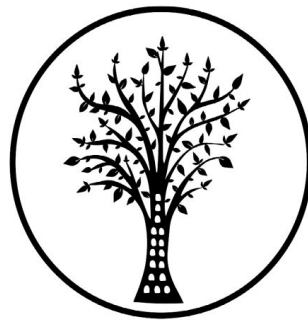


HERITAGE CONSERVATION MANAGEMENT PLAN

for the 86MW Oya Wind Energy Facility and associated
infrastructure, between Matjiesfontein and Sutherland in the
Western and Northern Cape Provinces



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Prepared by CTS Heritage

November 2020



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1. INTRODUCTION

Oya Energy (Pty) Ltd is proposing the development of the Oya Wind Energy Facility (WEF) with a maximum generation capacity of 86 MW at Kudusberg, a site approximately 45 km south-west of Sutherland (hereafter referred to as the 'proposed WEF'). The proposed WEF is located within the Witzenberg and Karoo Hoogland Local Municipalities, which fall within the Cape Winelands and Namakwa District Municipalities respectively. It falls within the Northern and Western Cape Provinces.

In their final comment for this application issued on 19 December 2018, SAHRA required that "To allow for the clear management of the large amount of heritage resources identified within the development area, a Heritage Management Plan (HMP) must be compiled as a condition of the EA. The HMP clearly differentiate between the relevant heritage authorities involved i.e. HWC and SAHRA. The HMP must be submitted to SAHRA regarding the Northern Cape section prior to the construction phase for comment. No construction may commence without comments from SAHRA in this regard;". This management plan is submitted to SAHRA in order to satisfy this requirement.

1.1 Location of Site

The Oya WEF is proposed for an area straddling the border of the Western and Northern Cape Provinces to the west of the R345 that runs between Sutherland and Matjiesfontein. The project falls within the Witzenberg Local Municipality, Cape Winelands District in the Western Cape, and the Karoo Hoogland Local Municipality, Namakwa District in the Northern Cape.

The proposed development area is located towards the southwest of the main Karoo region, with the centre of the study area some 11km south of the R356 and 22km west of the R354, the Sutherland-Matjiesfontein road.

1.2 Ownership and responsibility for site

Landowners

The land on which the WEF is located is privately owned (see Table attached as Appendix 3).

Environmental Authorisation (EA) Holder

The EA Holder would be the Project Company, Oya Energy (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 and in this context it is important to note that all assets brought onto the properties of the landowners are seen as moveable assets and does not attach to the title of the land. The Project Company therefore acquires the tenure across the landowners' properties by means of a long term lease that is registered in the Deeds Office, affording the Project Company the security it needs to exercise its rights in terms of the EA and also to ensure that the Project Company's rights are limited to what has been contracted between itself and the landowners. As is common with leases there is consideration to be paid for this tenure from the Project Company to the landowners and as the Project Company generates profit from exercising the rights afforded in the EA, a portion thereof is paid to the landowners. Simultaneously, although one may argue alienation of the land through the lease, the landowners' rights to continued occupation of the land is protected in the lease agreements. Although the landowners benefit from the revenues generated by the Project Company and therefore by extension the EA, they do not form part of the Project Company's management structure. The benefit therefore remains financial/commercial rather than organisational.

Implementation of EA

The person responsible for the implementation of the conditions in the EA would be the contractors and EPC during the construction phase. However, any non-compliance would fall onto Oya Energy (Pty) Ltd as the holder of the EA. All non-compliance would be audited by an independent ECO which would be appointed by Oya Energy (Pty) Ltd. Oya Energy (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 Oya Energy (Pty) Ltd.

Heritage Authorities

Part of the site is located in the Western Cape and part of the site is located in the Northern Cape. As such, the area is subject to three different heritage management authorities. Heritage Western Cape has the delegated authority for the management of all heritage resources (archaeological, palaeontological, burial grounds and graves, built environment, cultural landscapes and intangible heritage) located within the Western Cape, except for Grade I resources. There are no Grade I resources identified within the Kudusberg WEF development area. Any impacts to heritage resources within the Western Cape must follow the recommendations and best practice processes established by HWC.

All impacts to archaeological and palaeontological heritage in the Northern Cape 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 Northern Cape are managed by Ngwao Boswa Kapa Bokoni - Northern Cape Provincial Heritage Resources Authority (NBKB). Any impacts to these resources are subject to the recommendations and best practice processes established by NBKB.

1.3 Site Description

The area is on the border of the summer and winter rainfall regions and receives some snow and precipitation in winter as well as summer thunderstorms, although precipitation is limited and the region is semi-arid. The vegetation is characteristic of the Succulent Karoo biome in the low-lying areas and the Karoo Renosterveld Fynbos in the high-lying portions (Mucina and Rutherford 2006). The development area lies within the foothills of the Great Escarpment, and is characterised by valleys located between long ridges, and flat plains surrounded by hills and mountains. The ridges are largely undeveloped, while the valleys and plains contain several farmsteads comprising varying numbers of buildings. There are local roads and tracks servicing the area, some of which lead up to the hilltops, with recently created tracks servicing the wind masts scattered across peaks in the region. Together with farm infrastructure such as wire and stone fenced stock camps and farm boundaries, wind pumps and reservoirs, these are the predominant features in an otherwise undeveloped, natural environment.

Several of the affected farms are no longer engaged in active agriculture, have changed hands in recent times and are owned by absentee landlords. Many of the farms are now relying solely on tourist accommodation for income, and high levels of predation is making sheep farming unsustainable.



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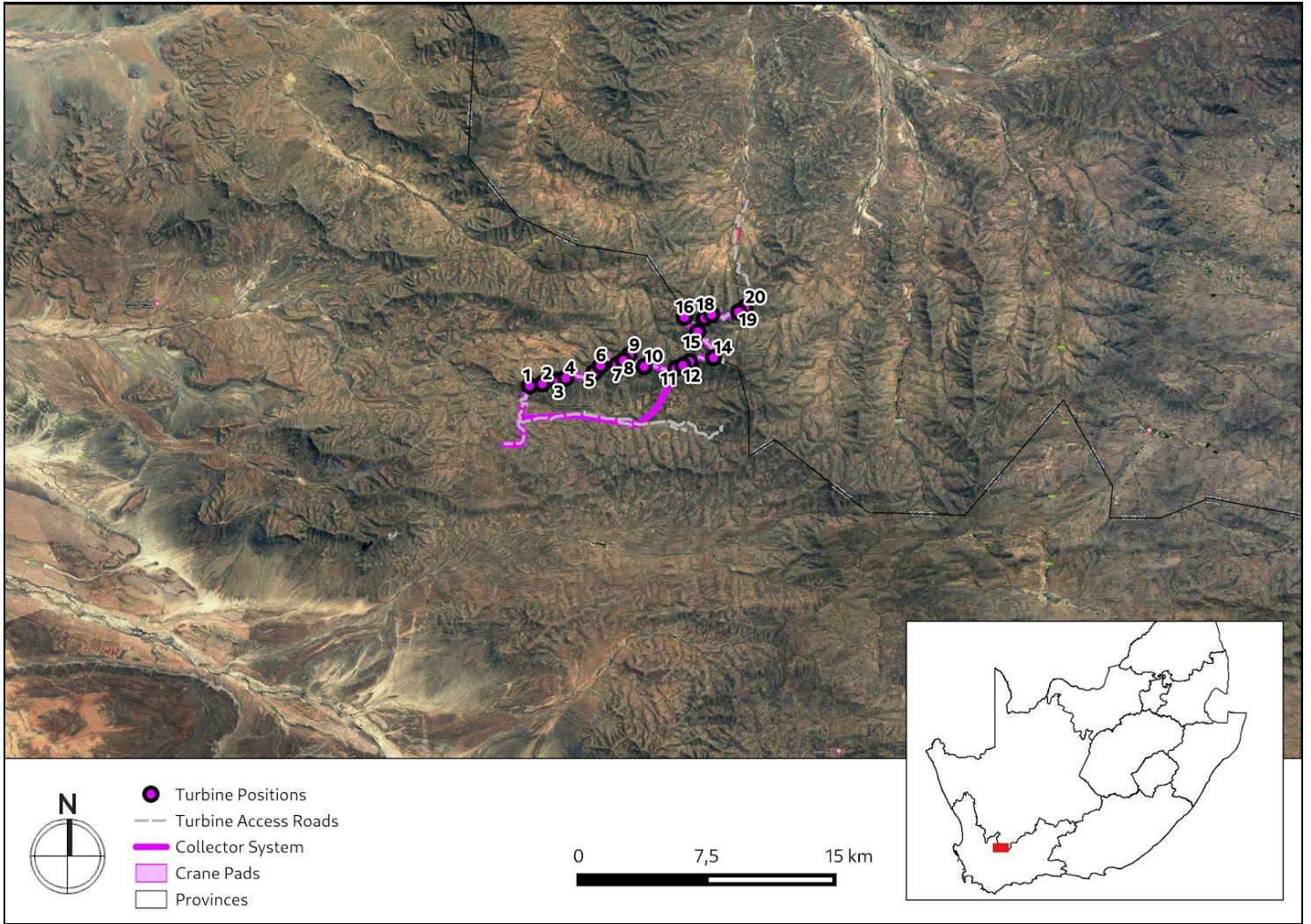


Figure 1: Location of Site

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.

Significance of Heritage Resources

A number of heritage resources located within the Oya WEF development area were identified through the initial Heritage Impact Assessment process and the subsequent walkdown of the final layout. 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. These resources are listed below in Table 1 in Appendix 2.

While not exhaustive, the list of known heritage resources located within the Oya WEF 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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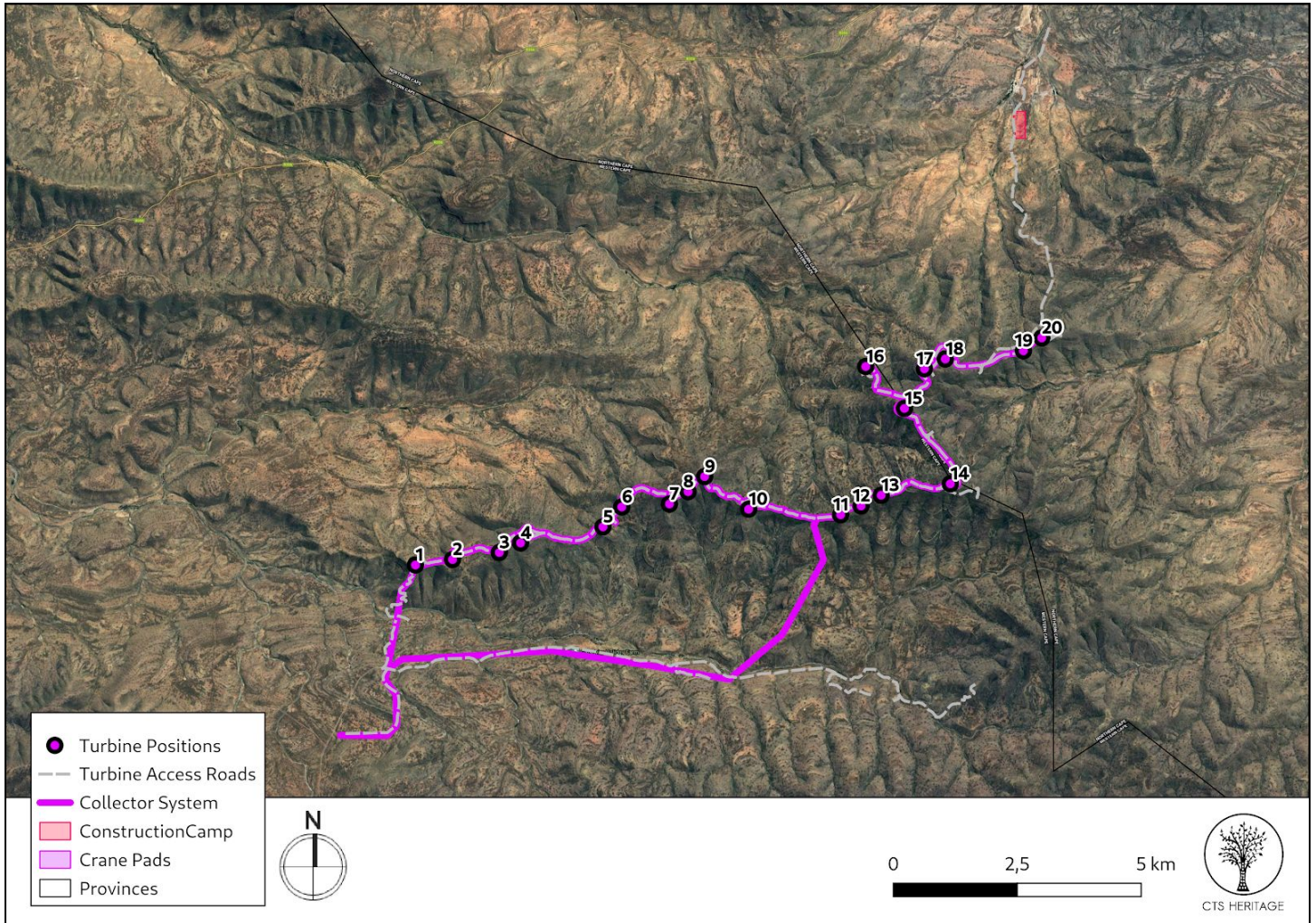


Figure 2: Final WEF Layout



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 revised every 5 years, or as necessary when circumstances require it. Any revisions must be submitted to Heritage Western Cape for approval.

2. RECORDING AND RESEARCH

2.1 Objectives of Recording and Research

Thorough recording of archaeological 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 Kudusberg WEF¹ (Smuts et al. 2018) and through the Heritage Walk Down reports conducted for the Oya WEF (CTS Heritage, 2020). It is anticipated that proposed clearance of vegetation and excavation associated with the construction of the turbines and their associated infrastructure may reveal additional heritage resources that are currently hidden by the vegetation and surface soil.

The heritage resources identified within this site retain potential for further academic study and as such, must be conserved with this in mind. Further academic investigation could provide insight into the evolution of settlement of the Karoo that has not yet been thoroughly documented.

Detailed research on the intangible heritage resources of the study area has not been done as this falls outside the requirements of the approvals process. Notwithstanding these risks and limitations, the potential intangible resources, identified through the review of other reports and historical literature on the area, are likely to exist in the landscape, and should be explored within a different research context to determine their full significance in terms of the NHRA. These are briefly addressed below.

2.2 Background context

The creation of the Komsberg REDZ, and the ensuing applications for WEFs in this area (Fourie et. al. 2015) has resulted in several HIAs having been compiled for the region since 2010. All these reports have addressed the region's archaeological and palaeontological heritage, and most have assessed the rural cultural landscape as well (see the Reference List in Section 7). The archaeological assessment completed by Smuts et al (2018) for the Kudusberg WEF provided a comprehensive background summary of the heritage of the area and is repeated below for ease of reference:

2.2.1 Palaeontological Background

The geology of the Oya WEF study area is outlined on the 1: 250 000 geology sheet 3220 Sutherland (Council for Geoscience, Pretoria; Theron 1983, Cole & Vorster 1999). Geologically, the study area lies on the gently folded northern margin of the Permo-Triassic Cape Fold Belt (CFB). The only major

¹ The Smuts et al. (2018) HIA was conducted for a larger area that was subject to part 2 split



sedimentary rock unit represented within the study area on 1: 250 000 scale geological maps is the Abrahamskraal Formation, which forms the basal subunit of the Lower Beaufort Group (Karoo Supergroup) succession of the Main Karoo Basin of South Africa (Johnson et al. 2006). The continental (fluvial and lacustrine) mudrocks and sandstones forming the lowermost portion of the very thick Abrahamskraal Formation (Lower Beaufort Group) are of Middle Permian age, approximately 265-270 million years old (Ma). The Formation is of high fossil sensitivity. Underlying basinal, prodeltaic and deltaic sediments of the Tierberg, Kookfontein and Waterford and Formations (Ecca Group) only crop out outside and to the west and south of the present study area, while the Early Jurassic Karoo Dolerite Suite (c. 182; Duncan & Marsh 2006) is not mapped within the study area and was not encountered during the present field study.

The Palaeozoic bedrocks are very extensively overlain by a wide spectrum of Late Cenozoic superficial deposits. They include slope deposits (colluvium and hillwash), river and stream alluvium (including coarse pediment gravels), down-wasted surface gravels, calcretes and various soils. These geologically youthful sediments are generally of low palaeontological sensitivity.

