EOH COASTAL & ENVIRONMENTAL SERVICES: PROPOSED ILITHA HOUSING DEVELOPMENT PROJECT, ILITHA, BUFFALO CITY METROPOLITAN MUNICIPALITY, EASTERN CAPE PROVINCE

Archaeological Impact Assessment

Prepared for: EOH Coastal & Environmental Services
Prepared by: Exigo Sustainability
ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED ESTABLISHMENT OF A HOUSING DEVELOPMENT NEAR ILITHA, BUFFALO CITY METROPOLITAN MUNICIPALITY, EASTERN CAPE PROVINCE

Conducted on behalf of:
EOH Coastal & Environmental Services (Port Elizabeth)
Exigo Sustainability

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DECLARATION

I, Nelius Le Roux Kruger, declare that –

- I act as the independent specialist;
- I am conducting any work and activity relating to the proposed Ilitha Housing Development Project in an objective manner, even if this results in views and findings that are not favourable to the client;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have the required expertise in conducting the specialist report and I will comply with legislation, including the relevant Heritage Legislation (National Heritage Resources Act no. 25 of 1999, Human Tissue Act 65 of 1983 as amended, Removal of Graves and Dead Bodies Ordinance no. 7 of 1925, Excavations Ordinance no. 12 of 1980), the Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment (SAHRA and the CRM section of ASAPA), regulations and any guidelines that have relevance to the proposed activity;
- I have not, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my 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;
- All the particulars furnished by me in this declaration are true and correct.

_____________________________________________________
Signature of specialist

Company: Exigo Sustainability
Date: 28 September 2017

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EXECUTIVE SUMMARY

This report details the results of an Archaeological Impact Assessment (AIA) study subject to an Environmental Impact Assessment (EIA) process for the proposed Ilitha Housing Development Project in the Buffalo City Metropolitan Municipality, Eastern Cape Province. The housing development is planned over a surface area of approximately 2.8ha at Ilitha, situated east of King William’s Town. The report includes background information on the area’s archaeology, its representation in Southern Africa, and the history of the larger area under investigation, survey methodology and results as well as heritage legislation and conservation policies. A copy of the report will be supplied to the Eastern Cape Provincial Heritage Resources Authority (Eastern Cape-PHRA) and recommendations contained in this document will be reviewed.

### Project Details

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<thead>
<tr>
<th><strong>Project Title</strong></th>
<th>Ilitha Housing Development Project</th>
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<tbody>
<tr>
<td><strong>Project Location</strong></td>
<td>S32.891515° E27.537315°</td>
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<tr>
<td><strong>1:50 000 Map Sheet</strong></td>
<td>3227DC</td>
</tr>
<tr>
<td><strong>Farm Portion / Parcel</strong></td>
<td>Ilitha Commonage</td>
</tr>
<tr>
<td><strong>Magisterial District / Municipal Area</strong></td>
<td>Buffalo City Metropolitan Municipality</td>
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<tr>
<td><strong>Province</strong></td>
<td>Eastern Cape Province</td>
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A number of archaeological and historical studies have been conducted in Eastern Cape and around King William’s Town, most of which infer a varied and rich heritage landscape. The literature shows evidence of an archaeological heritage that spans from the Early Stone Age, Middle Stone Age to the Later Stone Age, as well as evidence of pastoralism and Iron Age farmers. In terms of heritage resources, the landscape around the project area is primarily well known for the occurrence of Herder, Rock Art and Historical Period occurrences. However, the proposed Ilitha Housing Development Project footprint is situated over an area that has been transformed by urbanisation and development. As a consequence, much of the direct surroundings have sterilised the area of potential heritage resources - especially those dating to pre-Colonial and prehistoric times and no sites of heritage potential were identified in the project area. The following general recommendations are made based on observations in the project area:

- A Palaeontological Desktop Assessment for the project has been commissioned but as a general rule, any fossil remains such as fossil fish, reptiles or petrified wood exposed during construction should be carefully safeguarded and the relevant heritage resources authority (Eastern Cape-PHRA) should be notified immediately so that the appropriate action can be taken by a professional palaeontologist.
- Considering the localised nature of heritage remains, the general monitoring of the development progress by an ECO is recommended for all stages of the project. Should any subsurface palaeontological, archaeological or historical material, or burials be exposed during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately.
- It is essential that cognisance be taken of the larger archaeological landscape of the area in order to avoid the destruction of previously undetected heritage sites. It should be stated that the possibility of undetected archaeological remains occurring elsewhere in the project area should not be excluded. Burials and historically significant structures dating to the Colonial Period occur on farms in the area.
and these resources should be avoided during all phases of construction and development, including the operational phases of the development. Should any previously undetected heritage resources be exposed or uncovered during construction phases of the proposed project, these should immediately be reported to SAHRA.

- Since the intrinsic heritage and social value of graves and cemeteries are highly significant, these resources require special management measures. Should human remains be discovered at any stage, these should be reported to the Heritage Specialist and relevant authorities (SAHRA) and development activities should be suspended until the site has been inspected by the Specialist. The Specialist will advise on further management actions and possible relocation of human remains in accordance with the Human Tissue Act (Act 65 of 1983 as amended), the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925), the National Heritage Resources Act (Act no. 25 of 1999) and any local and regional provisions, laws and by-laws pertaining to human remains. A full social consultation process should occur in conjunction with the mitigation of cemeteries and burials.

No heritage resources were noted in the proposed Ilitha Housing Development Project footprint and no impact the heritage landscape is anticipated. In the opinion of the author of this Archaeological Impact Assessment Report, the proposed project should proceed from a culture resources management perspective, provided that previously undetected heritage remains are encountered during construction and development.

This report details the methodology, limitations and recommendations relevant to these heritage areas, as well as areas of proposed development. It should be noted that recommendations and possible mitigation measures are valid for the duration of the development process, and mitigation measures might have to be implemented on additional features of heritage importance not detected during this Phase 1 assessment (e.g. uncovered during the construction process).
NOTATIONS AND TERMS/TERMINOLOGY

Absolute dating: Absolute dating provides specific dates or range of dates expressed in years.

Archaeological record: The archaeological record minimally includes all the material remains documented by archaeologists. More comprehensive definitions also include the record of culture history and everything written about the past by archaeologists.

Artefact: Entities whose characteristics result or partly result from human activity. The shape and other characteristics of the artefact are not altered by removal of the surroundings in which they are discovered. In the Southern African context examples of artefacts include potsherds, iron objects, stone tools, beads and hut remains.

Assemblage: A group of artefacts recurring together at a particular time and place, and representing the sum of human activities.

Context: An artefact’s context usually consists of its immediate matrix, its provenience and its association with other artefacts. When found in primary context, the original artefact or structure was undisturbed by natural or human factors until excavation and if in secondary context, disturbance or displacement by later ecological action or human activities occurred.

Cultural Heritage Resource: The broad generic term Cultural Heritage Resources refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of palaeontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

Cultural landscape: A cultural landscape refers to a distinctive geographic area with cultural significance.

Cultural Resource Management (CRM): A system of measures for safeguarding the archaeological heritage of a given area, generally applied within the framework of legislation designed to safeguard the past.

Feature: Non-portable artefacts, in other words artefacts that cannot be removed from their surroundings without destroying or altering their original form. Hearths, roads, and storage pits are examples of archaeological features.

Lithic: Stone tools or waste from stone tool manufacturing found on archaeological sites.

Matrix: The material in which an artefact is situated (sediments such as sand, ashy soil, mud, water, etcetera). The matrix may be of natural origin or human-made.

Midden: Refuse that accumulates in a concentrated heap.

Microlith: A small stone tool, typically knapped of flint or chert, usually about three centimetres long or less.

Monolith: A geological feature such as a large rock, consisting of a single massive stone or rock, or a single piece of rock placed as, or within, a monument or site.

Phase 1 CRM Assessment: An Impact Assessment which identifies archaeological and heritage sites, assesses their significance and comments on the impact of a given development on the sites. Recommendations for site mitigation or conservation are also made during this phase.

Phase 2 CRM Study: In-depth studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required. Mitigation / Rescue involves planning the protection of significant sites or sampling through excavation or collection (in terms of a permit) at sites that may be lost as a result of a given development.

Phase 3 CRM Measure: A Heritage Site Management Plan (for heritage conservation), is required in rare cases where the site is so important that development will not be allowed and sometimes developers are encouraged to enhance the value of the sites retained on their properties with appropriate interpretive material or displays.

Provenience: Provenience is the three-dimensional (horizontal and vertical) position in which artefacts are found. Fundamental to ascertaining the provenience of an artefact is association, the co-occurrence of an artefact with other archaeological remains; and superposition, the principle whereby artefacts in lower levels of a matrix were deposited before the artefacts found in the layers above them, and are therefore older.

