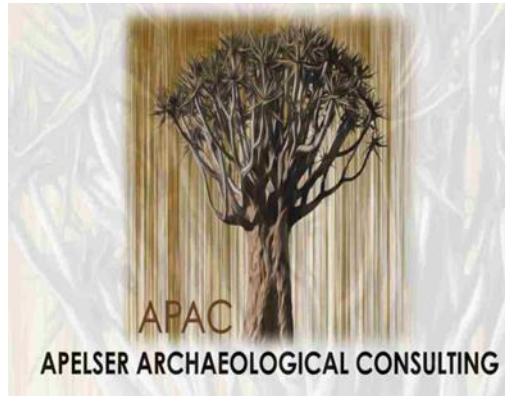


Appendix H.12

HERITAGE ASSESSMENT





Comprehensive and Professional Solutions for all Heritage Related Matters
CK 2006/014630/23 **VAT NO.: 4360226270**

**A PHASE 1 HERITAGE IMPACT ASSESSMENT REPORT
FOR THE ESKOM KOMATI POWER STATION
SOLAR ENERGY FACILITY (SEF)
MPUMALANGA PROVINCE**

For:

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REPORT: **APAC023/55**

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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. APELSE 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

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SUMMARY

APelser Archaeological Consulting (APAC) was appointed by WSP Group Africa (Pty) Ltd to conduct a Phase 1 Heritage Impact Assessment (HIA) for the Komati Solar Energy Facility (SEF). A Palaeontological Impact Assessment (PIA) forms part of the study and will be presented in a separate report. The Komati Power Station is situated about 37km from Middelburg, 43km from Bethal and 40km from Witbank, via Vandyksdrift in the Mpumalanga Province of South Africa.

Background research indicates that there are several cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls, but no known ones in the specific study area. During the field-based assessment no sites, features or remains were identified in the study and proposed development area. This report discusses the results of the background research & fieldwork undertaken, and provides recommendations on the way forward at the end.

From a Cultural Heritage point of view, it is recommended that the proposed Solar Energy Facility (SEF) and associated infrastructure as part of Eskom's repurposing program for the Komati Power Station be allowed to continue, taking into consideration the recommendations put forward at the end.

CONTENTS

1. INTRODUCTION	5
2. TERMS OF REFERENCE	5
3. LEGISLATIVE REQUIREMENTS	5
4. METHODOLOGY	9
5. DESCRIPTION OF THE AREA & PROJECT	9
6. DISCUSSION	13
7. CONCLUSIONS AND RECOMMENDATIONS	23
8. REFERENCES	24
APPENDIX A: DEFINITION OF TERMS:.....	26
APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE.....	27
APPENDIX C: SIGNIFICANCE AND FIELD RATING:	28
APPENDIX D: PROTECTION OF HERITAGE RESOURCES:.....	29
APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES.....	30

1. INTRODUCTION

APelser Archaeological Consulting (APAC) was appointed by WSP Group Africa (Pty) Ltd to conduct a Phase 1 Heritage Impact Assessment (HIA) for the Komati Solar Energy Facility (SEF). A Palaeontological Impact Assessment (PIA) forms part of the study and will be presented in a separate report. The Komati Power Station is situated about 37km from Middelburg, 43km from Bethal and 40km from Witbank, via Vandyksdrift in the Mpumalanga Province of South Africa.

Background research indicates that there are several cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls, but no known ones in the specific study area. During the field-based assessment no sites, features or remains were identified in the study and proposed development area.

The client indicated the location and boundaries of the study & proposed development area and the assessment concentrated on these land parcels. Two alternative areas (PV A & PV B) for the SEF were to be assessed.

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;
5. Review applicable legislative requirements;

3. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two Acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

3.1. The National Heritage Resources Act (Act 25 of 1999)

According to the 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 paleontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.)

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 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

Section 34 (1) of the 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) of the Act deals with archaeology, palaeontology and meteorites and 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 paleontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological 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 paleontological material or object, or any meteorite;
- d. bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological 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 South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from 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 (Act 65 of 1983 as amended)**.

3.2. The National Environmental Management Act (Act 107 of 1998)

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.

