

CTS HERITAGE

HERITAGE SCREENER

CTS Reference Number:	CTS19_007
SAHRA Ref:	
Client:	EOH-CES
Date:	6 February 2019
Title:	Proposed establishment of Berg Street Township on portion 5 of farm Hazia JP No 240, Zeerust, North West Province

Figure 1a. Satellite map indicating the location of the proposed development in the North West Province

Recommendation by CTS Heritage Specialists	<p>RECOMMENDATION: The heritage resources in the area proposed for development are sufficiently recorded. Due to the location and nature of the proposed development, it is unlikely that significant heritage resources will be impacted by the development and as such, it is recommended that no further heritage studies are required, however the HWC Fossil Finds Procedure must be implemented throughout the construction phase.</p>
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1. Proposed Development Summary

Residential extension project

Ramotshere Moiloa Local Municipality (RMLM) proposes to facilitate the extension of the residential area on the corner of Berg and Drooge Street – RE Portion 5 of Farm Hazia JP No 240, Zeerust, North West Province. The project aims to establish a middle income residential area. The 12.65 ha area will be subdivided into approximately 100 stands. Stands will be sold to prospective residents who will then construct their own housing. Adjacent municipal services, including water, electricity, waste removal and roads will be extended into the area. The proposed site is a green field's site zoned for agriculture and comprised of indigenous vegetation. The clearing of indigenous vegetation and transformation of open space into residential housing requires an environmental licencing. The municipality will be responsible for the clearing and pegging of the site, as well as the extension of services.

2. Application References

Name of relevant heritage authority(s)	SAHRA
Name of decision making authority(s)	North West Department: Rural, Environment and Agricultural Development

3. Property Information

Latitude / Longitude	25°31'39.50"S 26° 4'53.19"E
Erf number / Farm number	Portion 5 of Farm Hazia JP No. 240
Local Municipality	Ramotshere Moiloa
District Municipality	Ngaka Modiri Molema
Previous Magisterial District	Marico
Province	North West
Current Use	Open Space
Current Zoning	Agriculture
Total Extent	12.65 ha

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4. Nature of the Proposed Development

Total Surface Area	12.65 ha
Depth of excavation (m)	<3m Normal excavation for foundation purposes and installation of services.
Height of development (m)	The anticipated height is two storey at most
Expected years of operation before decommission	NA

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):

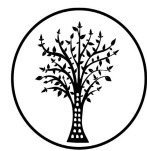
6. Additional Infrastructure Required for this Development

Connections to stormwater, sewerage, water, roads, electricity and other municipal infrastructure

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

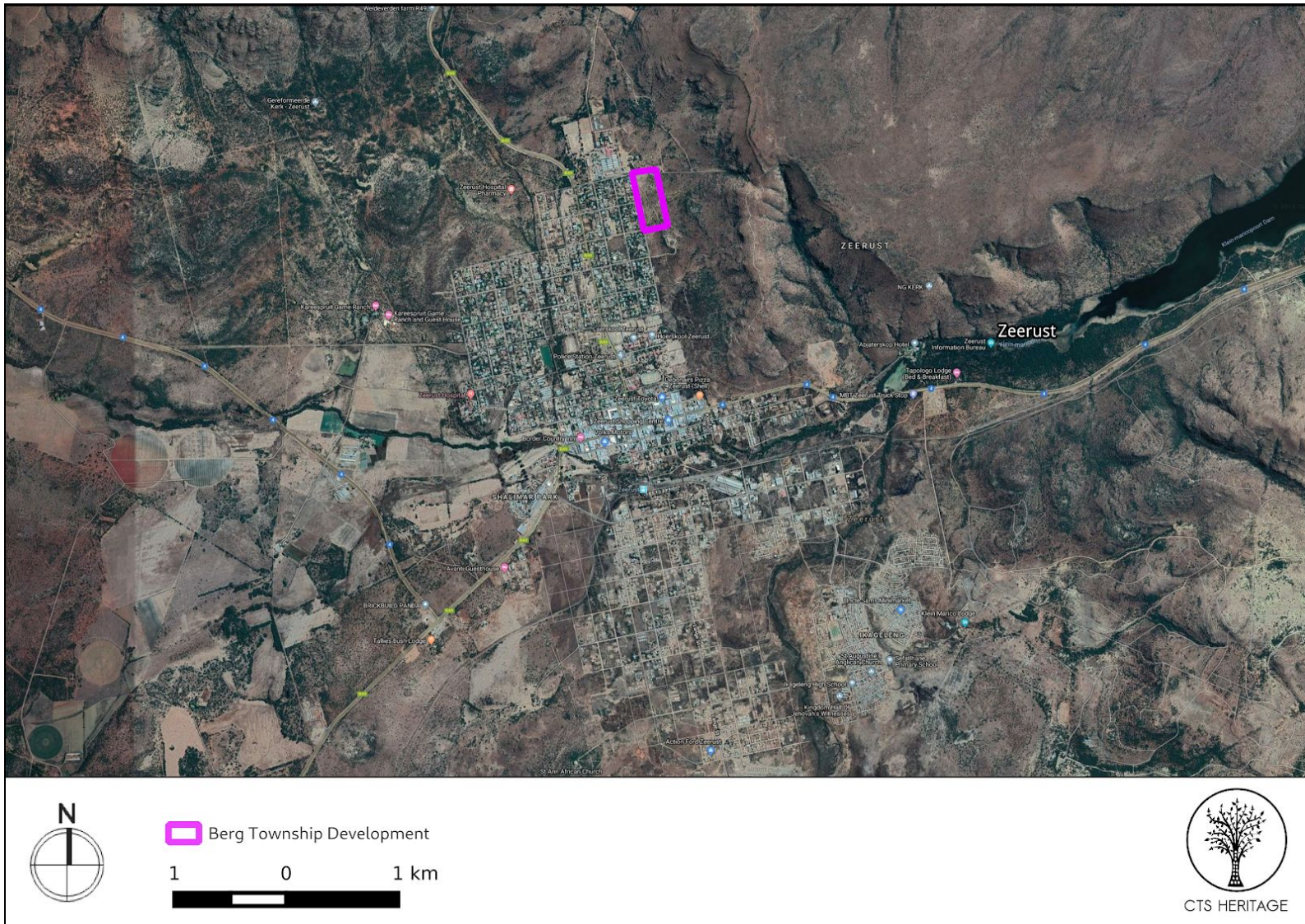
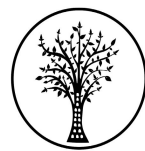


