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HERITAGE SCREENER

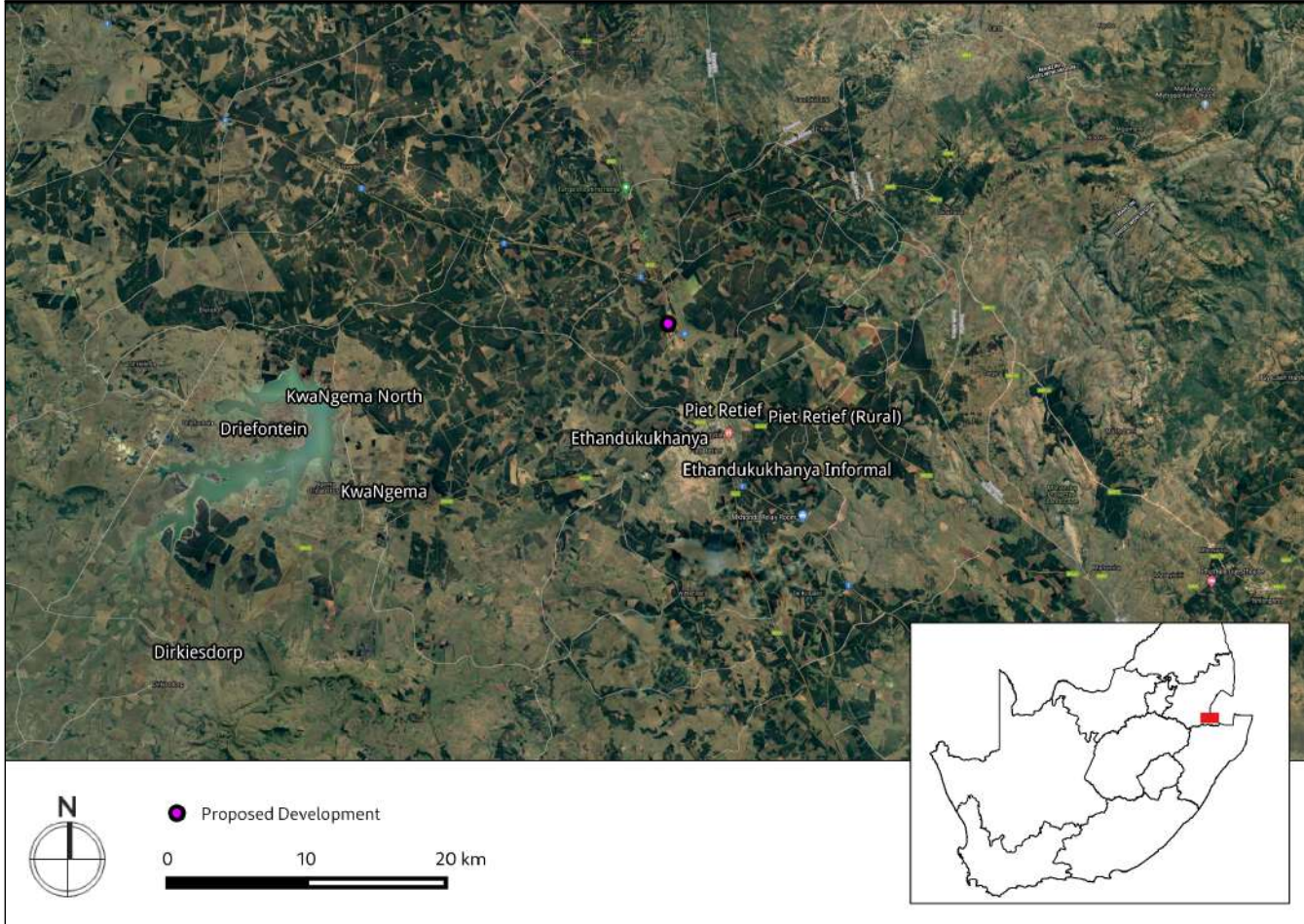
CTS Reference Number:	CTS21_180
SAHRIS Case No.	16568
Client:	Zutari
Date:	August 2021
Title:	Proposed Expansion of the PG Bison: Mkhondo plant in Mpumalanga
	
CTS Heritage Recommendation	<p>RECOMMENDATION</p> <p>Based on the information available, it is unlikely that the proposed development will impact on significant heritage resources and as such, it is recommended that no further heritage studies are required in terms of 38(3) of the NHRA. However, should any hidden or unmarked archaeological resources or burial grounds or graves be uncovered during the course of development, work must cease and SAHRA must be contacted regarding an appropriate way forward.</p>

Figure 1a. Satellite map indicating the location of the proposed development in Mpumalanga

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1. Proposed Development Summary

PG Bison is proposing to expand their current operations at their plant in eMkhondo (previously Piet Retief). The plant currently manufactures particleboard (chipboard) and MFB (melamine faced board) and the proposed development would involve:

- expanding the existing MFB manufacturing capacity by installing an additional 35 000m² per day MFB line. MFB is produced by laminating resin-impregnated paper onto particle board. This is done by laying the paper onto the board and applying heat and pressure in a short cycle press. The heat activates the resin and bonds the paper tightly to the board.
- expanding the range of products made by the plant, by adding in an 800m³ per day Medium Density Fibreboard (MDF) manufacturing facility. MDF is a manufactured wood product produced by breaking softwood down into fibres (via chipping, steaming and refining), mixing these fibres with wax and resin and then compressing this into a board in a heated press. The heat for the process (heating of thermal oil for the press, drying of wood fibre and heating of the water for steam) is produced by an on-site thermal energy plant. The proposed development thus also includes the construction of a new biomass-fired 38MW heating plant.

