

**PHASE 1 ARCHAEOLOGICAL AND CULTURAL IMPACT ASSESSMENT (AIA) FOR THE
PROPOSED ARLINGTON MULTIPLE-USE DEVELOPMENT, WALMER, GQEBERHA,
NELSON MANDELA BAY MUNICIPALITY, EASTERN CAPE PROVINCE**

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NOTE: ECPHRA (Eastern Cape Provincial Heritage Authority) COMMENTS in terms of Section 38(4) / (8) of the National Heritage Resources Act (25 of 1999). This matter was tabled at the Archaeology, Palaeontology and Meteorites (APM) Committee meeting held on 16 November 2023.

ECPHRA requires a Phase 1 HIA which must comprise of:

- An Archaeological and Cultural Heritage Impact Assessment (AIA) and
- A Paleontological Impact Assessment (PIA).

The phase 1 archaeological and cultural impact assessment was conducted as a requirement of the ECPHRA (Eastern Cape Provincial Heritage Authority) and National Heritage Resources Act 25 of 1999, Section 38(1):

- (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 5 000 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.

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 full Phase 1 Archaeological Impact Assessment (AIA). The Eastern Cape Provincial Heritage Resources (ECPHRA) has been the competent authority in the Eastern Cape Province since 2012. All heritage reports must be submitted to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) for comment and uploaded to the South African Heritage Information System (SAHRIS).

DECLARATION OF INDEPENDENCE

Ms Celeste Booth was appointed on a strictly professional basis to conduct the archaeological and cultural heritage assessment for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province.

This section confirms a declaration of independence that archaeological heritage specialist, Ms Celeste Booth, does not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Amendments to Environmental Impact Assessment Regulations, 2014 as amended.

Ms Celeste Booth further declares that she:

- will act as the independent Specialist in this application;

- will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- will declare that there are no circumstances that may compromise her objectivity in performing such work;
- has expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- will comply with the Act, regulations and all other applicable legislation;
- will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;
- has no, and will not engage in, conflicting interests in the undertaking of the activity;
- undertakes to disclose to the applicant and the competent authority all material information in her possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- will keep a register of all interested and affected parties that participated in a public participation process; and
- will provide the competent authority with access to all information at her disposal regarding the application, whether such information is favourable to the applicant or not
- confirms that all the particulars furnished by he in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- realises that a false declaration is an offence and is punishable in terms of section 24F of the Act.

SUMMARY OF SPECIALIST EXPERTISE

Ms Celeste Booth (BSc Honours: Archaeology) is an archaeologist who has had fifteen (15) years of full-time experience in Cultural Resource Management in the Eastern Cape Province and sections of the Northern Cape and Western Cape Provinces. Ms Booth has conducted several Archaeological Desktop Studies and Phase 1 Archaeological Impact Assessments within the Eastern Cape Province and in the Karoo region across the Eastern Cape, Northern Cape and Western Cape Provinces.

EXECUTIVE SUMMARY

Purpose of the Study

The purpose of the study was to conduct a phase 1 archaeological and cultural heritage assessment for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay 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.

Summary of Findings

No archaeological, historical or other heritage material, sites or features were identified during the survey for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province. This is due to dense grass / transformed vegetation and some dense thicket vegetation that covers the entire landscape of the proposed development.

However, previous surveys conducted within the surrounding area, especially, towards coastline have recorded historical material dumped within the Driftsands and shell middens extending along the coastline. The proposed development site is located within 5 km of the nearest coastline which is generally considered an archaeologically sensitive area, up to 5 km, but can extend further inland considering varying landscapes.

An exposed dune surface area has exposed an archaeological site at the eastern end of the Walmer Heights residential area, about 300 m – 400 m of the proposed Arlington development. An archaeological human burial was found exposed during 2019 by a member of the public which was investigated and removed by the Walmer South African Police Services (SAPS) and is currently being housed at the Albany Museum, which is the provincial archaeological repository in the Eastern Cape Province.

Arlington itself, previously St Andrews Racing Club, was opened on Saturday 23 December 1950, by the then Mayor of PE, Mr J.C.K. 'Boet' Erasmus. In October 2007, a new stabling complex was completed at Fairview and all the trainers based at Arlington moved across (www.sportingpost.co.za/arlington-closes-fond-farewell-to-arlington). It can be assumed that most of the remaining buildings, therefore, are older than 60 years and are protected under Section 34 of the National Heritage Resources Act 25 of 1999. A demolition permit is required from the Eastern Cape Provincial Heritage Resources Authority (ECPHRA). It is suggested that a built environment specialist or an historical architect be approached to conduct a built environment heritage assessment and advise on the permit application process.

Recommendations and Mitigation

The proposed development can be considered as having a *low archaeological heritage significance* from the lack of archaeological material, sites, and features identified during the survey. However, due to the proposed development site's location within an archaeologically sensitive coastal zone and a known archaeological site occurring 300m – 400 m east of the site, as well as the results of previous archaeological and cultural heritage assessments, the proposed development area within the wider cultural landscape can be considered as having a medium – high archaeological significance.

Development may proceed as planned however the following recommendations must be considered prior to the commencement of development:

1. A built environment specialist or an historical architect be approached to conduct a built environment heritage assessment and advise on the permit application process for the demolition of the remaining buildings.
2. A professional archaeologist must be appointed, at the expense of the developer to monitor all excavations for the proposed development. The archaeologist must mitigate in the instance of sites being uncovered during the course of the excavations. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the findings will then be conducted to establish the contextual status of the sites and remove the archaeological deposit before development activities continue.
3. 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.
4. If concentrations of pre-colonial archaeological heritage material, historical archaeological material, and/or human remains (including graves and burials) are uncovered during construction of the proposed development and / or future excavations for individual graves, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the findings will then be conducted to establish the contextual status of the sites and remove the archaeological deposit before development activities continue.

1. INTRODUCTION

1.1 Background Information

The Project Applicant, Afrostructures (Pty) Ltd., has identified a need for a multiple-use development that will be located in Walmer, Gqeberha (Port Elizabeth) within the Nelson Mandela Bay Metropolitan Municipality (NMBM) of the Eastern Cape Province. Adendorff Architects (Pty) Ltd. has been assigned as the Principal Agent and Architect for this development, whereas Afrostructures (Pty) Ltd. will serve as the Applicant for this Environmental Authorisation (EA) application.

The Applicant intends to establish a multiple-use development, comprising of 25 clusters as well as an internal road network, on erven 3988, 4195 and 6991, along Glendore Road in Walmer. The consolidated development footprint will be 614 409 m² (61,4 Ha) in extent. A total of nine (9) residential clusters are proposed of approximately 3 000 units, with 13 business clusters, one (1) cluster for Community Purposes and two (2) clusters for Special Purposes Infrastructure (solar power & wastewater treatment).

The establishment of such a development, in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and its Environmental Impact Assessment Regulations, 2014 (as amended), requires Environmental Authorisation (EA) from the Eastern Cape Department of Economic Development Environmental Affairs and Tourism (DEDEAT), subject to the undertaking of a Scoping and Environmental Impact Assessment (EIA) process.

The Applicant has appointed JG Afrika (Pty) Ltd. to provide the necessary professional environmental services and to act as the independent Environmental Assessment Practitioner (EAP) on the required application.

Project Description

The proposed Arlington development is located to the west of the suburb of Walmer in Gqeberha within the NMBM, on the former Arlington Racecourse property, and comprises three (3) erven spanning a cumulative area of approximately 61.4 Ha.

This development will aim to promote social, economic, and environmental sustainability. The project will be resource efficient through resource management ideas such as the improvement of the water distribution network, rainwater management, digital smart meters, renewable energy generation, sustainable drainage, reduction of water generation, and the optimisation of waste management.

The Arlington Development in its entirety will include the following components:

- a) Retail/Business Infrastructure.

- b) Office/Storage Facilities.
- c) Medical Use/Office Facilities.
- d) Special Use High Tech Industrial facility/infrastructure.
- e) Warehouse Facilities.
- f) Community Zone (i.e., child aftercare facilities).
- g) Mixed-residential Housing Units including Social Housing – no more than 3 000 units are proposed.
- h) Club House and Sport Facilities.
- i) A Business Incubator.
- j) Parking/Solar Charging Stations.
- k) Special Purposes Infrastructure – solar photovoltaic power park & wastewater treatment plant.
- l) Open spaces.
- m) Installation of internal infrastructure services, such as water, sanitation, irrigation, stormwater, roads, and electricity, to service the proposed infrastructure (see further details below), and;
- n) Installation of external infrastructure services, such as stormwater and sanitation connection lines as well as a pedestrian walkway along Racecourse Road and two traffic circles along Glendore Road. An additional road will be constructed between the south-western corner of the site and the northern circle.

The following Infrastructure Services are proposed:

Water supply:

It is proposed that approximately 50 % of water is to be supplied from NMBM via the existing Glendore Road water connection, and that 50 % of water is to be supplied from groundwater (with approximately 35 l/s to 50 l/s supply). The proposed water supply is a connection into the existing 315 mm diameter municipal supply main from Glendore Road. Each of the 25 clusters are to consist of 110 mm diameter supply network with a connection to 300 mm diameter supply main and a peak throughput of 113 l/s. Each cluster to consist of 110 mm diameter supply network with connection to units, fire hydrants, isolating valves, and meter to flow measurement per cluster. A Reverse Osmosis treatment system will be employed on site for the purification of the groundwater. In addition, tanks not exceeding 3 000 m³ will be installed for the storage of raw (ground) water and potable water.

Wastewater:

Northern Catchment of Site:

Wastewater is to be discharged via a gravitational system including collector sewers draining each of the clusters to the lowest point of the northern catchment. A wastewater treatment works in the form of a Bio-Rotor Treatment System (or similar) is proposed for

the treatment of effluent from the northern catchment. This treatment works will be equipped with a capacity of 1 125 kℓ/day for the re-use of treated effluent. As an alternate to the wastewater treatment works (in the event of failure of the operation of the wastewater treatment works), the provision of a storage sump of 24 hours storage i.e. 1125 kℓ or 15 m³ storage and a wastewater pumpstation is proposed, with a capacity of 30l/s together with estimated 500m long 160mm dia pump main, to discharge wastewater from the storage sump to discharge to the outfall for the southern catchment.

Southern Catchment of Site:

The wastewater of units within the southern catchment of the site will gravitate to a common collection point, from where the wastewater is to discharge under gravity with a 500 m long 300 mm dia gravity collector sewer to connect into the 355 mm dia NMBM Sewer in Victoria Road.

Irrigation:

The treated wastewater effluent is to be piped from the treatment system for purpose of irrigation for green areas and parks within the development.

Stormwater:

An internal storm water reticulation system will be developed and 9 000 m³ detention ponds to accommodate excess stormwater flow from the site. Stormwater is to be discharged via an approximately 500 m long, 600 mm diameter stormwater pipe into the existing municipal stormwater channel along Victoria Road.

Roadworks:

The proposed internal road network is to consist of a main access ring road, collector link roads providing access to the clusters, access control points to each of the clusters, parking for each cluster, together with pedestrian sidewalks, crossings, and cycle lanes. As part of the adjoining external road network, an additional road will be constructed between the south-western corner of the site and Glendore Road (which will be the primary access route), directly opposite the already present unnamed road. This new road will link up with Glendore Road by means of a new circle intersection. A second circle intersection is proposed further south at the T-junction of Glendore Road and Victoria Drive. All new traffic circles will be accompanied by raised pedestrian tables and subsequently surfaced pedestrian sidewalks along the adjoining road networks. The construction of additional lanes and changes to traffic signal phasing and timing at Victoria Drive and the Buffelsfontein Road intersections will also be implemented. Additionally, two public transport bays are proposed to be constructed, one on both exits to Glendore Road/Access Road, and one along the Victoria Drive/Glendore Road intersection. All the above-mentioned roadworks will be accompanied with the relevant/applicable traffic signals and

additional turning auxiliary lanes (such as at Genadendal/Buffelsfontein Road), as well as pedestrian and vehicle proof fencing/walls being erected along the property boundary adjacent to Glendore Road.

Electricity - Bulk electrical connection:

The electrical connection, from the NMBM Electricity and Energy Department is estimated to be 11 kV, 7 MVA, bulk connection with a main intake sub-station on Glendore Road. The facility will be reticulated internally, for self-consumption and costing, with 11 kV underground cable via a network of numerous 11 kV ring-main units, miniature sub-stations. The mini-subs will be positioned near each gate house of each zone.

PV System:

A space of 5.7 Ha is allocated for the PV ground mount system, which can have a capacity of $\pm 4\,400$ kW of inverter, with $\pm 5\,151$ kW (5 MW) panels. This is in line with the maximum allowable as per NERSA and the NMBM EE department, of which only allows 75 % of the connected load to be of equipment/plant on site with 25 % of the connected load to be able to be put back into their grid. The system will be connected via transformers, stepped up from 800 V into the 11 kV network. In the PV area, there will be transformers and control technology housed in various sub-station buildings.