The specific requirements that specialist studies and reports must adhere to are contained in Appendix 6 of the EIA Regulations.

4. METHODOLOGY

4.1. Survey of literature

A review 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. These include Bergh (1999), Huffman (2007) & Lombard et.al (2012).

4.2. Field survey

The field assessment component of the study was conducted on the 29th of May 2023, according to generally accepted 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. Where possible grids are walked in the area where development is proposed.

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 & PROJECT

The Komati Power Station is situated about 37km from Middelburg, 43km from Bethal and 40km from Witbank (eMalahleni), via Vandyksdrift in the Mpumalanga Province of South Africa. The station has a total of 9 units, five 100MW units on the east (Units 1 to 5) and four 125 MW units on the west (Units 6 to 9), with a total installed capacity of 1000 MW. Its units operated on a simple Rankine Cycle without reheat and with a low superheat pressure, resulting in a lower thermodynamic efficiency (efficiency up to 27%). Komati Units are small and have a higher operating & maintenance cost per megawatt generated compared to modern newer stations. Komati Power Station will reach its end-of-life expectancy in September 2022 when Unit 9 will have reached its dead stop date (DSD). Units 1 to 8 have already reached its DSD.

Eskom is proposing the establishment of both a Solar Energy Facility (SEF) & Wind Energy Facility (WEF) and associated infrastructure as part of its repurposing programme for Komati

Power Station. This reports only deals with the proposed SEF development. The plan is to install 100MW of Solar Photovoltaics (PV) and 150MW of Battery Energy Storage System (BESS). The parcels of land in Komati for the proposed development are owned by Eskom.

Based on the scrutiny of aerial images (Google Earth) of the study and proposed development parcels, as well as the field-based study undertaken in May 2023, it is clear that the area has been heavily impacted by development of the existing Power Station & its related infrastructure, residential & related developments as well as agricultural activities. The larger geographical area within which the study and proposed development areas are located have also been impacted by mining. The original natural and historical landscape has been severely altered through these activities and if any sites, features or material of cultural heritage (archaeological and/or historical) significance or origin were present here in the past it would have been extensively disturbed or destroyed as a result.

The topography of the study and development area is relatively flat and open, with no rocky outcrops, ridges or hills present. Large portions of the study and proposed development area has been utilized in the past (and currently) for agricultural activities (ploughing and crop growing). The largest impact on the area however has been the development and use of the Komati Power Station, its related infrastructure, Ash Discard Dump and the town of Komati (residential and related developments). Eskom Powerlines and Servitudes have also impacted on the area.