The proposed MFB line will be accommodated within the existing PG Bison premises while the new MDF plant will be built next to the existing facility. The main associated infrastructure requirements are:

- Additional water supply as the on-site boreholes are insufficient. A source has not yet been finalised but is likely to be either from the Assegai River or from the Heyshoop Dam. This will be dealt with as a separate application process due to timeframes.
- Power supply. Eskom will be responsible for undertaking the required power line upgrades to the existing sub-station.
- Treatment facilities for process wastewater and sanitation. The MDF process produces wastewater during the chip washing and cooking processes. The water is not hazardous but needs to be treated before being discharged. An on-site effluent treatment package plant that will also be able to accommodate the sewage that currently goes to conservancy tanks is proposed.

2. Application References

Name of relevant heritage authority(s)	SAHRA
Name of decision making authority(s)	DARDLEA

3. Property Information

Latitude / Longitude	26°56'34.18"S 30°45'54.47"E
Erf number / Farm number	Farm Vroegeveld 509, portion 41
Local Municipality	Mkhondo



District Municipality	Gert Sibande District Municipality
Province	Mpumalanga
Current Zoning	Agriculture

4. Nature of the Proposed Development

Total Area	Approximately 118 768sqm
Depth of excavation (m)	Average 2 to 4m
Height of development (m)	Buildings average 10m; the energy plant has a chimney stack that will extend approx 35m above the buildings (stack is essentially a pipe with a diameter of 2.24m)

5. Category of Development

x	Triggers: Section 38(8) of the National Heritage Resources Act
	Triggers: Section 38(1) of the National Heritage Resources Act
	1. Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.
	2. Construction of a bridge or similar structure exceeding 50m in length.
	3. Any development or activity that will change the character of a site-
x	a) exceeding 5 000m ² in extent
	b) involving three or more existing erven or subdivisions thereof
	c) involving three or more erven or divisions thereof which have been consolidated within the past five years
	4. Rezoning of a site exceeding 10 000m ²
	5. Other (state):



6. Additional Infrastructure Required for this Development

The main associated infrastructure requirements would be:

- Additional water supply - a supply has not yet been secured so we have no details; but water would most likely be pumped via a pipeline from either an existing abstraction point in the Assegai River or from the Heyshoop Dam. The supply pipeline is not expected to impact on/cross the site.
- Power supply (2 x 22kv lines) - these will run next to the existing lines from a sub-station to the plant and in the existing Eskom servitude. They do not cross the site.
- Treatment facilities for water used in the manufacturing process and for sanitation. An on-site effluent treatment package plant (all above ground - no conservancy tanks) is proposed.

7. Mapping (please see Appendix 3 and 4 for a full description of our methodology and map legends)



Figure 1b. Overview Map. Satellite image (2020) indicating the proposed development area in relation to Mkhondo (Piet Retief)



Figure 1c. Overview Map. Satellite image (2020) indicating the proposed development area



Figure 1d. Overview Map. Satellite image (2020) indicating the proposed development

