

CTS HERITAGE

HERITAGE SCREENER

CTS Reference Number:	CTS20_047
HWC Ref:	
Client:	Enviroworks
Date:	11 May 2020
Title:	Proposed development of chicken houses on Portion 75 of the Farm Bultfontein 475, North West Province
Recommendation by CTS Heritage Specialists	RECOMMENDATION: As it is not likely that the proposed development will impact significant heritage resources, it is recommended that no further heritage studies are required for this proposed development.

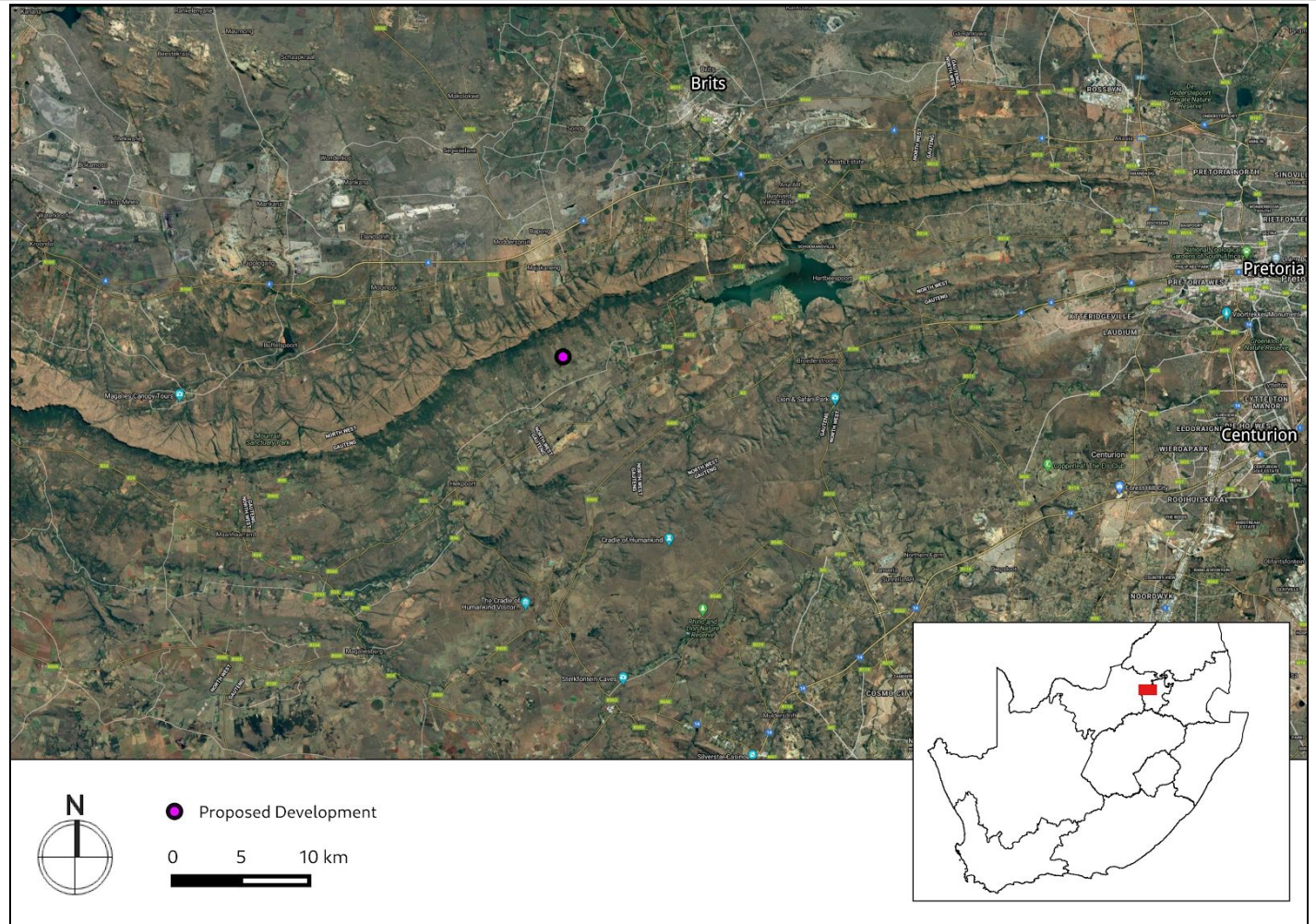


Figure 1a. Satellite map indicating the location of the proposed development in the North West Province

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1. Proposed Development Summary

Enviroworks (Pty) Ltd has been appointed as the Environmental Assessment Practitioners (EAPs) to assist Quantum Foods by conducting a Basic Assessment (BA) for their proposed project of the upgrading of chicken houses in Bultfontein, North West Province. The property is located on Portion 75 (a portion of portion 2) of the Farm Bultfontein 475, North West Province, at the following coordinates: 25.80532 S; 27.69482 E. The proposed Houses will house 40 000 Birds each and there will be 8 Houses, which would be positioned on the old/existing Footprints .The property was historically used for minor agricultural activities and as a breeder farm, and it has not been used since then. The proposed construction of chicken houses triggered the need for an Environmental Authorisation (EA) through a Basic Assessment (BA) Process.

