

# ARCHAEOLOGICAL WALKDOWN

In terms of Section 38(8) of the NHRA for a

**PROPOSED DEVELOPMENT OF  
THE BERGRIVER AND ZEN WIND ENERGY FACILITIES NEAR SARON**

**WESTERN CAPE PROVINCE**

**Prepared by**



CTS HERITAGE

In Association with

**Savannah Environmental**

**May 2023**



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## EXECUTIVE SUMMARY

This walkdown report assesses the final layouts of both the Berg River WEF and the adjacent Zen WEF near Gouda in the Western Cape. CTS Heritage completed the HIA for the Berg River WEF in 2022. Orton completed the HIA for the Zen WEF in 2012.

Based on the assessment of the potential impact of the development on the identified archaeological resources, it is not anticipated that significant archaeological resources will be impacted. There is no objection to the proposed development on archaeological grounds on condition that:

- Although all possible care has been taken to identify sites of archaeological significance during the investigation of the study area, it is always possible that hidden or subsurface sites or burials could be overlooked during the assessment. If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations or burials), fossils or other categories of heritage resources are found during the proposed development, HWC must be alerted regarding a way forward.



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**Appendix 1: Response from HWC on original HIA**



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## 1. INTRODUCTION

### 1.1 Background Information on Project

This walkdown report assesses the final layouts of both the Berg River WEF and the adjacent Zen WEF near Gouda in the Western Cape. CTS Heritage completed the HIA for the Berg River WEF in 2022. Orton completed the HIA for the Zen WEF in 2012.

#### **Bergriver Wind Farm, Western Cape Province – Project Description**

The authorised 120MW Bergriver Wind Farm is located adjacent to the town of Gouda and approximately 6km south of Saron and falls within the Drakenstein Local Municipality in the Cape Winelands District Municipality, Western Cape. An Environmental Authorisation (EA) for the Bergriver Wind Farm and associated infrastructure was received on 29 July 2022.

The Bergriver Wind Farm is to be constructed within the project site which comprises the following farm portions:

- Portion 3 of the Farm Hartebeeste Kraal 88
- Portion 4 of the Farm Bonne Esperance 83
- Portion 1 of the Farm Hartebeeste Kraal 88
- Portion 1 of Farm 397
- Portion 2 of Farm 397

Due to the proximity to the Zen Wind farm and the operational Gouda Wind Farm. Acciona Energy South Africa Global (Pty) Ltd (AESAG) acquired the project from the original developers and is developing a wind farm cluster. AESAG will adopt the latest wind turbine technology available to Acciona Energy for the project. The facility layout has been designed to optimise the energy yield and considers the latest technology. The new layout also takes into consideration the ideal point of connection to the grid, and ideal location of the 132kV on-site substation. The project will also utilise combined construction infrastructure (temporary facilities, laydown areas, batch plants to further reduce the overall impacts of the project and the adjacent Zen Wind Farm. Both the Bergriver and the Zen Wind Farm projects are designed to share infrastructure to optimise construction expenses and timeline.

In this regard, the following is proposed:

1. Retain the 16 wind turbines
2. Retain the hub height up to 150m and tip height of up to 230m
3. Retain turbine capacity at 7.5MW per turbine;
4. Optimise turbine/facility layout based on the energy yield.
5. Optimise position of on-site facility substation to enable a consolidated point of grid connection for the Zen/Bergriver wind farm cluster.

The proposed amendments are not listed activities and do not trigger any new listed activity. No additional properties will be affected by the amendments as the proposed amendments are within the originally authorised development footprint.

In addition to the above, the final facility layout and the EMPr for the facility must be submitted and approved prior to commencement of construction, as per the requirements of the EA.



