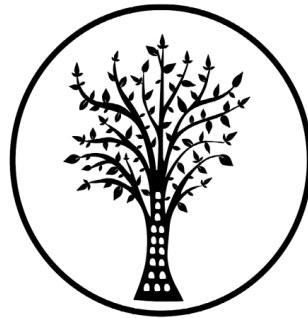


HERITAGE CONSERVATION MANAGEMENT PLAN

**UMMBILA EMOYENI RENEWABLE ENERGY WIND AND SOLAR PV
FACILITIES, MPUMALANGA PROVINCE**



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Prepared by CTS Heritage

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For

Savannah Environmental

April 2023



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1. INTRODUCTION

Umbila Emoyeni Renewable Energy Farm (Pty) Ltd is proposing the development of renewable energy facilities, collectively known as the Umbila Emoyeni Renewable Energy Facility (REF), consisting of a commercial wind farm, solar PV facility, and associated grid infrastructure, including a battery energy storage system, located approximately 6km southeast of Bethal in the Mpumalanga Province of South Africa.

A preferred project focus area with an extent of 27 819ha been identified by Umbila Emoyeni (Pty) Ltd as a technically suitable area for the development of the Umbilla Emoyeni Renewable Energy Farm with a contracted capacity of up to 666MW of wind energy and 150MW of solar energy. This layout, and project capacity, will be reduced as the EIA and scoping process identifies environmental constraints that exclude areas for development.

The wind farm is proposed to accommodate the following infrastructure:

- Up to 111 wind turbines with a maximum hub height of up to 200m. The tip height of the turbines will be up to 300m.
- 33kV / 132kV onsite collector substations
- Battery Energy Storage System (BESS)
- Cabling between turbines, to be laid underground where practical
- Laydown and O&M hub (approximately 300m x 300m):
 - Batching plant of 4ha to 7ha
 - Construction compound (temporary) of 6 Ha approximately
 - Operation and Maintenance office of 1.5Ha approximately ,
- Laydown and crane hardstand areas (approximately 75m x 120m)
- Access roads of 12-13m wide, with 12m at turning circles.

The solar PV facility is proposed to accommodate the following infrastructure:

- PV modules and mounting structures with a capacity per panel of 350W to 450W and dependent on optimization and cost.
- Inverters and transformers
- 33kV/132kV onsite collector substation
- Battery Energy Storage System (BESS)
- Cabling between project components
- Laydown and O&M hub (approximately 300m x 300m):

- Construction compound (temporary),
- Maintenance office
- Access roads (up to 12m wide)

The project will include associated grid infrastructure that is required to connect the Ummbila Emoyeni Renewable Energy Facility to the national grid. The grid connection solution entails establishing a 400/132 kV MTS, between Camden and SOL Substations, which will be looped in and out of the existing Camden-Sol 400 kV line¹. The location of the MTS will be refined through an ongoing process of communication with Eskom Planning but will be within close proximity to the 400kV line in order to cut into this line.

It is anticipated that the power generated by the project will be bid into the REIPPPP tender process (DMRE) and/or into private off take opportunities. The LILO corridor will intersect with either the Camden-Zeus 1 400kV, Camden-Zeus 2 400kV or Camden-Tutuka 400kV power line.

1.1 Location of Site

The development is located on the eastern side of the R35 that runs between Bethal and Morgenon in Mpumalanga. The project site comprises the following farm portions:

Table 1: Farm Portions

Parent Farm Number	Farm Portions
Farm 261 – Naudesfontein	15, 21
Farm 264 – Geluksplaats	0, 1, 3, 4, 5, 6, 8, 9, 11, 12
Farm 268 – Brak Fontein Settlement	6,7,10,11,12
Farm 420 – Rietfontein	8,9,10,11,12,15,16,18,19,22,32
Farm 421 – Sukkelaar	2, 2, 7, 9, 9 10, 10 11, 11 12, 12 22 ,25, 34, 35, 36, 37, 37, 38, 39, 40, 42, 42
Farm 422 – Klipfontein	0, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23
Farm 423 – Bekkerust	0, 1, 2, 4, 5, 6, 10, 11, 12, 13 14, 15, 17, 19, 20, 22, 23, 2425
Farm 452 – Brakfontein	5
Farm 454 – Oshoek	4, 13, 18
Farm 455 – Ebenhaezer	0, 1, 2, 3
Farm 456 – Vaalbank	1, 2, 3, 4, 7, 8, 13, 15, 16, 17, 18, 19
Farm 457 – Roodekrans	0, 1, 4, 7, 22, 23, 23



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Farm 458 – Goedgedacht	0, 2, 4, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 21, 22, 25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 37, 39
Farm 467 – Twee Fontein	0, 1, 4, 5, 6, 7, 8, 10
Farm 469 – Klipkraal	5, 6, 7, 8
Farm 548 – Durabel	0

1.2 Ownership and responsibility for site

Landowners

The land on which the Ummbila Emoyeni REF is located is privately owned:

Table 2: Landowner Contact Information

No.	Portion	Landowner	Contact Details
261	15	NICJAC PIETERSE BOERDERY CC	<u>Jacobus H Pieterse - 082 783 2687</u> <u>Simon N Pieterse - 087 550 0930</u> <u>Jacques - 082 783 2687</u> <u>Nico - 082 567 8085</u> <u>andre@njptransport.co.za</u> <u>jacques@njptransport.co.za</u> <u>nico@njptransport.co.za</u>
261	21	Johannes Fourie	
264	0	NICJAC PIETERSE BOERDERY CC	<u>Jacobus H Pieterse - 082 783 2687</u> <u>Simon N Pieterse - 087 550 0930</u> <u>Jacques - 082 783 2687</u>
264	1	NICJAC PIETERSE BOERDERY CC	<u>Nico - 082 567 8085</u> <u>andre@njptransport.co.za</u> <u>jacques@njptransport.co.za</u> <u>nico@njptransport.co.za</u>
264	3	ROOIBLOM BOERDERY NO 1 TRUST	<u>Neil Claasen - 082 809 9967 - niel@rooiblom.co.za</u>
264	4	ROOIBLOM BOERDERY NO 1 TRUST	<u>Neil Claasen - 082 809 9967 - niel@rooiblom.co.za</u>
264	5	ROOIBLOM BOERDERY NO 1 TRUST	<u>Neil Claasen - 082 809 9967 - niel@rooiblom.co.za</u>
264	6	HENNIE FOURIE TRUST	Sterk Gert' - 0828944275
264	8	GELUKSPLAATS BELEGGINGS TRUST	Bertus Louw - 082 492 0945



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264	9	PIETER FRANCOIS ERASMUS - Pietman	Pietman - 082 571 5561 - pietman.bekkersrust@gmail.com
264	11	JOHAN A LOMBARD	JOHAN A LOMBARD - jalombard84@gmail.com - 0132915516 & 0823883103
264	12	GELUKSPLAATS BELEGGINGS TRUST	Bertus Louw 082 492 0945
268	6	PIETER FRANCOIS ERASMUS - Pietman	Pietman - 082 571 5561 - pietman.bekkersrust@gmail.com
268	7	GERT FOURIE BOERDERY TRUST	
268	10	GERT FOURIE BOERDERY TRUST	
268	11	HENNIE FOURIE TRUST	Sterk Gert - 0828944275
268	12	HENNIE FOURIE TRUST	Sterk Gert - 0828944275
420	8	ROUX FRANCINA JOHANNA 4105020022086	Hennie Roux - 083 232 6236 - hennie958@gmail.com
420	9	MARIUS CARINUS TRUST 1259/98	Marius Carinus - 0827813662 - carienmarius@gmail.com
420	10	NICJAC PIETERSE BOERDERY CC	Jacobus H Pieterse - 082 783 2687 Simon N Pieterse - 087 550 0930 Jacques - 082 783 2687
420	11	NICJAC PIETERSE BOERDERY CC	Nico - 082 567 8085 andre@njptransport.co.za jacques@njptransport.co.za
420	12	NICJAC PIETERSE BOERDERY CC	nico@njptransport.co.za
420	15	DEUTRANS LANDBOU EIENDOMME CC 200903881523	Tony Brand - 0833031058
420	16	NICJAC PIETERSE BOERDERY CC	Jacobus H Pieterse - 082 783 2687 Simon N Pieterse - 087 550 0930 Jacques - 082 783 2687 Nico - 082 567 8085 andre@njptransport.co.za jacques@njptransport.co.za nico@njptransport.co.za

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420	18	DEUTRANS LANDBOU EIENDOMME CC 200903881523	Tony Brand - 0833031058
420	19	NICJAC PIETERSE BOERDERY CC	<u>Jacobus H Pieterse - 082 783 2687</u> <u>Simon N Pieterse - 087 550 0930</u> <u>Jacques - 082 783 2687</u>
420	22	NICJAC PIETERSE BOERDERY CC	<u>Nico - 082 567 8085</u> <u>andre@njptransport.co.za</u> <u>jacques@njptransport.co.za</u> <u>nico@njptransport.co.za</u>
420	32	MARIUS CARINUS TRUST1259/98	<u>Marius Carinus - 0827813662 - carienmarius@gmail.com</u>
421	2	HENDRIKSPAN BOERDERY CC 200205330223	<u>Flippie v Dyk - flippievandyk73@gmail.com</u>
421	2	HENDRIKSPAN BOERDERY CC 200205330223	<u>Flippie v Dyk - flippievandyk73@gmail.com</u>
421	7	Frik Human Plase cc	Brother to Hannes - Frik Human - 0824742799
421	9	Klipfontein Family Trust	
421	9	Klipfontein Family Trust	
421	10	Klipfontein Family Trust	
421	10	Klipfontein Family Trust	
421	11	Frik Human Plase cc	
421	11	Frik Human Plase cc	
421	12	Frik Human Plase cc	
421	12	Frik Human Plase cc	
421	22	Klipfontein Family Trust	
421	25	Klipfontein Family Trust	
421	34	KLIPFONTEIN BOERDERY TRUST 5771/1996	<u>Hannes Human - hanneshuman1@gmail.com - 082 550 3670</u>
421	35	Frik Human Plase cc	Brother to Hannes - Frik Human - 0824742799
421	36	KLIPFONTEIN BOERDERY TRUST 5771/1996	<u>Hannes Human - hanneshuman1@gmail.com - 082 550 3670</u>
421	37	Frik Human Plase cc	