Figure 1b. Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

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 Berg Township Development

100 0 100 m



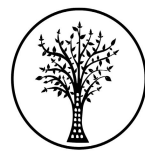
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Figure 1c. Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

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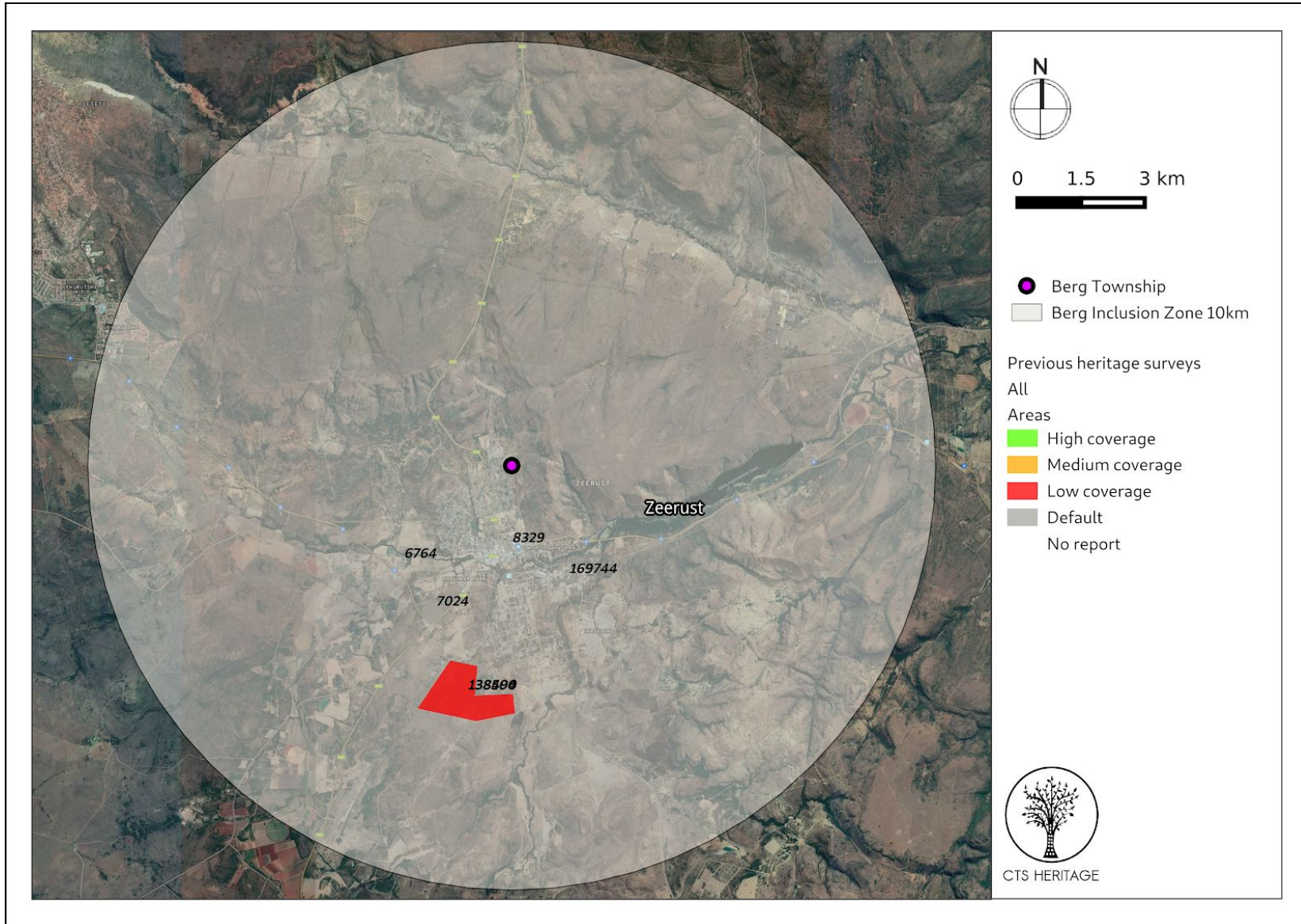
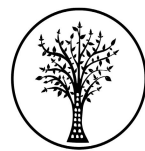