The Bergriver Wind Farm project site is proposed to accommodate the following infrastructure:

- Up to 16 wind turbines at 7.5MW each with hub height up to 150m and tip height of up to 230m.
- Concrete turbine foundations and turbine hardstands;
- Access and internal roads with a width of up to 10m;
- Temporary laydown areas which will accommodate storage and assembly areas;
- Cabling between the turbines, to be laid underground where practical;
- Onsite Substation, BESS and operational and maintenance (O&M Hub);
  - An on-site facility substation
  - A battery Energy Storage System (BESS)
  - Temporary concrete batching plant; and
  - Operation and maintenance buildings including a gate house, security building, control centre offices, warehouses, a workshop and visitors centre.

**Below is table for the details or dimensions of the 120MW Bergriver Wind Farm and associated infrastructure:**

Infrastructure	Footprint and dimensions
Facility capacity	Contracted capacity of 120MW
Number of turbines	Up to 16 turbines
Turbine hub Height	Up to 150m
Turbine tip height	Up to 230m
Turbine foundations	Approximately 20m x 20m to a depth of 3m per turbine
On-site Facility Substation	Capacity of 132kV The on-site substation, BESS and O&M buildings, temporary facilities and laydown will be placed within area within the development footprint.
Access and internal roads	Existing roads on farm will be used where feasible and practical. The width of the access road will be approximately 8m (this is also relevant for existing roads) however during construction access roads may be up to 10m in width. The total length of access roads is approximately. The access roads will be gravel.
Underground cabling	Underground cabling between the turbine is preferred and will be installed at a depth of 1.5m to 3m. Cabling to follow internal access roads.

**Zen Wind Farm, Western Cape Province – Project Description**

The authorised Zen Wind Farm is located approximately 10km northwest of the town Gouda and falls within the Drakenstein Local Municipality in the Cape Winelands District Municipality, Western Cape. An Environmental Authorisation (EA) for the Zen Wind Farm and associated infrastructure was received on 03 November 2016.



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The Zen Wind Farm is to be constructed within the project site which comprises the following farm portions:

- Portion 1 of the Farm Bonne Esperance 83,
- Portion 2 of the Farm Bonne Esperance 83,
- Portion 9 of the Farm No. 88
- Portion 0 of the Nayoth 458

Due to the proximity to the Bergriver Wind farm and the operational Gouda Wind Farm. Acciona Energy South Africa Global (Pty) Ltd (AESAG) acquired the project from the original developers and is developing a wind farm cluster. AESAG will adopt the latest wind turbine technology available to Acciona Energy for the project. The facility layout has been designed to optimise the energy yield and considers the latest technology. The project will also utilise combined construction infrastructure (temporary facilities, laydown areas, batch plants to further reduce the overall impacts of the project and the adjacent Bergriver Wind Farm. Both the Zen and the Bergriver Wind Farm projects are designed to share infrastructure to optimise construction expenses and timeline.

In this regard, the following is proposed:

1. Reduction in the overall capacity of the wind farm from 147MW to up to 120MW;
2. Reduction in the number of turbines from 27 to 17;
3. Increase turbine capacity from 6 MW to up to 7.5 MW per turbine
4. Retain hub height of up to 140m;
5. Increase the internal roads width from 6m to ~8m
6. Optimise turbine/facility layout based on the energy yield, and revise the layout as required based on the revised turbine numbers and turbine specification; and
7. Optimise internal underground cabling (33kV) to enable a consolidated point of grid connection for the Zen/Bergriver cluster, and remove substation and overhead power line connection from the project description.

The proposed amendments are not listed activities and do not trigger any new listed activity. No additional properties will be affected by the amendments as the proposed amendments are within the originally authorised development footprint.

In addition to the above, the final facility layout and the EMPr for the facility must be submitted and approved prior to commencement of construction, as per the requirements of the EA.

The Zen Wind Farm project site is proposed to accommodate the following infrastructure:

- Up to 17 wind turbines at 7.5MW each with hub height up to 140m and tip height of up to 230m.
- Concrete turbine foundations and turbine hardstands;
- Internal access roads (up to 8m in width) linking wind turbines and other infrastructure on the Bergriver Wind Farm site.

The Zen Wind Farm and Bergriver Wind Farm will share the following infrastructure.