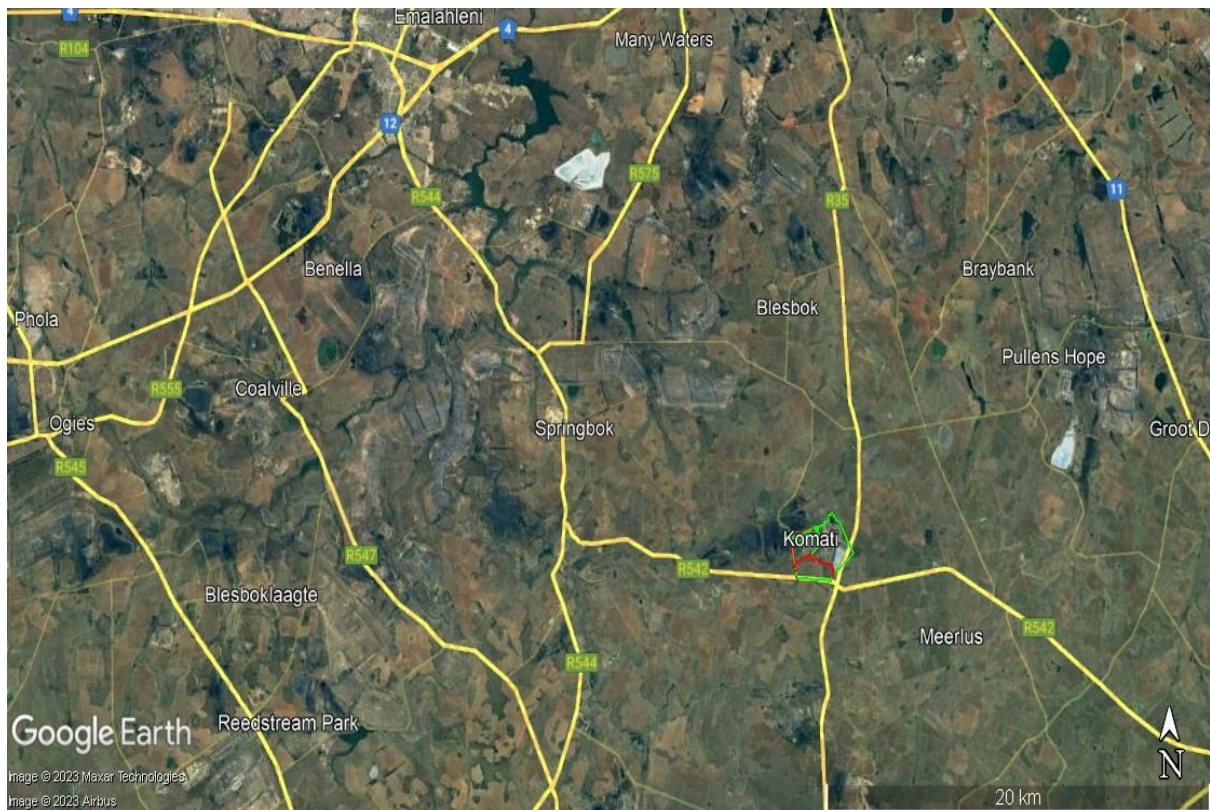


Figure 1: General location of the Eskom Komati Power Station study area (Google Earth 2023).



Figure 2: Closer view of the study & proposed SEF development areas (PV A in red & PV B in green). Note the heavily transformed and impacted nature of the specific and general area (Google Earth 2023).

