

CTS HERITAGE

HERITAGE SCREENER

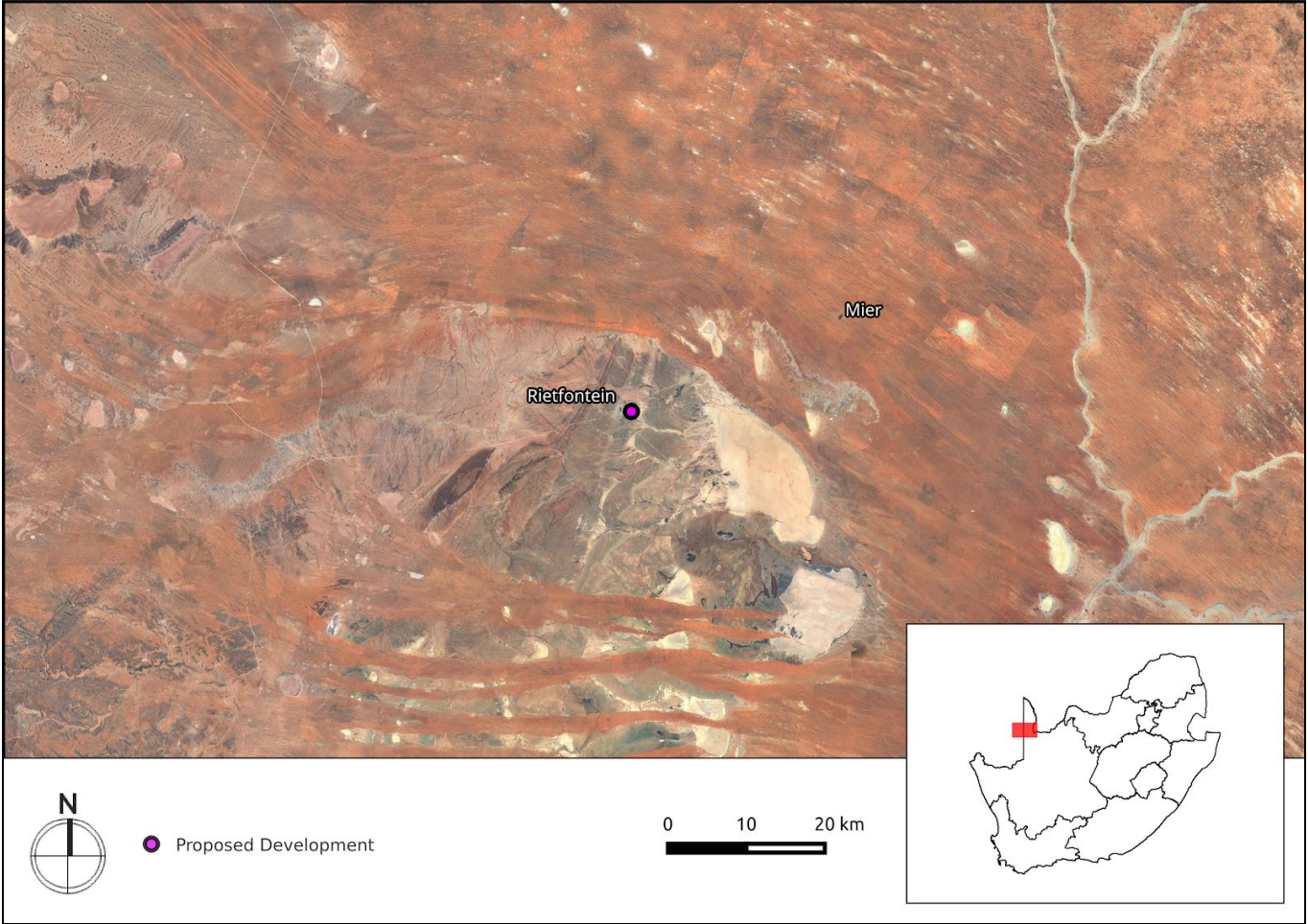
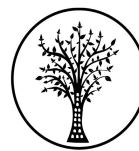
CTS Reference Number:	CTS19_189	
SAHRIS No:	14678	
Client:	Enviroworks	
Date:	December 2019	
Title:	Proposed upgrade of the Rietfontein WWTW, Northern Cape	
Recommendation by CTS Heritage Specialists	RECOMMENDATION: There is no objection to the proposed development on heritage grounds as, based on the available information, it is unlikely that the proposed development will negatively impact on significant archaeological, palaeontological or other heritage resources. It is recommended that no further heritage studies are required.	

Figure 1a. Satellite map indicating the location of the proposed development in the Northern Cape Province

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1. Proposed Development Summary

Proposed upgrade of the Rietfontein Waste Water Treatment Works with an additional 2.5 hectares with a capacity of 607 cubic meters per day in order to cater for all effluent generated by Rietfontein and the surrounding small towns.

2. Application References

Name of relevant heritage authority(s)	SAHRA
Name of decision making authority(s)	Department of Environment and Nature Conservation

3. Property Information

Latitude / Longitude	26°44'50.01"S, 20°02'44.98"E
Erf number / Farm number	Farm RE/585
Local Municipality	Dawid Kruiper
District Municipality	Z F Mgcawu
Province	Northern Cape
Current Use	Waste Water Treatment Works
Current Zoning	Waste Water Treatment Works
Total Extent of Property	~ 2 Ha

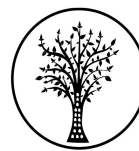
4. Nature of the Proposed Development

Total Surface Area of development	~1 Ha
Depth of excavation (m)	Approximately 4 meters
Height of development (m)	Approximately 2 meters

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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

