

CTS HERITAGE

HERITAGE SCREENER

CTS Reference Number:	CTS17_064	
HWC Reference:		
Client:	EnviroAfrica	
Date:	June 2017	
Title:	Proposed construction of storage dam, and repair of existing weir on Portions 3 and 5 of Farm van der Wattskraal No. 394 and Remaining Extent of Farm 235/0	
Recommendation by CTS Heritage Specialists: (Type 1)	RECOMMENDATION: The heritage resources in the area proposed for development are sufficiently recorded. No further studies are recommended. See Section 8 for full recommendations.	

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



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1. Proposed Development Summary

The applicant proposes to construct a dam on Portions 3 and 5 of the farm Van der Wattskraal 394 for the irrigation of a variety of nuts cultivated as part of a Broad-Based Black Economic Empowerment (BBBEE) project. The water will be abstracted from a natural watercourse at the Eksteenskloof weir located on the adjacent property (remaining extent of Farm 234), and piped to the dam during winter only.

The Eksteenskloof weir requires reconstruction following a flood event in 2008, which will be rebuilt to a maximum height of $\pm 2,2\text{m}$, a total length in the order of $\pm 35\text{m}$ and a top width of $\pm 300\text{mm}$, on a $3,6\text{m}$ wide foundation. The proposed dam will involve the construction of a zoned earth fill dam with a gross capacity in the order of $\pm 330\,000\text{m}^3$ including an open channel spillway and piped outlet works. The embankment will have a maximum height of $\pm 14\text{m}$, a total length in the order of $\pm 519\text{m}$ and a crest width of $\pm 4\text{m}$. The bulk of the embankment earth fill would come from inside the dam basin below the full supply level.

2. Application References

Name of relevant heritage authority(s)	Heritage Western Cape
Name of decision making authority(s)	Department of Environment and Development Planning

3. Property Information

Latitude / Longitude	-34.09588333333333 ; 20.036758333333335 (centroid)
Erf number / Farm number	3 and 5/394 and Re of 234
Local Municipality	Swellendam
District Municipality	Overberg
Previous Magisterial District	Swellendam
Province	Western Cape Province
Current Use	Agriculture
Current Zoning	Agriculture
Total Extent	1062.37 ha

4. Nature of the Proposed Development

Total Surface Area	7.175 ha
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Depth of excavation (m)	NA
Height of development (m)	14m
Expected years of operation before decommission	Permanent

5. Category of Development

Triggers: Section 38(8) of the National Heritage Resources Act	X
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.	X
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):	

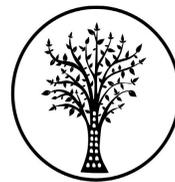
6. Additional Infrastructure Required for this Development

A new pipeline, approximately 300 – 350 metres in length and 300 mm in diameter, will be constructed to feed water from the weir to the storage dam. The pipeline, with construction footprint of 5 metres, will have a total footprint of ± 0.175 ha.

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

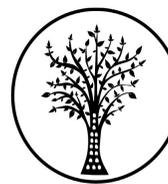


Figure 1b. Overview Map. Satellite image (2017) indicating the proposed development area in its immediate context.