Random Sampling: A probabilistic sampling strategy whereby randomly selected sample blocks in an area are surveyed. These are fixed by drawing coordinates of the sample blocks from a table of random numbers.

Site (Archaeological): A distinct spatial clustering of artefacts, features, structures, and organic and environmental remains, as the residue of human activity. These include surface sites, caves and rock shelters, larger open-air sites, sealed sites (deposits) and river deposits. Common functions of archaeological sites include living or habitation sites, kill sites, ceremonial sites, burial sites, trading, quarry, and art sites.

Stratigraphy: This principle examines and describes the observable layers of sediments and the arrangement of strata in deposits.

Systematic Sampling: A probabilistic sampling strategy whereby a grid of sample blocks is set up over the survey area and each of these blocks is equally spaced and searched.
<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>ASAPA</td>
<td>Association for South African Professional Archaeologists</td>
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<tr>
<td>AIA</td>
<td>Archaeological Impact Assessment</td>
</tr>
<tr>
<td>BP</td>
<td>Before Present</td>
</tr>
<tr>
<td>BCE</td>
<td>Before Common Era</td>
</tr>
<tr>
<td>CRM</td>
<td>Culture Resources Management</td>
</tr>
<tr>
<td>ECO</td>
<td>Environmental Control Officer</td>
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<tr>
<td>EIA</td>
<td>Early Iron Age (also Early Farmer Period)</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>EFP</td>
<td>Early Farmer Period (also Early Iron Age)</td>
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<tr>
<td>ESA</td>
<td>Earlier Stone Age</td>
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<td>GIS</td>
<td>Geographic Information Systems</td>
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<tr>
<td>HIA</td>
<td>Heritage Impact Assessment</td>
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<td>ICOMOS</td>
<td>International Council on Monuments and Sites</td>
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<tr>
<td>K2/Map</td>
<td>K2/Mapungubwe Period</td>
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<tr>
<td>LFP</td>
<td>Later Farmer Period (also Later Iron Age)</td>
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<td>LSA</td>
<td>Later Stone Age</td>
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<tr>
<td>MIA</td>
<td>Middle Iron Age (also Early later Farmer Period)</td>
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<tr>
<td>MSA</td>
<td>Middle Stone Age</td>
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<tr>
<td>NHRA</td>
<td>National Heritage Resources Act No.25 of 1999, Section 35</td>
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<tr>
<td>PFS</td>
<td>Pre-Feasibility Study</td>
</tr>
<tr>
<td>PHRA</td>
<td>Provincial Heritage Resources Authority</td>
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<tr>
<td>SAHRA</td>
<td>South African Heritage Resources Association</td>
</tr>
<tr>
<td>YCE</td>
<td>Years before Common Era (Present)</td>
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1 BACKGROUND

1.1 Scope and Motivation
Exigo Sustainability was commissioned by EOH Coastal & Environmental Services (Port Elizabeth) for an Archaeological Impact Assessment (AIA) study subject to an Environmental Impact Assessment (EIA) process for the Ilitha Housing Development Project in the Buffalo City Metropolitan Municipality, Eastern Cape Province. The rationale of this AIA is to determine the presence of heritage resources such as archaeological and historical sites and features, graves and places of religious and cultural significance in previously unstudied areas; to consider the impact of the proposed project on such heritage resources, and to submit appropriate recommendations with regard to the cultural resources management measures that may be required at affected sites / features.

1.2 Project Direction
Exigo Sustainability’s expertise ensures that all projects be conducted to the highest international ethical and professional standards. As archaeological specialist for Exigo Sustainability, Mr Nelius Kruger acted as field director for the project; responsible for the assimilation of all information, the compilation of the final consolidated AIA report and recommendations in terms of heritage resources on the demarcated project areas. Mr Kruger is an accredited archaeologist and Culture Resources Management (CRM) practitioner with the Association of South African Professional Archaeologists (ASAPA), a member of the Society for Africanist Archaeologists (SAFA) and the Pan African Archaeological Association (PAA) as well as a Master’s Degree candidate in archaeology at the University of Pretoria.

1.3 Project Brief
The proposed Ilitha Housing Development Project footprint is located along the north-eastern periphery of the Ilitha settlement east of King Williams Town in the Eastern Cape Province. Here, a total of 51 residential units are planned over a surface area of approximately 2.8 ha in a peri-urban zone.
Figure 1-1: Aerial representation of the Ilitha Housing Development Project location.
1.4 Terms of Reference

Heritage specialist input into the Environmental Impact Assessment (EIA) process is essential to ensure that, through the management of change, developments still conserve our heritage resources. Heritage specialist input in EIA processes can play a positive role in the development process by enriching an understanding of the past and its contribution to the present. It is also a legal requirement for certain development categories which may have an impact on heritage resources (Refer to Section 2.5.2).

Thus, EIAs should always include an assessment of heritage resources. The heritage component of the EIA is provided for in the National Environmental Management Act, (Act 107 of 1998) and endorsed by section 38 of the National Heritage Resources Act (NHRA - Act 25 of 1999). In addition, the NHRA protects all structures and features older than 60 years, archaeological sites and material and graves as well as burial sites. The objective of this legislation is to ensure that developers implement measures to limit the potentially negative effects that the development could have on heritage resources. Based hereon, this project functioned according to the following terms of reference for heritage specialist input:

- Provide a detailed description of all archaeological artefacts, structures (including graves) and settlements which may be affected, if any.
- Assess the nature and degree of significance of such resources within the area.
- Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance;
- Assess and rate any possible impact on the archaeological and historical remains within the area emanating from the proposed development activities.
- Propose possible heritage management measures provided that such action is necessitated by the development.
- Liaise and consult with the South African Heritage Resources Agency (SAHRA)

1.5 CRM: Legislation, Conservation and Heritage Management

The broad generic term Cultural Heritage Resources refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of palaeontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

1.5.1 Legislation regarding archaeology and heritage sites

The South African Heritage Resources Agency (SAHRA) and its provincial offices aim to conserve and control the management, research, alteration and destruction of cultural resources of South Africa. It is therefore vitally important to adhere to heritage resource legislation at all times.

a. National Heritage Resources Act No 25 of 1999, section 35

According to the National Heritage Resources Act No 25 of 1999 (section 35) the following features are protected as cultural heritage resources:

a. Archaeological artifacts, structures and sites older than 100 years
b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography

c. Objects of decorative and visual arts

d. Military objects, structures and sites older than 75 years

e. Historical objects, structures and sites older than 60 years

f. Proclaimed heritage sites

g. Grave yards and graves older than 60 years

h. Meteorites and fossils

i. Objects, structures and sites of scientific or technological value.

In addition, the national estate includes the following:

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 features of cultural significance

e. Geological sites of scientific or cultural importance

f. Archaeological and paleontological importance

g. Graves and burial grounds

h. Sites of significance relating to the history of slavery

i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.)

With regards to activities and work on archaeological and heritage sites this Act states that:

“No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit by the relevant provincial heritage resources authority.” (34. [1] 1999:58)

and

“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. (35. [4] 1999:58).”
and

“No person may, without a permit issued by SAHRA or a provincial heritage resources agency-

(a) destroy, damage, alter, exhumate 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, exhumate, 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;

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) and excavation equipment, or any equipment which assists in the detection or recovery of metals (36. [3] 1999:60).”

b. Human Tissue Act of 1983 and Ordinance on the Removal of Graves and Dead Bodies of 1925

Graves and burial grounds are commonly divided into the following subsets:

a. ancestral graves
b. royal graves and graves of traditional leaders
c. graves of victims of conflict
d. graves designated by the Minister
e. historical graves and cemeteries
f. human remains

Graves 60 years or older are heritage resources and fall under the jurisdiction of both the National Heritage Resources Act and the Human Tissues Act of 1983. However, graves younger than 60 years are specifically protected by the Human Tissues Act (Act 65 of 1983) and Ordinance on Excavations (Ordinance no. 12 of 1980) as well as any local and regional provisions, laws and by-laws. Such burial places also fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant local authorities.

c. National Heritage Resources Act No 25 of 1999, section 35

This act (Act 107 of 1998) states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made. Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation’s cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

1.5.2 Background to HIA and AIA Studies

South Africa’s unique and non-renewable archaeological and palaeontological heritage sites are ‘generally’ protected in terms of the National Heritage Resources Act (Act No 25 of 1999, section 35) and may not be disturbed at all without a permit from the relevant heritage resources authority. Heritage sites are frequently
threatened by development projects and both the environmental and heritage legislation require impact assessments (HIAs & AIAs) that identify all heritage resources in areas to be developed. Particularly, these assessments are required to make recommendations for protection or mitigation of the impact of the sites. HIAs and AIAs should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources including archaeological and palaeontological sites that might occur in areas of developed and (b) make recommendations for protection or mitigation of the impact on the sites.

