Heritage Impact Assessment

HeronBridge Sports Field Development

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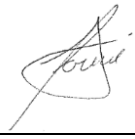
Document Review Approval	Armand Fourie		SACNASP Cand.Sci.Nat. (116705)	June 2017

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Amendments on Document

Date	Report Reference Number		Description of Amendment

DECLARATION OF INDEPENDENCE

Specialist Name	Jaco van der Walt
Declaration of Independence	I declare, as a specialist appointed in terms of the National Environmental Management Act (Act No 108 of 1998) and the associated 2014 Environmental Impact Assessment (EIA) Regulations, that I: • I act as the independent specialist in this application; • I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant; • I declare that there are no circumstances that may compromise my objectivity in performing such work; • I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity; • I will comply with the Act, Regulations and all other applicable legislation; • I have no, 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 form are true and correct; and • I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.
Signature	
Date	06/02/2017

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Executive Summary

Site name and location: The proposed Heronbridge sports field is to be located between the N14 highway and the R114 road, on sub-divisional portion 112 of portion 17 of the farm Nietgedacht 535 IQ, City of Johannesburg Metropolitan Municipality, Gauteng Province.

1: 50 000 Topographic Map: 2527 DD.

EIA Consultant: Prism EMS

Developer: Heronbridge College NPC)

Heritage Consultant: Heritage Contracts and Archaeological Consulting CC (HCAC).
Contact person: Jaco van der Walt Tel: +27 82 373 8491 E –mail jaco.heritage@gmail.com.

Date of Report: 11 February 2017.

Findings of the Assessment:

HCAC was appointed to assess the study area in terms of the archaeological component of Section 35 of the NHRA as part of the Environmental Impact Assessment (EIA) for the project. No significant Stone Age sites were recorded in the study area and no ceramics or stone walls attributed to the Iron Age were recorded. Similarly no sites of archaeological significance were recorded by other studies in the area (e.g. Kusel (2007), van Schalkwyk (2013) van der Walt (2015 a and b, 2016)). According to the SAHRA Paleontological Sensitivity map the study area is of zero paleontological sensitivity and no further studies are required in this regard. No further mitigation prior to construction is recommended in terms of Section 35 for the proposed development to proceed.

In terms of the built environment of the area (Section 34), no structures occur within the study area and in terms of Section 36 of the Act no burial sites were recorded in the study area. However if any graves are located in future they should ideally be preserved *in-situ* or alternatively relocated according to existing legislation. Due to the subsurface nature of archaeological remains and the fact that graves can occur anywhere on the landscape, it is recommended that a chance find procedure is implemented for the project as part of the EMPr.

No battlefields are on record for the study area and through the public participation process the presence of living heritage sites and oral histories was investigated but none was recorded. Similarly no historical settlements or significant cultural landscapes were noted during the fieldwork. Due to the lack of significant heritage features in the study area HCAC is of opinion that the development can commence based on approval from SAHRA.

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1 INTRODUCTION

1.1 Project Description

Heronbridge College NPC is intending to develop a substantial sports fields and related facilities in a phased approach on portion 112 (a portion of portion 17) of the farm Nietgedacht 535 IQ, Gauteng province. The Applicant (Heronbridge College NPC) currently owns the land with the college located on portion 36 and 38 of the farm Nietgedacht 535 IQ. In addition, the proposed development also involves the provision of all necessary services to the development including water, sanitation, storm water and roads.

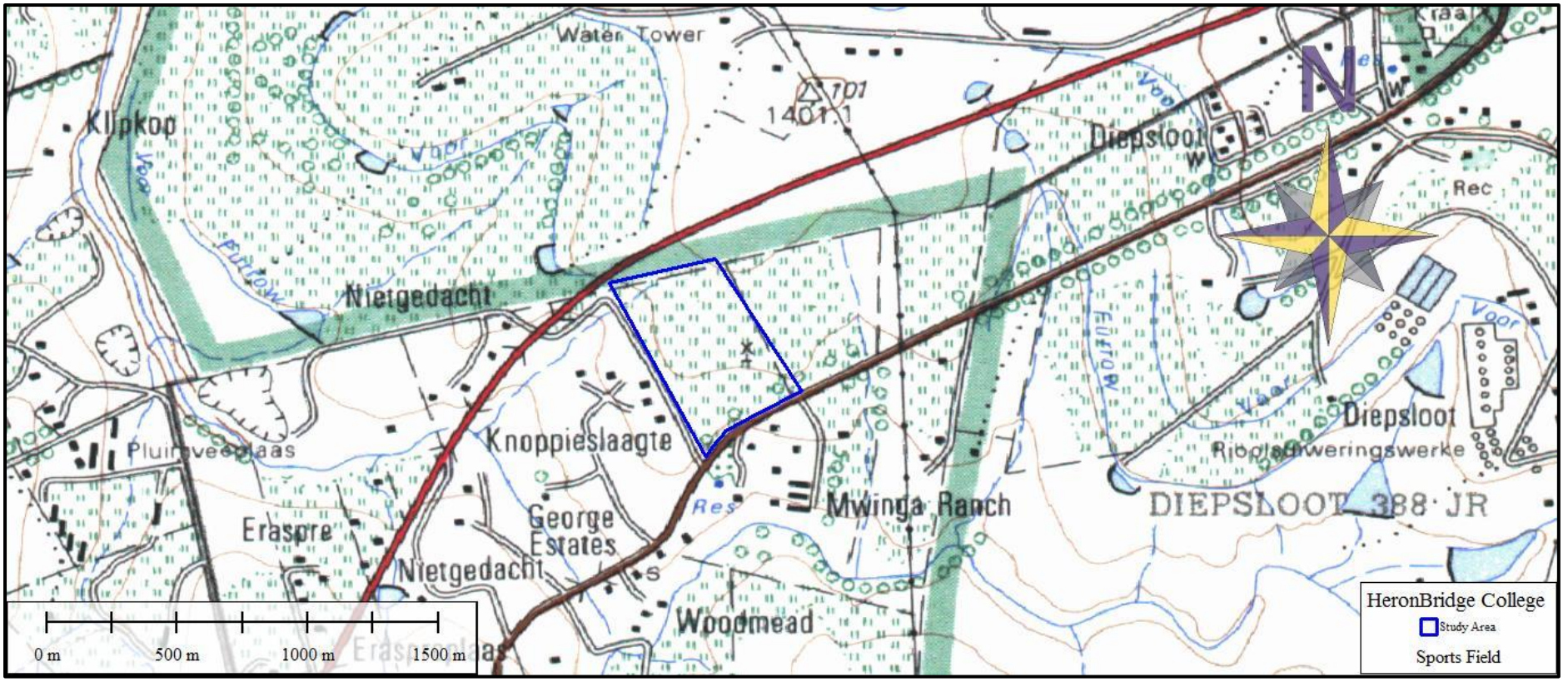

Figure 1.1. Locality Map

1.2 Scope and Purpose

Heritage Contracts and Archaeological Consulting CC (HCAC) was appointed to conduct a Heritage Impact Assessment for the proposed Heronbridge sports field to be located between the N14 highway and the R114 road, on sub-divisional portion 112 of portion 17 of the farm Nietgedacht 535 IQ, City of Johannesburg Metropolitan Municipality, Gauteng Province.

The aim of the study is to identify cultural heritage sites, document, and assess their importance within local, provincial and national context. It serves to assess the impact of the proposed project on non-renewable heritage resources, and to submit appropriate recommendations with regard to the responsible cultural resources management measures that might be required to assist the developer in managing the discovered heritage resources in a responsible manner. It is also conducted to protect, preserve, and develop such resources within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999).

The report outlines the approach and methodology utilised before and during the survey, which includes: Phase 1, a background study that included collection from various sources and consultations; Phase 2, the physical surveying of the study area on foot and by vehicle; Phase 3, reporting the outcome of the study.

General site conditions were recorded by means of photographs, GPS locations, and site descriptions. Possible impacts were identified and mitigation measures are proposed in the following report.

This report must also be submitted to the SAHRA for review.

1.3 Overview of Specialist

Jaco van der Walt is a member of ASAPA (no 159), and accredited in the following fields of the CRM Section of the association: Iron Age Archaeology, Colonial Period Archaeology, Stone Age Archaeology and Grave Relocation. This accreditation is also acknowledged by SAHRA and AMAFA. He has been involved in research and contract work in South Africa, Botswana, Zimbabwe, Mozambique, Tanzania and the DRC; having conducted more than 300 AIA's since 2000.

Table 1-1: Details of Specialist.

Specialist	Jaco van der Walt
Company:	HCAC
Qualifications:	MA Archaeology (University of the Witwatersrand)
Experience:	15 years' experience conducting AIA and managing projects
Affiliation/ Registration	ASAPA Registration number: 159
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2 REPORT OUTLINE

Appendix 6 of GN 982 of 4 December 2014 provides the requirements for specialist reports undertaken as part of the environmental authorisation process. In line with this, Table 2-1 provides an overview of Appendix 6 together with information on how these requirements have been met.

Table 2-1. Specialist Report Requirements.