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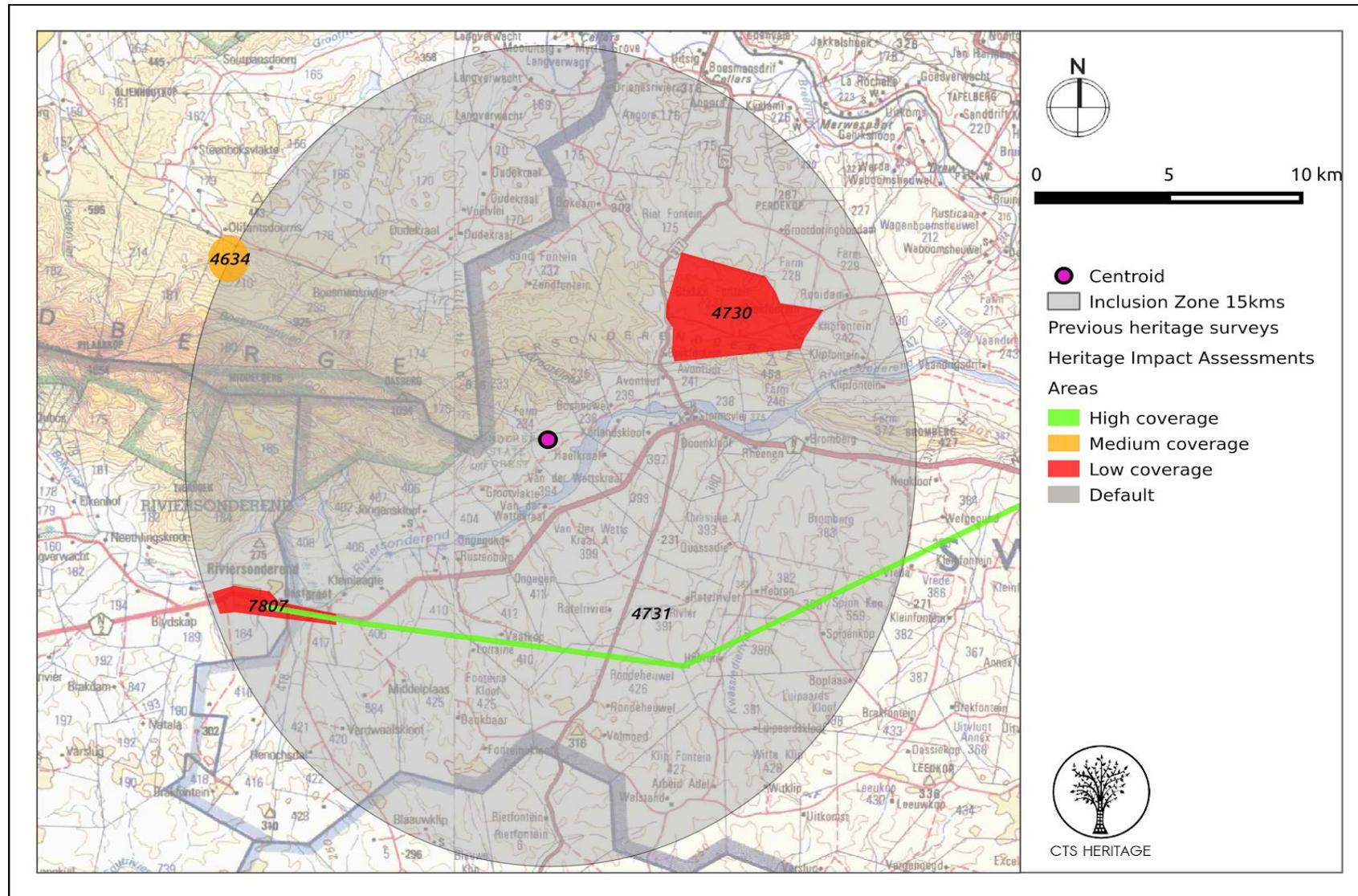


Figure 2a. Previous HIAs map. Previous Heritage Impact Assessments surrounding the proposed development area within 5kms, with SAHRIS NIDS indicated (please see Appendix 2 for full reference list).