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area within 10km, with SAHRIS NIDS indicated. Please see Appendix 2 for full reference list.

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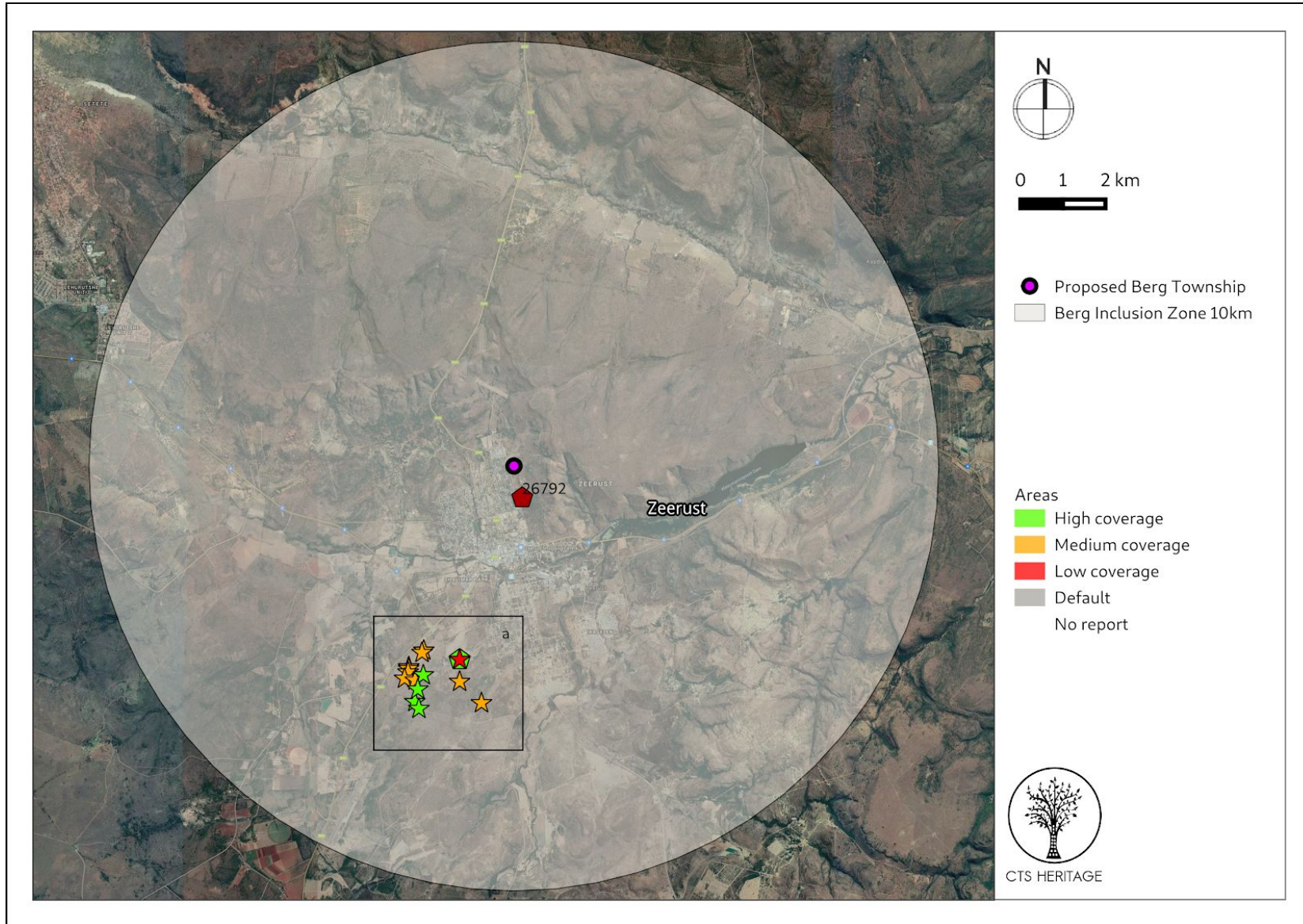


Figure 3. Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated. Please See Appendix 4 for full description of heritage resource types.