A detailed guideline of statutory terms and requirements is supplied in Addendum 1.

2 REGIONAL CONTEXT

2.1 Area Location

The project area for the Ilitha Housing Development Project is located on the north-eastern outskirts of the Ilitha residential zone in the Buffalo City Metropolitan Municipality, Eastern Cape Province. Ilitha is situated more or less 12km east of King Williamstown in the former Ciskei Region, with the N2 freeway passing directly north of the settlement. The settlement of Berlin occurs north-east of Ilitha with Ndevana forming its south-western boundary. The project area appears on 1:50 000 map sheets 3227DC (see Figure 2-1). Key geographical points for the project are:

- Relative Midpoint: S32.891515° E27.537315°

2.2 Area Description: Receiving Environment

King William’s Town and its surrounds are situated on inland plains of the Eastern Cape grasslands, on the foot of the Amatola Mountains in the former Ciskei homeland area at altitudes between 200 – 400m above sea level. The ecological landscape is defined as a combination of mixed grasslands and forest / scrub forest, typically dominated by mixed grassveld and forests at differing altitudes (Acocks 1975). A large number of pioneering plant species occur in the area. The annual rainfall ranges between 1150 to over 1300mm per annum. The geology of the larger region is constituted by mudstones and sandstones and towards the coast, shales, mudstones and sandstones of the Ecca group, with exposures of dolerite intrusions mostly in the higher lying areas are found.

2.3 Site Description

The proposed Ilitha Housing Development Project footprint, which extends over more or less 2.8ha, is situated adjacent to the R102 road directly south of the N2 freeway in an extension of the Ilitha residential area. Large portions of the site have been transformed by apparent historical farming, refuse dumping and burrowing activities. Small footpaths as well as jeep-tracks traverse the site have also cause some erosion. A single residential stand with a corrugated iron dwelling has been fenced off in the north-western section of the project area. A number of irregular stone cairns and structures occur along the R102 at the site and similar structures elsewhere in Ilitha were observed to function as flower bedding enclosures. For the rest of the site, surface grass and single trees and low scrubs remain.
Figure 2-1: 1:50 000 Map representation of the location of the proposed Ilitha Housing Development Project (sheet 3227DC).
Figure 2-2: Aerial map providing a regional setting for the proposed Ilitha Housing Development Project.
3 METHOD OF ENQUIRY

3.1 Sources of Information

Data from detailed desktop, aerial and field studies were employed in order to sample surface areas systematically and to ensure a high probability of heritage sites recording.

3.1.1 Desktop Study

The larger landscape of King William’s Town has been well documented in terms of its archaeology and history. A desktop study was prepared in order to contextualize the proposed project within a larger historical milieu. Numerous academic papers and research articles supplied a historical context for the proposed project and archival sources, aerial photographs, historical maps and local histories were used to create a baseline of the landscape’s heritage. In addition, the study drew on available unpublished Heritage Assessment reports to give a comprehensive representation of known sites in the project area. These included:

and Related Infrastructure, Portion 19 of Farm 925, Cove Rock, East London, Eastern Cape, South Africa


3.1.2 Aerial Representations and Survey

Aerial photography is employed to locate and study archaeological sites, particularly where larger scale area surveys are performed. This method was applied to assist the vehicular and foot site survey where depressions, variation in vegetation, soil marks and landmarks were examined. Specific attention was given to shadow sites (shadows of walls or earthworks which are visible early or late in the day), crop mark sites (crop mark sites are visible because disturbances beneath crops cause variations in their height, vigour and type) and soil marks (e.g. differently coloured or textured soil (soil marks) might indicate ploughed-out burial mounds). Attention was also given to moisture differences, as prolonged dampening of soil as a result of precipitation frequently occurs over walls or embankments. By superimposing high frequency aerial photographs with images generated with Google Earth, potential sensitive areas were subsequently identified, geo-referenced and transferred to a handheld GPS device. These areas served as referenced points from where further vehicular and pedestrian surveys were carried out.

The aerial survey suggested that most of the surface areas demarcated for the proposed Ilitha Housing Development Project might have been subjected to historical and more recent transformation and development (see Figure 3-1).
Figure 3-1: A series of aerial imagery indicating development progress of the project area in Ilitha (top:1990, middle: 2009, bottom: 2016)
3.1.3 Field Survey

Archaeological survey implies the systematic procedure of the identification of archaeological sites. An archaeological survey of the site subject to this study was conducted in September 2017. The process encompassed a field survey in accordance with standard archaeological practice by which heritage resources are observed and documented. In order to sample surface areas systematically and to ensure a high probability of site recording, the entire project footprint was carefully inspected on foot by means of a transect survey. GPS reference points identified during the aerial survey were also visited and random spot checks were made (see detail in previous section). Using a Garmin E-trex Legend GPS, the site was georeferenced and photographed with a Canon 450D Digital camera. Real time aerial mapping and positioning by means of a hand-held tablet-based Google Earth application was also employed on site to investigate possible disturbed areas during the survey.

![Figure 3-2: GPS track log of the site inspection, conducted in September 2017.](image)

3.2 Limitations

3.2.1 Access

The proposed project site is bordered to the east by the R102 road and the area is accessed directly via this road. Access control is not applied to the survey areas and no restrictions were encountered during the site visit in terms of access.

3.2.2 Visibility

The surrounding vegetation in the project area is mostly comprised out of mixed grasses and single trees and scrubs and the general visibility at the time of the AIA survey (September 2017) was high (see Figures 3-3 to 3-10). In single cases during the survey sub-surface inspection was possible. Where applied, this revealed no archaeological deposits.
Figure 3-3: View of general surroundings in the project area, looking south towards Ilitha.

Figure 3-4: An enclosed residential stand in the project area.

Figure 3-5: View of building rubble and scattered concreted chunks in the project area.
Figure 3-6: General surroundings in the project area, looking north.

Figure 3-7: Transformed surfaces with low grass cover in the project area.

Figure 3-8: View irregular stone structures along the R102 road in the project area.
3.2.3 Limitations and Constraints Summary

The foot site survey for the Ilitha Housing Development Project primarily focused around areas of potential heritage sensitivity as well as areas of high human settlement catchment probability (for example, in association with vegetation changes or around soil disturbances). No major constraints were encountered during the site visit for this study. Even though it might be assumed that survey findings are representative of the heritage landscape of the project area for the Ilitha Housing Development Project, it should be stated that the possibility exists that individual sites could be missed due to the localised nature of some heritage remains as well as the possible presence of sub-surface archaeology. Therefore, maintaining due cognisance of the integrity and accuracy of the archaeological survey, it should be stated that the heritage resources identified during the study do not necessarily represent all the heritage resources present in the project area. The subterranean nature of some archaeological sites, dense vegetation cover and visibility constraints sometimes distort heritage representations and any additional heritage resources located during consequent development phases must be reported to the Heritage Resources Authority or an archaeological specialist.
3.3 Impact Assessment

For consistency among specialists, impact assessment ratings by Exigo Specialists are generally done using the Plomp\(^1\) impact assessment matrix scale supplied by Exigo. According to this matrix scale, each heritage receptor in the project area is given an impact assessment. An assessment of potential heritage impacts for the proposed project is included in this report.

4 ARCHAEO-HISTORICAL CONTEXT

4.1 The archaeology of Southern Africa

Archaeology in Southern Africa is typically divided into two main fields of study, the Stone Age and the Iron Age or Farmer Period. The following table provides a concise outline of the chronological sequence of periods, events, cultural groups and material expressions in Southern African pre-history and history.