2. Application References

Name of relevant heritage authority(s)	SAHRA
Name of decision making authority(s)	Department of Economic Development, Environment, Conservation and Tourism (North West Provincial Government)

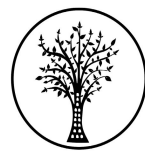
3. Property Information

Latitude / Longitude	25°48'0.83"S 27°41'24.72"E
Erf number / Farm number	Portion 75 of the Farm Bultfontein 475, North West Province
Local Municipality	Madibeng
District Municipality	Bojanala
Previous Magisterial District	Brits
Province	North West
Current Use	Poultry Farm
Total Extent	98.7ha

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4. Nature of the Proposed Development

Total Surface Area	•Size of the Chicken Houses: Length= 118 meters per house Width = 12 meters per house
Depth of excavation (m)	<3m
Height of development (m)	Single storey

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-
	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

Incinerator

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

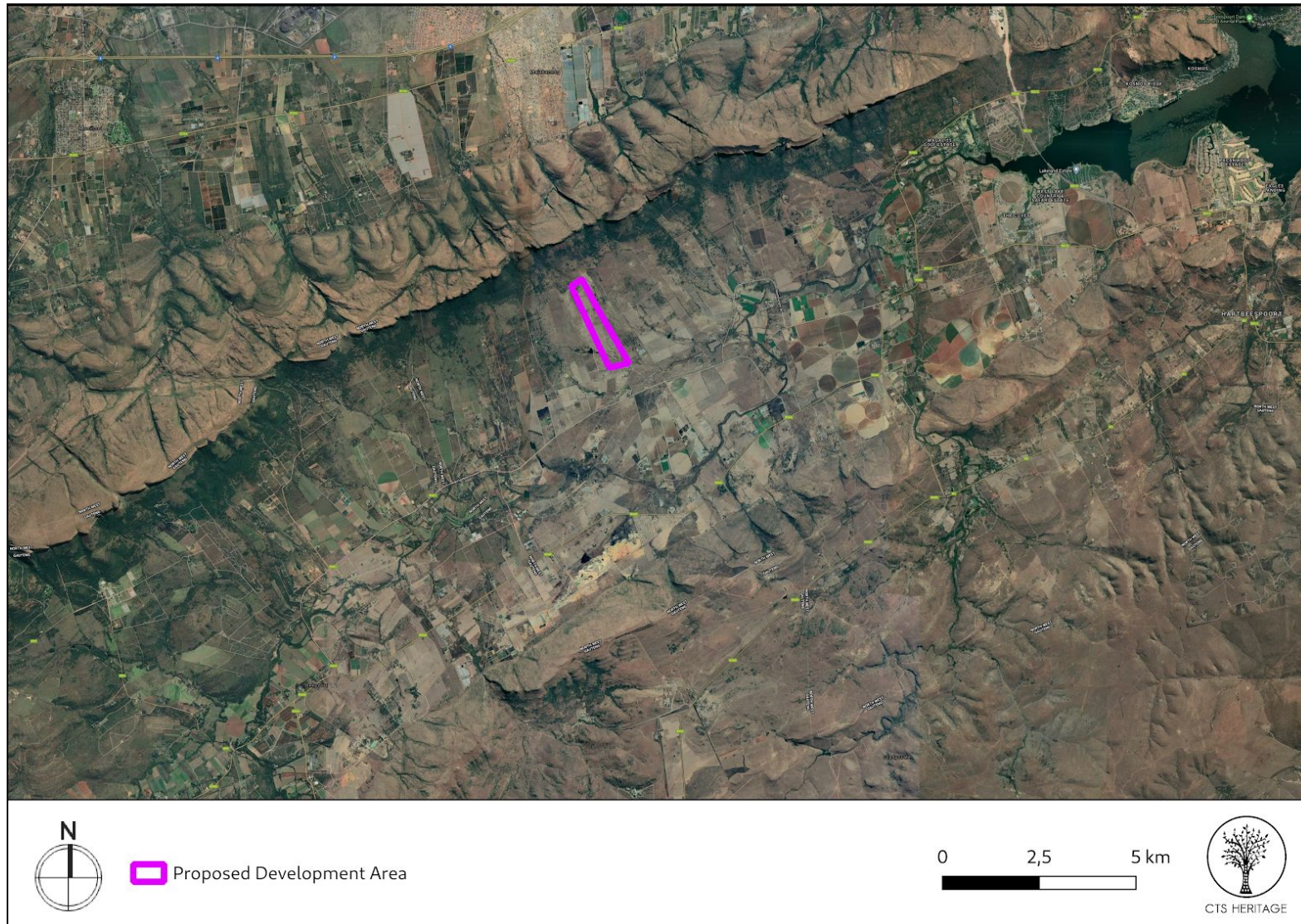


Figure 1b. Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

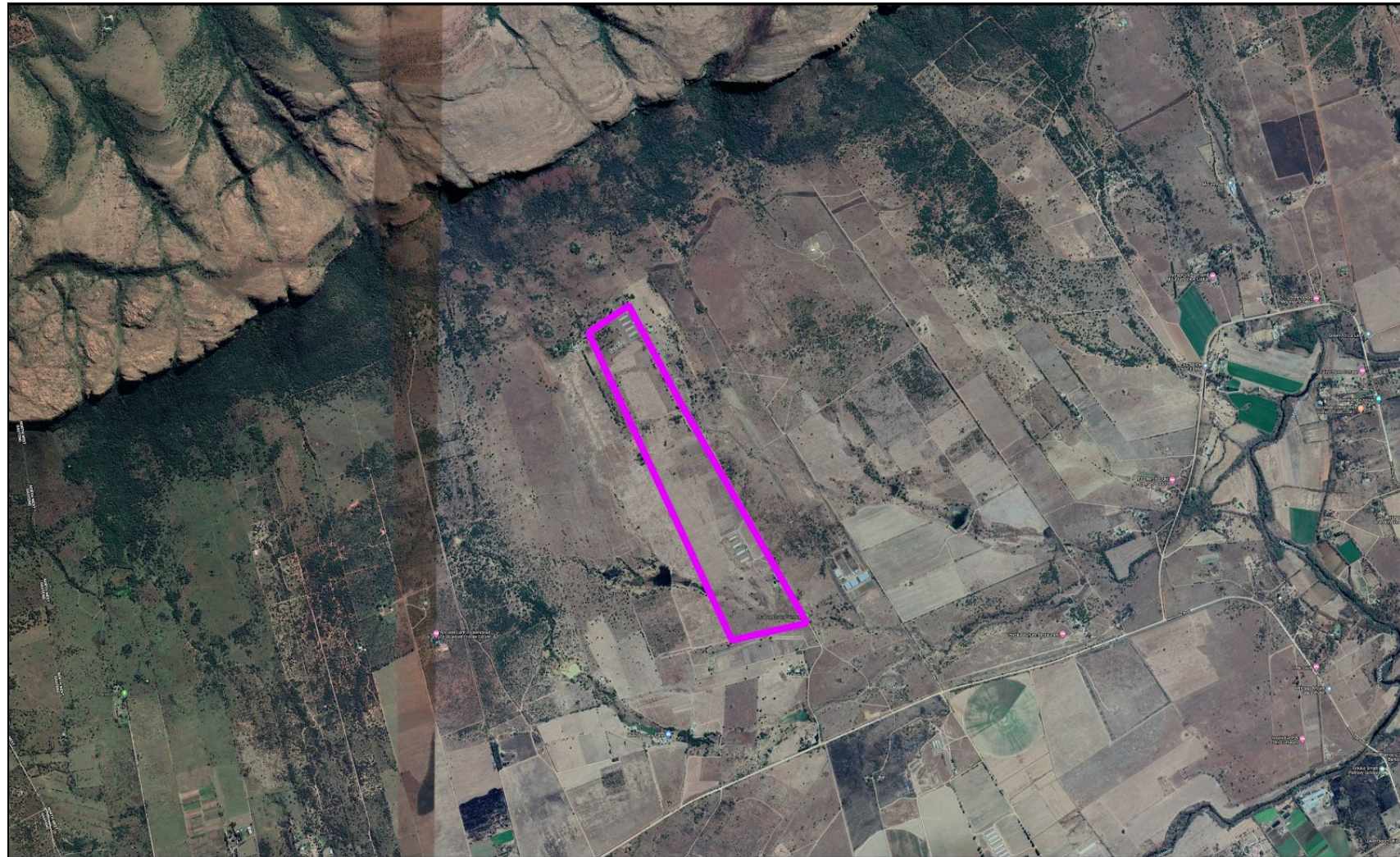
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 Proposed Development Area

0 1 2 km



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

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 Proposed Development Area

0 250 500 m



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

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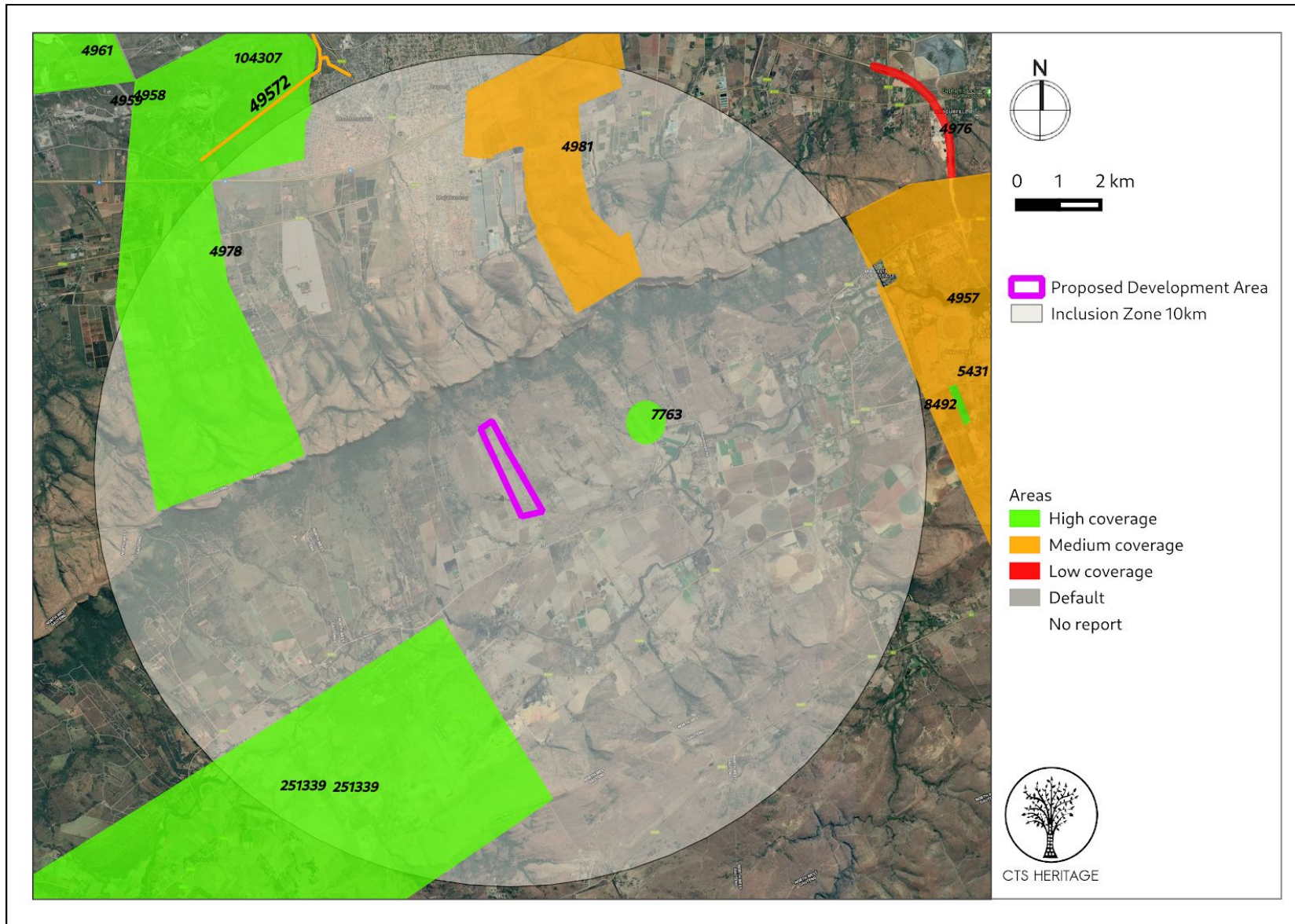