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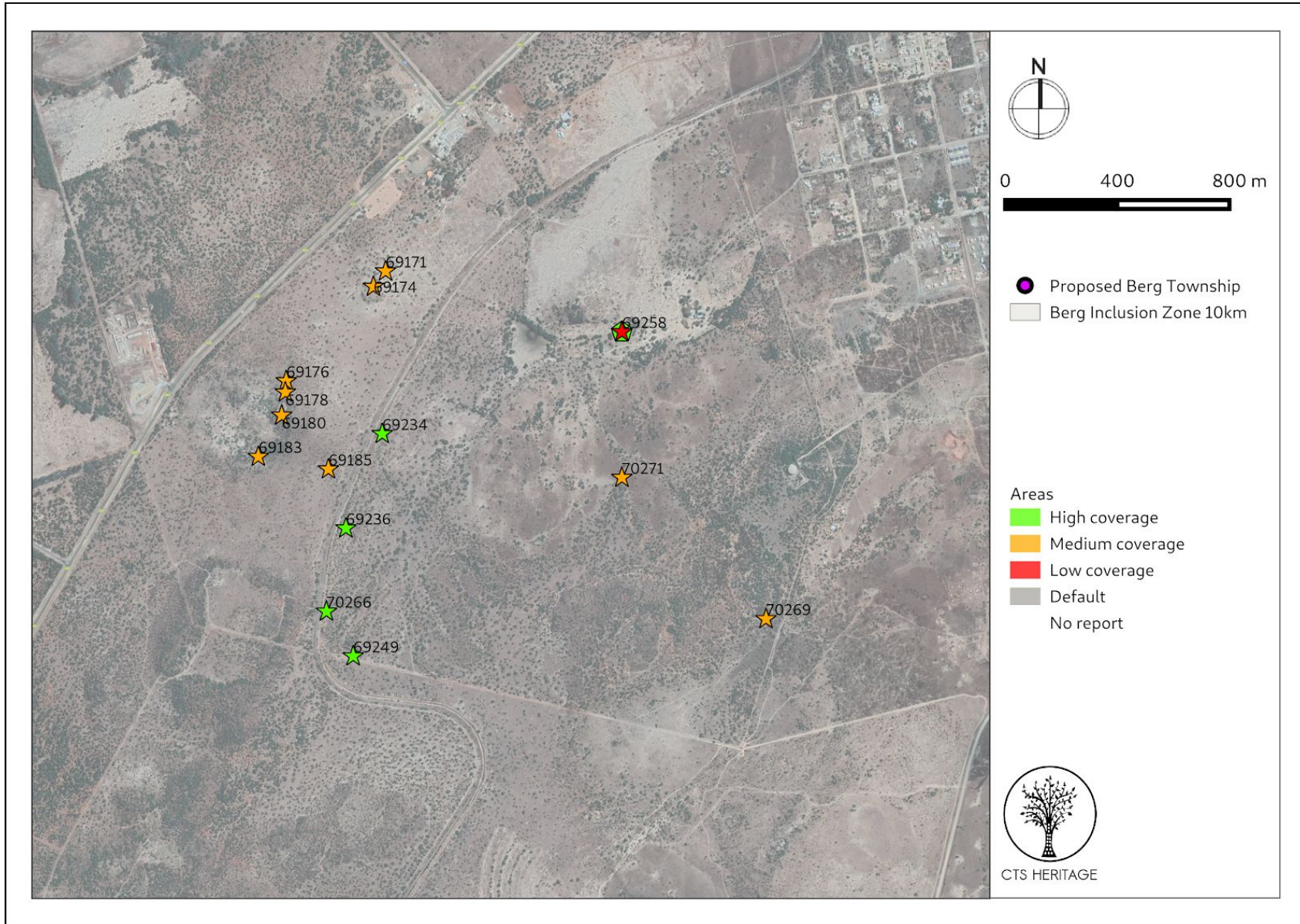