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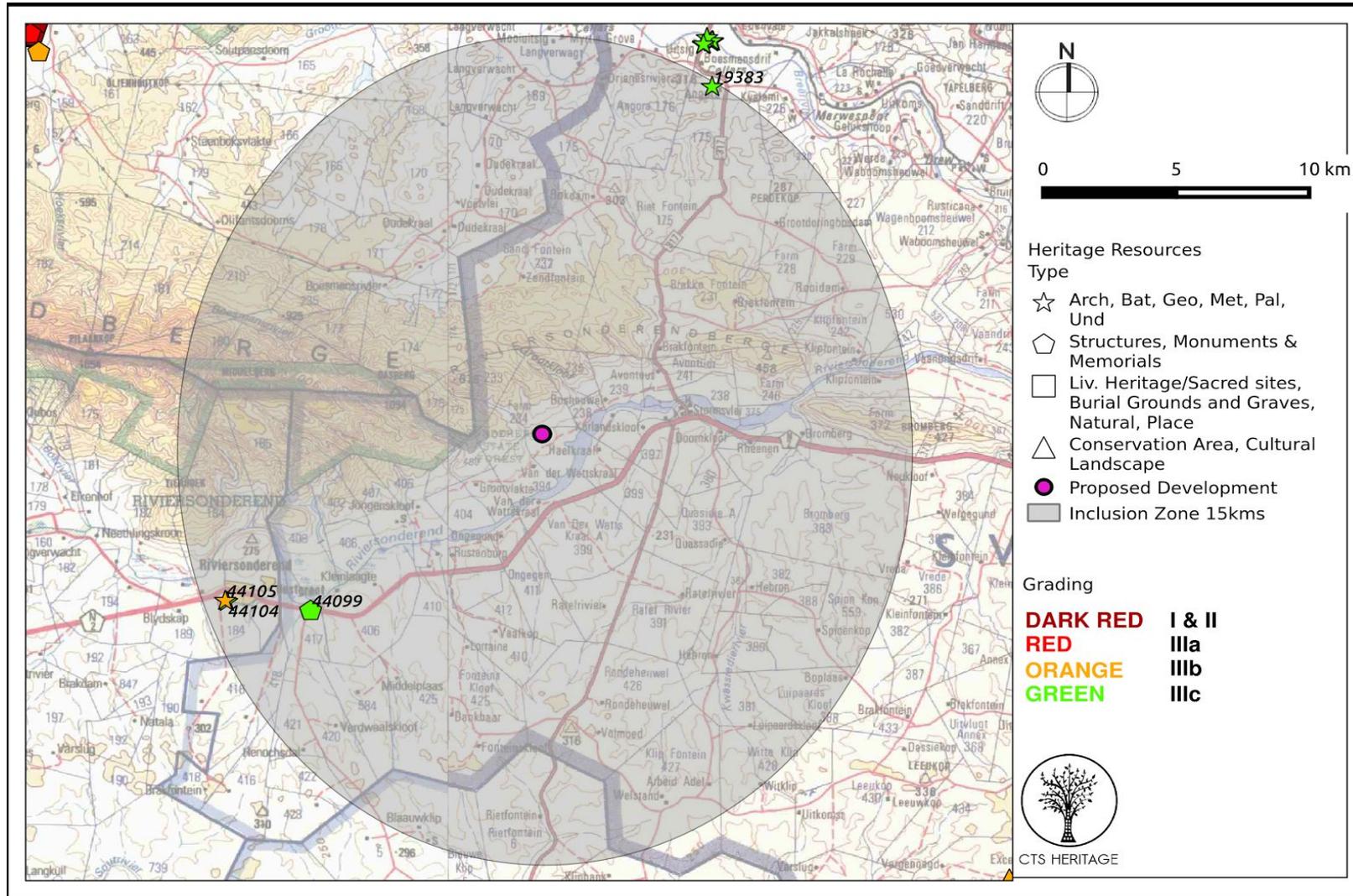


Figure 3a. Heritage Resources Map. Heritage resources previously identified in and near the study area, with SAHRIS Site IDs indicated (see Figure 3b for inset). See Appendix 4 for full description of heritage resource types.

