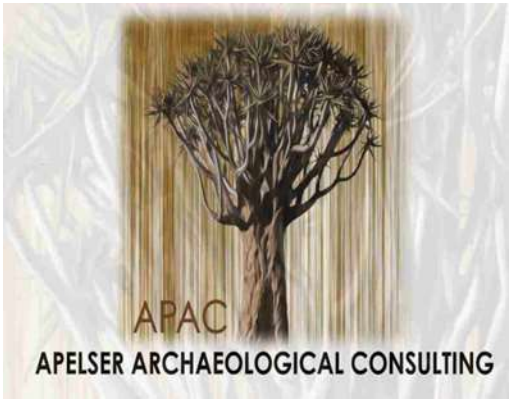

Comprehensive and Professional Solutions for all Heritage Related Matters

CK 2006/014630/23 **VAT NO.: 4360226270**

A PHASE 1 AIA REPORT FOR THE SYLVANIA LANNEX NEW OPENCAST & WASTE RETURN DAM EXPANSION PROJECT NEAR STEELPOORT, LIMPOPO PROVINCE

For:

Prescali Environmental Consultants (Pty) Ltd
PO Box 2544
Montana Park
0159

REPORT: **APAC020/72**

by:

A.J. Pelser
Accredited member of ASAPA

September 2020

P.O.BOX 73703
LYNNWOOD RIDGE
0040
Tel: 083 459 3091
Fax: 086 695 7247
Email: apac.heritage@gmail.com

Member: AJ Pelser BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

DISCLAIMER:

Although all efforts are made to identify all sites of cultural heritage (archaeological and historical) significance during an assessment of study areas, the nature of archaeological and historical sites are as such that it is always possible that hidden or subterranean sites, features or objects could be overlooked during the study. APELSER Archaeological Consulting can't be held liable for such oversights or for costs incurred as a result thereof.

Clients & Developers should not continue with any development actions until SAHRA or one of its subsidiary bodies has provided final comments on this report. Submitting the report to SAHRA is the responsibility of the Client unless required of the Heritage Specialist as part of their appointment and Terms of Reference

SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Prescali Environmental Consultants (Pty) Ltd to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the Sylvania ECM new Opencast & Waste Return Dam Expansion developments at their Lannex Section. The project and study area is located close to Steelpoort in the Limpopo Province. The 1st part of the study entailed a Desktop Study which resulted in a report (**See APAC019/97**) in October 2019.

A number of known cultural heritage (archaeological and historical) sites exist in the larger geographical area within which the study area falls, while some sites of cultural heritage (archaeological and/or historical) origin or significance are known to occur in close proximity to the study area. These were identified and studied during previous studies in the area by the author of this report. A number of new sites were identified and recorded in the study area during the September 2020 field assessment. This report will discuss the results of the field assessment (and will included the results of the desktop work) and provide recommendations on the way forward at the end of the document.

From an Archaeological perspective it is recommended that the proposed development/mining activities be allowed to continue taking the mitigation measures put forward at the end of the report into consideration.

CONTENTS

1. INTRODUCTION

APelser Archaeological Consulting (APAC) was appointed by Prescali Environmental Consultants (Pty) Ltd to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the Sylvania ECM new Opencast & Waste Return Dam Expansion developments at their Lannex Section. The project and study area is located close to Steelpoort in the Limpopo Province. The 1st part of the study entailed a Desktop Study which resulted in a report (See APAC019/97) in October 2019.

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The client indicated the location and the boundaries of the study area and the assessment concentrated on this.

2. TERMS OF REFERENCE

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;

2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;

3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;

4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources; and

5. Review applicable legislative requirements.

This Document represents a Desktop Study only. Once a Preferred Site or Sites for the Tailings Dam & WRD Expansion has been selected a field assessment will also be undertaken by the Specialists.

3. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act, 1999 (Act No. 25 of 1999) and the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

3.1. The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

a. Archaeological artifacts, structures and sites older than 100 years
b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
c. Objects of decorative and visual arts
d. Military objects, structures and sites older than 75 years
e. Historical objects, structures and sites older than 60 years
f. Proclaimed heritage sites
g. Grave yards and graves older than 60 years
h. Meteorites and fossils
i. Objects, structures and sites of scientific or technological value.

The National Estate includes the following:

a. Places, buildings, structures and equipment of cultural significance
b. Places to which oral traditions are attached or which are associated with living heritage
c. Historical settlements and townscapes
d. Landscapes and features of cultural significance
e. Geological sites of scientific or cultural importance
f. Sites of Archaeological and palaeontological importance
g. Graves and burial grounds
h. Sites of significance relating to the history of slavery
i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
b. The construction of a bridge or similar structure exceeding 50m in length

c. Any development or other activity that will change the character of a site and exceed 5 000m^2 or involve three or more existing erven or subdivisions thereof
d. Re-zoning of a site exceeding 10 000 m^2
e. Any other category provided for in the regulations of the South African Heritage Resources Agency (SAHRA) or a provincial heritage authority

Structures

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

Archaeology, palaeontology and meteorites

Section 35(4) deals with Archaeology, Palaeontology and Meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial)

a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the SAHRA. In order to demolish such a site or structure, a destruction permit from the SAHRA will also be needed.