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area within 5km, with SAHRIS NIDS indicated. Please see Appendix 2 for a full reference list.

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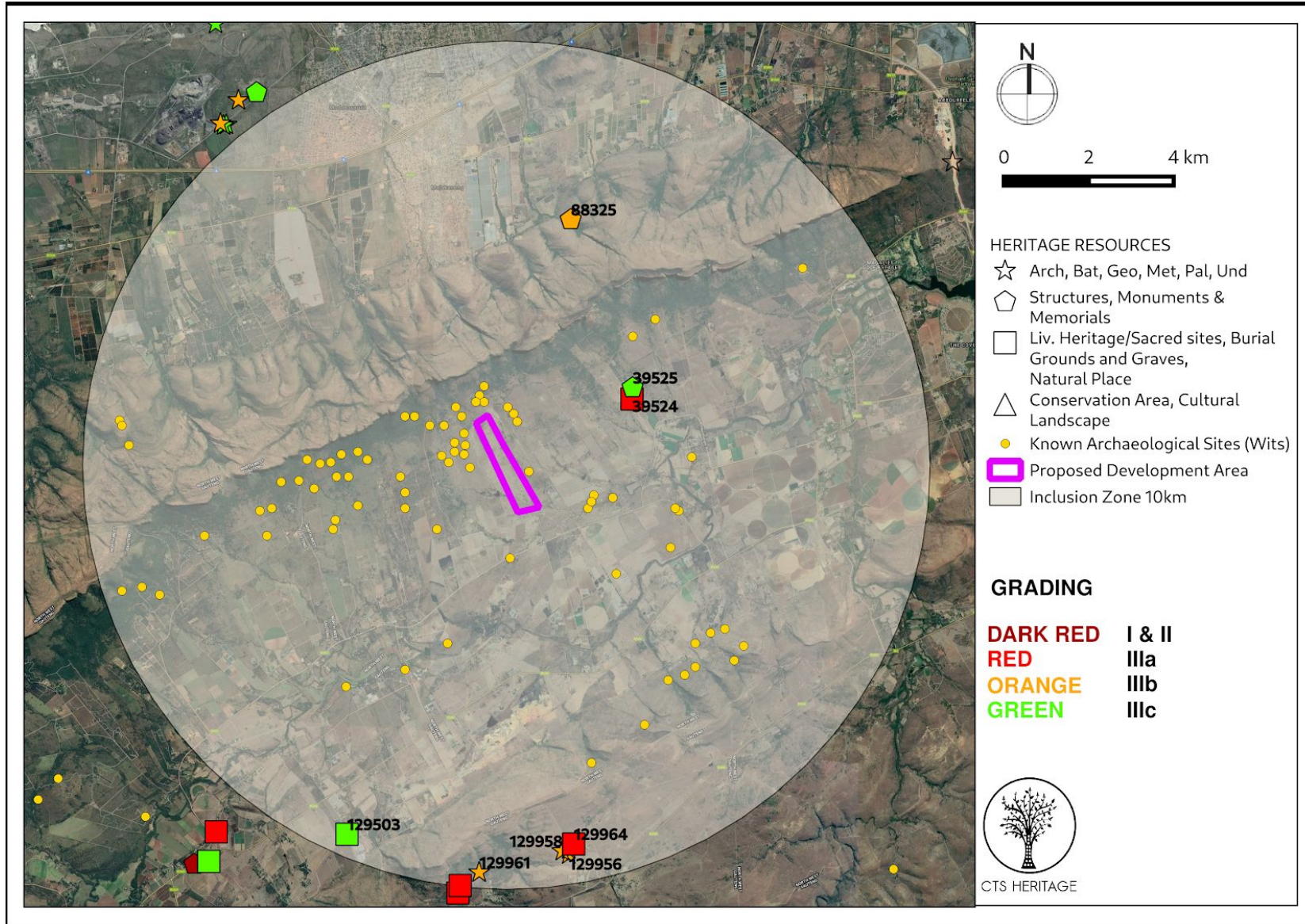
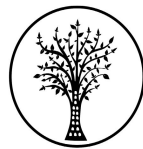


Figure 3. Heritage Resources Map. Heritage Resources previously identified in and near the study area. See insets a to d below with SAHRIS Site IDs indicated. Please See Appendix 4 for full description of heritage resource types.