Figure 3a. Heritage Resources Map. Inset

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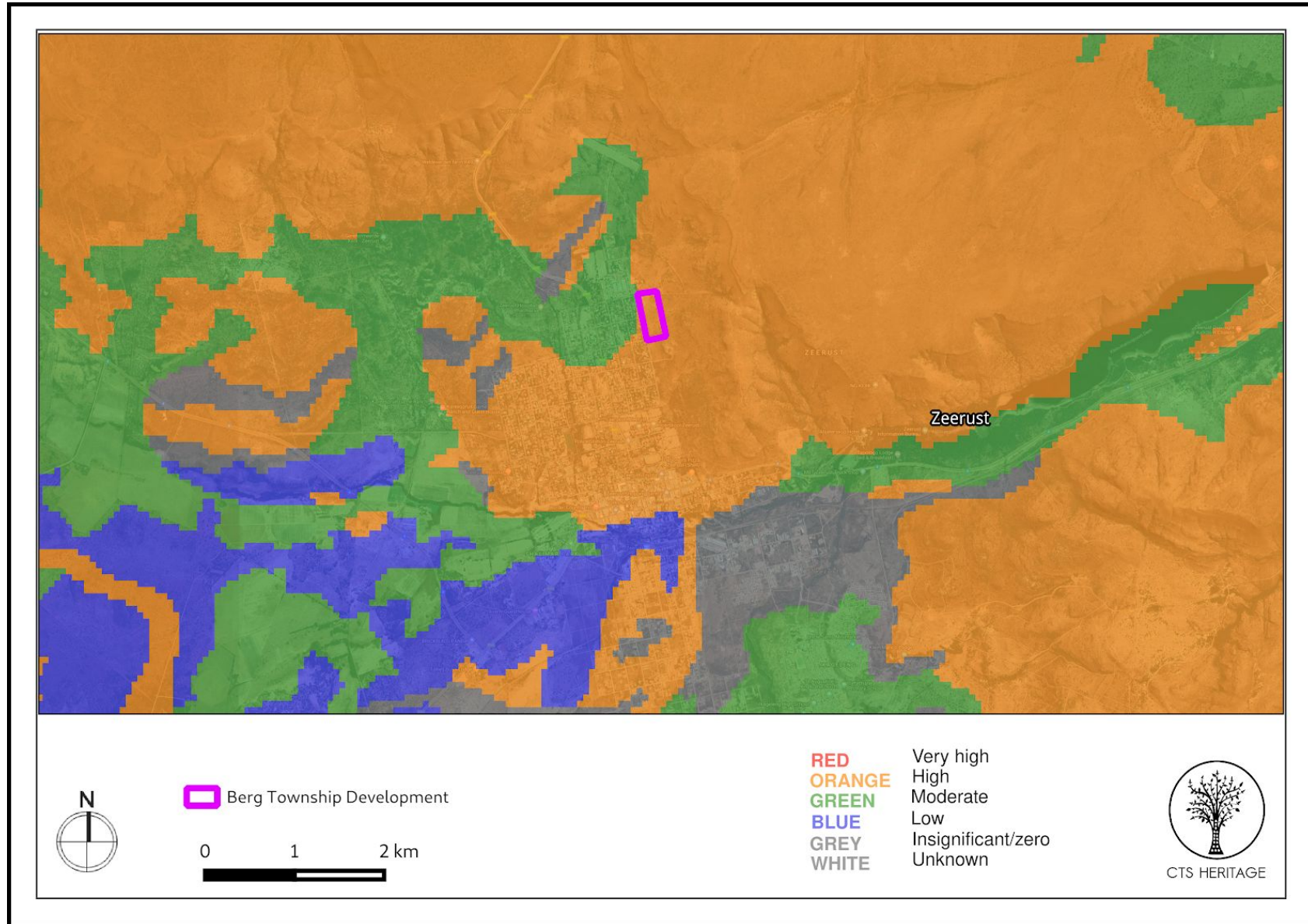


Figure 4.1. SAHRIS Palaeosensitivity Map. Indicating the fossil sensitivity underlying the study area. Please See Appendix 3 for full guide to the legend.