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421	37	Frik Human Plase cc	
421	38	Klipfontein Family Trust	
421	39	Van Rooyen	
421	40	ROUX FRANCINA JOHANNA4105020022086	<u>Hennie Roux - 083 232 6236 - hennie958@gmail.com</u>
421	42	ROUX FRANCINA JOHANNA4105020022086	
421	42	ROUX FRANCINA JOHANNA4105020022086	
422	0	VON WIELLIGH CHRISTIAAN LODEWYK WENTZEL	Alida von Wielligh - 0823371218 or 0178195896
422	2	ROUX FRANCINA JOHANNA4105020022086	<u>Hennie Roux - 083 232 6236 - hennie958@gmail.com</u>
422	3	Klipfontein Family Trust	<u>Hannes Human - hanneshuman1@gmail.com - 082 550 3670</u>
422	4	PIETER FRANCOIS ERASMUS - Pietman	<u>Pietman - 082 571 5561 - pietman.bekkersrust@gmail.com</u>
422	5		

Environmental Authorisation (EA) Holder

The EA Holder would be the Project Company, Ummbila Emoyeni (Pty) Ltd, who, through the EA acquires the right to develop the project (considering all other permits and consents have been acquired from all other relevant competent authorities). The Project Company does not, however, own the land on which it intends to develop.

Contact Person: Mr Peter Carl Venn

Address: 15 Chaplin, Cnr Oxford and Chaplin Roads, Illovo, 2196

Telephone: 083 689 3063

Email: peter.venn@seritigreen.com

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Implementation of EA

The person responsible for the implementation of the conditions in the EA would be the contractors during the construction phase. However, any non-compliance would fall onto Ummbila Emoyeni (Pty) Ltd as the holder of the EA. All non-compliance would be audited by an independent ECO which would be appointed by Ummbila Emoyeni (Pty) Ltd. Ummbila Emoyeni (Pty) Ltd would operate the facility. For decommissioning, the responsible parties would again be the contractors and audited by ECO but overall compliance would fall on Ummbila Emoyeni (Pty) Ltd.

Heritage Authorities

The area proposed for development is located in the Mpumalanga Province. As such, the area is subject to two different heritage management authorities. All impacts to archaeological and palaeontological heritage in the Mpumalanga Province are managed by SAHRA. Any impacts to these resources are subject to the recommendations and best practice processes established by SAHRA for archaeology and palaeontology.

All impacts to structures that are older than 60 years in the Mpumalanga Province are managed by the Mpumalanga Provincial Heritage Resources Authority (MPHRA). Any impacts to these resources are subject to the recommendations and best practice processes established by MPHRA.

1.3 Site Description

The area proposed for development is dominated by agriculture and Soweto Highveld Grassland. The study area consists of a gentle to medium undulating landscape with a few prominent rocky outcrops visible consisting largely of shale, dolerite and sandstone.

The vegetation of the study area alternates between cultivated cornfields, grasslands for grazing, and the typical grass tundras of the Highveld plateau. There are narrow streams and small scattered wetlands present across the study area. Dirt roads, main roads and farmlands bound the site to the north, south, east and west. Evidence of crop rotation and different types of cultivation is visible in areas of the development footprint. Scraped dirt roads, large farm vehicles and cargo trucks are present, moving through wet turf soil resulting in turbation of the roads.

The area is predominantly cornfields and grasslands in various stages of harvesting. In addition, large hay bales indicate that many “natural” grasslands are grown for animal feed. Therefore, it was clear that much of the area has been subjected to continuous agricultural activities and



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anthropogenic disturbances for a very long time.



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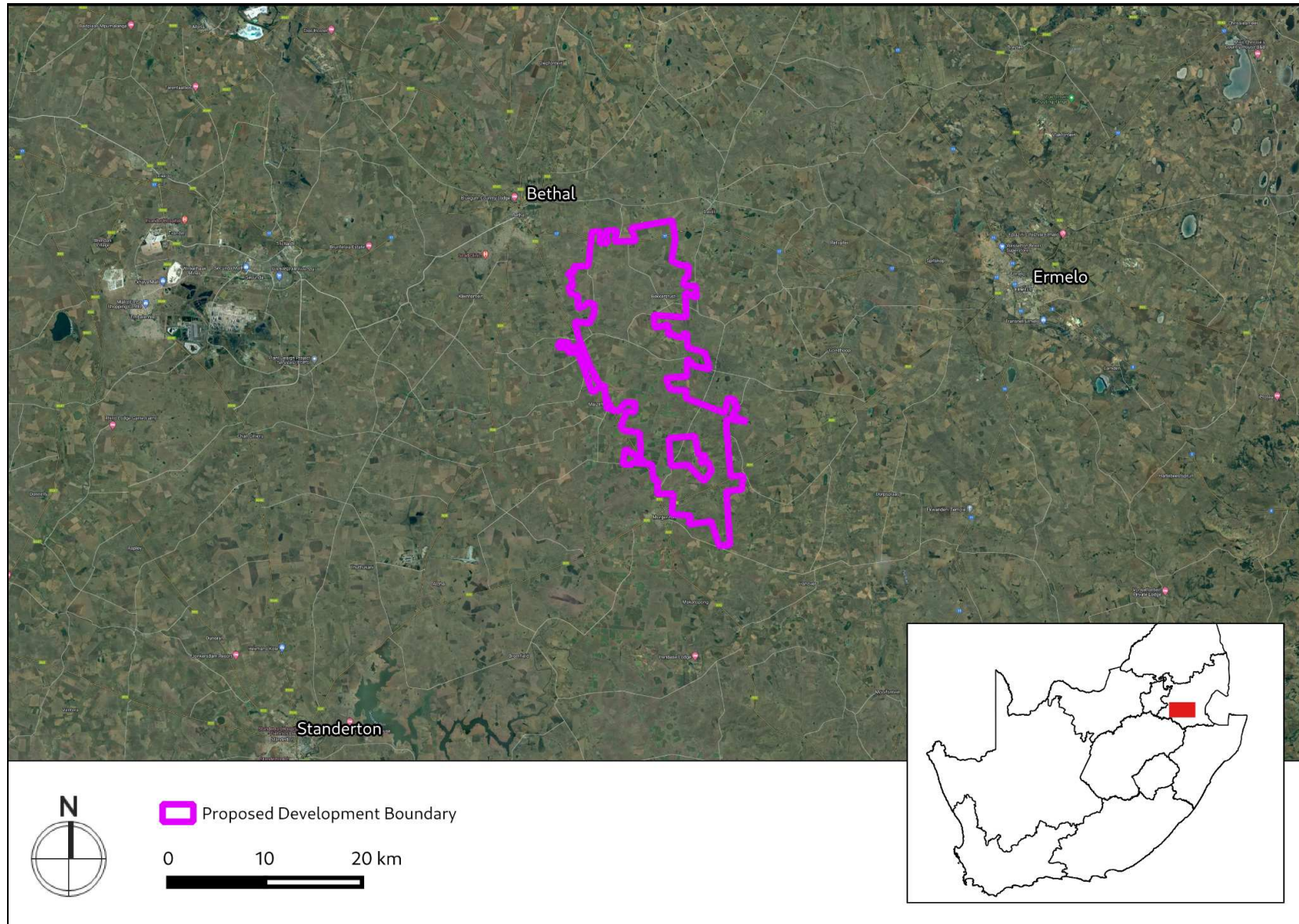


Figure 1: Location of Site

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1.4 Statement of Site significance

General points on significance

The cultural significance of a site determines the appropriateness and extent to which protection measures are required. The value or importance of the site to society in general, to specific past and present groups, and to posterity, includes:

- Spiritual/social value - the traditional and consistent use of a site for religious, spiritual or social purposes, even if the religious use no longer continues
- Aesthetic/artistic value - the recognition by scholars and the general public that a cultural site represents a high point of creative achievement
- Historic value - the achievements and knowledge of the past as vehicles for enlightening the present and future
- Scientific/research value - the site, or feature within the site, providing a source of knowledge that is unobtainable elsewhere

Since cultural significance can be interpreted differently by different people, and evaluations can change with time and circumstances, it is important to assess the significance of a site in terms of:

- The importance of a particular site in relation to other sites so as to decide on the appropriate level of management
- Ascertaining what all these values are so as not to inadvertently damage one value that a site has, while preserving another.

Details of the grading system used are provided in section 3 of the NHRA. In addition, the system outlined in Heritage Western Cape's Guideline for Grading: Implications and Management was used.

As per this system, heritage significance is indicated on a sliding scale:

- Grade I - National Significance
- Grade II - Regional/Provincial Significance
- Grade IIIA - High Local Significance
- Grade IIIB - Moderate Local Significance
- Grade IIIC - Low Local Significance
- NCW - Not Conservation-Worthy



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Significance of Heritage Resources

A number of heritage resources located within the Ummbila Emoyeni Renewable Energy Facility development area were identified through the initial Heritage Impact Assessment process (CTS Heritage 2022). All of the identified heritage resources have been graded in terms of the provisions of section 3 of the National Heritage Resources Act and the HWC Guide on the Implications of Grading (2016). As such, the grading methodology is not repeated here.

While not exhaustive, the list of known heritage resources located within the Ummbila Emoyeni Renewable Energy Facility development area provides insight into the nature and significance of the heritage resources common in the broader area.

As per the intentions of the NHRA, the grading of a heritage resource is indicative of its cultural significance and therefore informs its management and conservation strategies.

