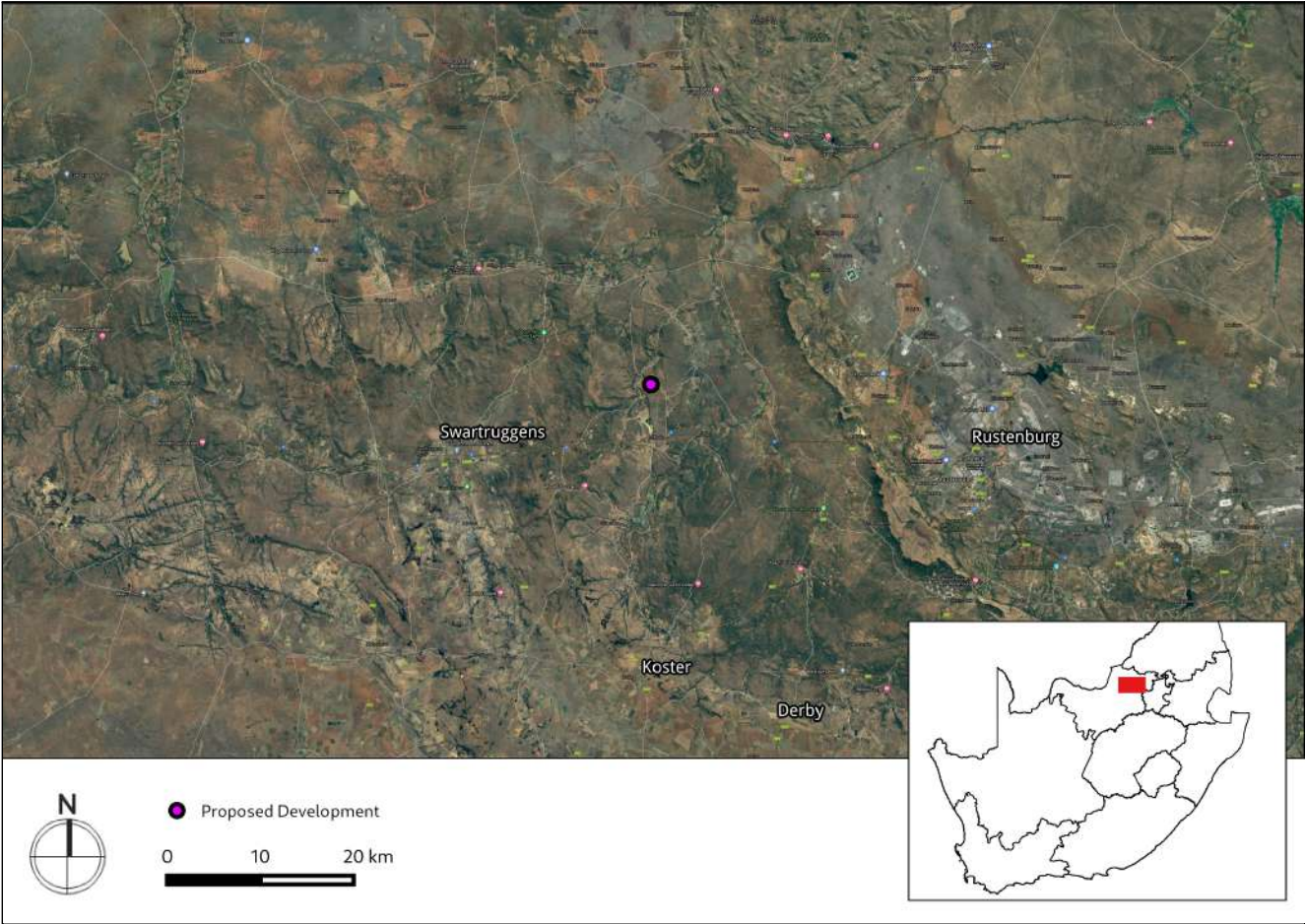




CTS HERITAGE

HERITAGE SCREENER

CTS Reference Number:	CTS21_139	 <p data-bbox="813 1233 2040 1262">Figure 1a. Satellite map indicating the location of the proposed development in the North West Province</p>
SAHRIS Case No:		
Client:	Enviroworks	
Date:	September 2021	
Title:	<p>PROPOSED EXPANSION OF CHICKEN HOUSES FROM APPROXIMATELY 30 000 TO 60 000 CHICKENS, BULHOEK FARM, NEAR SWARTRUGGENS, NORTH WEST PROVINCE</p>	
Recommendation by TS Heritage Specialists	<p>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. It is recommended that the attached Chance Fossil Finds Procedure is implemented during excavation activities.</p>	

CTS Heritage

16 Edison Way, Century City, Cape Town, 7441

Tel: +27 (0)87 073 5739 Email: info@ctsheritage.com Web: www.ctsheritage.com



1. Proposed Development Summary

Quantum Foods proposes the expansion of a poultry farm that will be expanded from approximately 30 000 to 60 000 chickens (rounded up) on Bulhoek Farm, near Swartruggens, North West Province. It is expected that there will eight (8) new chicken layer houses constructed each with a footprint of either 60 m x 13.5 m or 100 m x 12 m depending on the site.

Waste removal: After the quarantine period on the farm, the chicken carcasses will be taken to the local zoo and the remaining general waste will be disposed of a registered landfill site. The chicken manure is collected by an external farmer to use as fertilizer.

Water source: The water sources presently on site are three (3) boreholes that supply approximately 228 742.31 m³/month. The three (3) reservoirs present on site have a capacity of approximately 100 000 litres.