- Temporary facilities, laydown areas and batch plants
- Onsite Substation and Switching Substation



- Operation and Maintenance buildings including a gate house, security building, control centre, offices, warehouses, a workshop and visitors centre.

**Below is table for the details or dimensions of the up to 120MW Zen Wind Farm and associated infrastructure:**

<b>Infrastructure</b>	<b>Footprint and dimensions</b>
Facility capacity	Contracted capacity of 120MW
Number of turbines	Up to 17 turbines
Turbine hub Height	Up to 140m
Turbine tip height	Up to 230m
Turbine foundations	Approximately 20m x 20m to a depth of 6m per turbine
Access and internal roads	Existing roads on farm will be used where feasible and practical. The width of the access road will be approximately 8m (this is also relevant for existing roads) however during construction access roads may be up to 10m in width. The total length of access roads is approximately. The access roads will be gravel.
Underground cabling	Underground cabling between the turbine will be installed at a depth of 1.5m to 3m. Cabling to follow internal access roads.

In their response to the HIA submitted for the Bergriver WEF project dated 22 June 2022, HWC required that the final layout be subjected to a walkdown by an archaeologist. This report is completed to fulfil this requirement.

As such, this report should be read in conjunction with the HIA completed for the Bergriver WEF in 2022 and the HIA completed by Orton in 2012 for the adjacent Zen WEF.

**1.2 Description of Property and Affected Environment**

The affected properties lie between the Berg River on the western side and the R44 highway on the eastern end. The existing Gouda WEF immediately abuts the proposed Zen WEF and 46 turbines were constructed in the first WEF. The town of Gouda lies at the southeastern corner of the development area. The proposed WEF will be built on various wheat fields that have been under cultivation for a few centuries. The southern reaches of the Groot Winterhoek mountains form a ridge separating this area from the Tulbagh Valley to the east.

At the time of surveying this application, the wheat fields had been harvested and this provided an opportunity to inspect mostly Early, Middle Stone Age and Early Middle Stone Age stone artefacts that have been ploughed and churned up by wheat cultivation. The area is well known to contain gravel beds awash with these artefacts in the Klein Berg and Berg River floodplains. There are no major historical homesteads or buildings directly within the impacted study area and a series of well-built, wide farm roads criss-cross the fields providing access to the R44 and the farms along the Berg River. Many of these roads will be re-used for the construction of the Bergriver and Zen WEFs.