Streetlighting:

The streetlights, in the main roads, will be down facing only, with self-contained battery and PV panel. The lighting inside each zone, will be connected to the internal system of each zone, also with efficient LED pole lighting to suite the style of the area/zone.

Reticulation:

The MV cable reticulation will follow the civil route of the main roads and basically the same routing of the water reticulation, with a take-off at each gate house zone. There will also be infrastructure network of sleeves and manholes installed for the fibre for the development, which will follow the same routing as the above. These infrastructure services will be co-ordinated with the civil works.

The property is bordered by Glendore Road to the west, Walmer Heights to the north and Milkwood Estate to the southwest. The site is further located approximately 500 m west from the former Walmer Country Club and approximately 8 km from Chief Dawid Stuurman International Airport (former Port Elizabeth Airport). The site is currently accessible via Racecourse Road off Victoria Drive (M18) to the south. Both Glendore Road and Victoria Drive can be accessed from Buffelsfontein Road (M09) in the north.

Table 1: Property Information

PROJECT INFORMATION	Township	Erf No	Portion	Central Co-ordinates
AFFECTED PROPERTIES	Walmer	Erf No 3988	0	34°0'80.61S 25°33'45.29E
	Walmer	Erf No 4195	0	34°0'20.96S 25°33'22.39E
	Walmer	Erf No 6991	0	34°0'14.58S 25°34'12.07E
	Walmer	Erf No 14639	0	34°0'22.63S 25°33'26.35E
	Walmer	Erf No 1953	0	34°0'17.87S 25°33'45.23E
	Walmer	Erf No 1948	0	34°0'23.36S 25°33'51.47E
EXTENT OF THE SITE AREA	Approximately 61.4 Ha			
MUNICIPALITY	Nelson Mandela Bay Municipality			
WARD	1 and 4			

The development site is situated on the urban edge of the NMBM. However, the DEDEAT has confirmed that the proposed site is not located within an urban area.

The proposed development site is located approximately 3 km from the Sardinia Bay Nature Reserve towards the southwest and approximately 8 km the Nelson Mandela Bay Metropolitan University Private Nature Reserve towards the southeast. These are protected areas identified by the South African Protected and Conservation Areas Database (SAPCAD) (2022) in accordance with the National Environmental Management: Protected Areas Act (NEMPAA - Act 57 of 2003).

According to the Zoning Scheme Register of the NMBM, most of the development footprint is zoned as Recreational Open Space. The property will therefore require a Rezoning Application prior to the commencement of construction to accommodate the new land use rights of the different zones proposed. A Town Planner has been appointed by the Developer to make this application on their behalf.

Need and Desirability

The proposed project will be located on erven 3988, 4195, 6991, which is earmarked for a Multiple-Use Development. This development will promote social, economic, and environmental sustainability, through the following mechanisms:

- The proposed development will be a mixed-use residential & social housing with up to an additional 3000 units for the area, consisting of roads and parking areas, together with green park areas within different sections.
- The project will be resource efficient through resource management ideas such as the improvement of water distribution network, rainwater management, digital smart meters, renewable energy generation, sustainable drainage, reduction of water generation, optimisation of waste management.
- The development will integrate 4IR & ICTs infrastructure and smart mobility.
- The development will include, retail, business, office and storage sites, residential units, retirement units, a "Digi 4RI" centre, solar facility, and an early childhood development centre.

The goal of the proposed development is to ameliorate the contemporary urban disconnect with nature by the holistic improvement of urban spaces, integrating aspects of nature into urban environments by considering how the built environment contributes to our health and well-being and employing practical methodologies for the effective design thereof, we not only design favourable environments, but sustainable environments as well.

Activity nodes are incorporated for residents and the extended urban environment to come together to interact. These nodes are in the built form and very often are elements of urban space which foster societal cohesion of the neighbourhood.

The proposed multiple-use development will create the following for the future of the area:

- Ensure greater social diversity through an integrated housing development.
- Allow a broader range of housing types, such as cottage clusters, town homes, and other "missing middle" typologies.
- Facilitate the development of lower-cost housing typologies with dignity.
- Prevent segregated communities –combination of LSM housing typologies.
- Create a community where individuals regardless of their race or socioeconomic background can live together with a diverse housing inventory.
- Create a robust multifamily preservation strategy.
- Stimulate investment in surrounding areas through a deliberate direction for future growth.
- Creatively utilize land asset to stimulate economic development.
- Promote desired change through perceived and tangible economic perspective of surroundings.
- Promote an enhanced community's liveability.
- Support needs of existing and future residents.

- Strengthen the community by fostering its racial and socioeconomic diversity.
- Desirable secure location for people to live, work, and play facilitating the current Covid related work from home.
- Create new opportunities for home ownership of the future younger generations.
- Increase housing opportunities for people of all ages, income levels, races, and backgrounds.
- Improve housing conditions through quality environment and security.

With the current economic situation in South Africa, job creation is of utmost importance. The proposed project comprises of various developments and thus many jobs could be created. The statistics indicate the Nelson Mandela Bay Municipality has an unemployment rate of 36.6 % (<http://www.statssa.gov.za>). According to these statistics new job creation is needed to stem the rising unemployment rate.

The following National, Provincial and Municipal policy documentation were also interrogated for the proposed development:

- National Development Plan (2030).
- The Integrated Development Plans (IDP) for the Nelson Mandela Bay Municipality.
- The Spatial Development Framework for the Nelson Mandela Bay Municipality.
- The National Environmental Management Act Principles.

The project has been found to be aligned with the abovementioned policy documentation.

Feasible and Reasonable Alternatives

Development Footprint:

An alternative viable site location was not identified and evaluated for the project. The specific proposed location for the multi-use development is preferred as it is the only property of its size in the Arlington area which:

- Is currently vacant and undeveloped.
- Is located adjacent to existing developments and therefore requires minimal extension of bulk service infrastructure.
- According to the Nelson Mandela Bay Municipality's Bioregional Plan (2015) - a CBA is located less than 65 m northwest of the proposed site footprint and there are a few ESAs surrounding the proposed development, however, none of them are within critical proximity to the proposed development.
- Is easily accessible via two (2) existing roads (Entrance Gate 1 from Glendore Road and Entrance Gate 2 will be off Victoria Drive onto the Racecourse Road).
- Is owned by a landowner willing to become involved in a development of this nature.

Type of Activity to be undertaken:

This development will aim to promote social, economic, and environmental sustainability. The project will be resource efficient through resource management ideas such as the improvement of the water distribution network, rainwater management, digital smart meters, renewable energy generation, sustainable drainage, reduction of water generation, optimisation of waste management.

The two activity alternatives for the proposed development are:

- 1) The preferred option of the implementation of the proposed development; and
- 2) The no-go development option.

The preferred activity option would infer that the construction of the proposed multiple-use development be undertaken within the preferred development area to address the following:

- Ensure greater social diversity through an integrated housing development.
- Allow a broader range of housing types, such as cottage clusters, town homes, and other “missing middle” typologies.
- Facilitate the development of lower cost housing typologies with dignity.
- Prevent segregated communities’ combination of LSM housing typologies.
- Create a community where individuals regardless of their race or socio-economic background can live together with a diverse housing inventory.
- Create a robust multifamily preservation strategy.
- Stimulate investment in surrounding areas through a deliberate direction for future growth.
- Creatively utilize land asset to stimulate economic development.
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- Create new opportunities for home ownership of the future younger generations.
- Increase housing opportunities for people of all ages, income levels, races, and backgrounds.
- Improve housing conditions through quality environment and security.

The no-go development option is neither advised nor feasible for the proposed development as:

- The potential for short to medium term local job creation and skills development opportunities associated with the site establishment and construction of the proposed housing development will not be realised. Unemployment within the local municipality stands at 27.7% (see the Socio-Economic Profile in Section 9.10. of this report).
- Framework of the municipality as specified in the IDP.

In the case that the “no-go” alternative is exercised, the existing site will remain as open is and remain undeveloped.

Design Layout:

The Preferred Layout of the mixed-use development (dated 14/08/2023) includes the establishment of eight (8) land-use zones; namely: Residential 2, Residential 4, Business 2, Business 1, Community 1, Special Use High Tech Industry, Special Purposes Infrastructure, Private Open Space, comprising of differing extents.

Technology:

Preferred technologies have not yet been investigated for the project; however, best practice construction and implementation is recommended for all infrastructure associated with the project.

Potential alternatives that must be investigated for the proposed development will include:

- Environmentally friendly technology and designs regarding the construction of housing and associated infrastructure such as:
 - Solar power for geysers and general electricity.
 - Efficient rainwater harvesting.
 - Energy efficient lighting (within the houses and streets) and general appliances.
 - Water saving devices such as aerated taps and dual flush toilets.
 - A wastewater treatment works in the form of a Bio-Rotor Treatment System, or similar, is proposed for the treatment of effluent from the northern catchment.
- Waste minimisation activities during the construction and handover phases including the recycling of generated waste, where possible.

Additional feasible technology alternatives will be investigated further and refined during the EIA phase of the proposed development.

Operation Aspects:

The preferred and only operational aspects of the activity involve the maintenance of infrastructure and general service delivery to the area. No alternatives to the operation aspect of the proposed development have been considered.

‘No-Go’ Alternative:

The no-go alternative must be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The no-go alternative assumes that the proposed project will not go ahead i.e., the proposed multiple-use development will not occur and therefore the site will remain as.

Specialist Studies:

A Screening Tool Report was generated for the proposed Arlington Multiple-Use Development project using the national web-based Environmental Screening Tool, as required by the NEMA: EIA Regulations 2014 (as amended).

In line with the DFFE Screening Tool Report and Site Verification Assessment, the following Specialist Studies are being undertaken:

- Agricultural Assessment.
- Terrestrial Biodiversity Assessment.
- Faunal and Avifaunal Assessment.
- Vegetation Assessment.
- Archaeological Assessment.
- Palaeontological Assessment.
- Aquatic Assessment.
- Glint and Glare Assessment.
- Visual Impact Assessment.
- Socio-Economic Impact Assessment.

1.2 Applicant

Afrostructures (Pty) Ltd

1.3 Environmental Assessment Practitioner (EAP)

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2 SCOPE OF WORK AND TERMS OF REFERENCE

The purpose of the study was to conduct an archaeological and cultural heritage assessment for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province.

The survey was conducted to:

- Identify and map possible heritage sites and occurrences using published and database resources;
- Provide a description of the archaeology and cultural heritage of the site and identify and map any sites of archaeology or cultural significance that may be impacted by the proposed project;
- Assess the sensitivity and conservation significance of any sites of archaeological or cultural heritage significance affected by the proposed project;
- Identify and assess the significance of the potential impacts of the proposed project on archaeological and cultural heritage;
- Make recommendations on the protection and maintenance of any significant cultural heritage and/or archaeological sites that may occur on site;
- Identify practicable mitigation measures to reduce negative impacts on the archaeological resources and indicate how these can be incorporated into the construction and management of the proposed project;
- Provide guidance for the requirement of any permits from the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) that might become necessary.

Archaeological and historical material remains, features, and sites were evaluated and assessed based on the following points:

- Type of site;
- Location and environmental surrounds;
- Site category;
- Context and condition;
- Estimated size and depth of deposit;
- Cultural affinities;
- Record site content;
- Record basic information of finds;
- Estimate relative age of sites from cultural material and other information;
- Record and describe graves, graveyards, and informal burials;

- Assess the importance and significance of material remains, features, and sites; and
- Significance ratings based on local to international.

3 HERITAGE LEGISLATIVE AND POLICY FRAMEWORK

The current (2024) phase 1 archaeological and cultural impact assessment was conducted as a requirement of the ECPHRA (Eastern Cape Provincial Heritage Authority) and National Heritage Resources Act 25 of 1999, Section 38(1):

- (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 5 000 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.

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 full Phase 1 Archaeological Impact Assessment (AIA). The Eastern Cape Provincial Heritage Resources (ECPHRA) has been the competent authority in the Eastern Cape Province since 2012. All heritage reports must be submitted to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) for comment and uploaded to the South African Heritage Information System (SAHRIS)

4. 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, 2013a/b, 2014a/b, 2017, 2018; Van Ryneveld 2010, 2013; Webley 2005, 2007; Reichert 2022). Some of 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 situated within the 5 km archaeologically sensitive coastal zone.

Historical research on the early settlement in Walmer shows that the area proposed for the development area and surrounds was situated on the farm Welbedacht which was later divided into several properties.

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

The Early Stone Age from between 1.5 million and 250 000 years ago refers to the earliest that *Homo sapiens sapiens* predecessors began making stone tools. The earliest stone tool industry was referred to as the Olduvai Industry originating from stone artefacts recorded at Olduvai Gorge, Tanzania. The Acheulian Industry, the predominant southern African Early Stone Age Industry, replaced the Olduvai Industry approximately 1.5 million years ago, is attested to in diverse environments and over wide geographical areas. The hallmark of the Acheulian Industry is its large cutting tools (LCTs or bifaces), primarily handaxes and cleavers. Bifaces emerged in East Africa more than 1.5 million years ago (mya) but have been reported from a wide range of areas, from South Africa to northern Europe and from India to the Iberian coast. The end products were similar across the geographical and chronological distribution of the Acheulian techno-complex: large flakes that were suitable in size and morphology for the production of handaxes and cleavers perfectly suited to the available raw materials (Sharon 2009).