The Abrahamskraal Formation, as a component of the Lower Beaufort Group, has yielded one of the richest fossil records of Permo-Triassic land-dwelling plants and animals anywhere in the world. The Formation can contain therapsids, including small dicynodonts and large-bodied herbivorous and carnivorous dinocephalians, representing some of the earliest and most primitive examples of certain subgroups in the world. Fish and amphibian remains, trace fossils and plant fossils are also noted.

2.2.2 Archaeological Background

Over 10 HIAs have been compiled in the vicinity of the study area, all with respect to windfarms and their associated infrastructure, and the findings of these reports are largely congruent. The reports identified surprisingly little pre-colonial or stone age archaeology, and distinct spatial patterning to the little that was found (Booth, 2012, 2015a and 2015b; Hart and Webley, 2013; Hart and Kendrick, 2014; Hart, 2015; van der Walt, 2016). Almost all archaeological material, predominantly in the form of scatters, has been identified on the flat floodplains up to the foothills of the mountains, and within river valleys along watercourses (Booth, 2016a and 2016b). The dry, fairly desolate ridges, which are subject to high winds and therefore the proposed locations for the turbines, are generally entirely devoid of Stone Age archaeological remains (Webley and Halkett, 2017). These findings were also supported by the Heritage Scoping Assessment Report (Fourie et al. 2015) compiled as part of the Department of Environmental Affairs (DEA) Strategic Environmental Assessment (SEA) for wind and solar energy developments (DEA, 2015). A mitigation phase excavation (Evans et al. 1985) has been undertaken at two small rock shelters in the grounds of the South African Astronomical Observatory



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near Sutherland in the early 1980s. More recently, changing farming methods as represented by the distribution and variety of stone-built features (walls and kraals) was assessed as part of a Master's thesis (Regensberg, 2016).

The area is known to have been inhabited since the Early Stone Age (ESA) (Hart and Miller 2011) and throughout the Middle Stone Age (MSA) (Hart et al. 2010). Later Stone Age (LSA) scatters have also been documented throughout the region, although at remarkably low density (Booth 2012, 2016a and 2016b; Hart and Webley 2013; Hart and Kendrick 2014; Hart 2015; van der Walt 2015), although excavations at cave sites near Sutherland yielded significant LSA cultural material (Evan et. al. 1985). Most tools are made on hornfels, quartzite and chert, while quartz and Karoo shale were also utilised (Hart et. al. 2010). Within the last 2 000 years, pastoralists, the Khoekhoen, arrived in the area and, in this area, there is extensive evidence for the presence of these groups in the landscape. This evidence comes in the form of circular, stone-built enclosures constructed of piled stone up to half a metre high and from 3m to 4m to 9 m in diameter (Hart et. al. 2010). These enclosures represent living spaces, which contained grass huts or Matjieshuise (mat covered houses) and kraals. The kraals are generally situated on the leeward slopes of low ridges and likely date to between 300 and 1 000 years ago (Hart et. al. 2010). The kraals sometimes form complexes of as many as 13 interlocking enclosures, often with adjoining 'lammerkraals' (lamb pens). These sites can be found with fine, red burnished pottery and OES fragments. Other evidence for herders in this area has been identified in the form of open camps situated along dry riverbeds in valley bottoms. These sites are large, measuring 80m x 80m, and are associated with fine, thin walled Cape Coastal pottery, frequent informal stone tools, stone features, grinding surfaces, ash middens, animal bone and several graves with broken grindstones atop them; colonial period artefacts have also been found in association with these sites (Ibid.).

Rock art, which can be attributed to the San hunter gatherers or the pastoralists, is known within the region, although it's not commonly identified, and more concentrated in the Cape Fold Mountains to the south of the project area (Booth, 2016a and 2016b; van der Walt, 2015). These paintings tend to be of the fine line tradition, attributed to hunter gatherers, or finger painting, which is attributed to the herders.

Early *Trekboere* entered the region in the late 1700s, moving their livestock down into the valleys and plains of the Karoo from the better watered escarpment to escape the harsh winters there. As a result of this pattern of seasonal movement of flocks the *Trekboere* usually had a loan farm on the plateau, and a stockpost (*legplaats*) in the Karoo. Conflict arose between the arriving *trekboere* and the indigenous San, which culminated in the massacre of San in the late 1770s by Boer *commandos*

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(Schoeman 1986; Hart and Webley 2011). These massacres are recorded archivally and in placenames in the area, such as the farm Oorlogskloof near Sutherland where more than 30 stone cairn burials are to be found. Further mass graves might be found on Gunstfontein Farm, while there is purportedly also a cave where the San made a last stand against the *kommandos* (Ibid.).

Increasingly, as exploitation of the area became better established, and particularly after the Great Trek of the 1830s, their structures and imprint on the landscape became more permanent. The evidence for this early inhabitation of the region is to be found in historic farmhouses and associated buildings, stone cairns, stone walling, farm infrastructure such as reservoirs and, more recent wind pumps. Artefactual material from this period includes European ceramics, glass and iron fragments. The stone walling and kraals of this period are distinguished from the pre-colonial kraals as they are usually rectilinear and are faced on two sides with infill between the faces and are often mortared using locally derived clays.

The area was witness to a further period of military action during the South African War, with some skirmishes near Skietfontein in the Komsberg Mountains (Hart and Webley, 2011). The threat of Boer guerrilla activities also prompted the British to build several defensive structures in the region, including redoubts, gun platforms and blockhouses (van der Walt, 2015; Hart and Webley, 2011; Orton and Halkett, 2011).

2.2.3 Cultural Landscapes and Living Heritage Background

Cultural landscapes are the interface of culture and nature, tangible and intangible heritage, and biological and cultural diversity. In contemporary society, particular landscapes can be understood by taking into consideration the way in which they have been settled and modified including overall spatial organisation, settlement patterns, land uses, circulation networks, field layout, fencing, buildings, topography, vegetation, and structures.

Research done in the last decade on the surrounding area, for input into HIAs required for other proposed WEFs, has highlighted archaeological, palaeontological and cultural landscape resources that are significant.

Other cultural landscape research for HIAs in the area have noted the possible impacts and made recommendations on cultural landscapes for each of their study areas. The visibility of proposed facilities from major transport routes and tertiary roads has been considered, particularly the R354, a scenic tourism route between Matjiesfontein and Sutherland (Hart and Webley 2011; Hart and Kendrick 2014). Predominantly, it is the negative impacts to the sense of wilderness that has been

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indicated as the greatest likely outcome of these developments (Hart and Webely 2011, 2013). The clustering of several proposed WEFs in the Sutherland area is considered to progressively and more negatively erode the cultural landscape (Hart and Webely 2013). Significant built environment features are variable across the landscape, and while some clusters of heritage buildings exist (Hart and Webley 2013), largely, there are few conservation-worthy buildings, and that places of celebrated heritage significance are limited (Hart and Webley 2011; Hart and Kendrick 2014). The remoteness of the area is noted, and the low visitor numbers also considered (Hart and Webley 2013; Booth 2016b). Where gradings have been proposed for the cultural landscape, these vary between Grade II and IIa (Hart and Kendrick 2014; Booth 2016b). The changes to the character of the landscape, and negative impacts on sense of place and aesthetic value which result from WEF developments – and compounded by cumulative impacts – are seen to be largely unmitigatable, with only the effective rehabilitation of the landscape after decommissioning serving as effective remedial action (Booth 2016a).

The SEA for wind and solar photovoltaic energy in South Africa (DEA 2015) does not consider intangible heritage resources, identifying only areas with material remains and previously identified natural and cultural heritage sites or protected areas, such as Karoopoort, Matjiesfontein and Touw Local Nature Reserve, as cultural landscapes in the Komsberg REDZ 2. There has not been any investigation into the living heritage of the area or intangible resources attached to the landscape, such as language or oral history. Although recognised as “Very High to High Sensitivity Zones”, “no buffer” has been suggested for the sensitivity mapping application. The proposed Kudusberg WEF is in an area that has been graded as “High” in the Combined Heritage Sensitivity Map for REDZ 2 (Figure 4.3). Mitigation recommended for the impact of development on cultural landscapes in the Komsberg area is also limited to adjusting buffers and consideration of viewshed analysis, which considers only tangible heritage resources’ and visual impacts.

Due to the infrequent signature of physical remains in this area, researchers in material culture tend to describe the landscape as sparse or barren, attributing lower gradings of heritage significance as a result, except where scenic value is ascribed. This low ‘on the ground’ visibility is however the direct result of the liminal and seasonal occupation of the area which in and of itself is part of the value and significance of the landscape, and can be considered the tangible evidence of the historic character of the landscape, a character of movement and habitation in very challenging conditions. Furthermore, the suggestion that intangible resources can be “rehabilitated after decommissioning” is unfounded: oral history, language, indigenous knowledge systems are by nature dynamic, living resources which will be impacted upon permanently by any new introductions to the landscape. While

introductions or change are not always a negative impact, the impacts of proposed development on intangible heritage should be investigated and considered at least as thoroughly as the tangible heritage resources.

2.3 Heritage Resources Identified

The archaeological and palaeontological resources identified within the Oya WEF development area are listed in Appendix 2 and are recorded in detail on SAHRIS - the South African Heritage Resources Information System. Known heritage resources located within the Oya WEF development area include Middle and Later Stone Age artefacts and scatters, generally of low heritage significance as well as limited identified rock art with the potential for more rock art to be identified. Historical archaeological resources were identified, most often in conjunction with the ruins of farm werfs and kraals. A number of burial grounds and/or graves have also been identified. Human remains in this context carry a high levels of cultural significance. Very few palaeontological heritage resources have been identified, although fossil wood is known from the area.

Larger areas with specific **landscape character of cultural significance** (Cultural Landscape Areas or CLA) were identified in the Cultural Landscape Assessment (Bailey 2018) completed for the Kudusberg WEF. These are listed below:

- ***Ridges (Grade IIIA for scenic qualities)***

The cumulative visual impact of turbines located on at least 2 rows of high parallel ridges, (Oliviersberg north of Gatsrivier and Koedoesberg), on the surrounding open landscape, historic roads and scenic routes will be high. This together with the additional proposed turbines for WEF's in the surrounding area, will impact negatively on the sense of "wilderness area" and the vast open character of the landscape for which it is highly valued.

- ***Gatsrivier Valley CLA (Graded IIIB for historic road and CLA)***

The road that runs through the Gatsrivier Valley CLA is evident on historic maps and considered as a Grand Trunk Road on the Lainsberg Imperial map of 1900 - 1919. The farm road runs next to the Gatsrivier entering the narrow valley from the west (off the R356) running west to east and exiting the valley to the north at the Oliviersberg farmstead. The valley floor along the Gatsrivier has archaeological evidence of continual land use over the last few centuries. Historic farmsteads (Gatsrivier and Oliviersberg), stone kraals, packed stone residential structures and evidence of water harvesting are all evident, as are remnant remains of cultivation. According to the local farm manager there are historic stone buildings that are thought to be old school buildings (across from



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Springbok Cottage) which is also the site of the old Gatsrivier farmstead. No clear pre-colonial material was identified but it cannot be ruled out due to the limited time for full survey and, considering also, the relatively nearby rock shelter north of Oliviersberg farmstead that contained pre-colonial material. Considering the increased traffic that would have travelled along this valley in the past, relative to other surrounding roads, there is an increased potential for significant archaeological remains that form part of the story of the relationship between people and the land in this place.

- *Historic Cape Town - Sutherland Route CLA (Graded IIIB)*

The farm track that passes through the Gatsrivier valley, turning north onto the Oliviersberg ridge slope at the Oliviersberg homestead, over the saddle south of Pad se Hoek, and down into the Matjiesfontein se Kloof valley to the north and beyond to Sutherland, is a noted historic road visible on the Lainsberg Imperial Map dated 1900 - 1919 as a Grand Trunk Road. Remnants of stone packed retaining walls of the old road are evident as one travels along certain areas of the current road. This road connects the historic farmsteads in the area to each other and would have connected these farmsteads and communities to opportunities for trade and resources with people travelling between Cape Town and Sutherland (and beyond). The route transects and follows 4 of the 5 cultural landscape areas of the Kudusberg site, as it travels along river courses through valleys, up ridge slopes and over ridge saddles, in so doing connecting these areas in use, memory and function over space and time.

- *Uriasgatrivier Valley CLA - Living Heritage (Graded IIIA)*

This valley contains material evidence of historic transhumant land use patterns which continue to the present day. It is “a continuing landscape which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time, it exhibits significant material evidence of its evolution over time” (WHC, 2017). The northern entry point to Windheuwel farm and the Uriasgatrivier valley, is off the historic Karooport to Sutherland road (R356) that runs through the Tankwa Karoo, past Hangklip and through historic ridge saddles. Windheuwel farm is identified on historic maps, labeled as ‘Wind Heuwel Station’ on Burchell’s map Southern Africa (Figure 7). Wider and flatter than the other two identified valley CLAs, Uriasgatrivier Valley CL has a more spread out development pattern. Many tributaries travelling downslope over more even land, resulted in more space and opportunity for habitation, cultivation and stock farming for which there is evidence over time. Aerial survey identified round kraals as well as rectangular kraals in different places within the valley, potentially indicating precolonial and colonial stock farming land use. Identified graves and graveyards, formal marble

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headstones and more informal cairns, were found during foot survey and add to strengthen the relationship between the landscape and its inhabitants over time. Evidence of living heritage exists in the skerms and kookskerms still present and being used by the people who live and work on the landscape. Seasonal stock labourers work on the farm during the winter months when the stock is brought down from the escarpment, as has been done for centuries. In speaking to the family members (an older lady, a younger lady and a young boy of 8 months) living in the temporary living quarters next to which they have built kookskerms and skerms for other uses, it was said that they travel with the owner of the farm, a farmer, down to Windheuwel when it gets too cold on the escarpment. It was said that the farmer has another farm on the escarpment where they stay in summer. This continued seasonal transhumant movement and the associated knowledge of building techniques, stock farming and plant harvesting, on the same landscape over time, are all significant intangible heritage resources that constitute a landscape of living heritage.

- ***Matjiesfontein se Kloof Valley CLA (Graded IIIB)***

This valley contains material evidence of historic transhumant land use patterns which continue to the present day. It is “a continuing landscape which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time, it exhibits significant material evidence of its evolution over time” (WHC, 2017). Similar to the other valley landscape character areas, built structures cluster along river courses and around confluences, with the evolution of sites’ development over time and space traceable at a few sites, such as Matjiesfontein werf.

The Cultural Landscape Assessment (Bailey 2018) also identified a number of **Intangible Heritage Resources** of cultural significance. These potential intangible heritage resources are elements of the cultural landscape and cannot be confined, without further investigation, to specific sites or places. These are listed below:

- ***Geographical place names***

The study area stretches across different landscape areas, which have been variously named and classified over time and discipline, in different languages by the many travellers that have moved across the landscape. The names given to places on the landscape are very descriptive and tell a story about the way people who named it felt about it, thought about it and how they navigated their way around it. The names often refer to natural features of the area or places in relation to one another, such as Kranskloof and Boplaas, perhaps by which people recognised their place on the vast open landscape. Also evident in many names are aspects of the landscape which held value to its inhabitants, such as names of wildlife which may have been hunted or avoided, such as Koedoesberg

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and Muishondrivier, and vegetation which may have been used, such as Matjiesgoedhoek. Some names describe the climate and weather, some the rock formations, some the herds of wildlife for which the area was valued, others, like Moordenaarskaroo, allude to the atrocities that have occurred over time on the landscape, a result of the struggle for and conflict over scarce resources.

These names, in and of themselves, hold an intangible heritage value, in their ability to describe the ways in which the people, who moved through this space, used this space and lived on it, have interacted with it, navigated it and what the various landscape elements were valued for. They are intangible heritage resources that have been inscribed on the land and hold the memories, nature of relationships and sense of place of the cultural landscape over time.

- *Transhumant land use patterns and characteristics - Living heritage*

The Karoo and surrounds, which include the Kudusberg study area, was used for centuries by local indigenous pastoralists and hunter gatherer groups, their movements over this landscape organised to respond to the seasonal variations in grazing and water resources, for wild and domesticated animals; movement or mobility being essential for survival (Penn, 2005). Even after the initial movement of *trekboers* into the area, “pastoral production was the major occupation of all the societies of the frontier zone with the exception of the hunter gatherer San, and it was principally through the dynamics of pastoralism that they transformed each others’ cultures while exploiting, serving or co-operating with each other” (Ibid: 15).