NA

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

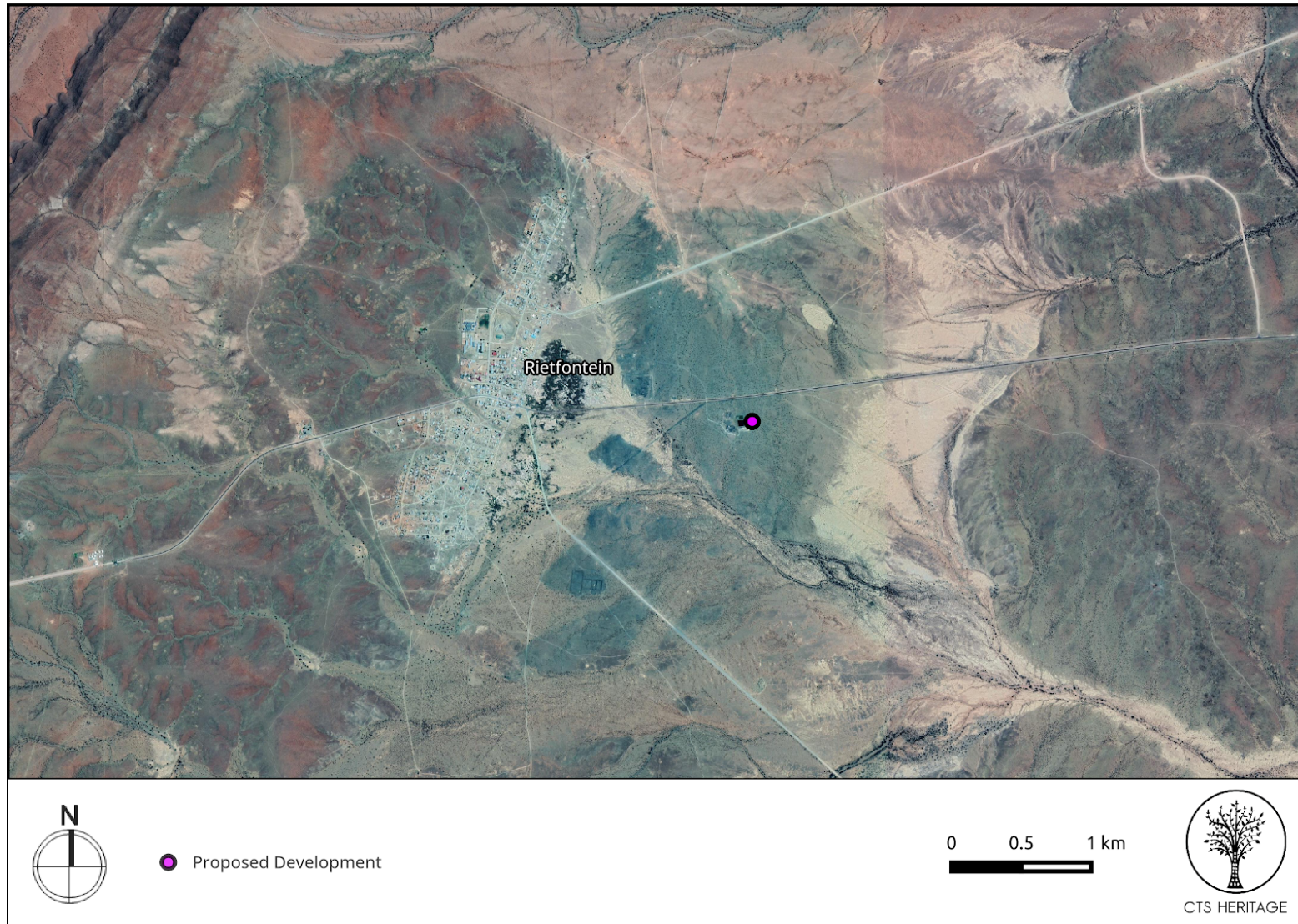


Figure 1b Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

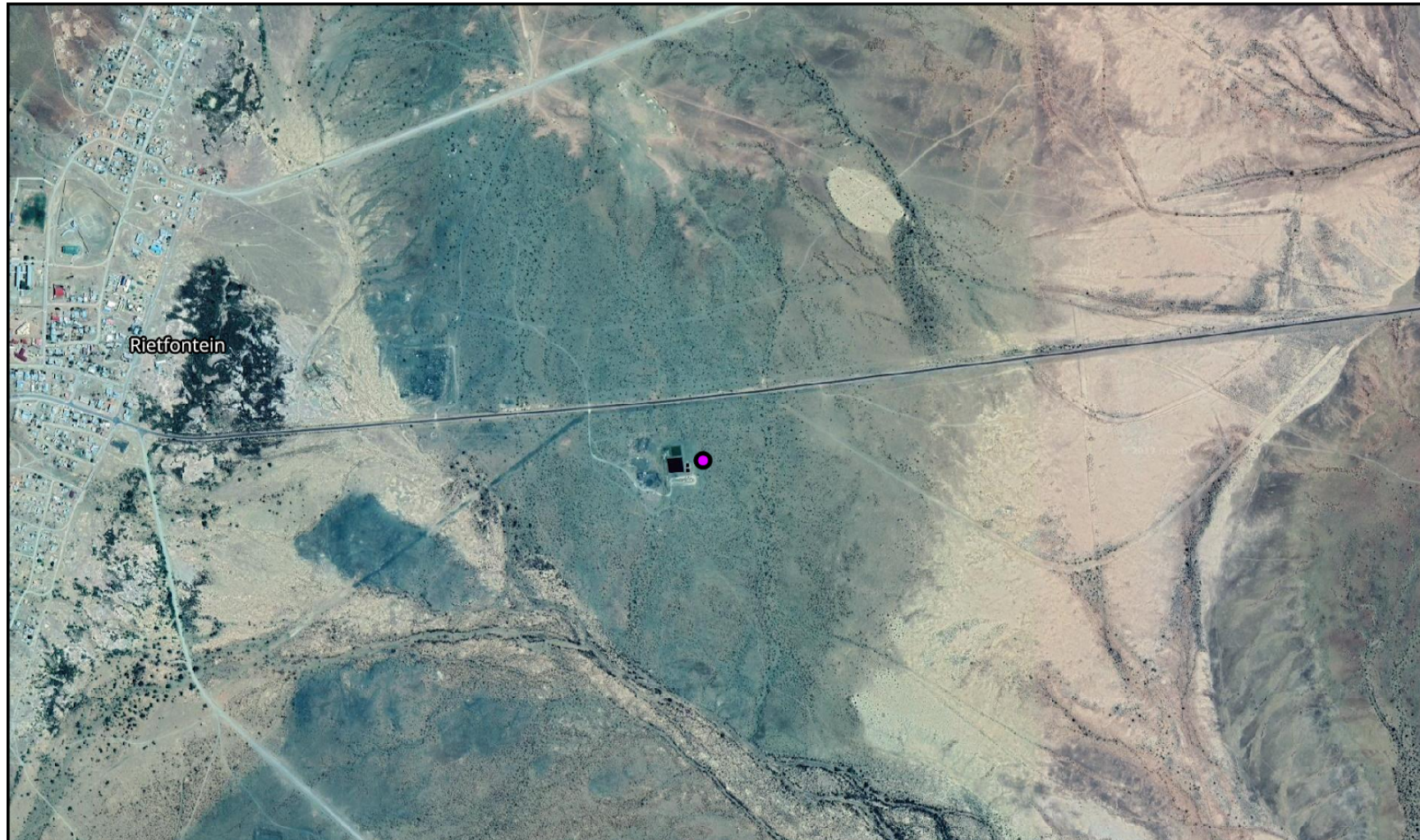
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● Proposed Development

