



CEDAR TOWER
SERVICES

HERITAGE SCREENER


CTS Reference Number:	CTS15_006	
Client:	CEN Integrated Environmental Management	
Date:	31 July 2015	
Proposed development:	Residential and related infrastructure	
Recommendation by CTS Heritage Specialists: (TYPE 1)	The palaeontological heritage resources in the area proposed for development are sufficiently recorded - The surveys undertaken in the area adequately captured the palaeontological heritage resources. There are no known palaeontological sites which require mitigation or management plans. No further palaeontological heritage work is recommended for the proposed development.	

Figure 1a. Topographic image with proposed development area indicated.



1. Proposed Development Summary

Municipal housing project and related infrastructure

2. Application References

Name of relevant heritage authority(s)	Eastern Cape Provincial Heritage Resources Authority (ECPHRA)
Name of decision making authority(s)	Department of Economic Development and Environmental Affairs (DEDEA)

3. Property Information

Farm Name and Number	Erf 455, 449 and 668 in Hunters Retreat
Local Municipality	Nelson Mandela Bay Metropolitan Municipality
District Municipality	Nelson Mandela Bay Metropolitan Municipality
Previous Magisterial District	Port Elizabeth
Province	Eastern Cape
Current Use	Vacant
Current Zoning	Residential
Total Extent of three erven	225.7403ha

4. Nature of the Proposed Development

Surface area to be affected/destroyed	225.7403ha
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Depth of excavation (m)	Unknown
Height of development (m)	Unknown
Expected years of operation before decommission	NA

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	X
b) involving three or more existing erven or subdivisions thereof	X
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

Interchange on the N2, Western Arterial between the N2 and Cape Road, route determination of the Western Arterial between Cape Road and Stanford Road and external water line