Although stark, vast and largely devoid of large settlements or congregated groups of people, to consider this area as only a “wilderness area” is an eerily colonial echo of the way in which the early colonists moved over and then into South African landscape, interpreting the openness and thin scattering of pastoral and hunter-gatherer groups as a sign of free and available land and resources. These areas of the Karoo that are still open and undeveloped, still used as seasonal grazing by transhumant farmers, are rare examples of South African history and heritage which are fast being lost to development and industrialisation. These aspects of our history are part of the story of how and why South Africa is the people and country it is today, and this landscape offers an opportunity to recognise and celebrate the work, lives and lifeways of those people who inhabited these ridges and plains and the ways in which they related to their landscape and each other under difficult and trying circumstances, throughout history into the present day.

“I am like an eagle,” an old farmer told me. “I look all round and see no one, not even the smoke of a neighbour’s chimney. That is why I love the Great Karoo.” - Green, 1955

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- **Indigenous Knowledge Systems**

“It was, initially, far more important for the *trekboers* to work together with the local Khoekhoen pastoralists whose knowledge of local conditions and skills in maintaining pastoral production in an arid environment was quite different to that of the south-western Cape” (Penn, 2005: 92). Other Indigenous Knowledge Systems (IKS) regarding the uses of the natural resources of the area could also be present, considering especially the location of the Kudusberg site in an area of exceptionally rich botanical diversity (Clark et al. 2011: which has been described as “rivalling those of rainforests” (South African National Biodiversity Institute 2006).

The IKS of the Komsberg area, including the Kudusberg landscape, could include valuable knowledge about, for instance, sustainable and low impact agricultural practices in semi-arid climates. IKS relating to the biocultural diversity of the various landscape areas may hold knowledge as of yet unrecorded or untapped and may be of various significances (WHC, 2017: 81). Without further research into these possibilities, a valuable and true assessment of the impact of the development on the cultural landscape cannot be made.

- **Frontier Zone History - ‘Khoisan’ Heritage**

This area is relatively well known for being occupied by Khoekhoen and /Xam people before and during the early periods of colonial influence and then settlement. The memory and material culture of these pre-colonial people are still evident on the landscape through the IKS that is potentially still held in the stories and lifeways of current inhabitants, through the stone kraals and stone implements they used, through the seasonal land use patterns that persist to this day, through the art they left on the landscape.

The Great Karoo, including the Klein Roggeveld and Moordenaarskaroo in which the Kudusberg Study area is located, offers the potential to recognise the historic dispossession of indigenous groups of people of their lifeways, land use practices, language and culture. The fact that the precolonial stone kraals were abandoned by their initial builders and then either left to dilapidate or reused by first *trekboers* and later colonial stock farmers, does not reduce their significance, but is rather a testament to the reality of conflict, atrocity and dispossession that occurred on this landscape.

As suggested by Penn (2005: 14), “It is no exaggeration to state that the history of conquest, extermination or incorporation of the Khoisan societies of the northern frontier zone in the 18th century has not been told. Nor has the strength, scale or diversity of Khoisan resistance been adequately described” or recognised. This history, and the memory thereof, embodied by Komsberg cultural landscape and surrounding Karoo area, is significant in the identity shaping of many present-day South Africans. Recognising the cultural landscape as a significant heritage resource has

the potential to encourage the recognition of a place and time in South African history that has shaped our people and country in a way that is often overlooked or blatantly ignored.

- *Aesthetic and scenic qualities*
- *Vast landscapes with far horizons and unbroken views*
- *Wilderness qualities*
- *Memory and attachment to the landscape characteristics by some South African communities*

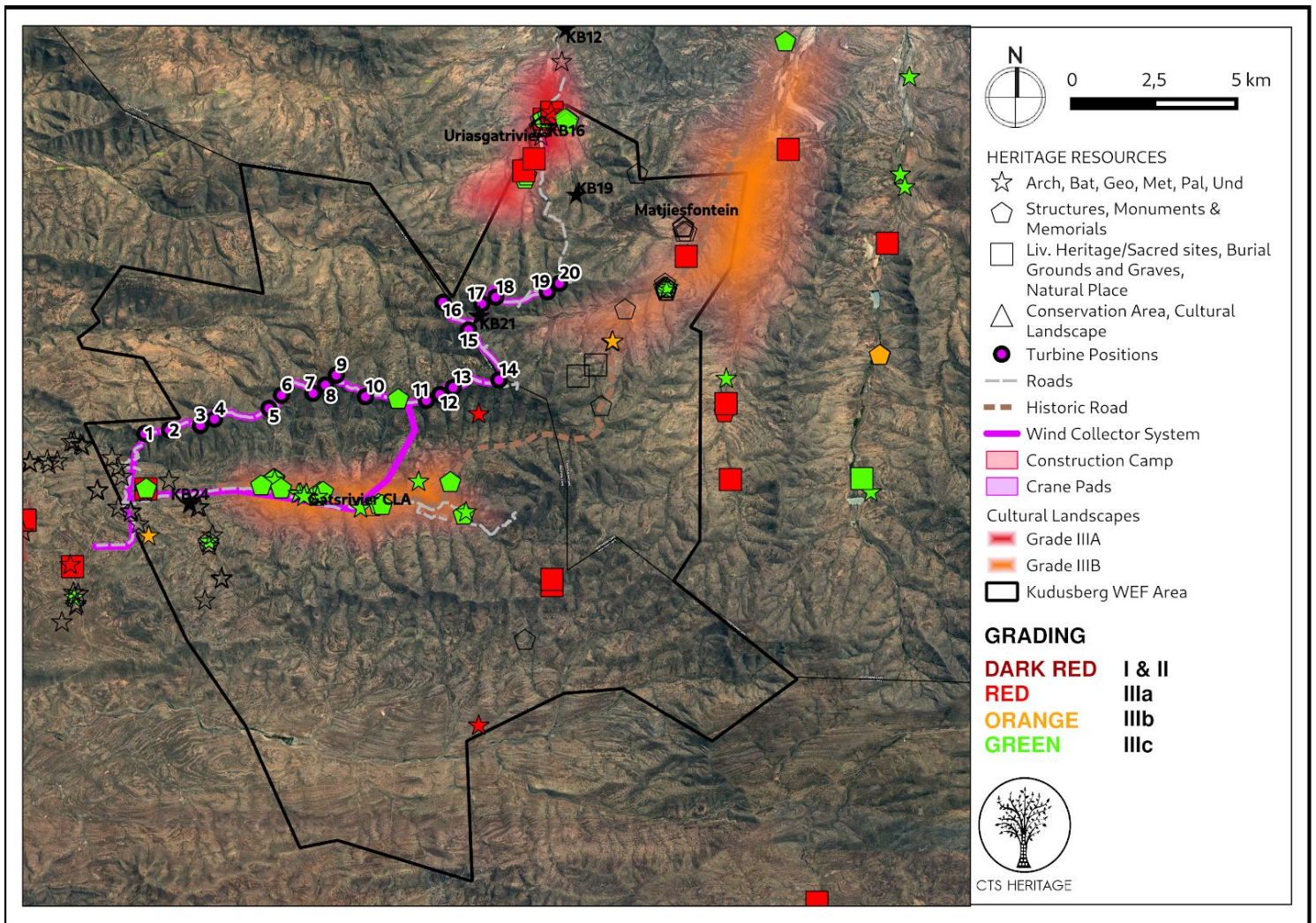


Figure 3. Map of all known heritage resources located within the Oya WEF Development area

3. SITE MANAGEMENT

3.1 Objectives of site management

The objectives of the heritage management plan for the Oya WEF are to ensure that the heritage resources identified within the area proposed for the WEF 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 will have **high** impacts to fossil resources and as such, the HWC Chance Fossil Finds Procedure must be implemented. However, due to the lack of irreplaceable, unique or rare fossils within the development footprint, and the extensive superficial deposit 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 development footprint. The preponderance of archaeological remains in the study area are the remains of built structures, likely of historic age, but some possibly pre-colonial. These structures are predominantly easy to identify and fairly robust, but several were located in very close proximity to proposed access roads however the final layout avoids any such impact.

- ***Burial Grounds and Graves***

The final layout does not impact any known burial grounds or graves. However, unknown or unmarked burial grounds and graves remain at risk during the construction phase and are likely to be subject to **very high** direct impacts without mitigation. Should any burial grounds or graves be accidentally uncovered during this phase, HWC (in the Western Cape) and/or SAHRA (in the Northern Cape) must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- ***Built Environment***

The final layout does not impact any known structures directly. The significance of the built environment is very low in this area, and it is likely that the significance of impacts to the built environment will be **low** provided that structures are avoided sufficiently not to cause structural damage to them.

- ***Cultural Landscapes***

Impacts to the cultural landscape are likely through the introduction of new, industrial, and disproportionately large elements into the largely uninhabited and only marginally transformed cultural landscape. The turbines themselves, as well as the laydown areas, crane pads, construction camps, substations and access roads all serve to erode the aesthetic and scenic qualities of the cultural landscape. These new intrusions also represent a dramatically new way of using, interacting with and shaping the landscape in an area that has, until now, largely resisted or been impervious to, efforts to transform it.

- ***Intangible Heritage***

Impacts to intangible heritage resources are predominantly indirect in nature, given that the resource is largely intangible. As such, no direct impacts are anticipated during the construction phase.

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 HWC Chance Fossil Finds Procedure 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, HWC (in the Western Cape) and/or SAHRA (in the Northern Cape) must be contacted regarding a way forward. Contact details are provided in Appendix 1.

- ***Burial Grounds and Graves***

Operational activities will not impact any known burial grounds of graves and impacts are unlikely during the operational phase. Should any burial grounds or graves be accidentally uncovered during this phase, HWC (in the Western Cape) and/or SAHRA (in the Northern Cape) 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, HWC (in the Western Cape) and/or NBKB (in the Northern Cape) must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.

- ***Cultural Landscapes***

Impacts to the cultural landscape will be continuous throughout the operational phase as a result of the construction of the turbines along highly visible ridge lines as well as the presence of roads and associated infrastructure in the landscape. Contextual impacts will be experienced during all phases but are most problematic during the operational phase, and will be ongoing for the operational lifetime of the facility, remaining of **high** significance throughout. Indeed, the ongoing visual intrusion created by the WEF infrastructure serves to erode connections to the sense of place and the aesthetic qualities of the landscape continually and increasingly. These indirect impacts to cultural landscapes and visual qualities can only be addressed and moderated through sensitive placement of turbines, roads and infrastructure that aim to minimise the visual intrusion of this infrastructure on the landscape. While the impacts are unavoidable, sensitive design and layout can reduce the significance of these impacts.

- ***Intangible Heritage***

Impacts to sites of living heritage will be continuous throughout the operational phase as a result of vehicles and personnel on site for maintenance, and the presence of roads, turbines and associated infrastructure in the landscape.

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 HWC Chance Fossil Finds Procedure 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, HWC (in the Western Cape) and/or SAHRA (in the Northern Cape) 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, HWC (in the Western Cape) and/or SAHRA (in the Northern Cape) 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, HWC (in the Western Cape) and/or NBKB (in the Northern Cape) must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.

- Cultural Landscapes

Impacts to significant cultural landscapes will be continuous throughout the decommissioning phase as a result of vehicles and personnel on site for turbine dismantling and removal, and the remnants of access roads, and locations of turbines and associated infrastructure in the landscape. It should be noted, however, that any resulting impacts will be of a short duration. Mitigation should only be to ensure that existing roads are used, and no previously undisturbed areas should be subject to disturbance.

- Intangible Heritage

Impacts to sites of living heritage will be continuous throughout the decommissioning phase as a result of vehicles and personnel on site for turbine dismantling and removal, and the remnants of

access roads, and locations of turbines and associated infrastructure in the landscape. It should be noted, however, that any resulting impacts will be of a short duration.

3.3 Conservation and management requirements

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

- Graves: no development should be permitted within 50m of graves and cemeteries; existing roads within this buffer should not be altered or widened;
- Cave site (KDB045): construction staff should not be permitted within 200m of the site;
- A fence must be erected around the Stadler Graveyard (KDB081)
- Farmsteads: no turbines should be located within 500m of farmsteads;
- Kraals, stone walling and ruins > 100 years: construction staff should not be permitted within 100m of these sites and no development should take place within 15m;
- Archaeological finds: no buffers are recommended for the isolated artefacts identified in this survey.
- buffers around the watercourses (100m)
- no-go areas (200m from watercourse)
- buffers around identified heritage resources (100m for stone structures and 50m for land use features such as dams, intersections, wind pumps)
- buffer around historic trunk road for any new structures (50m)
- All site crew should be informed of the heritage significance of the resources in the study area, and those sites near development infrastructure, or easily reached should be inspected by the ECO during the construction phase to ensure they are being respected;
- The R356 should be put forward for recognition as a scenic route to afford its scenic qualities and historic significance some measure of protection going forward;
- New construction work, construction camps, substations or access roads should not impact negatively or threaten any of the historic built form, which is part of the history and land use evolution of the cultural landscape by observing appropriate buffers around these features;
- If supported in consultation with local inhabitants (of permanent or seasonal habitation, owners or labourers), the negative impact of non-local inhabitants on cultural lifeways and language, employees associated with the new WEF should be reduced by housing the employees away from the CLAs;
- Impact of the proposed WEF on local inhabitants (of permanent and seasonal habitation, owners and labourers) should be monitored by the Holder of the Environmental Authorisation through a grievance mechanism described in the EMP. Such a grievance mechanism should



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take into account economic and social inequality and be made accessible and known to all inhabitants of the CLAs, not just the land owners. Such a grievance mechanism should be in place for the duration of the development process through to the end of the decommissioning phase;

- The Chance Fossil Finds Protocol should be implemented in the event of the discovery of significant new fossils during the construction phase;
- Monitoring of all major surface clearance and deeper (> 1m) excavations for fossil material (bones, teeth, petrified wood, etc.) by the ECO on an on-going basis during the construction phase. Significant fossil finds to be reported to Heritage Western Cape (HWC) (Western Cape sites) or the South African Heritage Resources Agency (SAHRA) (Northern Cape sites) for recording and sampling by a professional palaeontologist;
- 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 in the Northern Cape and HWC in the Western Cape) and may require inspection by an archaeologist to determine whether mitigation should take place and what form that mitigation should take.

These mitigation measures are mapped in Appendix 4.

3.4 Consultation

The main stakeholders for the site currently are the owners of the property (Appendix 3), the Local Authorities, the managers of the WEF and the heritage authority for the Western Cape, Heritage Western Cape (HWC) and Northern Cape (SAHRA and NBKB).