Sewage and wastewater: Sewage on site is kept in holding tanks until it is removed by a service provider. Wash water is currently disposed of in the field. However, Quantum Foods proposes the development of thirteen (13) evaporation ponds (each being 25m²) to treat the wash water.

2. Application References

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

3. Property Information

Latitude / Longitude	25°35'2.66"S 26°54'39.95"E
Erf number / Farm number	Portion 34 and 40 of the farm Bulhoek 389 JP
Local Municipality	Rustenburg
District Municipality	Bojanala
Province	North West
Current Use	Agriculture
Total Extent	339ha



4. Nature of the Proposed Development

Total Surface Area	8 structures each with a footprint of >2000m ²
Depth of excavation (m)	TBA
Height of development (m)	Approximately 4m

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

Evaporation Ponds

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

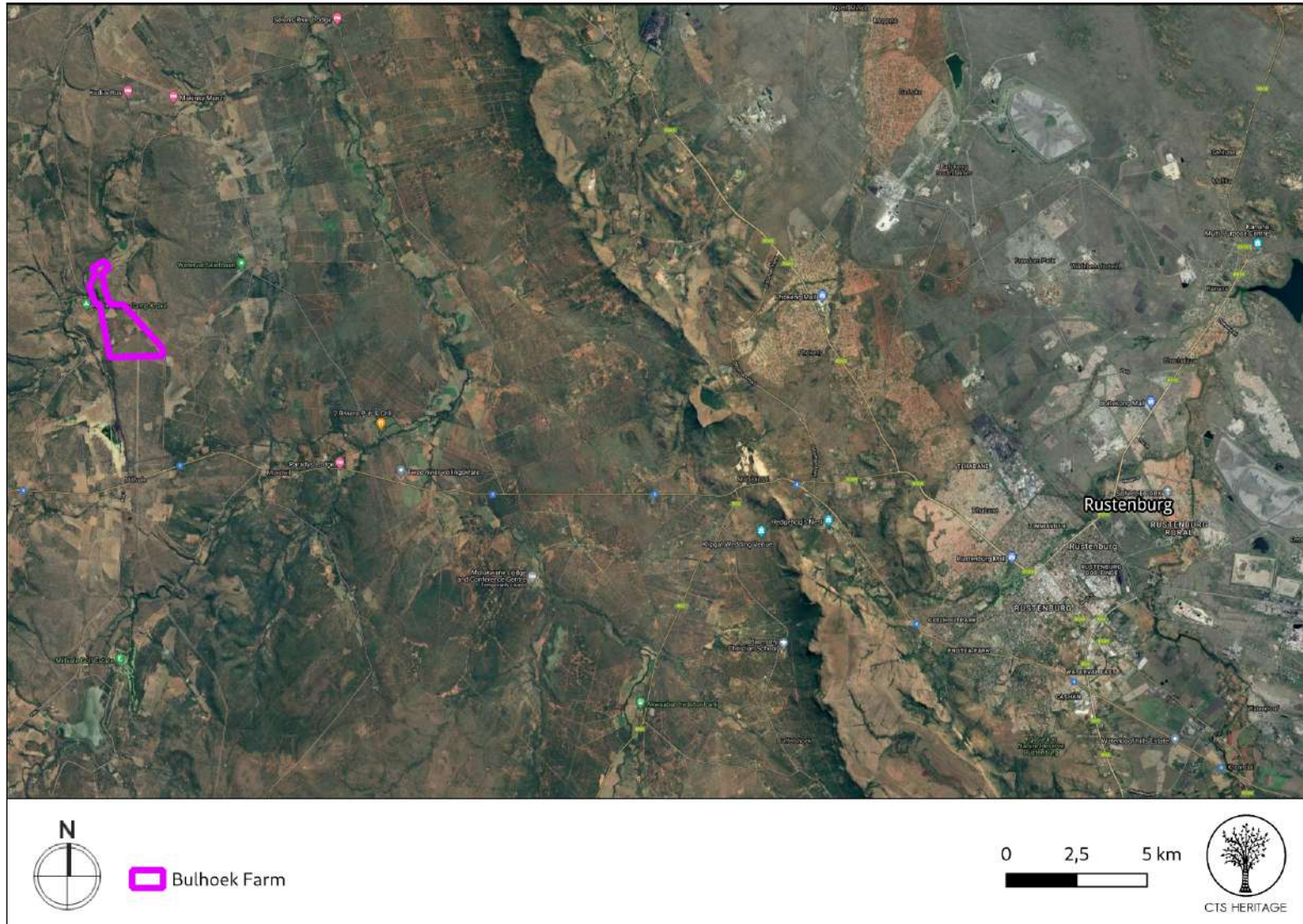


Figure 1b. Overview Map. Satellite image (2019) indicating the proposed development area at closer range.