0 200 400 m



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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

0 50 100 m




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

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 Proposed Development

0 25 50 m




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

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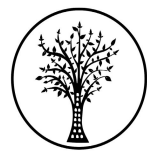


Figure 1f. Overview Map. Satellite image (2019) indicating the proposed development area at closer range

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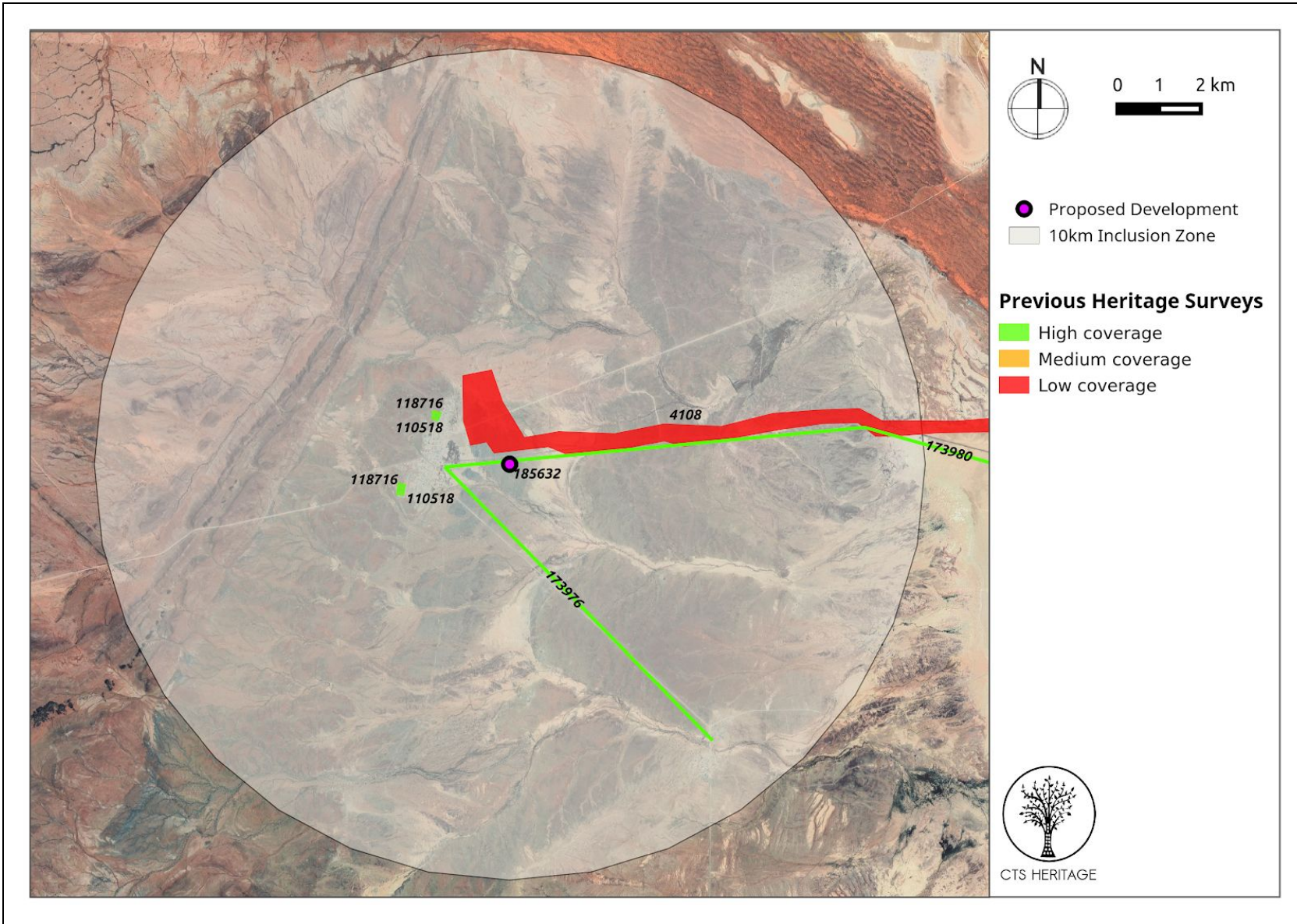


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area within 10km, with SAHRIS NIDS indicated. Please see Appendix 2 for full reference list.