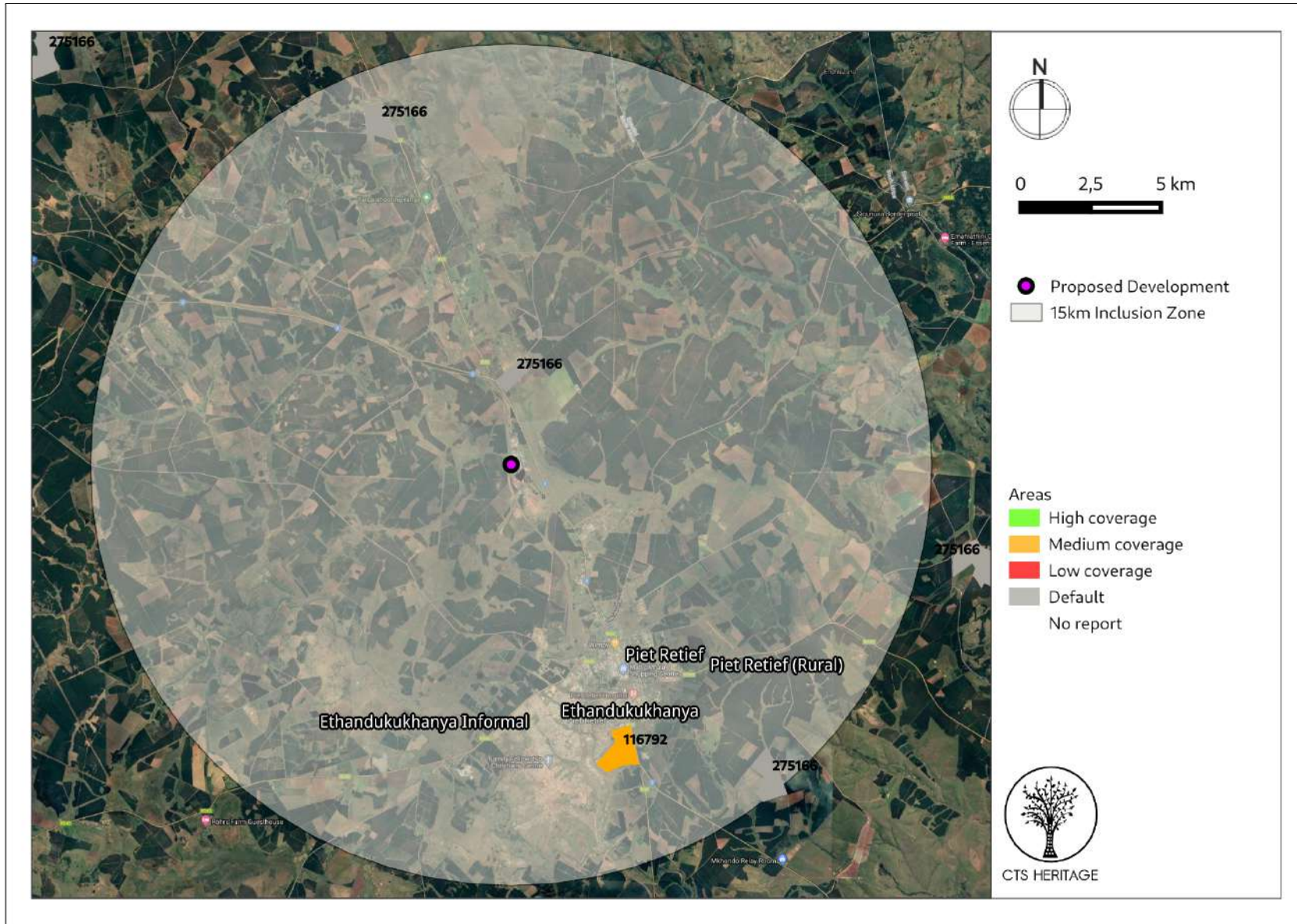


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments covering the proposed development area with SAHRIS NIDS indicated. Please see Appendix 2 for a full reference list.