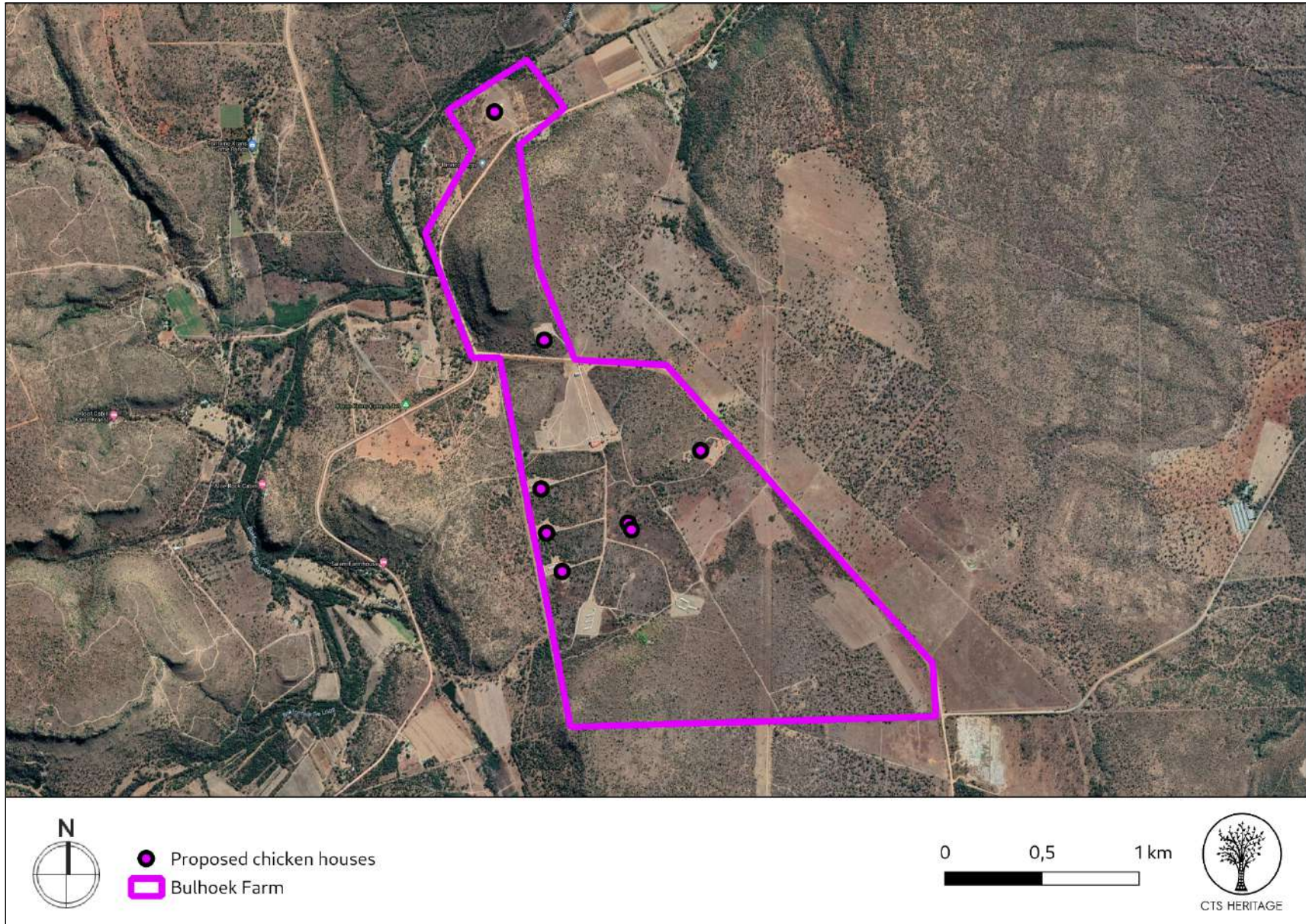


Figure 1c. Overview Map. Satellite image (2019) indicating the proposed development area at closer range.