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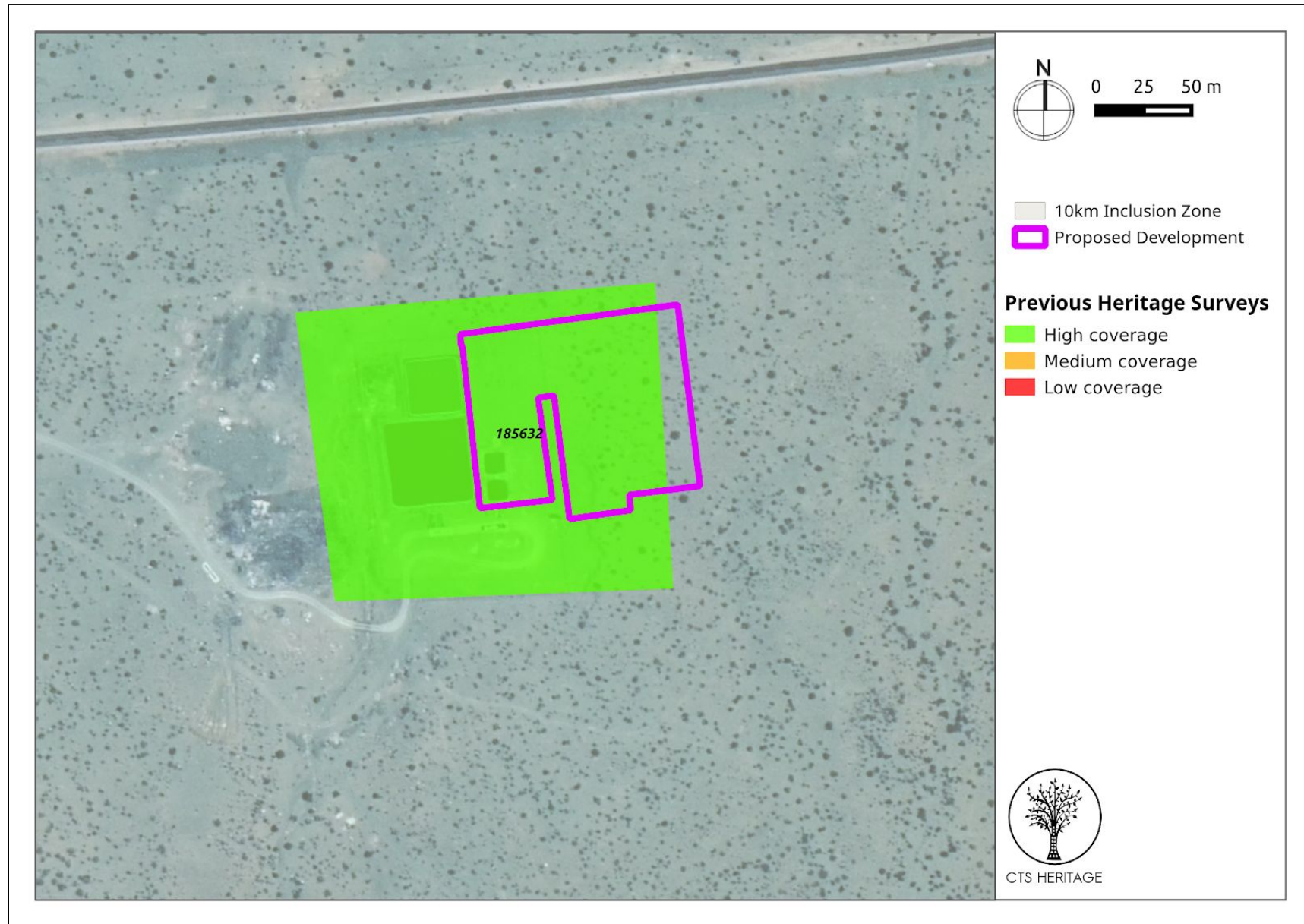


Figure 2a. Previous HIAs Map. Previous Heritage Impact Assessment in the Proposed Development Area

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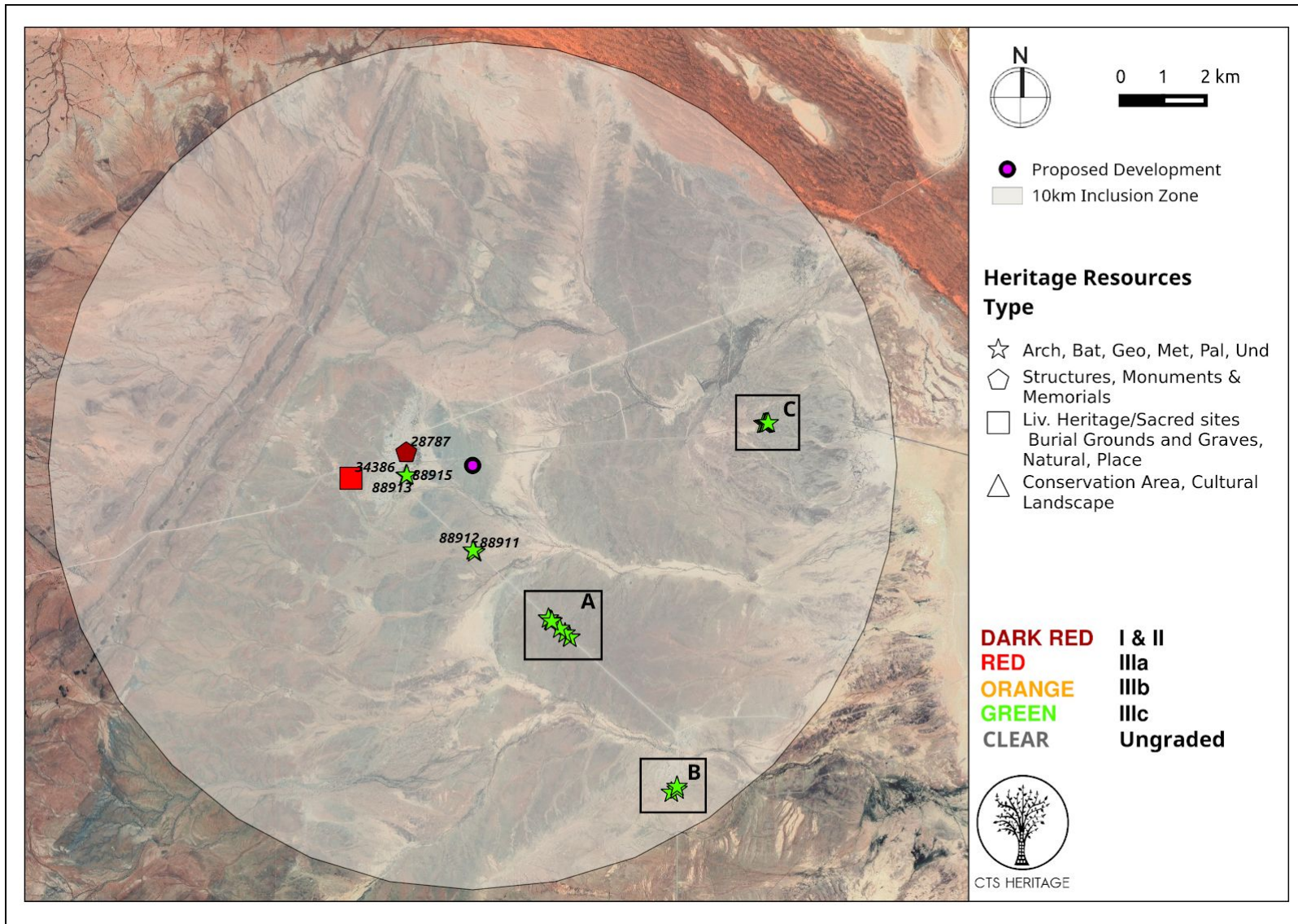


Figure 3a. Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated. Please See Appendix 4 for full description of heritage resource types.