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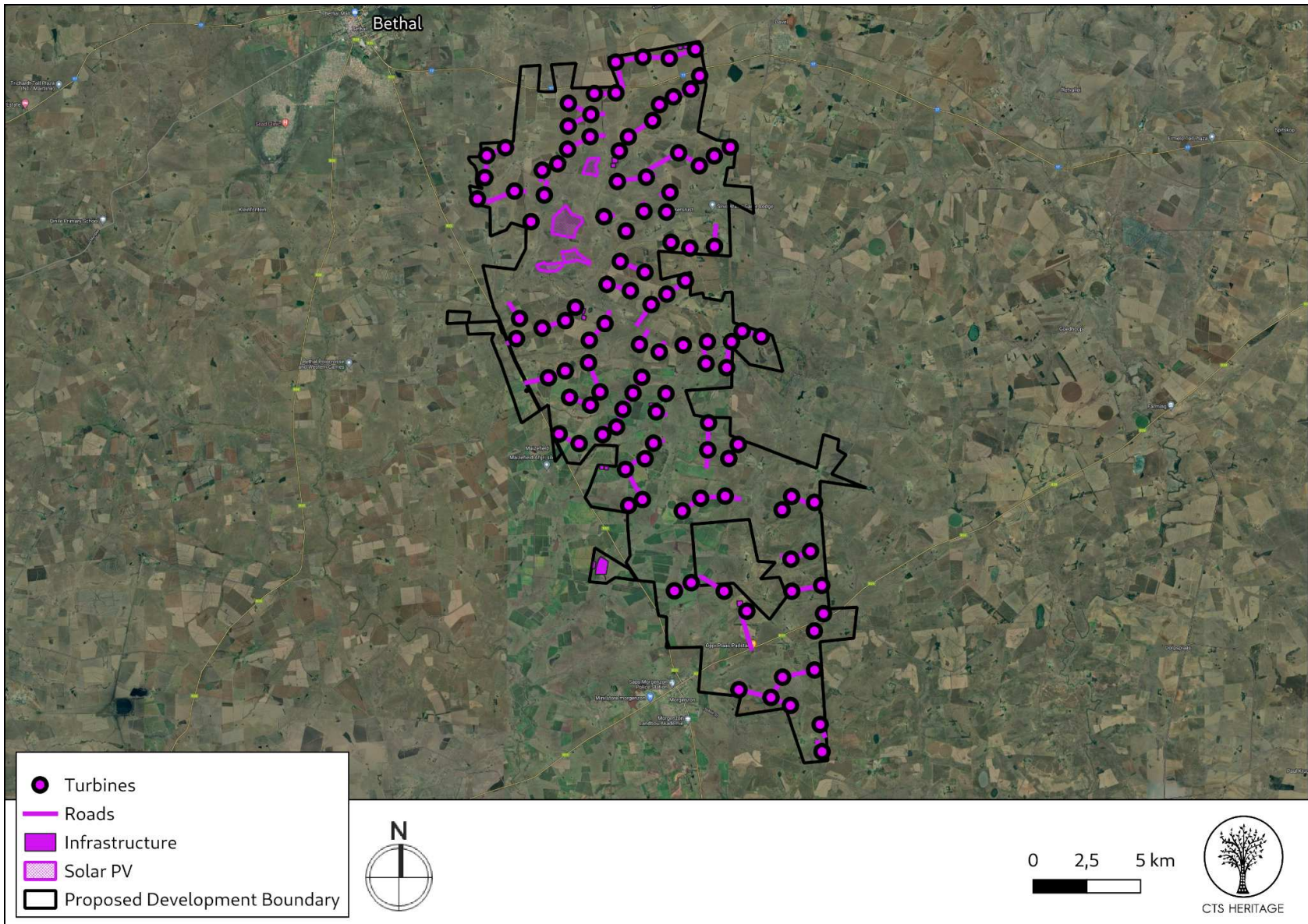


Figure 2: Umbila Emoyeni WEF and PV Layout

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1.5 Objectives of Management Plan

The purpose of this management plan is to guide the activities affecting the heritage resources to retain their significance by conserving it for future generations. A management plan is a living document in the sense that it can be updated as the situation changes and should therefore be reviewed regularly.

This management plan identifies:

- **what needs to be managed** - by surveying and recording the archaeological site in detail and summarising information on the location of sites and what they comprise;
- **who will manage the heritage resources** - by listing the people who have interests in the place and might be involved in its management;
- **the significance of the heritage** in relation to other local, provincial and national sites because the plan is designed to retain this significance;
- **key issues that must be addressed** to retain the significance through consultation with stakeholders;
- **the goals, objectives and strategies** for management and how they will be implemented; and
- **a documentation and monitoring plan** for the ruins so that any changes can be detected and the steps that have been taken can be documented.

1.6 Revision of Plan

The management plan should be reviewed every 5 years and revised as required, or as necessary when circumstances require it. Any revisions must be submitted to SAHRA for approval.

2. RECORDING AND RESEARCH

2.1 Objectives of Recording and Research

Thorough recording of archaeological and heritage sites allows site managers and heritage authorities to manage and identify the changes taking place at a site over time. The heritage resources located within this development have been previously recorded through the Heritage Impact Assessment conducted for the renewable energy facility (CTS Heritage, 2022).

It is anticipated that proposed clearance of vegetation and excavation associated with the construction of the facility and its associated infrastructure may reveal additional heritage resources that are currently hidden by the vegetation and surface soil.

The heritage resources identified within this site, and that are the subject of this management plan, are the burials and burial grounds identified in the HIA (CTS Heritage, 2022). These resources have high levels of local cultural significance and require proactive management interventions to ensure their conservation.

2.2 Background context

CTS Heritage (2022) drafted a concise background of the broader context of this area in the HIA originally drafted for the development. The background to the site is summarised here.

2.2.1 Palaeontological Background

According to the SAHRIS Palaeosensitivity Map, the area proposed for development is underlain by sediments of zero, moderate and very high palaeontological sensitivity. According to the extract from the Council of Science Map for East Rand 2628, the palaeontologically sensitive geology of the area is ascribed to the Vryheid Formation of the Ecca Group of sediments. Groenewald (2014, SAHRIS NID 167013) completed a field-based palaeontological assessment for the Waaihoek WEF in which he interrogates the palaeontological sensitivity of this formation. In this assessment, Groenewald (2014) notes that “The Vryheid Formation consists of interbedded very coarse-grained sandstone and mudstone that yields plant and trace fossils as well as some prominent coal seams.” In this assessment, Groenewald (2014) made the following recommendations for the WEF development within the Vryheid Formation “The PEA and CEO be made aware of the possibility of finding fossils in the Vryheid and Volksrust Formation sediments during excavation of the foundations for the turbines and other infrastructure. A professional palaeontologist is appointed to monitor possible palaeontological finds during excavation of turbine foundations and infrastructure where turbine

positions and infrastructure fall on Vryheid and Volksrust Formation sediments.” The sediments underlying the development area have very high levels of palaeontological sensitivity, the nature of the excavations associated with Renewable Energy facilities tends to be deep and as such, the likelihood of impacting intact Vryheid Formation sediments is high. Further investigation of the palaeontological sensitivity of the development area is recommended.

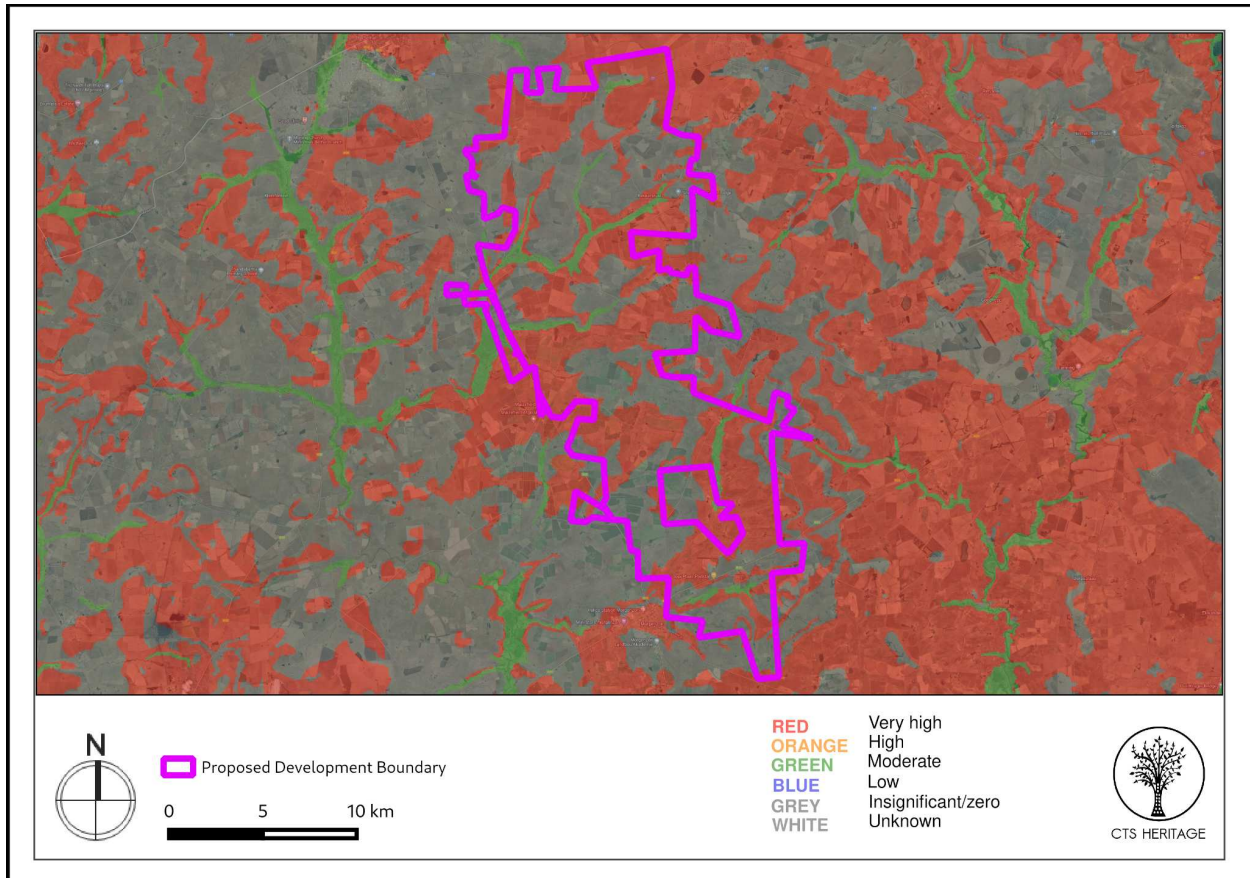


Figure 3.1: Palaeosensitivity Map. Indicating Zero to Very High fossil sensitivity underlying the study area for the facility

A PIA was completed for the renewable energy facility by Groenewald (2022). No palaeontological no-go areas have been identified within the project areas. With the exception of one fossil site of low scientific value, none of the recorded fossil sites overlaps directly with, or lies close to (< 20 m) the proposed infrastructure and no modification of the layouts through micro-siting is proposed here on palaeontological grounds.