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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 |
| Sites near development infrastructure, or easily reached should be inspected by the ECO during the construction phase to ensure they are being respected | ECO | Site inspections conducted at all sites at regular intervals | Bi-Annual Site Inspection and Monitoring Report to be submitted to SAHRA and HWC |
| New construction work, construction camps, substations or access roads should not impact negatively or threaten any of the historic built form, which is part of the history and land use evolution of the cultural landscape by observing appropriate buffers around these features | ECO | No unplanned impact or unplanned impact halted within 4 hours | Bi-Annual Site Inspection and Monitoring Report to be submitted to SAHRA and HWC |
| Monitoring of all major surface clearance and deeper (> 1m) excavations for fossil material (bones, teeth, petrified wood, etc.) by the ECO on an on-going basis during the construction phase. | ECO | No unplanned impact or unplanned impact halted within 4 hours | Bi-Annual Site Inspection and Monitoring Report to be submitted to SAHRA and HWC |
| Significant fossil finds to be reported to Heritage Western Cape (HWC) (Western Cape sites) or the South African Heritage Resources Agency (SAHRA) (Northern Cape sites) for recording | ECO | Implementation of the HWC Chance Fossil Finds Procedure | Written correspondence with relevant heritage authority regarding |



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| and sampling by a professional palaeontologist; | | | and minutes of relevant meetings |
| Implementation of the Chance Fossil Finds Procedure | ECO | Implementation of the HWC Chance Fossil Finds Procedure | Written correspondence with relevant heritage authority regarding and minutes of relevant meetings |
| Establishment and management of a grievance mechanism for local inhabitants impacted by the WEF development | EA Holder | Grievance mechanism process in place with contact information easily available | Annual report on grievances received and how these were dealt with to be sent to SAHRA and HWC |
| Construction of the final approved layout including implementation and enforcement of the identified buffer areas and no-go areas: 1. Graves: no development should be permitted within 50m of graves and cemeteries; existing roads within this buffer should not be altered or widened; 2. Cave site (KDB045): construction staff should not be permitted within 200m of the site; 3. Farmsteads: no turbines should be located within 500m of farmsteads; 4. Kraals, stone walling and ruins > 100 years: construction staff should not be permitted within 100m of these sites and no development should take place within 15m; 5. Archaeological finds: no buffers are recommended for the isolated artefacts identified in this survey. 6. buffers around the watercourses (100m) 7. no-go areas (200m from watercourse) 8. buffers around identified heritage resources (100m for stone structures and 50m for land use features such as dams, intersections, wind pumps) 9. buffer around historic trunk road for any new structures (50m) | ECO | Final layout adhered to in the final construction | Bi-Annual Site Inspection and Monitoring Report to be submitted to SAHRA and HWC |
| 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 | ECO | | Written correspondence with relevant heritage authority regarding |



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| authorities (SAHRA in the Northern Cape and HWC in the Western Cape) and may require inspection by an archaeologist to determine whether mitigation should take place and what form that mitigation should take. | | | and minutes of relevant meetings |
| OPERATIONAL PHASE | | | |
| Use existing roads for maintenance purposes | Site Manager | No unplanned impact or unplanned impact managed halted within 4 hours | Bi-Annual Site Inspection and Monitoring Report to be submitted to SAHRA and HWC |
| 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 | Bi-Annual Site Inspection and Monitoring Report to be submitted to SAHRA and HWC |
| 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 |
| Implementation of the Chance Fossil Finds Procedure | Site Manager | Implementation of the HWC Chance Fossil Finds Procedure | Written correspondence with relevant heritage authority regarding and minutes of relevant meetings |
| Establishment and management of a grievance mechanism for local inhabitants impacted by the WEF development | EA Holder | Grievance mechanism process in place with contact information easily available | Annual report on grievances received and how these were dealt with |
| 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 in the Northern Cape and HWC in the Western Cape) 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 | Site Manager | Section 34 permit application to HWC | Permit issued in terms of section 34 from the |



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| years require alteration or demolition during this phase, HWC (in the Western Cape) and/or NBKB (in the Northern Cape) must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1. | | (Western Cape) or NBKB (Northern Cape) | relevant heritage authority or correspondence in this regard. |
| DECOMMISSIONING PHASE | | | |
| Use existing roads for maintenance purposes | Site Manager | No unplanned impact or unplanned impact managed halted within 4 hours | Bi-Annual Site Inspection and Monitoring Report to be submitted to SAHRA and HWC |
| 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 | Bi-Annual Site Inspection and Monitoring Report to be submitted to SAHRA and HWC |
| 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 |
| Implementation of the Chance Fossil Finds Procedure | Site Manager | Implementation of the HWC Chance Fossil Finds Procedure | Written correspondence with relevant heritage authority regarding and minutes of relevant meetings |
| Establishment and management of a grievance mechanism for local inhabitants impacted by the WEF development | EA Holder | Grievance mechanism process in place with contact information easily available | Annual report on grievances received and how these were dealt with |
| 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 in the Northern Cape and HWC in the Western Cape) 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 | Site Manager | Section 34 permit application to HWC | Permit issued in terms of section 34 from the |



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| <p>or structures that are older than 60 years require alteration or demolition during this phase, HWC (in the Western Cape) and/or NBKB (in the Northern Cape) must be contacted regarding permission in terms of section 34 of the NHRA. Contact details are provided in Appendix 1.</p> | | <p>(Western Cape) or NBKB (Northern Cape)</p> | <p>relevant heritage authority or correspondence in this regard.</p> |
| <p>Long Term Management</p> | | | |
| <p>The R356 should be put forward for recognition as a scenic route to afford its scenic qualities and historic significance some measure of protection going forward</p> | <p>HWC and/or SAHRA</p> | <p>Placement of the R356 on the Heritage Register as a Scenic Route heritage resource in terms of section 30 of the NHRA</p> | <p>Gazette notice listing for the R356</p> |

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5. APPLICABLE LEGISLATION

The development of the Oya WEF 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 and the associated roads constitute a linear development exceeding 300m and this proposed development requires an evaluation of impacts to heritage resources in terms of other legislation (NEMA). This section states that the consenting authority (DEADP in the Western Cape and DENC in the Northern Cape) 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 (HWC in the Western Cape and SAHRA in the Northern Cape), 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, HWC has published guidelines on their minimum requirements for Heritage Impact Assessments and 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 Kudusberg WEF development (Smuts et al. 2018).

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.***

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 or destruction to or of heritage resources NOT anticipated in the HIA remain 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 HWC (Western Cape) or NBKB (Northern Cape) in terms of section 34 of the NHRA



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- Impacts to archaeological or palaeontological heritage not anticipated in the HIA requires a permit from HWC (Western Cape) or SAHRA (Northern Cape) in terms of section 35 of the NHRA
- Impacts to burial grounds or graves that are older than 60 years requires a permit from HWC (Western Cape) or SAHRA (Northern Cape) in terms of section 36 of the NHRA

It is recommended in the HIA that the R356 should be put forward for recognition as a scenic route to afford its scenic qualities and historic significance some measure of protection going forward. This recommendation requires that the relevant heritage authority formally protect this route as a significant scenic route. As this route has been graded IIIA, the appropriate formal protection mechanism for this resource would be placement on the Heritage Register in terms of section 30 of the NHRA. As yet, no regulations have been published by either SAHRA or HWC regarding how such a resource should be nominated for placement on the Heritage Register, nor have the appropriate regulations been published by either authority to establish the Heritage Register. As such, the responsibility for such formal protection falls to the heritage authority, but as yet, cannot be actioned.

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 (Case ID 13208)
<https://sahris.sahra.org.za/cases/basic-assessment-kudusberg-wind-farm-near-sutherland>
- Heritage Reports (HIA)
<https://sahris.sahra.org.za/heritage-reports/hia-kudusberg>
- Sites recorded in the HIA
<https://sahris.sahra.org.za/node/514990/linked-sites-to-reports>
- Heritage Report (Walkdown)
<https://sahris.sahra.org.za/heritage-reports/oya-wef-walkdown-report>

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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| 8181 | AIA Phase 1 | Jayson Orton | 29/09/2009 | HERITAGE STATEMENT FOR THE PROPOSED VERLORENVLEI DIVERSION CANAL, CERES MAGISTERIAL DISTRICT, WESTERN CAPE |
| 6644 | AIA Phase 1 | Jonathan Kaplan | 29/09/2009 | ARCHAEOLOGICAL IMPACT ASSESSMENT PROPOSED DEVELOPMENT ERF 660 DE DOORNS, WESTERN CAPE PROVINCE |
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| 356316 | Heritage Screener | Mariagrazia Galimberti, Kyla Bluff, Nicholas Wiltshire | 02/02/2016 | Heritage Screener CTS15_015b EOH Brandvalley Wind Energy Facility |
| 356318 | Heritage Screener | Mariagrazia Galimberti, Kyla Bluff, Nicholas Wiltshire | 01/02/2016 | Heritage Screener CTS15_015a EOH Rietkloof Wind Energy Facility |
| 364162 | PIA Phase 1 | John E Almond | 01/04/2016 | PALAEONTOLOGICAL HERITAGE ASSESSMENT: COMBINED DESKTOP & FIELD-BASED STUDY - PROPOSED BRANDVALLEY WIND ENERGY FACILITY LAINGSBURG, WESTERN & NORTHERN CAPE PROVINCES |
| 364163 | AIA Phase 1 | Celeste Booth | 01/04/2016 | A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE |



| | | | | |
|--------|-------------|--|------------|--|
| | | | | PROPOSED BRANDVALLEY WIND ENERGY FACILITY (WEF) SITUATED IN THE KAROO HOOGLAND LOCAL MUNICIPALITY (NAMAKWA DISTRICT MUNICIPALITY), THE WITZENBURG LOCAL MUNICIPALITY (CAPE WINELANDS DISTRICT MUNICIPALITY) AND LAINGSBURG LOCAL MUNICIPALITY (CENTRAL KAROO DISTRICT MUNICIPALITY). |
| 4843 | AIA Phase 1 | Hilary Deacon | 28/03/2008 | Archaeological Impact Assessment: Proposed Breede Valley De Doorns Housing Project |
| 514990 | HIA Phase 1 | Katie Smuts, Emmylou Bailey, Madelon Tusenius, John Almond | 29/10/2018 | HERITAGE IMPACT ASSESSMENT Basic Assessment for the Proposed Development of the 325MW Kudusberg Wind Energy Facility and associated infrastructure, between Matjiesfontein and Sutherland in the Western and Northern Cape Provinces: BA REPORT |
| 375379 | AIA Phase 1 | Hugo Pinto, Katie Smuts | 24/10/2011 | Preliminary Archaeological Survey of Karooport Farm |

Additional References:

Hart, T. et al. (2016). **HERITAGE IMPACT ASSESSMENT (SCOPING) FOR THE PROPOSED KOLKIES WIND ENERGY FACILITY AND ASSOCIATED GRID CONNECTION TO BE SITUATED IN THE SOUTHERN TANKWA KAROO.** (Assessment conducted under Section 38 (8) of the National Heritage Resources Act (No. 25 of 1999) as part of an EIA). For Arcus Consulting. Unpublished and not submitted.

Hart, T. et al. (2016). **HERITAGE IMPACT ASSESSMENT (SCOPING) FOR THE PROPOSED KAREE WIND ENERGY FACILITY AND ASSOCIATED GRID CONNECTION TO BE SITUATED IN THE SOUTHERN TANKWA KAROO.** (Assessment conducted under Section 38 (8) of the National Heritage Resources Act (No. 25 of 1999) as part of an EIA). For Arcus Consulting. Unpublished and not submitted.

Shaw, Matthew & Ames, Christopher & Phillips, Natasha & Chambers, Sherrie & Dosseto, Anthony & Douglas, Matthew & Goble, Ron & Jacobs, Zenobia & Jones, Brian & Lin, Sam & Low, Marika & Mcneil, Jessica-Louise & Nasoordeen, Shezani & O'driscoll, Corey & Saktura, Rosaria & Sumner, T. & Watson, Sara & Will, Manual & Mackay, Alex. (2020). **The Doring River Archaeology Project: Approaching the Evolution of Human Land Use Patterns in the Western Cape, South Africa.**

Smith, Andrew B., and Michael R. Ripp. "An Archaeological Reconnaissance of the Doorn/Tanqua Karoo." The South African Archaeological Bulletin, vol. 33, no. 128, 1978, pp. 118-133



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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.

Expert advice should be sought from the South African Heritage Resources Agency (SAHRA) or HWC 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 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 HWC or 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;
- * 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.

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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;
- * 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.

* 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,



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- 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

Heritage Western Cape (HWC)

Contact Person: Mrs C. Scheermeyer (Deputy Director)

Tel: 021 483 5959

Email: colette.scheermeyer@westerncape.gov.za or ceoheritage@westerncape.gov.za

Website: www.hwc.org.za

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

Ngwao Boswa Kapa Bokoni - Northern Cape Provincial Heritage Resources Authority (NBKB)

Contact Person: Mr Ratha Timothy

Tel: 079 036 9695

Email: rtimothy@nbkb.org.za

Website: <http://www.nbkb.org.za/>

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Iziko South African Museums

Contact Person: Dr Wendy Black

Tel: 021 481 3883

Email: wblack@iziko.org.za

Website: www.iziko.org.za

University of Cape Town: Archaeology Department

Contact Person: Prof. John Parkington

Tel: 021 650 2353

Email: john.parkington@uct.ac.za

Website: <http://www.archaeology.uct.ac.za/>

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APPENDIX 2:

Known heritage resources within the Kudusberg WEF Development Area

| SAHRIS ID | Site No | Site Name | Description (Detailed descriptions on SAHRIS) | Co-ordinates | | Grading |
|-----------|---------|-----------------------------|--|--------------|-----------|------------|
| | | | | | | |
| 130988 | KDB019 | Kudusberg | Structures | -32,893434 | 20,300591 | |
| 130989 | KDB020 | Kudusberg | Structures | -32,886809 | 20,325772 | Grade IIIc |
| 130990 | KDB021 | Kudusberg | Transport infrastructure | -32,866028 | 20,374972 | Grade IV |
| 130991 | KDB022 | Kudusberg | Building | -32,833555 | 20,396091 | Grade IIIc |
| 130992 | KDB023 | Kudusberg | Stone walling | -32,848361 | 20,378583 | Grade IIIb |
| 130719 | OYPV-01 | Matjiesfontein Oya Solar | Stone walling | -32,903047 | 20,247122 | Grade IIIc |
| 130993 | KDB024 | Kudusberg | Stone walling | -32,848417 | 20,378417 | Grade IIIb |
| 130720 | OYPV-02 | Matjiesfontein Oya Solar | Stone walling | -32,913278 | 20,251203 | |
| 130994 | KDB025 | | Stone walling | -32,848333 | 20,378611 | Grade IIIb |
| 130995 | KDB026 | Kudusberg | Stone walling | -32,848333 | 20,378611 | Grade IIIb |
| 130996 | KDB027 | Kudusberg | Stone walling | -32,848194 | 20,378694 | Grade IIIb |
| 130998 | KDB029 | Kudusberg | Transport infrastructure | -32,839528 | 20,38275 | Grade IV |
| 130725 | OYPV-05 | Matjiesfontein Oya Solar | Stone walling, Burial Grounds & Graves | -32,888592 | 20,226611 | Grade IIIa |
| 130999 | KDB030 | Kudusberg | Structures | -32,833472 | 20,3955 | Grade IV |
| 130727 | OYPV-06 | Matjiesfontein Oya Solar | Artefacts | -32,889661 | 20,226439 | |
| 131001 | KDB032 | Kudusberg | Structures | -32,832472 | 20,39575 | Grade IV |
| 131002 | KDB033 | Kudusberg | Artefacts, Deposit | -32,833528 | 20,396639 | Grade IV |
| 131003 | KDB035 | Kudusberg | Structures | -32,833722 | 20,396194 | Grade IV |
| 131004 | KDB036 | Kudusberg | Structures | -32,834528 | 20,396167 | Grade IV |
| 131005 | KDB037 | Kudusberg | Structures | -32,834278 | 20,395889 | Grade IV |
| 130732 | OYPV-11 | Matjiesfontein Oya | Artefacts | -32,9015 | 20,227469 | Grade IIIb |

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| | | Solar | | | | |
| 131006 | KDB038 | Kudusberg | Stone walling | -32,834167 | 20,396194 | Grade IV |
| 131007 | KDB039 | Kudusberg | Structures | -32,824806 | 20,402889 | Grade IV |
| 130734 | OYPV-13 | Matjiesfontein Oya Solar | Artefacts | -32,898217 | 20,224189 | |
| 130735 | OYPV-14 | Matjiesfontein Oya Solar | Artefacts | -32,885239 | 20,218722 | |
| 130736 | OYPV-15 | Matjiesfontein Oya Solar | Artefacts | -32,886306 | 20,234069 | |
| 131010 | KDB042 | Kudusberg | Artefacts, Deposit | -32,824611 | 20,403056 | Grade IV |
| 131011 | KDB043 | Kudusberg | Burial Grounds & Graves | -32,824889 | 20,402667 | Grade IIIa |
| 131013 | KDB045 | Kudusberg | Structures | -32,816806 | 20,401667 | Grade IV |
| 131014 | KDB046 | Kudusberg | Structures | -32,816972 | 20,401528 | Grade IV |
| 131015 | KDB047 | Kudusberg | Structures | -32,817083 | 20,401611 | Grade IV |
| 131016 | KDB048 | Kudusberg | Structures | -32,817083 | 20,401694 | Grade IV |
| 131019 | KDB051 | Kudusberg | Structures | -32,818278 | 20,401722 | Grade IV |
| 130749 | BKRN012 | Baakens Rivier | Structures | -32,90325 | 20,246933 | |
| 130750 | BKRN013 | Baakens Rivier | Stone walling | -32,91305 | 20,251267 | |
| 131021 | KDB053 | Kudusberg | Structures | -32,818194 | 20,402694 | Grade IV |
| 131022 | KDB054 | Kudusberg | Natural | -32,854611 | 20,373167 | |
| 131023 | KDB055 | Kudusberg | Natural | -32,857667 | 20,367417 | |
| 131024 | KDB056 | Kudusberg | Structures | -32,789667 | 20,354861 | Grade IV |
| 130754 | BKRN017 | Baakens Rivier 155 | Deposit | -32,888917 | 20,210806 | |
| 130755 | BKRN018 | Baakens Rivier 155 | Deposit | -32,889139 | 20,210639 | |
| 131026 | KDB057 | Kudusberg | Building | -32,80375 | 20,350111 | Grade IIIc |
| 131027 | KDB058 | Kudusberg | Structures | -32,802889 | 20,350556 | Grade IV |
| 130758 | BKRN021 | Baakens Rivier 155 | Deposit | -32,894722 | 20,221722 | |
| 130759 | BKRN022 | Baakens Rivier 155 | Deposit | -32,894972 | 20,221528 | |