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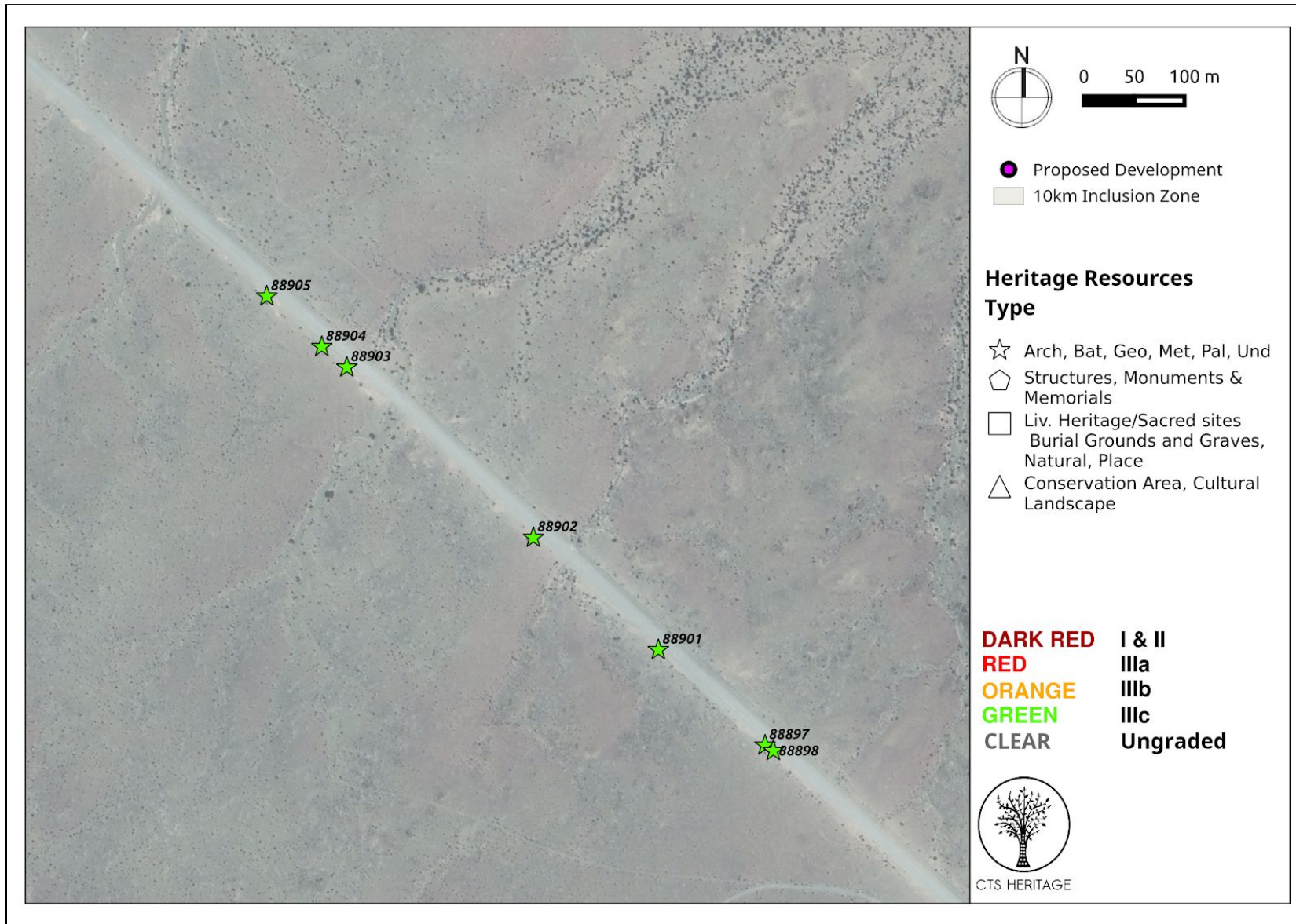