Requirement from Appendix 6 of GN 982 of 4 December 2014	Chapter
(a) Details of - (i) the specialist who prepared the report; and (ii) the expertise of that specialist to compile a specialist report including a curriculum vitae	Section 1 Section 10
(b) Declaration that the specialist is independent in a form as may be specified by the competent authority	*Declaration of Independence*
(c) Indication of the scope of, and the purpose for which, the report was prepared	Section 10
(d) Date and season of the site investigation and the relevance of the season to the outcome of the assessment	Section 4
(e) Description of the methodology adopted in preparing the report or carrying out the specialised process	Section 4
(f) Specific identified sensitivity of the site related to the activity and its associated structures and infrastructure	Section 6
(g) Identification of any areas to be avoided, including buffers	Section 6
(h) Map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers	Section 6
(I) Description of any assumptions made and any uncertainties or gaps in knowledge	Section 5
(j) Description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives on the environment	Section 6 Section 7 Section 8
(k) Mitigation measures for inclusion in the EMPr	Section 8
(I) Conditions for inclusion in the environmental authorisation	Section 8
(m) Monitoring requirements for inclusion in the EMPr or environmental authorisation	Section 8
(n) Reasoned opinion - (i) as to whether the proposed activity or portions thereof should be authorised; and	Section 8

Requirement from Appendix 6 of GN 982 of 4 December 2014	Chapter
(ii)if the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan	
(o) Description of any consultation process that was undertaken during the course of preparing the specialist report	Section 4
(p) A summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	See attached
(q) Any other information requested by the competent authority	(N/A)

3 LEGISLATION AND GUIDELINES

The AIA or HIA, as a specialist sub-section of the EIA, is required under the following legislation:

- National Heritage Resources Act (NHRA), Act No. 25 of 1999)
- National Environmental Management Act (NEMA), Act No. 107 of 1998 - Section 23(2)(b)
- Mineral and Petroleum Resources Development Act (MPRDA), Act No. 28 of 2002 - Section 39(3)(b)(iii)

Phase 1, an AIA or a HIA is a pre-requisite for development in South Africa as prescribed by SAHRA and stipulated by legislation. The overall purpose of heritage specialist input is to:

- Identify any heritage resources, which may be affected;
- Assess the nature and degree of significance of such resources;
- Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance;
- Assess the negative and positive impact of the development on these resources; and
- Make recommendations for the appropriate heritage management of these impacts.

The AIA should be submitted, as part of the impact assessment report or EMPr, to the PHRA if established in the province or to SAHRA. SAHRA will ultimately be responsible for the professional evaluation of Phase 1 AIA reports upon which review comments will be issued. 'Best practice' requires Phase 1 AIA reports and additional development information, as per the impact assessment report and/or EMPr, to be submitted in duplicate to SAHRA after completion of the study. SAHRA accepts Phase 1 AIA reports authored by professional archaeologists, accredited with ASAPA or with a proven ability to do archaeological work.

Minimum accreditation requirements include an Honours degree in archaeology or related discipline and 3 years post-university CRM experience (field supervisor level). Minimum standards for reports, site documentation and descriptions are set by ASAPA in collaboration with SAHRA. ASAPA is based in South Africa, representing professional archaeology in the SADC region. ASAPA is primarily involved in the overseeing of ethical practice and standards regarding the archaeological profession. Membership is based on proposal and secondment by other professional members.

Phase 1 AIA's are primarily concerned with the location and identification of heritage sites situated within a proposed development area. Identified sites should be assessed according to their significance. Relevant conservation or Phase 2 mitigation recommendations should be made. Recommendations are subject to evaluation by SAHRA.

Conservation or Phase 2 mitigation recommendations, as approved by SAHRA, are to be used as guidelines in the developer's decision making process.

Phase 2 archaeological projects are primarily based on salvage/mitigation excavations preceding development destruction or impact on a site. Phase 2 excavations can only be conducted with a permit, issued by SAHRA to the appointed archaeologist. Permit conditions are prescribed by SAHRA and includes (as minimum requirements) reporting back strategies to SAHRA and deposition of excavated material at an accredited repository.

In the event of a site conservation option being preferred by the developer, a site management plan, prepared by a professional archaeologist and approved by SAHRA, will suffice as minimum requirement.

After mitigation of a site, a destruction permit must be applied for with SAHRA by the applicant before development may proceed.

Human remains older than 60 years are protected by the National Heritage Resources Act, with reference to Section 36. Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act), as well as the Human Tissues Act (Act 65 of 1983), and are the jurisdiction of SAHRA. The procedure for Consultation Regarding Burial Grounds and Graves (Section 36[5]) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administrated by a local authority. Graves in this age category, located inside a formal cemetery administrated by a local authority, require the same authorisation as set out for graves younger than 60 years, in addition to SAHRA authorisation. If the grave is not situated inside a formal cemetery, but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws, set by the cemetery authority, must be adhered to.

Human remains that are less than 60 years old are protected under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925), as well as the Human Tissues Act (Act 65 of 1983), and are the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning; or in some cases, the MEC for Housing and Welfare. Authorisation for exhumation and reinternment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must also be adhered to. To handle and transport human remains, the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

4 METHODOLOGY

4.1 Desktop Assessment

Conduct a brief desktop study where information on the area is collected to provide a background setting of the historical context of the area.

4.2 Literature Review

This was conducted by utilizing data stored in the national archives and published reports relevant to the study area. The aim of this is to extract data and information on the area in question.

4.3 Site Investigation

Conduct a field study to: a) systematically survey the proposed project area to locate, identify, record, photograph and describe sites of archaeological, historical or cultural interest; b) record GPS points identified as significant areas; c) determine the levels of significance of the various types of heritage resources recorded in the project area.

The details of the site investigation undertaken are provided in **Error! Reference source not found.**.

Table 4-1: Site Investigation Details

	Site Investigation
Date	6 February 2017
Season	Summer – grass cover is high limiting archaeological visibility Area was sufficiently covered to adequately record the presence of heritage resources (Figure 4.1)

Figure 4.1. Track logs of the survey in black and the study area indicated in blue.

4.4 Impact Assessment Methodology

The presence and distribution of heritage resources define a 'heritage landscape'. In this landscape, every site is relevant. In addition, because heritage resources are non-renewable, heritage surveys need to investigate an entire project area, or a representative sample, depending on the nature of the project. In the case of the proposed project the local extent of its impact necessitates a representative sample and only the footprint of the areas demarcated for development were surveyed. In all initial investigations, however, the specialists are responsible only for the identification of resources visible on the surface. This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The following criteria were used to establish site significance:

- The unique nature of a site;
- The integrity of the archaeological/cultural heritage deposits;
- The wider historic, archaeological and geographic context of the site;
- The location of the site in relation to other similar sites or features;
- The depth of the archaeological deposit (when it can be determined/is known);
- The preservation condition of the sites; and
- Potential to answer present research questions.

Furthermore, the Section 3 of the NHRA distinguishes nine criteria for places and objects to qualify as 'part of the national estate' if they have cultural significance or other special value. These criteria are:

- Its importance in/to the community, or pattern of South Africa's history;
- Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- Its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa;
- Sites of significance relating to the history of slavery in South Africa.

4.5. Field Rating of Sites

Site significance classification standards prescribed by SAHRA (2006), and acknowledged by ASAPA for the SADC region, were used for the purpose of this report. The recommendations for each site should be read in conjunction with section 8.2 of this report.

FIELD RATING	***GRADE***	***SIGNIFICANCE***	***RECOMMENDED MITIGATION***
National Significance (NS)	Grade 1	-	Conservation; national site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; provincial site nomination
Local Significance (LS)	Grade 3A	High significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP.A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction

As standardized impact assessment methodology was utilized to determine the impacts associated with the proposed development. A summary of this methodology is provided below.

The **significance** of an impact is defined as the combination of the **consequence** of the impact occurring and the **probability** that the impact will occur. The nature and type of impact may be direct or indirect and may also be positive or negative, refer to Table 4.2Table 4-2: below for the specific definitions.

Table 4-2: Nature and type of impact.

	Nature and Type of Impact:		
IMPACT	**Direct**	Impacts that are caused directly by the activity and generally occur at the same time and place as the activity	✓/✗
	Indirect	Indirect or induced changes that may occur as a result of the activity. These include all impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity	✓/✗
	Cumulative	Those impacts associated with the activity which add to, or interact synergistically with existing impacts of past or existing activities, and include direct or indirect impacts which accumulate over time and space	✓/✗
	Positive	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes will benefit significantly, and includes neutral impacts (those that are not considered to be negative	✓
	Negative	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes will be comprised	✗

Table 4-3: presents the defined criteria used to determine the **consequence** of the impact occurring which incorporates the extent, duration and intensity (severity) of the impact.

Table 4-3: Consequence of the Impact occurring.

	Extent of Impact:		
CONSEQUENCE	**Site**	Impact is limited to the site and immediate surroundings, within the study site boundary or property (immobile impacts)	**1**
	Neighbouring	Impact extends across the site boundary to adjacent properties (mobile impacts)	**2**
	Local	Impact occurs within a 5km radius of the site	**5**
	Regional	Impact occurs within a provincial boundary	**8**
	National	Impact occurs across one or more provincial boundaries	**10**
	Duration of Impact:		
	Incidental	The impact will cease almost immediately (within weeks) if the activity is stopped, or may occur during isolated or sporadic incidences	**1**
	Short-term	The impact is limited to the construction phase, or the impact will cease within 1 - 2 years if the activity is stopped	**2**
	Medium-term	The impact will cease within 5 years if the activity is stopped	**5**
	Long-term	The impact will cease after the operational life of the activity, either by natural processes or by human intervention	**8**

	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	**10**
	Intensity or Severity of Impact:		
	Low	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are not affected	**1**
	Low-Medium	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are modified insignificantly	**2**
	Medium	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are altered	**5**
	Medium-High	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes are severely altered	**8**
	High	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes will permanently cease	**10**

The probability of the impact occurring is the likelihood of the impacts actually occurring, and is determined based on the classification provided in Table 4-4.

Table 4-4: Probability and confidence of impact prediction.

PROBABILITY	**Probability of Potential Impact Occurrence:**		
	Improbable	The possibility of the impact materialising is very low either because of design or historic experience	**5**
	Possible	The possibility of the impact materialising is low either because of design or historic experience	**10**
	Likely	There is a possibility that the impact will occur	**15**
	Highly Likely	There is a distinct possibility that the impact will occur	**25**
	Definite	The impact will occur regardless of any prevention measures	**30**

The **significance** of the impact is determined by considering the consequence and probability without taking into account any mitigation or management measures and is then ranked according to the ratings listed in Table 4-5:.

Table 4-5: Significance rating of the impact.

SIGNIFICANCE	**Significance Ratings:**	
	Low	Neither environmental nor social and cultural receptors will be adversely affected by the impact. Management measures are usually not provided for low impacts
	Low-Medium	Management measures are usually encouraged to ensure that the impacts remain of Low-Medium significance. Management measures may be proposed to ensure that the significance ranking remains low-medium

	Medium	Natural, cultural and/or social functions and processes are altered by the activities, and management measures must be provided to reduce the significance rating
	Medium-High	Natural, cultural and/or social functions and processes are altered significantly by the activities, although management measures may still be feasible
	High	Natural, cultural, and/or social functions and processes are adversely affected by the activities. The precautionary approach will be adopted for all high significant impacts and all possible measures must be taken to reduce the impact

The level of confidence associated with the impact prediction is also considered as low, medium or high (Table 4-6:).