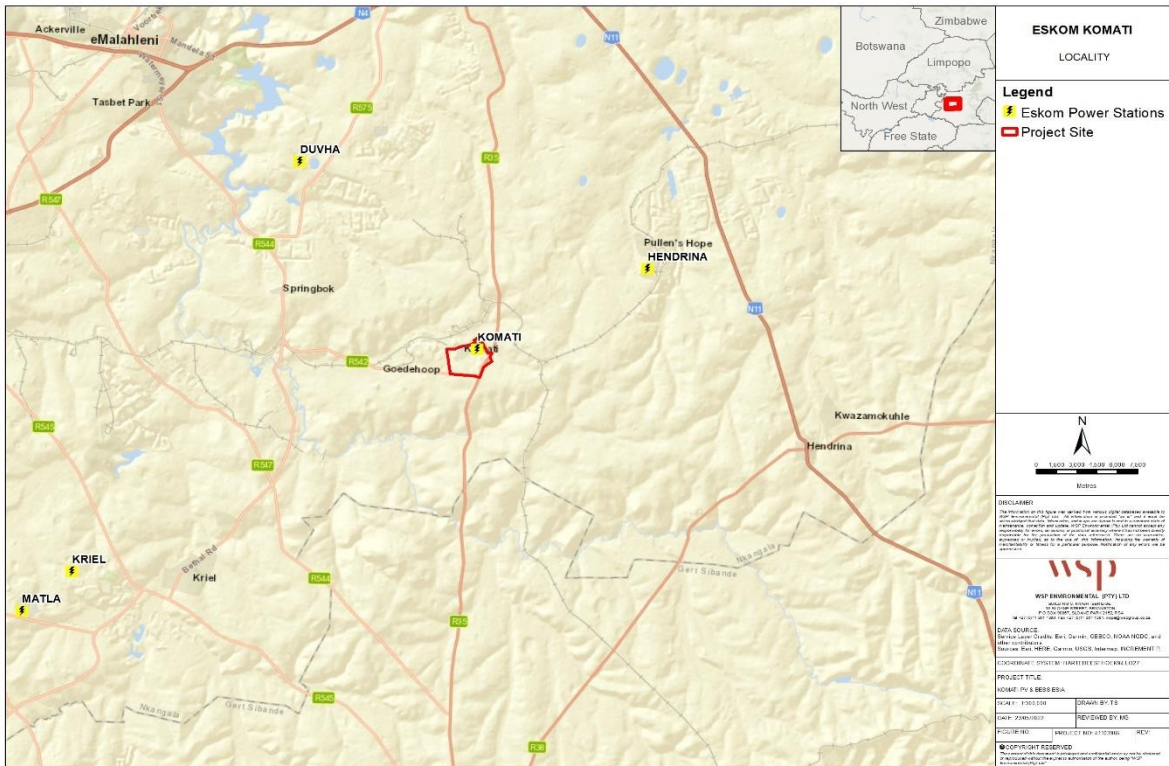


Figure 3: Topographical Locality Map (courtesy WSP).



Figure 4: Closer view of area around the town of Komati (Google Earth 2022).



Figure 5: Closer view of part of study area showing recently ploughed agricultural fields, as well as the impacted nature of the area through activities associated with the Power Station (Google Earth 2022).



Figure 6: Closer view of the area around the Komati Power Station (Google Earth 2022).

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 be divided in basically 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).

There are no known Stone Age sites in close proximity to the study area, although rock paintings (associated with the Later Stone Age) are known south of eMalahleni (Witbank) near the confluence of the Olifants River and Rietspruit, as well as a rock art site to the southeast of Middelburg (Bergh 1999:4-5). Heritage surveys have recorded few outstanding Stone Age sites, rock paintings and engravings in the Eastern Highveld - mainly as a result of limited extensive archaeological surveys. Stone tools have however been recorded around some of the pans which occur on the Eastern Highveld (Pistorius 2010:16). Some individual

Later Stone Age artifacts were identified in the larger area during a 2007 HIA for Goedgevonden Colliery, but the location of the site is not indicated (De Jong 2007: 19).

No Stone Age sites or material were identified in the study area during the May 2023 field assessments. If any were to be present, they would most likely be individual stone tools or low-density scatters in open-air surface scatters around the area.

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.

No Early or Middle Iron Age sites are known to occur in the study area (Bergh 1999: 6-7). According to Pistorius the Eastern Highveld had probably not been occupied by Early Iron Age communities, but was occupied by Late Iron Age farming communities such as the Sotho, Swazi and Ndebele who established stone walled settlement complexes. Seemingly these sites are more common towards the eastern perimeters of the Eastern Highveld. Small, inconspicuous stone walled sites have been observed along the Olifants River but are an exception and not the rule (Pistorius 2010:16-17).

There are a fairly large number of Late Iron Age stone walled sites in the bigger geographical area that includes Lydenburg, Dullstroom, Machadodorp, Badplaas and Belfast (Bergh 1999: 6-7). Late Iron Age sites have been identified to the north and east of Middelburg in the vicinity of Belfast (Bergh 1999: 7). Some of these sites might be related to the so-called Marateng facies of the Urewe pottery tradition of the LIA, dating to between AD1650 and 1840 (Huffman 2007: 207). During the 19th century the Ndzundza Ndebele inhabited the land to the north of Middelburg, but it seems as if the area directly surrounding the town was largely uninhabited. The Ndebele of Mzilikazi did move through this area during the *difaqane* which probably left it uninhabited for some time (Bergh 1999: 10-11).

No Iron Age sites, features or material were identified in the area during the May 2023 assessments.

The historical age started with the first recorded oral histories in the area. The first European people to move through this area were the party of the traveler Robert Schoon who passed through during 1836 (Bergh 1999: 13). Although the Voortrekkers moved across

the Vaal River during the 1830's, it seems as if Europeans only settled here after 1850 (Bergh 1999: 14-15).

One historic event took place in the region. During the Anglo-Boer War, the British forces under Brigadier-General Beatson were attacked by the ZAR forces, led by Gen. Muller. More than 50 British soldiers were killed. Afterwards, Brigadier-Gen. Beatson accused the Australian forces of cowardice. They mutinied against him and some were arrested, court-martialled and sentenced to death. Fortunately, these sentences were later commuted to imprisonment. This battle took place on the farm Wilmansrust 47IS, just to the south of the power station. A monument to commemorate this event was erected on this farm, but during the early 1970s it was relocated to the town of Bethal. The site investigation for the power station was started in 1957, and the first unit was commissioned in 1961 and the last in 1966. In 1990 the station was completely mothballed (Van Schalkwyk 2007: 4). Construction of the power station began during 1961.