One fossil site (UMB10) is located in close proximity to a proposed road and turbine; however, this site has low palaeontological significance and has been sufficiently recorded. No further mitigation is recommended for this site.

The potential for rare, unrecorded fossil sites of high scientific and/or conservation value is very high in the areas proposed for development located within the Vryheid Formation and where excavation depth will exceed 1.5m. These are best handled through a Chance Fossil Finds Protocol as per the recommendations below.

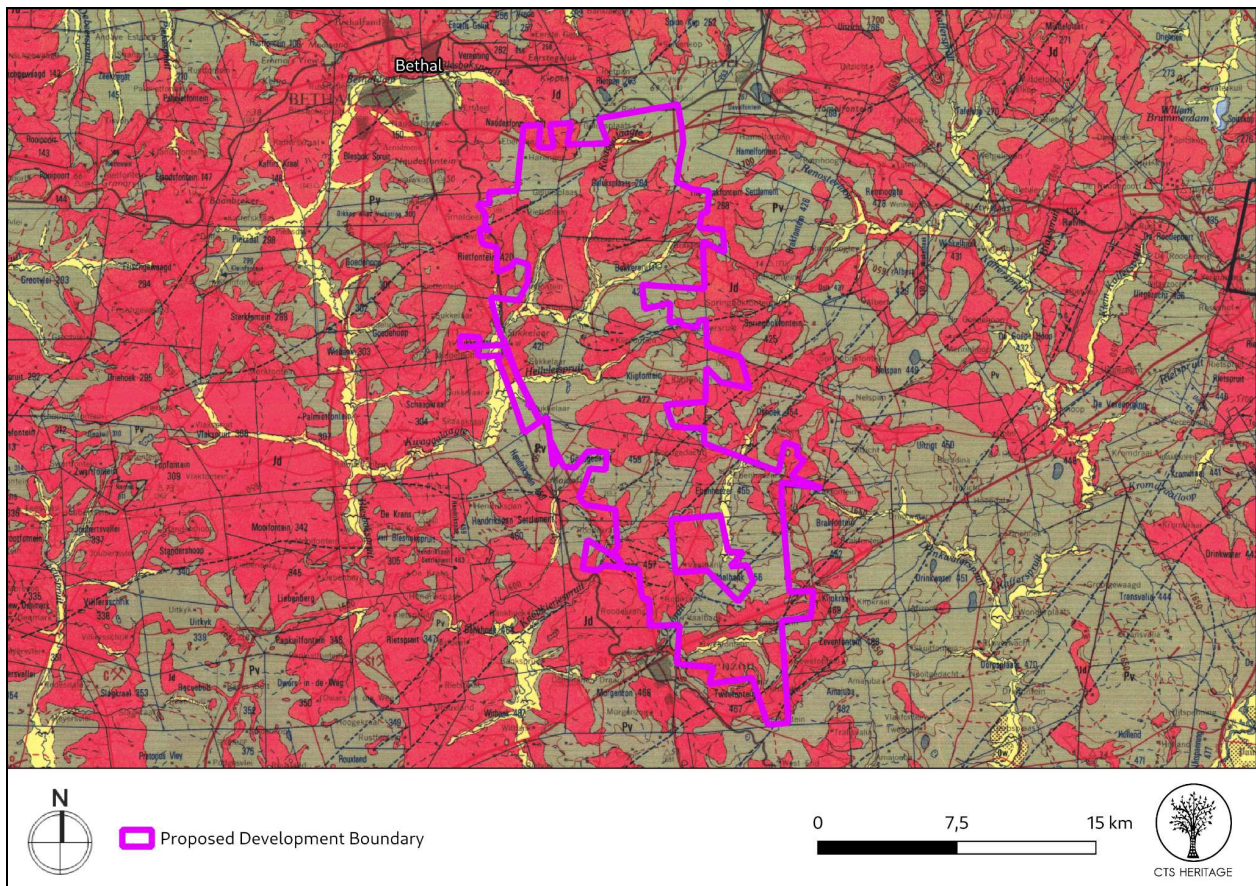


Figure 3.2: Geology Map. Extract from the CGS 2628 East Rand Map indicating that the development area for the REF development is underlain by sediments of Pv: Vryheid Formation of the Eccca Group and Jd: Jurassic Dolerite as well as Quaternary Sands

2.2.2 Archaeological Background

Heritage Impact Assessments have been completed nearby for projects in Secunda and these can be used to infer the archaeological sensitivity in the development area. Van Vollenhoven (2015) notes that the geographical area around the towns of Standerton and Bethal is not known to conserve Stone Age archaeology. He notes that “No such sites are indicated on maps contained in a historical atlas of this area (Bergh 1999: 4-5). However, this may only be since no research has actually been done in this area. The closest known Stone Age occurrences are a Late Stone Age site at the town of Ermelo and rock art sites far to the west of Standerton (Bergh 1999: 4-5).” Van Vollenhoven (2015) noted no natural shelters during the survey; however, the good vegetation in the surrounding area and the rivers indicate that ample grazing and water may have been available, making it a prime spot for hunting in the past. Therefore one may assume that Stone Age people probably would have moved through the area. Late Iron Age sites are found in a large area around the towns of Bethal and Standerton and number at least 585 such sites.

In the heritage assessment of a powerline upgrade at the nearby Syferfontein Mine, Nel & Karodia (2013), noted that *“a heritage assessment was conducted in 2000 by the National Cultural History Museum and included in the Syferfontein Mine EMP in 2010. During the survey, a few Stone Age artefacts were identified. These artefacts were not considered to have any primary context and therefore were interpreted to have low significance value. No Early Iron Age sites were identified. The Late Iron Age sites found here conform to those identified in the literature for the Southern Highveld area (former southern Transvaal, northern Orange Free State) as Type V sites. As the soil is mostly turf, Iron Age settlement usually took place on the various dolerite outcrops. The added benefit of choosing these locations was that it was located at the source of building material used in constructing the settlements. One such site shows interesting features as the living units were actually excavated to obtain enough building material for the surrounding walls. A few of the farmsteads dating to early part of this century were identified as possibly having historical-architectural significance. A number of abandoned homesteads are located in the areas that were investigated. These seem to belong to farm labourers and were all abandoned within the last few years. They are therefore not viewed to be of cultural or historical significance. However, some graves are located in the vicinity of the homesteads and it is possible that more graves will be located nearby”*.

In the field assessment completed for the renewable energy facility development (CTS Heritage, 2022), no Stone Age or Iron age archaeology was identified during the field assessment. Some historical ruins and kraals of contextual historic significance, graded III C, were identified; however, none of these are likely to be impacted as per the layout provided.

A number of burial grounds and/or graves were identified during the field assessment (Grade IIIA) and some of these fall within areas likely to be impacted as per the proposed layout.

2.3 Heritage Resources Identified

The development area has been thoroughly assessed by CTS Heritage in the report dated August 2022. In this assessment, a number of sites of heritage significance were identified:

Sites identified during the field assessment development area

ID	Site Name	Description	Co-ordinates		Grading	Mitigation
1	Umbila Emoyeni 001	10? GRAVES Not all the cairns are intact	-26.50822222	29.57985	IIIA	No direct impact anticipated. Part of historic cluster
2	Umbila Emoyeni 002	STONE STRUCTURE Part of the historical identity of the area, including stone structures and foundations.	-26.51131389	29.57884167	IIIC	No direct impact anticipated. Part of historic cluster
3	Umbila Emoyeni 003	STONE FOUNDATION Part of the historical identity of the area, including stone structures and foundations.	-26.51185278	29.57861111	NCW	Likely to be impacted by the Solar PV Layout
4	Umbila Emoyeni 004	AREA WITH OLD STONE HOUSE STONE CIRCLES STONE KRAAL Part of the historical identity of the area, including stone structures and foundations.	-26.74378611	29.69147222	IIIC	Not impacted by the current development layout
5	Umbila Emoyeni 005	41 GRAVES Fieldstone cairns, with a few cement headstones. Headstones are marked, challenging to discern dates. Graves are situated right next to a cornfield, with a wire fence dissecting what may be more graves	-26.7268	29.68093056	IIIA	No direct impact anticipated however possibility of more burials in the area
6	Umbila Emoyeni 006	15 GRAVES Fieldstone cairns. No inscriptions that could be read. Graves are situated on top of the koppie, within the wind turbine footprint.	-26.69272778	29.67026111	IIIA	Turbine must be relocated more than 300m east of its present location
7	Umbila Emoyeni 007	OLD STRUCTURES Part of the historical identity of the area, including stone structures and foundations.	-26.51163056	29.64264722	NCW	Not impacted by the current development layout
8	Umbila Emoyeni 008	POSSIBLE GRAVE One stone cairn	-26.50435	29.59498889	IIIA	No direct impact anticipated
9	Umbila Emoyeni 009	HISTORIC YARD MIDDEN Part of the historical identity of the area, including stone structures and	-26.50869722	29.58020833	IIIC	No direct impact anticipated. Part of historic cluster



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		foundations.				
10	Umbila Emoyeni 010	HISTORICAL HOUSE AND YARD Part of the historical identity of the area, including stone structures and foundations.	-26.50905278	29.58053611	IIIC	No direct impact anticipated. Part of historic cluster
11	Umbila Emoyeni 011	LARGE STONE KRAAL Part of the historical identity of the area, including stone structures and foundations.	-26.51104444	29.58501667	IIIC	No direct impact anticipated. Part of historic cluster
12	Umbila Emoyeni 012	5 GRAVES Metal cross, fieldstone cairns. Graves are along the proposed powerline route	-26.54944722	29.56575833	IIIA	No direct impact anticipated
13	Umbila Emoyeni 013	80 GRAVES Fieldstone cairns and headstones, painted cement frames and headstones, cement and concrete slabs and headstones. Some of the graves have inscriptions; dates indicated as the 1940s and 1950s. Approximately 80 graves within a rectangular packed stone border. Graves are along the proposed powerline route	-26.58522222	29.60138611	IIIA	Road/grid must be realigned to ensure a minimum of a 50m no development buffer is implemented around the site
14	Umbila Emoyeni 014	HISTORICAL PUMP	-26.58596389	29.60083611	NCW	No direct impact anticipated
15	Umbila Emoyeni 015	SITE SURFACE SCATTERS METAL Surface scatters of glass, large metal objects, farm implements and a cast-iron pot. Could be associated with the graveyard at WP 013 GR	-26.58672222	29.59949444	IIIC	No direct impact anticipated

These sites have been mapped in Figure 4 below.