7. Mapping

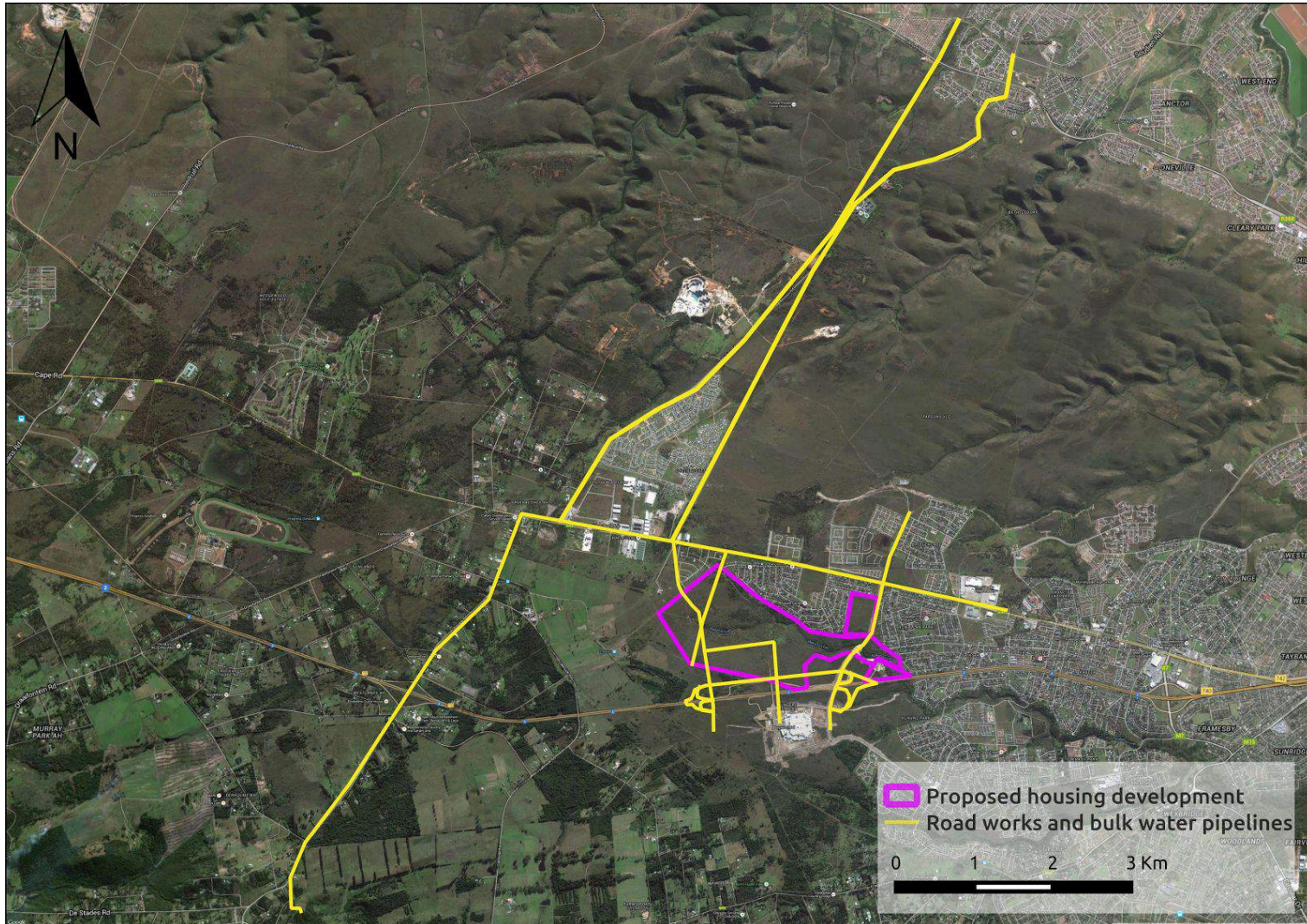


Figure 1b. Overview Map. Satellite image with proposed