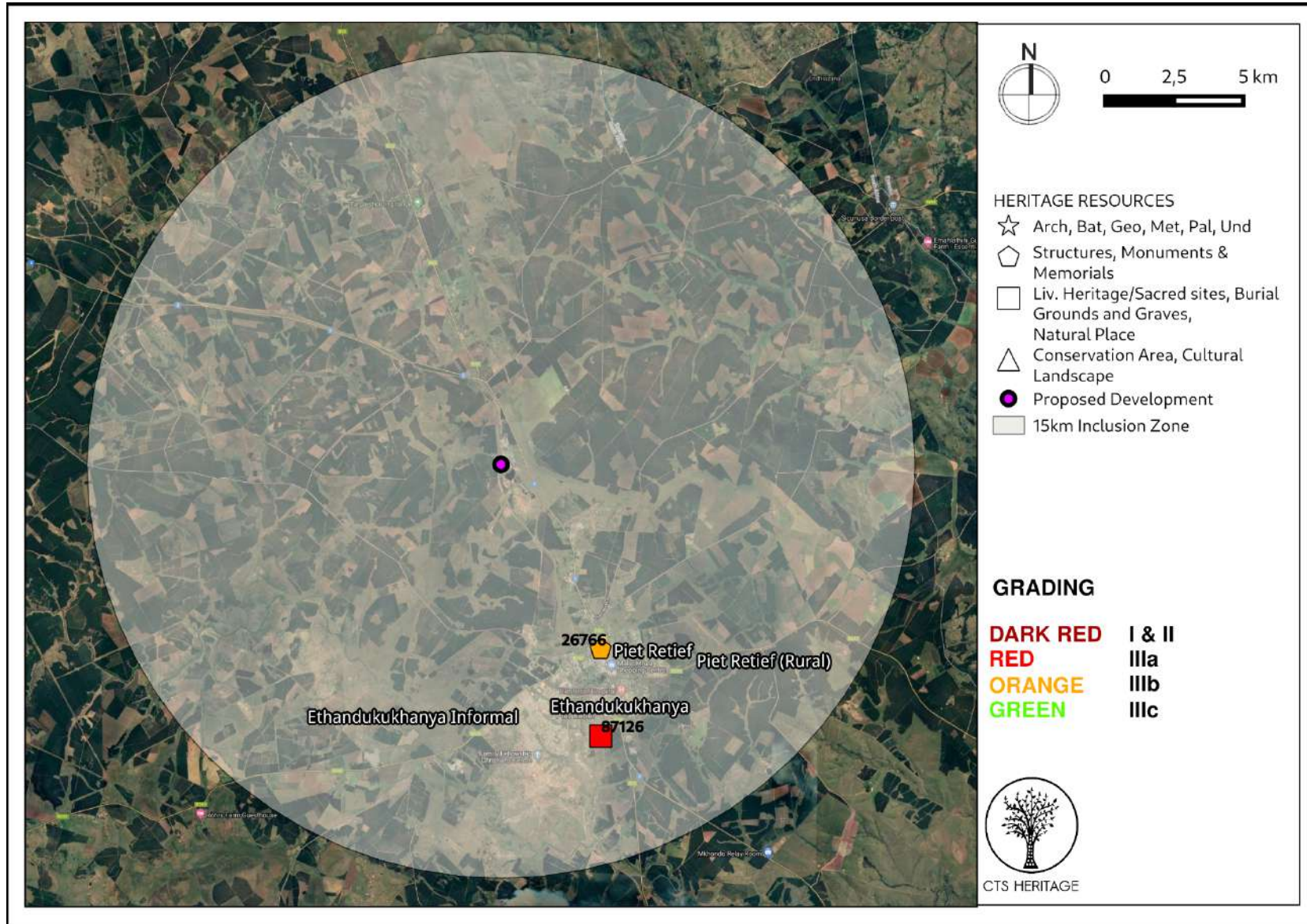


Figure 3. Heritage Resources Map. Heritage Resources previously identified within the study area, with SAHRIS Site IDs indicated in the insets below. Please See Appendix 4 for a full description of heritage resource types.



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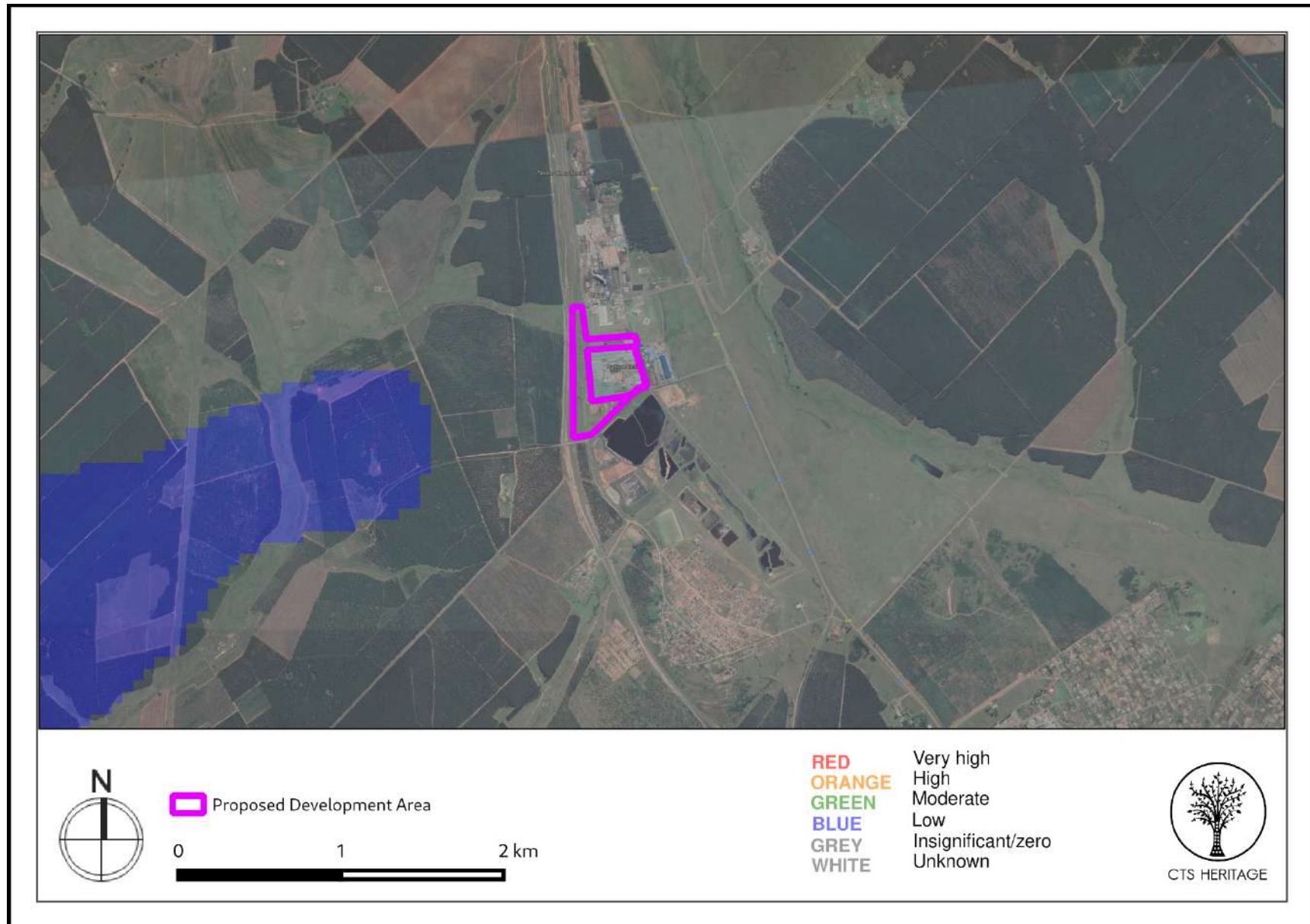


Figure 4a. Palaeosensitivity Map. Indicating fossil sensitivity underlying the study area. Please See Appendix 3 for a full guide to the legend.