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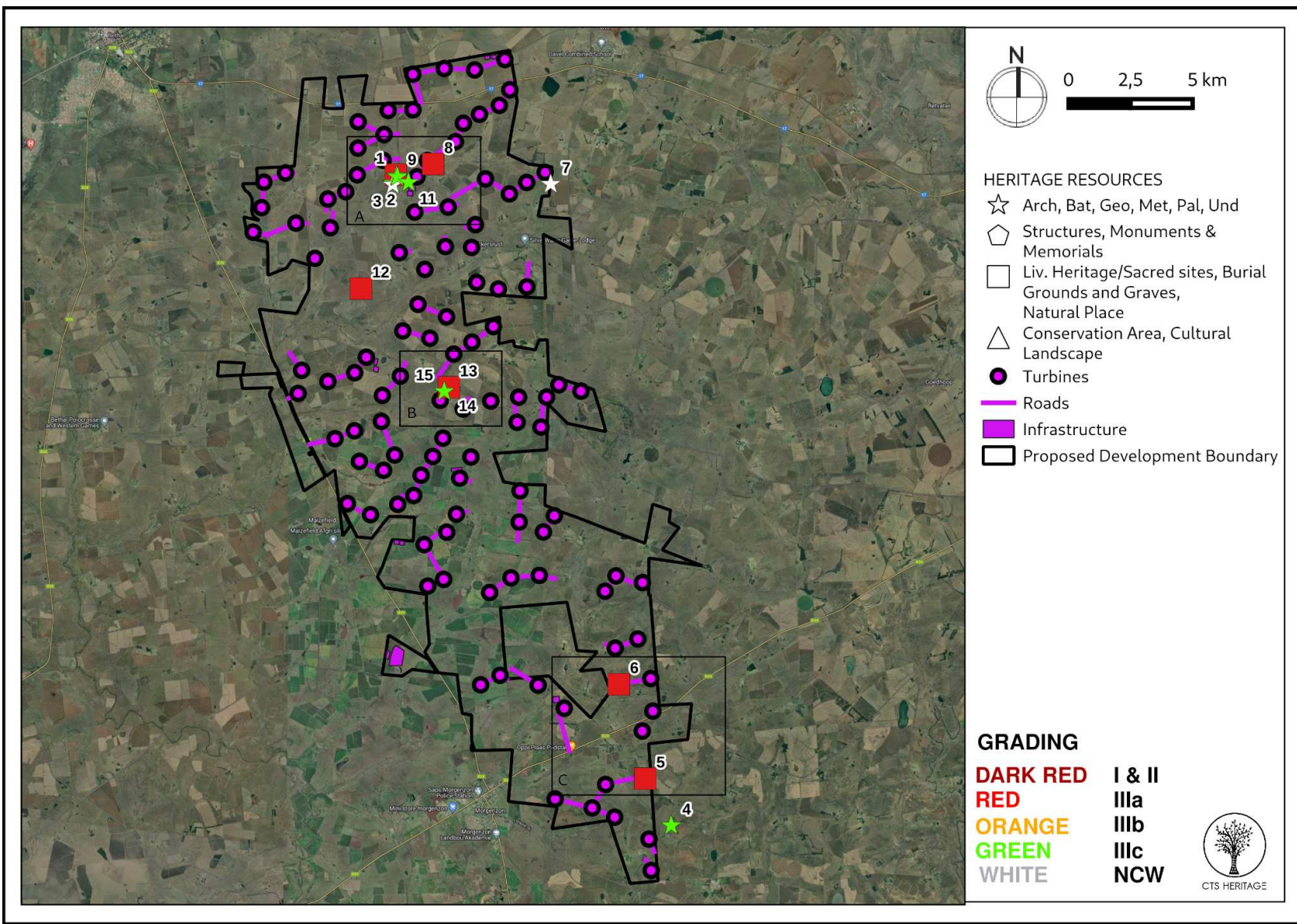


Figure 4.: Map of archaeological heritage resources within the proposed development area

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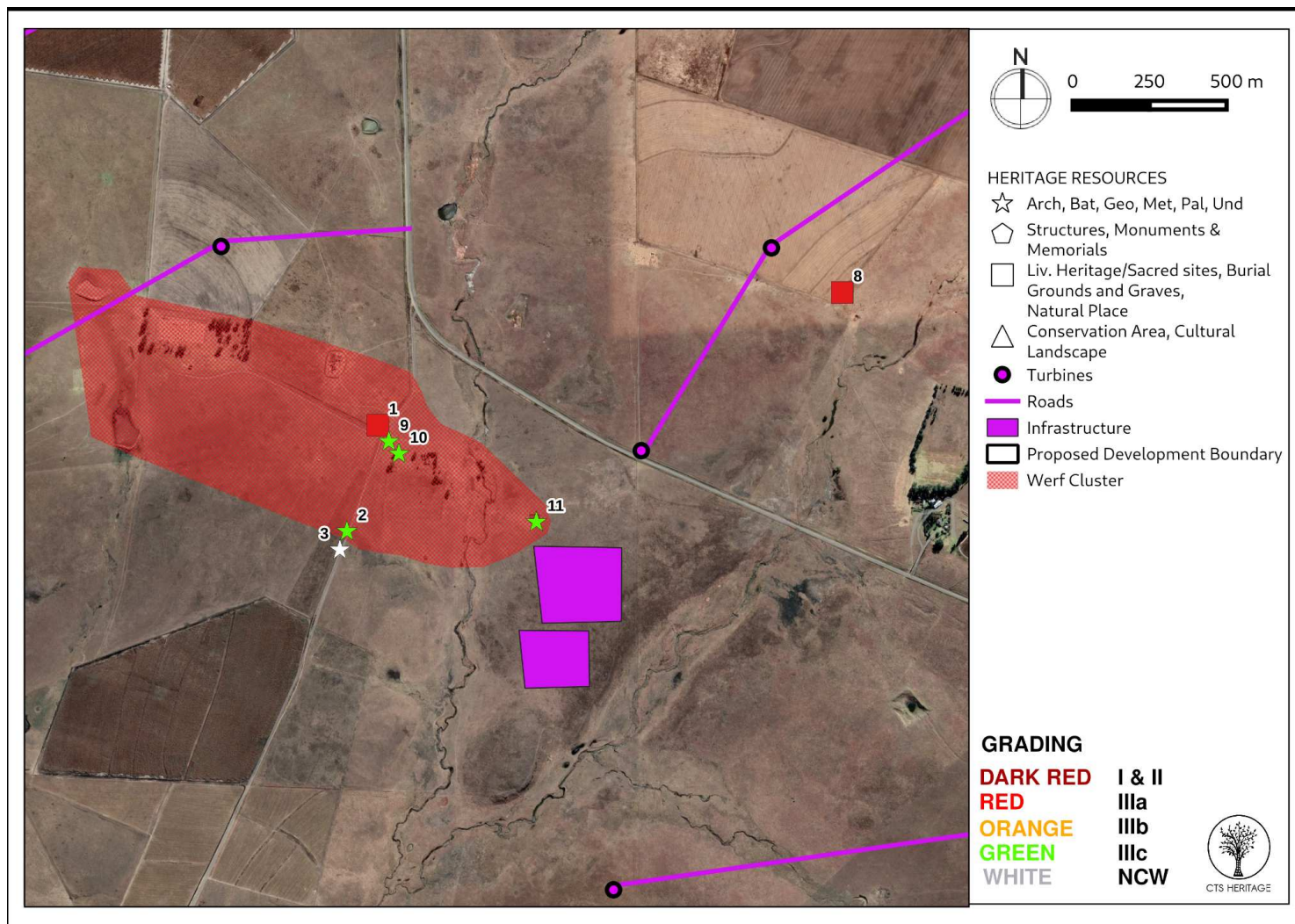


Figure 4.1: Map of all sites and observations noted within the development area - Inset A