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



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

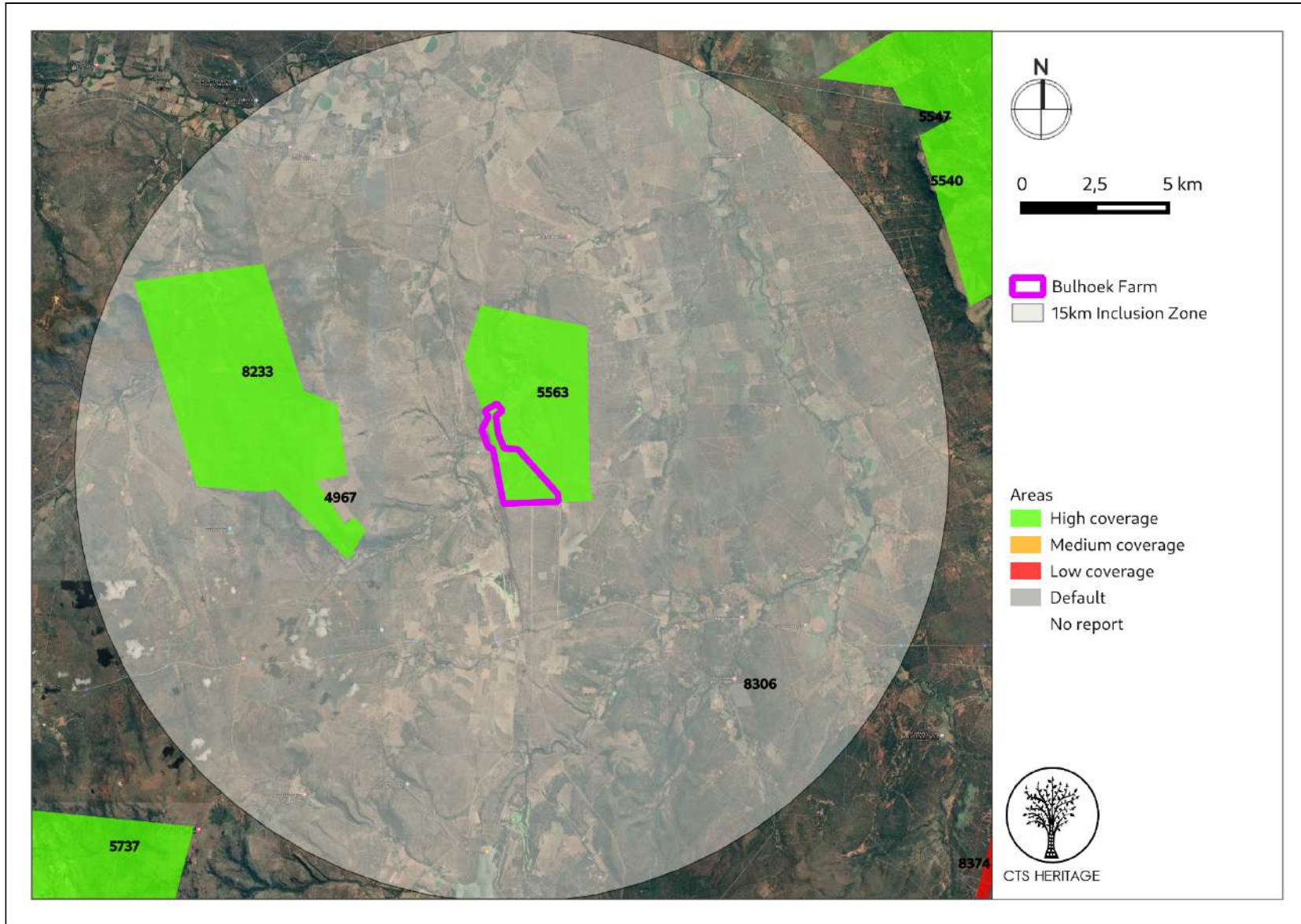


Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area within 15km, with SAHRIS NIDS indicated. Please see Appendix 2 for a full reference list.

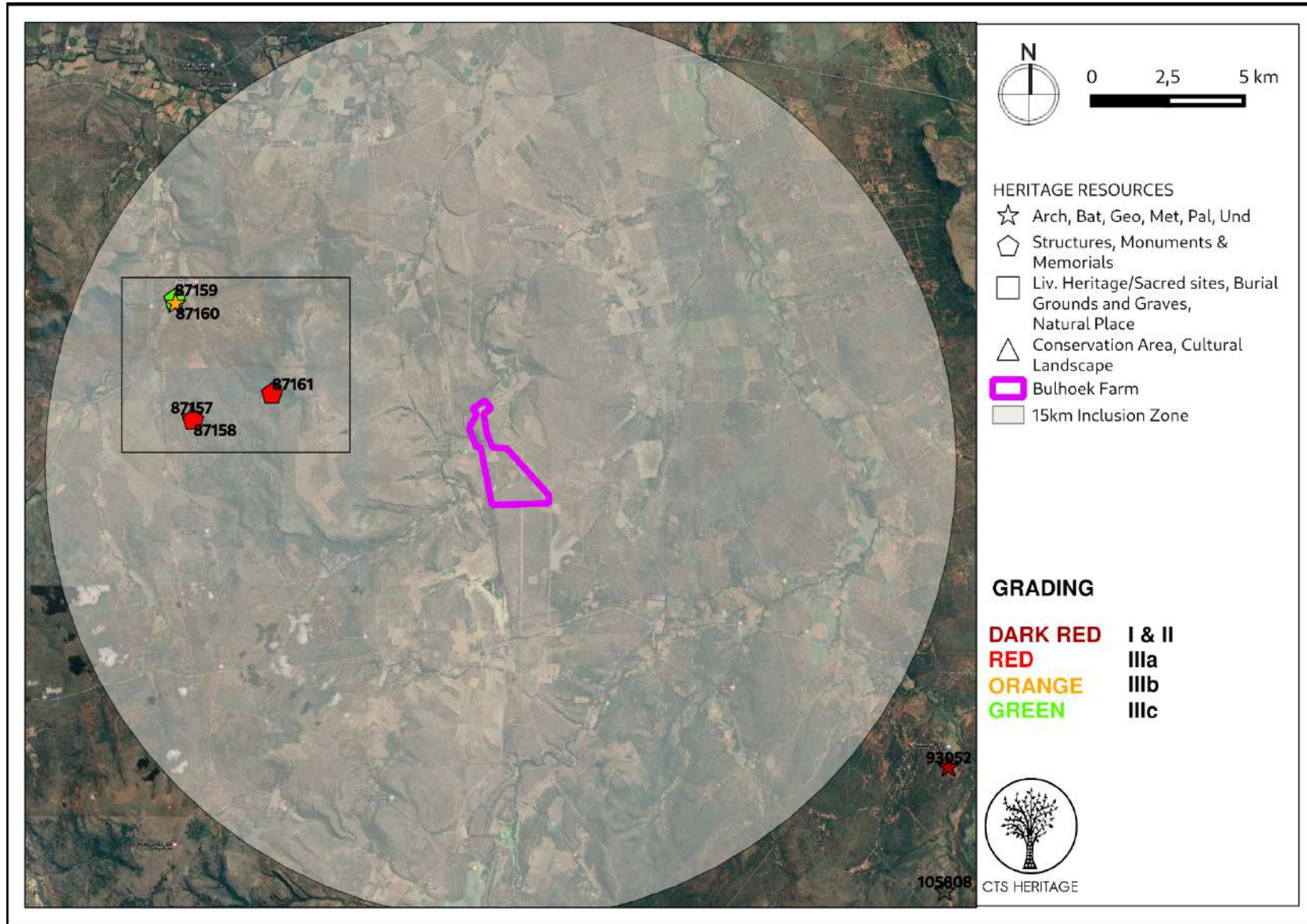


Figure 3. Heritage Resources Map. Heritage Resources previously identified in and near the study area. See insets a to d below with SAHRIS Site IDs indicated. Please See Appendix 4 for full description of heritage resource types.