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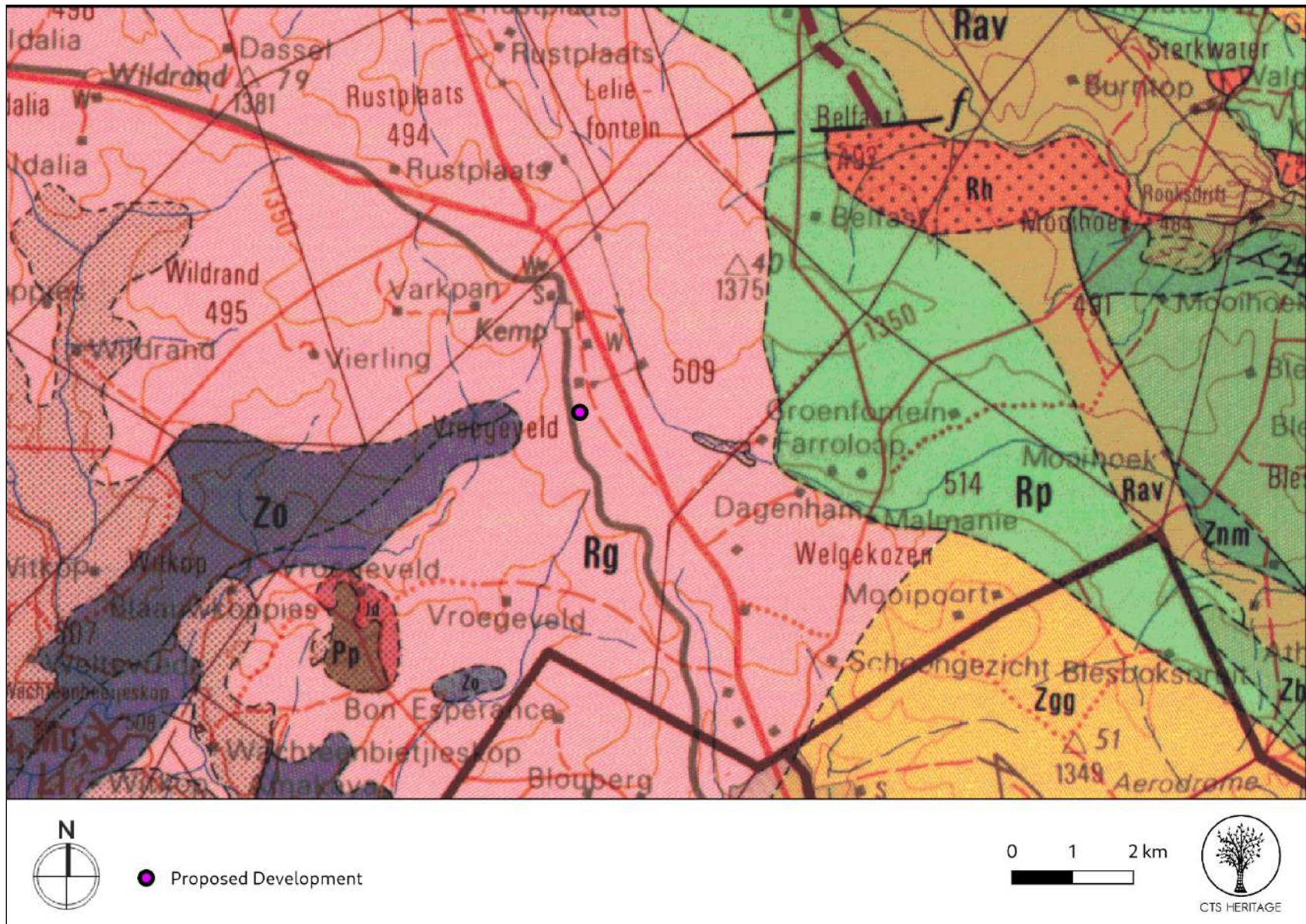


Figure 4b. Geology Map. Extract from the CGS 2630 Mbabane Map indicating that the development area for the proposed development is underlain by the Rg: Granite sediments

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Figure 5. Site Image. Standing on the southern corner of the site looking north