<table>
<thead>
<tr>
<th>Period</th>
<th>Epoch</th>
<th>Associated cultural groups</th>
<th>Typical Material Expressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Stone Age</td>
<td>Pleistocene</td>
<td>Early Hominins: Australopithecines Homo habilis Homo erectus</td>
<td>Typically large stone tools such as hand axes, choppers and cleavers.</td>
</tr>
<tr>
<td>Middle Stone Age</td>
<td>Pleistocene</td>
<td>First Homo sapiens species</td>
<td>Typically smaller stone tools such as scrapers, blades and points.</td>
</tr>
<tr>
<td>Late Stone Age</td>
<td>Pleistocene / Holocene</td>
<td>Homo sapiens sapiens including San people</td>
<td>Typically small to minute stone tools such as arrow heads, points and bladelets.</td>
</tr>
<tr>
<td>Early Iron Age / Early Farmer Period 300 – 900 AD</td>
<td>Holocene</td>
<td>First Bantu-speaking groups</td>
<td>Typically distinct ceramics, bead ware, iron objects, grinding stones.</td>
</tr>
<tr>
<td>Middle Iron Age (Mapungubwe / K2) / early Later Farmer Period 900 – 1350 AD</td>
<td>Holocene</td>
<td>Bantu-speaking groups, ancestors of present-day groups</td>
<td>Typically distinct ceramics, bead ware and iron / gold / copper objects, trade goods and grinding stones.</td>
</tr>
<tr>
<td>Late Iron Age / Later Farmer Period 1400 AD -1850 AD</td>
<td>Holocene</td>
<td>Various Bantu-speaking groups including Venda, Thonga, Sotho-Tswana and Zulu</td>
<td>Distinct ceramics, grinding stones, iron objects, trade objects, remains of iron smelting activities including iron smelting furnace, iron slag and residue as well as iron ore.</td>
</tr>
<tr>
<td>Historical / Colonial Period ±1850 AD – present</td>
<td>Holocene</td>
<td>Various Bantu-speaking groups as well as European farmers, settlers and explorers</td>
<td>Remains of historical structures e.g. homesteads, missionary schools etc. as well as, glass, porcelain, metal and ceramics.</td>
</tr>
</tbody>
</table>

4.2 The Eastern Cape and Ilitha: Specific Themes.

The history of Eastern Cape is reflected in a rich archaeological landscape. The province is well known for its contribution to Stone Age research and various South African archaeological cultures have derived their names from cave sites such as Klasies River, Albany, Wilton and Howiesons Poort. Significantly, the intensive utilization of marine resources by San hunter-gatherers (dating from as old as 6 000 years ago),

\(^1\) Plomp, H.,2004
Khoi pastoralists and KhoiSan (dating from the past 1 800 years in the region), manifests in the archaeological record through hundreds of shell middens (large piles of marine shell) dating to the terminal Pleistocene and Holocene that litter coastal areas along the Eastern Cape. Later, Bantu-speaking tribes moved into this area from other parts of Southern Africa and settled here. White farmers, settling in the area since the middle of the 19th century, divided up the landscape into a number of farms, which even today form the framework for agricultural, residential and other forms of development.

4.2.1 The Stone Ages

The Earlier 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 Olduwan Industry, originating from stone artefacts recorded at Olduvai Gorge, Tanzania. The Acheulian Industry, the predominant Southern African Early Stone Age Industry, which replaced the Olduwan 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. The most well-known Early Stone Age site in Southern Africa is Amanzi Springs, situated about 10km north-east of Uitenhage, near Port Elizabeth (Deacon 1970). In a series of spring deposits a large number of stone tools were found in situ to a depth of 3-4m. Wood and seed material preserved remarkably very well within the spring deposits, and possibly date to between 800 000 to 250 000 years old. Large stone ESA tools are often found associated with the gravels in the area, and were later replaced by smaller stone tools called the Middle Stone Age (MSA) flake and blades industries.

The Middle Stone Age (MSA) 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. The large handaxes and cleavers were replaced by smaller stone artefacts called the MSA flake and blade industries. Surface scatters of these flake and blade industries occur widespread across Southern Africa. The majority of MSA sites occur on flood plains and sometimes in caves and rock shelters. Sites usually consist of large concentrations of knapped stone flakes such as scrapers, points and blades and associated manufacturing debris.

Figure 4-1: Typical ESA handaxe (left) and cleaver (center). To the right is a MSA scraper (right, top), point (right, middle) and blade (right, bottom).
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 MSA to LSA; although there is a lack of crucial sites and evidence that represent this change. The LSA 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, Wilton Industries and in between, the larger Albany/Oakhurst and the Kabeljous Industries. Bored stones 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. Most importantly bows and arrows revolutionized the hunting economy. It was only within the last 2000 years that earthenware pottery was introduced. Before then tortoise shell bowls were used for cooking and ostrich eggshell (OES) flasks were used for storing water.

Sites dating to the LSA are better preserved in rock shelters, although open sites with scatters of mainly stone tools can occur. Well-protected deposits in shelters allow for stable conditions that result in the preservation of organic materials such as wood, bone, hearths, ostrich eggshell beads and even bedding material.

4.2.2 Pastoralism in the Eastern Cape

Khoekhoe pastoralists or herders entered southern Africa about 2000 years ago, with domestic animals such as fat-tailed sheep and goats, travelling through the south towards the coast. Hunter-gatherer and herder sites occur widely in the Eastern Cape. It is sometimes difficult to distinguish between hunter-gatherer and herder sites, because the former may have acquired stock through theft or herder clientship and the latter largely relied on hunting and gathering to supplement pastoral resources. Both groups collected shellfish and used other food sources from the sea, and both groups hunted and gathered plant food. Their economic systems were directed by the accumulation of wealth in domestic stock numbers and their political make-up was more hierarchical than that of the hunter-gatherers. Often, these archaeological sites are found close to the banks of large streams and rivers. Excavations at sites indicate that shellfish and marine animals, and in particular seals, specifically formed a major part of their diet.

The intensive utilization of shellfish manifests in the archaeological record through hundreds of shell middens (large piles of marine shell) dating to the terminal Pleistocene and Holocene that litter the coastal areas of southern Africa. These were campsites of San, Khoisan and Bantu-speakers who lived along the immediate coast. Human remains are frequently found in the middens, mixed with shell, other food remains and cultural material. In general these shell middens date from the past 6,000 years. They are found mainly opposite rocky coasts, but also occur along sandy beaches if there was a large enough source of white mussels. These concentrations of shell represent the campsites of San hunter-gatherers (dating from as much as 6,000 years ago), Khoi pastoralists and KhoiSan (dating from the past 1,800 years in the region) peoples who lived along the immediate coast and collected marine foods on a daily basis. The Khoi people were the first food producers in South Africa and introduced domesticated animals (sheep, goat and cattle) and ceramic vessels to southern Africa as early as 2,000 years ago. The oldest sheep remains recovered from the middens near the Kabeljous River Mouth were radiocarbon dated to 1,560 years old - the oldest date for the presence of sheep in the Eastern Cape (Binneman 1996, 2001).
4.2.3 The Iron Age Farmer Period

The beginnings of the Iron Age (Farmer Period) in southern Africa are associated with the arrival of a new Bantu speaking population group at around the third century AD. These newcomers introduced a new way of life into areas that were occupied by Later Stone Age hunter-gatherers and Khoekhoe herders. Distinctive features of the Iron Age are a settled village life, food production (agriculture and animal husbandry), metallurgy (the mining, smelting and working of iron, copper and gold) and the manufacture of pottery. Iron Age farming communities 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. LIA sites in the Eastern Cape Province occur adjacent to the major rivers in low lying river valleys but also along ridge crests above the 800m contour. An early phase of the Late Iron Age has been uncovered in KwaZulu-Natal which transpired in a ceramic style known as “Blackburn”. This ceramic style represents a break with that of the Early Iron Age. Since there is a resemblance between Blackburn pottery and Nguni pottery, Huffman (1989) postulates that Blackburn reflects the migration of the Nguni to KwaZulu-Natal and later to the Transkei. Consequently, sites belonging to the final phase of the Late Iron Age can often be linked with historically known Nguni groups.

The most southern Iron Age site, Kulubele, excavated by archaeologists from the Albany Museum during the 1990’s, is situated along the banks of the Kei River in the Kei River Valley. The earliest date for the site is 1250 BP yielded numerous settlement areas, thick-walled pottery, animal bones, and most importantly chicken bones that illustrates contact between the first farming communities and European seafarers.

The LIA in the project area can be ascribed to the Mpondomise, Thembu, and Xhosa tribal clusters or their immediate predecessors (Feely 1987). It is also possible that some stone walled sites, especially those incorporating shelters or caves, were constructed by hybrid San/Nguni groups. Trade played a major role in the economy of LIA societies. Goods were traded locally and over long distances. The main trade goods included metal, salt, grain, cattle and thatch. This led to the establishment of economically driven centres and the growth of trade wealth. Keeping of domestic animals, metal work and the cultivation of crops continued with a change in the organisation of economic activities (Maggs, 1989; Huffman 2007). Hilltop settlements are mainly associated with LIA settlement patterns that occurred during the second millennium AD. Later Iron Age settlements have been formally recorded by the Albany Museum and cover...
a relatively extended area in comparison with the Early Iron Age settlement patterns. 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). Contact with the Cape Colony initially stimulated an already flexible and dynamic characteristic of the Cape Nguni political economy. When trade opportunities developed in the late 18th century, the Xhosa would exchange cattle (and permission for and guidance in hunting elephants) in return for copper, iron, beads (Peires 1981:95); they would then exchange these goods at a profit for cattle with their African neighbours to the east, bringing about a kind of speculation in cattle.