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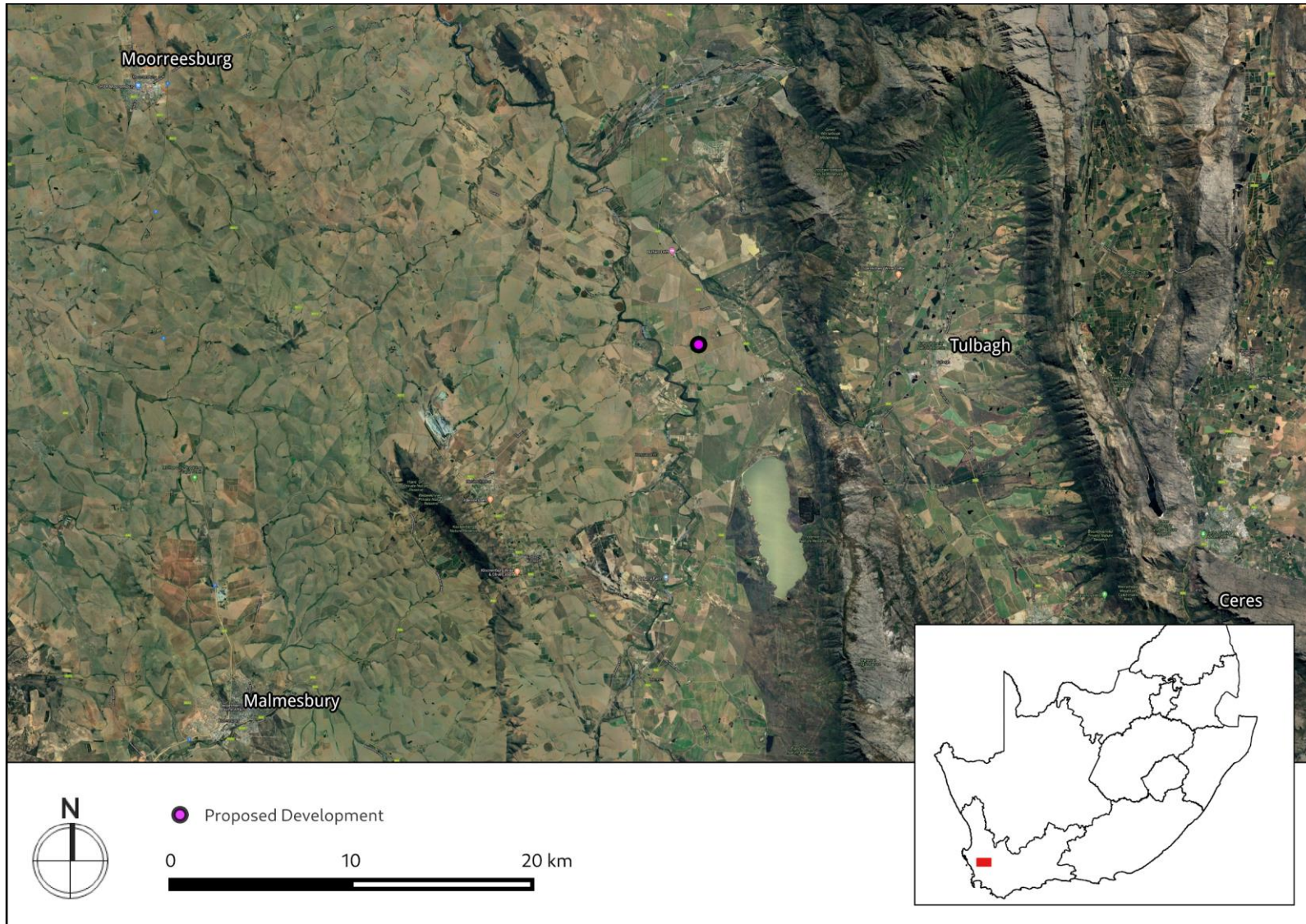