Table 4-6: Level of confidence of the impact prediction.

	Level of Confidence in the Impact Prediction:		
CONFIDENCE	**Low**	Less than 40% sure of impact prediction due to gaps in specialist knowledge and/or availability of information	**10**
	Medium	Between 40 and 70% sure of impact prediction due to limited specialist knowledge and/or availability of information	**50**
	High	Greater than 70% sure of impact prediction due to outcome of specialist knowledge and/or availability of information	**100**

Once significance rating has been determined for each impact, management and mitigation measures must be determined for all impacts that have a significance ranking of Medium and higher in order to attempt to reduce the level of significance that the impact may reflect.

The EIA Regulations, 2014 specifically require a description is provided of the degree to which these impacts:

- can be reversed;
- may cause irreplaceable loss of resources; and
- can be avoided, managed or mitigated.

Based on the proposed mitigation measures, the mitigation efficiency is also determined (Table 4-7:) whereby the initial significance is re-evaluated and ranked again to affect a significance that incorporates the mitigation based on its effectiveness. The overall significance is then re-ranked and a final significance rating is determined.

Table 4-7: Mitigation efficiency.

	Mitigation Efficiency		
MITIGATION EFFICIENCY	**None**	Not applicable	**0%**
	Very Low	Where the significance rating stays the same, but where mitigation will reduce the intensity of the impact. Positive impacts will remain the same	**20%**
	Low	Where the significance rating reduces by one level, after mitigation	**40%**
	Medium	Where the significance rating reduces by two levels, after mitigation	**60%**
	High	Where the significance rating reduces by three levels, after mitigation	**80%**
	Very High	Where the significance rating reduces by more than three levels, after mitigation	**100%**

The reversibility is directly proportional the “Loss of Resource” where no loss of resource is experienced, the impact is completely reversible; where a substantial “Loss of resource” is experienced there is a medium degree of reversibility; and an irreversible impact relates to a complete loss of resources, i.e. irreplaceable (Table 4-8:).

Table 4-8: Degree of reversibility and loss of resources.

DEGREE REVERSIBILITY & LOSS OF RESOURCES	**Loss of Resources:**		
	No Loss	No loss of social, cultural and/or ecological resource(s) is experienced. Positive impacts will not experience resource loss	**0**
	Partial	The activity results in an insignificant or partial loss of social, cultural and/or ecological resource(s)	**30**
	Substantial	The activity results in a significant loss of social, cultural and/or ecological resource(s)	**60**
	Irreplaceable	The activity results in the complete and irreplaceable social, cultural and/or ecological loss of resource(s)	**80**
	Reversibility:		
	Irreversible	Impacts on natural, cultural and/or social functions and processes are irreversible to the pre-impacted state in such a way that the application of resources will not cause any degree of reversibility	**20**
	Medium Degree	Impacts on natural, cultural and/or social functions and processes are partially reversible to the pre-impacted state if less than 50% resources are applied	**40**
	High Degree	Impacts on natural, cultural and/or social functions and processes are partially reversible to the pre-impacted state if more than 50% resources are applied	**70**
	Reversible	Impacts on natural, cultural and/or social functions and processes are fully reversible to the pre-impacted state if adequate resources are applied	**100**

4.6. Consultation Process

Stakeholder engagement is a key component of any EIA process. It involves stakeholders interested in, or affected by the proposed development. Stakeholders are provided with an opportunity to raise issues of concern, in this case specifically pertaining to Heritage issues. Public consultation is a legislative requirement of the NHRA, as part of the consultation process the following tasks will be undertaken:

- Stakeholder identification and analysis;
- Compilation of information sharing documentation;
- Stakeholder notification (through the dissemination of information and meeting invitations);
- Stakeholder meetings undertaken with I&APs;
- The compilation of a Comments and Response Report (CRR).

No heritage concerns were raised during this process.

5 ASSUMPTIONS, GAPS AND LIMITATIONS

It should be noted that due to safety concerns around the dumping areas, access to these areas were restricted. Due to the subsurface nature of archaeological artefacts, the possibility exists that some features or artefacts may not have been discovered/recorded during the survey and the possible occurrence of unmarked graves and other cultural material cannot be excluded. This report only deals with the footprint area of the proposed development. High vegetation cover limited archaeological visibility. It is possible that new information, which could change the recommendations, could come to light through the following:

- Exposure of archaeological and historical sites and objects that are hidden or are buried during site clearance activities;
- Exposure of hidden archaeological and historical sites and objects (obscured by tall grass etc.).
- Additional information may be presented during the social consultation process.

Although HCAC surveyed the area as thoroughly as possible, it is incumbent upon the developer to stop operations and inform the relevant heritage agency should further cultural remains, such as graves, stone tool scatters, artefacts, bones or fossils, be exposed during the process of development.

6 RESULTS AND FINDINGS

6.1 Databases Consulted

Twenty four sites are on record for the larger geographical area at the Wits database. These sites consist of Stone Age (ESA & LSA), Late Iron Age, engraving sites and cemeteries. None of these sites are located within or close to the project area but provide a background of to the sites that can be expected. Numerous previous CRM projects were conducted in the general vicinity of the study area. The following studies were consulted for this report.

Author	Year	Project	Findings
Kusel, U.	2007	Cultural Heritage Resources Impact Assessment Of Portion 29 Of The Farm Lindley 528 Jq Lanseria Gauteng	No Sites were recorded
Pelser, A.	2011	A Report On A Heritage Impact Assessment For The Proposed Lanseria Commercial Crossing Development On Various Portions Of Bultfontein 533 Jq, Nooitgedacht 534 Jq And Nietgedacht 535 Jq, Near Lanseria Gauteng	Informal cemeteries were identified
Kitto, J.	2013	Proposed Establishment Of A New Industrial Township On Portions 38 And 39 Of The Farm Bultfontein No. 533-JQ, Lanseria, City Of Johannesburg Metropolitan Municipality, Gauteng Province Heritage Impact Assessment Report.	Modern Structures and graves were recorded
Van Schalkwyk	2013	Basic Cultural Heritage Assessment For The Proposed Bulk Water Supply Pipeline Between Lanseria And Cosmos City, Gauteng Province. Unpublished Report.	No Sites were recorded
Van der Walt, J.	2015 a	Archaeological Impact Assessment For The Proposed Kya Sand Extension 104 Township Development, Gauteng	No Sites were recorded
Van der Walt, J.	2015b	Archaeological Impact Assessment for The Proposed Township Development On Portion 96 Of The Farm Lindley 528 J.Q. Lanseria, Gauteng Province.	No Sites were recorded
Van der Walt, J.	2016	Archaeological impact assessment for the proposed Nietgedacht building waste storage, handling and distribution facility, Gauteng Province	No Sites recorded

6.2 Genealogical Society and Google Earth Monuments

No cemeteries are indicated for the farm under investigation. There are however several cemeteries indicated for the farm Nooitgedacht 534 JQ directly to the west. These cemeteries will not be impacted on by the proposed development.

6.3 Historical context and previous land use of the study area

6.3.1. Historical overview of the greater study area

Excavations by Mason (1997) at the Boulders shopping centre (approximately 20 km to the east of the current study area) was aimed at interpreting the cultural layering of the Midrand area and provides a good platform for understanding the cultural use of the wider landscape. He identified 7 occupational layers in his excavations that can be broadly divided into Stone Age, Iron Age and historical occupations.

- The Stone Age can be divided in three main phases as follows;
- Later Stone Age; associated with Khoi and San societies and their immediate predecessors. Recently to ~30 thousand years ago
- Middle Stone Age; associated with Homo sapiens and archaic modern humans. 30-300 thousand years ago.
- Earlier Stone Age; associated with early Homo groups such as Homo habilis and Homo erectus. 400 000-> 2 million years ago.

Remains dating to all three of these phases were identified by Mason at the Boulders shopping Centre site, MSA and LSA material was also recorded at Glenn Ferness cave. The Iron Age of the region consists of Tswana speaking people who settled in the area from the early 16th century.
J. S. Bergh's historical atlas of the four northern provinces of South Africa is a very useful source for the writing of local and regional history.
Interestingly, it seems that the study area is located about 32 km north of the Melville Koppies, which is a Middle Stone-Age site. (Bergh 1999: 4) This area was also important to Iron Age communities, since these people had smelted and worked iron ore at the Melville Koppies site since the year 1060, by approximation. (Bergh 1999: 7, 87)

Regarding the Iron Age, the Smelting Site at Melville Koppies requires further mention. The site was excavated by Professor Mason from the Department of Archaeology of WITS in the 1980's. Extensive Stone walled sites are also recorded further South at Klipriviers Berg Nature reserve belonging to the Late Iron Age period. A large body of research is available on this area. These sites (Taylor's Type N, Mason's Class 2 & 5) are now collectively referred to as Klipriviersberg (Huffman 2007). These settlements are complex in that aggregated settlements are common, the outer wall sometimes includes scallops to mark back courtyards, there are more small stock kraals, and straight walls separate

households in the residential zone. These sites dates to the 18th and 19th centuries and was built by people in the Fokeng cluster.

In this area the Klipriviersberg walling would have ended at about AD 1823, when Mzilikazi entered the area (Rasmussen 1978). This settlement type may have lasted longer in other areas because of the positive interaction between Fokeng and Mzilikazi.

The Difaqane (Sotho), or Mfekane ("the crushing" in Nguni) was a time of bloody upheavals in Natal and on the Highveld, which occurred around the early 1820's until the late 1830's. (Bergh 1999: 10). It came about in response to heightened competition for land and trade, and caused population groups like gun-carrying Griquas and Shaka's Zulus to attack other tribes. (Bergh 1999: 14; 116-119) It seems that, in 1827, Mzilikazi's Ndebele started moving through the area where Johannesburg is located today. This group went on raids to various other areas in order to expand their area of influence. (Bergh 1999: 11).

