



## **NSOVO ENVIRONMENTAL CONSULTING**

**APPLICATION FOR EXEMPTION FROM CONDUCTING A PHASE I ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROPOSED UPGRADE OF STORM WATER AND ENVIRONMENTAL SYSTEMS IN THE PORT OF SALDANHA WITHIN SALDANHA BAY LOCAL MUNICIPALITY IN THE WESTERN CAPE PROVINCE.**

**July, 2018**

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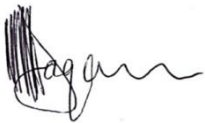
## **DECLARATION**

### **ABILITY TO CONDUCT THE PROJECT**

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## Acknowledgements

The author and the team of Vhubvo would like to acknowledge Nsovo and Transnet officials as well as staffs of NASA and Deeds Office.



## **EXECUTIVE SUMMARY**

Vhubvo Archaeo-Heritage Consultant Cc has been commissioned by Nsovo Environmental Consulting to assess the archaeological and cultural heritage of the proposed upgrade of stormwater and environmental systems at the Port of Saldanha which is within the jurisdiction of the Saldanha Bay Local Municipality in the West Coast District Municipality. This assessment is a specialist component which will form part of the Environmental Management Programme, aimed at investigating the general heritage state of the area affected by the proposed development as well as determining if there is a need to conduct any further investigation from an archaeological perspective. To reach a defensible recommendation, both desktop study and field survey were conducted. The desktop study was undertaken through South African Heritage Resources Information System (SAHRIS) for previous Cultural Heritage Impact Assessments conducted in the region of the proposed development, and also for research that has been carried out in the wider area over recent years. The field survey was conducted to validate any assumptions made during the desktop study.

### **Receiving Environment**

The area proposed for development is disturbed due to past developments (see Figures 4 - 7). Furthermore, the land on which the development is proposed is reclaimed from sea (see Figure 3) and no material of archaeological value is expected to be disturbed by the proposed development. The locality map provided in Figure 1 indicates the study area.

### **Impact statement**

The desktop study has shown that the proposed site has no potential to yield any archaeological site or isolated tools. The survey conducted confirm that there is no evidence of any archaeological materials on the proposed site. Similarly, no shipwreck resources have been identified near the proposed area.

### **Restrictions and Assumptions**

Although the development is an upgrade and no heritage resource are expected since the area is disturbed.



## Survey Findings

The proposed area is highly disturbed by previous excavation activities, and preceding installation. As such, no land based archaeological, shipwreck material or graves are expected.

## Recommendations and Discussions

Investigation of past archaeological studies in the region, aerial photography and historical maps, coupled by a site visit revealed that the development is proposed on reclaimed land where no archaeological sites, burial grounds or isolated artefacts can be found. It is thus recommended that the Heritage Western Cape exempt the project from any further archaeological assessment studies, since the landscape is severely degraded for any archaeological site/and or artifact to be found.

## Conclusions

This proposal which is secondary in nature in that the related activities already exists on the proposed site can be considered to be of an insignificant landscape change, and do not warrant a Phase I AIA.



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**ACRONYMS AND ABBREVIATIONS**

AIA	Archaeological Impact Assessment
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
LIA	Late Iron Age
MIA	Middle Iron Age
EIA	Early Iron Age
HMP	Heritage Management Plan
LSA	Late Stone Age
MSA	Middle Stone Age
ESA	Early Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency
LIHRA	Limpopo Heritage Resource Authority
NEMPAA	National Environmental Management: Protected Areas
NEMA	National Environmental Management Act
HWC	Heritage Western Cape
ICOMOS	International Council on Monuments and Sites





## GLOSSARY OF TERMS

The following terms used in this Archaeology are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the International Council on Monuments and Sites (ICOMOS):

**Archaeological Material:** remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artifacts, human and hominid remains, and artificial features and structures.

**Artefact:** Any movable object that has been used, modified or manufactured by humans.

**Conservation:** All the processes of looking after a site/heritage place or landscape including maintenance, preservation, restoration, reconstruction and adaptation.