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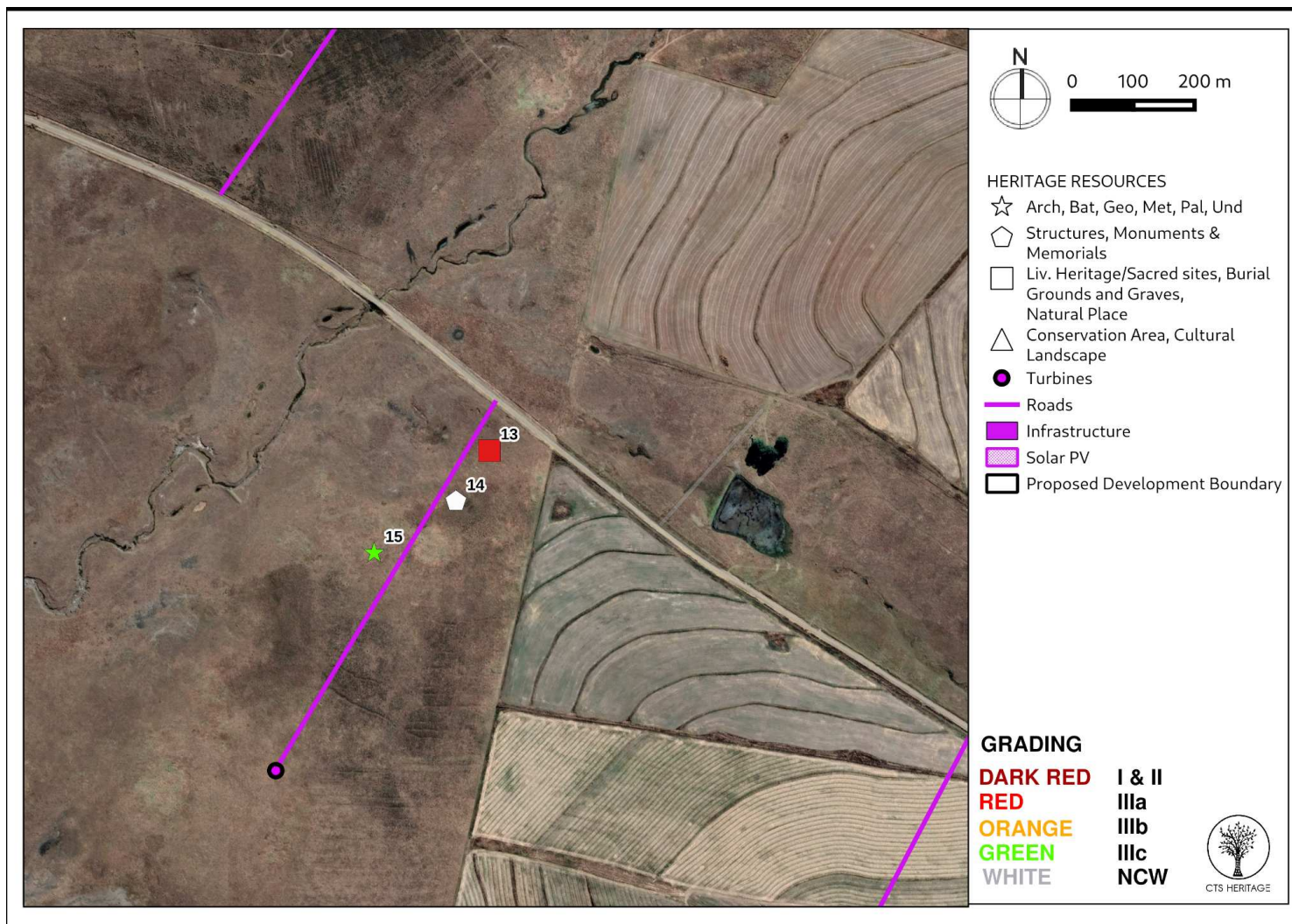


Figure 4.2: Map of all sites and observations noted within the development area - Inset B



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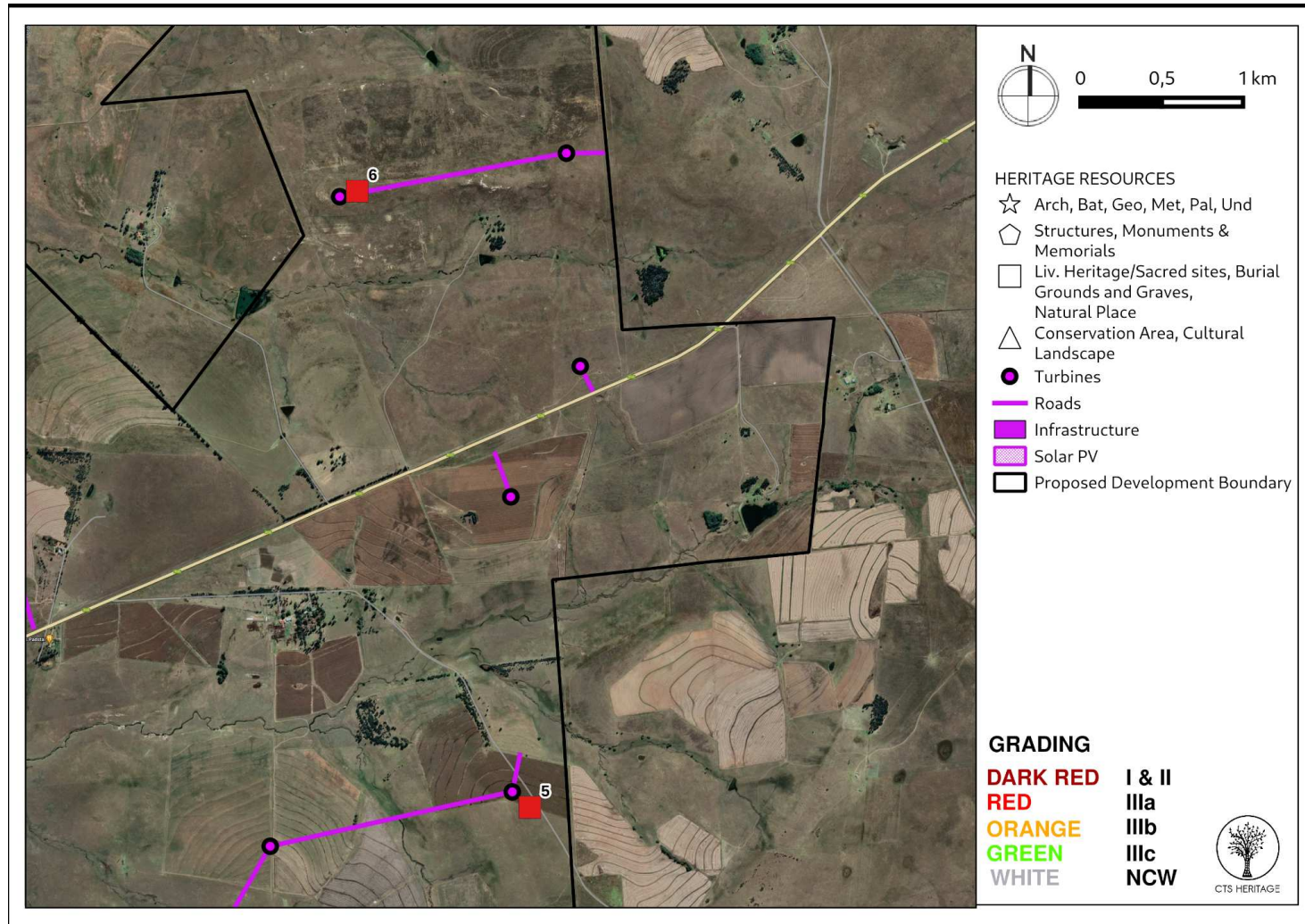


Figure 4.3: Map of all sites and observations noted within the development area - Inset C

3. SITE MANAGEMENT

3.1 Objectives of site management

The objectives of the heritage management plan for the Renewable Energy Facility are to ensure that the heritage resources identified within the area proposed for the development are properly conserved and any further impacts to these heritage resources are appropriately managed.

The Heritage Management Plan identifies the steps required for the appropriate management of these heritage resources including:

- Regular monitoring of the physical integrity of the identified heritage resources
- Details regarding procedures and processes to follow in the event of negative impact to identified or new heritage resources during the construction or operational phases of the development
- Mitigation of potential impacts resulting from the construction, operational and decommissioning phases to the identified heritage resources

3.2 Potential Impacts to identified heritage resources

A. Construction Phase

- *Palaeontology*

The final layout does not impact any known palaeontological heritage resources. The construction of any infrastructure that requires excavation into bedrock or is located at sites of surface exposures of bedrock may have **high** impacts to fossil resources and as such, the attached Chance Fossil Finds Procedure (Appendix 2) must be implemented. However, due to the lack of irreplaceable, unique or rare fossils within the development footprint, and the extensive superficial deposits overlying the sensitive deposits, the significance of the overall impact of the development is expected to be **very low**.

- *Archaeology*

The final layout does not impact any known archaeological heritage resources of significance. Stone Age archaeology is very sparse in this area, with only a very few, isolated artefacts found in the vicinity of the development footprint.

- *Burial Grounds and Graves*

A number of significant burial sites have been identified within the development area. High cultural value is placed on human remains and as such, no impact to these sites can take place. There is a high risk of accidental impact or disturbance to these sites during the construction phase of

development. Recommendations pertaining to the management of impact to these sites are included below. Furthermore, buried burial grounds or graves may be accidentally uncovered during this phase.

- ***Built Environment***

The final layout does not impact any known structures directly. Structures of low significance have been identified within the development area; however no impact to these structures is anticipated. Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, MPHRA must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.

B. Operational Phase

- ***Palaeontology***

Operational activities will not impact any known palaeontological heritage resources and impacts are unlikely during the operational phase. Should any palaeontological heritage be accidentally uncovered during this phase, the Chance Fossil Finds Procedure (Appendix 2) must be implemented.

- ***Archaeology***

Operational activities will not impact any known archaeological heritage resources of significance and impacts are unlikely during the operational phase. Should any archaeological resources be accidentally uncovered during this phase, SAHRA must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- ***Burial Grounds and Graves***

A number of significant burial sites have been identified within the development area. High cultural value is placed on human remains and as such, no impact to these sites can take place. Allowance must be made for access to these burial sites by relatives and relevant communities. Recommendations pertaining to the management of impact to these sites are included below.

Other than this, operational activities will not impact any known burial grounds or graves and impacts are unlikely during the operational phase. Should any burial grounds or graves be accidentally uncovered during this phase, SAHRA must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- ***Built Environment***

Operational activities will not impact any known structures directly and impacts are unlikely during the operational phase. Should it be necessary that structures that have been graded or structures

that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.

C. Decommissioning Phase

- Palaeontology

Infrastructure removal should not impact any known palaeontological heritage resources and impacts are unlikely during the decommissioning phase. Should any palaeontological heritage be accidentally uncovered during this phase, the Chance Fossil Finds Procedure (Appendix 2) must be implemented.

- Archaeology

Infrastructure removal should not impact any known archaeological heritage resources of significance and impacts are unlikely during the decommissioning phase. Should any archaeological resources be accidentally uncovered during this phase, SAHRA must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- Burial Grounds and Graves

Infrastructure removal should not impact any known burial grounds or graves and impacts are unlikely during the decommissioning phase. Should any burial grounds or graves be accidentally uncovered during this phase, SAHRA must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- Built Environment

Infrastructure removal should not impact any known structures directly and impacts are unlikely during the decommissioning phase. Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.