No recent historical sites and features were identified and recorded in the study & development area in May 2023.

Results of the May 2023 Field Assessment

It was evident from the desktop study that archaeological/historical sites and finds do occur in the larger geographical landscape within which the specific study area is located. Based on this it is always possible that open-air Stone Age sites could be found in the area, in the form of individual stone tools or small scatters of tools if present. The possibility of Iron Age sites in the area is highly unlikely with no rocky outcrops, ridges and hills present. The likelihood of recent historical sites and features being present in the area is also low, although this could not be excluded. If any were to be present, it would most likely be remnants of homesteads and unknown/unmarked graves. During a 2007 Heritage Survey for the Komati Power Station Ash Dam Extension (on the farm Komati Power Station 58IS, a subdivision of the original farm Koornfontein 27IS), no Stone Age, Iron Age or recent historical sites, features or material were identified in the area (Van Schalkwyk 2007: 4).

During the May 2023 field assessment, no sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were identified in the study and proposed SEF development area. The planned SEF development and related infrastructure is located in already heavily disturbed areas and the likelihood of any cultural heritage sites or features being located here is very low. The often subterranean nature of archaeological and/historical sites and features should however always be taken into consideration and there is always a possibility of these occurring in an area earmarked for development. This could include unmarked or unknown graves or burials.

The DFFE Screening Tool indicated a Low Sensitivity for Archaeological and Cultural Heritage. The desktop research and physical field-based assessment confirmed this low sensitivity and that there are no sensitive heritage features in the study and proposed development area.