**Cultural Heritage Resources:** refers to physical cultural properties such as archaeological sites, palaeontological sites, historic and prehistorical places, buildings, structures and material remains, cultural sites such as places of rituals, burial sites or graves and their associated materials, geological or natural features of cultural importance or scientific significance. This include intangible resources such religion practices, ritual ceremonies, oral histories, memories indigenous knowledge.

**Cultural landscape:** “the combined works of nature and man” and demonstrate “the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both internal and external”.

**Cultural Resources Management (CRM):** the conservation of cultural heritage resources, management, and sustainable utilization and present for present and for the future generations



**Cultural Significance:** is the aesthetic, historical, scientific and social value for past, present and future generations.

**Chance Finds:** means Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

**Compatible use:** means a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

**Conservation** means all the processes of looking after a place so as to retain its cultural significance.

**Expansion:** means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased.

**Grave:** A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place.

**Heritage impact assessment (HIA):** Refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. The HIA includes recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.



**Historic Material:** remains resulting from human activities, which are younger than 100 years, but no longer in use, including artifacts, human remains and artificial features and structures.

**Impact:** the positive or negative effects on human well-being and / or on the environment.

**In situ material:** means material culture and surrounding deposits in their original location and context, for instance archaeological remains that have not been disturbed.

**Interested and affected parties Individuals:** communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by the proposal or activity and/ or who are concerned with a proposal or activity and its consequences.

**Interpretation:** means all the ways of presenting the cultural significance of a place.

**Late Iron Age:** this period is associated with the development of complex societies and state systems in southern Africa.

**Material culture** means buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

**Mitigate:** The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

**Place:** means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

**Protected area:** means those protected areas contemplated in section 9 of the National Environmental Management: Protected Areas and the core area of a biosphere reserve and shall include their buffers.



**Public participation process:** A process of involving the public in order to identify issues and concerns, and obtain feedback on options and impacts associated with a proposed project, programme or development. Public Participation Process in terms of National Environmental Management Act refers to: a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to specific matters.

**Setting:** means the area around a place, which may include the visual catchment.

**Significance:** can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgments and science-based criteria (i.e. biophysical, physical cultural, social and economic).

**Site:** a spatial cluster of artifact, structures, organic and environmental remains, as residues of past human activity.



## 1. INTRODUCTION

Nsovo Environmental Consulting requested Vhubvo Archaeo-Heritage Consultant Cc to conduct an Archaeological Impact Assessment (AIA) for the proposed upgrade of storm water management systems at the Port of Saldanha within the jurisdiction of Saldanha Bay Local Municipality of West Coast District Municipality. This assessment is a specialist component which will provide the necessary input into the Basic Assessment Report, and form part of the Environmental Management Programme. The main objective of the assessment is to investigate the general state of heritage within the affected area as well as to assess the need to compile a Phase 1 Archaeological Impact Assessment study. The survey was conducted in accordance with the SAHRA Minimum Standards for Archaeology and Paleontology which clearly specify the required contents of reports of this nature.

## 2. SITES LOCATION AND DESCRIPTION

Figure 1 below depicts the proposed study area at a scale of 1:50 000. The project site is zoned industrial and is used as an iron ore export facility. Saldanha Bay is a large sheltered anchorage on the West Coast of South Africa some 120 km north of Cape Town. The southern and south western portion of the bay (Posberg Peninsula) takes the form of a shallow Lagoon which is presently conserved within the West Coast National Park. The northern portion of the bay (Hoedjies Bay) now falls within the Port of Saldanha – a deep water harbour, industrial area and the town of Saldanha Bay. On the eastern shore lies the resort town of Langebaan - a popular weekend holiday destination. Until the construction of the R27 provincial road in the 1970s, the bay was a relatively isolated area only accessible by road from Cape Town via the towns of Malmesbury and Darling. The construction of the road and establishment of the deep water harbour have seen massive development take place. Langebaan has transformed from a sleepy coastal village to a development *mecca* complete with yacht harbour, resorts, casino and supermarkets. Similarly the Port of Saldanha has grown significantly absorbing much of what was until recently a bleak and deserted stretch of shoreline along the northern edge of the Bay. Despite the widespread development, there are still areas that retain a sense of wilderness that characterises the area. Along the Eastern side of the bay (Spreeuwalle



shoreline) are semi-stabilised dunes, large tracts of Strandveld vegetation punctuated by granite outcrops which are a characteristic of this area.