One of the most well-known Early Stone Age sites in southern Africa is Amanzi Springs (Deacon 1970), situated about 10 km north-east of Uitenhage and 45 km south east of the WEF site. The site is situated on a north-facing hill overlooking the Coega River. The earliest reference to the spring was made by an early traveller, Barrow (1801). FitzPatrick first reported stone artefacts in the area in 1924. Ray Inskeep (Inskeep 1965) conducted a small-scale excavation of the site in 1963. It was only in 1964 and 1965 that large scale excavations were conducted by Hilary Deacon. In a series of spring deposits, a large number of stone tools were found *in situ* to a depth of 3-4 m. Wood and seed material preserved remarkably very well within the spring deposits, and possibly date to between 800 000 to 250 000 years old.

Other Early Stone Age sites that contained preserved bone and plant material include Wonderwerk Cave in the Northern Province, near Kimberly and Montagu Cave in the Western Cape, near the small town of Montagu (Mitchell 2007). Early Stone Age sites have also been reported in the foothills of the Sneeuberge Mountains (in Prins 2011).

Early Stone Age tools is the earliest evidence for human ancestors occupying the Sundays River Valley and surrounding area and occur throughout the region in river gravels that cap hilltops and slopes and on the palaeosols / calcrete floors in the dune systems like those at Geelhoutboom and Brandewynkop (Butzer 1978; Deacon & Geleijnse 1988). Large hand axes have been reported from Coega Kop and along the Coega and Sundays Rivers. Archaeological research has been recently been carried out near Kirkwood and Addo.

The Albany Museum Database holds records and archaeological collections of sites researched within the region.

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 1.5 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 Middle Stone Age spans a period from 250 000 - 30 000 years ago and focuses on the emergence of modern humans through the change in technology, behaviour, physical appearance, art and symbolism. Various stone artefact industries occur during this time period, although less is known about the time prior to 120 000 years ago, extensive systemic archaeological research is being conducted on sites across southern Africa dating within the last 120 000 years (Thompson & Marean 2008). The large handaxes and cleavers were replaced by smaller stone artefacts called the Middle Stone Age flake and blade industries. Surface scatters of these flake and blade industries occur widespread across southern Africa although rarely with any associated botanical and faunal remains. It is also common for these stone artefacts to be found between the surface and approximately 50-80 cm below ground. Fossil bone may in rare cases be associated with Middle Stone Age occurrences (Gess 1969). These stone artefacts, like the Earlier Stone Age handaxes are usually observed in secondary context with no other associated archaeological material.

The Middle Stone Age is distinguished from the Early Stone Age by the smaller-sized and distinctly different stone artefacts and *chaîne opératoire* (method) used in manufacture, the introduction of other types of artefacts and evidence of symbolic behaviour. The prepared core technique was used for the manufacture of the stone artefacts which display

a characteristic faceted striking platform and includes mainly unifacial and bifacial flake blades and points. The Howiesons Poort Industry (80 000 - 55 000 years ago) is distinguished from the other Middle Stone Age stone artefacts: the size of tools is generally smaller, the range of raw materials include finer-grained rocks such as silcrete, chalcedony, quartz and hornfels, and include segments, backed blades and trapezoids in the stone toolkit which were sometimes hafted (set or glued) onto handles. In addition to stone artefacts, bone was worked into points, possibly hafted, and used as tools for hunting (Deacon & Deacon 1999).

Other types of artefacts that have been encountered in archaeological excavations include tick shell (*Nassarius kraussianus*) beads, the rim pieces of ostrich eggshell (OES) water flasks, ochre-stained pieces of ostrich eggshell and engraved and scratched ochre pieces, as well as the collection of materials for purely aesthetic reasons. Although Middle Stone Age artefacts occur throughout the Eastern Cape, the most well-known Middle Stone Age sites include the type-site for the Howiesons Poort stone tool industry, Howiesons Poort (HP) rock shelter, situated close to Grahamstown and Klasies River Mouth Cave (KRM), situated along the Tsitsikamma coast. Middle Stone Age sites are located both at the coast and in the interior across southern Africa.

The Klasies River Cave complex (caves 1-5), situated 55 km west of Jeffreys Bay, is the most significant archaeological site with evidence of occupation and human development over the last 120 000 years. Previous excavations at the Klasies River main site exposed anatomically modern human remains dating to about 110 000 years old (Singer & Wymer 1982; Rightmire & Deacon 1991; Deacon 1992, 1993, 1995, 2001; Deacon, H.J. & Shuurman, R. 1992; Henderson 1992; Deacon & Deacon 1999).

Archaeological sites excavated within the wider region have revealed evidence of occupation during the Middle Stone Age period. Scatters of Middle Stone Age stone artefacts are also known to occur within the surrounding area where these have been recorded in archaeological and heritage impact assessments within the region.

The Albany Museum Data Recording Centre holds records of sites and artefacts in its collections. Middle Stone Age scatters are known to occur along the Port Alfred coastline and within the wider region (Albany Museum Archaeological database).

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). One

occurrence of Middle Stone Age artefacts also occurred north of Buffelsfontein Road near the proposed site of development (Van Ryneveld 2013).

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

The Later Stone Age (LSA) spans the period from about 20 000 years ago until the colonial era, although some communities do continue making stone tools today. The period between 30 000 and 20 000 years ago is referred to as the transition from the Middle Stone Age to Later Stone Age; although there is a lack of crucial sites and evidence that represent this change. By the time of the Later Stone Age the genus *Homo*, in southern Africa, had developed into *Homo sapiens sapiens*, and in Europe, had already replaced *Homo neanderthalensis*.

The Later Stone Age is marked by a series of technological innovations, new tools and artefacts, the development of economic, political and social systems, and core symbolic beliefs and rituals. The stone toolkits changed over time according to time-specific needs and raw material availability, from smaller microlithic Robberg (20/18 000-14 000 ya), Wilton (8 000-the last 500 years) Industries and in between, the larger Albany/Oakhurst (14 000-8 000ya) and the Kabeljous (4 500-the last 500 years) Industries. Bored stones were used as part of digging sticks, grooved stones for sharpening and grinding and stone tools fixed to handles with mastic also become more common. Fishing equipment such as hooks, gorges and sinkers also appear within archaeological excavations. Polished bone tools such as eyed needles, awls, linkshafts and arrowheads also become a more common occurrence. Most importantly bows and arrows revolutionized the hunting economy. It was only within the last 2 000 years that earthenware pottery was introduced, before then tortoiseshell bowls were used for cooking and ostrich eggshell (OES) flasks were used for storing water. Decorative items like ostrich eggshell and marine/fresh water shell beads and pendants were made.

Hunting and gathering made up the economic way of life of these communities; therefore, they are normally referred to as hunter-gatherers. Hunter-gatherers hunted both small and large game and gathered edible plantfoods from the veld. For those that lived at or close to the coast, marine shellfish and seals and other edible marine resources were available for gathering. The political system was mainly egalitarian, and socially, hunter-gatherers lived in bands of up to twenty people during the scarce resource availability dispersal seasons and aggregated according to kinship relations during the abundant resource availability seasons. Symbolic beliefs and rituals are evidenced by the deliberate burial of the dead and in the rock art paintings and engravings scattered across the southern African landscape.

The majority of archaeological sites found in the area would date from the past 10 000 years where San hunter-gatherers inhabited the landscape living in rock shelters and caves as well as on the open landscape. These latter 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). Caves and rock shelters, however, in most cases, provide a more substantial preservation record of pre-colonial human occupation.

Later Stone Age sites occur both at the coast (caves, rock shelters, open sites and shell middens) and in the interior (caves, rock shelters and open sites) across southern Africa. There are more than a few significant Later Stone Age sites in the Eastern Cape. The most popular are the type sites for the above-mentioned stone artefact industries, namely Wilton (for the Wilton Industry), Melkhoutboom (for the Albany Industry), both rock shelters situated to the west of Grahamstown, and Kabeljous Rock Shelter (for the Kabeljous Industry) situated just north of Jeffreys Bay. There are many San hunter-gatherers' sites in the interior mountainous region north of the study site. Here, caves and rock shelters were occupied by the San during the Later Stone Age and contain numerous paintings along the walls.

Extensive Later Stone Age research has been conducted along the coastline south of the proposed development site and it is thought that these past communities may have moved between the mountainous areas and the coast according to excavated remains. Later Stone Age stone artefact scatters and sites are known to occur within region, along the coastal areas, Uitenhage and Port Elizabeth, as well as within the Greater Addo Elephant National Park and towards Jansenville where these have been recorded in archaeological and heritage impact assessments.

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 Van Stadens River - Noordhoek 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

The Later Stone Age (LSA) spans the period from about 20 000 years ago until the colonial era, although some communities continue making stone tools today. The period between 30 000 and 20 000 years ago is referred to as the transition from the Middle Stone Age to Later Stone Age; although there is a lack of crucial sites and evidence that represent this change. By the time of the Later Stone Age the genus *Homo*, in southern Africa, had developed into *Homo sapiens sapiens*, and in Europe, had already replaced *Homo neanderthalensis*.

The Later Stone Age is marked by a series of technological innovations, new tools and artefacts, the development of economic, political and social systems, and core symbolic beliefs and rituals. The stone toolkits changed over time according to time-specific needs and raw material availability, from smaller microlithic Robberg (20/18 000-14 000 ya),

Wilton (8 000-the last 500 years) Industries and in between, the larger Albany/Oakhurst (14 000-8 000ya) and the Kabeljous (4 500-the last 500 years) Industries. Bored stones were used as part of digging sticks, grooved stones for sharpening and grinding and stone tools fixed to handles with mastic also become more common. Fishing equipment such as hooks, gorges and sinkers also appear within archaeological excavations. Polished bone tools such as eyed needles, awls, linkshafts and arrowheads also become a more common occurrence. Most importantly bows and arrows revolutionized the hunting economy. It was only within the last 2 000 years that earthenware pottery was introduced, before then tortoiseshell bowls were used for cooking and ostrich eggshell (OES) flasks were used for storing water. Decorative items like ostrich eggshell and marine/fresh water shell beads and pendants were made.

Hunting and gathering made up the economic way of life of these communities; therefore, they are normally referred to as hunter-gatherers. Hunter-gatherers hunted both small and large game and gathered edible plantfoods from the veld. For those that lived at or close to the coast, marine shellfish and seals and other edible marine resources were available for gathering. The political system was mainly egalitarian, and socially, hunter-gatherers lived in bands of up to twenty people during the scarce resource availability dispersal seasons and aggregated according to kinship relations during the abundant resource availability seasons. Symbolic beliefs and rituals are evidenced by the deliberate burial of the dead and in the rock art paintings and engravings scattered across the southern African landscape.

The majority of archaeological sites found in the area would date from the past 10 000 years where San hunter-gatherers inhabited the landscape living in rock shelters and caves as well as on the open landscape. These latter 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). Caves and rock shelters, however, in most cases, provide a more substantial preservation record of pre-colonial human occupation.

Later Stone Age sites occur both at the coast (caves, rock shelters, open sites and shell middens) and in the interior (caves, rock shelters and open sites) across southern Africa. There are more than a few significant Later Stone Age sites in the Eastern Cape. The most popular are the type sites for the above-mentioned stone artefact industries, namely Wilton (for the Wilton Industry), Melkhoutboom (for the Albany Industry), both rock shelters situated to the west of Grahamstown, and Kabeljous Rock Shelter (for the Kabeljous Industry) situated just north of Jeffreys Bay. There are many San hunter-gatherer sites in the interior mountainous region north of the study site. Here, caves and rock shelters were occupied by the San during the Later Stone Age and contain numerous paintings along the walls.

According to Derricourt (1977) open Later Stone Age sites in the Transkei and Ciskei are mostly located close to water regardless of whether it may be seasonal or perennial and water courses and notes that lydianite (indurated shale / hornfels) is predominant as a raw material. He also notes that it is possible that Later Stone Age open sites may be distinguished by those containing pottery and those without.

Extensive Later Stone Age research has been conducted along the coastline south of the proposed development site and it is thought that these past communities may have moved between the mountainous areas and the coast according to excavated remains. Later Stone Age stone artefact scatters and sites are known to occur within region, along the coastal areas, Uitenhage and Port Elizabeth, as well as within the Greater Addo Elephant National Park and towards Jansenville where these have been recorded in archaeological and heritage impact assessments.

Later Stone Age middens and archaeological scatters are known to occur along the coastline (Albany Museum Archaeological database).

The Albany Museum Data Recording Centre holds records of sites and artefacts in its collections.