Human remains

Graves and burial grounds are divided into the following:

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

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

a. destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations** (**Ordinance no. 12 of 1980**) (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated to) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act, 1983** (**Act No. 65 of 1983 as amended**).

3.2. The National Environmental Management Act

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

4. METHODOLOGY

4.1. Survey of literature

A survey of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

4.2. Field survey

The field assessment section of the study was conducted according to generally accepted AIA/HIA practices and aimed at locating all possible objects, sites and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

4.3. Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

4.4. Documentation

All sites, objects, features and structures identified are documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

5. DESCRIPTION OF THE AREA

The study area is located at the Sylvania ECM's Lannex Mine Section close to Steelpoort in the Limpopo Province. Large parts of the study and development area has been heavily disturbed and altered from its original natural landscape through recent and ongoing mining development. However, some areas where the new expansions and developments are being proposed have not been altered and fieldwork was conducted in these areas. The focus of the September 2020 fieldwork was the new Opencast Areas (OC1-OC3); the proposed access roads to these areas and the Waste Return Dam (WRD) Expansion Area.

Previous work (2010) by the author (for Archaetnos cc) identified some archaeological sites at Lannex. These were mitigated in 2010 as well (See Discussion Section further on). The possibility that similar sites and material might be present in the area earmarked for mining expansion therefore did exist, and a number of finds and sites were recorded during the recent fieldwork.

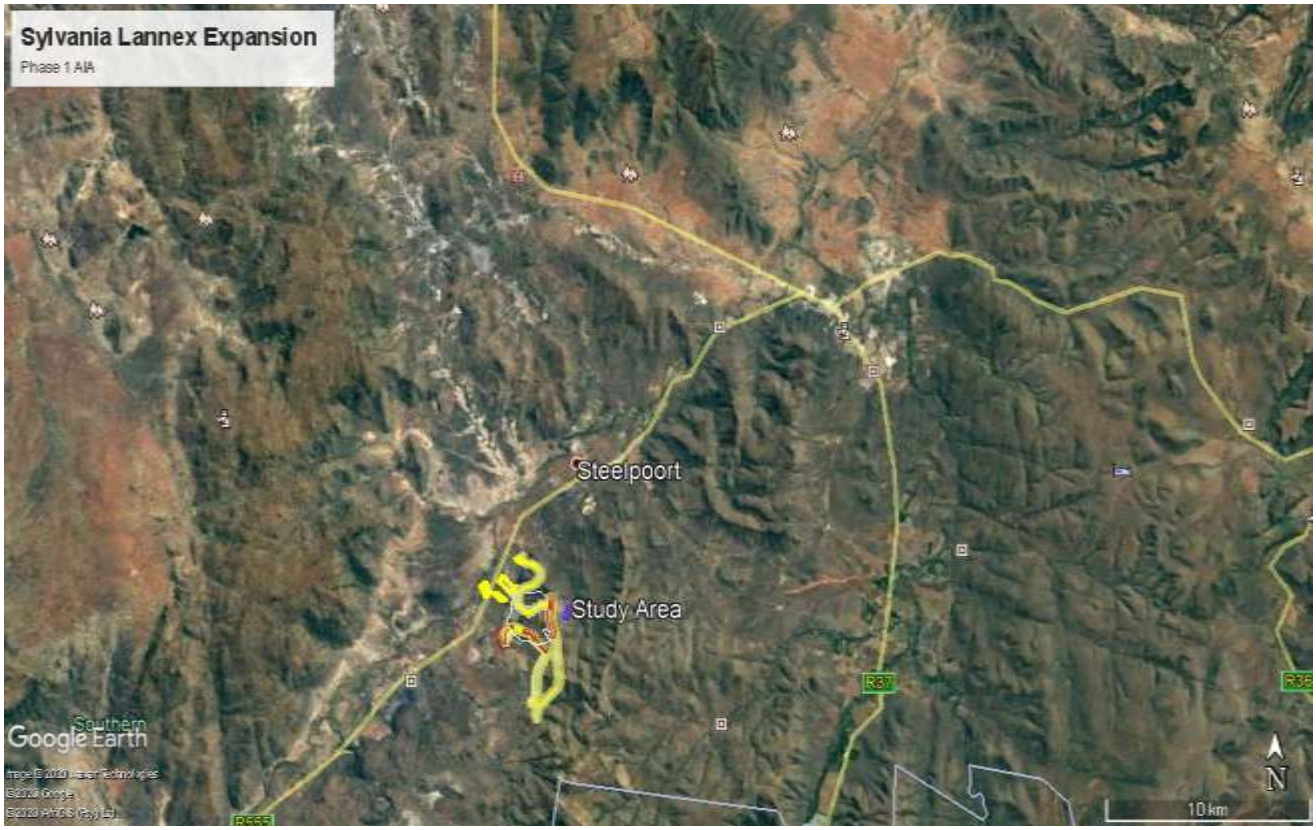

Figure 1: General location of study area (Google Earth 2020).