During the time of the Difaqane, a northwards migration of white settlers from the Cape was also taking place. Some travellers, missionaries and adventurers had gone on expeditions to the northern areas in South Africa, some already as early as the 1720's. It was however only by the late 1820's that a mass-movement of Dutch speaking people in the Cape Colony started advancing into the northern areas. This was due to feelings of mounting dissatisfaction caused by economical and other circumstances in the Cape. This movement later became known as the Great Trek.

This migration resulted in a massive increase in the extent of that proportion of modern South Africa dominated by people of European descent. (Ross 2002: 39) By 1939 to 1940, farm boundaries were drawn up in an area that includes the present-day Johannesburg and Krugersdorp. (Bergh 1999: 15).

The first settlers moved in the Midrand area in the 1820s, this included hunters, traders, missionaries and other travellers. Voortrekker farmers such as Frederik Andries Strydom and Johannes Elardus Erasmus established the farms Olifantsfontein and Randjesfontein respectively around the 1840's and this indicated permanent occupation of the area by white settlers. These early white settlers and their descendants were often buried on their farms and formal and informal graves and graveyards can be expected anywhere on the landscape (Van Schalkwyk 1998).

The Anglo-Boer War (1899-1902) had an impact on the Midrand area, and for a short period the area was a key focus of the British war effort, when the British forces under Lord Roberts advanced through Midrand from Johannesburg en route to Pretoria. Pretoria was occupied on 5 June 1900. Some British military units were stationed close to the study area this includes the Escom Training Centre as well as Bibury Grange. No major battles took place in Midrand. Conflict in the area was defined by the Boer attempts to sabotage the railway line as well as attacks on troop trains. A notable incident was the

successful Boer demolition of the railway culvert near the Pinedene Station. The railway had to be completely rebuilt by the Imperial Military Railways in 1901(Van Schalkwyk 1998).

6.3.2. Historical Overview Of The Development Of The Study Area

It was necessary to use a range of sources in order to give an account of the history of the study area. Sources include secondary source material, maps, online sources and archival documents. This study should be viewed as an introduction to the history of the area under investigation.

Since the mid-1800s up until the present, South Africa has been divided and re-divided into various districts. Since 1857, the farm under investigation formed part of the Pretoria district. As of 1894 the farm formed part of the Krugersdorp district. This remained the case up until 1977, when South Africa was divided into various smaller magisterial districts. The farm area became known as the Krugersdorp magisterial district within the Witwatersrand district. Today, the property falls within the City of Johannesburg, Gauteng Province. (Bergh 1999: 17; 20-27)

Note that, by 1920 the property under investigation was known as Nietgedacht 91, and later became Nietgedacht 130. By 1950 the farm was known as Nietgedacht 535 JQ.

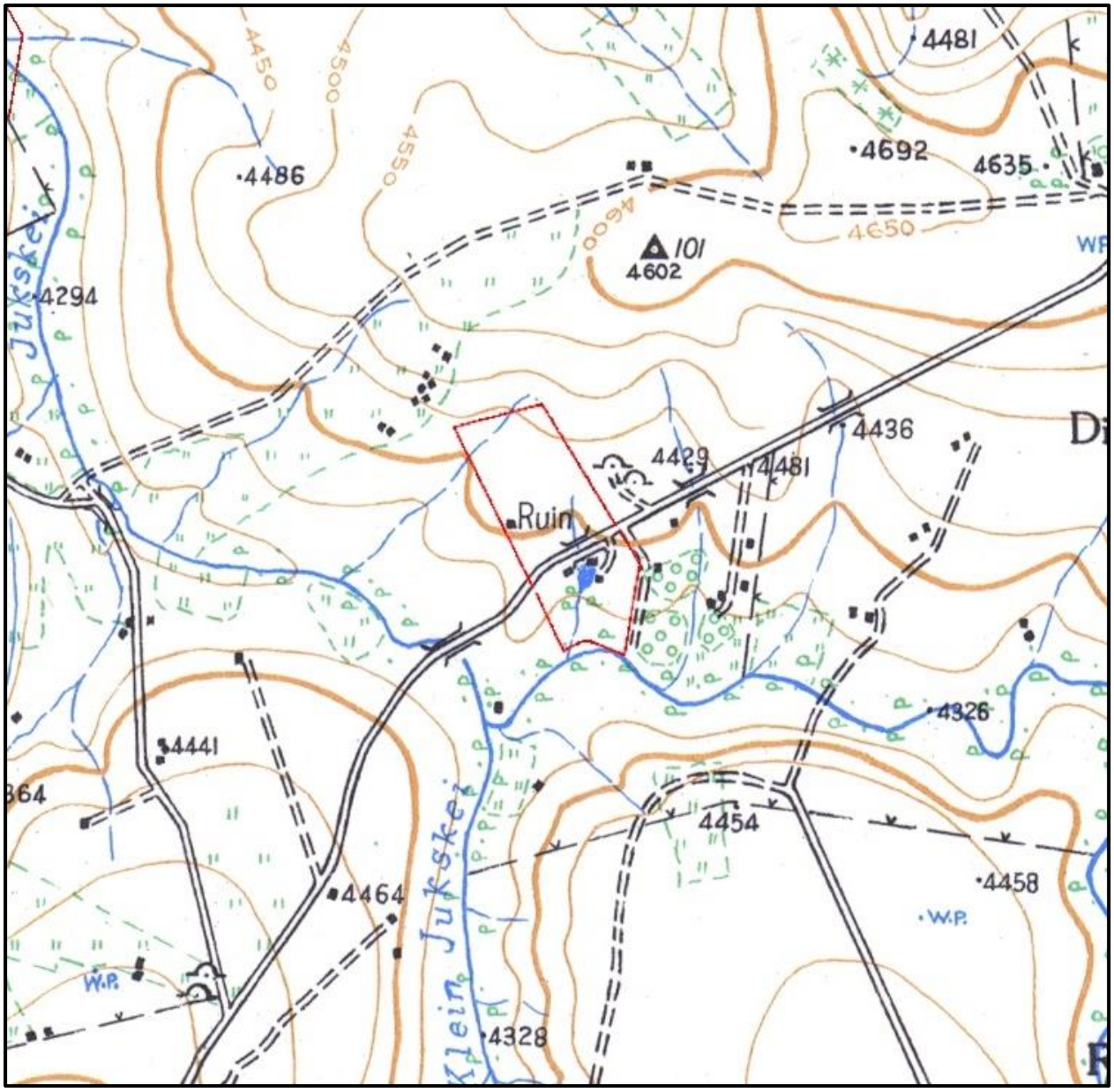

Figure 0.1. 1943 Topographical Map of the portion under investigation on Nietgedacht (red border). The property was divided into a northern and southern portion by the road that would later become the R114. A ruin is visible in the northern part of the property. A section of the Jukskei River flows alongside the southern farm border. Three buildings can be seen close to the road in the southern section of the farm. (Topographical Map 1943)

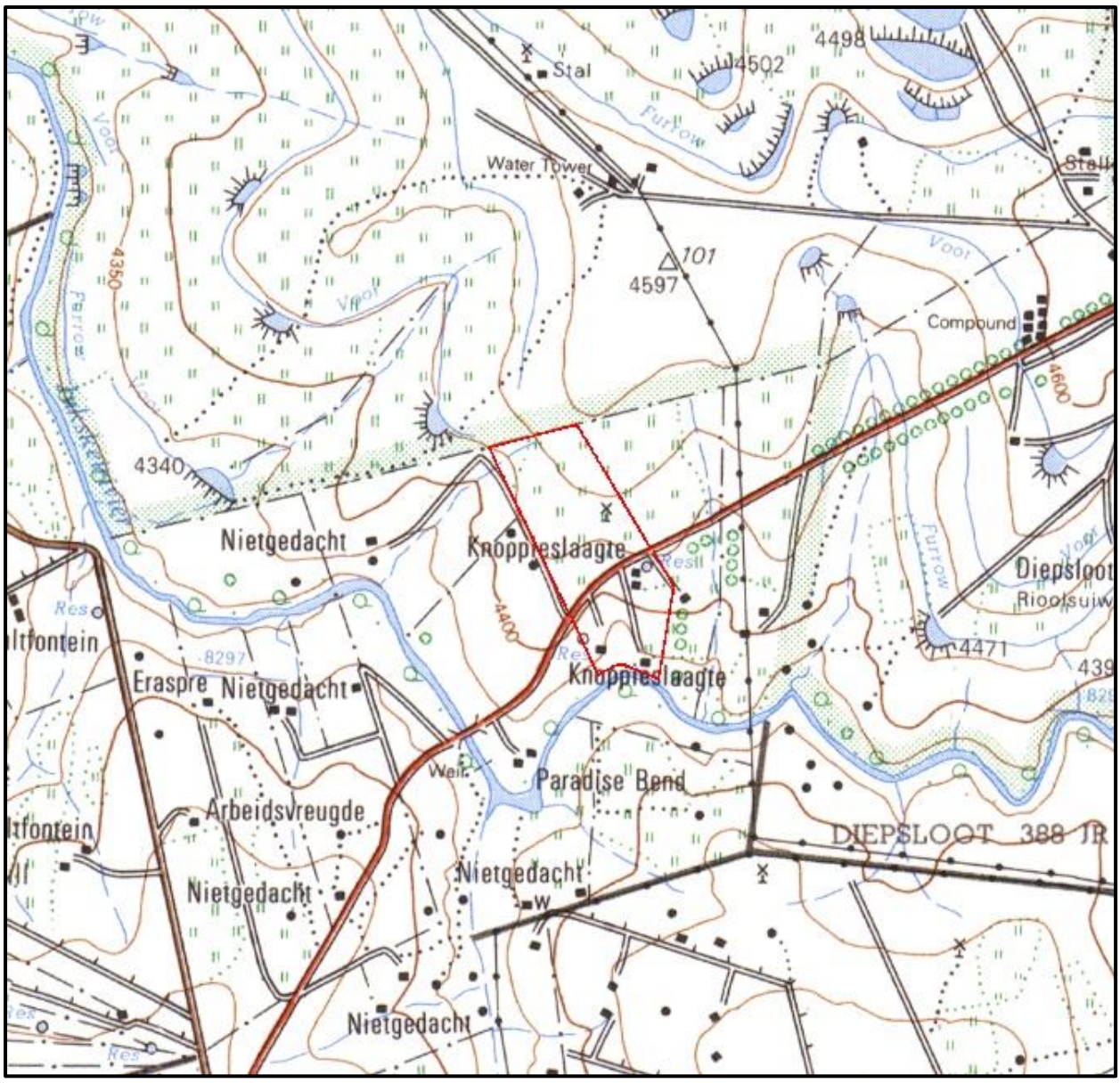

Figure 0.2. 1969 Topographical Map of the portion under investigation on Nietgedacht. Developments in the area under investigation included a windmill in the northern part of the farm, as well as cultivated land. In the southern section two small roads can be seen branching from the main road. Four buildings are also visible. It is difficult to say whether any of these buildings are located at the same location as those on the 1943 map. It seems that this area was known as "Knoppieslaagte" at the time. (Topographical Map 1969)