Some 2 000 years ago Khoenkhoen pastoralists occupied the region and lived mainly in small settlements. They 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 Khoekhoen pastoralists within the last 2 000 years. These middens and scatters are differentiated from the Later Stone Age sites 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 2 000 Years - The Iron Age

The Nguni-speaking agropastoralists or 'first-farming communities' or Iron Age communities entered southern Africa along the east coast within the last 2 000 years. They owned domestic stock, namely goats, sheep and cattle. Their pottery was different to that of the Khoekhoe, in the shape, thickness, heavy decoration and variety of the vessels. First farming communities lived a relatively sedentary way of life, they planted

sorghum and millet, and were therefore limited to settle in the summer rainfall areas. In addition, first farming communities possessed the skill of metal working, having the ability to mine and work iron, copper, tin and even gold. Their economic systems were also based on the accumulation of wealth through ownership and their political organization was slightly more hierarchical than that of the Khoekhoen.

Much research has been conducted on the Iron Age (IA) across southern Africa, therefore resulting in well-established chronological and typological frameworks and settlement and economic patterns for the Iron Age sequence (Huffman 2007). The Iron Age sequence is based on ceramic phases determined by vessel profile and decoration motif and placement.

According to Huffman (2007) an eastern migration stream, known as the Chifumbaze Complex spread southwards from East Africa south into southern Africa during the period of about AD 200–300 where several KwaZulu-Natal and north-Eastern Cape sites were occupied. The Early Iron Age sites in the Eastern Cape dates to between circa AD 600 to AD 900 and can be divided into the following ceramic facies (Maggs 1989; Huffman 2007):

- Msuluzi (AD 500-700);
- Ndongondwane (AD 700 – 800);
- Ntshekane (AD 800 – 900).

Thicker and decorated pottery sherds, kraals, possible remains of domesticated animals, upper and lower grindstones, storage pits, metal and iron implements are associated with identifying Early Iron Age sites. The sites are generally large settlements, but the archaeological visibility may in most cases be difficult owing to the organic nature of the homesteads. Additional evidence of these agropastoralist groups derives from rock paintings of cattle painted by hunter-gatherer groups who encountered or interacted with these communities. The bones of cattle and sheep excavated at Oakleigh Shelter near Queenstown may be an indication of possible stock theft (Derricourt 1977). The Early Iron Age (EIA) first-farming communities during the first millennium AD generally preferred to occupy river valleys within the eastern half of southern Africa owing to the summer-rainfall climate that was conducive for growing millet and sorghum.

In comparison to other areas containing Iron Age sites only a small amount of Iron Age research has been conducted in the Eastern Cape thus far. Earlier investigations into the Early Iron Age in the Transkei and Ciskei includes work at Buffalo River Mouth (Wells 1934; Laidler 1935), at Chalumna River Mouth (Derricourt 1977) and additional research by Feely (1987) and Prins (1989). Early Iron Age Sites (EIA) sites also include Kulubele situated in the Great Kei River Valley near Khomga (Binneman 1996), Ntsitsana situated in the interior Transkei, 70 km west of the coast, along the Mzimvubu River (Prins & Granger 1993), and Canasta Place situated on the west bank of the Buffalo (Qonce) River (Nogwaza 1994). Along the coast, near Coffee Bay, Early Iron Age sites have been dated from AD 670 and includes the sites of Mpame and Mqanduli. Early Iron Age pottery scatters have been

documented along several area of the Wild Coast coastline including Zig-Zag Cave near Port St Johns (Derricourt 1977).

In relation to the proposed development site, Early Iron Age sites occur as far inland as the limit of the woodland (savanna) vegetation mainly in the Eastern Valley Bushveld in deeply incised river valleys in the basins of the Mzimvubu and Mzintlana Rivers up to 100 km (Feely & Bell-Cross 2011). Ntsitsana is a first millennium farming site (AD 650 - 950) located on alluvial flats on the outer bend of a meander of the Mzimvubu River (situated near Tanbankula 70 km inland from the coast and 30 km south of the current development site). Surface scatters of potsherds indicated that the site belonged to the oldest known phase of farming settlement in Transkei (Prins 1993). The pottery associated with the site is of the Msuluzi and Ndongwane facies (Huffman 2007).

There has in the past been some speculation that Early Iron Age populations may have spread well south of the Transkei into the Ciskei, possibly up to the Great Fish River (Binneman *et al.* 1992), however, no further research has been undertaken to confirm these statements.

Hilltop settlement is mainly associated with Later Iron Age (LIA) settlement patterns that occurred during the second millennium AD. The Later Iron Age communities later moved from settlement in river valleys to the hilltops. Later Iron Age settlements have been formally recorded by the Albany Museum With the exception of the Tembu, stone buildings which characterizes the Iron Age sites of Sotho areas, is absent in the Transkei and Ciskei, and a pattern of some mobility without, it is presumed, a stone working technology of significance, makes the allocation of sites a major problem (Derricourt 1973).

Huffman's (2004) ceramic sequence among the Nguni groups contains three facies:

- Blackburn (AD 1 050 – 1 300): along north and south coasts of KwaZulu Natal;
- Moor Park (AD 1 300 – 1 700): first recorded in Estcourt Midlands then along Transkei coast where it was called Umgazana Ware. Appears south of the Mtamvuma River and it is suggested that it was the beginning of the division between southern and northern Nguni people and probably continued into the nineteenth century;
- Nqabeni (AD 1 700 – 1 850): style centres on KwaZulu Natal;

Iron Age sites have been recorded as far south as Port Alfred (Albany Museum Archaeological database).

4.6 Unmarked Burials and Exposed Human Remains

It is difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. Several human remains have been rescued eroding out of the dunes along

this coastline. In some instances, packed stones or rocks may indicate the presence of informal pre-colonial burials. Several human remains have been rescued eroding out of the dunes along this coastline.

Graves with rich grave goods were uncovered during excavations at the sites of Melkhoutboom and Vygeboom in the Greater Addo Elephant National Park. Stapleton and Hewitt apparently recovered a number of human remains from under circles of cairns on a farm near Kirkwood in 1928. The cairns were located near to the Sundays River.

The Albany Museum Database holds records of human remains that have been exposed and collected for conservation and curation within the wider region from the coastal areas to the south and east as well as inland around to Graaff Reinet and within the Greater Addo Elephant National Park. Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments have also recorded formal historical cemeteries and informal burials.

An exposed dune surface area has exposed an archaeological site at the eastern end of the Walmer Heights residential area, about 300 m – 400 m of the proposed Arlington development. An archaeological human burial was found exposed during 2019 by a member of the public which was investigated and removed by the Walmer South African Police Services (SAPS) and is currently being housed at the Albany Museum, which is the provincial archaeological repository in the Eastern Cape Province.

4.7 Rock Art (Paintings and Engravings)

Rock art is generally associated with the Later Stone Age period mostly dating from the last 5 000 years to the historical period. It is difficult to accurately date the rock art without destructive practices. The southern African landscape is exceptionally rich in the distribution of rock art which is determined between paintings and engravings. Rock paintings occur on the walls of caves and rock shelters across southern Africa. Rock engravings, however, are generally distributed on the semi-arid central plateau, with most of the engravings found in the Orange-Vaal basin, the Karoo stretching from the Eastern Cape (Cradock area) into the Northern Cape as well as the Western Cape, and Namibia. At some sites both paintings and engravings occur in close proximity to one another especially in the Karoo and Northern Cape. The greatest concentrations of engravings occur on the andesite basement rocks and the intrusive Karoo dolerites, but sites are also found on about nine other rock types including dolomite, granite, gneiss, and in a few cases on sandstone (Morris 1988). Substantial research has also been conducted in the Western Cape Karoo area around Beaufort West (Parkington 2008). Rock paintings are prolific in the inland mountainous regions situated north of the site.

There are several San hunter-gatherer sites in the Elandsberg and Groot Winterhoekberg Mountains, as well as within the Groendal area to the east and the Zuurburg Mountains.

Here caves and rock shelters were occupied by the San during the Later Stone Age and contain paintings along the walls.

The Albany Museum Database holds records of sites and collections of rock painting sites of the wider regions and there are several that that remain undocumented.

4.8. Last 500 years – Historical

The history of Walmer dates back to the early 1800's before the mass arrival of British Settlers to Port Elizabeth. During 1815 the farm Welbedacht was granted to AM Muller. The farm was located to the south-west of Port Elizabeth and covered an area of just under 14 square miles. The farm was inherited by Muller's eight sons when he died in 1845, however, the sons could not decide on how to subdivide the property and as a result the farm was sold and the money distributed to the heirs. In 1855 the area was transferred to the municipality of Port Elizabeth and renamed Walmer in honour of the Duke of Wellington. By March 1855 the land was laid out and resolved to sell 400 plots by public auction. A number of stands were reserved for the Dutch Reformed Church and the Anglican Church. The plan of the village included wide streets and a plentiful supply of water. In 1899 Walmer was awarded separate municipal status while its residential character, spacious residential plots and attractive dwellings attracted families with young children and the elderly. In 1967 Walmer became part of the Port Elizabeth Municipality. The history of the Port Elizabeth-Avontuur railway, which is located north of the proposed development area, shows that its passenger service has never been much of a revenue earner. Passengers were initially carried on scheduled trains. However, with their numbers dwindling over the years due to competition from buses operated by the then South African Railway's Road Motor Service, the railway authorities eventually had to terminate the service. A short suburban branch line to serve the town of Walmer (at that stage on the outskirts of Port Elizabeth!) was brought into operation in 1906. This service showed a loss from the start because of lack of community support and was abandoned in 1928. The sport of horse racing in South Africa enjoys a long and rich history that can be traced back to 1797, with the first recorded race club meeting taking place in 1802.

Thoroughbred horseracing took place in PE prior to 1850, but officially started in 1857, when the Port Elizabeth Turf Club was formed. In order to establish set rules for racing, the Jockey Club of South Africa was also founded in the region in 1882. Arlington itself, previously St Andrews Racing Club, was opened on Saturday 23 December 1950, by the then Mayor of PE, Mr J.C.K. 'Boet' Erasmus. In October 2007, a new stabling complex was completed at Fairview and all the trainers based at Arlington moved across.

The Walmer Golf Club, or more fondly known as Little Walmer, was founded in 1897 which makes it one of the oldest golf clubs in the country. The Walmer Golf Club borders the proposed development area to the west.

The early population of Port Elizabeth consisted mainly of Europeans, as well as persons of mixed race which the Apartheid system subsequently labelled as 'Coloureds' and 'Cape Malays'. Initially few members of the indigenous population were attracted to the town, and almost from the onset economic status was related to skin colour. Thus segregation was an integral part of early Port Elizabeth, with the industrial areas of South End and North End being predominantly Coloured, while the Central and Western suburbs were mainly White.

A large influx of Xhosa refugees into the Colony occurred after the cattle-killing of 1857 and they were rapidly absorbed into the wage-labour market on account of a labour shortage in towns of the eastern frontier districts. Thus, a rising number of Black workers began to enter Port Elizabeth seeking employment, so then a number of so-called 'locations' began to be established on the outskirts of the White suburbs. The growth of Port Elizabeth's African population led to the overcrowding of the Native Strangers' Location. Many of these new arrivals were accommodated in a number of locations on private property. The largest was Gubb's Location which was situated on the 'Mill Property' (now Mill Park), with others in the Baakens River Valley, Walmer and South End .

The pattern of 'locations' was first established in 1834 when the Colonial Government made a grant of land to the London Missionary Society (LMS) to provide a burial ground and residential area for Hottentots and other coloured people who were members of the Church (Baines 1989) located at the crest of Hyman's Kloof (Russel Road). Other workers however chose to erect their homes closer to their places of employment, or where a supply of portable water was available. With few exceptions these Black suburbs were informal in nature and residents there were forced to endure living conditions which contemporary observers described as being squalid and open to exploitation by capitalist landlords. Many Whites considered them to be unhealthy and petitions were reportedly organised demanding that they be removed to the outskirts of the town. These requests were in direct opposition to the needs of the growing commercial and industrial sectors which preferred to locate their labour sources close to the harbour and the inner-city area. These conflicting vested interests created political tension within the Port Elizabeth Council which were only resolved in 1885 when the Municipality adopted its first set of markedly segregationist regulations. As a result suburbs for the exclusive use of Black residents who were not housed by employers, and who could not afford to purchase property were established on the outskirts of Port Elizabeth. Most prominent amongst them were including Walmer (1896).

In 1898 white business owners and white households wanted their black workers to remain close to their property so work could be more convenient. Although the area of the Gqebera Township was intended to be a white suburb, South African indigenous populations (blacks and coloureds) began to move into the area. (www.sportingpost.co.za/arlington-closes-fond-farewell-to-arlington).

In 1901 an outbreak of Bubonic plague struck the town. This was a direct result of Argentinian fodder and horses being imported into South African by the British military during the Anglo-Boer conflict (now referred to as the South African War). These cargos also carried plague-infected rats and although many members of the White and Coloured communities were also affected, the Black population bore the brunt of the Plague Health Regulations. During this time most of Port Elizabeth's old locations were demolished (with the exception of Walmer), their resident belongings were arbitrarily destroyed and restrictions were imposed upon inter-town travel.