Within the last 30 years, Saldanha Bay has been transformed from a minor fishing port into a significant centre of heavy industry within the Western Cape. Since the construction of the bulk terminal and dredging of the bay to accommodate large bulk carriers in the 1970's, several other companies have developed large operations in the area, namely the Saldanha Steel smelter, and the Namakwa Sands Smelter which both use the Port of Saldanha's general cargo facilities. Thus, within a relatively short period of time the northern edge of the bay has been transformed from windswept wilderness into a near-industrial landscape. The iron ore handling terminal has established itself as a dominant and overwhelming landmark.

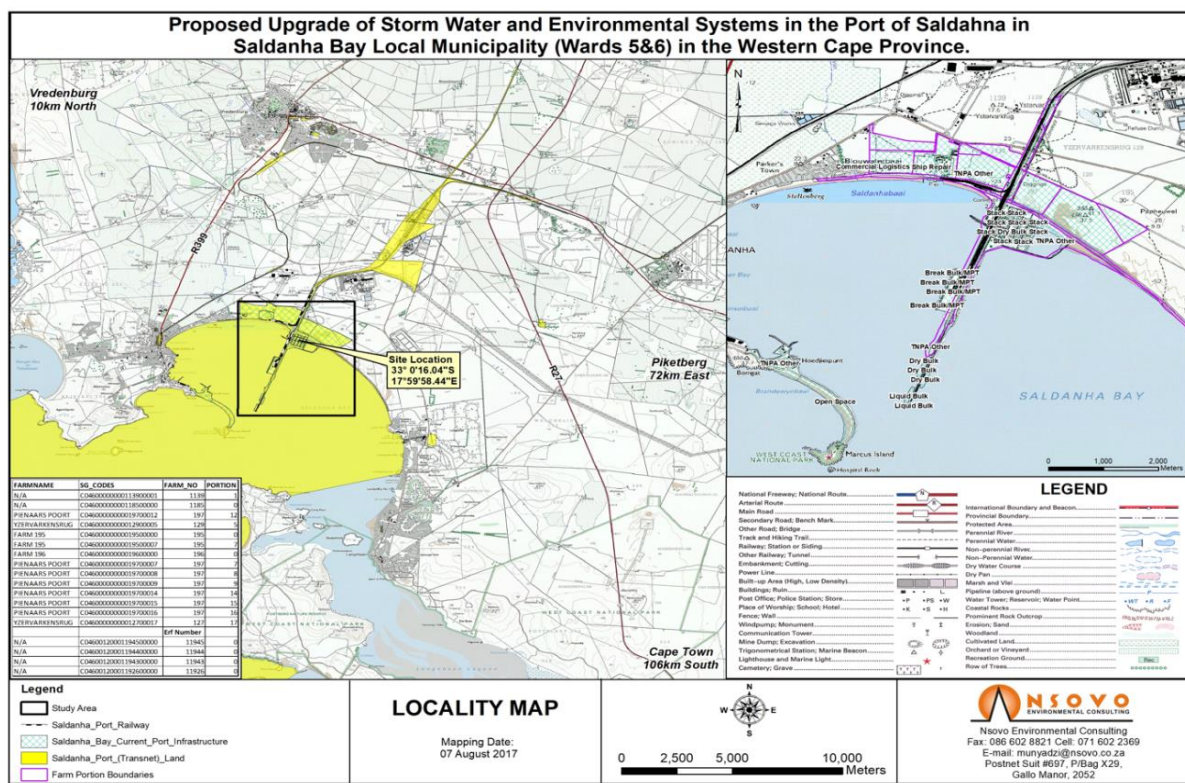


Figure 1: An overview of the topographical map depicting the area proposed for upgrade (Courtesy Nsovo).