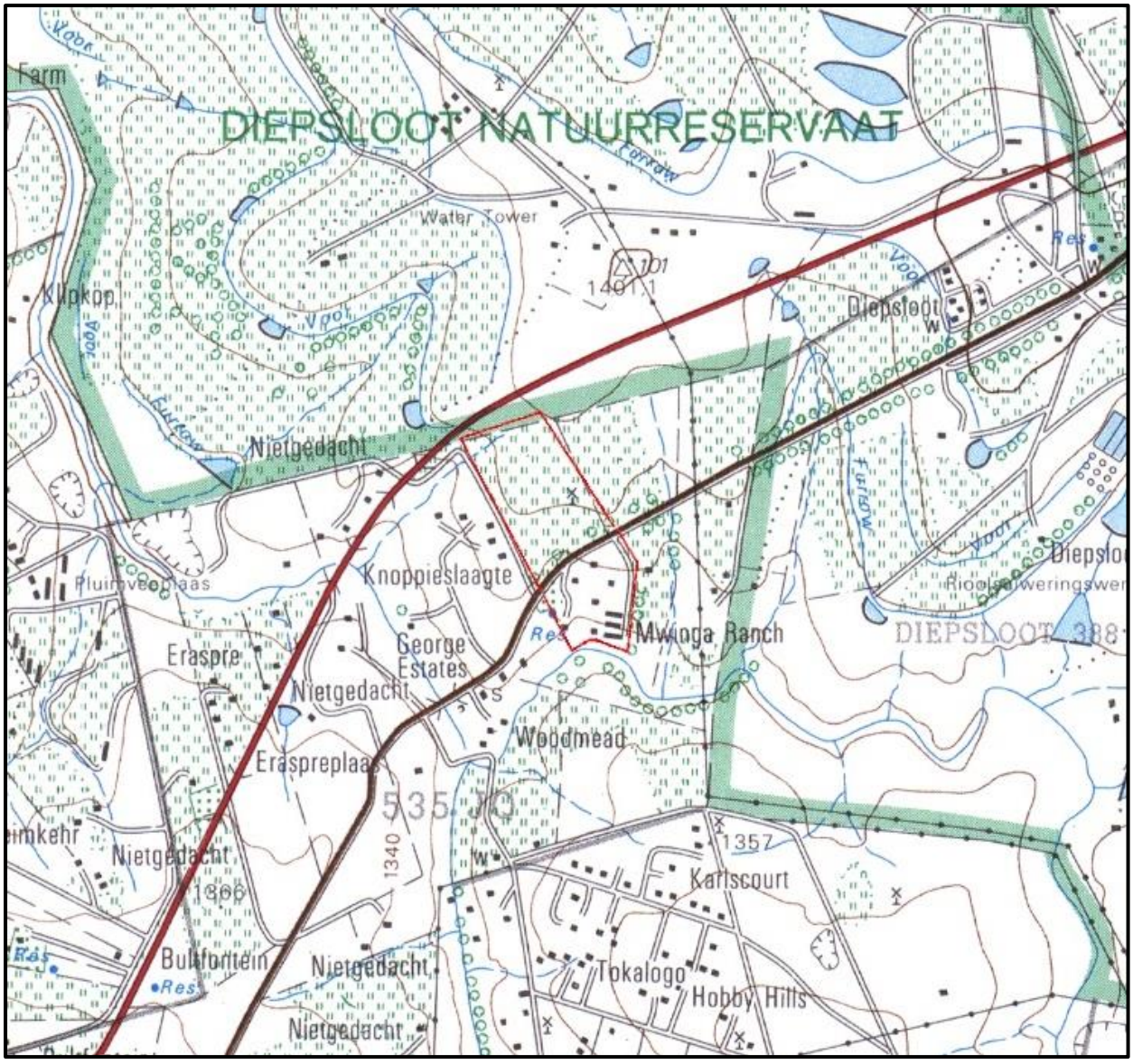

Figure 0.3.1985 Topographical Map of the portion under investigation on Nietgedacht 535 JQ. By this time the N14 Highway had been constructed to the north and west of the property. The northern part of the farm was still used as cultivated lands, and the windmill is still visible. In the southern section one can see two small roads branching from the main road, a small portion of land in the west planted with orchards, six normal buildings and three large, rectangular buildings near the eastern border. It seems that this development was known as "Mwinga Ranch". Knoppieslaagte can be seen to the west. (Topographical Map 1985)

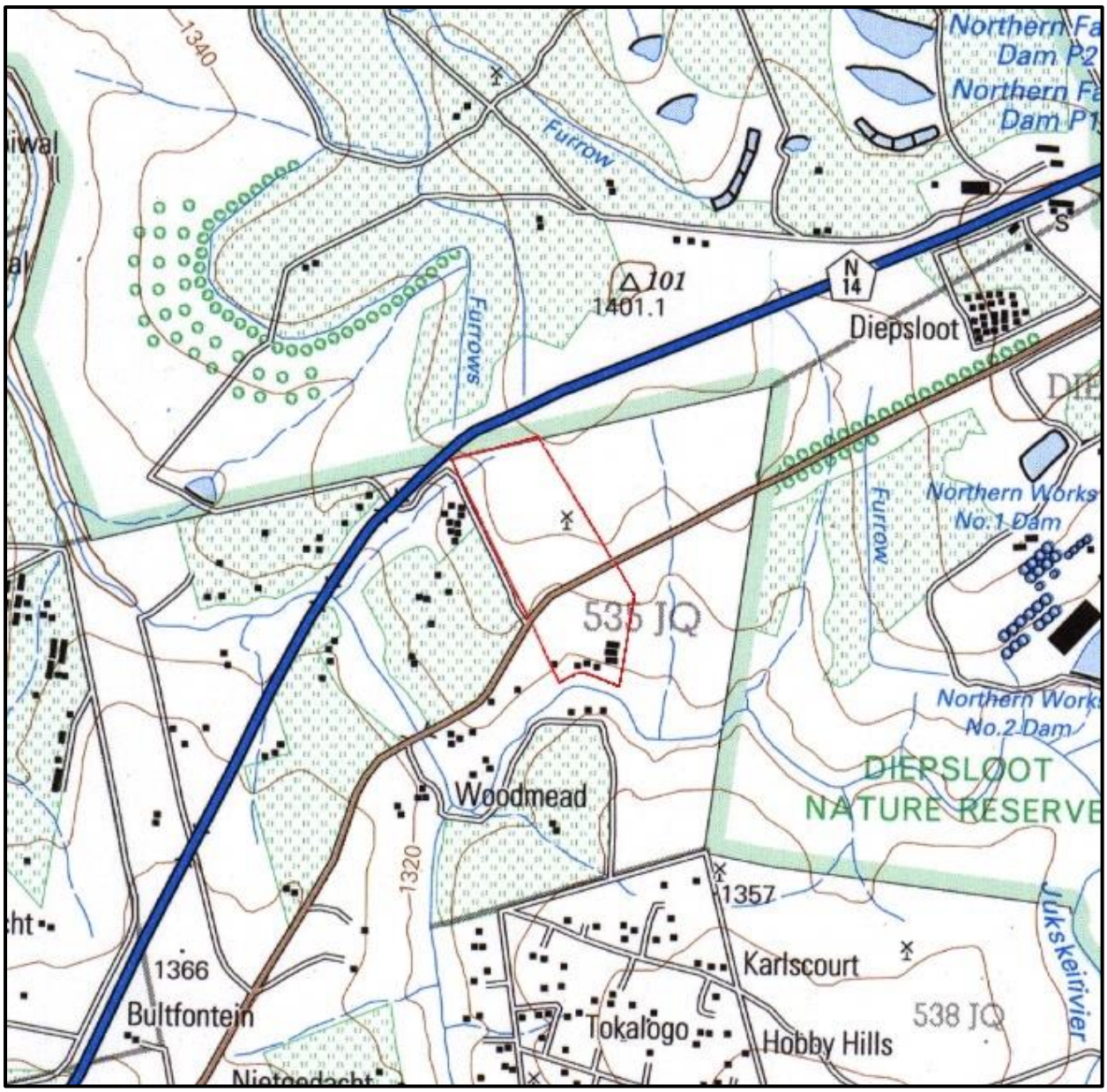

Figure 0.4. 1996 Topographical map of the portion under investigation on Nietgedacht 535 JQ. The northern part of the farm was no longer used for agriculture, but the windmill can still be seen. No small roads can be seen in the southern part of the farm, and buildings can only be seen near the most southern border of the farm. Four normal buildings and three large, rectangular buildings are visible. (Topographical Map 1996)