Gqebera, as Walmer Township is called in the Xhosa language that most of its residents speak, was designated to be in the 'whites only' area under the Apartheid Group Area Act 1955, and therefore the regime tried to remove the Township. Due to the strong resistance of the township's residents and support from the citizens in the nearby Walmer suburbs resident area, Gqebera was never destroyed. But the price was high; apartheid authorities would deny Walmer Township the most basic infrastructure.

The Driftsands, situated south-east of the proposed development area towards the coast 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 5 km south of the proposed site for the low-cost housing development as well as along the Sardinia Bay Road.

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 Arlington development is located to the west of the suburb of Walmer and borders the suburb of Walmer Heights, in Gqeberha, within the NMBM, on the former Arlington Racecourse property, and comprises three (3) erven spanning a cumulative area of approximately 61.4 Ha.

The Applicant intends to establish a multiple-use development, comprising of 25 clusters as well as an internal road network, on erven 3988, 4195 and 6991, along Glendore Road

in Walmer. The consolidated development footprint will be 614 409 m² (61,4 Ha) in extent. A total of nine (9) residential clusters are proposed of approximately 3 000 units, with 13 business clusters, one (1) cluster for Community Purposes and two (2) clusters for Special Purposes Infrastructure (solar power & wastewater treatment).

The proposed development site is located within 5 km of the nearest coastline which is generally considered an archaeologically sensitive area, up to 5 km, but can extend further inland considering varying landscapes.

5.2 Map

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

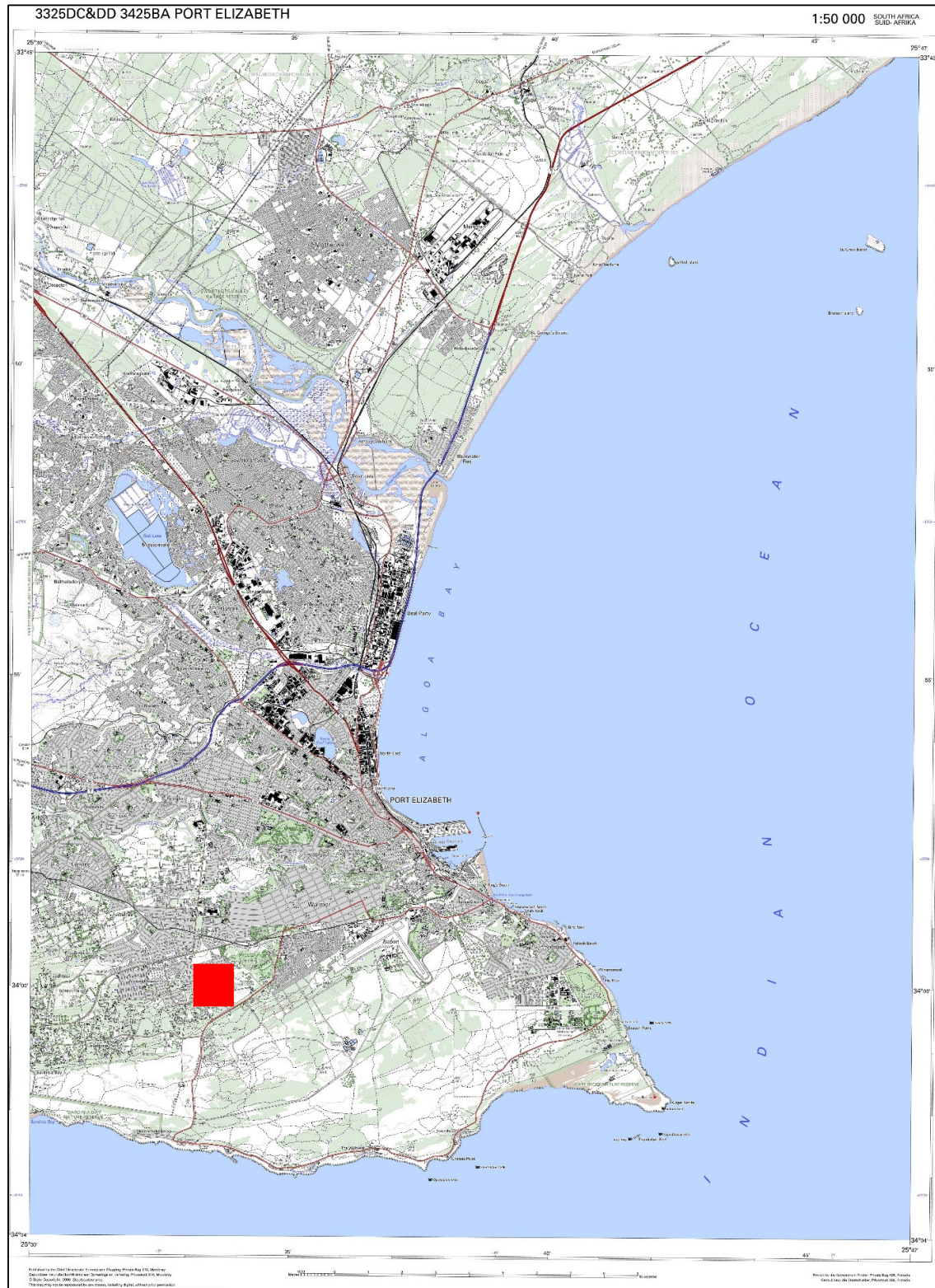


Figure 1. 1:50 000 topographic map 3325DC&DD 3425BA PORT ELIZABETH showing the location of the area for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province.



Figure 2. Google Earth generated map the showing the location of the area for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province (courtesy of JG Afrika).



Figure 3. Google Earth generated map the showing the location of the area for the proposed Arlington multiple-use development and the surrounding landscape in proximity to the coastline.



Figure 4. Google Earth generated map the showing the location of the area for the proposed Arlington multiple-use development and previous phase 1 archaeological and cultural impact assessments conducted within the surrounding are of the proposed Arlington mixed-use development.



Figure 5. Google Earth generated map the showing the location of the area for the proposed Arlington multiple-use development and an archaeological site identified during 2019.

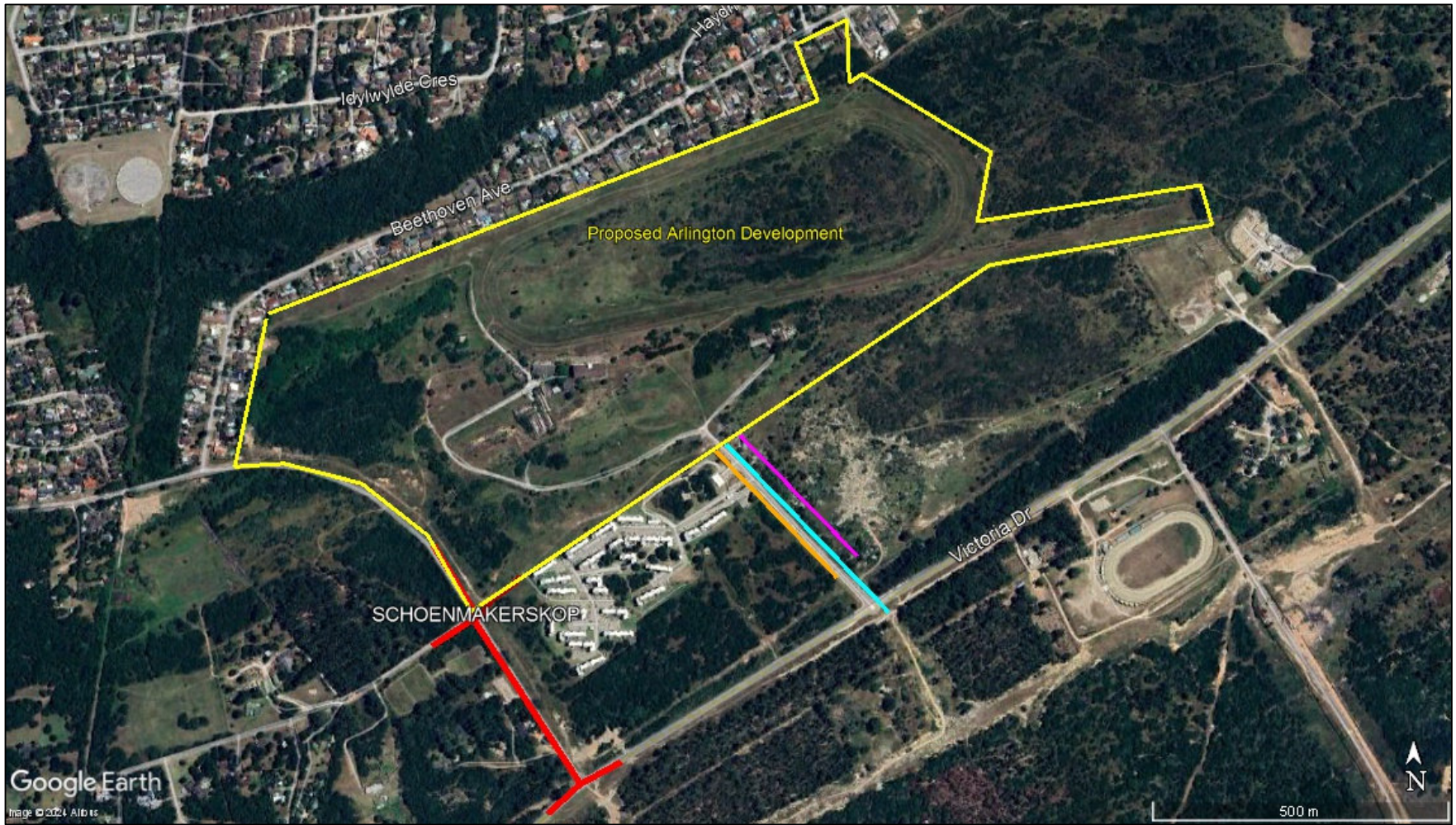


Figure 6. Close-up showing the showing the location of the area for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province.

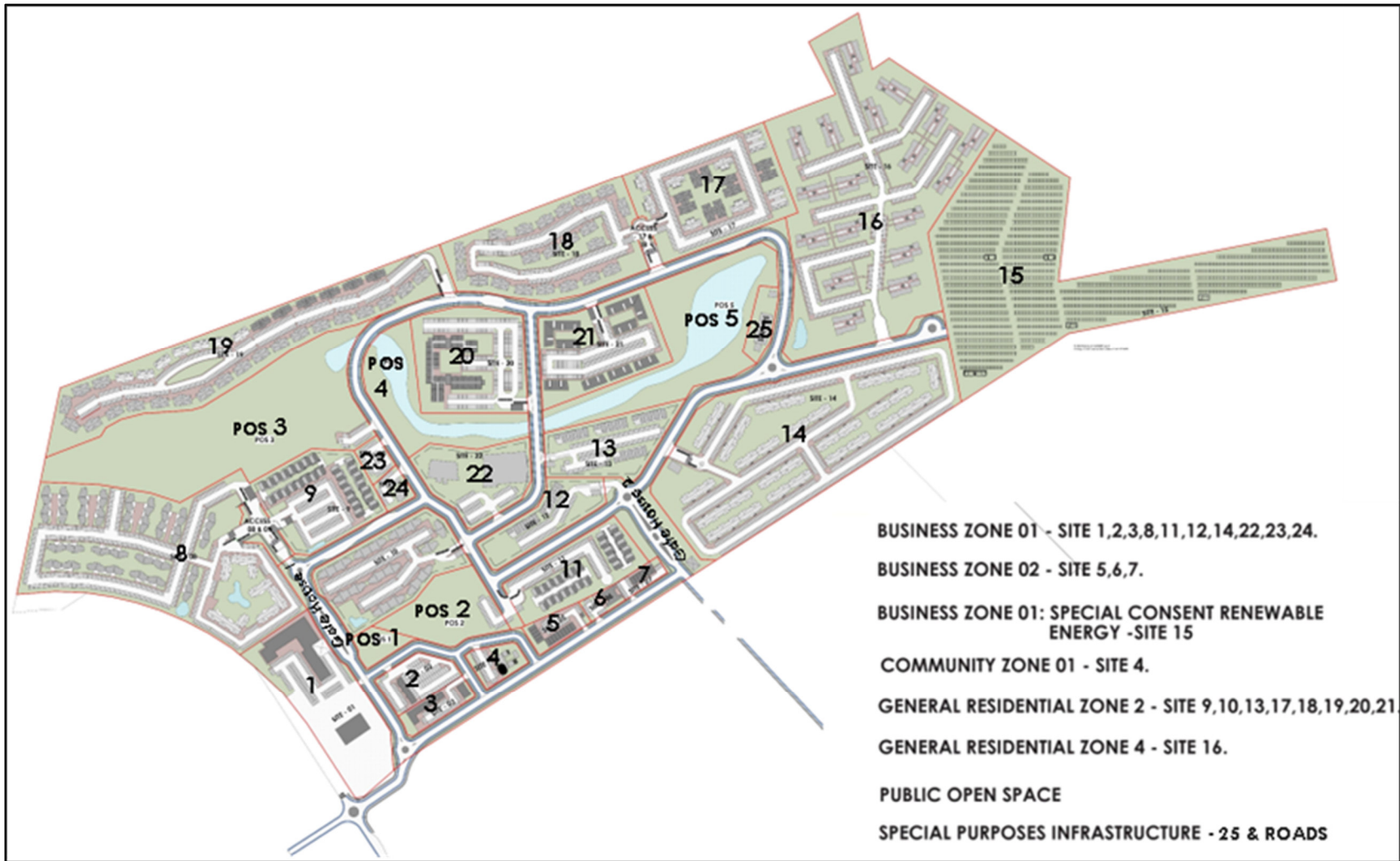


Figure 7. Proposed layout of the Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province.