development indicated.



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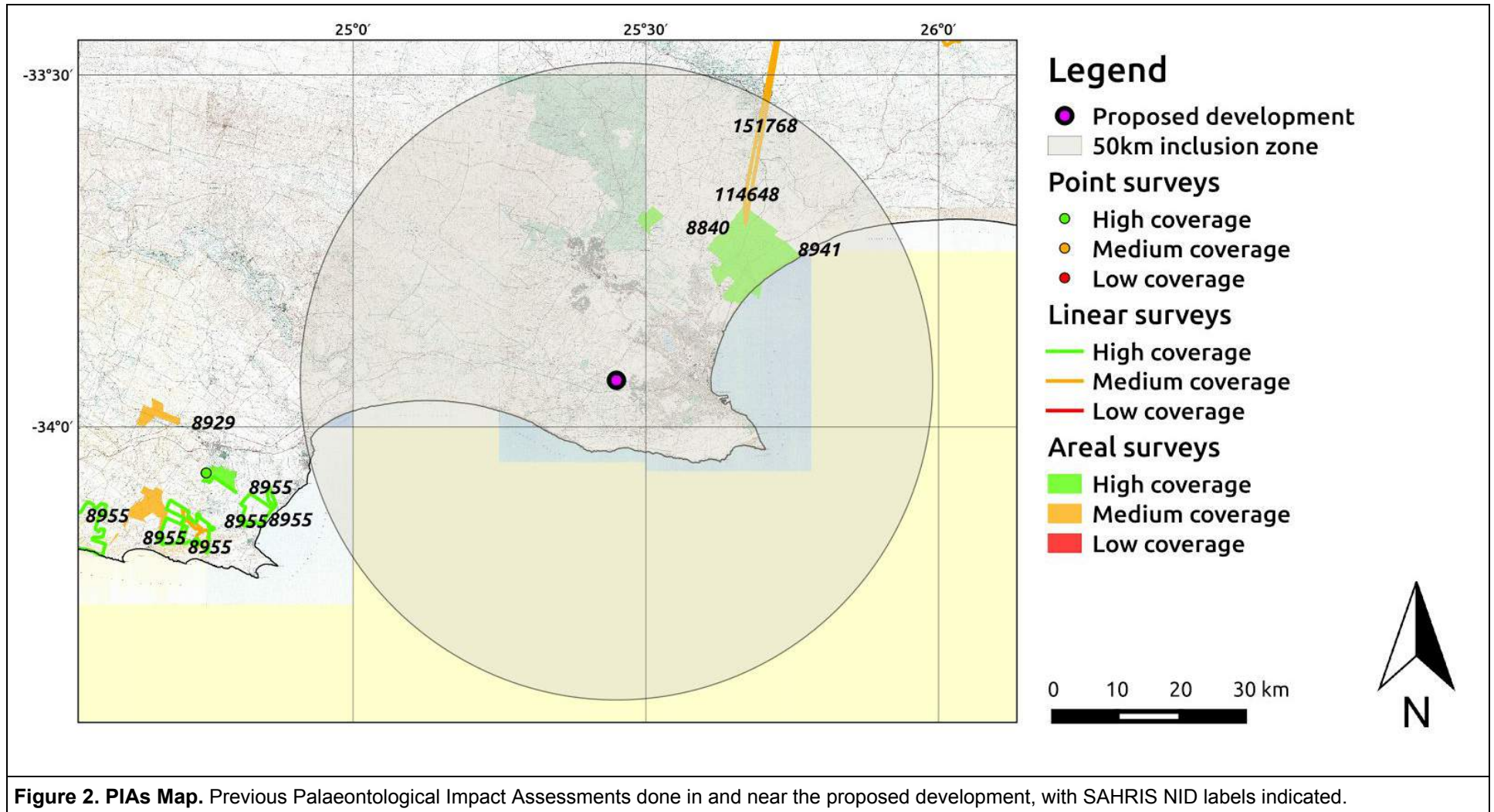