Figure 3b. Heritage Resources Map. Heritage Resources Inset A

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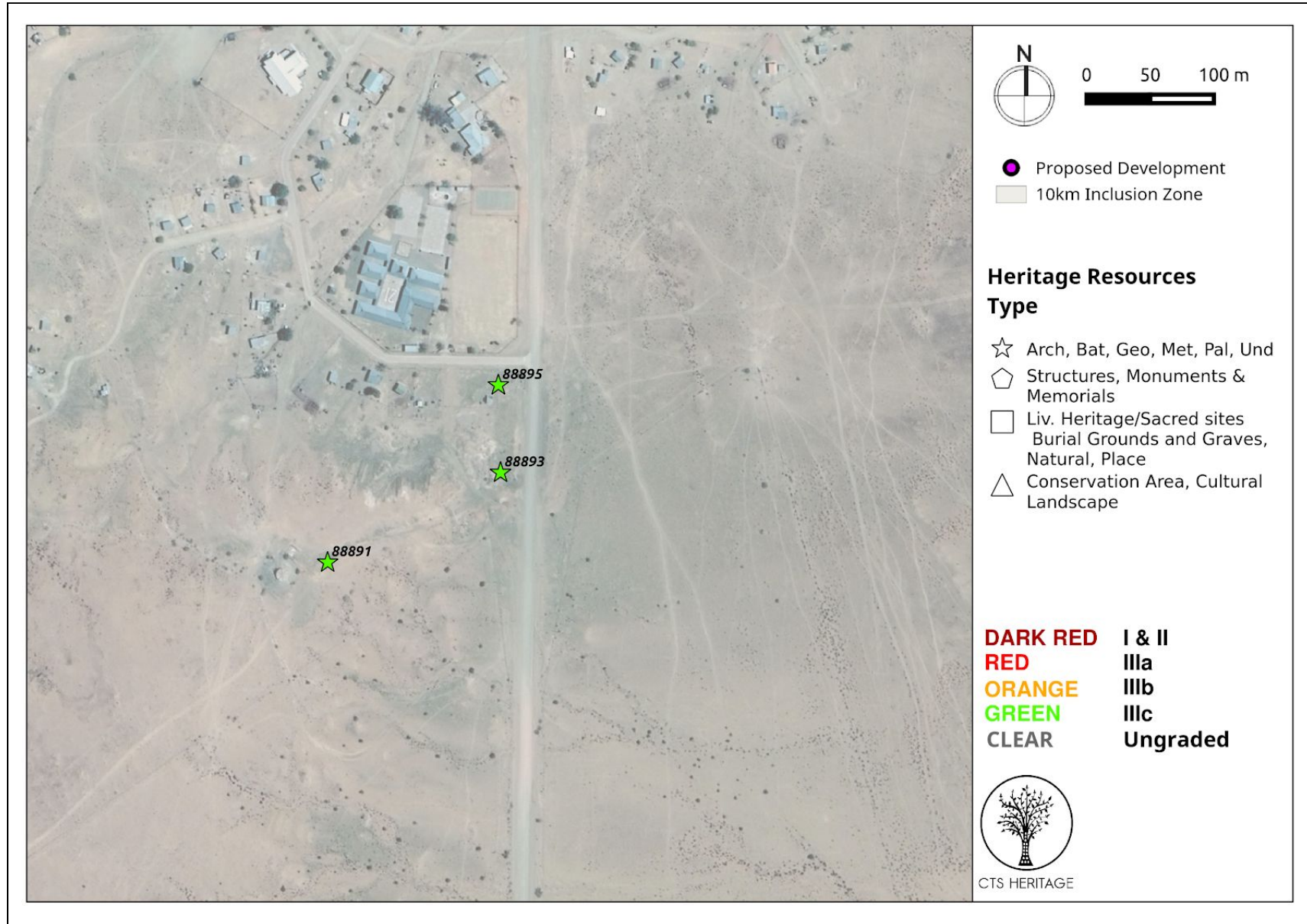


Figure 3c. Heritage Resources Map. Heritage Resources Inset B

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Figure 3d. Heritage Resources Map. Heritage Resources Inset C

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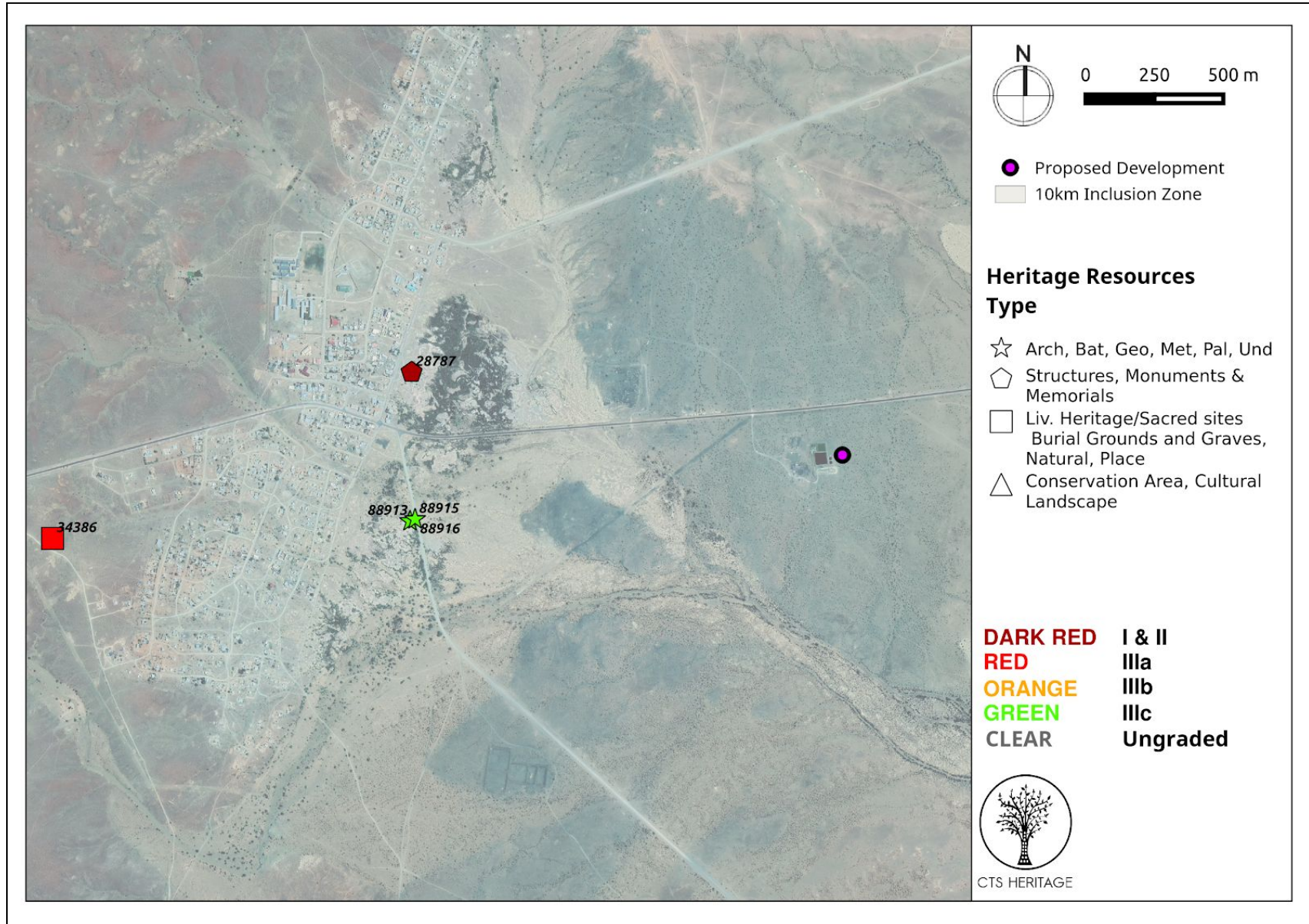