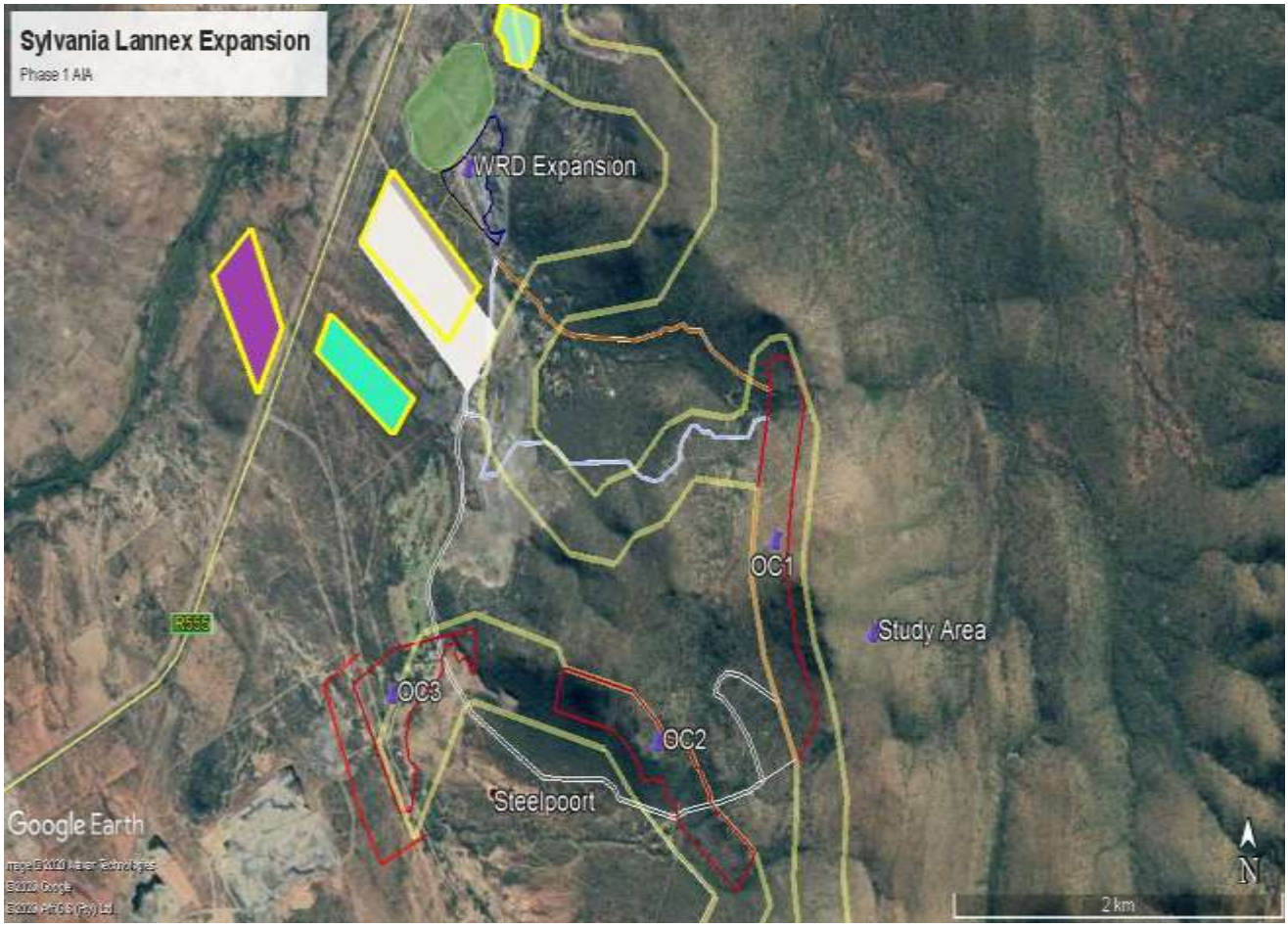

Figure 2: Closer location of study area and development footprint (Google Earth 2020).

6. DISCUSSION

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can basically be divided into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago
Middle Stone Age (MSA) less than 300 000 – 20 000 years ago
Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

Some Stone Age sites and artifacts are known to exist in the study area, and were identified and studied by the author during previous assessments and archaeological mitigation at Sylvania Lannex (Pelser et.al 2010). These are open-air surface sites located in and around erosion dongas.

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts. In South Africa it can be divided in two separate phases (Bergh 1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

Early Iron Age sites are known to exist in the larger Steelpoort Valley area (Pistorius 2006), while Later Iron Age stone-walled sites are also known and have been archaeologically studied in the larger geographical area in the past (Van Schalkwyk 2013; Pelser 2013). The origins of the first Bantu-Negroid farming communities who practiced agriculture, live-stock herding and metal working can be traced to the Steelpoort Valley. These Early Iron Age farming communities, whose settlements have been recorded on amongst others Hendriksplaats 281 and Derde Gelid 278, were related to Early Iron Age communities who, contemporaneously, from AD500 to AD900, settled further towards the east in the Lydenburg Valley. One of the settlements belonging to the Early Iron Age Lydenburg culture won international acclaim as the so-called Lydenburg Heads (clay masks) were discovered at this site near the Sterkspruit, south of Lydenburg (Pistorius 2013: 18).

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write. The first Europeans to travel close to this area were the group of Schoon in 1836 (Bergh 1999: 13).