![Figure 4-3: Early Iron Age farmer period sites in the Eastern Cape around Mthahta (after Feely & Bell-Cross 2011).](image)

**4.2.4 Historical and Colonial Times and Recent History**

The Historical period in Southern Africa encompass the course of Europe's discovery of South Africa and the spreading of European settlements along the East Coast and subsequently into the interior. In addition, the formation stages of this period are marked by the large scale movements of various Bantu-speaking groups in the interior of South Africa, which profoundly influenced the course of European settlement. Finally, the final retreat of the San and Khoekhoen groups into their present-day living areas also occurred in the Historical period in Southern Africa. In 1498 Portuguese sailor Vasco de Gama was the first white man to set foot on South African soil, and quickly set about exploiting the land and her people. He was soon followed by Dutch settlers, who became known as the Boers (Farmers), and not long after came the British in their quest to colonize the African sub-continent.

Named after William IV, King William’s Town was founded by Sir Benjamin d’Urban in May 1835 during the Xhosa War. It was abandoned in December 1836, but was reoccupied in 1846 and was the capital of British Kaffraria from its creation in 1847 to its incorporation in 1865 with the Cape Colony. Many of the colonists in the neighbouring districts are descendants of members of the British German Legion disbanded after the Crimean War and provided with homes in Cape Colony; hence such names as Berlin, Braunschweig, Frankfurt, Hamburg, Potsdam and Stutterheim given to settlements in this part of the country.
King William's Town was originally declared the provincial capital of the surrounding Adelaide District in the 1830s. On 5 May 1877, the Cape Government of Prime Minister John Molteno opened the first railway, connecting the town to East London on the coast and to the Xhosa lands inland and further east.[3] With its direct railway communication, the town became an important entrepot for trade with the Xhosa people throughout "Kaffraria". The area's economy depended on cattle and sheep ranching, and the town itself has a large industrial base producing textiles, soap, candles, sweets, cartons and clothing.

A significant heritage site occurs no more than 6km south-west of the project area on the banks of the Buffalo River. Here, Fort Murray was established by Colonel Harry Smith on the instructions of Governor Sir Benjamin D'Urban after the Sixth Frontier War in 1835. It was one of the Forts in a series of forts built by the British during the frontier wars of the early 1800's to mid-1800's. The fort was located on the west bank of the Buffalo River near the Mount Coke Mission Station. Named after Colonel Murray of the 42nd Regiment, the fort was 40 metres square with three redans and could accommodate thirty cavalry. Government agent to the followers of chiefs Tzatzoe, Siwani and Umkye, Richard Southey, was based at Fort Murray. On July 28, 1836 the British Government renounced its claim to the province of Queen Adelaide and ordered the withdrawal of all troops in the area, retaining only King William's Town and Fort Cox. Fort Murray was abandoned in September 1836. Restoration of the fort started in 1976 being completed in May 1977 but by August 1995, the fort was vandalised and totally destroyed.

![Figure 4: The original design plan for Fort Murray](http://www.artefacts.co.za/main/Buildings/bldgframes.php?bldgid=10397).
5 RESULTS: ARCHAEOLOGICAL SURVEY

In terms of heritage resources, the landscape around the project area is primarily well known for the occurrence of Herder, Rock Art and Historical Period occurrences. However, the proposed Ilitha Housing Development Project footprint is situated over an area that has been extensively transformed by urbanisation and development. As a consequence, much of the direct surroundings have sterilised the area of potential heritage resources - especially those dating to pre-Colonial and prehistoric times and no sites of heritage potential were identified in the project area.

5.1 The Stone Age

Stone Age remains associated with caves, outcrops/hills and river courses are known to exist in the larger King William’s Town area. However, no stone tools or associated material culture or evidence of any factory or workshop site were found in the project areas.

5.2 The Iron Age Farmer Period

A frontier zone between the east and the west, the King William’s Town landscape is rich in precoliclinal Iron Age Farmer Period remnants. However, the site inspection identified no Iron Age farmer sites.

5.3 Colonial Period and recent times

European and local farming communities settled in King William’s Town during the Colonial Period in the last century but no sites of Historical or Colobial provenience were noted during the site inspection.

5.4 Graves

No human burial sites or grounds were observed documented in the project area subject to this assessment.
6 RESULTS: STATEMENT OF SIGNIFICANCE AND IMPACT RATING

6.1 Potential Impacts and Significance Ratings

The following section provides a background to the identification and assessment of possible impacts and alternatives, as well as a range of risk situations and scenarios commonly associated with heritage resources management. A guideline for the rating of impacts and recommendation of management actions for areas of heritage potential within the project area is supplied in Section 10.2 of the Addendum.

6.1.1 General assessment of impacts on resources

Generally, the value and significance of archaeological and other heritage sites might be impacted on by any activity that would result immediately or in the future in the destruction, damage, excavation, alteration, removal or collection from its original position, any archaeological material or object (as indicated in the National Heritage Resources Act (No 25 of 1999)). Thus, the destructive impacts that are possible in terms of heritage resources would tend to be direct, once-off events occurring during the initial construction period. However, in the long run, the proximity of operations in any given area could result in secondary indirect impacts. The EIA process therefore specifies impact assessment criteria which can be utilised from the perspective of a heritage specialist study which elucidates the overall extent of impacts.

6.1.2 Direct impact rating

Direct or primary effects on heritage resources occur at the same time and in the same space as the activity, e.g. loss of historical fabric through demolition work. Indirect effects or secondary effects on heritage resources occur later in time or at a different place from the causal activity, or as a result of a complex pathway, e.g. restriction of access to a heritage resource resulting in the gradual erosion of its significance, which is dependent on ritual patterns of access (refer to Section 10.3 in the Addendum for an outline of the relationship between the significance of a heritage context, the intensity of development and the significance of heritage impacts to be expected).

No heritage receptors were found in the project area as a result of the general degraded state of the site and no potential impact to heritage resources is foreseen.

6.2 Evaluation Impacts

Previous studies conducted in the larger King William’s Town landscape suggest a rich and diverse archaeological landscape but the surroundings of the Ilitha Housing Development Project have been transformed across much of the landscape as well as the proposed project footing. Cognisance should nonetheless be taken of archaeological material that might be present in surface and sub-surface deposits.

6.2.1 Archaeology

The study did not identify any archaeological receptors which will be directly impacted by the proposed project and no impact on archaeological sites or features is anticipated.

6.2.2 Built Environment

Historical Period buildings occur in the general landscape further away from Ilitha but the project area has no significance in terms of the built environment as there are no additional apparent old buildings, structures, or features in the project surrounds. No impact on the built environment is anticipated.

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6.2.3 Cultural Landscape

Even though the larger King William’s Town area comprises a rich cultural horizon, the landscape surrounding the proposed project areas have been transformed by urbanisation and agriculture. Further away from the project area, the landscape is typical of the Eastern Cape coastal interior with large areas of flat plains, mountain ranges and undulating hills occurring throughout. This landscape stretches over many kilometres and the proposed project is unlikely to result in a significant impact on the landscape.

6.2.4 Graves / Human Burials Sites

No human burial sites were noted in the project area. In the rural areas of the Eastern Cape, graves and cemeteries sometimes occur within settlements or around homesteads but they are also randomly scattered around archaeological and historical settlements. The probability of additional and informal human burials encountered during development should thus not be excluded. In addition, human remains and burials are commonly found close to archaeological sites; they may be found in “lost” graveyards, or occur sporadically anywhere as a result of prehistoric activity, victims of conflict or crime. It is often 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. In some instances packed stones or rocks may indicate the presence of informal pre-colonial burials. If any human bones are found during the course of construction work then they should be reported to an archaeologist and work in the immediate vicinity should cease until the appropriate actions have been carried out by the archaeologist. Where human remains are part of a burial they would need to be exhumed under a permit from SAHRA (for pre-colonial burials as well as burials later than about AD 1500). Should any unmarked human burials/remains be found during the course of construction, work in the immediate vicinity should cease and the find must immediately be reported to the archaeologist, or the South African Heritage Resources Agency (SAHRA). Under no circumstances may burials be disturbed or removed until such time as necessary statutory procedures required for grave relocation have been met.

No heritage resources were noted in the proposed Ilitha Housing Development Project footprint and no impact the heritage landscape is anticipated. In the opinion of the author of this Archaeological Impact Assessment Report, the proposed project should proceed from a culture resources management perspective, provided that previously undetected heritage remains are encountered during construction and development.

6.3 Management actions

Recommendations for relevant heritage resources management actions are vital to the conservation of heritage resources. A general guideline for recommended management actions is included in Section 10.4 of the Addendum. The following management measures should be considered during implementation of the proposed Ilitha Housing Development Project.