Figure 2: A historical topographical map dating to 1981 indicating the *Port* at its early stage (Deeds: 3317BC/1981).



Figure 3: An overview of the historical topographical map of the area of the *Port* as indicated by the red arrow (Deeds: 3317BB, 1973). Note that the port had not been established during this era.





**Figure 4:** An overview of the retention pond to be upgraded near the tippler area.



**Figure 5:** View of another detention pond proposed to be upgraded along the causeway.







Figure 6: View of the Slurry proposed for upgrade.



Figure 7: The area proposed for retention pond.



### 3. NATURE OF THE PROPOSED PROJECT

In 2012, Hatch Goba revised and updated the Storm Water Master Plan (SWMP) for the Port of Saldanha which replaced the plan that was compiled in 2003. Subsequently, the SWMP covers the areas owned by the National Ports Authority of South Africa and includes the small Craft Harbour and Iron Ore Terminal. The area covered by the SWMP divided the study area into five major catchments which are defined by their physical characteristics and operational activities including existing drainage system boundaries. It is therefore understood that out of the 5 mentioned catchments, the proposed scope of work will include only two catchments (i.e. catchments 3 and 4) and their respective sub-catchments. Catchment three entails the service corridor which is subdivided into nine smaller sub-catchments of which only 5 (3C, 3F, 3G, 3H and 3I) will be considered. This catchment consist of the causeway, ore/oil, jetty, multipurpose terminal, maintenance terminal and rail corridor. Catchment 4 is the stockyard which is subdivided into three (4A, 4B and 4C) smaller sub-catchments. This catchment consist of primarily the iron ore stock yard and the administration complex. The SWMP indicates that the existing storm water management infrastructure of certain areas in the Port is inadequate for 1:50 year flood line conditions. If this infrastructure is not upgraded and/or replaced, uncontrolled discharge into the bay and municipal system will be imminent. Subsequently, Transnet proposes to undertake the upgrade of storm water and environmental systems at the Port of Saldanha. The proposed development entails the upgrade of the existing storm water infrastructure in both operational and non-operational areas of Transnet in the Port of Saldanha. Areas under consideration within the catchment three and four are as follows:

**Table 1:** Catchments areas within the proposed location

CATCHMENT THREE	
Area 3C	Tippler area
Area 3F	Rail Embankment
Area 3G	Multipurpose Terminal
Area 3H	Causeway
Area 3I	Ore Jetty



CATCHMENT FOUR	
Area 4A	Stockyard North
Area 4B	Stockyard Centre
Area 4C	Stockyard South

The primary objective of this project is to implement the recommendations of the SWMP and ensure that it align and fully comply with the requirements of the South African Legislation.

The proposed project will primarily thus entail the following:

- Development of two new storm water retention ponds;
- Expansion and reshaping of thirteen existing storm water retention ponds;
- Development of a waste water treatment facility; and
- Upgrade of the storm water management infrastructure as well as maintenance of existing ones.

#### 4. PURPOSE OF THE STUDY

The purpose of this Archaeological Impact Assessment is the following:

- Generally assess the potential cultural heritage and archaeological impacts associated with the development and operation of the proposed project;
- Given the scale and potential archaeological impacts of the proposed development, this assessment will indicate whether there is a need to commission a full Phase I Archaeological Impact Assessment; and
- Recommend appropriate and practical mitigation measures to minimise the negative impacts and maximise potential benefits associated with the proposed development.



## 5. METHODOLOGY AND APPROACH

### 5.1 Background study introduction

The methodological approach is informed by the 2012 SAHRA Policy Guidelines for impact assessment. As part of this study, the following tasks were conducted:

- 1) Literature review;
- 2) Consultations with the developer and appointed consultants;
- 3) Completion of a field survey; and
- 4) Analysis of the acquired data, leading to the production of this report.