The historical period in the Steelpoort Valley is associated with the second millennium AD when a predominantly Northern Sotho-speaking population occupied the Steelpoort. These people are part of a larger Northern Sotho-speaking community who occupy a vast area between the Limpopo River in the north, the Drakensberg in the east and the Sekhukhune Mountains in the west. Numerous divisions and groups or clans occupied this vast region. The history of the people of this area can be divided into several periods:

The earliest period of settlement is characterized by small groups of Bantu speaking people who started to drive the San and Khoi Khoi from the area and who are difficult to identify. From approximately AD1700 ancestral groupings of the present inhabitants of the land began to arrive in the area. Groups that can be distinguished include:

1. A large group of Sotho who came from the north-eastern parts of the Lowveld and who settled on the plateau to the north and to the south of the Strydpoortberge.

2. Small groups of Kgatla and Huruthshe-Kwena origin moved from the Tswana area (Brits and Rustenburg) into the territory. Amongst them were the present Pedi (or Rota) who moved into what is now Sekhukhuneland, where they subjected the Sotho already living there.

3. During these times Sekhukhuneland was also penetrated by Sotho arriving from the south-east.

4. After AD1600 the Northern Ndebele arrived from the south-east and settled in what is now the Mokerong district (Pistorius 2013: 19).

It is assumed that during the period from AD1700 to AD1826 the Pedi took political control over the territory previously known as Lebowa, but to the south of the Strydpoortberge. The Pedi chiefdom reached its zenith during the reign of Thulare who died in 1824. During the disruption of the difaqane (AD1822 to AD1828) Mzilikazi attacked the Pedi from the south-east in 1826 and in 1827/1828. This caused large-scale depopulation of the southern part of the Northern-Sotho territory. The Pedi sought refuge in the Soutpansberg in 1822 and only returned in 1828. After the wars with Mzilikazi there were wars with the Swazi. The Voortrekkers arrived in the Steelpoort area in the late 1840‟s. Several armed struggles between the Voortrekkers and the Pedi ensued (Pistorius 2013: 19-20).

After the British annexed the Transvaal (AD1877 to AD1881) the Pedi was subjugated by the British who were supported by the Swazi during the war of Sekhukhune in 1879. In 1842 Andries Hendrik Potgieter wished to move from the British sphere of influence and to establish trade relations with Delagoa Bay. He moved with his followers from Potchefstroom to the Eastern Transvaal and founded Andries Ohrigstad (named after himself and Gergios Gerhardus Ohrig, a merchant from Amsterdam who was well disposed towards the Voortrekkers). The name was later abbreviated to Ohrigstad. The town also served as the seat of the Volksraad. During 1848 to 1849 Ohrigstad was abandoned when many people died of malaria. The town of Lydenburg was founded further to the south near the confluence of the Sterkspruit and the Spekboom River. This area was located on higher ground and was therefore healthier than Ohrigstad. The railway line between Steelpoort and Lydenburg was constructed in 1924 due to an increase in the mining of chrome and magnetite. The name Steelpoort is derived from a hunting expedition that took place either in the late 19th century or the early 20th century. When a group of Voortrekkers from Natal under Frans Joubert had settled there, a man called Scholtz shot an elephant at dusk and on returning next morning found that the tusks had been removed. When the wagons were searched, the tusks were found in the possession of a man called Botha, after which the farm Bothashoek was named. Because an elephant had been killed there, the poort was named Olifantspoort. The river flowing through the Poort was called Steelpoort River [„steel‟ meaning steal] (Pistorius 2013: 20).

The Pedi were governed by Thulware until his death in 1824. His main village was Monganeng on the banks of the Tubatse River. His son, Sekwati, fled to the Soutpansberg in the north during the raids of Mzilikazi in 1822. He returned in 1828 and occupied the mountain fortress Phiring, his capital from where he united the Pedi. The Pedi initially

maintained good relations with the Voortrekkers who arrived in Ohrigstad from 1845. However, after a clash with Andries Hendrik Potgieter in 1852 Sekwati moved his capital to Thaba Mosego. Border disputes with the Zuid-Afrikaansche Republiek (ZAR) were settled in 1857 with an accord that stated that the Steelpoort River served as the border between Pedi land and the Lydenburg Republic. Sekwati gave the Berlin Missionary Society permission to establish the Maandagshoek missionary station in Pedi territory. After Sekwati‟s death in 1861, his son Sekhukhune succeeded his father and also established his village at Thaba Mosego. He ordered the Berlin Missionary Society to discontinue their work and the mission station was burn down. Alexander Merensky, one of the missionaries, thereafter established the well-known Botšabelo missionary station at Middelburg (Pistorius 2013: 21).

The good relationship between the ZAR and the Pedi was gradually weakened. The period from 1876 to 1879 was one of conflict and war, first with the ZAR and then with the British who annexed the Transvaal in 1877. During the First Sekhukhune War in August 1876, the Voortrekkers attacked Thaba Mosego and partly destroyed the settlement. The Second Sekhukhune War followed in November 1879 during which Sekhukhune was captured in the Mamatamageng cave and sent to prison in Pretoria. Two divisions attacked the Pedi. The main division, comprised of 3 000 whites and 2 500 black allies, attacked from the north-east. The Lydenburg division consist of 5 000 to 8 000 Swazi Impi, 400 other black allies and 400 white soldiers who attacked from Burgersfort in the south. The Second Sekhukhune War is associated with the settlements of Thaba Mosego and Tšate, a new village established by Sekhukhune close to Thaba Mosego (Pistorius 2013: 21-22).