Figure 1.1: Close up satellite image indicating proposed location of development





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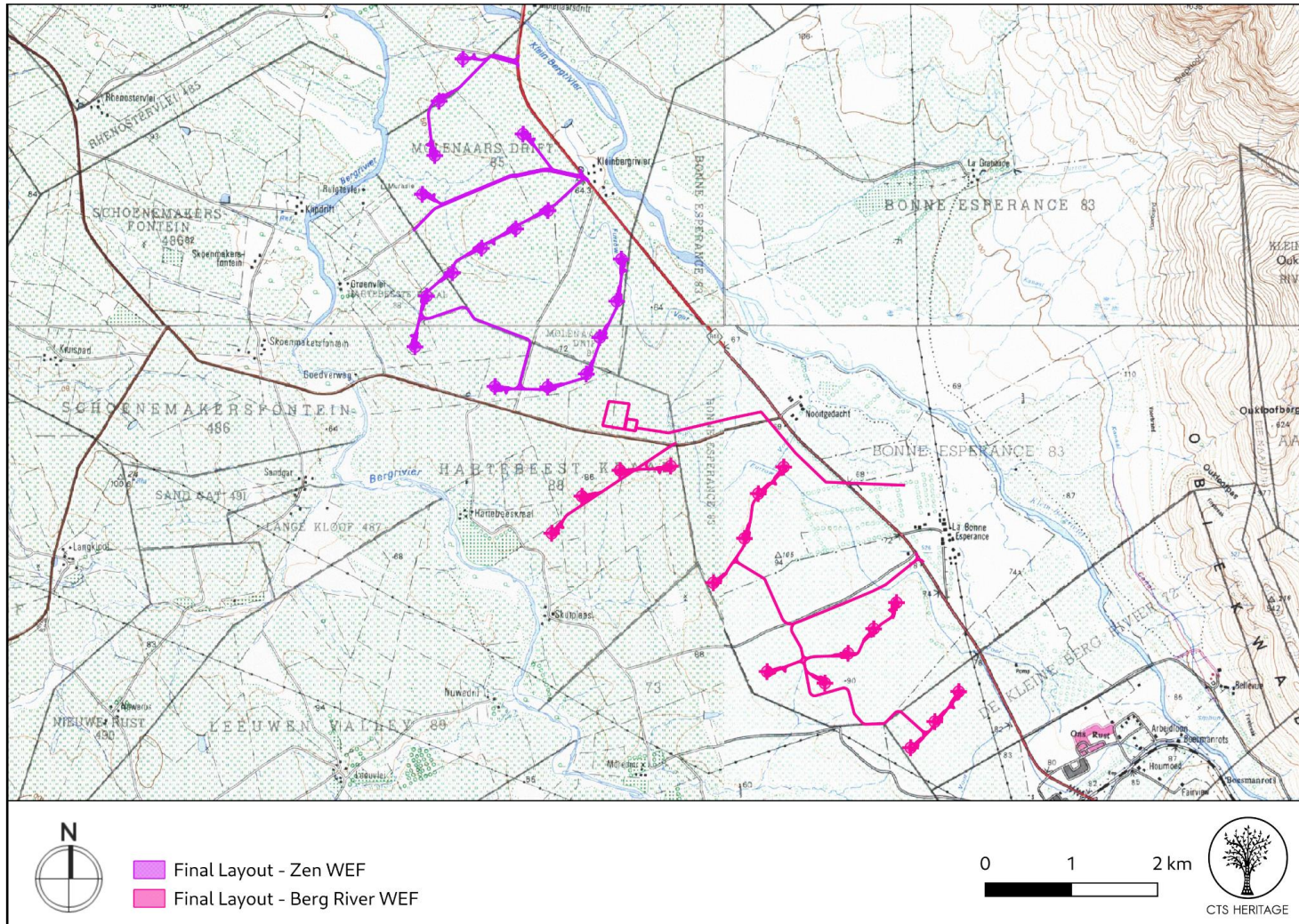