#### 5.1.1 Literature Review

The desktop study was undertaken through SAHRIS for previous Cultural Heritage Impact Assessments conducted in the region of the proposed development, and also for research that has been carried out in the area over the recent years, as well as historical aerial maps located in the Deeds Office. These sources were used to screen the proposed area and to understand the baseline of heritage sensitivities.

#### 5.1.2 Oral interview

Oral interview was initiated with Transnet officials, this aimed to understand the cultural landscapes and/ or intangible heritage of the area.

#### 5.1.3 Physical survey

The field survey was undertaken on the 22<sup>nd</sup> of September 2017. An archaeologist from Vhubvo conducted the survey in the presence of Nsovo and Transnet officials.

#### 5.1.4 Documentation

The general project area was documented. This documentation included taking photographs using a Sony Cybershort Digital Camera with 10.1 mega-pixel capability. Plotting of finds was done by a Garmin etrex Venture HC.

#### 5.1.5 Restrictions and Assumptions

Although the development is an upgrade and no heritage resources are expected since the area is disturbed.



## 6. APPLICABLE HERITAGE LEGISLATION

Several statutes the legal basis for the protection and preservation of both cultural and natural resources. These include the National Environment Management Act (No. 107 of 1998); Mineral Amendment Act (No 103 of 1993); Tourism Act (No. 72 of 1993); Cultural Institution Act (No. 119 of 1998), and the National Heritage Resources Act (Act 25 of 1999). Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

- (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 50 m in length; and*
- (c) any development or other activity which will change the character of an area of land, or water -***
  - (i) exceeding 5 000 m<sup>2</sup> in extent;*
  - (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 m<sup>2</sup> 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.*

### **Other relevant sections of the Act are the following:**

**Section 34(1)** *No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.*

**Section 35(4)** *No person may, without a permit issued by the responsible heritage resources authority:*

- *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite*

**Section 36 (3)** *No person may, without a permit issued by SAHRA or a provincial heritage resources authority:*

- *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 formal cemetery administered by a local authority; or*
- *bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.*





lower than that of today. A plethora of Late Stone Age sites dating to within the last 5000 years has been excavated on Club Mykonos and surrounding land firmly demonstrating the hunter gatherers, and later Khoekhoen pastoralists where camping on those parts of the bay were there were rocky shorelines that could provide them with shellfish and other marine foods. Thus it can be seen, like most places in South Africa, Saldanha Bay has a past which spans millions of years.

Since its discovery, Saldanha Bay (named after Antonio de Saldanha who visited the Cape in the early 1500's) was used as a safe anchorage by virtually every sea going nation who had trading interests in the east. It was never permanently settled in any meaningful way until quite late in the history of the Cape. The Dutch East India Company Vereenigde Oostindische Compagnie (VOC) chose Table Bay as their favoured location to establish a permanent re-victualing station even though the anchorage of Table Bay was far inferior and much more dangerous than that of Saldanha. The reason for this is that Table Bay had permanent water, arable land, supplies of wood and was generally well suited to land based settlement (The lack of water at Saldanha impeded its development until a permanent water supply was constructed by the military engineers at the beginning of World War 2). Being anxious to maintain a presence at Saldanha Bay, the VOC established a small garrison on the Posberg Peninsula in 1666. The handful of men equipped with one or two small cannons kept a watch on shipping as the French who were frequently at war with the Dutch used the bay with alacrity, even invading the tiny Dutch garrison. Being many days journey from Cape Town the tiny Dutch garrison was plagued with difficulties. At times the local Cochoqua were in conflict with the VOC forcing the abandonment of the garrison between 1673 and 1677. The bay remained in Dutch hands until the first British occupation of 1795. Development of the area was restricted to sparse farms and fishing which was centered at the small hamlet of Hoedjiesbaai. Strategically, being an undefended bay, Dutch shipping was trapped and taken by British forces on at least three separate occasions between 1781 and 1806. Without adequate defenses, Saldanha Bay became a trap rather than a safe anchorage in times of conflict – a factor which further inhibited its development. In 1820 a group of Irish settlers landed at Saldanha Bay and lived there for a period of time before moving inland where they



established the town of Clanwilliam in the Olifants River Valley where they were allocated land.