3.3 Conservation and management requirements

Mitigation measures to reduce the anticipated negative impacts to the identified heritage resources during the various phases of the development include:

- A 500m no development buffer should be implemented on either side of the N17, R35 and R39
- A 200m no development buffer should be implemented on either side of the secondary routes that run through the development area
- A 500m no development buffer must be implemented around the identified farm werfs



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- A 50m no-go development buffer is implemented around all burial ground sites including Observations 001, 005, 006, 008, 012 and 013.
- A Management Plan for the ongoing conservation of these burials is developed prior to construction, along with a Guide on how to identify marked and unmarked burials and how to proceed should previously unidentified burials be uncovered during the construction process.
This document satisfies this requirement
- The historic farm werf cluster is not impacted by the development.
- Turbine 101 must be relocated 300m east along the road alignment to ensure that no human remains are impacted by the development.
- The road to Turbine 60 must be relocated to ensure that a no-development buffer of at least 50m is implemented around the burial site 013 so that no impact takes place.
- The Chance Fossil Finds Procedure (Appendix 3) must be strictly adhered to for excavations exceeding 1.5m located within the Vryheid Formation
- Although all possible care has been taken to identify sites of cultural importance during the investigation of the study area, it is always possible that hidden or subsurface sites could be overlooked during the assessment. If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils, burials or other categories of heritage resources are found during the proposed development, work must cease in the vicinity of the find and SAHRA must be alerted immediately to determine an appropriate way forward.

3.4 Consultation

The main stakeholders for the site currently are the owners of the property, the Local Authorities, the managers of the facility and the heritage authority for the Mpumalanga Province (SAHRA and MPHRA).

Additional stakeholders include the present occupants of the property as well as the relatives and relevant community members associated with the burial sites identified within the development area.

4. MONITORING

4.1 Objectives of Monitoring

The following recommendations are made for long-term management of the identified heritage resources to conserve the significance of the place as part of the irreplaceable history and shared cultural heritage of the landscape. The following management goals provide guidelines for use and maintenance of the heritage, acceptable physical protection and conservation, visitor education, monitoring and research.

4.2 Monitoring and Site Maintenance

Action	Responsible party	Performance Indicators	Evidence
CONSTRUCTION PHASE			
All site crew should be informed of the heritage significance of the resources in the study area	ECO	Once-off meeting held with site crew	Minutes of meeting
All sites within the development area should be inspected by the ECO during the construction phase to ensure they are being respected and that no impact takes place	ECO	Site inspections conducted at all sites at regular intervals	Monthly Site Inspection and Monitoring Report to be submitted to SAHRA
All burial sites must be fenced using clearview fencing to ensure visual permeability and continuity in terms of sense of place. A gate must be created for access purposes for relatives and relevant community members. The position of this gate must be such that it can be accessed without risk to the renewable energy facility. This fencing must be placed 5m from the nearest identifiable burial.	ECO	Fences appropriately erected with gates	Existing fences with gates
No impact may take place within the fenced area. All development associated with the facility must take place more than 45m from the erected fence providing a 50m buffer between the burials and construction activities as per the recommendations in the HIA	ECO	Site inspections conducted at all sites at regular intervals	Monthly Site Inspection and Monitoring Report to be submitted to SAHRA
Contact must be made with the present and past occupants of the property in order to identify relevant relatives of the deceased	ECO	Engagement with occupants and family members	Contact list for visitors



and relevant community members. A list of relevant relatives and community members that are likely to want access to the burial sites must be compiled and lodged with the WE Facility management. The individuals on this list will have access to the burial sites as required.			
Significant fossil finds to be reported to the South African Heritage Resources Agency (SAHRA) for recording and sampling by a professional palaeontologist;	ECO	Implementation of the Chance Fossil Finds Procedure	Written correspondence with relevant heritage authority regarding the find and minutes of relevant meetings
Implementation of the Chance Fossil Finds Procedure	ECO	Implementation of the Chance Fossil Finds Procedure	Written correspondence with relevant heritage authority regarding the find and minutes of relevant meetings
If any archaeological material or human burials are uncovered during the course of development, then work in the immediate area should be halted at once. The find should be reported to the heritage authorities (SAHRA) and may require inspection by an archaeologist to determine whether mitigation should take place and what form that mitigation should take.	ECO	No unplanned impact or unplanned impact managed Halted within 4 hours	Written correspondence with relevant heritage authority regarding and minutes of relevant meetings
Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.	ECO	Section 34 permit application to MPHRA	Permit issued in terms of section 34 from the relevant heritage authority or correspondence in this regard.
OPERATIONAL PHASE			
Keep all disturbance within existing development footprint and ensure identified buffers and no-go areas are adhered to	Site Manager	No unplanned impact or unplanned impact managed halted within 4 hours	Site Inspection every 5 years and Monitoring Report to be submitted to SAHRA



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All site crew should be informed of the heritage significance of the resources in the study area	Site Manager	Meeting held with site crew	Minutes of meeting
Visitors are to be allowed access to the burial sites as per the list of identified relatives and community members. A visitor protocol must be developed and implemented	Site Manager	Record of names and dates of visitors to be kept Visitor protocol to be developed.	Database of names and dates of visitors to the burial sites
Implementation of the Chance Fossil Finds Procedure	Site Manager	Implementation of the Chance Fossil Finds Procedure	Written correspondence with relevant heritage authority regarding finds and minutes of relevant meetings
If any archaeological material or human burials are uncovered during the course of operations, then work in the immediate area should be halted at once. The find should be reported to the heritage authorities (SAHRA) and may require inspection by an archaeologist to determine whether mitigation should take place and what form that mitigation should take.	Site Manager	No unplanned impact or unplanned impact halted within 4 hours	Written correspondence with relevant heritage authority regarding finds and minutes of relevant meetings
Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.	Site Manager	Section 34 permit application to MPHRA	Permit issued in terms of section 34 from the relevant heritage authority or correspondence in this regard.
DECOMMISSIONING PHASE			
Keep all disturbance within existing development footprint and ensure identified buffers and no-go areas are adhered to	Site Manager/ECO	No unplanned impact or unplanned impact managed halted within 4 hours	Monthly Site Inspection and Monitoring Report to be submitted to SAHRA
All site crew should be informed of the heritage significance of the resources in the study area	Site Manager/ECO	Meeting held with site crew	Minutes of meeting
Implementation of the Chance Fossil Finds Procedure	Site Manager/ECO	Implementation of the Chance Fossil Finds Procedure	Written correspondence with relevant heritage authority regarding

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			and minutes of relevant meetings
If any archaeological material or human burials are uncovered during the course of operations, then work in the immediate area should be halted at once. The find should be reported to the heritage authorities (SAHRA) and may require inspection by an archaeologist to determine whether mitigation should take place and what form that mitigation should take.	Site Manager	No unplanned impact or unplanned impact halted within 4 hours	Written correspondence with relevant heritage authority regarding and minutes of relevant meetings
Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.	Site Manager	Section 34 permit application to HFS	Permit issued in terms of section 34 from the relevant heritage authority or correspondence in this regard.

4.3 Guide on how to identify marked and unmarked burials and how to proceed should previously unidentified burials be uncovered during the construction process

4.3.1 Marked Burials

Marked burials are visible on the ground surface and are often marked by headstones or markers, or by cement blocks. Historic and modern burials are usually fenced or walled, and can be clearly discerned.





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Sometimes, especially in more rural areas, burials are marked by piles of stones stacked on top of each other, laid out parallel to one another. Often, burials are oriented in an east-west direction to reflect the movement of the sun.



4.3.2 Unmarked Burials

Unmarked burials will not be visible from the ground surface, and often the only evidence of human remains is once the skeletal material itself is disturbed.

During excavation activities, the site foreman must be aware of any changes or variation in soil colour or texture. Often, the soil immediately surrounding buried human remains is dense and rich in nutrients. Buried human skeletal material is soft to the touch, and often orange in colour, and can break very easily.

4.3.3 How to proceed

At the first signs of any skeletal material in the construction phase, work must cease at the site of the observation, the area must be cordoned off and SAHRA and SAPS must be contacted to complete a site inspection. As noted in the comment from SAHRA, “If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/Ngqabutho Madida 012 320 8490), must be alerted immediately as per section 36(6) of the NHRA. Non-compliance with section of the NHRA is an offence in terms of section 51(1)e of the NHRA and item 5 of the Schedule.”

The site inspection should determine: whether or not the skeletal material is:

- Modern (SAPS) or
- Archaeological (older than 60 years, SAHRA)

Should the human remains be determined to be younger than 60 years, SAPS must determine the way forward. Should the human remains be older than 60 years, SAHRA must determine the way forward.

It must first be noted that human remains have very high levels of social cultural value and as such, the removal of human remains from their place of internment must be considered a last resort. It is preferable to leave the human remains *in situ* and relocate infrastructure. Should it be impossible to relocate the infrastructure, for any reason, application must be made to relocate the human remains.

Should the skeletal material be determined to be older than 60 years but younger than 100 years, the processes for applying for a permit to impact burial grounds and graves as per section 36 of the NHRA and as per the guidelines published by SAHRA must be followed.



Should the skeletal material be determined to be older than 100 years, the processes for applying for a permit to excavate archaeological material remains as per section 35 of the NHRA and as per the guidelines published by SAHRA must be followed.

5. APPLICABLE LEGISLATION

The development of the Wind Energy facility triggers sections 38(1) and 38(8) of the National Heritage Resources Act (Act 25 of 1999) as this proposed development constitutes a change of character to a site exceeding 5000m². As such, this proposed development requires an evaluation of impacts to heritage resources in terms of other legislation (NEMA). This section states that the consenting authority must ensure that the assessment completed for impacts to heritage satisfies the requirements of the relevant heritage authority in terms of section 38(3) of the NHRA (SAHRA in Mpumalanga), and that the recommendations of the relevant heritage authority must be taken into consideration prior to the granting of consent.