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| 131030 | KDB061 | Kudusberg | Burial Grounds & Graves | -32,801444 | 20,349722 | Grade IIIa |
| 130760 | BKRN023 | Baakens Rivier 155 | Deposit | -32,893528 | 20,243944 | |
| 131031 | KDB062 | | Burial Grounds & Graves | -32,798167 | 20,353056 | Grade IIIa |
| 130761 | BKRN024 | Baakens Rivier 155 | Palaeontological | -32,893694 | 20,243444 | |
| 130762 | BKRN025 | Baakens Rivier 155 | Palaeontological | -32,901278 | 20,248306 | |
| 130763 | BKRN026 | Baakens Rivier 155 | Palaeontological | -32,904194 | 20,247167 | |
| 130764 | BKRN027 | Baakens Rivier 155 | Deposit | -32,919139 | 20,245806 | |
| 131035 | KDB066 | | Stone walling | -32,789944 | 20,355194 | Grade IV |
| 130765 | BKRN028 | Baakens Rivier 155 | Deposit | -32,89375 | 20,217528 | |
| 130766 | BKRN029 | Baakens Rivier 155 | Palaeontological | -32,882806 | 20,2175 | |
| 131036 | KDB067 | Kudusberg | Structures | -32,789472 | 20,355556 | Grade IV |
| 130767 | BKRN030 | Baakens Rivier 155 | Deposit | -32,880108 | 20,215539 | |
| 131037 | KDB068 | Kudusberg | Burial Grounds & Graves | -32,78725 | 20,356417 | Grade IIIa |
| 131038 | KDB069 | Kudusberg | Building | -32,787194 | 20,356111 | Grade IIIc |
| 131039 | KDB070 | Kudusberg | Structures | -32,78775 | 20,355222 | Grade IV |
| 131044 | KDB070 | Kudusberg | Artefacts | -32,789611 | 20,356528 | Grade IV |
| 131045 | KDB071 | Kudusberg | Structures | -32,786528 | 20,357639 | Grade IV |
| 131046 | KDB072 | Kudusberg | Burial Grounds & Graves | -32,785556 | 20,358833 | Grade IIIa |
| 131047 | KDB073 | Kudusberg | Burial Grounds & Graves | -32,785528 | 20,358917 | Grade IIIa |
| 131048 | KDB074 | Kudusberg | Burial Grounds & Graves | -32,7855 | 20,358889 | Grade IIIa |
| 131049 | KDB075 | Kudusberg | Burial Grounds & Graves | -32,7855 | 20,358861 | Grade IIIa |
| 131050 | KDB076 | Kudusberg | Burial Grounds & Graves | -32,785444 | 20,358861 | Grade IIIa |
| 131051 | KDB077 | Kudusberg | Burial Grounds & Graves | -32,785417 | 20,358889 | Grade IIIa |
| 131052 | KDB078 | Kudusberg | Stone walling | -32,785444 | 20,358611 | Grade IV |
| 131058 | KDB084 | Kudusberg | Artefacts | -32,792083 | 20,355333 | Grade IV |
| 131059 | KDB085 | Kudusberg | Structures | -32,789364 | 20,355633 | Grade IV |

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| 131060 | KDB086 | Kudusberg | Structures | -32,789411 | 20,355494 | Grade IV |
| 131061 | KDB087 | Kudusberg | Structures | -32,789522 | 20,355591 | Grade IV |
| 131062 | KDB088 | Kudusberg | Structures | -32,789631 | 20,355891 | Grade IV |
| 131063 | KDB089 | Kudusberg | Structures | -32,789487 | 20,355724 | Grade IV |
| 131064 | KDB090 | Kudusberg | Structures | -32,789504 | 20,355792 | Grade IV |
| 131065 | KDB091 | Kudusberg | Structures | -32,789405 | 20,355552 | Grade IV |
| 131066 | KDB092 | Kudusberg | Structures | -32,787903 | 20,359372 | Grade IV |
| 131067 | KDB093 | Kudusberg | Structures | -32,788384 | 20,363416 | Grade IV |
| 131068 | KDB094 | Kudusberg | Structures | -32,787274 | 20,363537 | Grade IV |
| 131069 | KDB095 | Kudusberg | Structures | -32,787839 | 20,364278 | Grade IV |
| 131072 | KDB098 | Kudusberg | Rock Art, Artefacts, Deposit | -32,953333 | 20,335028 | Grade IIIa |
| 131074 | KDB100 | Kudusberg | Structures | -32,864056 | 20,308778 | Grade IIIc |
| 131075 | KDB101 | Kudusberg | Building | -32,895703 | 20,330119 | Grade IIIc |
| 131076 | KDB102 | Kudusberg | Artefacts | -32,894958 | 20,330869 | Grade IIIc |
| 131085 | KDB110 | Kudusberg | Burial Grounds & Graves | -32,915 | 20,358917 | Grade IIIa |
| 131086 | KDB111 | Kudusberg | Burial Grounds & Graves | -32,913333 | 20,358889 | Grade IIIa |
| 131087 | KDB112 | Kudusberg | Burial Grounds & Graves | -32,913333 | 20,358861 | Grade IIIa |
| 131096 | KDB121 | Kudusberg | Structures | -32,802417 | 20,386667 | Grade IV |
| 131099 | KDB124 | Kudusberg | Structures | -32,802417 | 20,386667 | Grade IV |
| 131100 | KDB125 | Kudusberg | Structures | -32,93 | 20,350056 | Grade IV |
| 131103 | KDB128 | Kudusberg | Structures | -32,789472 | 20,355556 | Grade IV |
| 131151 | KDB131 | Kudusberg | Artefacts | -32,8413 | 20,33519 | |
| 131152 | KDB132 | Kudusberg | Structures | -32,89313 | 20,30349 | Grade IIIc |
| 131153 | KDB133 | Kudusberg | Structures | -32,88774 | 20,26414 | Grade IIIc |
| 131154 | KDB134 | Kudusberg | Artefacts | -32,89265 | 20,24085 | |
| 131155 | KDB135 | Kudusberg | Structures | -32,88854 | 20,22665 | Grade IIIc |

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| 130963 | KDB001 | Kudusberg | Artefacts | -32,885889 | 20,268444 | |
| 130964 | KDB002 | Kudusberg | Structures | -32,885889 | 20,268389 | |
| 130965 | KDB003 | Kudusberg | Structures | -32,886083 | 20,268333 | Grade IIIc |
| 130966 | KDB004 | Kudusberg | Stone walling | -32,88625 | 20,268528 | Grade IIIc |
| 130967 | KDB005 | Kudusberg | Structures | -32,888556 | 20,270611 | Grade IIIc |
| 130968 | KDB006 | Kudusberg | Stone walling | -32,889778 | 20,276917 | Grade IIIc |
| 130969 | KDB006a | Kudusberg | Stone walling | -32,889895 | 20,276256 | Grade IIIc |
| 130970 | KDB007 | Kudusberg | Stone walling | -32,889917 | 20,278861 | Grade IIIc |
| 130972 | KDB008a | Kudusberg | Structures | -32,890576 | 20,282364 | Grade IIIc |
| 130973 | KDB008b | Kudusberg | Structures | -32,88961 | 20,283268 | Grade IIIc |
| 130974 | KDB008c | Kudusberg | Structures | -32,889472 | 20,284282 | Grade IIIc |
| 130978 | KDB009 | Kudusberg | Geological | -32,89075 | 20,282472 | |
| 130979 | KDB010 | Kudusberg | Rock Art, Deposit, Artefacts | -32,868111 | 20,335028 | Grade IIIa |
| 130980 | KDB011 | Kudusberg | Artefacts | -32,886583 | 20,315417 | Grade IIIc |
| 130981 | KDB012 | Kudusberg | Structures | -32,864056 | 20,308778 | Grade IIIc |
| 130982 | KDB013 | Kudusberg | Stone walling | -32,893901 | 20,296531 | Grade IIIc |
| 130985 | KDB016 | Kudusberg | Stone walling | -32,890699 | 20,278101 | Grade IIIc |
| 130986 | KDB017 | Kudusberg | Building | -32,895704 | 20,330119 | Grade IIIc |
| 130987 | KDB018 | Kudusberg | Structures | -32,892834 | 20,302446 | Grade IIIc |
| | KB1 | Kudusberg WEF_1 | Historical graveyard contains multiple graves; adjacent to the main farm road | -32.75276 | 20.36311 | IIIa |
| | KB3 | Kudusberg WEF_3 | Smaller rectangular stone kraal (+- 20mx30m) attached to larger kraal (KB2) | -32.75205 | 20.36413 | IIIC |
| | KB4 | Kudusberg WEF_4 | Stone Kraal | -32.75301 | 20.36333 | IIIC |
| | KB5 | Kudusberg WEF_5 | Dumping sites (holes) | -32.75309 | 20.36280 | NCW |
| | KB6 | Kudusberg WEF_6 | Stone ruin | -32.75342 | 20.36279 | IIIC |

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| | KB7 | Kudusberg WEF_7 | Stone house consists of three rooms and a fireplace. | -32.75393 | 20.36296 | IIC |
| | KB8 | Kudusberg WEF_8 | Modern Homestead | -32.75397 | 20.36359 | NCW |
| | KB11 | Kudusberg WEF_11 | Chert flake | -32.75990 | 20.36430 | NCW |
| | KB12 | Kudusberg WEF_12 | Possible quartzite artefact | -32.76279 | 20.36333 | NCW |
| | KB14 | Kudusberg WEF_14 | Stone walling? | -32.78738 | 20.36327 | NCW |
| | KB15 | Kudusberg WEF_15 | Historical rubbish scatter (next to KB16) | -32.78747 | 20.36341 | IIC |
| | KB16 | Kudusberg WEF_16 | Stone house consists of 4 rooms and chimney | -32.78773 | 20.36357 | IIC |
| | KB18 | Kudusberg WEF_18 | Stone House consists of three rooms | -32.78854 | 20.36370 | IIC |
| | KB19 | Kudusberg WEF_19 | Chert flake | -32.80815 | 20.36676 | NCW |
| | KB20 | Kudusberg WEF_20 | Possible greywacke artefact | -32.88588 | 20.35886 | NCW |
| | KB21 | Kudusberg WEF_21 | Chert adze, single piece no other artefacts evident | -32.8413 | 20.33519 | NCW |
| | KB24 | Kudusberg WEF_24 | Chert core, Only minor flaking around edges | -32.89265 | 20.24085 | NCW |

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APPENDIX 3:

Kudusberg Landowner Details

| Owner / Lessor | Properties | c/o (main contact) | Landline | Cell | Fax | Postal Addr | Physical Addr | Email address |
|----------------------------|---|---|--|---------------------------------------|----------------------------------|-------------------------------------|---|---|
| Frans Du Toit Trust | RE/158 Amandelboom | Francois du Toit (Snr) | 023 5511704 | 084 5811063 Fanie: the son. | | PO Box 1 Laingsburg 6900 | Exelsior Laingsburg 6900 | adutoit8@gmail.com |
| De List Trust | 6/193 Urias Gat | Dirkie Bothma / Son - Klein Dirkie (084 585 8424) | 023 571 2010 (Sutherland) 023 572 1074 (site/winter) | 082 744 8087 083 2188 185 | n/a | Posbus 91, Sutherland 6920 | Voelfontein, Sutherland | dirkiebothma@gmail.com |
| Koedoesfontein Trust | 4/193 Urias Gat 1/158 Amandelboom | See above | | | | | | |
| Hendrik Jakobus Visser | RE/156 Gats Rivier 1/156 Gats Rivier RE/159 Oliviers Berg | Hennie Visser | 023 231 0876 (w) 023 231 1872 (home/Wolseley) 087 802 8440(Gatsrivier) | 082 578 0940 | 086 606 8297 | PO Box 125, 6830 Wolseley | Twistniet., Wolseley | anetenhenni@worldonline.co.za |
| | | Anet Boltman (partner) | 023 231 0976 | 082 875 9016 | | | | |
| P U UYS Familie Trust | 1/159 Oliviers Berg | Pieter Uys | 023 358 1218 (site) | 081 270 8965 | | Posbus 327 Gordons Bay 7151 | 14 kalben (lizandra somerset wes) | pietmika@gmail.com |
| Spitskop Trust | 2/157 Riet Fontein 2/156 Gats Rivier 1/157 Riet Fontein | Thinus (Marthinus) van der Merwe | 023 317 0703 (w) | 083 444 9752 | 023 317 0774 086 721 3765 (w) | PO Box 13, 6836 Kouebokkeveld | Ceres Fonteintjie Boerderij, Kouebokkeveld | admin@fonteintjie.co.za |
| Johan Le Roux | RE/193 Urias Gat | n/a | 023 551 1730 | 071 001 6887 / Irene: 062 588 6389 | | | Boesmansfontein, Laingsburg | boesmansfontein@gmail.com / ireneleroux6@gmail.com |
| D.R VD Walt and J.H Hamman | 395 Kilpbanks Fontein | Daneel Rousseau van der Walt | 021 913 4606 (defunct) 012 664 6664 (Hear Us) | 0832706347 (Hear Us) | | | | |
| | | John Hamman | 00264 81 143 9607 021 912 2960 (Durbanville Office) | +264 81 143 9607 079 250 4106 (SA) | +26 461 378 844 | | | john@pointbreak.com.na susanjohnhamman@gmail.com |

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| | | | | | | | | |
|----------------------------|------------------------|--|---|--------------|--------------|--------------------------------------|---|--|
| | | | | | | | | ail.com |
| M M Esterhuysen Trust | RE/194 Matjiesfontein | Carli du Plessis (main trustee) | | 082 442 5354 | | | | |
| | | Duppie du Plessis (husband / main contact) | hartebeesfontein@roggeveld.co.za, dehoop@roggeveld.co.za - two tenants on farm Carlie asked that we keep them informed of any site visit related activity | 082 467 5635 | | stasieweg 163, Brackenfell, 7560 | | carlie@sun.ac.za stefanievzyl@gmail.com |
| J & B Trust | RE/196 Karree Kloof | Jaapie Bothma | 021 919 2254 | 083 447 8874 | 086 276 1460 | | 12 Raphael Crescent, Stellenberg, Durbanville | bothma1966@gmail.com |
| | | Bernise Bothma | | 083 457 5756 | | | | berniseph@gmail.com |
| Van Der Vyver (CJ) Trust | RE/161 Muishond Rivier | Dawie vd Vyver (son) | | 084 381 7281 | | P.O.Box 39, Laingsburg, 6900 | | svdv@lantic.net / dvdv@lantic.net |
| Charl Gerhardus du Plessis | 1/196 Karre Kloof | | 023 5511 222 | 082 651 7465 | | 39 Soutkloof Street, Laingsburg 6900 | 39 Soutkloof Street, Laingsburg 6900 | charl@agrisell.co.za |
| | | | | | | | | |