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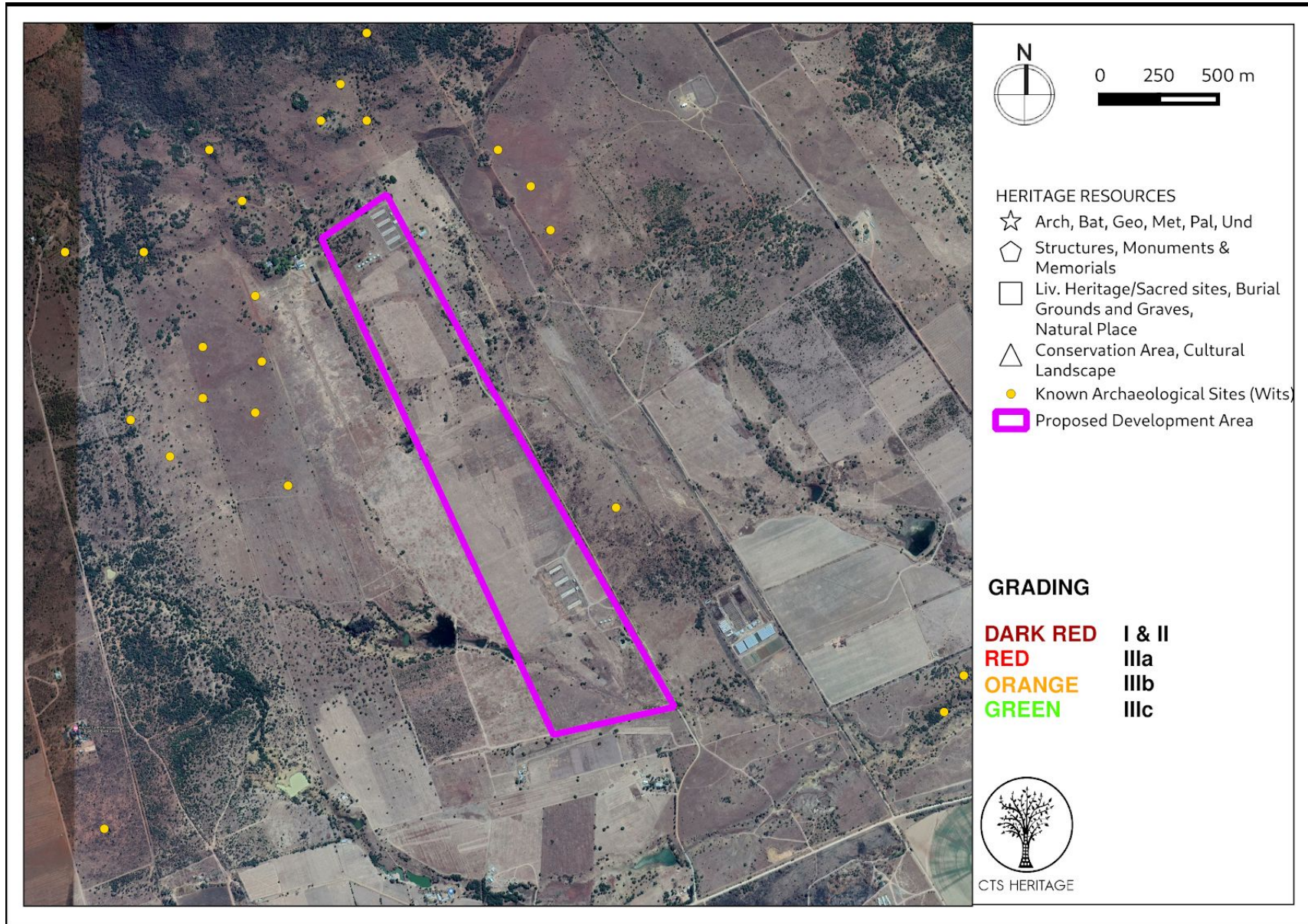


Figure 3a. Heritage Resources Map. Inset

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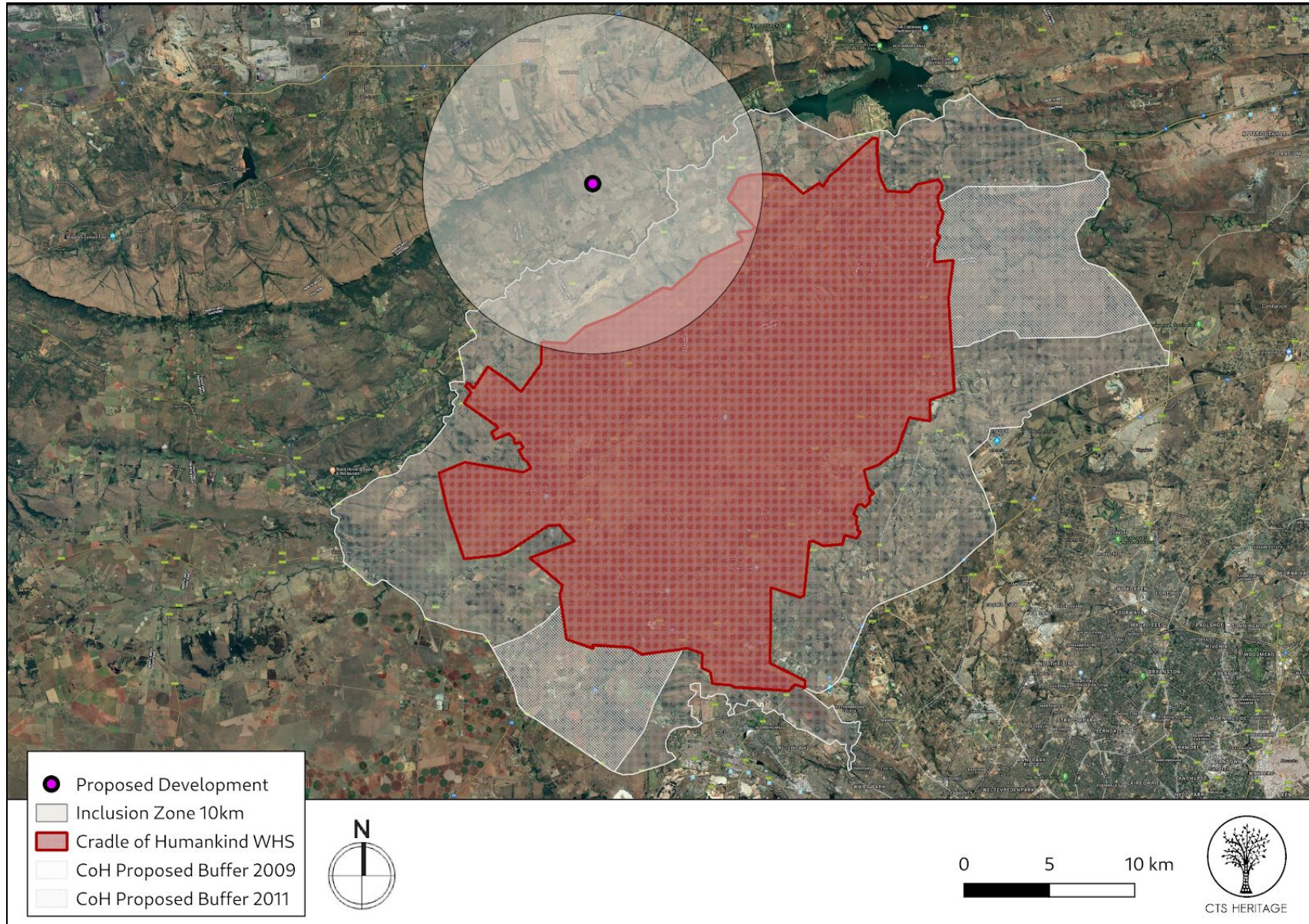