Section 38(3) of the NHRA details the information that **MUST** be included in a Heritage Impact Assessment drafted in terms of section 38 of the NHRA. Furthermore, SAHRA has published Minimum Standards for Archaeological and Palaeontological Impact Assessments. All such guidelines and minimum standards have been complied with in the HIA that was conducted for the Umbila Emoyeni Renewable Energy Facility (CTS Heritage, 2022).

In terms of section 38(10) of the NHRA, if the applicant complies with the recommendations and requirements of the relevant heritage authority issued in terms of section 38(8) of the NHRA, then the applicant **MUST** be exempted from compliance with all other (general) protections included in the NHRA. As such, as long as the requirements of the heritage authority are satisfied, no permit application is required for the destruction of or impact to any heritage resource ***that has been identified in the HIA.***

In the instance of the Section 38 process followed for the Umbila Emoyeni WEF, PV Facility and EGI, no further additional specific conditions are provided for the development in the comments received from SAHRA.

Should any heritage resources be newly uncovered during excavation activities ie. heritage resources that were not identified in the HIA, then as per the monitoring table above, work must cease in that area and the relevant heritage authority must be contacted regarding a way forward. Any alteration



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or destruction to or of heritage resources NOT anticipated in the HIA remains subject to the general protections and require permission from the relevant heritage authority.

- Impacts to any structures older than 60 years require a permit from MPHRA (Mpumalanga) in terms of section 34 of the NHRA
- Impacts to archaeological or palaeontological heritage not anticipated in the HIA requires a permit from SAHRA (Mpumalanga) in terms of section 35 of the NHRA
- Impacts to burial grounds or graves that are older than 60 years requires a permit from SAHRA (Mpumalanga) in terms of section 36 of the NHRA

6. DOCUMENTATION AND MONITORING

All site record sheets, digital photos and mapping have been loaded securely to SAHRIS so that the EA holder, site manager and ECO are able to access the information online. Access to the database is governed by SAHRA and certain categories of information are not freely available to the general public without special permission such as GPS coordinates of archaeological sites.

Please see the following links for information:

- Case Application on SAHRIS - WEF (Case ID 18576)
<https://sahris.sahra.org.za/cases/ummbila-emoyeni-renewable-energy-wind-facilities-mpumalanga-province>
- Case Application on SAHRIS - PV (Case ID 18577)
<https://sahris.sahra.org.za/cases/ummbila-emoyeni-renewable-energy-solar-pv-facilities-mpumalanga-province>
- Case Application on SAHRIS - EGI (Case ID 18578)
<https://sahris.sahra.org.za/cases/ummbila-emoyeni-renewable-energy-facilities-egi-mpumalanga-province>

It is important that any new or previously unrecorded heritage resources identified during the course of the Construction, Operational or Decommissioning Phases are recorded on SAHRIS.



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7. REFERENCES

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
157393	Heritage Statement	Shahzaadee Karodia Khan, Johan Nel	01/02/2014	HERITAGE STATEMENT FOR THE BASIC ASSESSMENT UNDERTAKEN FOR A POWERLINE UPGRADE, SYFERFONTEIN MINE, SECUNDA, MPUMALANGA PROVINCE
358403	HIA Phase 1	Anton van Vollenhoven	10/08/2015	A report on a Cultural Heritage Impact Assessment for the Development of a De-stoning Plan at the New Denmark Colliery, close to Standerton, Mpumalanga Province
5014	AIA Phase 1	Julius CC Pistorius	01/06/2007	A Phase 1 Heritage Impact Assessment Study for the Proposed New 88 kV Power Line Running from the Majuba Power Station near Amersfoort to the Camden Power Station near Ermelo in the Mpumalanga Province
5059	AIA Phase 1	Johnny Van Schalkwyk	01/05/2003	Archaeological Survey of a Section of the Secunda-Mozambique Gas Pipeline Bethal and Highveld Ridge
5700	AIA Phase 1	Johnny Van Schalkwyk	01/10/2002	A Survey of Cultural Resources for the Proposed New Tutuka-Alpha Standerton Power Transmission Line, Standerton District
7920	AIA Phase 1	Johnny Van Schalkwyk	01/02/2004	Heritage Impact Assessment for the Planned Sivukile Extension 4 Township Lekwa Municipality

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APPENDICES



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APPENDIX 1:

A Summary of the SAHRA Minimum Standards for Archaeological Site Museums and Rock Art Sites open to the Public

The archaeological heritage of South Africa is unique and it is non-renewable. Archaeological sites, including those with rock paintings or rock engravings, are especially vulnerable to damage caused by visitors. All such sites are protected by the National Heritage Resources Act (Act No. 25 of 1999). Anyone opening a site to the public, either as a formal site museum or simply as a place of interest, must take basic precautions to ensure the safety of the site and its contents. This guide is also applicable to mitigate the negative impacts of increased human activity in proximity to significant archaeological sites.

Expert advice should be sought from the South African Heritage Resources Agency (SAHRA) and/or from one of the museums or university departments listed below. Interventions should be reversible and the integrity of the site should be maintained as far as possible. No site should be opened to the public without a prior professional investigation that includes a conservation management plan approved by the appropriate heritage agency and, for rock art sites, complete documentation in case of later damage.

Remember that a permit is required for ANY disturbance at an archaeological site for activities that fall outside of those activities assessed in a formal Heritage Impact Assessment process and this includes erecting noticeboards, boardwalks, fences, etc. Liaison with the local publicity office and regional services council is recommended.

THE FOLLOWING MINIMUM STANDARDS MUST FORM PART OF THE MANAGEMENT PLAN:

1. Notify SAHRA of intention to open site

2. Engage a professional with specialist knowledge to document the site, draw up a conservation management plan and advise on interpretation of the site.

3. Approach to the Site

3.1 Arrangements for visiting

* if the site is open at all times, there should be adequate signposting;



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- * if the site is kept locked, there should be clear arrangements for the collection and return of a key;
- * if it is open only by appointment, there should be a specialist guide or a specially trained local guide who has had clear instructions on what to do and say.

3.2 Provision for vehicles

- * there should be an adequate and well-maintained road, preferably paved to limit dust, with off-road parking;
- * the parking should not encroach on the site: vehicles should not park closer than about 100 m from the edge of the site;
- * the parking area should be marked by a barrier between it and the start of the path.

3.3 Facilities

- * there should be a litter bin at the parking lot and it should be emptied regularly;
- * consider the need for toilets and the supply of refreshments and other facilities such as a shop, public telephone, restroom, etc., depending on the number of visitors expected;
- * consider the need to establish an interpretive centre separate from the site, where people can see displays and where you may be able to store material, provide accommodation, etc. Remember that a permit from HWC is required to collect any archaeological material and so displays are best done in collaboration with a professional or institution.

3.4 Design of the path

- * make sure that the path to the site is distinct;
- * the path should follow the contours to avoid unnecessary erosion of any hill slope;
- * make sure there are discreet signs to indicate direction where the path crosses a rocky area;
- * the path should not enter the site at a position where the deposits or the rock art can be damaged;
- * the introductory notice board should be displayed at the end of the path and the beginning of the site, where it will not interfere with good photographic views.

4. Provision of Information

- * at least an introductory notice board explaining that the site is protected by law;
- * where appropriate, a display with more detailed information on what can be seen at the site and what it means;



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- * a visitors' book in a container to protect it from the weather, or at a farmhouse or other convenient place (copies of these can be sent to HWC for record purposes);
- * a leaflet or pamphlet explaining visitor etiquette.
- * an explanatory leaflet or pamphlet that is specific to the site.

5. Guides

- * specialist guides or specially trained local guides ensure that the meaning of the rock art or, in the case of archaeological sites, the story of the people who used the site is interpreted and so enhance the experience for the visitor. They also teach appropriate visitor etiquette and contribute to the safety of the site.

6. Protection of the Site

- * measures used to protect archaeological deposits should be effective, reversible and recognisable, yet harmonious. It is important that visitors appreciate that the site is being well looked after, so it should be clean and as natural as possible. Remember that a permit is required for any disturbance or intervention at a site.

7. Protection of the Art

- * a psychological or physical barrier should be set up between the visitor and the rock art, or display area, in the form of anything from a low wooden railing to a fence that encloses the entire site, depending on the vulnerability of the site or precautions necessary for the safety of the visitor;
- * boardwalks are recommended and may include railings. They must be of treated wood or non-flammable material,
- * every effort should be made to remove graffiti from the site, as it attracts more graffiti. A permit is required to remove graffiti at a rock art site.

8. Protection of the Surface and Deposits

- * an effective cover should be put on the floor of the site to prevent dust being kicked up and damaging rock art and to stop people picking up material on the surface. Cover can be provided by a boardwalk, geotextile, or medium to large slabs of natural rock from the surrounds of the site.
- * excavated sections should be backfilled, in consultation with HWC

9. Regular Maintenance

- * arrangements should be made with the appropriate heritage agency or museum for a monitoring programme.



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* provision should be made for regular visits to the site by the manager or property owner to check on litter, damage, graffiti, etc., which should be reported to the heritage agency.

* there should be regular monitoring of vegetation around the site so that, if necessary:

- measures can be taken to protect it against trampling,
- potentially dangerous plants such as those with thorns can be controlled,
- dead wood can be removed so that damage by veld fires can be avoided,
- firebreaks can be maintained.

10. Avoid having:

* a litter bin on site unless very large groups are catered for;

* braai or picnic places on the site or right next to it;

* camping places within 500 m of an archaeological site;

* plastic sheeting or plastic bags exposed to view unless there is no other option;

* concrete barriers or surfaces;

* metal poles or wire in contact with rock shelter or cave walls as they rust and stain the rock;

* a sandy surface on the outer side of a fence as this will be eroded by people walking there and the fence will be under-cut.

11. Contact Information

South African Heritage Resources Agency (SAHRA)

Contact Person: Mr Phillip Hine

Tel: 021 462 4502

Email: phine@sahra.org.za

Website: www.sahra.org.za

Mpumalanga PHRA

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APPENDIX 2:
Chance Fossil Finds Procedure