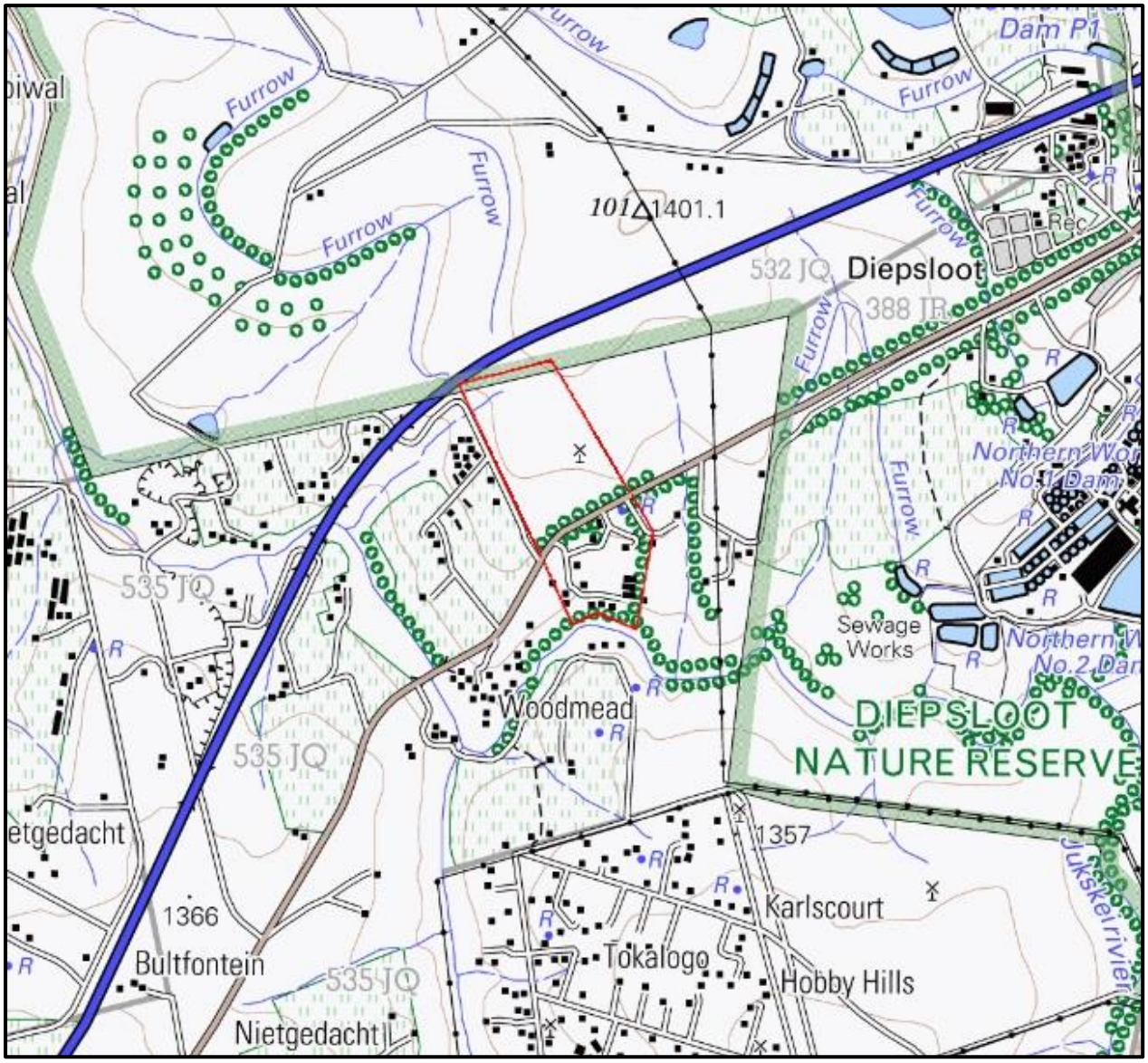

Figure 0.5. 2001 Topographical map of the portion under investigation on Nietgedacht 535 JQ. The only development visible in the northern part of the farm is a windmill. In the southern part of the farm, a number of small roads have been constructed. Rows of trees are visible and a maximum of thirteen normal buildings and three large, rectangular buildings can be seen. (Topographical Map 2001)

Figure 0.6. 2015 Google Earth image showing the area under investigation. The R114 Main Road intersects the property. The N14 Highway can be seen to the northwest. (Google Earth 2015)

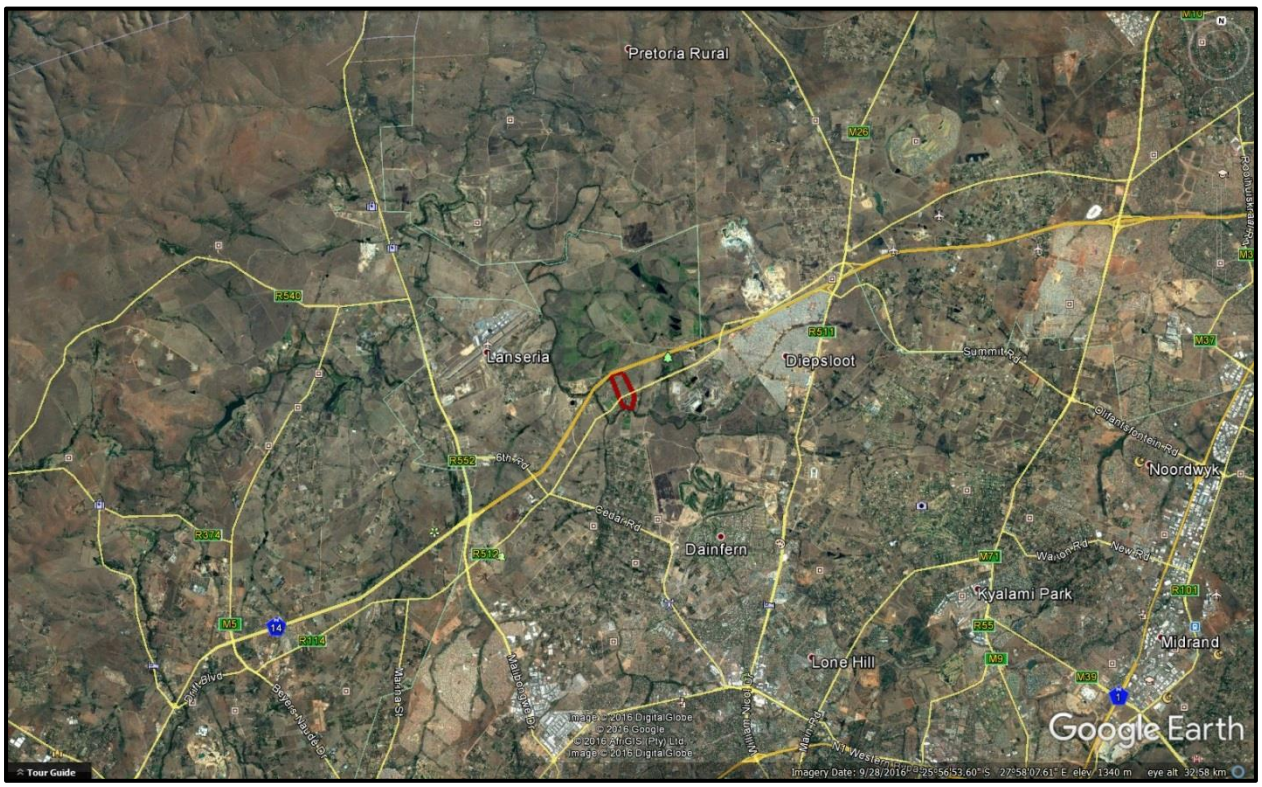

Figure 0.7. 2016 Google Earth image, showing the study area in relation to the Lanseria Airport, Diepsloot, Dainfern, Midrand and other sites. (Google Earth 2015)

Portion 112 of the farm Nietgedacht 535 JQ is located within the City of Johannesburg Local Authority in Gauteng Province, and measures 25.0749 hectares. The property is currently owned by Hebronbridge College N. P. C. (Windeed 2017)

The issue of special interest for this study is the historical use of the land and the structures it left behind. Structures older than 60 years are of particular interest. All available archival evidence was used to provide some information on the history of the property in the following section.

History of land use

In February 1956, the situation in the Nietgedacht area was described in a report by the Peri-Urban Areas Health Board. According to this authority, there were many small undeveloped farm portions in the area. The region was also agriculturally poor. Also, it was located approximately 18 miles away from the post offices in Pretoria, Krugersdorp and Johannesburg and no railway facilities were available. For this reason residential sites were not in demand in the area. (NASA *SAB, CDB: 3/1087 TAD12/1/411*)

Figure 0.8. Early 1940s map showing the site where an old bridge would be widened at the place where the road from Krugersdorp to Pretoria crossed the Klein Jukskei River, a short distance to the southwest of the farm portion under investigation. The farm was known as Nietgedacht 91 at the time. (NASA *SAB, PWD: 375 2/719*)

Since the 1930s, plans were underway to widen the old Jukskei River Bridge, just to the southwest to the portion of Nietgedacht under investigation. This project was completed in the early 1940s. (NASA *SAB, PWD: 375 2/719*)