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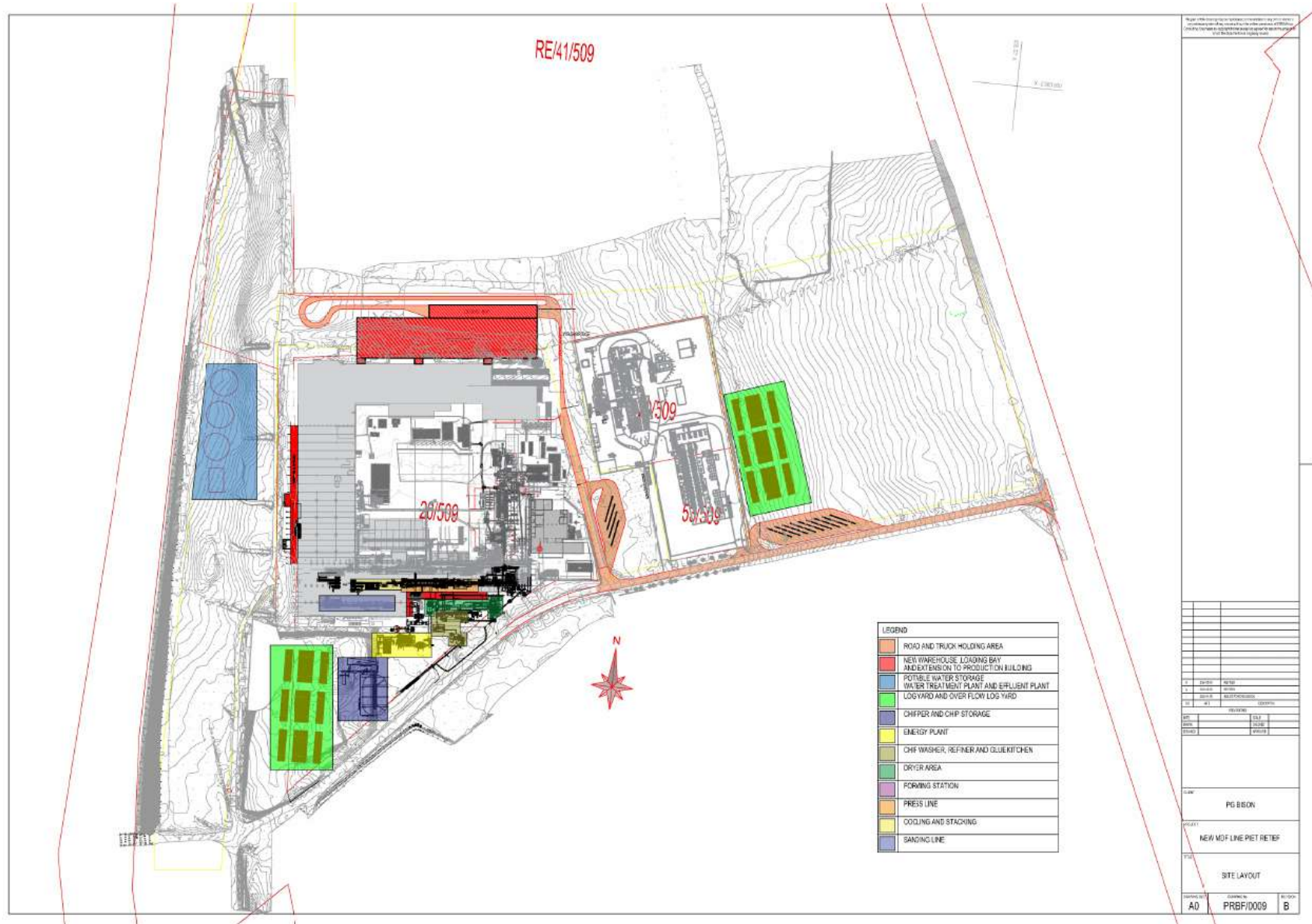


Figure 6. SDP. From client



8. Heritage Assessment

This application is for the proposed expansion of industrial activities at the existing PG Bison plant in eMkhondo (previously Piet Retief). The plant currently manufactures particleboard (chipboard) and MFB (melamine faced board). The area proposed for development is located approximately 7km north west of Mkhondo and is located in an area that has been extensively previously disturbed through industrial activities (Figure 1d). Mkhondo (previously Piet Retief) was founded by the Voortrekkers in 1883 and named after the Voortrekker leader, Piet Retief. In 1886, the inhabitants of the town declared the Klein Vrystaat (Little Free State), which contained a population of only 72, as an independent republic. This republic existed until 1891, when it was incorporated into the South African Republic. The town became a municipality in 1932. Based on the information available, it is unlikely that this proposed development will negatively impact on any significant cultural landscape or on the historic core of Mkhondo.

More recently, Mkhondo was home to Saul Mkhize, a political activist who opposed the forced removals of people from Driefontein, now known as Saul Mkhizeville, during Apartheid. On 2 April 1983, Saul Mkhize was shot by police while attempting to organise a peaceful march around this issue. Subsequently, in 2015, the Mkhondo Municipality unveiled a statue of Saul Mkhize at the Mkhondo Municipal offices. The sites of significance in relation to Saul Mkhize are located within Mkhondo and Saul Mkhizeville and will not be negatively impacted by the proposed development.