OBJECTIVE: prevent unnecessary disturbance and/or destruction of previously undetected heritage receptors.

No specific mitigation measures in terms of further heritage resources management are required for the Ilitha Housing Development Project footprint. However the following general recommendations should be considered:
PROJECT COMPONENT/S | All phases of construction and operation.
---|---
POTENTIAL IMPACT | Damage/destuction of sites.
ACTIVITY RISK/SOURCE | Digging foundations and trenches into sensitive deposits that are not visible at the surface.
MITIGATION: TARGET/OBJECTIVE | To locate previously undetected heritage remains / graves as soon as possible after disturbance so as to maximize the chances of successful rescue/mitigation work.
MITIGATION: ACTION/CONTROL | ECO: Monitor as frequently as practically possible.
TIMEFRAME | Fixed Mitigation Procedure (required)

**PERFORMANCE INDICATOR**
Archaeological sites are discovered and mitigated with the minimum amount of unnecessary disturbance.

**MONITORING**
Successful location of sites by person/s monitoring.

### 7  RECOMMENDATIONS

Previous heritage studies conducted in the larger King William’s Town Province region suggest a rich and diverse archaeological landscape but the surroundings of the proposed Ilitha Housing Development Project have been transformed by ruralisation, infrastructure development and farming. Cognisance should nonetheless be taken of archaeological material that might still be present in surface and sub-surface deposits along more pristine areas. The following general recommendations are made based on general observations in the proposed Ilitha Housing Development Project area:

- A Palaeontological Desktop Assessment for the project has been commissioned but as a general rule, any fossil remains such as fossil fish, reptiles or petrified wood exposed during construction should be carefully safeguarded and the relevant heritage resources authority (Eastern Cape PHRA) should be notified immediately so that the appropriate action can be taken by a professional palaeontologist.
- Considering the localised nature of heritage remains, the general monitoring of the development progress by an ECO is recommended for all stages of the project. Should any subsurface palaeontological, archaeological or historical material, or burials be exposed during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately.
- It is essential that cognisance be taken of the larger archaeological landscape of the area in order to avoid the destruction of previously undetected heritage sites. It should be stated that the possibility of undetected archaeological remains occurring elsewhere in the project area should not be excluded. Burials and historically significant structures dating to the Colonial Period occur on farms in the area and these resources should be avoided during all phases of construction and development, including the operational phases of the development.
- Since the intrinsic heritage and social value of graves and cemeteries are highly significant, these resources require special management measures. Should human remains be discovered at any stage, these should be reported to the Heritage Specialist and relevant authorities (SAHRA) and development activities should be suspended until the site has been inspected by the Specialist. The Specialist will advise on further management actions and possible relocation of human
remains in accordance with the Human Tissue Act (Act 65 of 1983 as amended), the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925), the National Heritage Resources Act (Act no. 25 of 1999) and any local and regional provisions, laws and by-laws pertaining to human remains. A full social consultation process should occur in conjunction with the mitigation of cemeteries and burials.

In addition to these site-specific recommendations, careful cognizance should be taken of the following:

- As Palaeontological remains occur where bedrock has been exposed, all geological features should be regarded as sensitive.
- Water sources such as drainage lines, fountains and pans would often have attracted human activity in the past. As Stone Age material the larger landscape should be regarded as potentially sensitive in terms of possible subsurface deposits.

8 GENERAL COMMENTS AND CONDITIONS

This AIA report serves to confirm the extent and significance of the heritage landscape of the proposed Ilitha Housing Development Project area. The larger heritage horizon encompasses rich and diverse archaeological landscapes and cognizance should be taken of heritage resources and archaeological material that might be present in surface and sub-surface deposits. If, during construction, any possible archaeological material culture discoveries are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find. Such material culture might include:

- Formal Earlier Stone Age stone tools.
- Formal MSA stone tools.
- Formal LSA stone tools.
- Potsherds
- Iron objects.
- Beads made from ostrich eggshell and glass.
- Ash middens and cattle dung deposits and accumulations.
- Faunal remains.
- Human remains/graves.
- Stone walling or any sub-surface structures.
- Historical glass, tin or ceramics.
- Fossils.

If such sites were to be encountered or impacted by any proposed developments, recommendations contained in this report, as well as endorsement of mitigation measures as set out by Eastern Cape-PHRA, SAHRA, the National Resources Act and the CRM section of ASAPA will be required.

It must be emphasised that the conclusions and recommendations expressed in this archaeological heritage sensitivity investigation are based on the visibility of archaeological sites/features and may not therefore, represent the area’s complete archaeological legacy. Many sites/features may be covered by soil and vegetation and might only be located during sub-surface investigations. If subsurface archaeological deposits, artefacts or skeletal material were to be recovered in the area during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately (cf. NHRA (Act No. 25 of 1999), Section 36 (6)). It must also be clear that Archaeological Specialist Reports will be assessed by the relevant heritage resources authority (SAHRA).
9 BIBLIOGRAPHY


*Human Tissue Act and Ordinance 7 of 1925, Government Gazette, Cape Town*

*National Resource Act No.25 of 1999, Government Gazette, Cape Town*


Accessed 2017-09-30

Accessed 2017-09-30

Accessed 2017-09-30
10 ADDENDUM 1: HERITAGE LEGISLATION BACKGROUND

10.1 CRM: Legislation, Conservation and Heritage Management

The broad generic term Cultural Heritage Resources refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of palaeontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

10.1.1 Legislation regarding archaeology and heritage sites

The South African Heritage Resources Agency (SAHRA) and their provincial offices aim to conserve and control the management, research, alteration and destruction of cultural resources of South Africa. It is therefore vitally important to adhere to heritage resource legislation at all times.

   d. National Heritage Resources Act No 25 of 1999, section 35

According to the National Heritage Resources Act of 1999 a historical site is any identifiable building or part thereof, marker, milestone, gravestone, landmark or tell older than 60 years. This clause is commonly known as the “60-years clause”. Buildings are amongst the most enduring features of human occupation, and this definition therefore includes all buildings older than 60 years, modern architecture as well as ruins, fortifications and Iron Age settlements. “Tell” refers to the evidence of human existence which is no longer above ground level, such as building foundations and buried remains of settlements (including artefacts).

The Act identifies heritage objects as:

- objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects, meteorites and rare geological specimens
- visual art objects
- military objects
- numismatic objects
- objects of cultural and historical significance
- objects to which oral traditions are attached and which are associated with living heritage
- objects of scientific or technological interest
- any other prescribed category

With regards to activities and work on archaeological and heritage sites this Act states that:

“No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit by the relevant provincial heritage resources authority.” (34. [1] 1999:58)

and

“No person may, without a permit issued by the responsible heritage resources authority—

   (d) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;

   (e) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
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

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. (35. [4] 1999:58).”

and

“No person may, without a permit issued by SAHRA or a provincial heritage resources agency-

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;

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;

bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) and excavation equipment, or any equipment which assists in the detection or recovery of metals (36. [3] 1999:60).”

e. Human Tissue Act of 1983 and Ordinance on the Removal of Graves and Dead Bodies of 1925

Graves 60 years or older are heritage resources and fall under the jurisdiction of both the National Heritage Resources Act and the Human Tissues Act of 1983. However, graves younger than 60 years are specifically protected by the Human Tissues Act (Act 65 of 1983) and the Ordinance on the Removal of Graves and Dead Bodies (Ordinance 7 of 1925) as well as any local and regional provisions, laws and by-laws. Such burial places also fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities.

10.1.2 Background to HIA and AIA Studies

South Africa’s unique and non-renewable archaeological and palaeontological heritage sites are ‘generally’ protected in terms of the National Heritage Resources Act (Act No 25 of 1999, section 35) and may not be disturbed at all without a permit from the relevant heritage resources authority. Heritage sites are frequently threatened by development projects and both the environmental and heritage legislation require impact assessments (HIAs & AIAs) that identify all heritage resources in areas to be developed. Particularly, these assessments are required to make recommendations for protection or mitigation of the impact on the sites. HIAs and AIAs should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources including archaeological and palaeontological sites that might occur in areas of developed and (b) make recommendations for protection or mitigation of the impact on the sites.

The National Heritage Resources Act (Act No. 25 of 1999, section 38) provides guidelines for Cultural Resources Management and prospective developments:

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

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site:
   (i) exceeding 5 000 m² in extent; or
   (ii) involving three or more existing 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 heritage 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 at 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.”

And:

“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:

(k) The identification and mapping of all heritage resources in the area affected;
(l) 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;

(m) an assessment of the impact of the development on such heritage resources;
(n) 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;
(o) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
(p) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
(q) plans for mitigation of any adverse effects during and after the completion of the proposed development (38. [3] 1999:64).”