Figure 2. PIAs Map. Previous Palaeontological Impact Assessments done in and near the proposed development, with SAHRIS NID labels indicated.



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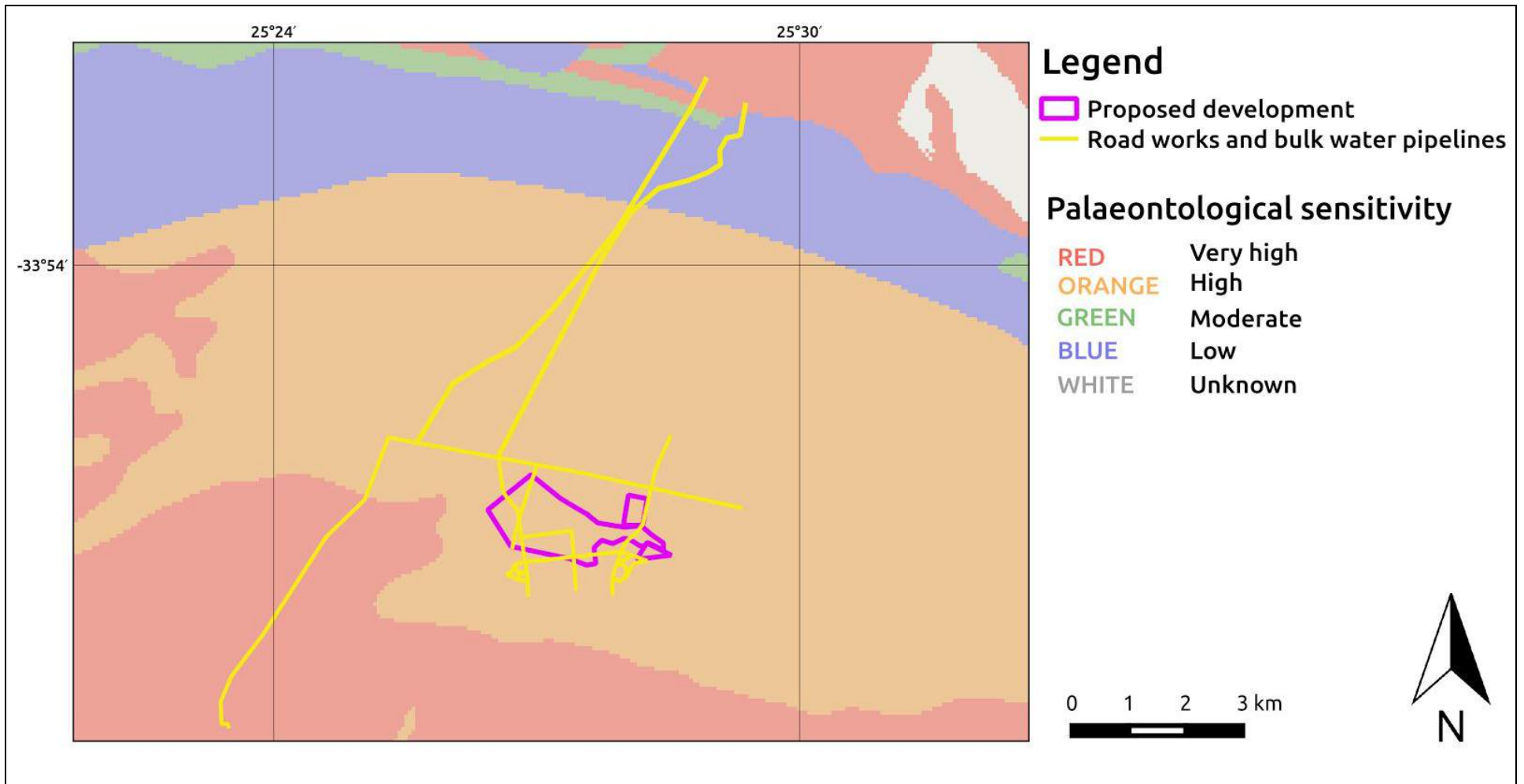
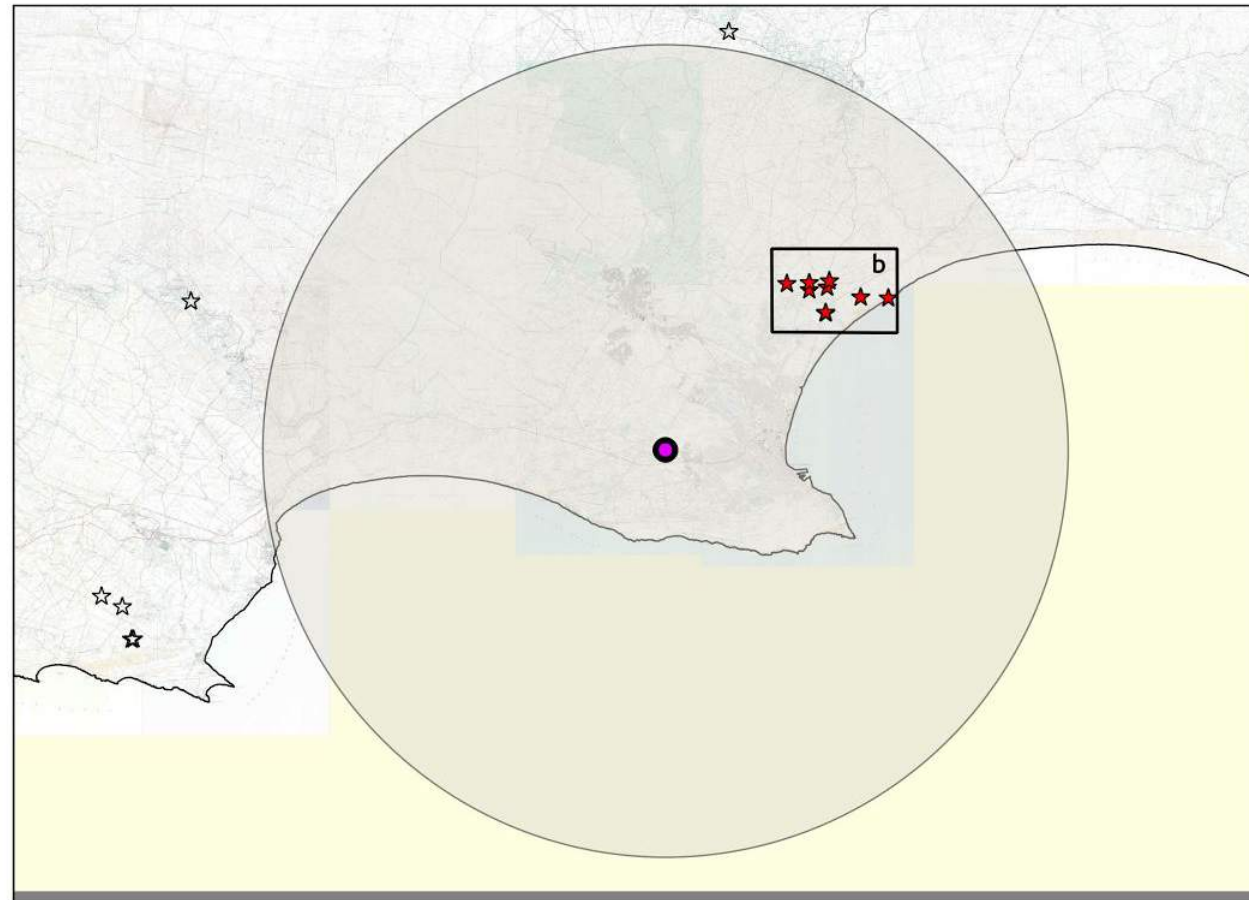