Very few heritage impact assessments have been completed in proximity to the proposed development area (Figure 2) and as such, very few heritage resources have been documented within 15km of the development area (Figure 3). According to Kruger (2015 SAHRIS ID 275166), “. Sites, documenting Earlier, Middle and Later Stone Age habitation occur across the province, mostly in open air locales or in sediments alongside rivers or pans. In addition, a wealth of Later Stone Age rock art sites, most of which are in the form of rock engravings are to be found in the larger landscape. These sites occur on hilltops, slopes, rock outcrops and occasionally in river beds. Later, Bantu-speaking tribes moved into this area from the northern parts of Southern Africa and settled here. These were presumably Sotho-Tswana herder groups. Various historians and ethnographers describe that the Lowveld was frequented by Swazi and Sotho-Tswana groups during historic times i.e. Late Iron Age times during the period AD 1500-1800. Historical trade routes were well established before the period of Colonial expansion and these routes mainly existed as a direct consequence of metallurgy and mining for iron, tin, copper and some gold to make weapons, agricultural equipment and ornaments. During the nineteenth century the Lowveld area of Mpumalanga was extensively settled by both Bantu and European groups that migrated into this area.” In his field assessment of areas in close proximity to this development, Kruger (2015) identified sites dating to colonial expansion in the area, and a number of burial grounds and graves. This aligns with the findings made by Celliers (2012, SARHIS ID 116792). Based on the available information regarding the archaeological sensitivity of the broader area as well as the previously disturbed nature of the area proposed for development, it is very unlikely that the proposed development will negatively impact on significant archaeological resources. However, the possibility remains that unmarked or hidden burial grounds or graves exist within the proposed development area.

According to the SAHRIS Palaeosensitivity Map, the area proposed for development is underlain by sediments of zero palaeontological sensitivity (Figure 4a). According to the extract from the Council of GeoScience Map for Mbabane 2630 (Figure 4b), the area proposed for development is underlain by leucocratic biotite granite which is known to be sterile of significant fossil material. It is therefore very unlikely that the proposed development will negatively impact on significant palaeontological heritage.

RECOMMENDATION

Based on the information available, it is unlikely that the proposed development will impact on significant heritage resources and as such, it is recommended that no further heritage studies are required in terms of 38(3) of the NHRA. However, should any hidden or unmarked archaeological resources or burial grounds or graves be uncovered during the course of development, work must cease and SAHRA must be contacted regarding an appropriate way forward.



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APPENDIX 1

List of heritage resources within the development area

Site ID	Site no	Full Site Name	Site Type	Grading
26766	9/2/254/0001	Dutch Reformed Church, Church Street, Piet Retief	Building	Grade IIIb
87126	PRF002	Piet Retief 002	Burial Grounds & Graves	Grade IIIa

APPENDIX 2

Reference List with relevant AIAs and PIAs

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
116792	AIA Phase 1	Jean-Pierre Celliers	16/10/2012	Report on Phase 1 Archaeological Impact Assessment on the Remainder of Portion 1 of Piet Retief Town and Townlands 149 HT, Mpumalanga Province.
275166	AIA Phase 1	Neels Kruger	02/06/2015	ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) OF AREAS DEMARCATED FOR THE ESTABLISHMENT OF 9 MONDI AGRI-VILLAGES, GREATER PIET RETIEF AREA, MPUMALANGA PROVINCE

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APPENDIX 3 - Keys/Guides

Key/Guide to Acronyms

AIA	Archaeological Impact Assessment
DARD	Department of Agriculture and Rural Development (KwaZulu-Natal)
DEFF	Department of Environmental, Forestry and Fisheries (National)
DEADP	Department of Environmental Affairs and Development Planning (Western Cape)
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism (Eastern Cape)
DEDECT	Department of Economic Development, Environment, Conservation and Tourism (North West)
DEDT	Department of Economic Development and Tourism (Mpumalanga)
DEDTEA	Department of economic Development, Tourism and Environmental Affairs (Free State)
DENC	Department of Environment and Nature Conservation (Northern Cape)
DMR	Department of Mineral Resources (National)
GDARD	Gauteng Department of Agriculture and Rural Development (Gauteng)
HIA	Heritage Impact Assessment
LEDET	Department of Economic Development, Environment and Tourism (Limpopo)
MPRDA	Mineral and Petroleum Resources Development Act, no 28 of 2002
NEMA	National Environmental Management Act, no 107 of 1998
NHRA	National Heritage Resources Act, no 25 of 1999
PIA	Palaeontological Impact Assessment
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
VIA	Visual Impact Assessment

Full guide to Palaeosensitivity Map legend

	RED:	VERY HIGH - field assessment and protocol for finds is required
	ORANGE/YELLOW:	HIGH - desktop study is required and based on the outcome of the desktop study, a field assessment is likely
	GREEN:	MODERATE - desktop study is required
	BLUE/PURPLE:	LOW - no palaeontological studies are required however a protocol for chance finds is required
	GREY:	INSIGNIFICANT/ZERO - no palaeontological studies are required
	WHITE/CLEAR:	UNKNOWN - these areas will require a minimum of a desktop study.

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APPENDIX 4 - Methodology

The Heritage Screener summarises the heritage impact assessments and studies previously undertaken within the area of the proposed development and its surroundings. Heritage resources identified in these reports are assessed by our team during the screening process.

The heritage resources will be described both in terms of **type**:

- Group 1: Archaeological, Underwater, Palaeontological and Geological sites, Meteorites, and Battlefields
- Group 2: Structures, Monuments and Memorials
- Group 3: Burial Grounds and Graves, Living Heritage, Sacred and Natural sites
- Group 4: Cultural Landscapes, Conservation Areas and Scenic routes

and **significance** (Grade I, II, IIIa, b or c, ungraded), as determined by the author of the original heritage impact assessment report or by formal grading and/or protection by the heritage authorities.