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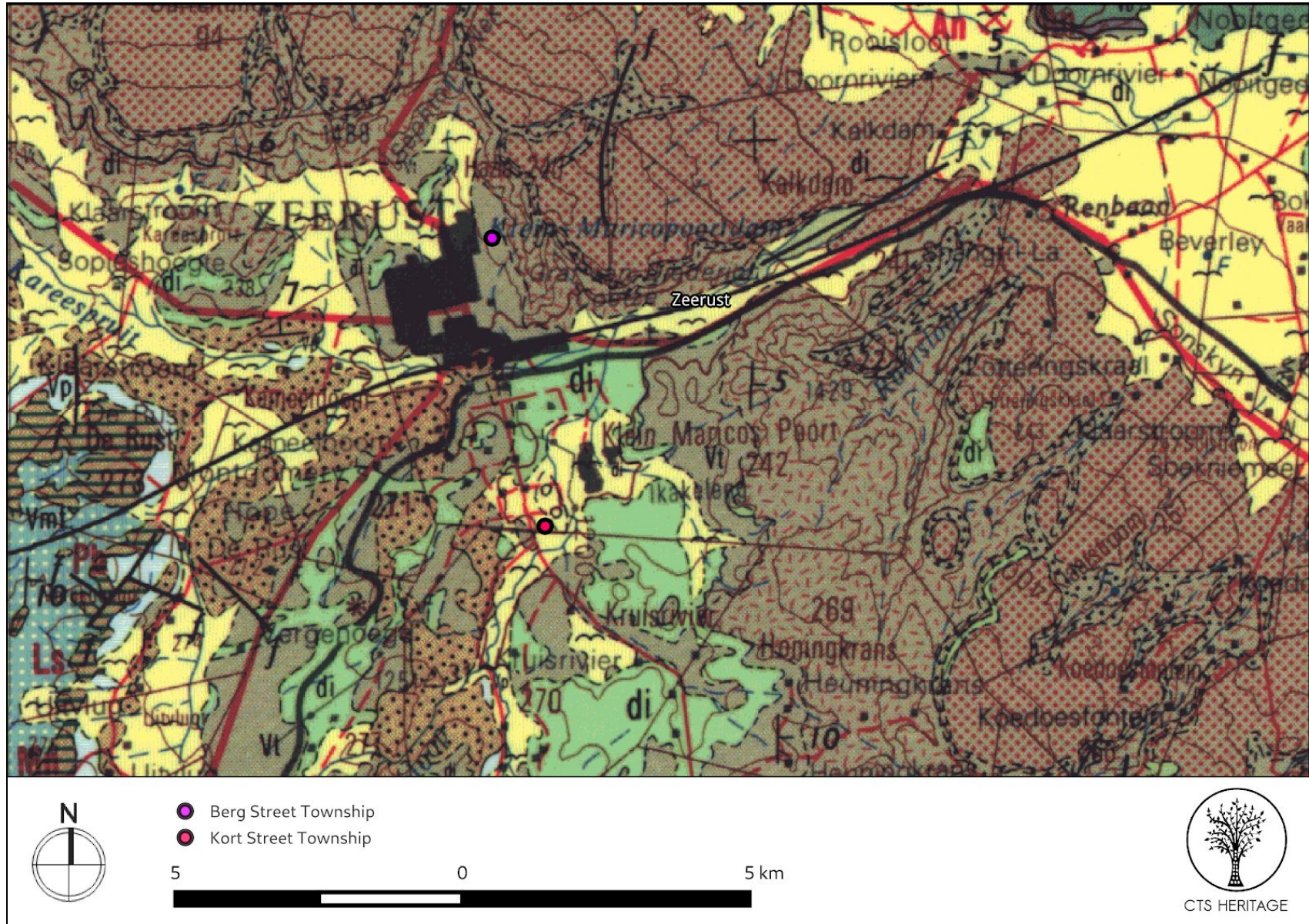


Figure 4.2. Geology Map. Indicating the geology underlying the study area. Extract from CGS 1:250 000 Rustenburg geological map 2526

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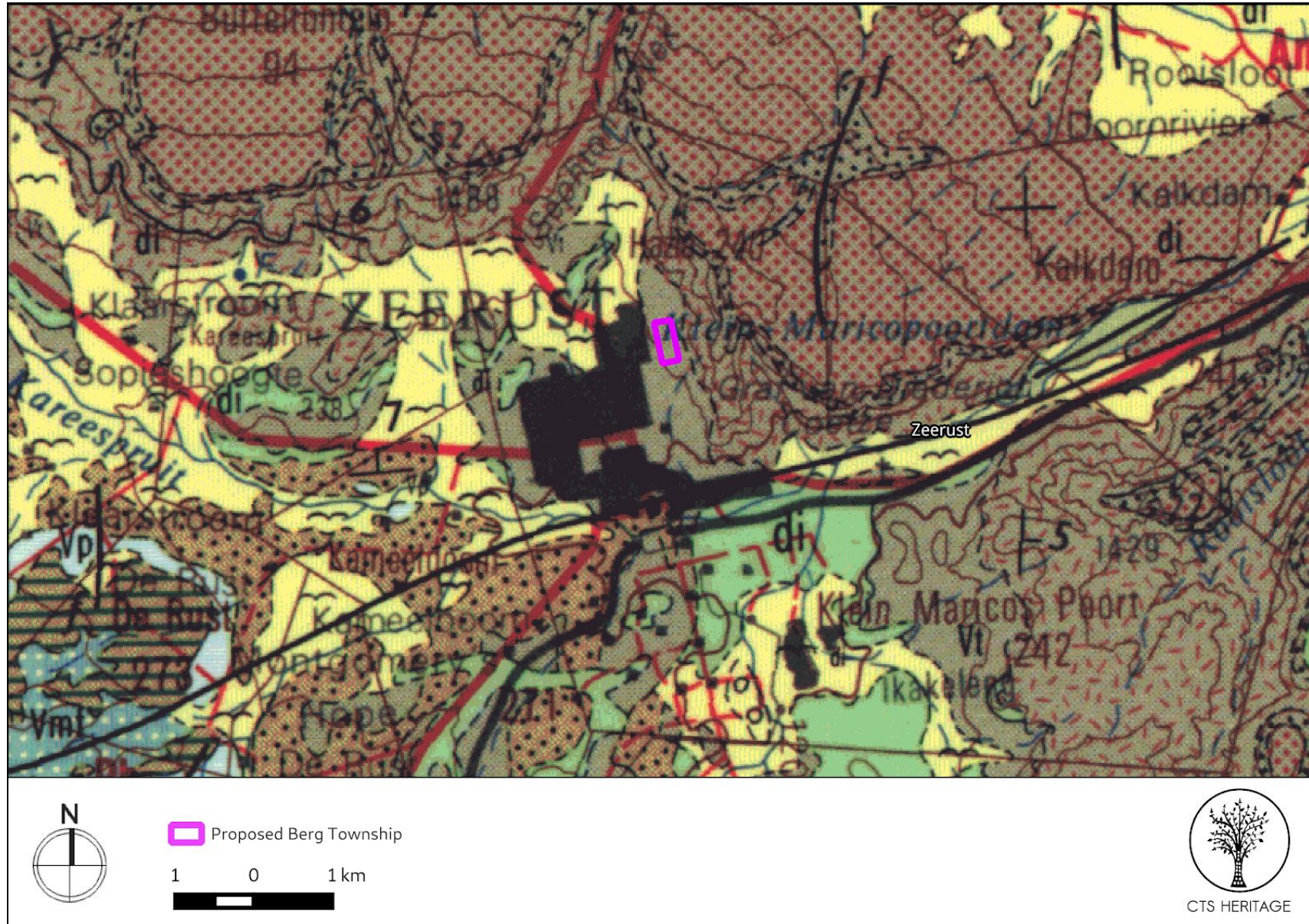