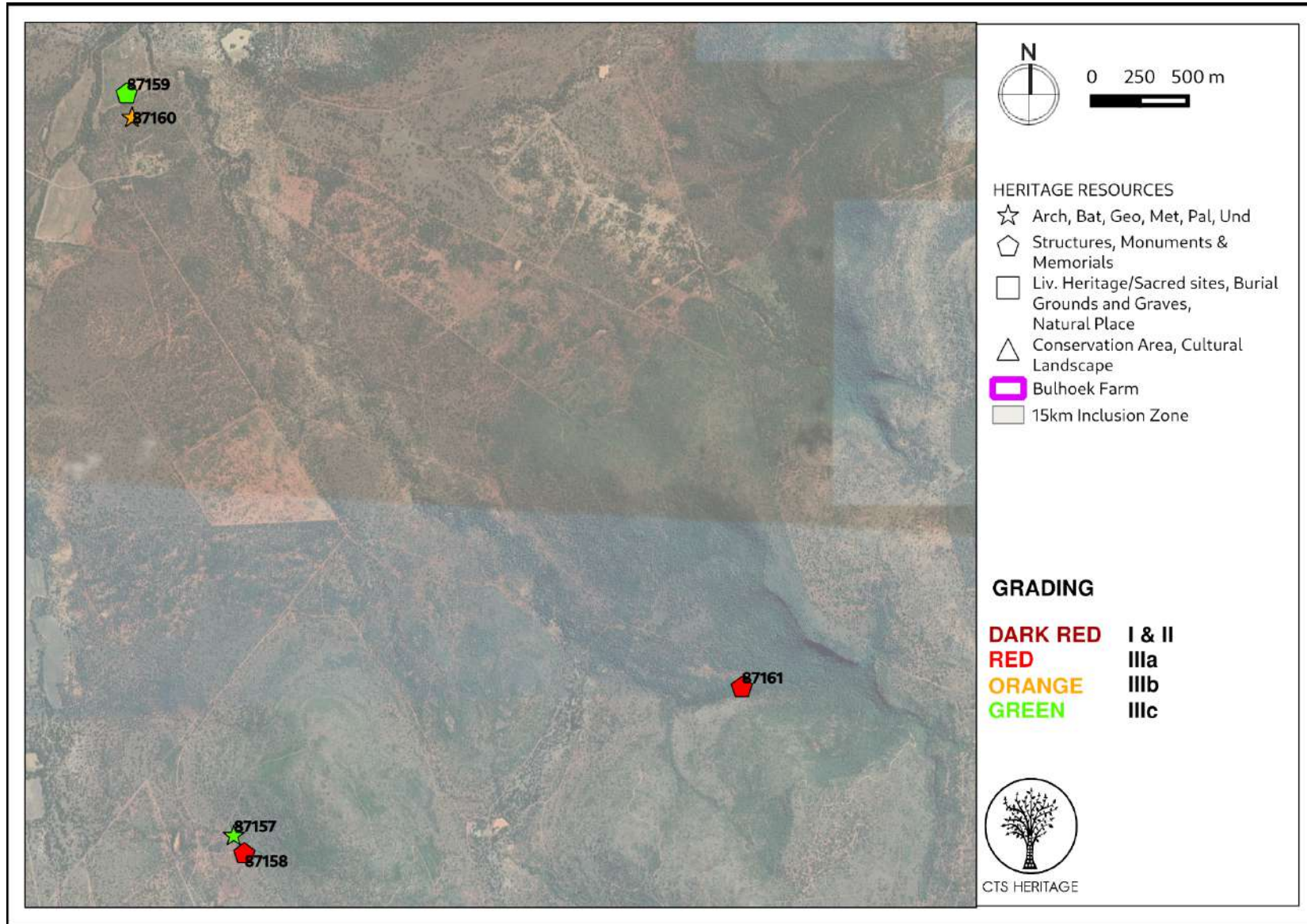


Figure 3a. Heritage Resources Map. Inset

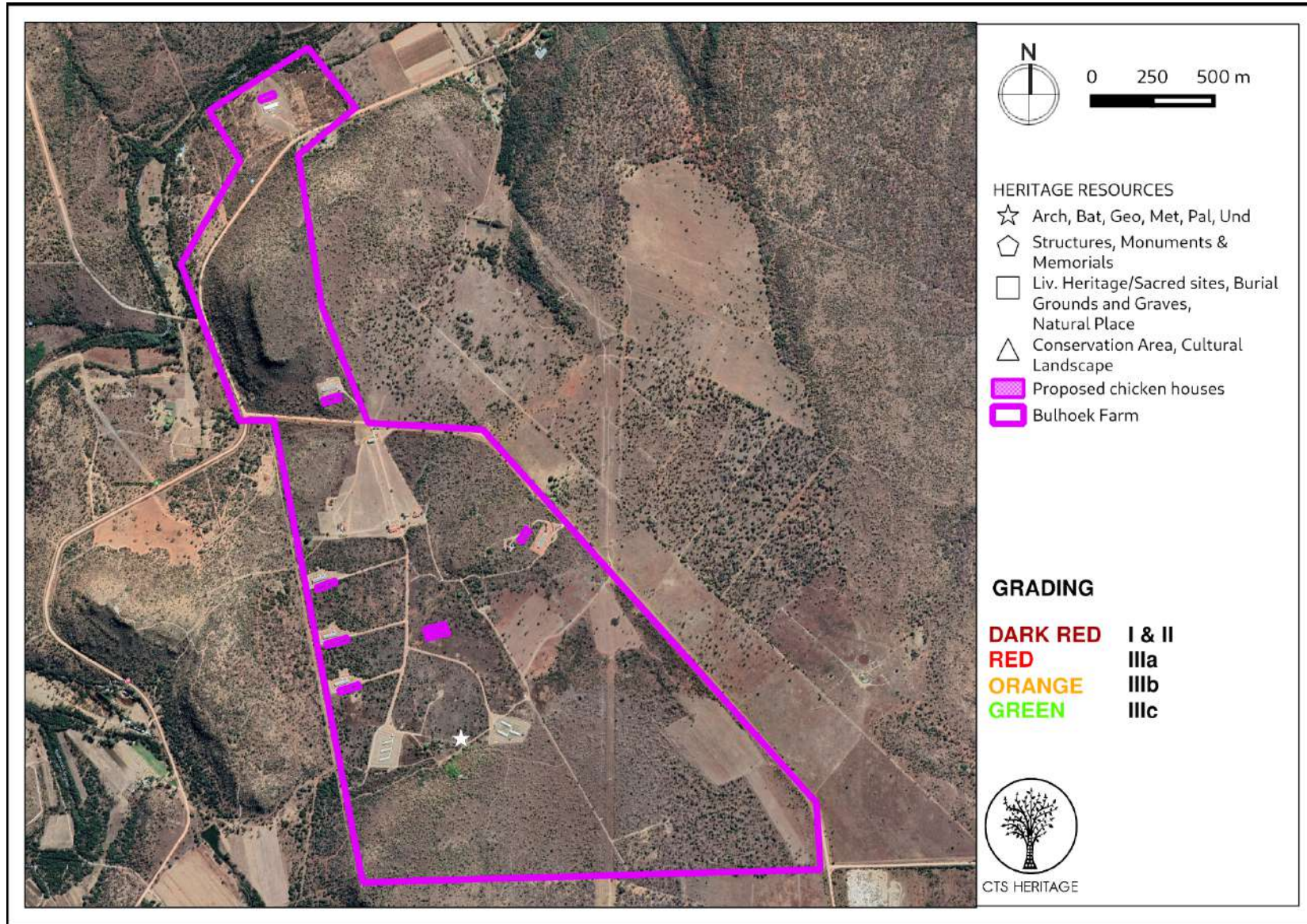


Figure 3b. Heritage Resources Map. Site identified in Van Vollenhove (2007) relative to the proposed development