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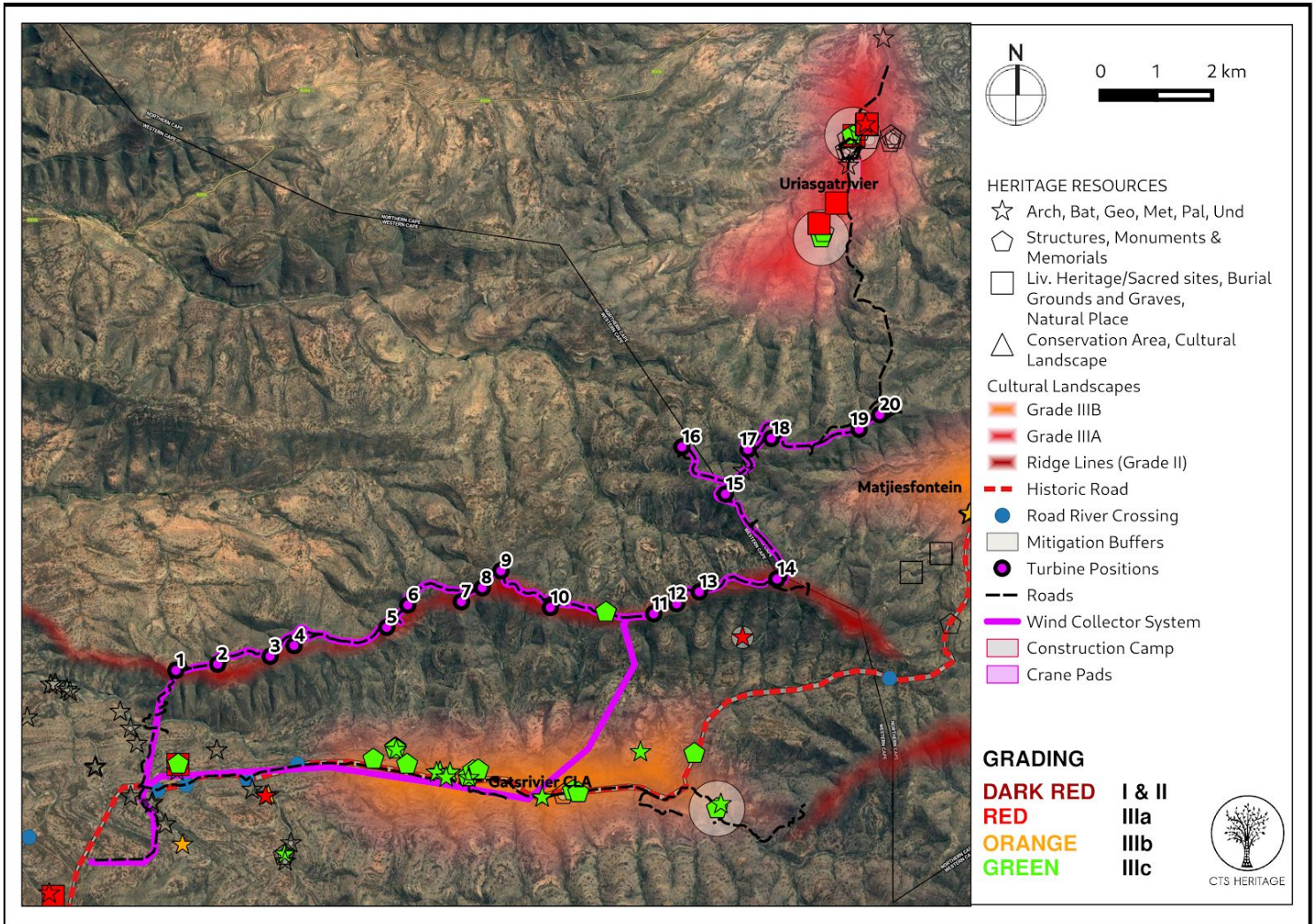
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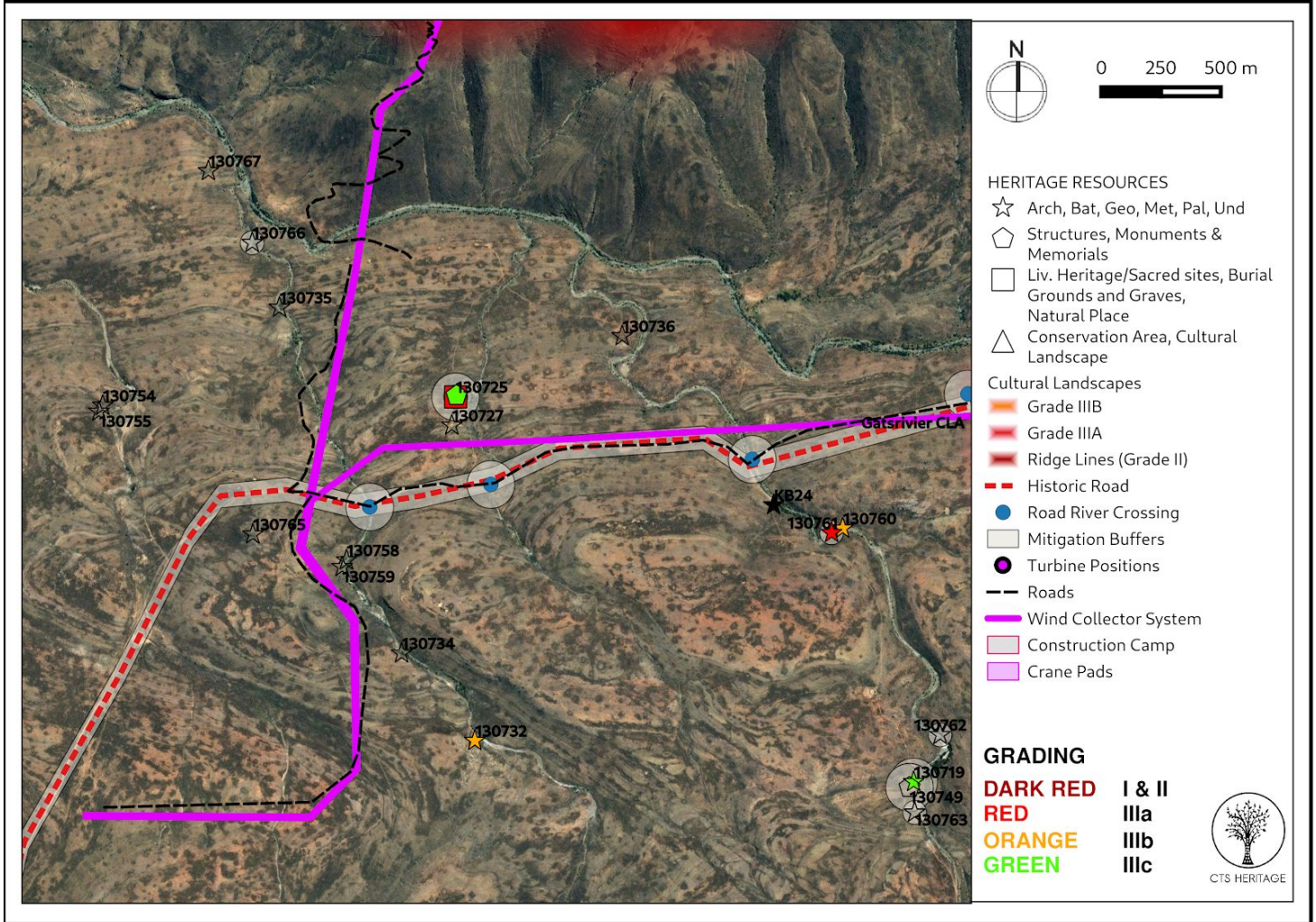
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APPENDIX 4: Mitigation Maps



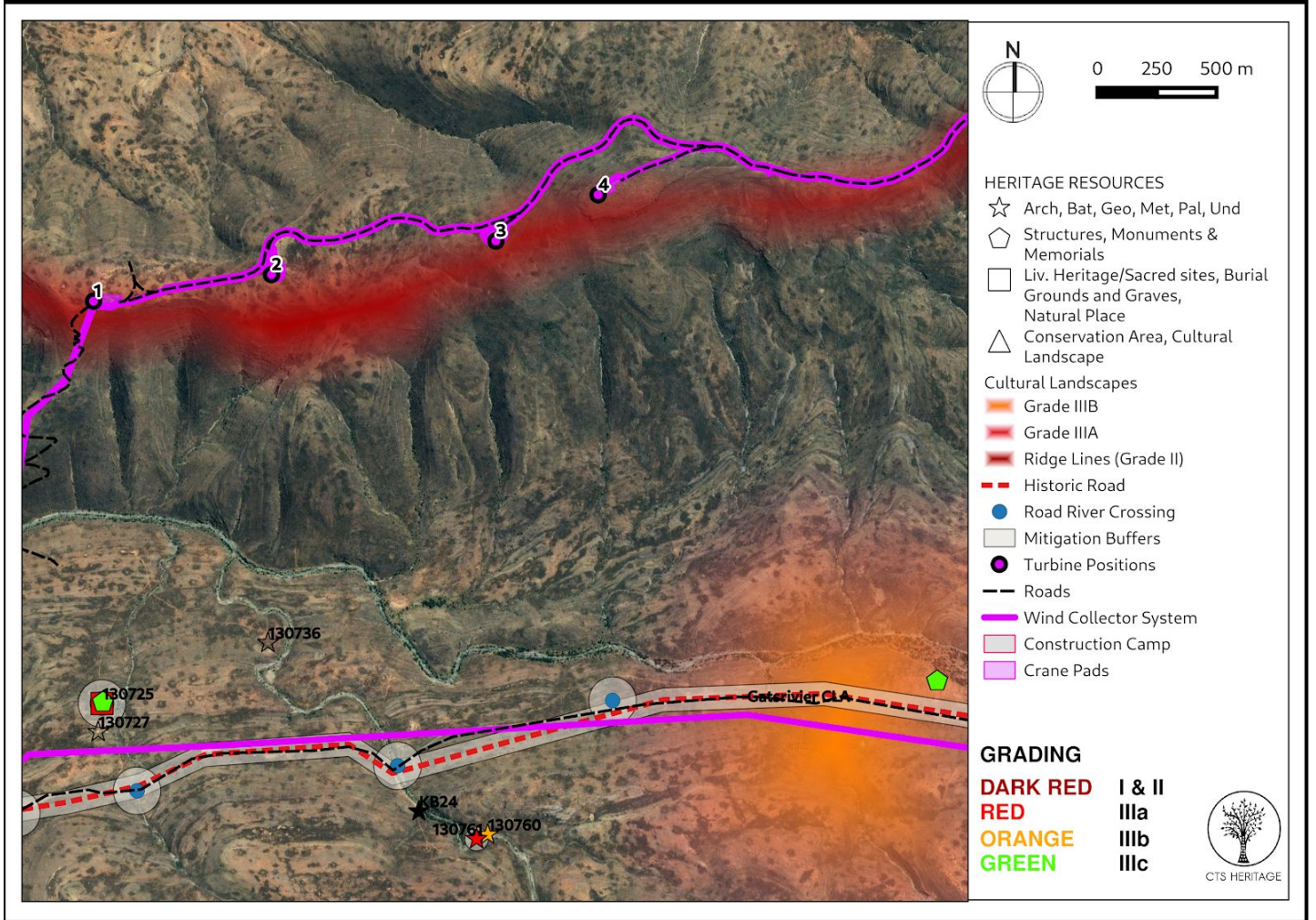


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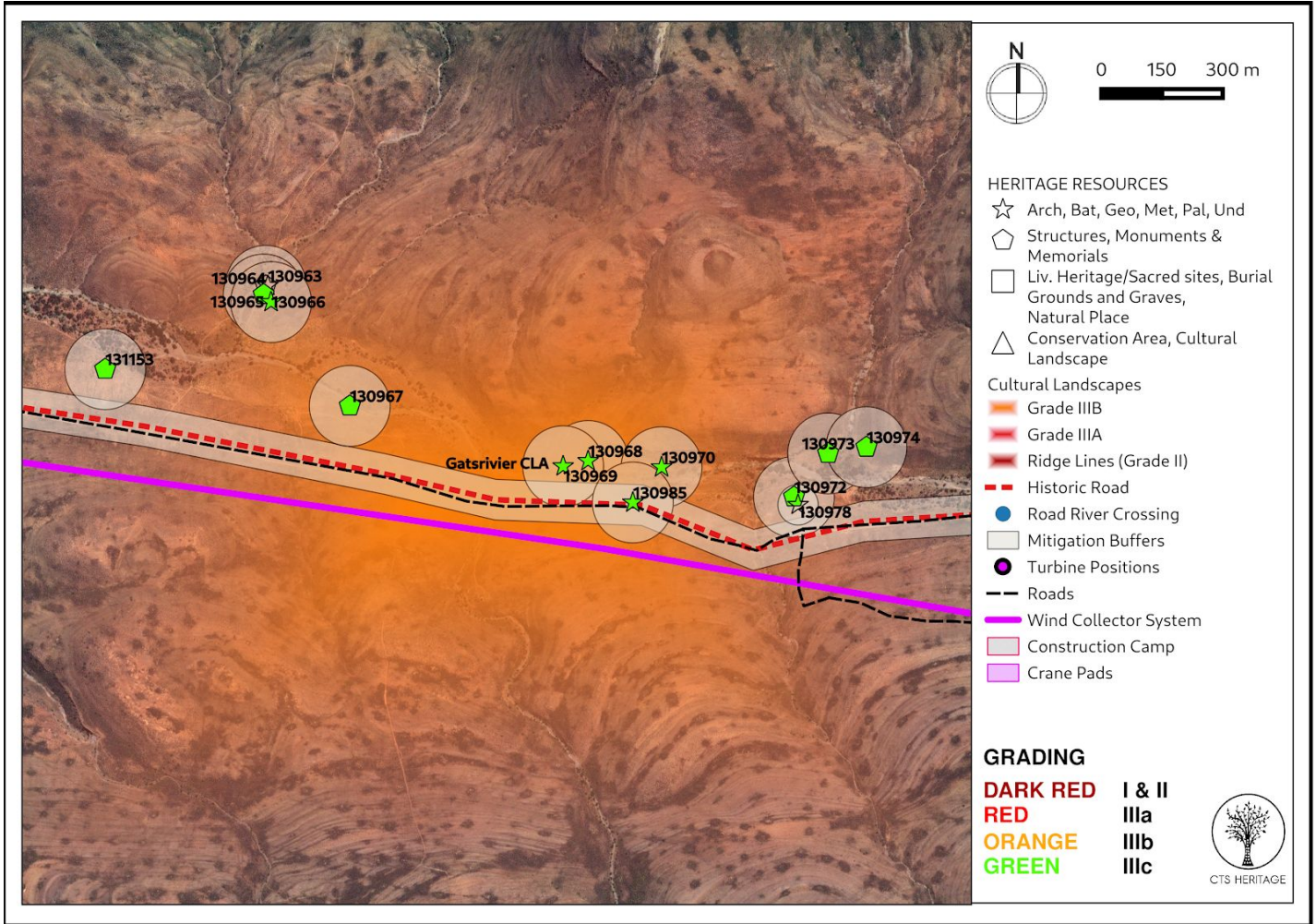