Figure 4.3. Geology Map. Indicating the geology underlying the study area. Extract from CGS 1:250 000 Rustenburg geological map 2526 (Timeball Hill Formation)

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8. Heritage statement and character of the area

This application is for the proposed development of the new Berg Street Township to the east of Zeerust on Portion 5 of the Farm Hazia 240, in the North West Province. The town of Zeerust was built on the Farm Hazia 240 in 1867. The historic core of Zeerust therefore has Victorian origins, however the proposed development area is located some distance from this historic core of the town located along the Klein Marico River. The only known declared Provincial Heritage Site within Zeerust is the Church of St John the Baptist, Zeerust, Marico District (Figure 3, SAHRIS Site ID 26792). This PHS is located approximately 500m from the proposed development area and as such, the context of this significant resource may be impacted by the proposed development.

The area proposed for development has not been surveyed for any heritage assessments, however approximately seven heritage assessments have been completed within 10km of the area proposed for development (Figure 2, Appendix 2). In Pelsers' (2013) assessment of an area located to the southwest of Zeerust, he identified "a number of Late Iron Age stone walled sites and features were identified during the survey in the area. The sites are located on hills and outcrops and in the area... The sites probably form part of a large LIA settlement complex, representing individual settlement units or homesteads with features such as cattle kraals (livestock enclosures), hut bays and other related features. It possibly date to the same time period as the Hurutshe settlement complexes at Kaditshwene and other sites close to Zeerust, and around the late 18th to early 19th century." (SAHRIS NID 138494). These archaeological resources have high heritage significance. Pelsers' sites are mapped in Figure 3a and described in Appendix 1. In Huffman's (2003) assessment of another site located to the southwest of Zeerust, in addition to evidence of iron age settlements, he identified a scatter of Early Stone Age artefacts of low heritage significance (SAHRIS NID 7024). Previously, historic graves have been identified on a plot located on Voortrekker Road within Zeerust town. The two graves were located in the courtyard or garden of a historical Freemason's Lodge, and were exhumed in 2006 (SAHRIS NID 8329). Based on the known heritage of the area, and the location of the proposed development area on a flat plane bordering on the town of Zeerust, it is unlikely that the proposed development will impact on significant archaeological heritage. As per Pelsers (2013), the known Iron Age sites from this area are located on hills and outcrops.

The area proposed for development is underlain by sediments of the Timeball Hill Formation, Pretoria Group, Transvaal Supergroup (Figure 4.3) of high palaeontological sensitivity according to the SAHRIS Palaeosensitivity Map (Figure 4.1). According to Bamford (2013), referring to the Pretoria Group as a whole, "These rocks are predominantly mudrocks, quartzites with some basal lavas and have been submitted to low grade metamorphism (Eriksson et al., 2006). The rocks are more than 2200 million years old and this predates macro- and land fossils." (SAHRIS NID 138490). Almond (2017) describes the Timeball Hill Formation as comprising two successions of shale with an intercalated package of ferruginous quartzite. According to Almond (2017), stromatolite fossils have been recorded from the Timeball Hill Formation; "The stromatolites recorded from the Timeball Hill Formation are associated with thin carbonate interbeds within turbidite successions in the lower part of the formation ("lower mudstones")", although these have not been recorded within the Zeerust study area. Almond (2017) notes that "Most of these rocks are of low palaeontological sensitivity and any original fossil content has probably been compromised by later dolerite intrusion causing baking of the surrounding country rocks." As such, the proposed development is unlikely to impact on significant palaeontological heritage, especially since the project footprint is small and partially-disturbed. However, due to the possibility of impact to stromatolite fossils within the underlying bedrocks, it is recommended that the attached Palaeontology Chance Finds Procedure be implemented throughout the construction phase.