CTS HERITAGE

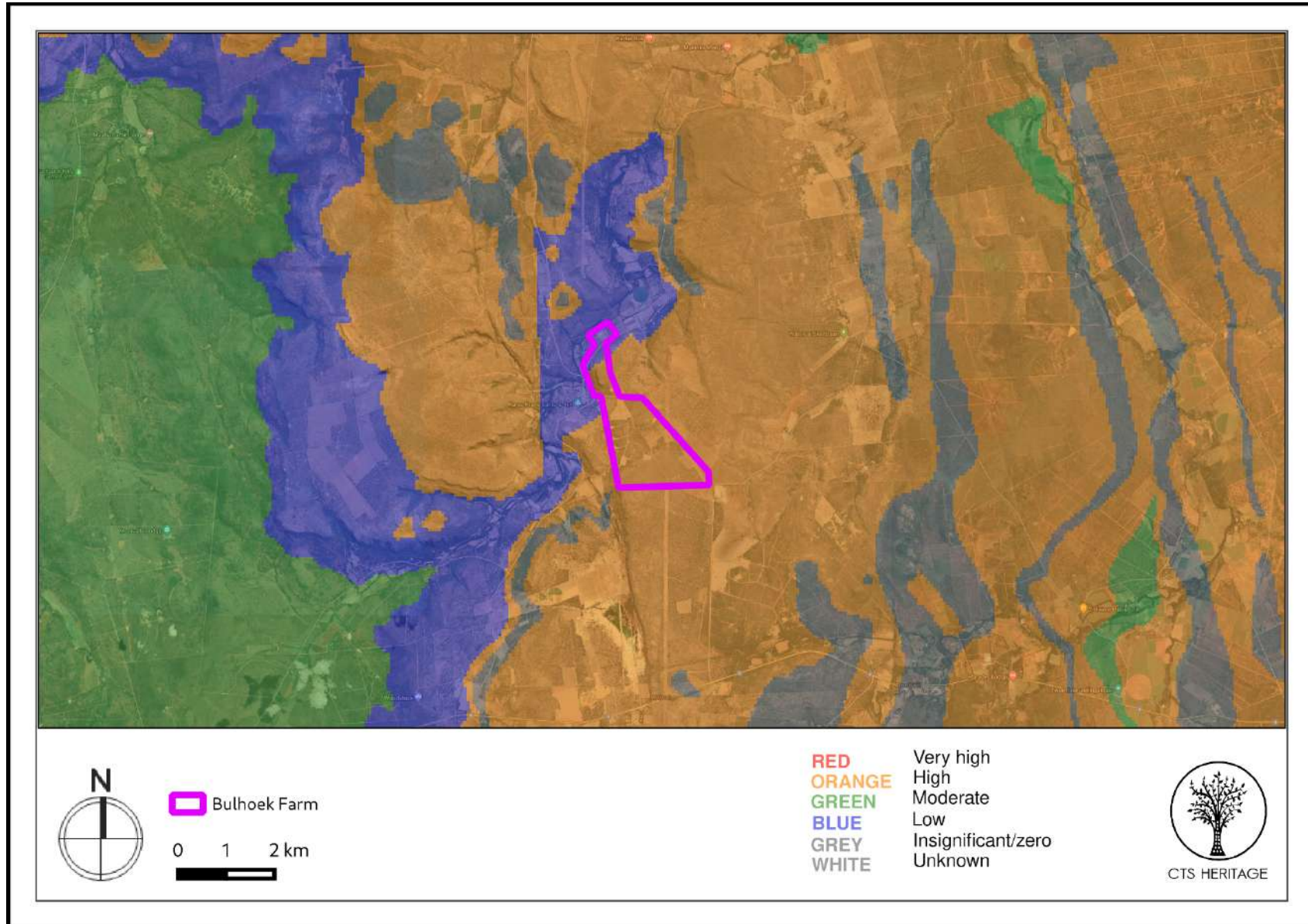


Figure 4a. SAHRIS Palaeosensitivity Map. Indicating the fossil sensitivity underlying the study area. Please See Appendix 3 for a full guide to the legend.

CTS Heritage

16 Edison Way, Century City, Cape Town, 7441