Figure 3. Palaeo Map. Palaeosensitivity of the study area. See Appendix 3 for full guide to the legend.



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Legend

● Proposed development

50km inclusion zone

Heritage resources

Type

☆ Palaeontological

Grading

DARK RED I & II

RED IIIa

ORANGE IIIb

GREEN IIIc

CLEAR Ungraded

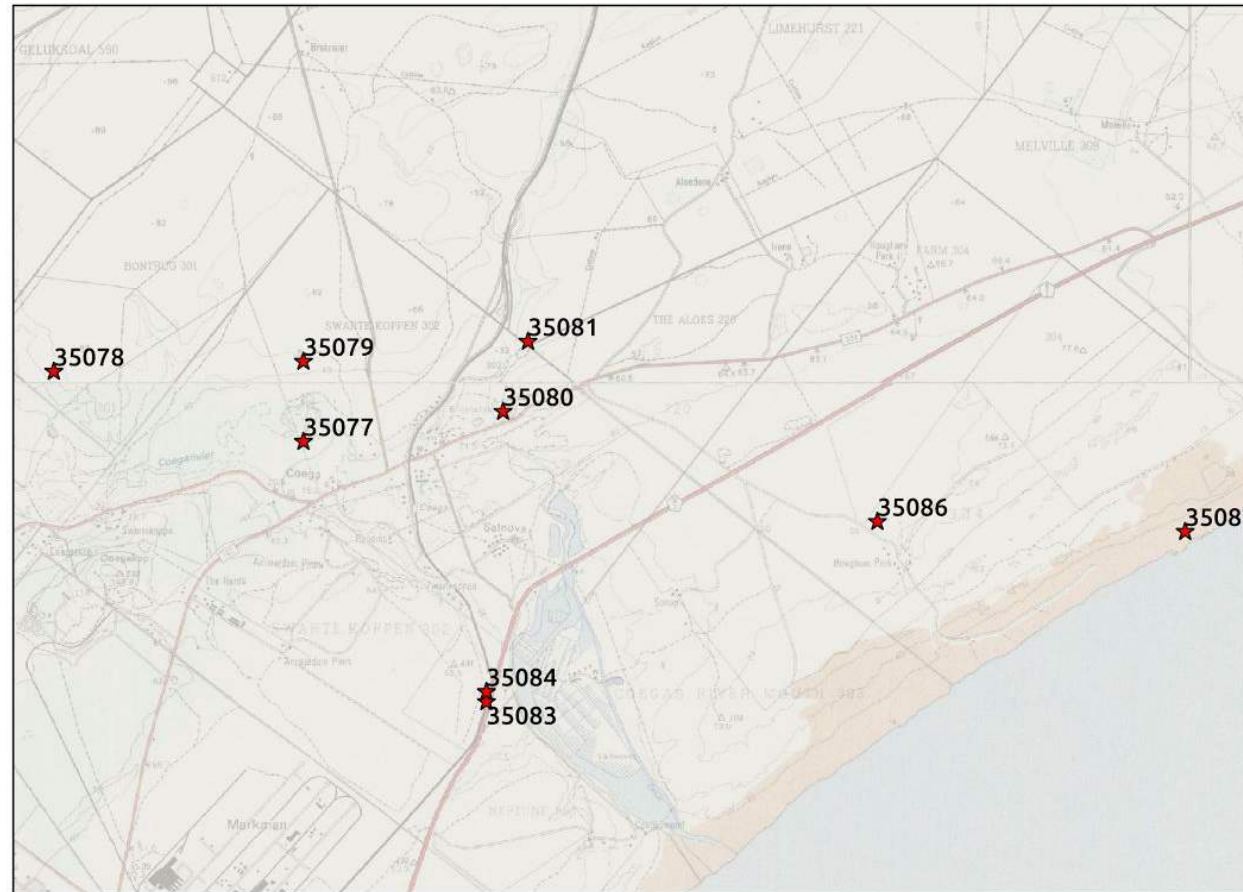
0 10 20 30 km



Figure 4a. Palaeontological Sites Map. Palaeontological sites previously identified in and near the study area. The site IDs of the sites identified in inset b are presented in Figure 4b.



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Legend

Heritage resources

Type

☆ Palaeontological

Grading

DARK RED	I & II
RED	IIIa
ORANGE	IIIb
GREEN	IIIc
CLEAR	Ungraded

0 1 2 3 km



Figure 4b. Palaeontological Sites Map. Close up of the palaeontological sites previously identified in the Coega IDZ area, near the study area, with SAHRIS site NIDs labels indicated.

8. Heritage statement and character of the area

CEN Environmental is undertaking the environmental impact assessment process for a proposed residential development, associated infrastructure and proposed roadworks between Cape Road and Stanford Road near Port Elizabeth.

The archaeological component of the Heritage Impact Assessment has already been commissioned and therefore this screener only consists of the palaeontological component. The proposed residential development is underlain by the Peninsula Formation. This formation may include aquatic trace fossils such as eurypterid trackways and trilobite burrows.

The SAHRIS palaeosensitivity map indicates that this formation is rated as having high palaeontological significance, however, during several palaeontological surveys previously undertaken in the area (amongst others, Almond: March 2010; de Klerk: December 2010 and Pether: June 2012), it was concluded that the Peninsula Formation in this section of the Eastern Cape is only sparsely fossiliferous and therefore of low palaeontological sensitivity. **No further palaeontological studies are therefore recommended in this section.**

All palaeontological sites displayed in Figure 4b are related to the Alexandria, Salnova and Sundays River Formations. **These formations do not occur in the proposed development area.**