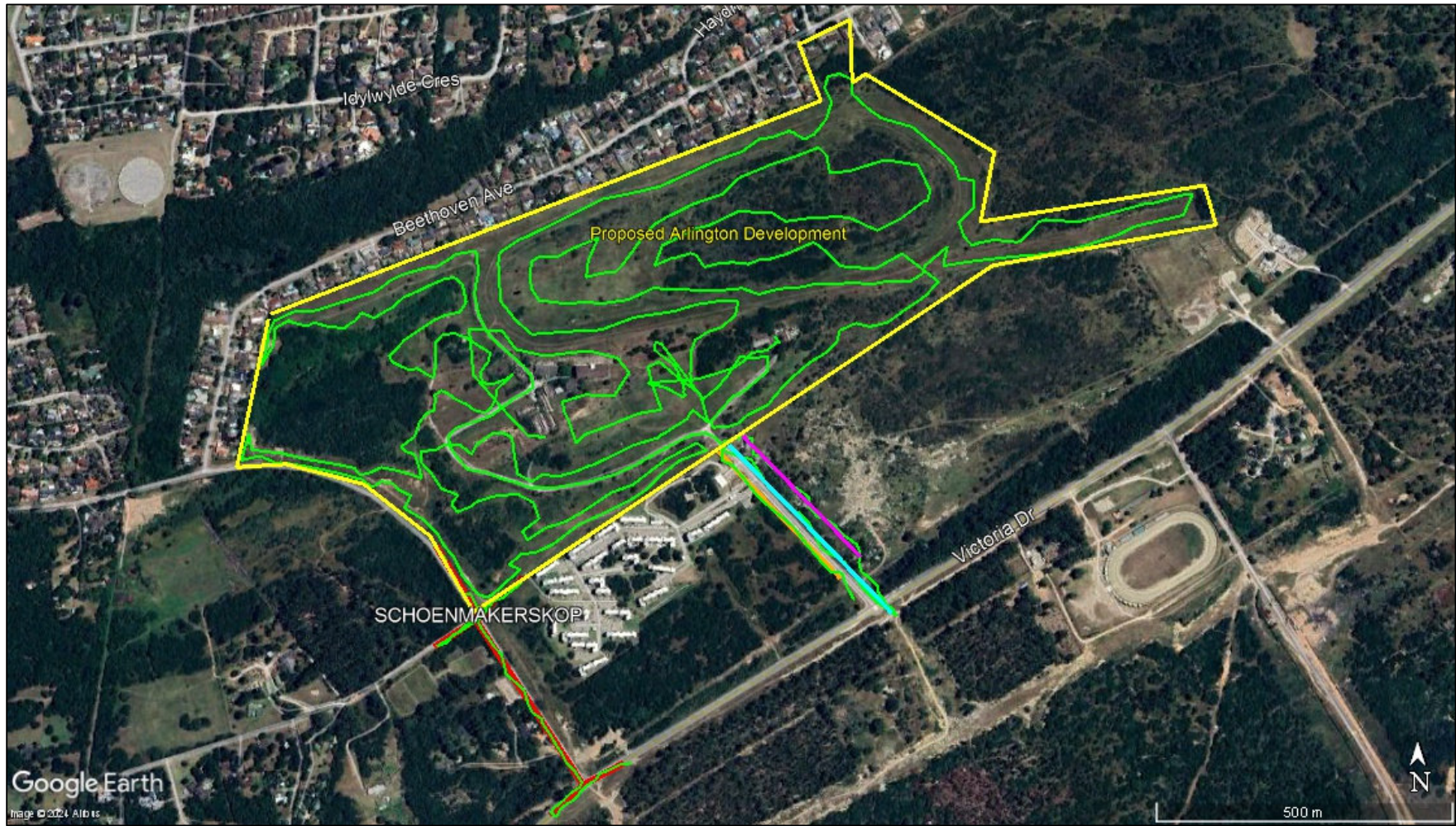


Figure 8. Google Earth generated map the showing the location of the area for the proposed Arlington and survey tracks walked during the field assessment of the site.

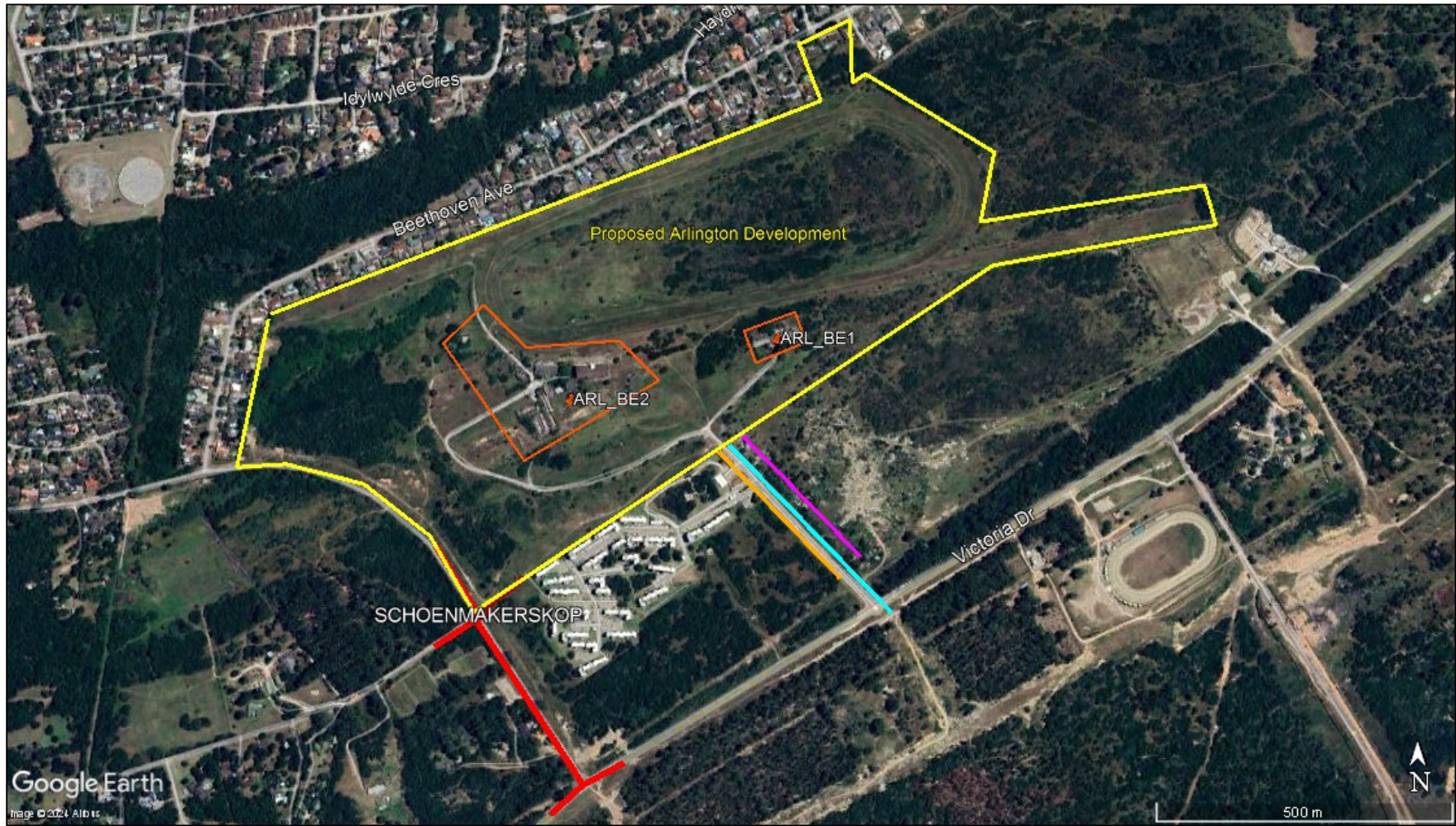


Figure 9. Google Earth generated map the showing the location of the area for the proposed Arlington and the remaining built environment structures (ARL_BE1 and ARL_BE2).

6 ARCHAEOLOGICAL INVESTIGATION

6.1 Methodology

A literature review was conducted prior to the field survey to establish the potential archaeological and cultural heritage sites that may be encountered within the proposed area and provide insight into the archaeological background of the wider region. An archaeological background information chapter has been included in this report.

The survey was conducted on foot. GPS co-ordinates were plotted using the Avenza Maps mapping application.

6.2 Results of the Archaeological Investigation

Arlington itself, previously St Andrews Racing Club, was opened on Saturday 23 December 1950, by the then Mayor of PE, Mr J.C.K. 'Boet' Erasmus. In October 2007, a new stabling complex was completed at Fairview and all the trainers based at Arlington moved across (www.sportingpost.co.za/arlington-closes-fond-farewell-to-arlington). It can be assumed that most of the remaining buildings (Figures 9, 10–13), therefore, are older than 60 years and are protected under Section 34 of the National Heritage Resources Act 25 of 1999. A demolition permit is required from the Eastern Cape Provincial Heritage Resources Authority (ECPHRA). It is suggested that a built environment specialist or an historical architect be approached to conduct a built environment heritage assessment and advise on the permit application process.

Dense thicket vegetation and dense grass vegetation occurred over the entire area (Figures 14-23). There were very few areas that were surface exposed and allowed for any possible indication of archaeological materials and sites that may occur underneath the surface.

No archaeological, historical or other heritage material, sites or features were identified during the survey for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province.

However, previous surveys conducted within the surrounding area, especially, towards coastline have recorded historical material dumped within the Driftsands and shell middens extending along the coastline (Figure 4). The proposed development site is located within 5 km of the nearest coastline which is generally considered an archaeologically sensitive area, up to 5 km, but can extend further inland considering varying landscapes.

An exposed dune surface area has exposed an archaeological site at the eastern end of the Walmer Heights residential area, about 300 m – 400 m of the proposed Arlington development (Figure 5). An archaeological human burial was found exposed during 2019 by a member of the public which was investigated and removed by the Walmer South

African Police Services (SAPS) and is currently being housed at the Albany Museum, which is the provincial archaeological repository in the Eastern Cape Province.



Figure 10. View from the entrance to the premises showing the remains of the built environment complex (ARL_BE2).



Figure 11. View of remains of the built environment complex (ARL_BE2) from the south-west.



Figure 12. View of remains of the built environment complex (ARL_BE2) from the north-east.



Figure 13. View of remains of the built environment complex (ARL_BE1).



Figure 14. View of the general landscape of the proposed development area facing the racecourse.



Figure 15. View of the general landscape of the proposed development area facing the racecourse.



Figure 16. View of the general landscape of the proposed development area facing the racecourse.



Figure 17. View of the general landscape of the proposed development area facing the racecourse.



Figure 18. View of the general landscape of the proposed development area facing the racecourse.



Figure 19. View of the entry / exit point to the property showing the location of proposed pipelines and pedestrian walkway.



Figure 20. View of the general landscape of the proposed development.



Figure 21. View of the general landscape of the proposed development area.



Figure 22. View of the general landscape of the proposed development area.



Figure 23. View of the general landscape of the proposed development area.

7 COORDINATES AND SITES FOR THE PHASE 1 ARCHAEOLOGICAL AND CULTURAL HERITAGE ASSESSMENT FOR THE PROPOSED ARLINGTON MULTIPLE-USE DEVELOPMENT, WALMER, GQEBERHA, NELSON MANDELA BAY MUNICIPALITY, EASTERN CAPE PROVINCE

Table 2. Coordinates and sites for the Phase 1 Archaeological and Cultural Heritage Assessment for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province.