RECOMMENDATION:

The heritage resources in the area proposed for development are sufficiently recorded.

Due to the location and nature of the proposed development, it is unlikely that significant heritage resources will be impacted by the development and as such, it is recommended that no further heritage studies are required, however the Chance Fossil Finds Procedure must be implemented throughout the construction phase.

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Desktop Palaeontological Screening Assessment reviewed by Dr John Almond (palaeontologist) and proposed palaeontological recommendations endorsed.

John E. Almond

Signed: Dr John Almond
Date: 13 February 2019

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APPENDIX 1

List of heritage resources within the 10km Inclusion Zone

Site ID	Site no	Full Site Name	Site Type	Grading
69178	KAME004	KAMEELDOORN 271JP/ 004	Stone walling	Grade IIIb
69180	KAME005	KAMEELDOORN 271JP/ 005	Stone walling	Grade IIIb
69183	KAME006	KAMEELDOORN 271JP/ 006	Stone walling	Grade IIIb
69185	KAME007	KAMEELDOORN 271JP/ 007	Stone walling	Grade IIIb
26792	9/2/238/0006-001	Church of St John the Baptist, Zeerust, Marico District	Building	Grade II
69171	KAME001	KAMEELDOORN 271JP/ 001	Stone walling	Grade IIIb
69174	KAME002	KAMEELDOORN 271JP/ 002	Stone walling	Grade IIIb
69176	KAME003	KAMEELDOORN 271JP/ 003	Stone walling	Grade IIIb
70271	KAME013	KAMEELDOORN 271JP/ 013	Stone walling	Grade IIIb
69236	KAME009	KAMEELDOORN 271JP/ 009	Artefacts	Grade IIIc
69249	KAME011	KAMEELDOORN 271JP/ 011	Artefacts	Grade IIIc
69258	KAME015	KAMEELDOORN 271JP/ 015	Archaeological	Grade IIIa
69234	KAME008	KAMEELDOORN 271JP/ 008	Artefacts	Grade IIIc
69282	KAME014	KAMEELDOORN 271JP/ 014	Structures	Grade IIIc
70266	KAME010	KAMEELDOORN 271JP/ 010	Artefacts	Grade IIIc
70269	KAME012	KAMEELDOORN 271JP/ 012	Stone walling	Grade IIIb

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APPENDIX 2 Reference List

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
138494	AIA Phase 1	Anton Pelser	01/10/2013	ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) REPORT FOR A PROPOSED 75MW PHOTOVOLTAIC SOLAR FACILITY ON THE REMAINDER OF KAMEELDOORN 271JP, PORTION 15 OF KAMEELDOORN 271JP & PORTION 14 OF KRUISRIVIER 270JP, ZEERUST, NORTHWEST PROVINCE
138506	HIA Phase 1	Anton Pelser	01/10/2013	INTEGRATED HERITAGE IMPACT ASSESSMENT (HIA) REPORT FOR A PROPOSED 75MW PHOTOVOLTAIC SOLAR FACILITY ON THE REMAINDER OF KAMEELDOORN 271JP, PORTION 15 OF KAMEELDOORN 271JP & PORTION 14 OF KRUISRIVIER 270JP, ZEERUST, NORTHWEST PROVINCE
169744	HIA Phase 1	Anton Pelser	31/01/2014	Phase 1 HIA Report for the Proposed Zeerust Chicken Abattoir in Zeerust, North West Province
6764	AIA Phase 1	Jaco van der Walt	01/11/2008	Archaeological Impact Assessment on Portion 1 of the Farm Kameeldoorn 271 JP, Zeerust District, North West Province
7024	AIA Phase 1	Thomas Huffman	01/04/2008	Kameeldoorn Archaeological Survey, Zeerust
8329	AIA Phase 1	Anton Pelser, Anton van Vollenhoven	01/11/2007	A Report on the Preliminary Investigation of Two Historical Graves on Plot 1242, Zeerust, North west Province
138490	PIA Desktop	Marion Bamford	04/09/2013	Palaeontological Impact Assessment for proposed Photovoltaic facility near Zeerust. Desktop Study
	PIA LoE	John Almond	2017	Proposed access roads for the Zeerust PV Plant on Remainder of Portion 5 of Hazia 240JP & Portion 15 of Kameeldoorn 271JP near Zeerust, Northwest Province. Recommended exemption from further palaeontological studies

ALMOND, J.E. 2017. Proposed access roads for the Zeerust PV Plant on Remainder of Portion 5 of Hazia 240JP & Portion 15 of Kameeldoorn 271JP near Zeerust, Northwest Province. Recommended exemption from further palaeontological studies, 8 pp. Natura Viva cc.

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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)
DEA	Department of Environmental Affairs (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.

The compilation of the Heritage Screener will not include any field assessment. The Heritage Screener will be submitted to the applicant within 24 hours from receipt of full payment. **If the 24-hour deadline is not met by CTS, the applicant will be refunded in full.**

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