Figure 3b. Heritage Resources Map. Location of proposed development in relation to the Cradle of Humankind World Heritage Site and buffer areas

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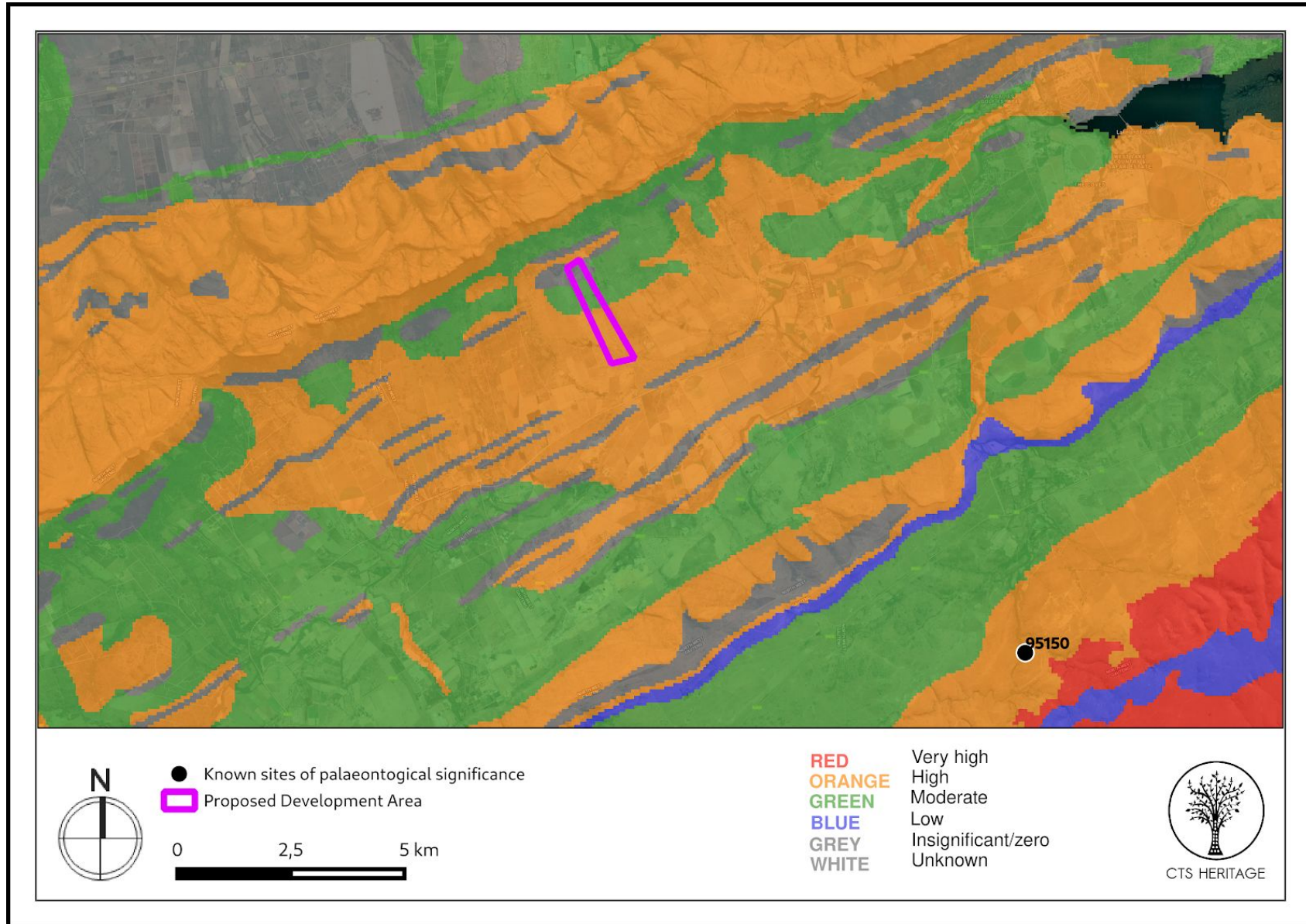


Figure 4a. SAHRIS Palaeosensitivity Map. Indicating moderate fossil sensitivity underlying the study area. Please See Appendix 3 for a full guide to the legend.