Tel: +27 (0)87 073 5739 Email: info@ctsheritage.com Web: www.ctsheritage.com

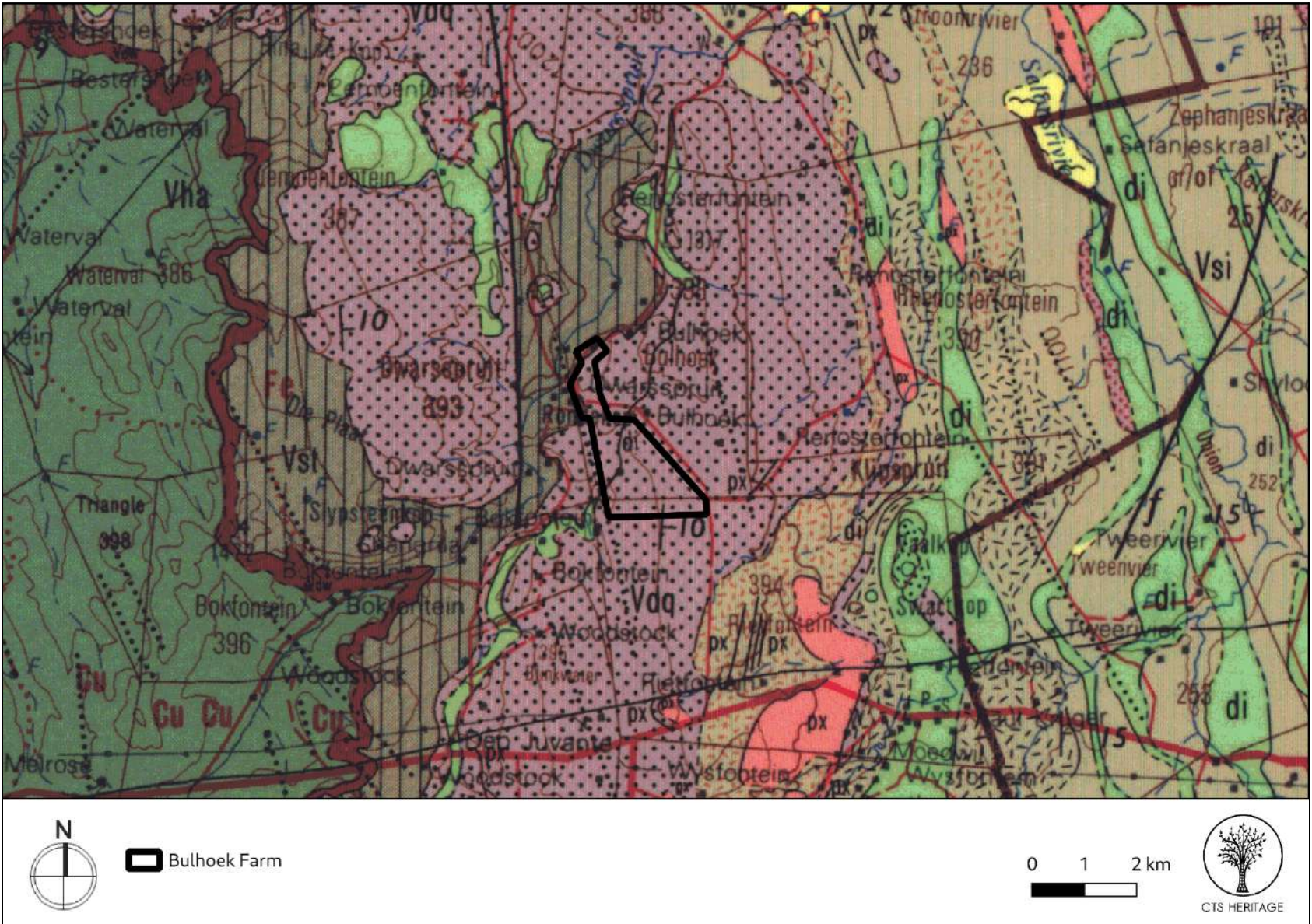


Figure 4b. Geology Map. Extract from the Council of GeoScience Map 2526 Rustenburg indicating that the area proposed for development is underlain by sediments of the Daspoort Formation of the Pretoria Group (Vdq)