Figure 3e. Heritage Resources Map. Heritage Resources Located in close proximity to the Proposed Development

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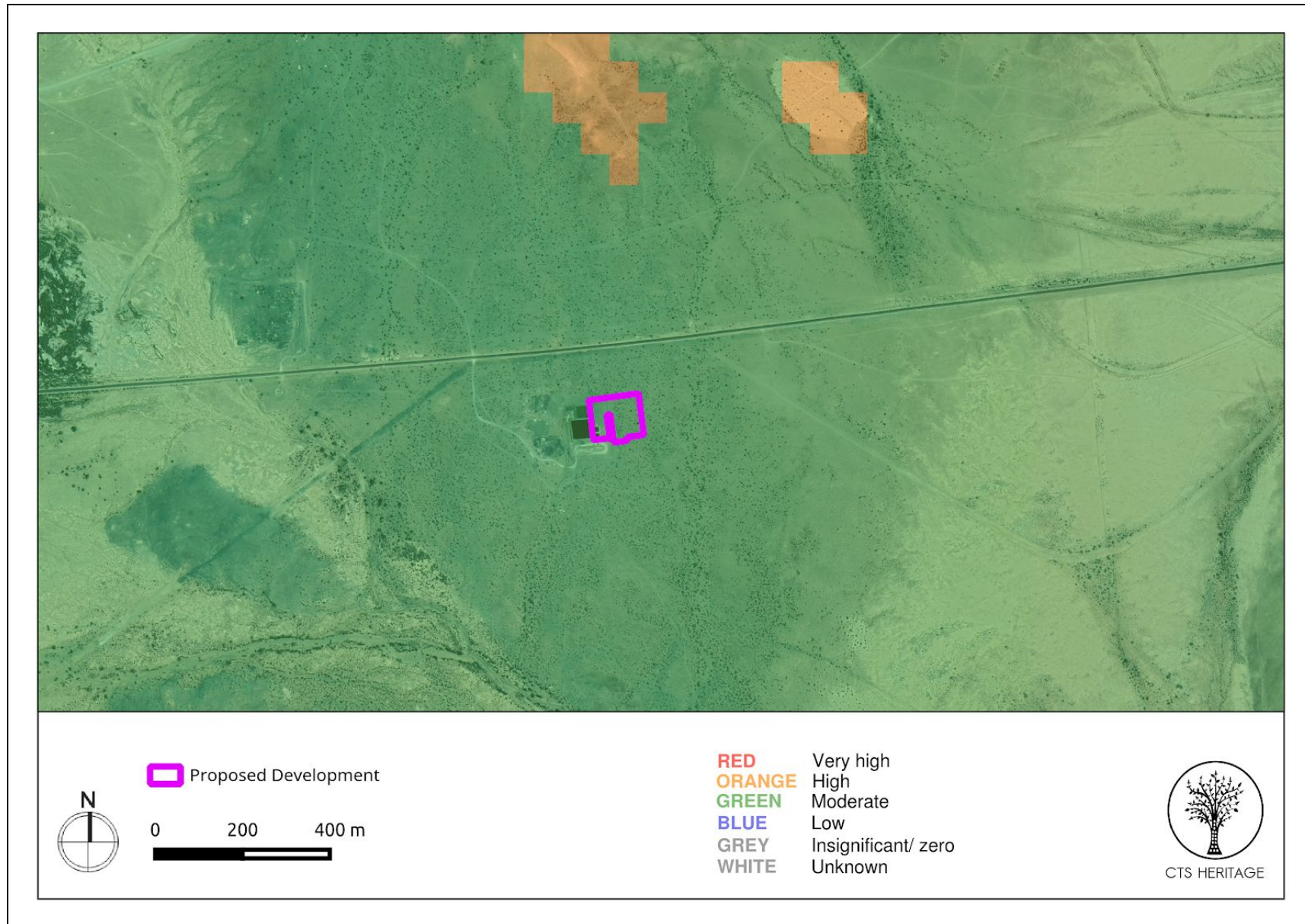


Figure 4. Palaeosensitivity Map. Indicating Moderate and Very High fossil sensitivity underlying the study area. Please See Appendix 3 for full guide to the legend.

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8. Heritage statement and character of the area

This application is for the proposed upgrade and expansion of the existing Rietfontein Waste Water Treatment Works in the Northern Cape. The Rietfontein Waste Water Treatment Works will be capacitated with an additional 2.5 hectares with a capacity of 607 cubic meters per day in order to cater for all effluent generated by Rietfontein and the surrounding small towns. The small town of Rietfontein is located on the border with Namibia, adjacent to the famous Hakskeenpan which has been used to test land speed records. The location of the proposed development is described by Engelbrecht as “in fairly close proximity of the international Namibia border and Rietfontein border post to the West of the site. The site is situated on the edge of Rietfontein town (semi-urban), along the west- south-western periphery.” Engelbrecht (2014) further notes that “Rietfontein town has a recorded history of missionary activity during the 19th and 20th century as well as battles during the 19th century. The assessment area is however excluded from these historical events. The entire Rietfontein area is however sensitive in terms of colonial historical events and should be kept in mind by the developer.” It is also noted that “ There are historical texts evident of a battle that occurred on 19 March 1915 between SA Union soldiers and German forces apparently during the period of the Boer Rebellion which commenced during 1914. The historical evidence does not elaborate on the exact fixation of the battle in relation to the development footprint.” Pages 54 and 55 of Engelbrecht’s assessment (2014) provide a summary of the history of Rietfontein and surrounds.