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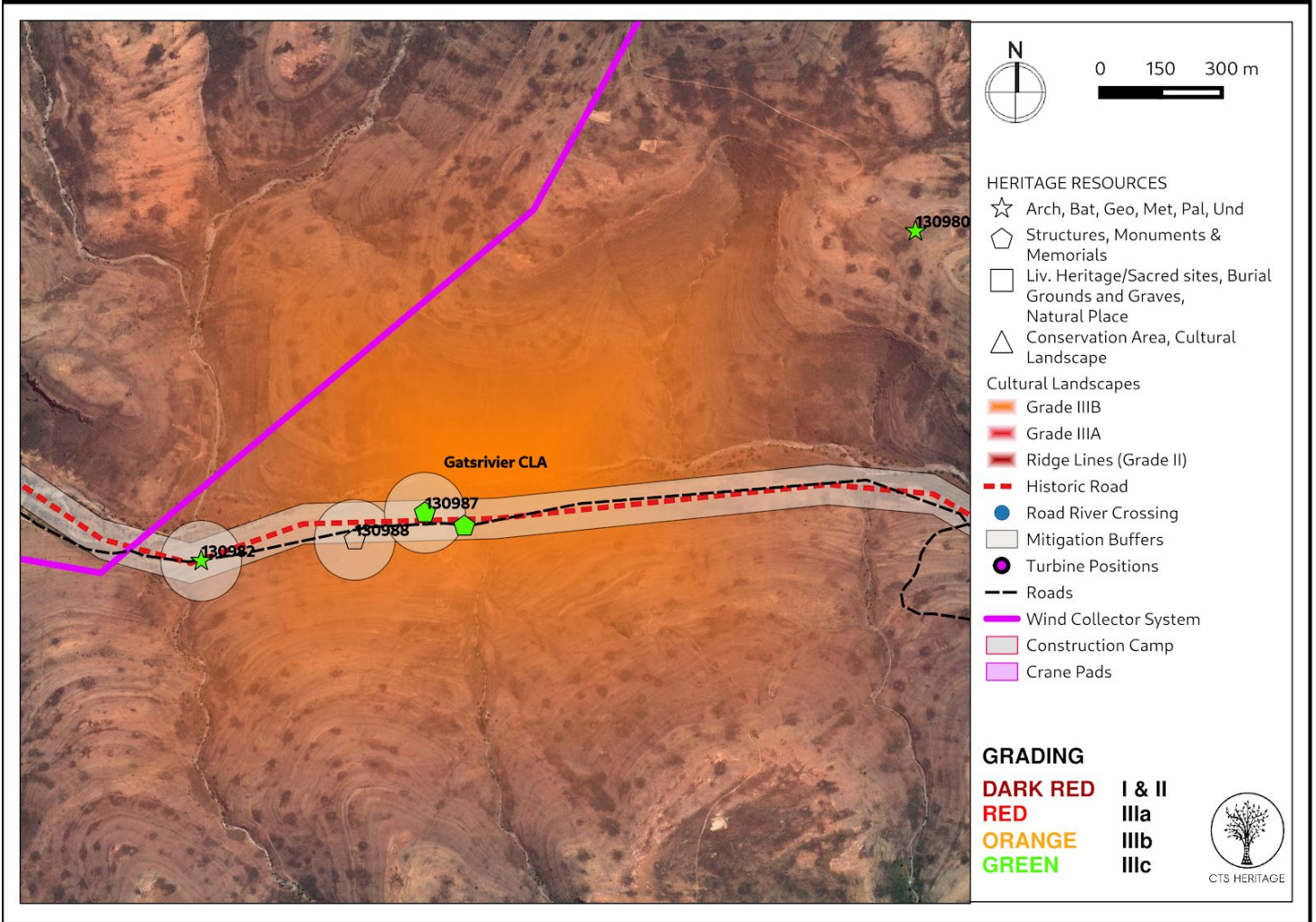


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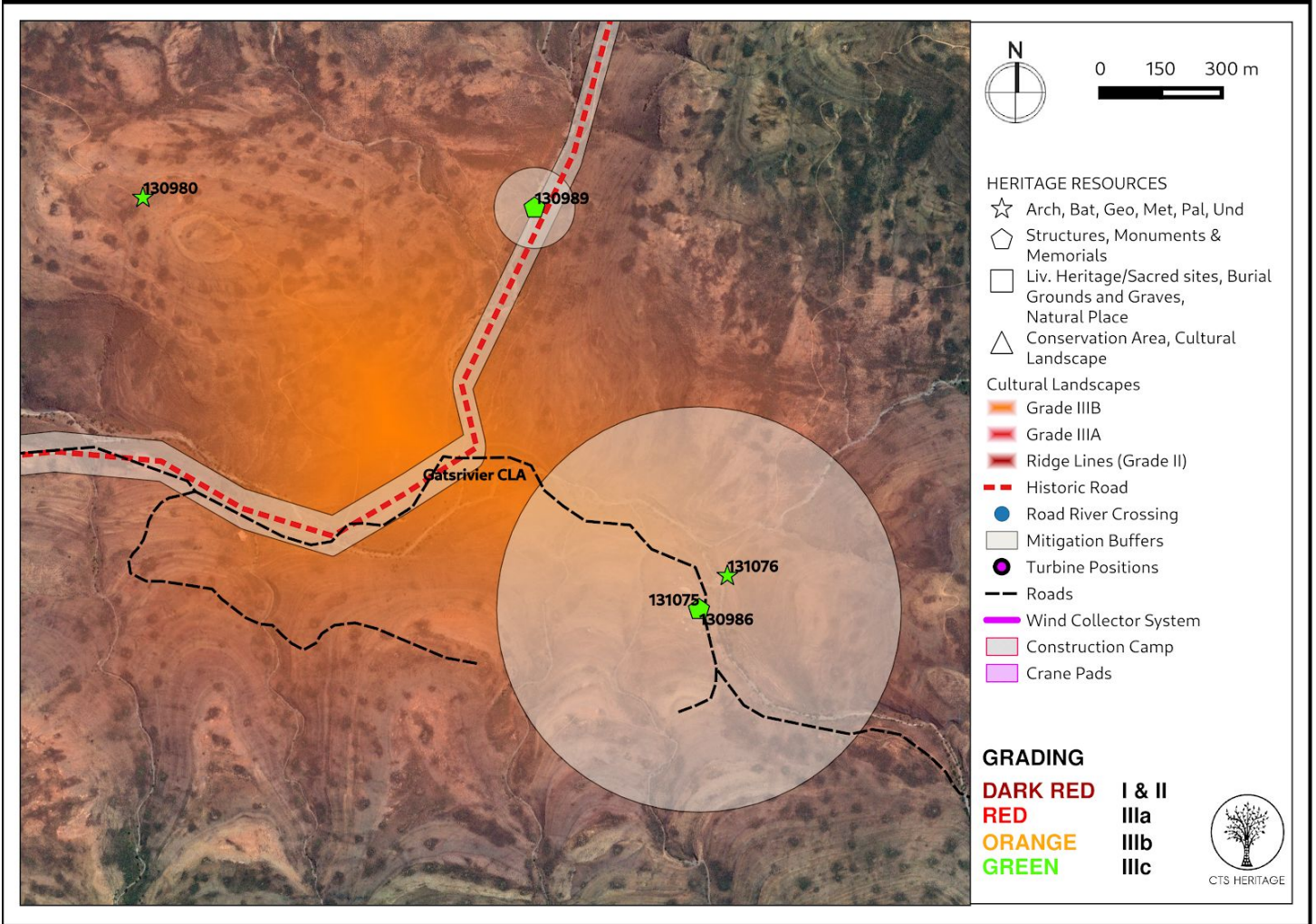


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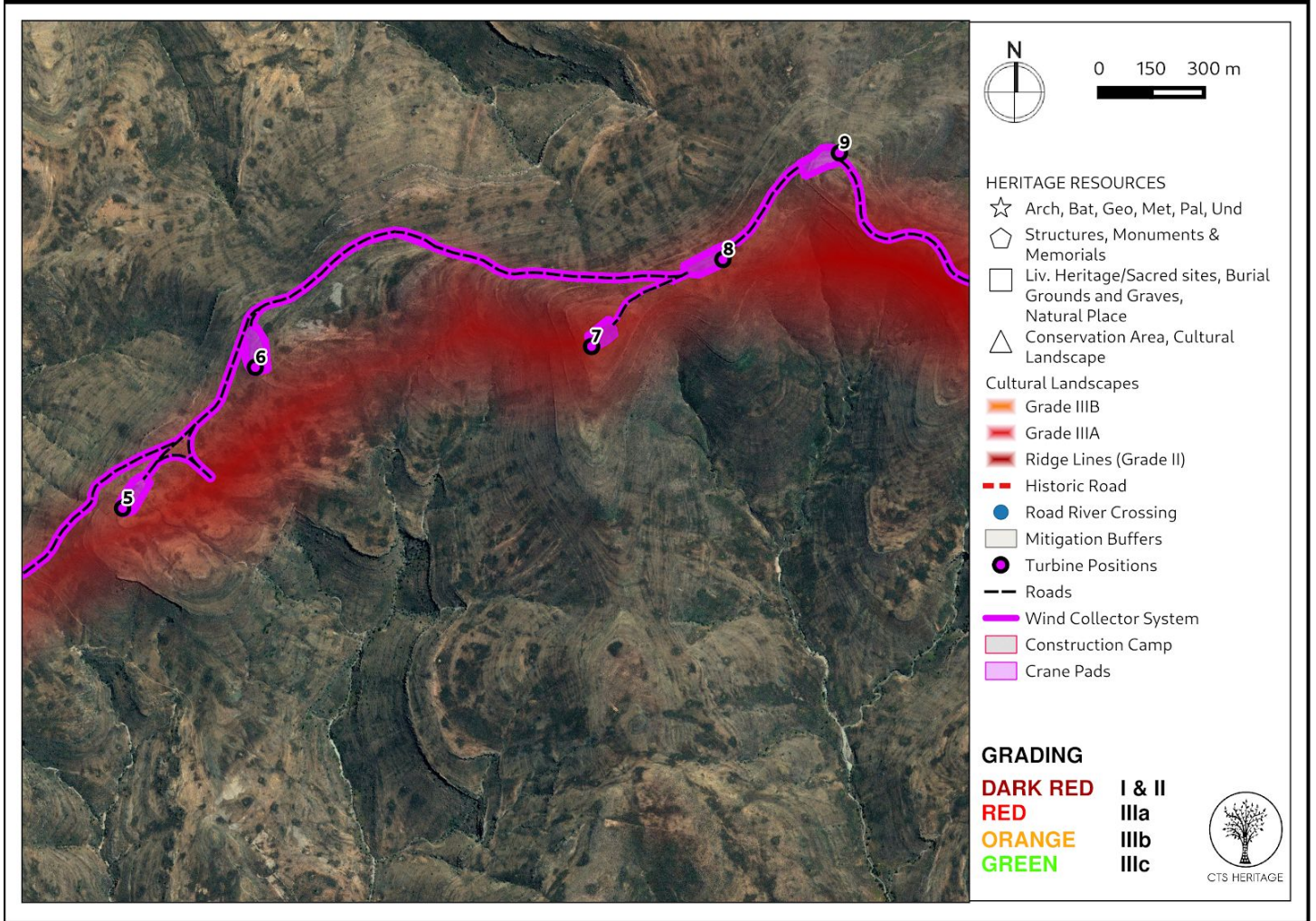


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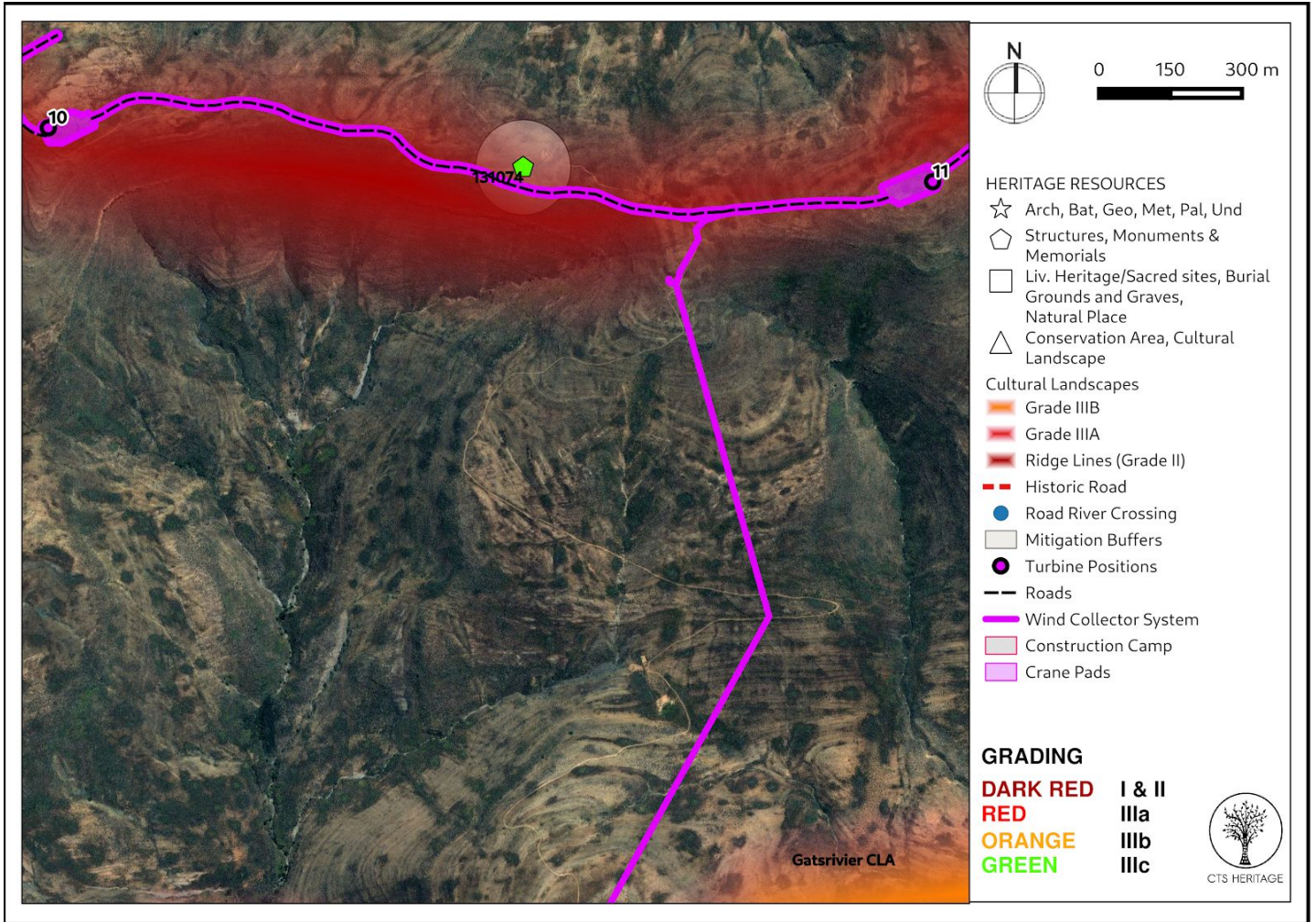


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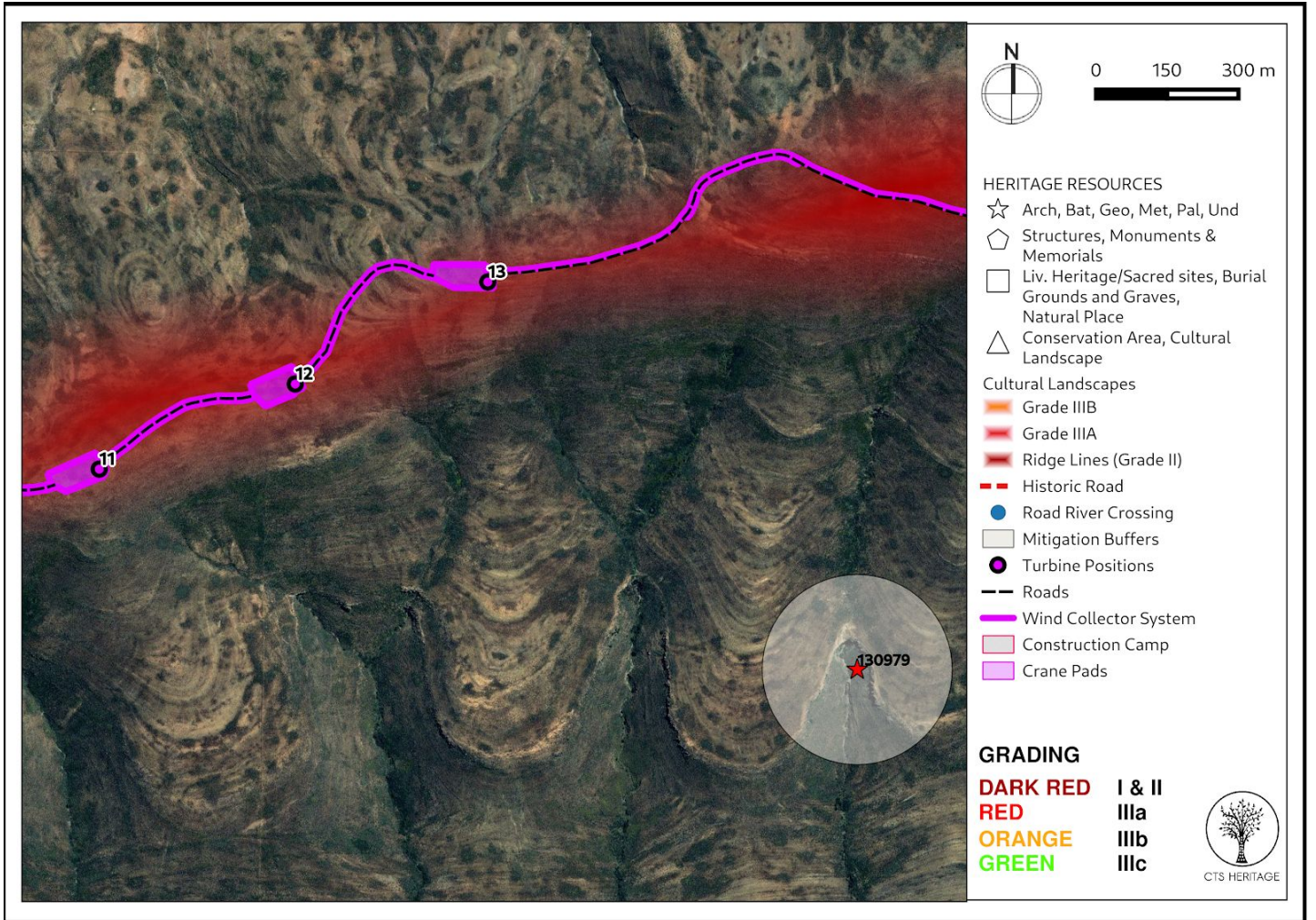