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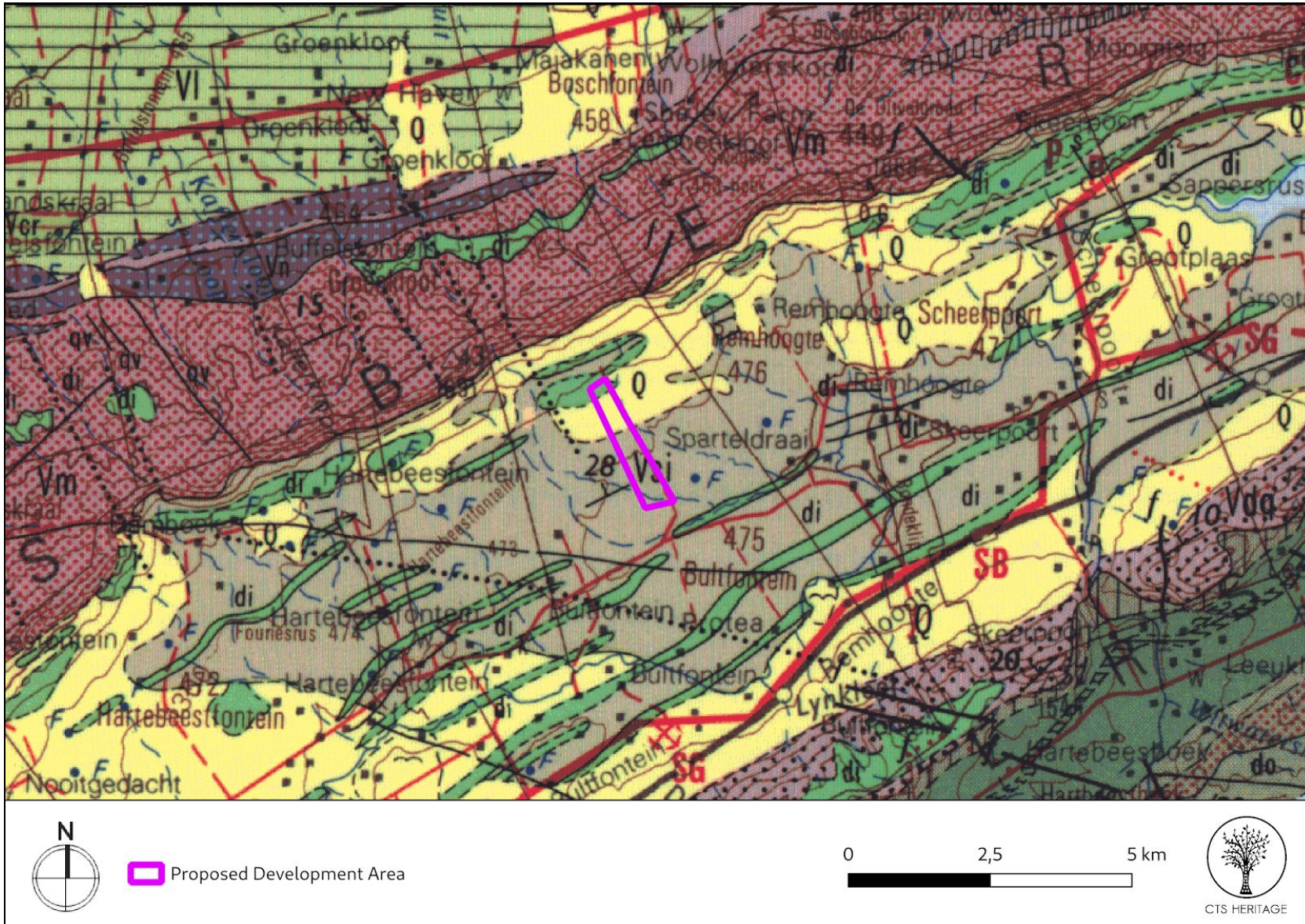


Figure 4b. Geology Map. Extract from the CGS 2526 Rustenburg Map indicating that the development area is underlain by the following sediments: Vsi - Silverton Formation of the Pretoria Group and Q - Quaternary Sands

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8. Heritage statement and character of the area

This region is characterised by Highland Grassveld, with cultivated fields, as well as eco tourism in the surrounding region. The proposed study area lies within close proximity to the Cradle of Humankind (COH) World Heritage Site (Figure 3b).

A broad history of the area is included in Murimbika (2010, SAHRIS ID 534905) and is referred to here. In addition to the sites associated with the Cradle of Humankind, significant rock art and rock engravings are known from the adjacent Magaliesberg Mountains. According to Murimbika (2010), the broader region has also yielded some significant Iron Age Sites such as the Mzonjani facies Broederstroom site (AD 430 to AD 780). Such Iron age sites are reflected by the yellow points in Figure 3a and 3b. According to Murimbika (2010), the broader region was subject to a number of instances of migration and settlement from 450 AD. Evidence indicates that Sotho-Tswana groups migrated in and out of the Magaliesberg region, and such groups are responsible for the many early stone-walled settlements in this region. One of the most documented migrations is the Mfecane (forced migration or scattering) which was a period of widespread chaos and warfare among indigenous ethnic communities in southern Africa during the period between 1815 and about 1840. During this time, the Ndebele under Mzilikazi reached the Magaliesberg region and are responsible for introducing the Doornspruit-type walled settlements that are known from this region (the Doornspruit River drains into the project area). According to Murimbika (2010) this type of stone-walled settlement represents “typical Nguni-Sotho-Tswana acculturation”. Murimbika (2010) further explains that one of the most acculturated groups in the region is known as the “Po”, whose Chief Mogale lends his name to the Magaliesberg Mountains and the Mogale City Municipality.