The area proposed for development was assessed for impacts to archaeological heritage by Engelbrecht (2014) (Figure 2a). According to Engelbrecht (2014), “The assessment area directly east of the existing oxidation ponds is filled with stones (Quartzite, sandstone, quartz, jaspilite, jasper and chert). To the east the site borders with one non-perennial dry riverine bed indicating flow from North to South. Along the South western boundary of the site there is a two track sand road present, running from North west to South east.” In Engelbrecht’s field assessment (2014), he identified six instances of “low significance Middle Stone Age and Later Stone Age archaeological material was observed on the site.” In addition, Engelbrecht noted that no burial grounds or graves were evident within the development footprint; “The Rietfontein town has its own Municipal cemetery to the south of Rietfontein town. No burial grounds or graves were recorded during our survey and consultation with the local community confirmed the absence of any graves on the site.” Engelbrecht (2014) also notes that “No public monuments or memorials were recorded on the site. The historical missionary church (Rynse Sending Gemeente) in Rietfontein town is a declared National Monument.” The Middle and Later Stone Age resources identified by Engelbrecht (2014) are considered to be not-conservation worthy and no mitigation measures were proposed in his report. Engelbrecht (2014) does articulate a protocol that should be followed during the development phase in his report, and it is recommended that this protocol is adhered to. The area proposed for development has been thoroughly assessed in terms of impacts to archaeological resources and as such, it is recommended that no further archaeological or other heritage studies are required.

The area proposed for development is underlain by geology that has moderate palaeontological sensitivity according to the SAHRIS Palaeosensitivity Map (Figure 4). The area proposed for development is underlain by diamictite of the Dwyka Group. Dwyka Group sediments are known to contain fossils largely from interglacial and immediately post-glacial sediments including trace fossils, organic-walled microfossils, rare marine invertebrates (eg molluscs), fish, vascular plants, interglacial and post-glacial trace fossil assemblages. In addition, there is the possibility of impacting body fossils (eg molluscs, fish, plants). However, the likelihood of this proposed development negatively impacting on significant palaeontological heritage is low and as such, it is recommended that no further palaeontological studies are required.

RECOMMENDATION:

There is no objection to the proposed development on heritage grounds as, based on the available information, it is unlikely that the proposed development will negatively impact on significant archaeological, palaeontological or other heritage resources. It is recommended that no further heritage studies are required.

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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
88902	KALA007	KALAHARI-EAST 007	Artefacts	Grade IIIc
28787	9/2/032/0013	Dutch Reformed Mission Church, Rietfontein, Gordonia District	Building	Grade II
88904	KALA009	KALAHARI-EAST 009	Artefacts	Grade IIIc
88905	KALA010	KALAHARI-EAST 010	Artefacts	Grade IIIc
88903	KALA008	KALAHARI-EAST 008	Artefacts	Grade IIIc
88911	KALA011	KALAHARI-EAST 011	Artefacts	Grade IIIc
88913	KALA013	KALAHARI-EAST 013	Artefacts	Grade IIIc
88914	KALA014	KALAHARI-EAST 014	Artefacts	Grade IIIc
88912	KALA012	KALAHARI-EAST 012	Artefacts	Grade IIIc
88915	KALA015	KALAHARI-EAST 015	Artefacts	Grade IIIc
88916	KALA016	KALAHARI-EAST 016	Artefacts	Grade IIIc
88917	KALA017	KALAHARI-EAST 017	Artefacts	Grade IIIc
88918	KALA018	KALAHARI-EAST 018	Artefacts	Grade IIIc
88919	KALA019	KALAHARI-EAST 019	Artefacts	Grade IIIc
88920	KALA020	KALAHARI-EAST 020	Artefacts	Grade IIIc
34386	RIET001	Rietfontein 001	Artefacts, Burial Grounds & Graves	Grade IIIa
88891	KALA001	KALAHARI-EAST 001	Artefacts	Grade IIIc
88893	KALA002	KALAHARI-EAST 002	Artefacts	Grade IIIc
88895	KALA003	KALAHARI-EAST 003	Artefacts	Grade IIIc
88897	KALA004	KALAHARI-EAST 004	Artefacts	Grade IIIc

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88898	KALA005	KALAHARI-EAST 005	Artefacts	Grade IIIc
88901	KALA006	KALAHARI-EAST 006	Artefacts	Grade IIIc

APPENDIX 2

Reference List from SAHRIS

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
4108	AIA Phase 1	Cobus Dreyer	12/09/2007	First Phase Archaeological and Cultural Heritage Assessment of Borrow Pit R Along the Proposed R87 Road Between Rietfontein & Groot Mier, Gordonia District, Northern Cape
110518	HIA Phase 1	Jan Engelbrecht	15/02/2013	Phase 1 Heritage Impact Assessment Report: Proposed Development for Low Cost Housing Mier Local Municipality, Siyanda District Municipality, Northern Cape Province, South Africa
110893	Heritage Scoping	Liezl van Pletzen-Vos, Renee Rust	01/01/2013	Preliminary Heritage Impact Assessment Report Proposed Low Income Housing Project Rietfontein, Remainder Farm No. 585, Gordonia Road, Groot Mier Municipality, Northern Cape
118716	HIA Phase 1	Liezl van Pletzen-Vos, Renee Rust	22/04/2013	Heritage Impact Assessment Report: Proposed Low Income Housing Project Rietfontein, Remainder Farm No. 585, Gordonia Road, Groot Mier Municipality, Northern Cape.
173976	Heritage Impact Assessment Specialist Reports	Jonathan Kaplan	01/07/2014	THE PROPOSED KALAHARI-EAST BULK WATER SUPPLY SCHEME PHASE 1A ASKHAM TO SUPPLY SCHEME PHASE 1A ASKHAM TO PHILANDERSBRON, NORTHERN CAPE
173980	Heritage Impact Assessment Specialist Reports	Jonathan Kaplan	01/07/2014	THE PROPOSED KALAHARI-EAST BULK WATER SUPPLY SCHEME PHASE 1A ASKHAM TO SUPPLY SCHEME PHASE 1A ASKHAM TO PHILANDERSBRON, NORTHERN CAPE
185632	AIA Phase 1	Jan Engelbrecht	12/11/2014	Archaeological Impact Assessment for the proposed upgrading of the Rietfontein Oxidation Ponds near Rietfontein in the Northern Cape 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)
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

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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.

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

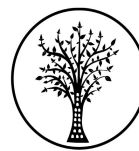
(2) The heritage resources and the area proposed for development are only partially recorded - The surveys undertaken in the area have not adequately captured the heritage resources and/or there are sites which require mitigation or management plans. Further specific heritage work is recommended for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

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- 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
- 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.

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