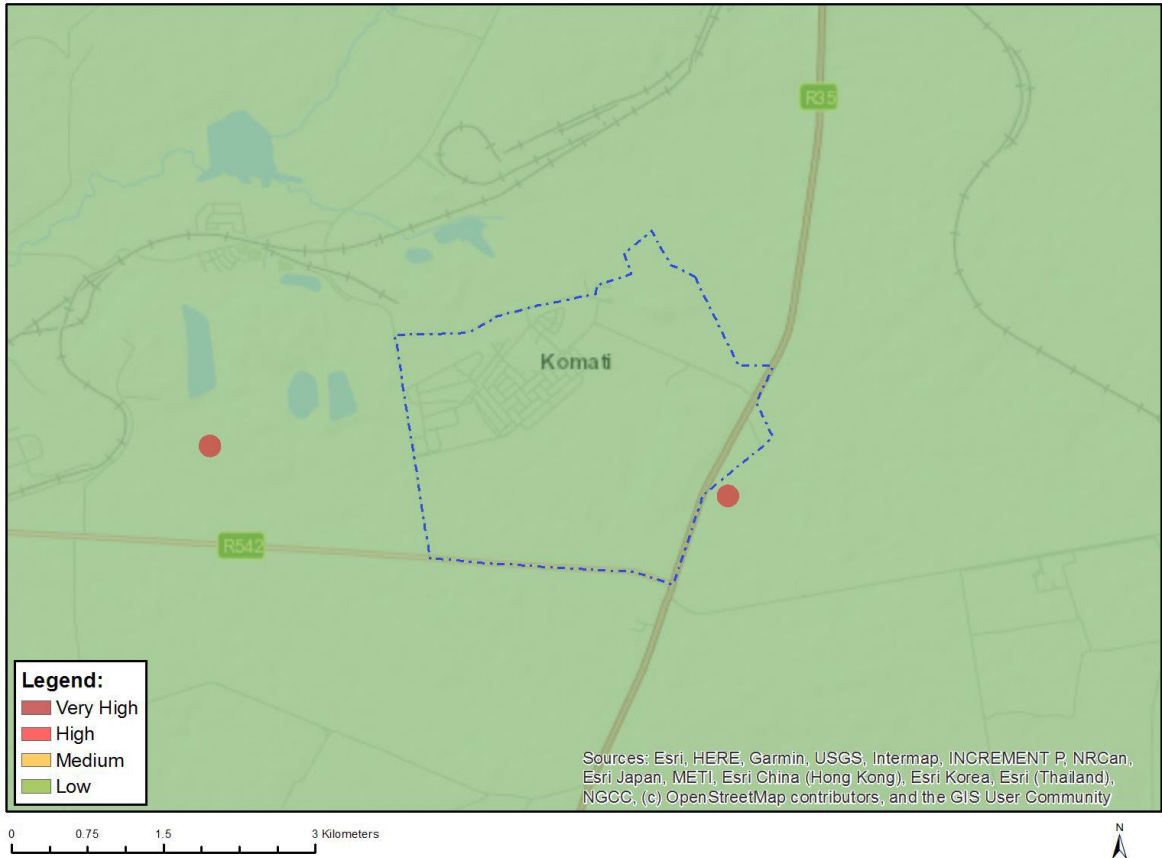


Figure 7: The DFFE Screening Tool Map showing the Low Sensitivity relative to Archaeological and Cultural Heritage resources.



Figure 8: A view of the Komati Power Station.



Figure 9: General view of a section of the area. Note the fairly open but disturbed nature of the area.



Figure 10: Some open areas exist in Komati between the Power Station and the town. This is taken from the direction of the Power Station down the Eskom Powerline Corridor.



Figure 11: A view of the area with the Ash Discard Dump visible.



Figure 12: A view of a section of the area close to the proposed PV B area. Recently ploughed fields are evident here.



Figure 13: More agricultural fields next to the R542 road, with the Power Station visible in the distance.



Figure 14: Another section of the study and development area near the proposed PV A area.



Figure 15: The impacts of agricultural and Eskom related activities on the area is clearly visible in this image.



Figure 16: A view of a part of Komati Town.

Impact Assessment and Mitigation Measures

The significance of impacts is determined using the following criteria:

Probability: describes the likelihood of the impact actually occurring

- **Improbable:** the possibility of the impact occurring is very low, due to the circumstances, design or experience.
- **Probable:** there is a probability that the impact will occur to the extent that provision must be made therefore.
- **Highly probable:** it is most likely that the impact will occur at some stage of the development.
- **Definite:** the impact will take place regardless of any prevention plans and there can only be relied on mitigation measures or contingency plans to contain the effect.

Duration: the lifetime of the impact

- **Short Term:** the impact will either disappear with mitigation or will be mitigated through natural processes in a time span shorter than any of the phases.
- **Medium Term:** the impact will last up to the end of the phases, where after it will be negated.
- **Long Term:** the impact will last for the entire operational phase of the project but will be mitigated by direct human action or by natural processes thereafter.
- **Permanent:** the impact is non-transitory. Mitigation either by man or natural processes will not occur in such a way or in such a time span that the impact can be considered transient.

Scale: the physical and spatial size of the impact

- **Local:** the impacted area extends only as far as the activity, e.g. footprint
- **Site:** the impact could affect the whole or measurable portion of the abovementioned property.
- **Regional:** the impact could affect the area including the neighboring residential areas.

Magnitude/Severity: Does the impact destroy the environment, or alter its function

- **Low:** the impact alters the affected environment in such a way that natural processes are not affected.
- **Medium:** the affected environment is altered, but functions and processes continue in a modified way.
- **High:** function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

Significance: This is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required.

- **Negligible:** the impact is non-existent or unsubstantial and is of no or little importance to any stakeholder and can be ignored.
- **Low:** the impact is limited in extent, has low to medium intensity; whatever its probability of occurrence is, the impact will not have a material effect on the decision and is likely to require management intervention with increased costs.
- **Moderate:** the impact is of importance to one or more stakeholders, and its intensity will be medium or high; therefore, the impact may materially affect the decision, and management intervention will be required.
- **High:** The impact could render development options controversial or the project unacceptable if it cannot be reduced to acceptable levels; and/or the cost of management intervention will be a significant factor in mitigation.