REFERENCE	DESCRIPTION	CO-ORDINATE	HERITAGE GRADING
Proposed Arlington Development	Location of the proposed Arlington Development	34° 0'2.92"S; 25°33'31.52"E	N/A
ARL_BE1	Remains of built environment structures	34° 0'8.65"S; 25°33'43.88"E	Not graded
ARL_BE2	Remains of built environment structures	34° 0'12.04"S; 25°33'30.10"E	Not graded
Archaeological Site	Exposed dune surface area located 300m – 400m west of the proposed development area	33°59'48.03"S; 25°34'0.08"E	Not yet graded (medium – high significance)
1	Webley 2005	34° 1'4.79"S; 25°32'9.94"E	N/A
2	Webley 2007	34° 2'4.91"S; 25°33'6.94"E	N/A
3	Booth 2013	34° 0'53.95"S; 25°33'34.39"E	N/A
4	Binneman & Booth 2010	34° 2'12.21"S; 25°35'59.57"E	N/A
5	Van Ryneveld 2010	33°59'22.36"S; 25°34'20.93"E	N/A
5	Van Ryneveld 2010	34° 0'47.90"S; 25°35'57.21"E	N/A
6	Van Ryneveld 2013	33°58'52.76"S; 25°36'23.56"E	N/A
7	Booth 2014a	33°59'53.29"S; 25°34'13.88"E	N/A
8	Booth 2014b	34° 0'29.52"S; 25°35'16.55"E	N/A
9	Booth 2017	34° 1'54.06"S; 25°33'2.70"E	N/A
10	Reichert 2022	33°59'23.93"S; 25°33'54.61"E	N/A
11	Booth 2019	34° 0'46.85"S; 25°33'49.75"E	N/A
11	Booth 2019	34° 0'52.10"S; 34° 0'52.10"S	N/A
12	Booth 2018	34° 0'46.54"S; 25°37'9.05"E	N/A

12	Booth 2018	34° 1'48.40"S; 25°33'18.95"E	N/A
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8 DESCRIPTION AND GRADING OF SITES

8.1 Built Environment Structures (ARL_BE1 and ARL_BE2)

It can be assumed that most of the remaining buildings (Figures 9, 10–13), therefore, are older than 60 years and are protected under Section 34 of the National Heritage Resources Act 25 of 1999. A demolition permit is required from the Eastern Cape Provincial Heritage Resources Authority (ECPHRA).

It is suggested that a built environment specialist or an historical architect be approached to conduct a built environment heritage assessment and advise on the permit application process.

8.2 Archaeological Sites

No archaeological, cultural or heritage sites, resources or features were identified during the survey for the proposed Arlington development. However, due to the proposed development site's location within an archaeologically sensitive coastal zone and a known archaeological site occurring 300m – 400 m east of the site, as well as the results of previous archaeological and cultural heritage assessments.

The proposed development area within the wider cultural landscape can be considered as having a *medium – high archaeological and cultural heritage significance*.

9 CULTURAL LANDSCAPE

Cultural landscapes are a significant considering factor when conducting various archaeological and heritage impact assessments for proposed developments. The proposed Phase 1 Archaeological and Cultural Heritage Assessment for the proposed Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay Municipality, Eastern Cape Province is considered as a *low archaeological heritage significance* as no archaeological cultural material, sites, or features were identified.

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.

Cultural landscapes are increasingly becoming a significant considering factor when conducting various archaeological and heritage impact assessments for proposed developments. 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 is 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 of 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.

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 economic 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 important 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

The proposed development area and the surrounding 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 area proposed for the mining right application. 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 areas fit 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 area of the mining site were granted during the early and mid-1800's. It is speculated that the current mining 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 an *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.

10 ASSESSMENTS OF IMPACTS ON THE ARCHAEOLOGICAL HERITAGE RESOURCES

Negative impact on the archaeological and cultural landscape is considered is possible even though no material heritage resources were observed during the survey. Unseen below surface material resources, such as stone artefacts and unmarked human burials will be negatively impacted if not mitigated appropriately during the course of the proposed development and the recommendations and mitigation measures in this report are ignored.

11 LIMITATIONS AND GAPS IN KNOWLEDGE

The gathering of information, consultation and research is limited to archaeological heritage data that is known and has been recorded over time. 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 region. These impact assessments have identified several Early, Middle, and Later Stone Age artefact scatters and sites, coastal archaeological sites, historical artefacts and built environment structures, as well as evidence of Iron Age agropastoralist occupation and/or interaction by the presence of broken earthenware pot sherds and associated material culture and settlement patterns.

It is always ideal for the entire area to be surveyed on foot especially areas that have not been researched extensively or at all. The identification of archaeological / historical heritage sites is limited to the surface and in areas where archaeological visibility may be hindered by dense vegetation cover, limited to the investigation of disturbed surface areas. The state of archaeological remains can only be determined by surface observation which in itself is limited and does not expose the true state of archaeological evidence. However, a physical survey observation is able to assess the environment where a desktop assessment cannot do justice in determining the significance of the archaeological sensitivity of the proposed development area.

Most importantly, archaeological and heritage resources are a non-renewable resource that cannot be replaced once lost or destroyed, therefore, every effort should be taken to preserve or conserve the most significant of heritage resources. Mitigation measures have

been recommended by the author and should be respected and implemented prior to the commencement of the proposed development.

12 RECOMMENDATIONS AND MITIGATION

The proposed development can be considered as having a *low archaeological heritage significance* from the lack of archaeological material, sites, and features identified during the survey. However, due to the proposed development site's location within an archaeologically sensitive coastal zone and a known archaeological site occurring 300m – 400 m east of the site, as well as the results of previous archaeological and cultural heritage assessments, the proposed development area within the wider cultural landscape can be considered as having a *medium – high archaeological heritage significance*.

Development may proceed as planned however the following recommendations must be considered prior to the commencement of development:

1. A built environment specialist or an historical architect be approached to conduct a built environment heritage assessment and advise on the permit application process for the demolition of the remaining buildings.
2. A professional archaeologist must be appointed, at the expense of the developer to monitor all excavations for the proposed development. The archaeologist must mitigate in the instance of sites being uncovered during the course of the excavations. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the findings will then be conducted to establish the contextual status of the sites and remove the archaeological deposit before development activities continue.
3. 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.
4. If concentrations of pre-colonial archaeological heritage material, historical archaeological material, and/or human remains (including graves and burials) are uncovered during construction of the proposed development and / or future excavations for individual graves, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the findings will then be conducted to establish the contextual status of the sites and remove the archaeological deposit before development activities continue.

13 CONCLUSION

The purpose of the study was to conduct an archaeological and cultural heritage assessment for the proposed development of the Arlington multiple-use development, Walmer, Gqeberha, Nelson Mandela Bay 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.

The proposed development can be considered as having a *low archaeological heritage significance* from the lack of archaeological material, sites, and features identified during the survey. However, due to the proposed development site's location within an archaeologically sensitive coastal zone and a known archaeological site occurring 300m – 400 m east of the site, as well as the results of previous archaeological and cultural heritage assessments, the proposed development area within the wider cultural landscape can be considered as having a *medium – high archaeological heritage significance*.

The recommendations must be considered prior to the commencement of development and implemented during the course of development and be included as part of the environmental management plan for the project.

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15 RELEVANT ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENTS

Very little systematic archaeological research has been conducted within the immediate and surrounding areas for the proposed project, therefore, Cultural Resource Management (CRM) Reports, such as archaeological and heritage impact assessments, assist in attempting to predict the archaeological and heritage resources that may be found within the proposed development areas. The following reports are considered relevant to the current project:

- 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, Extern Cape Province.
- 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. 2010. A phase 1 archaeological heritage impact assessment for the proposed rezoning and subdivision of farm 36 and 37, Theescombe, Port Elizabeth. Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape province for the development of 2 residential nodes, lodge, and nature reserve.
- 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. 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. & 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 far, (Site Alternative 3), Nelson Mandela Metropolitan Municipality, Eastern Cape Province.
- Booth, C. 2013a. A phase 1 archaeological impact assessment (AIA) for the Airports Company of South Africa (ACSA) proposed Port Elizabeth airport stormwater upgrade, Walmer, Nelson Mandela Bay Municipality, Eastern Cape Province.
- Booth, C. 2013b. 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.

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- Booth, C. 2017. A phase 1 archaeological impact assessment (AIA) for the proposed mining permit application on the southern portion of Erf 118 and Erf 119, Victoria Drive, Schoenmakerskop, Port Elizabeth, Nelson Mandela Metropolitan Municipality, Eastern Cape Province.
- Booth, C. 2018. Phase 1 archaeological impact assessment for the proposed mining right application on several erven in the Driftsands Area, Port Elizabeth, Nelson Mandela Bay Municipality (NMBM), Eastern Cape Province.
- Booth, C. 2019. Phase 1 archaeological impact assessment for the proposed mining permit application Glendore Rover Sand Pit, Erf 118, Schoenmakerskop, Port Elizabeth, Nelson Mandela Bay (NMB) Municipality, Eastern Cape Province.
- Reichert, K. 2022. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for a proposed business (1) development on Erf 7005 portion of Erf 1935 in Walmer, Gqeberha (Port Elizabeth), Nelson Mandela Bay Municipality, Eastern Cape Province
- Van Ryneveld, K. 2010. Phase 1 archaeological impact assessment: Driftsands collector sewer augmentation, Port Elizabeth (Nelson Mandela Bay Municipality), Eastern Cape, South Africa.
- Van Ryneveld, K. 2013. Phase 1 archaeological impact assessment: Walmer stormwater detention ponds and associated infrastructure, Erven 1935 and 7006, Walmer, Nelson Mandela Bay Municipality, Eastern Cape Province, South Africa.
- 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.

16 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: HERITAGE LEGISLATIVE REQUIREMENTS

Sections 3, 34, 35, 36, 38, 48, 49 and 51 of the National Heritage Resources Act 25 of 1999 apply:

S3. National estate

(1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

(2) Without limiting the generality of subsection (1), the national estate may include –

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including –
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves 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) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of ¹⁹ 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

- (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.
- (2) Within three months of the refusal of the provincial heritage resources authority to issue a permit, consideration must be given to the protection of the place concerned in terms of one of the formal designations provided for in Part 1 of this Chapter.
- (3) The provincial heritage resources authority may at its discretion, by notice in the Provincial Gazette, make an exemption from the requirements of subsection (1) within a defined geographical area, provided that it is satisfied that heritage resources falling into the defined area or category have been identified and adequately provided for in terms of the provisions of Part 1 of this Chapter.
- (4) Should the provincial heritage resources authority believe it to be necessary if by, following a three-month notice period published in the Provincial Gazette, withdraw or amend a notice under subsection (3).

S35. Archaeology, palaeontology and meteorites

- (1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and maritime cultural zone shall be the responsibility of SAHRA.
- (2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collation policy acceptable to the heritage resources authority and may in doing so establish such terms and conditions as it sees fit for the conservation of such objects.
- (3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority or museum, which must immediately notify such heritage resources authority.
- (4) No person may, without a permit issued by the responsible heritage resources authority—
 - (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
 - (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
 - (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
 - (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- (5) When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is under way, and where no application for a permit has been submitted and not heritage resources management procedure in terms of section 38 has been followed, it may –
 - (a) Serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
 - (b) Carry out an investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
 - (c) If mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
 - (d) Recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.

- (5) The responsible heritage resources authority may, after consultation with the owner of the land on which archaeological or palaeontological site or a meteorite is situated, serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.
- (6)(a) Within a period of two years from the commencement of this Act, any person in possession of any archaeological or palaeontological material or object or any meteorite which was acquired other than in terms of a permit issued in terms of this Act, equivalent provincial legislation or the National Monuments Act, 1969 (Act No. 28 of 1969), must lodge with the responsible heritage resources authority lists of such objects and other information prescribed period shall be deemed to have been recovered after the date on which this Act came into effect.
 - (b) Paragraph (a) does not apply to any public museum or university.
 - (c) The responsible authority may at its discretion, by notice in the Gazette or the Provincial Gazette, as the case may be, exempt any institution from the requirements of paragraph (a) subject to such conditions as may be specified in the notice, and may by similar notice withdraw or amend such exemption.
- (8) and object or collection listed under subsection (7) -
 - (a) remains in the ownership of the possessor for the duration of his or her lifetime, and SAHRA must be notified who the successor is; and
- (9) must be regularly monitored in accordance with regulations by the responsible heritage authority.

S36. Burial grounds and graves

- (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.
- (2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.
- (3)(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.
- (3) SAHRA or provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.
- (4) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority -
 - (a) Made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
 - (b) Reached agreements with such communities and individuals regarding the future of such grave or burial ground.
- (5) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority -
 - (b) Carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
 - (c) If such grave is protected or is of significance, assist any person who or community which is the direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

- (6)(a) SAHRA must, over a period of five years from the commencement of this Act, submit to Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agent's provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.
- (d) The Minister must publish such lists as he or she approved in the Gazette.
- (6) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.
- (7) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may reinter the remains of that person in a prominent place in the capital of the Republic.

S.37 Public monuments and memorials

Public monuments and memorials must, without the need to publish a notice to this effect, be protected in the same manner as places which are entered in a heritage register referred to in section 30.