Archaeological Sites at Sylvania Lannex

During 2010 Archaetnos cc was appointed by Prescali Environmental Consultants (Pty) Ltd, on behalf of SAMANCOR Eastern Chrome Lannex Section, to conduct a heritage impact assessment on the farm Grootboom Annex 335 KT, near Steelpoort in Mpumalanga Province. The development of the Sylvania Lannex Tailings Dam was being proposed.

During the February 2010 survey two sites of cultural (archaeological) heritage significance was located in the area of the proposed tailings dam (**See Report AE1013 - Pelser et.al 2013: 9**). Sites 1 and 2 contained a fairly large number of stone tools and flakes scattered in an erosion donga. The tools probably dated to between the Middle and Late Stone Age, based on their size and mode of production. These artifacts were evidence of the presence of people in the area for at least 150 000 years.

The tools were being eroded out by water, and although they were found to be out of context, the site was deemed as fairly significant (medium significance) because of the relatively large number of artifacts identified here and mitigation measures were recommended. Subsequently Archaetnos was contracted to undertake these mitigation measures, culminating in a Phase 2 Archaeological Mitigation Report submitted in July 2010 (**See Report AE1047**).

GPS Location of Sites**: Site 1 - S24.77060 E30.16669; Site 2 - S24.77043 E 30.16719.**

Figure 3: The types of Stone Age tools found on Site 1.

Figure 4: More stone tools found in the Lannex Area.

Results of the September 2020 Field Assessment

Although the main focus of the field assessment was the new Opencast (OC1-OC3) areas, the proposed access roads and the new Waste Return Dam (WRD) Expansion Area, reference was also to be made to the complete Opencast Area at Sylvania Lannex.

The study & development area in the main has been extensively impacted by past and ongoing mining operations. If any significant sites did exist in these sections it would have been disturbed or destroyed to a large degree.

The new WRD Expansion area has been extensively disturbed and it is highly unlikely that any archaeological sites would exist here and the proposed development activities here can be continued. The proposed new access roads to OC1, OC2 & OC3 will use existing routes that have already been developed in the past and will only be expanded and broadened in sections. The impacts of these roads on any potential sites will therefore be minimal.

OC1 & OC2 is located in areas with very steep slopes and settlement in these areas during Iron Age times would have been unlikely. These settlements would have been located closer to the foot of the hills and in the valleys below and closer to water sources such as rivers and streams. No rock shelters or overhangs were noted in the OC1 & OC2 areas and Stone Age sites here is also doubtful.

The OC3 area is located partially in an area already disturbed by previous (now rehabilitated) mining. However, part of the OC3 area is located close to and in an extensive erosion donga area and it is here where a number of archaeological sites and finds were recorded during the recent assessment. These sites are discussed below.

Four (4) sites were identified in the study area during the September 2020 fieldwork, dating to the Stone- and Iron Age periods, but it is very likely that many more are located in the OC3 area and in the expansive erosion donga that is partially situated within the new Opencast pit.

Site 1 contains a number of MSA/LSA stone tools and artifacts (flakes, cores, scrapers) that are eroding out in an open-air context from the calcretes in the erosion donga. There are also a number of later Iron Age pottery fragments here. Unfortunately none of the potsherds are decorated and dating them is therefore difficult. It is however possible that they belong to the EIA to MIA periods of the Iron Age known to be present in the larger area, and with no stone-walled LIA sites identified in the study area this becomes a more likely scenario. Site 2 is similar to Site 1, with larger numbers of undecorated pottery found together with a smaller scatter of MSA/LSA material. Sites 3 & 4 are located outside of the footprint of OC3, but in the same erosion donga system and these sites are definitely related and linked to the others identified during the assessment. Site 2 contains a fairly large amount of Iron Age pottery, while Site 4 consists of the possible stone-packed foundation of a granary stand and associated pieces of undecorated pottery.

With only a section of the erosion donga located in the OC3 pit area assessed in any detail, it is highly likely that other similar sites occur in the development area. Some sites and finds are possibly also still covered by topsoil in un-eroded sections, preserving them fairly in-tact. It is therefore imperative that the OC3 area be studied in more detail as part of Phase 2 Archaeological Mitigation before mining activities commence here. This will entail the following:

1. Detailed mapping of the OC3 area and erosion donga system in order to determine the extent of the archaeological deposit and sites located here

2. The sampling of surface material dating to the Stone Age and Iron Age. For this an archaeological permit will be required from SAHRA

3. The excavation of surface features dating to the Iron Age (such as Site 3) in order to determine the age of and extent of the Iron Age in the study area. A permit from SAHRA will have to be obtained for this purpose as well.