Consequently, section 35 of the Act requires Heritage Impact Assessments (HIAs) or Archaeological Impact Assessments (AIAs) to be done for such developments in order for all heritage resources, that is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual, linguistic or technological value or significance to be 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. Heritage resources management and conservation

10.2 Assessing the Significance of Heritage Resources

Archaeological sites, as previously defined in the National Heritage Resources Act (Act 25 of 1999) are places in the landscape where people have lived in the past – generally more than 60 years ago – and have left traces of their presence behind. In South Africa, archaeological sites include hominid fossil sites, places where people of the Earlier, Middle and Later Stone Age lived in open sites, river gravels, rock shelters and caves, Iron Age sites, graves, and a variety of historical sites and structures in rural areas, towns and cities. Palaeontological sites are those with fossil remains of plants and animals where people were not involved in the accumulation of the deposits. The basic principle of cultural heritage conservation is that archaeological and other heritage sites are valuable, scarce and non-renewable. Many such sites are unfortunately lost on a daily basis through development for housing, roads and infrastructure and once archaeological sites are damaged, they cannot be re-created as site integrity and authenticity is permanently lost. Archaeological sites have the potential to contribute to our understanding of the history of the region and of our country and continent. By preserving links with our past, we may not be able to revive lost cultural traditions, but it enables us to appreciate the role they have played in the history of our country.

- Categories of significance

Rating the significance of archaeological sites, and consequently grading the potential impact on the resources is linked to the significance of the site itself. The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences. The guidelines as provided by the NHRA (Act No. 25 of 1999) in Section 3, with special reference to subsection 3 are used when determining the cultural significance or other special value of archaeological or historical sites. In addition, ICOMOS (the Australian Committee of the International Council on Monuments and Sites) highlights four cultural attributes, which are valuable to any given culture:

- **Aesthetic value:**
  Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria include consideration of the form, scale, colour, texture and material of the fabric, the general atmosphere associated with the place and its uses and also the aesthetic values commonly assessed in the analysis of landscapes and townscape.

- **Historic value:**
  Historic value encompasses the history of aesthetics, science and society and therefore to a large extent underlies all of the attributes discussed here. Usually a place has historical value because of some kind of influence by an event, person, phase or activity.

- **Scientific value:**
  The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality and on the degree to which the place may contribute further substantial information.

- **Social value:**
  Social value includes the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a certain group.
It is important for heritage specialist input in the EIA process to take into account the heritage management structure set up by the NHR Act. It makes provision for a 3-tier system of management including the South Africa Heritage Resources Agency (SAHRA) at a national level, Provincial Heritage Resources Authorities (PHRAs) at a provincial and the local authority. The Act makes provision for two types or forms of protection of heritage resources; i.e. formally protected and generally protected sites:

**Formally protected sites:**
- Grade 1 or national heritage sites, which are managed by SAHRA
- Grade 2 or provincial heritage sites, which are managed by the provincial HRA (MP-PHRA).
- Grade 3 or local heritage sites.

**Generally protected sites:**
- Human burials older than 60 years.
- Archaeological and palaeontological sites.
- Shipwrecks and associated remains older than 60 years.
- Structures older than 60 years.

With reference to the evaluation of sites, the certainty of prediction is definite, unless stated otherwise and if the significance of the site is rated high, the significance of the impact will also result in a high rating. The same rule applies if the significance rating of the site is low. The significance of archaeological sites is generally ranked into the following categories.

<table>
<thead>
<tr>
<th>Significance</th>
<th>Rating Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>No significance: sites that do not require mitigation.</td>
<td>None</td>
</tr>
</tbody>
</table>
| Low significance: sites, which may require mitigation. | 2a. Recording and documentation (Phase 1) of site; no further action required  
2b. Controlled sampling (shovel test pits, augering), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction |
| Medium significance: sites, which require mitigation. | 3. Excavation of representative sample, C14 dating, mapping and documentation (Phase 2 investigation); permit required for sampling and destruction [including 2a & 2b] |
| High significance: sites, where disturbance should be avoided. | 4a. Nomination for listing on Heritage Register (National, Provincial or Local) (Phase 2 & 3 investigation); site management plan; permit required if utilised for education or tourism  
4b. Locate demonstrable descendants through social consulting; obtain permits from applicable legislation, ordinances and regional by-laws; exhumation and reinterment [including 2a, 2b & 3] |

Furthermore, the significance of archaeological sites was based on six main criteria:
- Site integrity (i.e. primary vs. secondary context),
- Amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures),
- Density of scatter (dispersed scatter),
- Social value,
- Uniqueness, and
- Potential to answer current and future research questions.
A fundamental aspect in assessing the significance and protection status of a heritage resource is often whether or not the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and mitigated in order to gain data / information, which would otherwise be lost.
ADDENDUM 2: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE

11.1 Site Significance Matrix

According to the NHRA, Section 2(vi) the significance of heritage sites and artefacts is determined by its aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these. The following matrix is used for assessing the significance of each identified site/feature.

<table>
<thead>
<tr>
<th>2. SITE EVALUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Heritage Value (NHRA, section 2 [3])</td>
</tr>
<tr>
<td>It has importance to the community or pattern of South Africa’s history or pre-colonial history.</td>
</tr>
<tr>
<td>It possesses unique, uncommon, rare or endangered aspects of South Africa’s natural or cultural heritage.</td>
</tr>
<tr>
<td>It has potential to yield information that will contribute to an understanding of South Africa’s natural and cultural heritage.</td>
</tr>
<tr>
<td>It is of importance in demonstrating the principle characteristics of a particular class of South Africa’s natural or cultural places or objects.</td>
</tr>
<tr>
<td>It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.</td>
</tr>
<tr>
<td>It has importance in demonstrating a high degree of creative or technical achievement at a particular period.</td>
</tr>
<tr>
<td>It has marked or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).</td>
</tr>
<tr>
<td>It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.</td>
</tr>
<tr>
<td>It has significance through contributing towards the promotion of a local sociocultural identity and can be developed as a tourist destination.</td>
</tr>
<tr>
<td>It has significance relating to the history of slavery in South Africa.</td>
</tr>
<tr>
<td>It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.</td>
</tr>
</tbody>
</table>

2.2 Field Register Rating

| National/Grade 1 [should be registered, retained] | | |
| Provincial/Grade 2 [should be registered, retained] | | |
| Local/Grade 3A [should be registered, mitigation not advised] | | |
| Local/Grade 3B [High significance; mitigation, partly retained] | | |
| Generally Protected A [High/Medium significance, mitigation] | | |
| Generally protected B [Medium significance, to be recorded] | | |
| Generally Protected C [Low significance, no further action] | | |

2.3 Sphere of Significance

| International | High | Medium | Low |
| National | | | |
| Provincial | | | |
| Local | | | |
| Specific community | | | |

11.2 Impact Assessment Criteria

The following table provides a guideline for the rating of impacts and recommendation of management actions for sites of heritage potential.
Significance of the heritage resource

This is a statement of the nature and degree of significance of the heritage resource being affected by the activity. From a heritage management perspective it is useful to distinguish between whether the significance is embedded in the physical fabric or in associations with events or persons or in the experience of a place; i.e. its visual and non-visual qualities. This statement is a primary informant to the nature and degree of significance of an impact and thus needs to be thoroughly considered. Consideration needs to be given to the significance of a heritage resource at different scales (i.e. sitespecific, local, regional, national or international) and the relationship between the heritage resource, its setting and its associations.

Nature of the impact

This is an assessment of the nature of the impact of the activity on a heritage resource, with some indication of its positive and/or negative effect/s. It is strongly informed by the statement of resource significance. In other words, the nature of the impact may be historical, aesthetic, social, scientific, linguistic or architectural, intrinsic, associational or contextual (visual or non-visual). In many cases, the nature of the impact will include more than one value.

Extent

Here it should be indicated whether the impact will be experienced:
- On a site scale, i.e. extend only as far as the activity;
- Within the immediate context of a heritage resource;
- On a local scale, e.g. town or suburb;
- On a metropolitan or regional scale; or
- On a national/international scale.

Duration

Here it should be indicated whether the lifespan of the impact will be:
- Short term, (needs to be defined in context);
- Medium term, (needs to be defined in context);
- Long term where the impact will persist indefinitely, possibly beyond the operational life of the activity, either because of natural processes or by human intervention; or
- Permanent where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.

Of relevance to the duration of an impact are the following considerations:
- Reversibility of the impact; and
- Renewability of the heritage resource.

Intesity

Here it should be established whether the impact should be indicated as:
- Low, where the impact affects the resource in such a way that its heritage value is not affected;
- Medium, where the affected resource is altered but its heritage value continues to exist albeit in a modified way; and
- High, where heritage value is altered to the extent that it will temporarily or permanently be damaged or destroyed.