S38. Heritage resources management

- (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 5 000 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.
- (2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection (1) –
- (a) if there is a reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or
 - (b) notify the person concerned that this section does not apply.
- (3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:
- (a) The identification and mapping of all heritage resources in the area affected;
 - (b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
 - (c) An assessment of the impact of development on such heritage resources;
 - (d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
 - (e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

- (f) If heritage resources will be adversely affected by the proposed development, the consideration of alternative; and
 - (g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.
- (4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development, decide –
- (a) whether or not the development may proceed;
 - (b) any limitations or conditions to be applied to the development;
 - (c) what the general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;
 - (d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of development; and
 - (e) whether the appointment of specialists is required as a condition of approval of the proposal.
- (5) A provincial heritage resources authority may not make any decision under subsection (4) with respect to any development with impacts on a heritage resource protected at national level unless it has consulted SAHRA.
- (6) The applicant may appeal against the decision of the provincial heritage resources authority to the MEC, who –
- (a) must consider the views of both parties; and
 - (b) may at his or her discretion –
 - (i) appoint a committee to undertake an independent review of the impact assessment report and the decision of the responsible heritage resources authority;
- And
- (ii) consult SAHRA; and
 - (c) must uphold, amend or overturn such decision.
- (7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by SAHRA unless the authority concerned decides otherwise.
- (8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the impact of such development of heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environmental Affairs and Tourism, or the Mineral Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regards to such development have been taken into account prior to the granting of the consent.
- (9) The provincial heritage resources authority, with the approval of the MEC, may, by the notice in the Provincial Gazette, exempt from the requirements of this section any place specified in the notice.
- (10) Any person who has complied with the decision of a provincial heritage resources authority in subsection (4) or of the MEC in terms of subsection (6) or other requirements referred to in subsection (8), must be exempted from compliance with all other protections in terms of this part, but any existing heritage agreements made in terms of section 42 continue to apply.

S48. Permits

- (1) A heritage resources authority may prescribe the manner in which an application is made to it for any permit in terms of this Act and other requirements for permit applications, including –
- (a) any particulars or information to be furnished in the application and any documents, drawings, plans, photographs and fees which should accompany the application;
 - (b) minimum qualifications and standards of practice required of persons making application for a permit to perform specified actions in relation to particular categories of protected heritage resources;
 - (c) standards and conditions for the excavation and curation of archaeological and palaeontological objects and material and meteorites recovered by authority of a permit;

- (d) the conditions under which, bore a permit is issued, a financial deposit must be lodged and held in trust for the duration of the permit or such period as the heritage resources authority may specify, and conditions of forfeiture of such deposit;
 - (e) conditions for the temporary export and return of objects under section 32 or section 35;
 - (f) the submission of reports on work done under authority of a permit; and
 - (g) the responsibilities of the heritage resources authority regarding monitoring of work done under authority of a permit.
- (2) On application by any person in the manner prescribed under subsection (1), a heritage resources authority may in its discretion issue to such person a permit to perform such actions at such time and subject to such terms, conditions and restrictions or directions as may be specified in the permit, including a condition –
- (a) that the applicant give security in such form and such amount determined by the heritage resources authority concerned, having regard to the nature and extent of the work referred to in the permit, to ensure the satisfactory completion of such work or the curation of objects and material recovered during the course of the work; or
 - (b) providing for the recycling or deposit in a materials bank of historical building materials; or
 - (c) stipulating that design proposals be revised; or
 - (d) regarding the qualifications and expertise required to perform those actions for which the permit is issued.
- (3) A heritage resources authority may at its discretion, in respect of any heritage resource protected by it in terms of the provisions of Chapter II, by notice in the Gazette or the Provincial Gazette, as the case may be, grant an exemption from the requirement to obtain a permit from it for such activities or class of activities by such persons or class of persons in such circumstances as are specified in the notice.

S49. Appeals

- (1) Regulations by the Minister and the MEC must provide for a system of appeal to the SAHRA Council for a provincial heritage resources council against a decision of a committee or other delegated representative of SAHRA or a provincial heritage resources body authority.
- (2) Anybody wishing to appeal against a decision of the SAHRA Council or the council of a provincial heritage resources authority must notify the Minister or MEC in writing within 30 days. The Minister or MEC, must have due regards to –
- (a) the cultural significance of the heritage resources in question;
 - (b) heritage conservation principles; and
 - (c) any other relevant factor which is brought to its attention by the appellant or the heritage resources authority.

S51. Offences and penalties

- (1) Notwithstanding the provisions of any other law, any person who contravenes –
- (a) sections 27(18), 29(10), 32(13) OR 32(19) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 1 of the Schedule;
 - (b) sections 33(2), 35(4) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 2 of the Schedule;
 - (c) sections 28(3) or 34(1) are guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 3 of the Schedule;
 - (d) sections 27(22), 32(15), 35(6), or 44(3) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 4 of the Schedule;
 - (e) sections 27(23)(b), 32(17), 35(3) or 51(8) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 5 of the Schedule;
 - (f) sections 32(13), 32(16), 32(20), 35(7)(a), 44(2), 50(5) or 50(12) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 6 of the Schedule.
- (2) The Minister, with the concurrence of the relevant MEC, may prescribe a penalty of a fine or of imprisonment for a period not exceeding six months for any contravention or failure to comply with regulations by heritage resources authorities or by-laws by local authorities.
- (3) The Minister or the MEC, as the case may be, may make regulations in terms of which the magistrate of the district concerned may –

- (a) levy admission of guild fines up to a maximum amount of R10 000 for infringement of the terms of this Act for which such heritage resources authority is responsible; and
 - (b) serve a notice upon a person who is contravening a specified provision of this Act or has not complied with the terms of a permit issued by such authority, imposing a daily fine of R50 for the duration of the contravention, subject to a maximum period of 365 days.
- (4) The Minister may from time to time by regulation adjust the amounts referred to in subsection (3) in order to account for the effect of inflation.
- (5) Any person who-
- (a) fails to provide any information that is required to be given, whether or not on the request of a heritage resources authority, in terms of this Act;
 - (b) for the purpose of obtaining, whether for himself or herself or for any other person, any permit, consent or authority in terms of this Act, makes any statement or representation knowing it to be false or not knowing or believing it to be true;
 - (c) fails to comply with or perform any act contrary to the terms, conditions, restrictions or directions subject to which any permit, consent or authority has been issued to him or her in terms of this Act;
 - (d) obstructs the holder of a permit in terms of this Act in exercising a right granted to him or her by means of such a permit;
 - (e) damages, takes, or removes, or causes to be damaged, taken or removed from a place protected in terms of this Act any badge or sign erected by a heritage authority or a local authority under section 25(2)(j) or section 27(17), any interpretive display or any other property or thing.
 - (f) receives any badge, emblem or any other property or thing unlawfully taken or removed from a place protected in terms of this Act; and
 - (g) within the terms of this Act, commits or attempts to commit any other unlawful act, violates any prohibition or fails to perform any obligation imposed upon him or by its terms, or who counsels, procures, solicits or employs any other person to do so.
- shall be guilty of an offence and upon conviction shall be liable to such maximum penalties, in the form of a fine or imprisonment or both such fine and such imprisonment, as shall be specified in the regulations under subsection (3).
- (6) Any person who believes that there has been an infringement of any provision of this Act, may lay a charge with the South African Police Service or notify a heritage resources authority.
- (7) A magistrate's court shall, notwithstanding the provisions of any other law, be competent to impose any penalty under this Act.
- (8) When any person has been convicted of any contravention of this Act which has resulted in damage or to alteration of a protected heritage resource the court may -
- (a) order such person to put right the result of the act of which he or she was guilty, in the manner so specified and within such period as may be so specified, and upon failure of such person to comply with the terms of such order, order such person to pay to the heritage resources authority responsible for the protection of such resource a sum equivalent to the cost of making good; or
 - (b) when it is of the opinion that such a person is not in a position to make good damage done to a heritage resources by virtue of the offender not being the owner or occupier of a heritage resources or for any other reason, or when it is advised by the heritage resources authority responsible for the protection of such resource that it is unrealistic or undesirable to require that the results of the act be made good, order such person to pay the heritage resources authority a sum equivalent to the cost of making good.
- (9) In addition to other penalties, if the owner of a place has been convicted of an offence in terms of this Act involving the destruction of, or damage to, the place, the Minister on the advice of SAHRA or the MEC on the advice of a provincial heritage resources authority, may serve on the owner an order that no development of such place may be undertaken, except when making good the damage and maintaining the cultural value of the place, or for a period not exceeding 10 years specified in the order.
- (10) Before making the order, the local authority and any person with a registered interest in the land must be given a reasonable period to make submissions on whether the order should be made and for how long.
- (11) An order of no development under subsection (9) attaches to the land and is binding not only on the owner as at the date of the order, but also on any person who becomes an owner of the place while the order remains in force.
- (12) The Minister on the advice of SAHRA, may reconsider an order of no development and may in writing amend or repeal such order.

(13) In any case involving vandalism, and whenever else a court deems it appropriate, community service involving conservation of heritage resources may be substituted for, or instituted in addition to, a fine or imprisonment.

(14) Where a court convicts a person of an offence in terms of this Act, it may order for forfeiture to SAHRA or the provincial heritage resources authority concerned, as the case may be, of a vehicle, craft, equipment or any other thing used or otherwise involved in the committing of the offence.

(15) A vehicle, craft, equipment or other thing forfeited under subsection (14) may be sold or otherwise disposed of as the heritage resources authority concerned deems fit.

APPENDIX B: GRADING SYSTEM

The National Heritage Resources Act 25 of 1999 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 C: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM COASTAL AND INLAND AREAS: guidelines and procedures for developers

1. Stone artefacts

Stone artefacts are the most common and identifiable precolonial artefacts occurring on the South Africa landscape. Early Stone Age, Middle Stone Age and Later Stone Age stone artefacts occur in various concentrations on the South Africa landscape. Stone artefacts are very commonly found occurring on flat floodplains in a mostly secondary or disturbed context. However, they can be also be found in an *in situ* or undisturbed context in areas where little human or animal impact happens such as open sites mostly near rocky outcrops, amongst boulders and caves.

These may be 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.



Early Stone Age (ESA) stone artefact
(1.5 million years ago – 250 000 years ago)



Middle Stone Age stone artefacts
(250 000 – 30 000 years ago)



Later Stone Age stone artefacts
(30 000 years ago – historical times)



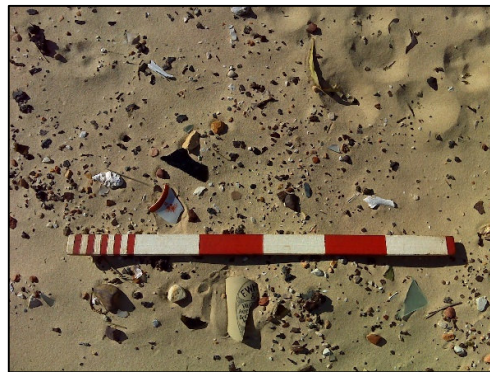
2. Pottery scatters

Pottery scatters can be associated with either Khoekhoen pastoralists, the Nguni first farming communities (referred to as the South African Iron Age) or colonial settlement and can be dated to within the last 2 000 years which occur both at the coast and inland. Pottery associated with Bushmen / hunter-gatherers is generally thought to occur in the Karoo region. The most obvious difference between Khoekhoen and Nguni pottery are the decorations, shapes, sizes and wall thickness. Khoekhoen pottery is generally thinner than the thicker walled and robust Nguni pottery. Colonial ceramics ranges from earthenware, stoneware, porcelain and European glazed and unglazed ceramics.

Precolonial pottery and colonial ceramics are more easily identifiable by the layman and should be reported.



**Khoekhoen earthenware pottery
(last 2 000 years)**



**Iron Age earthenware pottery
(last 2 000 years)**



Examples of 19th century European ceramics

3. Historical artefacts and features

These are easy to identify and include colonial artefacts (such as ceramics, glass, metal, etc.), foundations of buildings or other construction features and items from domestic and military activities associated with early travellers' encounters on the landscape and European settlement.



**Example of a Fortified Structure
(Fort Double Drift)**



Ruin of stone packed dwelling



Glass artefacts

4. Shell middens (marine and freshwater)

Shell middens can be defined as an accumulation of marine or freshwater shell deposited by past human populations rather than the result of natural or animal activity. Marine shell middens occur all along the coast and may extend within 5 km of the coastline. This area is generally regarded as being archaeologically sensitive. The shells are concentrated in a specific locality above the high-water mark and frequently contain various edible and sometimes inedible marine shells, stone tools, pottery, bone (fish and animal) 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. Freshwater shell middens occur along river banks and comprise freshwater shell, fish and animal bone, stone tools, pottery, and sometimes human remains.



Examples of the occurrence of coastal shell middens

5. Large stone features

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



Examples of stone packed features

6. Graves, Burials and Human Skeletal material

Formal historical graves are easily identifiable as they are in most cases fenced off or marked with engraved headstones. Informal stone packed graves in several instances also occur within these fenced off areas.

It is difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. Several human remains have been rescued eroding out of the dunes along this coastline and dongas in inland areas. In some instances, packed stones or rocks may indicate the presence of informal pre-colonial burials.

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.



Exposed human remains eroding out a coastal shell midden.



Exposed human remains eroding out an inland donga