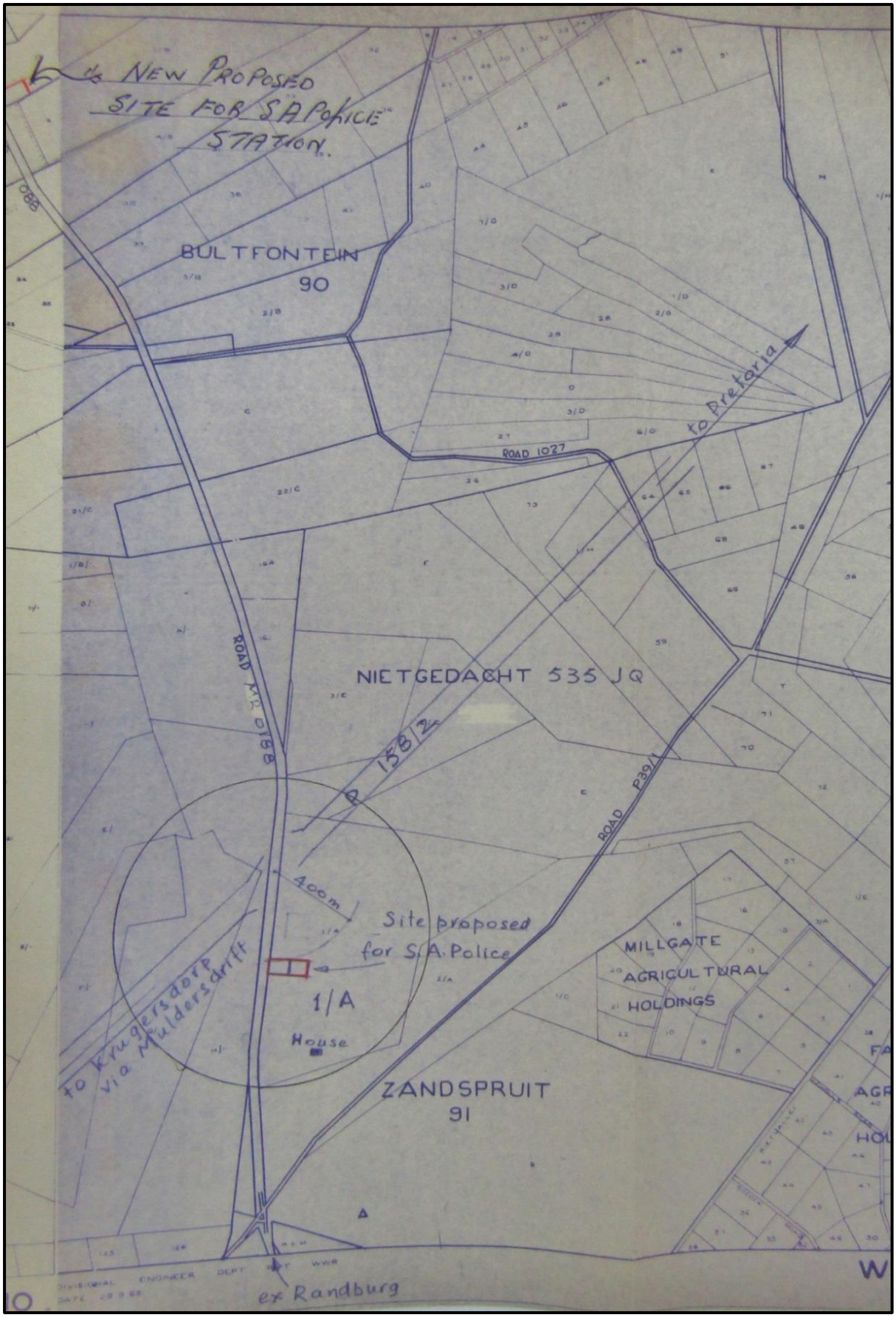

Figure 0.9. 1977 map showing how Nietgedacht 535 JQ was subdivided at the time. (NASA *SAB, DOW: 232 38141*)

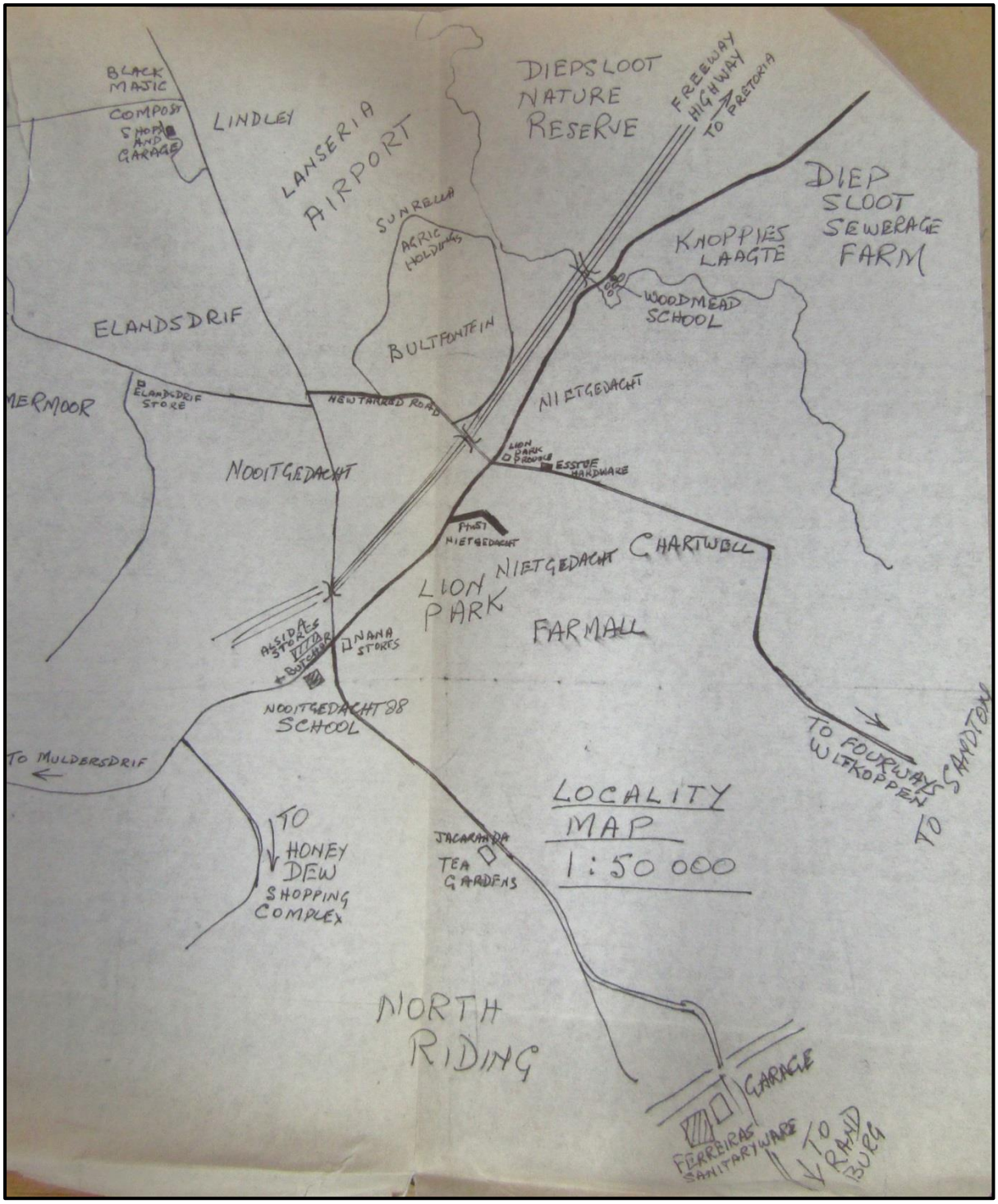

Figure 0.10. Early 1980s map of Nietgedacht 535 JQ and the surrounding area. The Woodmead School had been constructed just to the southwest of the portion under investigation. (NASA *SAB, CDB: 15015 PB4/19/2/24/535/4*)

6.4. Baseline Description of Impact Area

The farm Nietgedacht and surrounding properties were at first commercial farms with their main focus on the production of crops and the raising of live-stock. Most of these farms were later sub-divided into small holdings which supported a wide range of businesses and activities. The previous farming activities are still evident as most of the property is still devoid of trees as it was cleared for fields to be ploughed and planted. These old fields are now covered with a lush presence of various grass types (Figure 6.11). The property adjacent and on the eastern side of the study area was also ploughed and planted until recently (Figure 6.14).

The study area measures approximately 21 ha in size and is situated directly next to and to the south of the N14 High Way. On the western side it is bordered by Riverfield Road with a lodge and various workshops on the other side of the road. Fallow fields are situated to the east of the proposed site and more small holdings are situated on the southern side of the R114 tar road which forms the southern boundary of the site. The proposed site slopes down from the N14 High Way in the north down to the Jukskei River to the south and south-west. The Jukskei River is situated approximately 300m from the site. The site has predominantly light-brown sandy soils and termite mounds are abounded across the site.

The proposed site is open with only a fence along the N14 on the northern side. This open nature of the site gives access to anyone who wants to dump unwanted material. A large dump which includes mostly building rubble, soil and rocks is present in the north-western corner of the proposed site (Figure 6.15). Various other small dumps were also identified across the rest of the site (Figure 6.16). The large dump site was not investigated as it was unsafe and the dumped material covers most of that section of the property.

As mentioned before, the site is largely devoid of trees as it was cleared for fields to be ploughed and planted. Blue Gum and Wattle trees are situated along Riverfield Road on the western extent of the site and along the R114 Road on the southern extent of the site. A small cluster of trees is also situated at the north-eastern corner of the site. The rest of the proposed site is covered with grasses and weeds.

A few tracks cross the site as well and they lead to the large dumping area. A power line is situated along the R114 Road at the southern extent of the site. Other municipal services, such as a sewerage system, are also present on the site.

The succession of the previous agricultural activities resulted that most of the proposed site was disturbed and damaged from a heritage point of view. No sites or finds of any heritage value or significance was identified within the proposed study area.

6.5. Photographic Record

Figure 0.11. General site conditions.

Figure 0.12. General site conditions – note the thick grass cover.

Figure 0.13. General site conditions.

Figure 0.14. Agricultural fields on the eastern side of the study area.

Figure 0.15. Large dumping area.

Figure 0.16. Illegal Dumping.

Figure 0.17. Illegal dumping.

Figure 0.18. Illegal Dumping.

6.6. Site Sensitivity

Due to the lack of archaeological sites and material in the study area, the study area is considered to be of low heritage significance and no red flags or no go areas were identified.

7. IMPACT ASSESSMENT

Due to the lack of archaeological sites in the study area no impact is foreseen on the heritage record of the Diepsloot area. Heritage resources can occur subsurface and it should be noted that heritage resources are irreplaceable and impacts on heritage resources are irreversible.

8. REASONED OPINION AND RECOMMENDATIONS

From a heritage perspective, the proposed project will have a negligible impact on heritage resources and HCAC is of the opinion that the development can continue, if the above recommendations are adhered to and based on approval from SAHRA, If, during the pre-construction phase or during construction, any archaeological finds are made (e.g. graves, stone tools, and skeletal material), the operations must be stopped, and the archaeologist must be contacted for an assessment of the finds. Due to the subsurface nature of archaeological material and graves the possibility of the occurrence of unmarked or informal graves and subsurface finds cannot be excluded and chance find procedure should be implemented as part of the EMP for the project.

8.1. Assessment of Alternatives

No Alternatives were assessed for this project.

8.2. Mitigation and Monitoring Requirements

OBJECTIVE: To preserve and mitigate non-renewable heritage resources in the study area.