GPS Location of Sites: S24 47 52.30 E30 09 45.70 (**Site 1**); S24 47 54.50 E30 09 45.90 (**Site 2**) S24 48 12.00 E30 10 07.60 (**Site 3**); S24 48 12.70 E30 10 07.00 (**Site 4**)
Cultural Significance: Medium - High
Heritage Significance: Grade III: Other heritage resources of local importance and therefore worthy of conservation.
Field Ratings: General protection A (IV A): Site should be mitigated before destruction (High/Medium Significance)
Mitigation: See Above

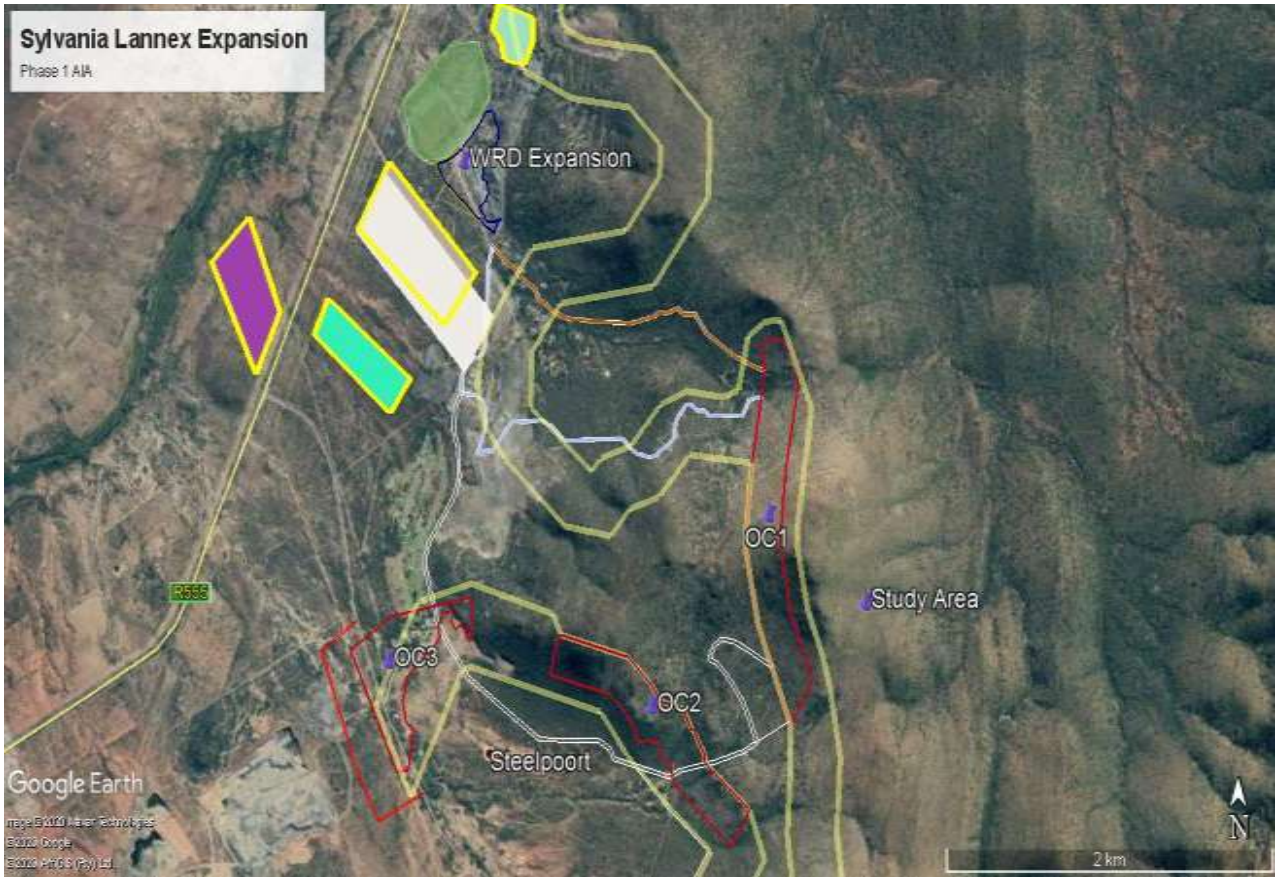

Figure 5: Closer view of the Sylvania Lannex study area and development footprints (Google Earth 2020).

Figure 6: The WRD Expansion area in purple. Note the disturbed nature of the area (Google Earth 2020).