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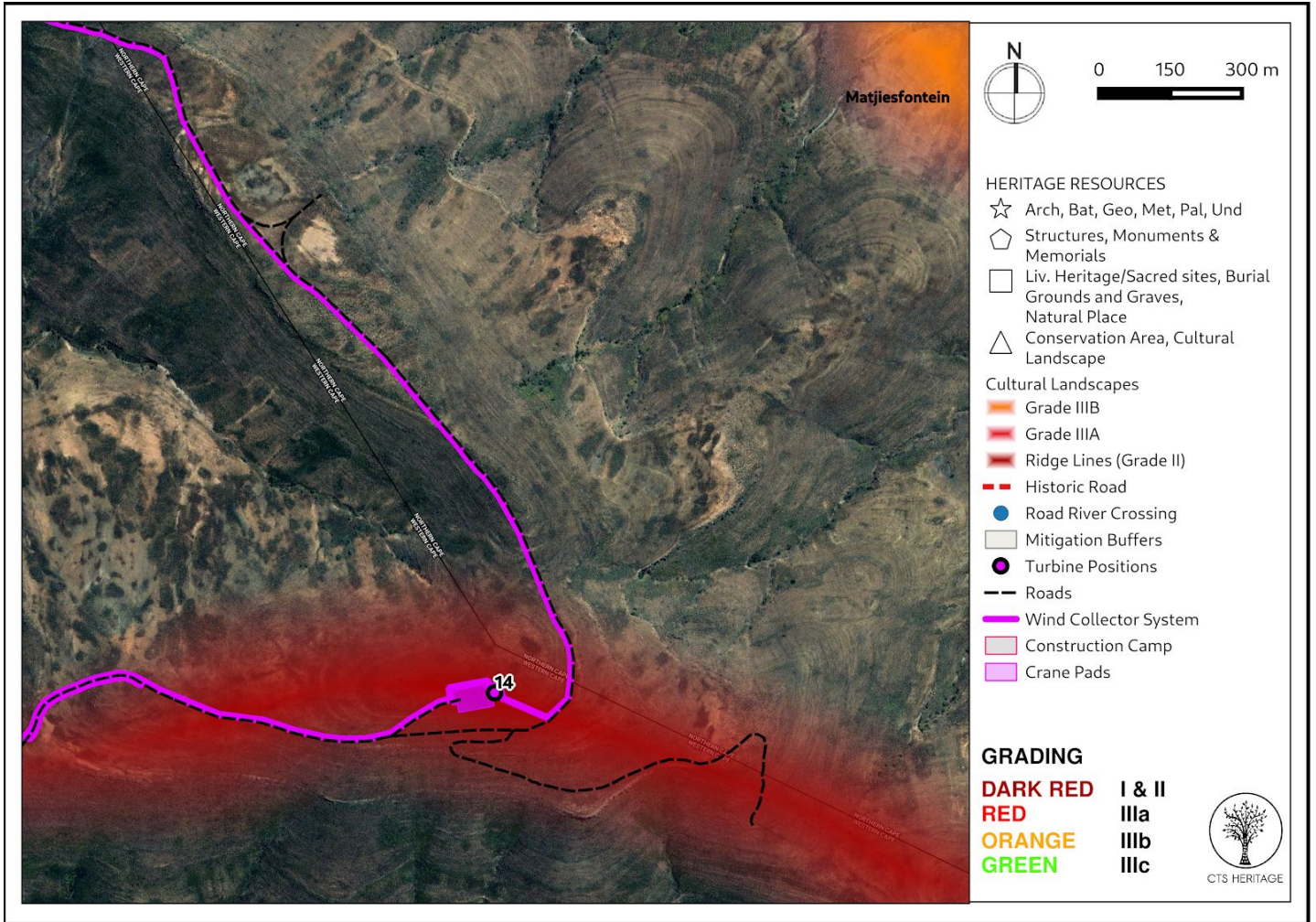


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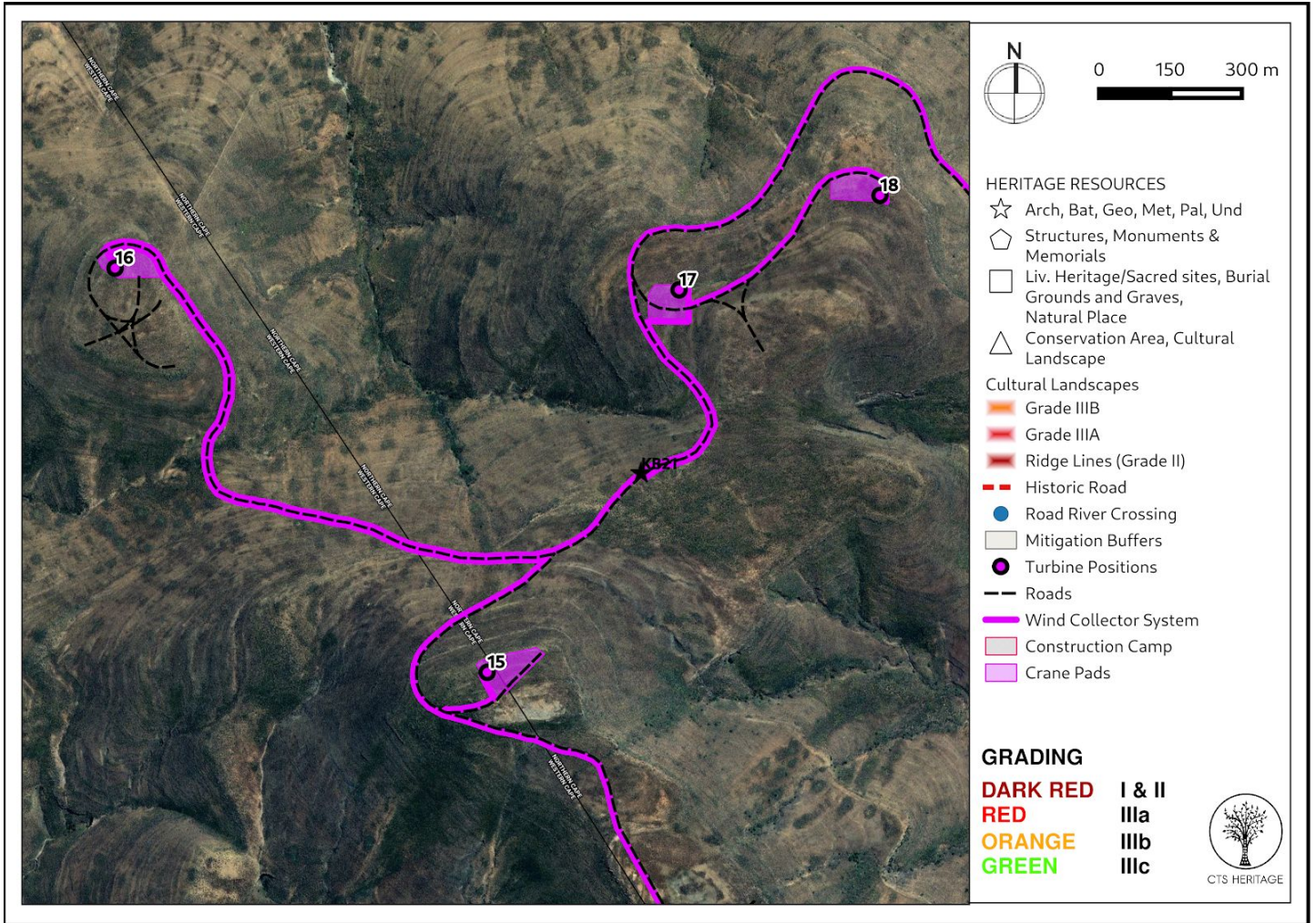


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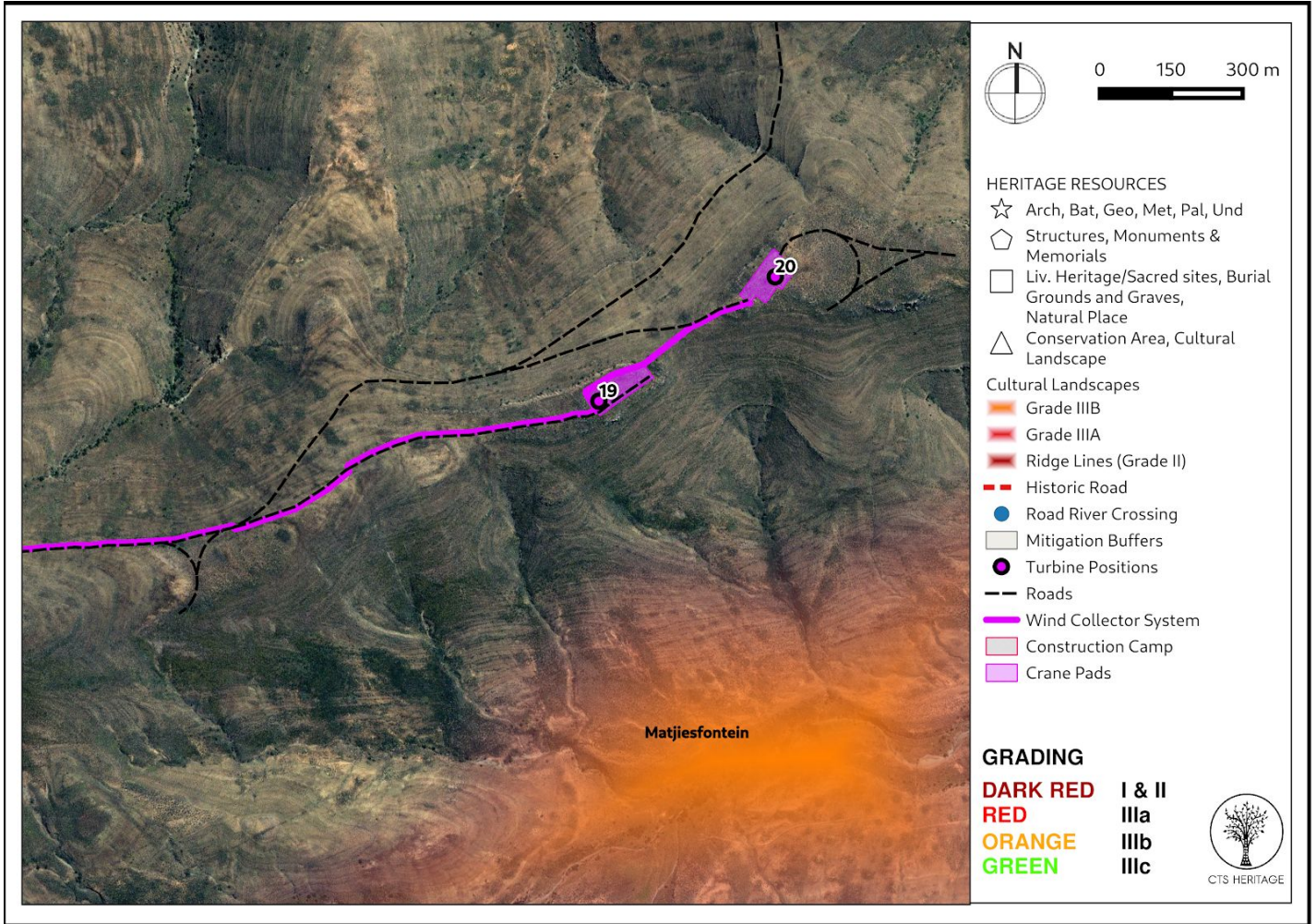
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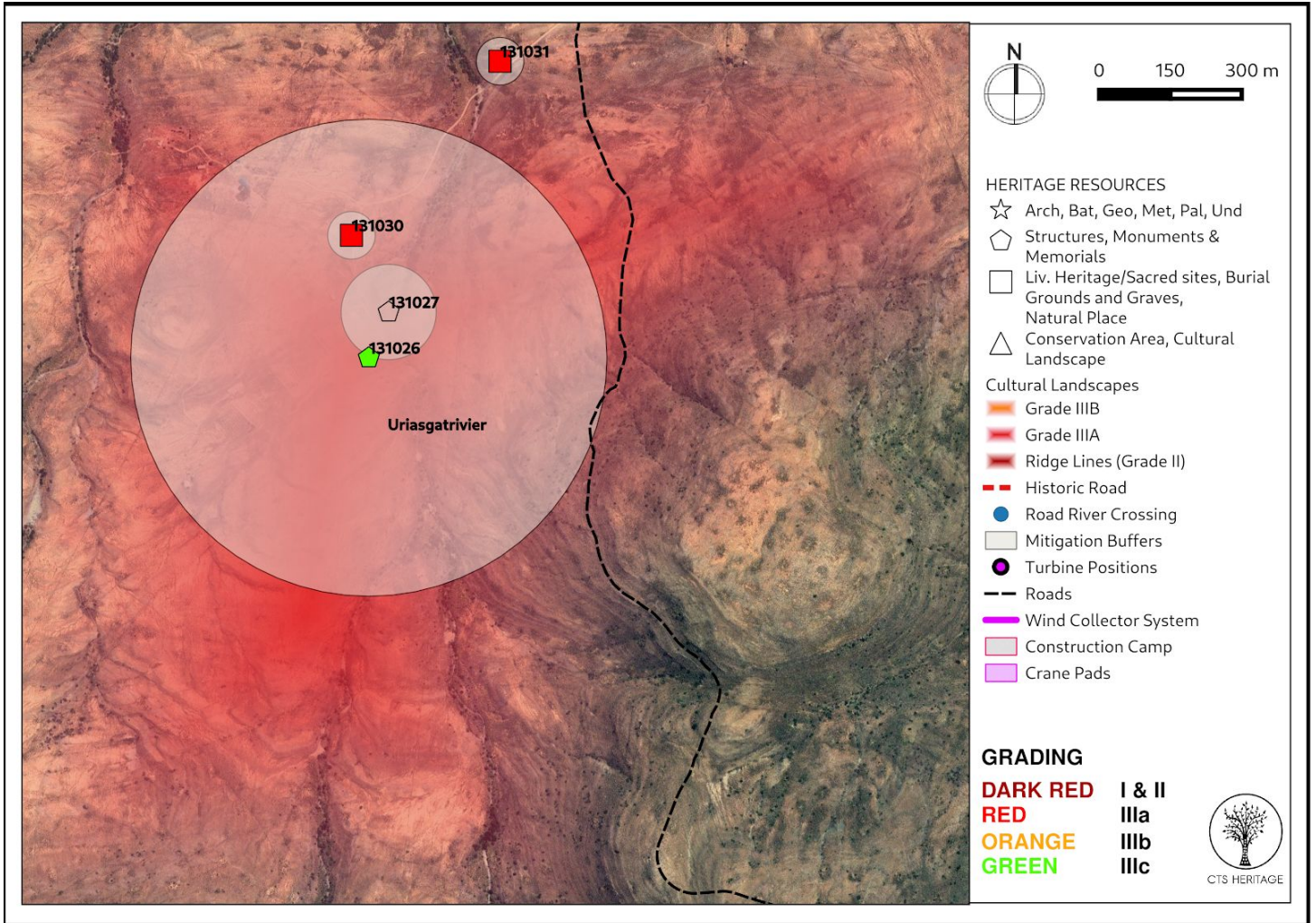


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