Project component/s	Heritage resources can be impacted on by the pre-construction and construction activities of the project.
Potential Impact	Irreplaceable loss of heritage resources in the study area and depletion of the archaeological database of the area.
Activity/risk source	Activities such as vegetation clearing and digging foundations could destroy archaeological resources.
Mitigation: Target/Objective	An environmental management plan that considers heritage resources in the event of any future extensions of infrastructure or identification of heritage resources. Mitigation is not considered to be necessary at this point. .

Mitigation: Action/control	Responsibility	Timeframe
Implement a Chance Finds Procedure to ensure that if any heritage resources are uncovered that these are reported and correctly mitigated.	ECO	Daily during the construction phase

Performance Indicator	Heritage impacts should be considered in any future development in the area. Implementation of a chance find procedure i.e. Immediate reporting to relevant heritage authorities of any heritage feature discovered during any phase of development or operation of the facility.
Monitoring	The ECO should monitor the possible occurrence of heritage resources regularly.

Chance finds procedure

This procedure applies to the developer's permanent employees, its subsidiaries, contractors and subcontractors, and service providers. The aim of this procedure is to establish monitoring and reporting procedures to ensure compliance with this policy and its associated procedures. Construction crews must be properly inducted to ensure they are fully aware of the procedures regarding chance finds as discussed below.

- If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.
- It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area.
- The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.

8.3. Conclusion

HCAC was appointed to assess the study area in terms of the archaeological component of Section 35 of the NHRA as part of the Environmental Impact Assessment (EIA) for the project. No significant Stone Age sites were recorded in the study area and no ceramics or stone walls attributed to the Iron Age were recorded. Similarly, no sites of archaeological significance were recorded by other studies in the area (e.g. Kusel (2007), van Schalkwyk (2013) van der Walt (2015 a and b, 2016).). No further mitigation prior to construction is recommended in terms of the archaeological component of Section 35 for the proposed development to proceed. According to the SAHRA Paleontological Sensitivity map the area is of zero paleontological sensitivity and no further studies are required in this regard.

In terms of the built environment of the area (Section 34), no structures occur within the study area and in terms of Section 36 of the Act no burial sites were recorded in the study area. However if any graves are located in future they should ideally be preserved *in-situ* or alternatively relocated according to existing legislation. Due to the subsurface nature of archaeological remains and the fact that graves can occur anywhere on the landscape, it is recommended that a chance find procedure is implemented for the project as part of the EMPr.

In Line with the NHRA Act 25 of 1999 Section 38.3 this report provided the heritage authority with the following:

NHRA Section 38.3 Requirement	Application to this study
Identification and Mapping of heritage resources	No heritage resources occur in the study area
Assessment of significance of identified heritage resources	No heritage resources occur in the study area
Assessment of the impact of the development on heritage resources	The proposed development of the HeronBridge sports field will not have a significant impact on heritage resources.
Evaluation of the impact of the development on heritage resources relative to social and economic benefits of the development	Due to the lack of heritage resources in the development footprint the social and economic benefits of the project outweigh the impact of the project on the heritage resources of the larger area.
Results of consultation with interested and affected parties regarding the impact of the development on heritage resources	No heritage concerns were raised
If heritage resources will be adversely affected by the proposed development, the consideration of alternatives	No heritage resources will be affected and no alternatives were considered.
Plans for mitigation of any adverse effects during and after the completion of the proposed development	Implementation of a chance find procedure.

From a heritage perspective, the proposed project will have a negligible impact on heritage resources and HCAC is of the opinion that the development can continue, if the above recommendations are adhered to and based on approval from SAHRA

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10. APPENDICES

10.1. Curriculum Vitae of Specialist

Jaco van der Walt
Archaeologist

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Education:

Particulars of degrees/diplomas and/or other qualifications:

Name of University or Institution:		University of Pretoria
Degree obtained	**:**	BA Heritage Tourism & Archaeology
Year of graduation	**:**	2001
Name of University or Institution:		University of the Witwatersrand
Degree obtained	**:**	BA Hons Archaeology
Year of graduation	**:**	2002
Name of University or Institution	**:**	University of the Witwatersrand
Degree Obtained	**:**	MA (Archaeology)
Year of Graduation	:	2012
Name of University or Institution	**:**	University of Johannesburg
Degree	**:**	**PhD**
Year	:	Currently Enrolled

EMPLOYMENT HISTORY:

2011 – Present:	**Owner – HCAC (Heritage Contracts and Archaeological Consulting CC)**.
2007 – 2010 :	**CRM Archaeologist,** Managed the Heritage Contracts Unit at the University of the Witwatersrand.
2005 - 2007:	**CRM Archaeologist**, Director of Matakoma Heritage Consultants
2004:	**Technical Assistant**, Department of Anatomy University of Pretoria
2003:	**Archaeologist**, Mapungubwe World Heritage Site
2001 - 2002:	**CRM Archaeologists,** For R & R Cultural Resource Consultants, Polokwane
2000:	**Museum Assistant**, Fort Klapperkop.

Countries of work experience include:

Republic of South Africa, Botswana, Zimbabwe, Mozambique, Tanzania, The Democratic Republic of the Congo, Lesotho and Zambia.

SELECTED PROJECTS INCLUDE:

Archaeological Impact Assessments (Phase 1)

Heritage Impact Assessment Proposed Discharge Of Treated Mine Water Via The Wonderfontein Spruit Receiving Water Body Specialist as part of team conducting an Archaeological Assessment for the Mmamabula mining project and power supply, Botswana

Archaeological Impact Assessment Mmamethlake Landfill

Archaeological Impact Assessment Libangeni Landfill

Linear Developments

Archaeological Impact Assessment Link Northern Waterline Project At The Suikerbosrand Nature Reserve

Archaeological Impact Assessment Medupi – Spitskop Power Line,

Archaeological Impact Assessment Nelspruit Road Development

Renewable Energy developments

Archaeological Impact Assessment Karoshoek Solar Project

Grave Relocation Projects

Relocation of graves and site monitoring at Chloorkop as well as permit application and liaison with local authorities and social processes with local stakeholders, Gauteng Province.

Relocation of the grave of Rifle Man Maritz as well as permit application and liaison with local authorities and social processes with local stakeholders, Ndumo, Kwa Zulu Natal.

Relocation of the Magolwane graves for the office of the premier, Kwa Zulu Natal

Relocation of the OSuthu Royal Graves office of the premier, Kwa Zulu Natal

Phase 2 Mitigation Projects

Field Director for the Archaeological Mitigation For Booysendal Platinum Mine, Steelpoort, Limpopo Province. Principle investigator Prof. T. Huffman

Monitoring of heritage sites affected by the ARUP Transnet Multipurpose Pipeline under directorship of Gavin Anderson.

Field Director for the Phase 2 mapping of a late Iron Age site located on the farm Kameelbult, Zeerust, North West Province. Under directorship of Prof T. Huffman.

Field Director for the Phase 2 surface sampling of Stone Age sites effected by the Medupi – Spitskop Power Line, Limpopo Province

Heritage management projects

Platreef Mitigation project – mitigation of heritage sites and compilation of conservation management plan.

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS:

- Association of Southern African Professional Archaeologists. Member number 159

  Accreditation:

  - Field Director Iron Age Archaeology
  - Field Supervisor Colonial Period Archaeology, Stone Age Archaeology and Grave Relocation
- Accredited CRM Archaeologist with SAHRA
- Accredited CRM Archaeologist with AMAFA
- Co-opted council member for the CRM Section of the Association of Southern African Association Professional Archaeologists (2011 – 2012)

PUBLICATIONS AND PRESENTATIONS

- A Culture Historical Interpretation, Aimed at Site Visitors, of the Exposed Eastern Profile of K8 on the Southern terrace at Mapungubwe.
  - J van der Walt, A Meyer, WC Nienaber
  - Poster presented at Faculty day, Faculty of Medicine University of Pretoria 2003
- 'n Reddingsondersoek na Anglo-Boereoorlog-ammunisie, gevind by Ifafi, Noordwes-Provinsie. South-African Journal for Cultural History 16(1) June 2002, with A. van Vollenhoven as co-writer.
- Fieldwork Report: Mapungubwe Stabilization Project.
  - WC Nienaber, M Hutten, S Gaigher, J van der Walt
  - Paper read at the Southern African Association of Archaeologists Biennial Conference 2004
- A War Uncovered: Human Remains from Thabantšho Hill (South Africa), 10 May 1864.
  - M. Steyn, WS Boshoff, WC Nienaber, J van der Walt
  - Paper read at the 12th Congress of the Pan-African Archaeological Association for Prehistory and Related Studies 2005
- Field Report on the mitigation measures conducted on the farm Bokfontein, Brits, North West Province .
  - J van der Walt, P Birkholtz, W. Fourie
  - Paper read at the Southern African Association of Archaeologists Biennial Conference 2007

- Field report on the mitigation measures employed at Early Farmer sites threatened by development in the Greater Sekhukhune area, Limpopo Province. J van der Walt
    - Paper read at the Southern African Association of Archaeologists Biennial Conference 2008
- Ceramic analysis of an Early Iron Age Site with vitrified dung, Limpopo Province South Africa.
    - J van der Walt. Poster presented at SAFA, Frankfurt Germany 2008

- Bantu Speaker Rock Engravings in the Schoemanskloof Valley, Lydenburg District, Mpumalanga (*In Prep)*
    - J van der Walt and J.P Celliers
- Sterkspruit: Micro-layout of late Iron Age stone walling, Lydenburg, Mpumalanga. W. Fourie and J van der Walt. A Poster presented at the Southern African Association of Archaeologists Biennial Conference 2011
- Detailed mapping of LIA stone-walled settlements' in Lydenburg, Mpumalanga. J van der Walt and J.P Celliers
    - Paper read at the Southern African Association of Archaeologists Biennial Conference 2011
- Bantu-Speaker Rock engravings in the Schoemanskloof Valley, Lydenburg District, Mpumalanga. J.P Celliers and J van der Walt
    - Paper read at the Southern African Association of Archaeologists Biennial Conference 2011
- Pleistocene hominin land use on the western trans-Vaal Highveld ecoregion, South Africa, Jaco van der Walt.
    - J van der Walt. Poster presented at SAFA, Toulouse, France. Biennial Conference 2016

REFERENCES:

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