8. Heritage statement and character of the area

This application is for the expansion of six existing chicken houses and the development of evaporation ponds and two new chicken laying houses on a farm located between the towns of Swartruggens and Rustenburg in the North West Province, west of the Magaliesberg (Figure 1b). As indicated in figure 2, the farm on which this development is located was previously the subject of an archaeological assessment completed by van Vollenhoven (2007, SAHRIS NID 5563) for proposed laying houses. Van Vollenhoven (2007) notes that the farm was previously a piggery. Van Vollenhoven (2007) notes the presence of a hill located in close proximity to one of the chicken houses (evident in Figure 1d), however he goes on to note that “This area may have been suitable for human occupation, but as the development will not directly impact thereon, it was not surveyed.” None of the proposed chicken houses that are part of this application are likely to impact on this hill.

A broad history of the area is included in Murimbika (2010) and is referred to here. 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). 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. According to Murimbika (2010) this type of stone-walled settlement represents “typical Nguni-Sotho-Tswana acculturation”. 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.

Despite the history of the area, Van Vollenhoven (2007) only identified 2 sites in his assessment of this property, neither of which were determined to have any heritage significance (Figure 3b). The site identified by Van Vollenhoven (2007) is described as follows: “The building has been demolished. An indication of the foundation as well as loose bricks, stones, and plaster as well as cultural material was identified in the vicinity. The cultural significance of the site is low. It probably is not older than 60 years and is not very unique.” Similarly, the other site identified by Van Vollenhoven (2007) is described as “the remains of various structures including houses and other outbuildings associated with an earlier farming phase on the farm”. Van Vollenhoven (2007) ascribed no heritage significance to this site, and provided no co-ordinates. Based on the information available for this area, and on the limited footprints of the proposed development, mostly in areas that have been previously disturbed, it is very unlikely that significant archaeological heritage will be impacted by the proposed development.

According to the SAHRIS Palaeosensitivity Map, the area proposed for development is underlain by sediments of high palaeontological sensitivity (Figure 4a). According to the extract from the Council of GeoScience Map 2526 for Rustenburg, the area proposed for development is underlain by sediments of the Daspoort Formation of the Pretoria Group (Vdq). According to the SAHRIS Fossil Heritage Browser, the Daspoort Formation is known to contain stromatolites and probably also microfossils. Based on the limited nature of the proposed development, it is unlikely that significant stromatolites or microfossils will be impacted by the proposed development however, due to the high levels of palaeontological sensitivity of the underlying formation, it is recommended that the attached Chance Fossil Finds Procedure is implemented during excavation activities.

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. It is recommended that the attached Chance Fossil Finds Procedure is implemented during excavation activities.



CTS HERITAGE

APPENDIX 1

List of heritage resources within the 15km Inclusion Zone from SAHRIS

Site ID	Site no	Full Site Name	Site Type	Grading
87157	WATV001	Waterval 386/ 001	Artefacts	Grade IIIc
87158	WATV002	Waterval 386/ 002	Structures	Grade IIIa
87159	WATV003	Waterval 386/ 003	Structures	Grade IIIc
87160	WATV004	Waterval 386/ 004	Artefacts	Grade IIIb
87161	WATV005	Waterval 386/ 005	Structures	Grade IIIa

CTS Heritage

16 Edison Way, Century City, Cape Town, 7441

Tel: +27 (0)87 073 5739 Email: info@ctsheritage.com Web: www.ctsheritage.com



CTS HERITAGE

APPENDIX 2 Reference List

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
4967	AIA Phase 1	Anton Pelser	01/02/2007	A Report on an Archaeological Impact Assessment on a Portion of Re 5 of Waterval 386 JP and a Portion of Portion 26 and 27 of Bokfontein 396 JP, Kgetlengriver Local Municipality, Northwest Province
5563	AIA Phase 1	Anton van Vollenhoven, Anton Pelser	01/11/2007	A Report on a Cultural Heritage Impact Assessment at the Site for the Proposed New Laying House on the Farm Bulhoek 368 JP, Northwest Province
8233	AIA Phase 1	Anton van Vollenhoven, Anton Pelser	01/09/2008	A Report on a Cultural Heritage Impact Assessment for the Proposed Country Estate on the Farms Waterval 386 JP, Northwest Province
8306	AIA Phase 1	Wouter Fourie	09/11/2007	Ingwe Eco Estate Archaeological Impact Assessment. Residential Development on Portion 71 of the Farm Wysfontein 427 JP, North West Province

CTS Heritage

16 Edison Way, Century City, Cape Town, 7441

Tel: +27 (0)87 073 5739 Email: info@ctsheritage.com Web: www.ctsheritage.com



CTS HERITAGE

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.

CTS Heritage

16 Edison Way, Century City, Cape Town, 7441

Tel: +27 (0)87 073 5739 Email: info@ctsheritage.com Web: www.ctsheritage.com



CTS HERITAGE

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.

CTS Heritage

16 Edison Way, Century City, Cape Town, 7441

Tel: +27 (0)87 073 5739 Email: info@ctsheritage.com Web: www.ctsheritage.com



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

CTS Heritage

16 Edison Way, Century City, Cape Town, 7441

Tel: +27 (0)87 073 5739 Email: info@ctsheritage.com Web: www.ctsheritage.com



CTS HERITAGE

- 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.

CTS Heritage

16 Edison Way, Century City, Cape Town, 7441

Tel: +27 (0)87 073 5739 Email: info@ctsheritage.com Web: www.ctsheritage.com