Probability

This should describe the likelihood of the impact actually occurring indicated as:
- Improbable, where the possibility of the impact to materialize is very low either because of design or historic experience;
- Probable, where there is a distinct possibility that the impact will occur;
- Highly probable, where it is most likely that the impact will occur; or
- Definite, where the impact will definitely occur regardless of any mitigation measures

Confidence

This should relate to the level of confidence that the specialist has in establishing the nature and degree of impacts. It relates to the level and reliability of information, the nature and degree of consultation with I&AP’s and the dynamic of the broader socio-political context.
- High, where the information is comprehensive and accurate, where there has been a high degree of consultation and the socio-political context is relatively stable.
- Medium, where the information is sufficient but is based mainly on secondary sources, where there has been a limited targeted consultation and socio-political context is fluid.
- Low, where the information is poor, a high degree of contestation is evident and there is a state of socio-political flux.

**Impact Significance**
The significance of impacts can be determined through a synthesis of the aspects produced in terms of the nature and degree of heritage significance and the nature, duration, intensity, extent, probability and confidence of impacts and can be described as:
- Low; where it would have a negligible effect on heritage and on the decision
- Medium, where it would have a moderate effect on heritage and should influence the decision.
- High, where it would have, or there would be a high risk of, a big effect on heritage. Impacts of high significance should have a major influence on the decision;
- Very high, where it would have, or there would be high risk of, an irreversible and possibly irreplaceable negative impact on heritage. Impacts of very high significance should be a central factor in decision-making.

### 11.3 Direct Impact Assessment Criteria

The following table provides an outline of the relationship between the significance of a heritage context, the intensity of development and the significance of heritage impacts to be expected.

<table>
<thead>
<tr>
<th>HERITAGE CONTEXT</th>
<th>TYPE OF DEVELOPMENT</th>
<th>CATEGORY A</th>
<th>CATEGORY B</th>
<th>CATEGORY C</th>
<th>CATEGORY D</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTEXT 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High heritage</td>
<td></td>
<td>Moderate</td>
<td>High</td>
<td>Very high</td>
<td>Very high</td>
</tr>
<tr>
<td>Value</td>
<td></td>
<td>heritage</td>
<td>heritage</td>
<td>heritage</td>
<td>heritage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>impact</td>
<td>impact</td>
<td>impact</td>
<td>impact</td>
</tr>
<tr>
<td>CONTEXT 2</td>
<td></td>
<td>Minimal</td>
<td>Moderate</td>
<td>High</td>
<td>Very high</td>
</tr>
<tr>
<td>Medium to high</td>
<td></td>
<td>heritage</td>
<td>heritage</td>
<td>heritage</td>
<td>heritage</td>
</tr>
<tr>
<td>heritage value</td>
<td></td>
<td>impact</td>
<td>impact</td>
<td>impact</td>
<td>impact</td>
</tr>
<tr>
<td>CONTEXT 3</td>
<td></td>
<td>Little or</td>
<td>Minimal</td>
<td>Moderate</td>
<td>High</td>
</tr>
<tr>
<td>Medium to low</td>
<td></td>
<td>no heritage</td>
<td>heritage</td>
<td>heritage</td>
<td>heritage</td>
</tr>
<tr>
<td>heritage value</td>
<td></td>
<td>impact</td>
<td>impact</td>
<td>impact</td>
<td>impact</td>
</tr>
<tr>
<td>CONTEXT 4</td>
<td></td>
<td>Little or</td>
<td>Little or</td>
<td>Minimal</td>
<td>Moderate</td>
</tr>
<tr>
<td>Low to no</td>
<td></td>
<td>no heritage</td>
<td>no heritage</td>
<td>heritage</td>
<td>heritage</td>
</tr>
<tr>
<td>heritage value</td>
<td></td>
<td>impact</td>
<td>impact</td>
<td>impact</td>
<td>impact</td>
</tr>
</tbody>
</table>

**NOTE:** A default “LITTLE OR NO HERITAGE IMPACT EXPECTED” value applies where a heritage resource occurs outside the impact zone of the development.

<table>
<thead>
<tr>
<th>HERITAGE CONTEXTS</th>
<th>CATEGORIES OF DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context 1:</td>
<td>Category A: Minimal intensity development</td>
</tr>
<tr>
<td>Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources</td>
<td>- No rezoning involved; within existing use rights.</td>
</tr>
<tr>
<td></td>
<td>- No subdivision involved.</td>
</tr>
<tr>
<td></td>
<td>- Upgrading of existing infrastructure within existing envelopes</td>
</tr>
<tr>
<td></td>
<td>- Minor internal changes to existing structures</td>
</tr>
<tr>
<td></td>
<td>- New building footprints limited to less than 1000m².</td>
</tr>
<tr>
<td>Context 2:</td>
<td>Category B: Low-key intensity development</td>
</tr>
<tr>
<td>Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources.</td>
<td>- Spot rezoning with no change to overall zoning of a site.</td>
</tr>
<tr>
<td></td>
<td>- Linear development less than 100m</td>
</tr>
<tr>
<td></td>
<td>- Building footprints between 1000m²-2000m²</td>
</tr>
<tr>
<td></td>
<td>- Minor changes to external envelop of existing structures (less than 25%)</td>
</tr>
<tr>
<td></td>
<td>- Minor changes in relation to bulk and height of immediately adjacent structures (less than 25%).</td>
</tr>
<tr>
<td>Context 3:</td>
<td>Category C: Moderate intensity development</td>
</tr>
<tr>
<td>Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources</td>
<td>- Rezoning of a site between 5000m²-10 000m².</td>
</tr>
<tr>
<td>Context 4:</td>
<td></td>
</tr>
<tr>
<td>Of little or no intrinsic, associational or contextual heritage value due to disturbed, degraded conditions or extent of irreversible damage.</td>
<td></td>
</tr>
</tbody>
</table>
11.4 Management and Mitigation Actions

The following table provides a guideline of relevant heritage resources management actions is vital to the conservation of heritage resources.

<table>
<thead>
<tr>
<th>No further action / Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where no heritage resources have been documented, heritage resources occur well outside the impact zone of any development or the primary context of the surroundings at a development footprint has been largely destroyed or altered, no further immediate action is required. Site monitoring during development, by an ECO or the heritage specialist are often added to this recommendation in order to ensure that no undetected heritage remains are destroyed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>This is appropriate where any type of development occurs within a formally protected or significant or sensitive heritage context and is likely to have a high negative impact. Mitigation is not acceptable or not possible. This measure often includes the change / alteration of development planning and therefore impact zones in order not to impact on resources.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This is appropriate where development occurs in a context of heritage significance and where the impact is such that it can be mitigated to a degree of medium to low significance, e.g. the high to medium impact of a development on an archaeological site could be mitigated through sampling/excavation of the remains. Not all negative impacts can be mitigated.</td>
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<thead>
<tr>
<th>Compensation</th>
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<tbody>
<tr>
<td>Compensation is generally not an appropriate heritage management action. The main function of management actions should be to conserve the resource for the benefit of future generations. Once lost it cannot be renewed. The circumstances around the potential public or heritage benefits would need to be exceptional to warrant this type of action, especially in the case of where the impact was high.</td>
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<tr>
<th>Rehabilitation</th>
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<tbody>
<tr>
<td>Rehabilitation is considered in heritage management terms as an intervention typically involving the adding of a new heritage layer to enable a new sustainable use. It is not appropriate when the process necessitates the removal of previous historical layers, i.e. restoration of a building or place to the previous state/period. It is an appropriate heritage management action in the following cases:</td>
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<tr>
<td>- The heritage resource is degraded or in the process of degradation and would benefit from rehabilitation.</td>
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<tr>
<td>- Where rehabilitation implies appropriate conservation interventions, i.e. adaptive reuse, repair and maintenance, consolidation and minimal loss of historical fabric.</td>
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<tr>
<td>- Where the rehabilitation process will not result in a negative impact on the intrinsic value of the resource.</td>
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<th>Enhancement</th>
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<tr>
<td>Enhancement is appropriate where the overall heritage significance and its public appreciation value are improved. It does not imply creation of a condition that might never have occurred during the evolution of a place, e.g. the tendency to sanitize the past. This management action might result from the removal of previous layers where these layers are culturally of low significance and detract from the significance of the resource. It would be appropriate in a range of heritage contexts and applicable to a range of resources. In the case of formally protected or significant resources, appropriate enhancement action should be encouraged. Care should, however, be taken to ensure that the process does not have a negative impact on the character and context of the resource. It would thus have to be carefully monitored</td>
</tr>
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