The significance is calculated by combining the criteria in the following formula:

Sum (Duration, Scale, Magnitude) x Probability

S = Significance weighting; Sc = Scale; D = Duration; M = Magnitude; P = Probability

With no sites, features and material of cultural heritage origin and significance found in the area during the assessment, the current site layouts provided will not impact any known sites.

Aspect	Description	Weight
Probability	Improbable	1
	Probable	2
	Highly Probable	4
	Definite	5
Duration	Short Term	1
	Medium Term	3
	Long Term	4
	Permanent	5
Scale	Local	1
	Site	2
	Regional	3
Magnitude/Severity	Low	2
	Medium	6
	High	8

Significance	Sum (Duration, Scale, Magnitude)	x Probability
	Negligible	≤20
	Low	>20≤40
	Moderate	>40≤60
	High	>60

Results: $5+1+2 \times 1 = 8$ i.e., ≤20

The impact of the proposed development on the recorded and known cultural heritage sites in the area is therefore deemed as Negligible based on the Impact Assessment criteria used. However, there is always a possibility of sites, features and material being missed as a result of various factors such as vegetation cover hampering visibility on the ground, as well as the often-subterranean nature of cultural heritage resources (including low stone-packed or unmarked graves). These factors need to be taken into consideration and it is therefore recommended that a Chance Finds Protocol be drafted and implemented for the proposed Eskom Komati SEF Development.

Heritage Cumulative Impact Statement

Several renewable energy developments exist within the surrounding area which have submitted applications for environmental authorisation (some of which have been approved). It is however important to note that the existence of an approved EA does not directly equate to actual development of the project. The projects within 30 km of the proposed Komati Solar Facility include the Proposed installation of a Solar photovoltaic power plant at ESKOM Duvha power station and the Proposed Forzando North Coal Mine photovoltaic solar facility in the Emalahleni Local Municipality, Mpumalanga Province (courtesy WSP Group Africa (Pty) Ltd (WSP)).

With no sensitive cultural heritage resources existing in the Komati Power Station proposed SEF project area, the cumulative heritage impacts of these other projects will be non-existent. It does need to be mentioned that this statement in no way claims that there are no sites of cultural heritage origin or significance located at or in close proximity to these other project areas.

7. CONCLUSIONS AND RECOMMENDATIONS

APelser Archaeological Consulting (APAC) was appointed by WSP Group Africa (Pty) Ltd to conduct a Phase 1 Heritage Impact Assessment (HIA) for the Komati Solar Energy Facility (SEF). A Palaeontological Impact Assessment (PIA) forms part of the study and will be presented in a separate report. The Komati Power Station is situated about 37km from Middelburg, 43km from Bethal and 40km from Witbank, via Vandyksdrift in the Mpumalanga Province of South Africa.

It was evident from the desktop study that archaeological/historical sites and finds do occur in the larger geographical landscape within which the specific study area is located. It is always possible that open-air Stone Age sites could be found in the area, in the form of

individual stone tools or small scatters of tools if present. The possibility of Iron Age sites in the area is highly unlikely, while the likelihood of recent historical sites and features being present in the area is also low. During a 2007 Heritage Survey for the Komati Power Station Ash Dam Extension (on the farm Komati Power Station 58IS, a subdivision of the original farm Koornfontein 27IS), no Stone Age, Iron Age or recent historical sites, features or material were identified in the area. During the May 2023 field assessment, no sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were identified in the study and proposed SEF development area.

The impact of the proposed development on the recorded and known cultural heritage sites in the area is deemed as Negligible based on the Impact Assessment criteria used. However, there is always a possibility of sites, features and material being missed as a result of various factors such as vegetation cover hampering visibility on the ground, as well as the often-subterranean nature of cultural heritage resources (including low stone-packed or unmarked graves). These factors need to be taken into consideration and it is therefore recommended that a Chance Finds Protocol be drafted and implemented for the proposed Eskom Komati SEF Development.

Finally, from a Cultural Heritage point of view, it is recommended that the proposed Solar Energy Facility (SEF) and associated infrastructure as part of Eskom's repurposing program for the Komati Power Station be allowed to continue, taking into consideration the recommendations provide above.

8. REFERENCES

General and closer views of Study & Proposed Development Area footprints: Google Earth 2022 & 2023.

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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.