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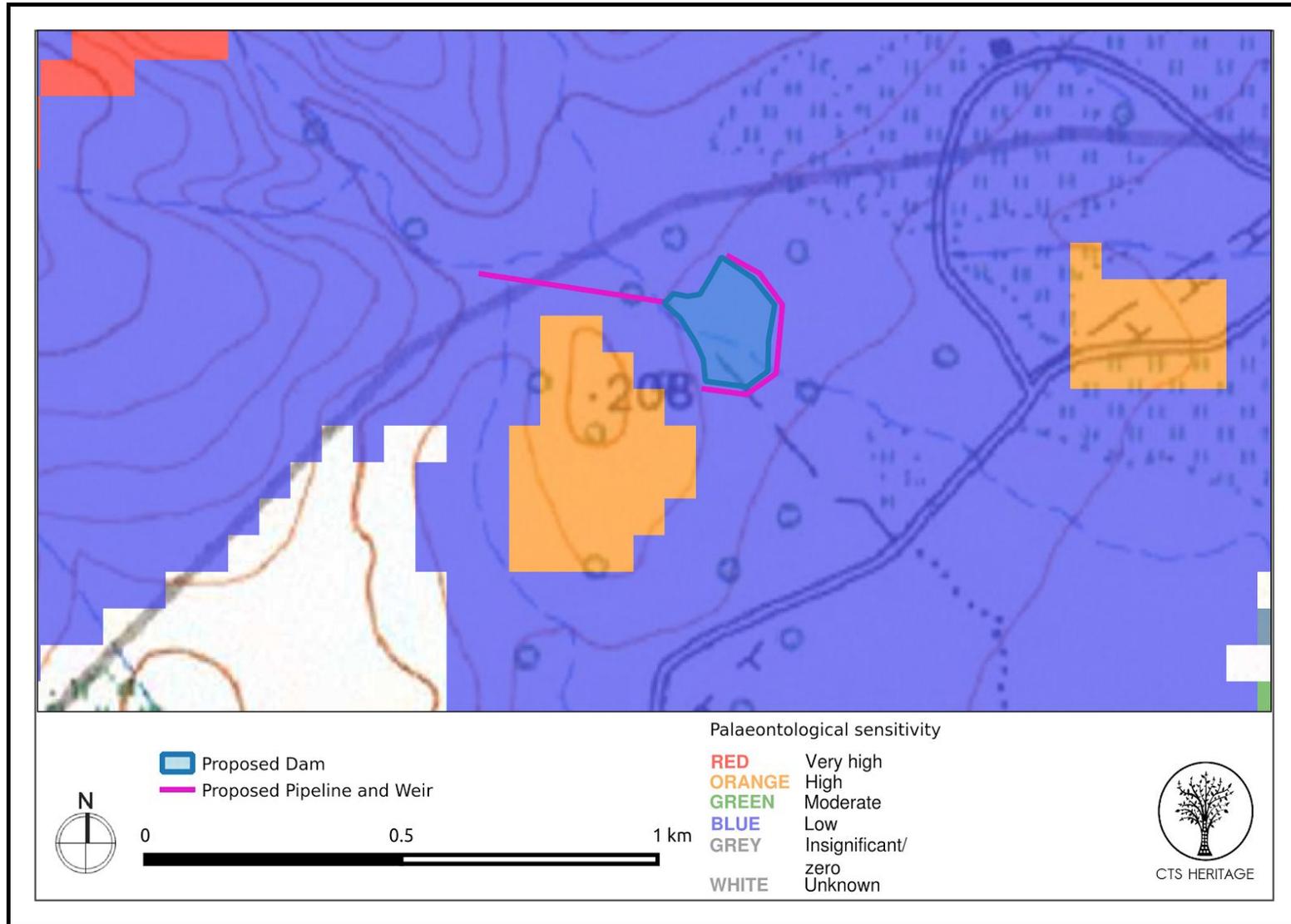


Figure 4. Palaeosensitivity Map, indicating unknown fossil sensitivity underlying the study area. See Appendix 3 for full guide to the legend.

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8. Heritage statement and character of the area

The applicant proposes to construct a dam and rebuild a weir on Portions 3 and 5 of the farm Van der Wattskraal 394, and Remainder of Farm 234, to provide irrigation to nut orchards to be planted as part of a BBBEE project in the Swellendam Municipality, Overberg District, Western Cape.

The presence of perennial water in this area has meant that it has been occupied since the Stone Age, first by hunter-gatherers, and, more recently, by pastoralists. The VOC began loaning land to farmers in this region in the 1700s, and it became increasingly intensively farmed for stock and, particularly wheat. The site lies 15km east of Riviersonderend and 46km west of Swellendam, in the heart of this wheat growing region. There are currently accommodation and conference facilities on the farm. The watercourse in which the repair of the weir is required has been indicated as a floodplain wetland within a moderately modified condition, according to the National Freshwater Ecosystems (NFPEPA) database (2011), however the proposed development area has not been identified as wetland habitat, nor a River Freshwater Ecosystem Priority Area (FEPA).