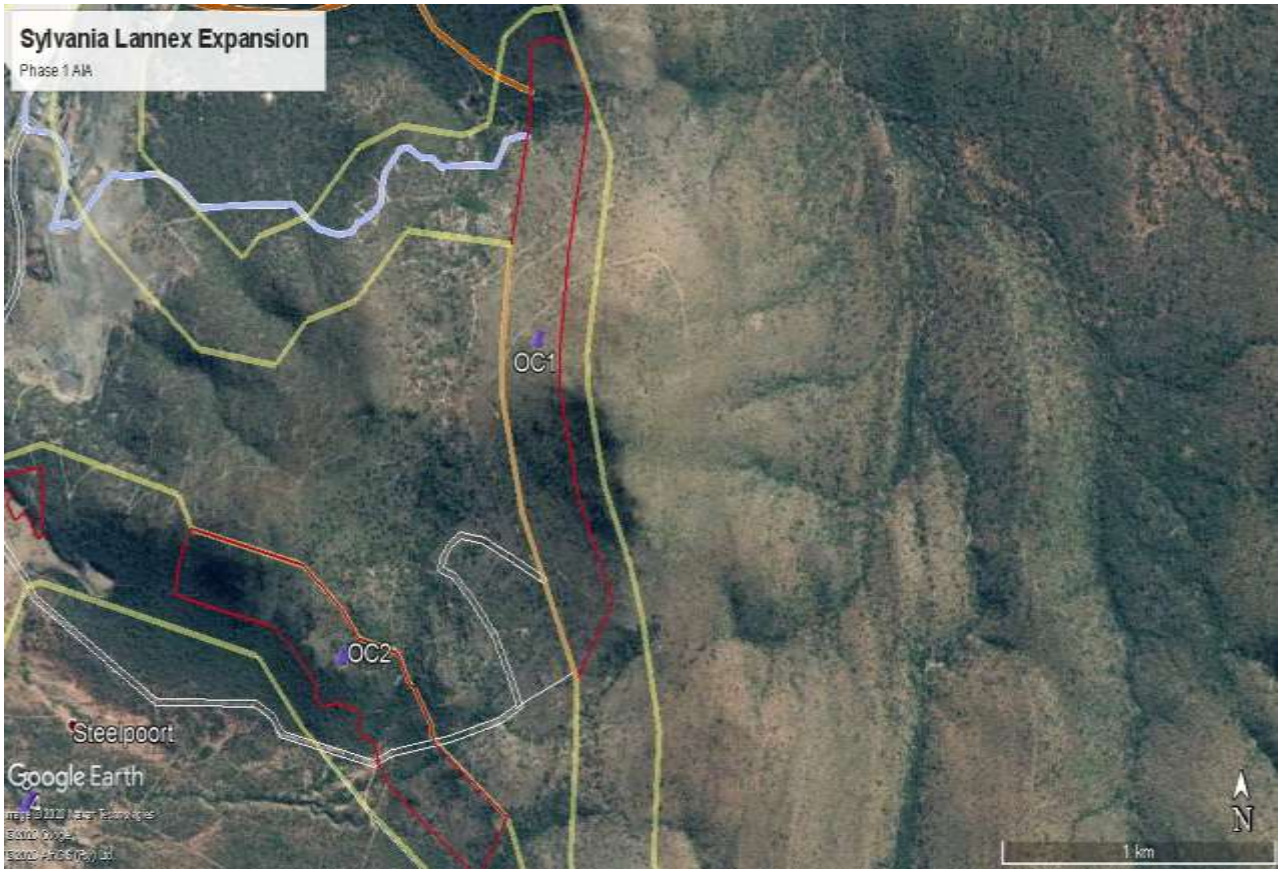

Figure 7: Closer view of the OC1 & OC2 pit locations (Google Earth 2020).