In the early 20th century whale fisheries were established at Donkergat and Salamander Bay which saw increased growth of the hamlet with the installation of jetties and coaling facilities. By the late 1930's the whaling industry had collapsed. Several ex-whale catchers were converted for military service and served with distinction through World War 2; others were scuttled at Salamander Bay and Donkergat. A number of hulks were removed by the South African Navy in 1982 and dumped in deeper water off-shore.

In 1942 Saldanha Bay became a defended anchorage with boom defenses, a mine field and batteries on each side of the entrance to the bay. The bay itself was extensively used by convoys and warships alike. A permanent naval base was established and the area's water problems were at last resolved when military engineers established a water supply which was piped from the Berg River. The strategic importance of Saldanha Bay continues to grow with its status as the Cape's only deep sea Port. In short, the heritage of the area is diverse and ancient including both land and marine components. Those elements of the cultural historical landscape identified above which could be potentially affected by the proposed development are the palaeontological and geological formations relating to the ancient Berg River, the coastal dune cordon which may contain pre-colonial heritage and possibly the maritime archaeology of the bay. The proposed activity is too small to be considered to constitute any possible impact and cultural landscape.

## 9. SURVEY FINDINGS AND DISCUSSIONS

The proposed development is located on reclaimed land from sea (see Figure 3), therefore no landbased archaeological artefacts or graves area expected. Furthermore, it should also be noted that the area on which the upgrades are proposed is highly disturbed by previous related excavation and preceding installation of storm water management facilities. As a result, the possibility of impacts on any heritage features is highly unlikely and therefore negligible. Although the proposed project entails expansion of existing ponds (see Figure 4





and 5) which will require deeper excavations, and it can thus be argued that oceanic artefacts such as ship-wreck, and sea shell could be discovered, it should be borne in mind that several archaeological studies (Hart 2007, Van Rooyen and Gertenbach 2007) had been conducted in the area, and none discovered any archaeological finds. Needless to say, the survey revealed that the area proposed for upgrade does not warrant a full Phase I AIA studies. The proposed area is disturbed such that no archaeological survey can discover any archaeological resource.

## 10. RECOMMENDATIONS AND DISCUSSIONS

Investigation of past archaeological studies in the region (Hart 2007, Van Rooyen and Gertenbach 2007), aerial photography and historical map (Figure 2 and 3), coupled with a site visit revealed that the development is proposed on an area where no archaeological sites, burial grounds or isolated artefacts can be found. On that note, it is recommended that the project be exempted from any further archaeological assessment studies, since the landscape is severely degraded for any archaeological site/and or artifact to be found. Nonetheless, the following recommendations are proposed for the construction phase of the development:

- Prior to construction, contractors should be given training on how to identify and protect archaeological remains that may be discovered during the project. The pre-construction training should include some limited site recognition for the types of archaeological sites that may occur in the construction areas.

## 11. CONCLUSIONS

This project proposal which is secondary in nature in that most of the storm water infrastructure already exists on the proposed area can be considered to be of an insignificant landscape change. Furthermore, it is of inconsequential in heritage terms. Thus, it is recommended that the Heritage Western Cape exempt the project from undertaking a Phase 1 Archaeological study.



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## APPENDIX 1: SITE SIGNIFICANCE

The following guidelines for determining site *significance* were developed by SAHRA in 2003. 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.

### (a) Historic value

- Is it important in the community, or pattern of history?
- Does it have strong or special association with the life or work of a person, group or organization of importance in history?
- Does it have significance relating to the history of slavery?

### (b) Aesthetic value

- Is it important in exhibiting particular aesthetic characteristics valued by a community or cultural group?

### (c) Scientific value

- Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage?
- Is it important in demonstrating a high degree of creative or technical achievement at a particular period?

### (d) Social value

- Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons?

### (e) Rarity

- Does it possess uncommon, rare or endangered aspects of natural or cultural heritage?

### (f) Representivity

- Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects?
- What is the importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as



being characteristic of its class?

- Is it important in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality?