The larger Magaliesberg area has been the subject of various research projects and archaeological surveys during the last forty years. As a result the cultural history of the area is relatively well known and recorded. Coetzee (2014) conducted a Heritage Impact Assessment within 5km of the proposed development area (SAHRIS ID 251339). In his report, Coetzee (2014) notes that the Battle of Nooitgedacht that took place during the Second Anglo-Boer War (1899 – 1902) took place in the valley north of Hartebeesthoek on 13 December 1900. However no blockhouses or remains of the skirmish are recorded within the development area. In his assessment, Coetzee (2014) identified a number of late iron age sites, burial grounds and historical buildings and structures. By the mid-1800's, Voortrekkers had begun to settle in the foothills of the Magaliesberg mountains and in so doing, clashed with Mzilikazi's Ndebele in 1837. These early colonial battles forced the Ndebele north of the Limpopo River and effectively ended the independence of African Chiefdoms in the area. The Voortrekkers went on to establish the Republic of the Transvaal. As articulated by Murimbika (2010), it is in this context that the Magaliesberg area, in which the proposed development is located, is an important cultural landscape. However, the proposed development will be located on the footprints of existing chicken ouse infrastructure and as such, no impact is anticipated.

The area proposed for development is underlain by geological sediments of high and moderate palaeontological sensitivity (Figure 4a) of the Silverton Formation of the Pretoria Group and Quaternary sands (Figure 4b). Although the Silverton Formation consists of marine mudrocks with minor carbonates and volcanic rocks (= Machadodorp Member) which are not fossiliferous, it is also known to contain stromatolites according to the SAHRIS Fossil Heritage Browser and the Palaeotechnic Report for Gauteng (Groenewald, 2014). Importantly, the proposed development is located within an area known to contain potentially fossiliferous late Caenozoic cave breccias within outcrop areas of carbonate sub-units (ie limestones and dolomites) that have not been individually mapped on the 1:250 000 geology maps. These breccias contribute to the enormous significance of the Cradle of Humankind region.

However, based on the previously disturbed nature of the property as well as the limited nature and scale of the proposed development, it is unlikely that the proposed development will negatively impact on significant archaeological or palaeontological heritage and as such, it is recommended that no further heritage studies are required.

RECOMMENDATION:

As it is not likely that the proposed development will impact significant heritage resources, it is recommended that no further heritage studies are required for this proposed development.

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APPENDIX 1

List of heritage resources within the 10km Inclusion Zone from SAHRIS

Site ID	Site no	Full Site Name	Site Type	Grading
129503	CASHAN010	Cashan 010 - Graveyard	Burial Grounds & Graves	Grade IIIc
88325	PEMPR010	Pandora_EMPR 010	Building	Grade IIIb
39524	REM01	Remhoogte 01	Building, Artefacts, Burial Grounds & Graves	Grade IIIa
129958	HBHK 009	Hartebeesthoek 009	Settlement	Grade IIIb
129961	HBHK 012	Hartebeesthoek 012	Settlement	Grade IIIb
129956	HBHK 007	Hartebeesthoek 007	Settlement	Grade IIIb
129957	HBHK 008	Hartebeesthoek 008	Settlement	Grade IIIb
129964	HBHK 015	Hartebeesthoek 015	Burial Grounds & Graves	Grade IIIa
39525	REM02	Remhoogte 02	Structures	Grade IIIc

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APPENDIX 2 Reference List

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
7763	AIA Phase 1	Polke Birkholtz	22/09/2008	Phase 1 Heritage Impact Assessment: Proposed Development of Portion 53 of the Farm Remhoogte 476- JQ, Madibeng Municipality, North West Province
4978	AIA Phase 1	Anton Pelsler, Anton van Vollenhoven	01/09/2008	A Report on a Heritage Impact Assessment for the Buffelsfontein East & West Expansion Project on the Farm Buffelsfontein 465 JQ, near Mooinooi, North West Province
251339	HIA Phase 1	Francois P Coetzee	15/09/2014	Cultural Heritage Assessment for the Proposal Hekpoort - Cashan Substation and Powerline Servitude, West Rand Local Municipality, Gauteng.
4981	AIA Phase 1	Johnny Van Schalkwyk, Anton van Vollenhoven	01/03/1999	A Survey of Cultural Resources at the Sites of Wucor Granite Mining and Thaba Romana Granite, Northwest Province
534905	HIA Phase 1	McEdward Murimbika	05/02/2010	Phase 1 Archaeological and Heritage Impact Assessment Specialist Study Report for Proposed Installation of New Antennae and Associated Infrastructure at Farm Hartebeesthoek 502 JQ, Gauteng Province

Sites from PalaeoBiology Database in Figure 4a

Collection No.	Collection	Formation	Reference
95150	Malapa Cave		P. H. G. Dirks, J. M. Kibii, and B. F. Kuhn, C. Steininger, S. E. Churchill, J. D. Kramers, R. Pickering, D. L. Farber, A.-S. Mériaux, A. I. R. Herries, G. C. P. King, L. R. Berger. 2010. Geological setting and age of Australopithecus sediba from southern Africa. <i>Science</i> 328 :205-208

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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 PALAEOONTOLOGICAL 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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