Sites identified and mapped during research projects will also be considered.

DETERMINATION OF THE EXTENT OF THE INCLUSION ZONE TO BE TAKEN INTO CONSIDERATION

The extent of the inclusion zone to be considered for the Heritage Screener will be determined by CTS based on:

- the size of the development,
- the number and outcome of previous surveys existing in the area
- the potential cumulative impact of the application.

The inclusion zone will be considered as the region within a maximum distance of 50 km from the boundary of the proposed development.

DETERMINATION OF THE PALAEOLOGICAL SENSITIVITY

The possible impact of the proposed development on palaeontological resources is gauged by:

- reviewing the fossil sensitivity maps available on the South African Heritage Resources Information System (SAHRIS)
- considering the nature of the proposed development
- when available, taking information provided by the applicant related to the geological background of the area into account

DETERMINATION OF THE COVERAGE RATING ASCRIBED TO A REPORT POLYGON

Each report assessed for the compilation of the Heritage Screener is colour-coded according to the level of coverage accomplished. The extent of the surveyed coverage is labeled in three categories, namely low, medium and high. In most instances the extent of the map corresponds to the extent of the development for which the specific report was undertaken.

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Low coverage will be used for:

- desktop studies where no field assessment of the area was undertaken;
- reports where the sites are listed and described but no GPS coordinates were provided.
- older reports with GPS coordinates with low accuracy ratings;
- reports where the entire property was mapped, but only a small/limited area was surveyed.
- uploads on the National Inventory which are not properly mapped.

Medium coverage will be used for

- reports for which a field survey was undertaken but the area was not extensively covered. This may apply to instances where some impediments did not allow for full coverage such as thick vegetation, etc.
- reports for which the entire property was mapped, but only a specific area was surveyed thoroughly. This is differentiated from low ratings listed above when these surveys cover up to around 50% of the property.

High coverage will be used for

- reports where the area highlighted in the map was extensively surveyed as shown by the GPS track coordinates. This category will also apply to permit reports.

RECOMMENDATION GUIDE

The Heritage Screener includes a set of recommendations to the applicant based on whether an impact on heritage resources is anticipated. One of three possible recommendations is formulated:

(1) The heritage resources in the area proposed for development are sufficiently recorded - The surveys undertaken in the area adequately captured the heritage resources. There are no known sites which require mitigation or management plans. No further heritage work is recommended for the proposed development.

This recommendation is made when:

- enough work has been undertaken in the area
- it is the professional opinion of CTS that the area has already been assessed adequately from a heritage perspective for the type of development proposed

(2) The heritage resources and the area proposed for development are only partially recorded - The surveys undertaken in the area have not adequately captured the heritage resources and/or there are sites which require mitigation or management plans. Further specific heritage work is recommended for the proposed development.

This recommendation is made in instances in which there are already some studies undertaken in the area and/or in the adjacent area for the proposed development. Further studies in a limited HIA may include:

- improvement on some components of the heritage assessments already undertaken, for instance with a renewed field survey and/or with a specific specialist for the type of heritage resources expected in the area
- compilation of a report for a component of a heritage impact assessment not already undertaken in the area

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- undertaking mitigation measures requested in previous assessments/records of decision.

(3) The heritage resources within the area proposed for the development have not been adequately surveyed yet - Few or no surveys have been undertaken in the area proposed for development. A full Heritage Impact Assessment with a detailed field component is recommended for the proposed development.

Note:

The responsibility for generating a response detailing the requirements for the development lies with the heritage authority. However, since the methodology utilised for the compilation of the Heritage Screeners is thorough and consistent, contradictory outcomes to the recommendations made by CTS should rarely occur. Should a discrepancy arise, CTS will immediately take up the matter with the heritage authority to clarify the dispute.

APPENDIX 5 -Summary of Specialist Expertise

Jenna Lavin, an archaeologist with an MSc in Archaeology and Palaeoenvironments, and currently completing an MPhil in Conservation Management, heads up the heritage division of the organisation, and has a wealth of experience in the heritage management sector. Jenna's previous position as the Assistant Director for Policy, Research and Planning at Heritage Western Cape has provided her with an in-depth understanding of national and international heritage legislation. Her 8 years of experience at various heritage authorities in South Africa means that she has dealt extensively with permitting, policy formulation, compliance and heritage management at national and provincial level and has also been heavily involved in rolling out training on SAHRIS to the Provincial Heritage Resources Authorities and local authorities.

Jenna is on the Executive Committee of the Association of Professional Heritage Practitioners (APHP), and is also an active member of the International Committee on Monuments and Sites (ICOMOS) as well as the International Committee on Archaeological Heritage Management (ICAHM). In addition, Jenna has been a member of the Association of Southern African Professional Archaeologists (ASAPA) since 2009. Recently, Jenna has been responsible for conducting training in how to write Wikipedia articles for the Africa Centre's WikiAfrica project.

Since 2016, Jenna has drafted over 80 Heritage Impact Assessments throughout South Africa.

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