There are no declared heritage sites within a 15km radius of the proposed development site, although four graded sites exist (Figure 3 and Appendix 1). These are a Grade IIIc historic farmhouse (VRY-RIV01, SID 44099), and three archaeological sites containing ESA and MSA material. One of these, graded IIIb (RSV2, SID 44105), is an extensive scatter of predominantly Early Stone Age material with some Middle Stone Age artefacts included. One of the Grade IIIc sites (RSV1, SID 44104), is a disturbed site comprising Middle and Early Stone Age artefacts, while the other (PMLT7, SID 19383) contains scattered ESA and MSA material. Five heritage surveys have been conducted in the area (Figure 2 and Appendix 2), comprising four AIAs and an HIA. These reports confirm that the region has been inhabited since the Stone Age, and occupied more recently by the Khoekhoe, while farms were granted to Europeans from the eighteenth century onwards (Deacon 2006, NID 4731). The early farming of the area has intensified and diversified to create the cultural landscape as it exists today. Relatively little artefactual material was found in these surveys (sites RSV1 and 2 and PMLT7), likely owing to the long term disturbance of surfaces resulting from intensive cultivation (Kaplan 1990, NID 7807). The only report conducted on relatively undisturbed ground (Kaplan 2004, NID 4634) also found relatively little material - nine artefacts over a 10 ha area. These occurrences all fell outside the 15km radius of consideration in this application, but serve to show the relative paucity of artefactual material in this region; more artefactual material and sites should be expected in caves and shelters in more mountainous regions. While it is clear that archaeological material does occur in this region, the combination of long term disturbance of surfaces through intensive cultivation, and the apparent infrequency of artefactual material found on open ground, makes any discovery of *in situ*, significant archaeological heritage resources unlikely.

In terms of the palaeontology of the study area, the underlying deposits are of low fossil sensitivity, comprising scree, talus and alluvium as well as light grey to red sandy soils. The proposed developments will, therefore, have no impact on significant palaeontological resources.

In light of the above, it is unlikely that the proposed development will impact on significant heritage resources and as such, it is recommended that no further heritage studies are required.

RECOMMENDATION:

The heritage resources in the area proposed for development are sufficiently recorded - There are no known sites which require mitigation or management plans, nor any significant heritage resources known in the immediate vicinity, and the proposed development is unlikely to impact on heritage resources. No further studies are required.

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APPENDIX 1

List of heritage resources within the 5km Inclusion Zone

Site ID	Site no	Full Site Name	Site Type	Grading
19383	PMLT7	Parmalat 7	Artefacts	Grade IIIc
44099	VRY-RIV01	Vryheid to Riviersonderend 01	Building	Grade IIIc
44104	RVS1	Riviersonderend 1	Artefacts	Grade IIIc
44105	RVS2	Riviersonderend 2	Artefacts	Grade IIIb

APPENDIX 2

Reference List

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
4634	AIA	Jonathan Kaplan	01/06/2004	Phase 1 Archaeological Impact Assessment Portion 4 of the Farm Olifantsdoorn No 210, Robertson
4730	AIA	Sarah Wurz	18/12/2006	Phase 1 Archaeological Impact Assessment for the Farm Brakke Fontein No 123, Swellendam District, Western Cape
4731	AIA	Hilary Deacon	05/02/2006	Proposed Eskom Overberg Powerline, Vryheid Substation to Riviersonderend Substation: Heritage Impact Assessment Report
4732	HIA	Hilary Deacon	01/03/2006	Proposed Deviation to the Eskom Overberg Powerline Vryheid Substation to Riviersonderend Substation: Heritage Impact Assessment Report
7807	AIA	Jonathan Kaplan	01/12/1990	An Archaeological Investigation of the Proposed Riviersonderend Bypass Road

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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
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)
DEDETEA	Department Of economic Development, Tourism And Environmental Affairs (free State)
Denc	Department Of Environment And Nature Conservation (northern Cape)
DMR	Department of Mineral Resources
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

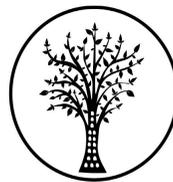
Full guide to Palaeosensitivity Map legend

	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

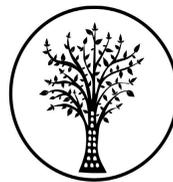
DETERMINATION OF THE COVERAGE RATING ASCRIBED TO A REPORT POLYGON

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

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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. 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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