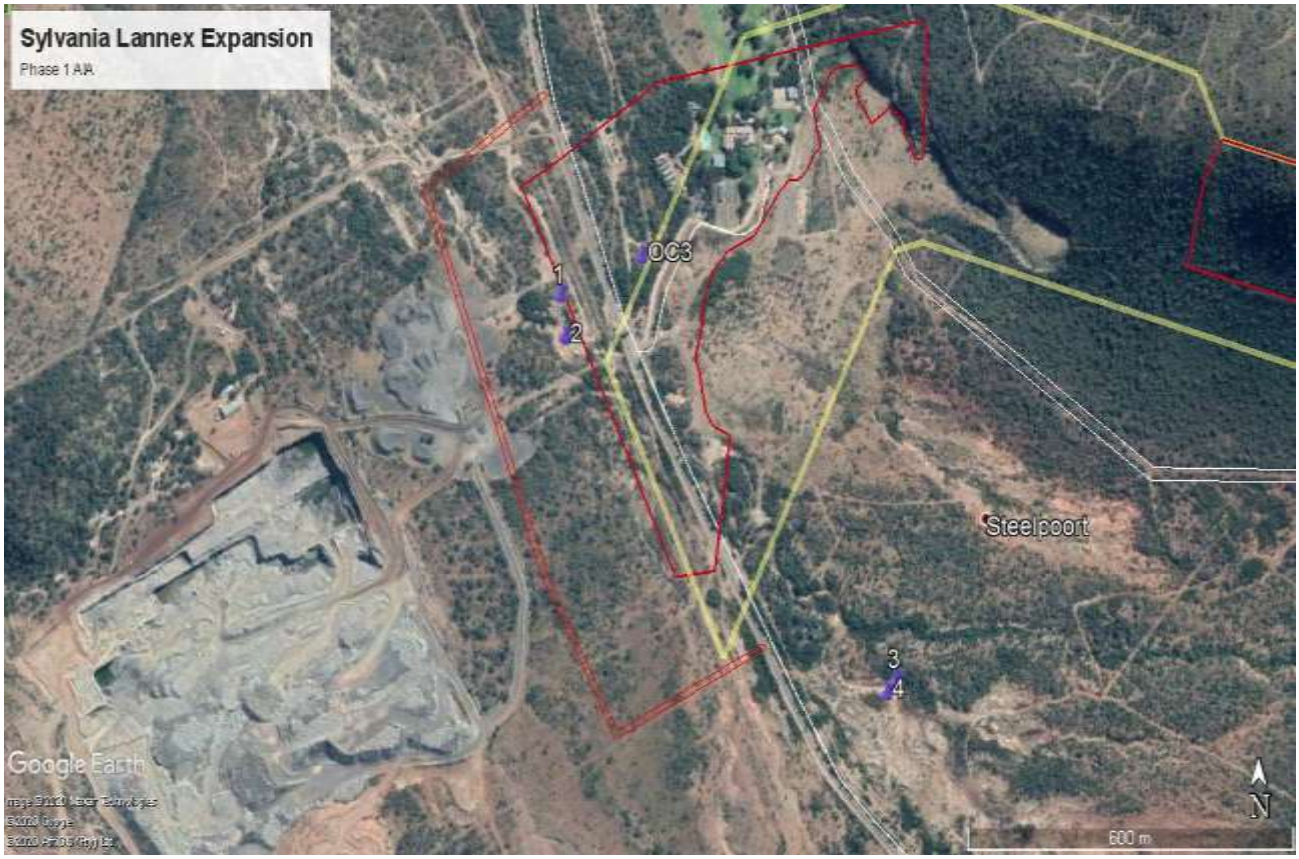

Figure 8: Closer view of the OC3 area showing the archaeological sites recorded. Note the extensive erosion donga system here (Google Earth 2020).

Figure 9: View of the area close to the main Plant. Mining has already impacted large sections of the study area.

Figure 10: View of area close to existing Plant and WRD expansion area.

Figure 11: View of general area close to OC1 & OC2. The existing roads will also be used for access to these areas.

Figure 12: View of the location of OC1. The visible roads will be utilized. The mining method will be opencast. The terrain is hilly with steep slopes.

Figure 13: A general view towards the OC2 area.

Figure 14: Part of the area has already been impacted by mining.

Figure 15: A view of a section of the erosion donga near OC3.

Figure 16: Stone Age material & Iron Age pottery from Site 1.

Figure 17: A view of the erosion donga and streambed in the OC3 area.

Figure 18: The calcretes in the area. The archaeological material is eroding from these deposits.

Figure 19: Iron Age pottery and Stone Age tools from Site 2.

Figure 20: A view of old rehabilitated mining near OC3 and the erosion donga system.

Figure 21: More mining impacts in the general area.

Figure 22: A view of the extensive erosion in the area.

Figure 23: Another view of the erosion donga system.

Figure 24: Undecorated Iron Age pottery from Site 3.

Figure 25: A possible granary stand at Site 4.

Figure 26: Undecorated pottery at Site 4.

It should be noted that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.

7. CONCLUSIONS AND RECOMMENDATIONS

APelser Archaeological Consulting (APAC) was appointed by Prescali Environmental Consultants (Pty) Ltd to conduct a Phase 1 Archaeological Impact Assessment (AIA) for the Sylvania ECM new Opencast & Waste Return Dam Expansion developments at their Lannex Section. The project and study area is located close to Steelpoort in the Limpopo Province. The 1st part of the study entailed a Desktop Study which resulted in a report (**See APAC019/97**) in October 2019.

A number of known cultural heritage (archaeological and historical) sites exist in the larger geographical area within which the study area falls, while some sites of cultural heritage (archaeological and/or historical) origin or significance are known to occur in close proximity

to the study area. Previous work (2010) by the author (for Archaetnos cc) identified some archaeological sites at Lannex. These were mitigated in 2010.

Four (4) sites were identified in the study area during the September 2020 fieldwork, dating to the Stone- and Iron Age periods, and it is very likely that many more are located in the OC3 area and in the expansive erosion donga that is partially situated within the new Opencast pit.

With only a section of the erosion donga located in the OC3 pit area assessed in any detail, it is highly likely that other similar sites occur in the development area. Some sites and finds are possibly also still covered by topsoil in un-eroded sections, preserving them fairly in-tact. It is therefore imperative that the OC3 area be studied in more detail as part of Phase 2 Archaeological Mitigation before mining activities commence here. This will entail the following:

1. Detailed mapping of the OC3 area and erosion donga system in order to determine the extent of the archaeological deposit and sites located here

2. The sampling of surface material dating to the Stone Age and Iron Age. For this an archaeological permit will be required from SAHRA

3. The excavation of surface features dating to the Iron Age (such as Site 3) in order to determine the age of and extent of the Iron Age in the study area. A permit from SAHRA will have to be obtained for this purpose as well.

From an Archaeological point of view it is recommended that the proposed development actions can be allowed to continue, but that the recommended mitigation measures for the archaeological sites in the OC3 area be undertaken before any work here is undertaken. Once the Phase 2 Archaeological work has been finalized work in the OC3 area can continue.

Finally, it should be noted that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.

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APPENDIX A: DEFINITION OF TERMS:

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE

Historic value: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

Aesthetic value: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

Scientific value: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

Social value: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Rarity: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

Representivity: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or 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.

APPENDIX C: SIGNIFICANCE AND FIELD RATING:

Cultural significance:

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.

- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.

- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

Heritage significance:

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance

- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate

- Grade III: Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

i. National Grade I significance: should be managed as part of the national estate

ii. Provincial Grade II significance: should be managed as part of the provincial estate

iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)

iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/ medium significance)

v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)

vi. General protection B (IV B): site should be recorded before destruction (medium significance)

vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

APPENDIX D: PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – Grade I and II
Protected areas - An area surrounding a heritage site
Provisional protection – For a maximum period of two years
Heritage registers – Listing Grades II and III
Heritage areas – Areas with more than one heritage site included
Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states
Structures – Older than 60 years
Archaeology, palaeontology and meteorites
Burial grounds and graves
Public monuments and memorials

APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.

2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.

3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.

4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.

5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.

6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.