Areas indicated in blue (Goudini and Skurweberg Formations) on the palaeontological map are of low palaeontological sensitivity, whereas areas in green are of moderate sensitivity. Given the relative sensitivity of these formations, it is recommended that the ECO be informed of the rare possibility of identifying aquatic fossils in these formations. The area indicated in red in the palaeosensitivity map consists of the Kirkwood Formation. This formation has very high fossil sensitivity, however, only a very small section of the proposed roadworks will occur in this area. **No further palaeontological studies, monitoring or mitigation are therefore recommended in these areas.**



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APPENDIX 1 - Site List

Site ID	Site no	Full Site Name	Site Type	Grading
35077	COE008	Coega 008	Palaeontological	Grade IIIa
35078	COE009	Coega 009	Palaeontological	Grade IIIa
35079	COE010	Coega 010	Palaeontological	Grade IIIa
35080	COE011	Coega 011	Palaeontological	Grade IIIa
35081	COE012	Coega 12	Palaeontological	Grade IIIa
35083	COE013	Coega 013	Palaeontological	Grade IIIa
35084	COE014	Coega 14	Palaeontological	Grade IIIa
35086	COE015	Coega 015	Palaeontological	Grade IIIa
35087	COE016	Coega 016	Palaeontological	Grade IIIa

APPENDIX 2 - Reference List

Nid	Author/s	Date	Report Type	Title
8840	Gess, R.	August 2008	PIA	Palaeontological Heritage Study for Amanzi Estates
8871	Gess, R.	March 2007	PIA	Palaeontological Heritage Report for proposed Chlor-Alkali and Salt Plant at Coega
8875 109216	Almond, J.	March 2010	PIA	Palaeontological Heritage Assessment of the Coega IDZ, Eastern Cape Province
8929	De Klerk, B.	January 2011	PIA	Palaeontological heritage impact assessment of the proposed Happy Valley wind energy facility on a site east of Humansdorp, Eastern Cape
8941	Almond, J.	September 2008	PIA	Kalagadi Manganese Smelter, Coega IDZ, Eastern Cape Province: Desktop Palaeontological Assessment
8955	De Klerk, B.	December 2010	PIA	Palaeontological Heritage Impact Assessment of the proposed wind farms in the coastal region of the Kouga Local Municipality near the villages of Oyster Bay and St Francis Bay.
8988	De Klerk, B.	September 2011	PIA	Proposed Oyster Bay Wind Energy Facility near Humansdorp. Kouga Local Municipality, Eastern Cape
9033	Almond, J.	August 2011	PIA	Proposed Tsitsikamma Community Wind Energy Facility near Humansdorp, Kouga Local Municipality, Eastern Cape Province
44900	Almond, J.	April 2012	PIA	Impact on Palaeontology - Proposed Banna ba Pifhu Wind Energy project near Humansdorp, Eastern Cape.
44918	Pether, J.	June 2012	PIA	MINING RIGHT APPLICATION on Farms Klein Rivier 713 Ptn 32 and Buffelsbosch 742 Ptn 14 District of Humansdorp, Eastern Cape Province



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114648	Almond, J.	September 2012	PIA	Palaeontological specialist assessment: desktop study - Proposed 16 MTPA expansion of Transnet's existing manganese ore export railway line & associated infrastructure between Hotazel and the Port of Ngqura, Northern and Eastern Cape. Part 1: Hotazel to Kimberley, Northern Cape
151768	Almond, J.	November 2013	PIA	Palaeontological specialist assessment: combined desktop and field-based study: Proposed 16 MTPA expansion of Transnet's existing manganese ore export railway line & associated infrastructure between Hotazel and the Port of Ngqura, Northern and Eastern Cape. Part 1: Hotazel to Kimberley, Northern Cape

APPENDIX 3 - Keys/Guides

Key/Guide to Acronyms

AIA	Archaeological Impact Assessment
DARD	Department of Agriculture and Rural Development (Kwa-Zulu 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)
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
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.



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.

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
- 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.**