Figure 1.2: Topo map of the area proposed for development

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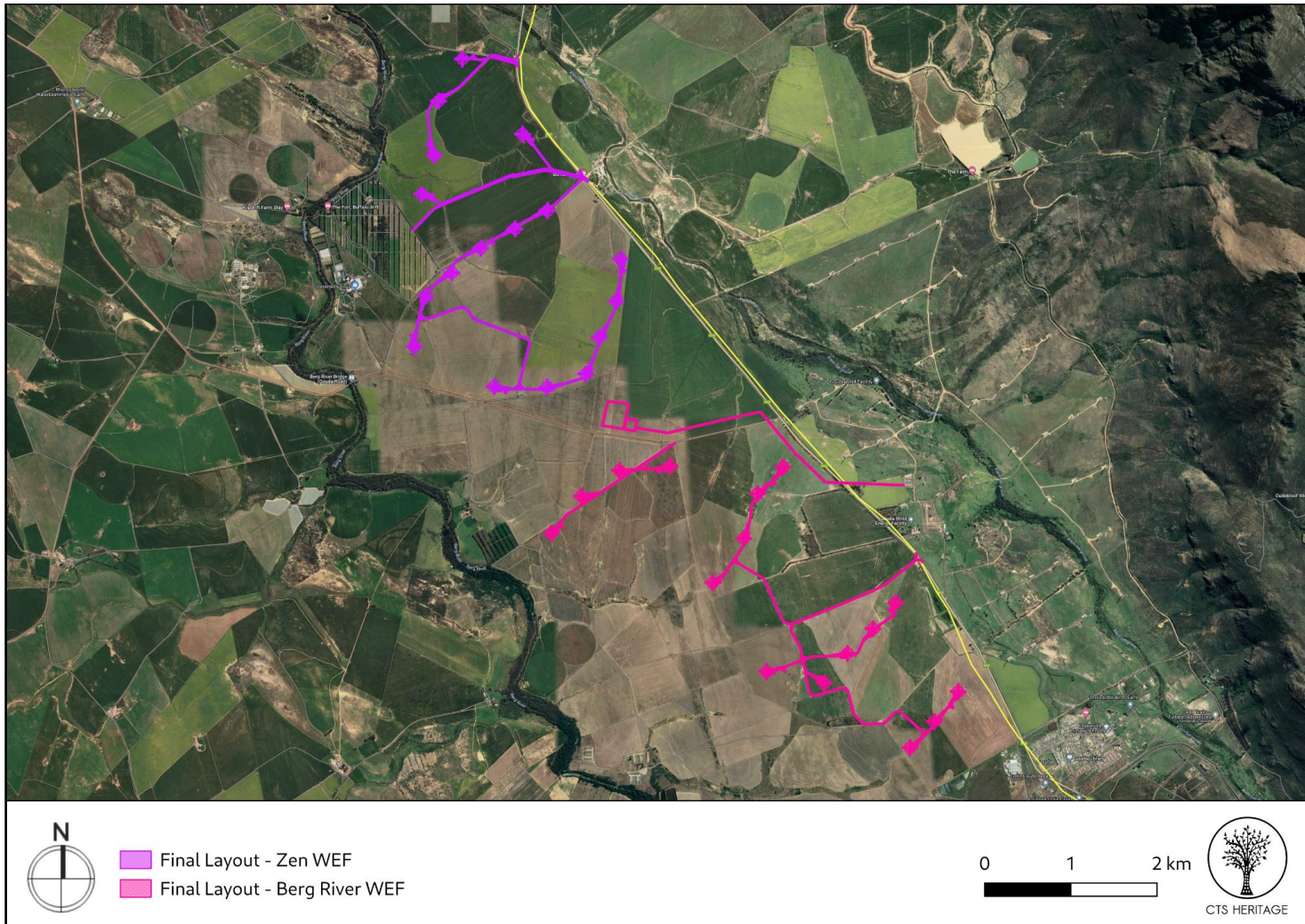


Figure 1.3: Proposed final layout of the development from Savannah



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## **2. METHODOLOGY**

### **2.1 Purpose of Archaeological Study**

The purpose of this archaeological study is to satisfy the requirements of section 38(8), and therefore section 38(3) of the National Heritage Resources Act (Act 25 of 1999) in terms of impacts to archaeological resources.

### **2.2 Summary of steps followed**

- An archaeologist conducted a walkdown of the final layout on 19 April 2023 to determine what archaeological resources are likely to be impacted by the proposed development.
- The area proposed for development was assessed on foot, photographs of the context and finds were taken, and tracks were recorded using a GPS.
- The identified resources were assessed to evaluate their heritage significance in terms of the grading system outlined in section 3 of the NHRA (Act 25 of 1999).
- Alternatives and mitigation options were discussed with the Environmental Assessment Practitioner.

### **2.3 Constraints & Limitations**

Most of the fields that will be impacted by the WEF during the initial assessment were covered with wheat crops. However, at the time of this walkdown, the wheat fields had been harvested and ploughing for next year's crop had been prepared. Previous assessors (eg Orton 2012) had found various open scatters of rolled cobbles, cores, choppers, cleavers, handaxes, flakes and radial cores in local quartzite when the opportunity arose to assess fields that were not cultivated at the time. This survey expanded on this pattern and managed to locate many more observations of disturbed material that had been brought to the surface by ploughing.

The experience of the archaeologist, and observations made during the study, allow us to predict with some accuracy the archaeological sensitivity of the receiving environment.



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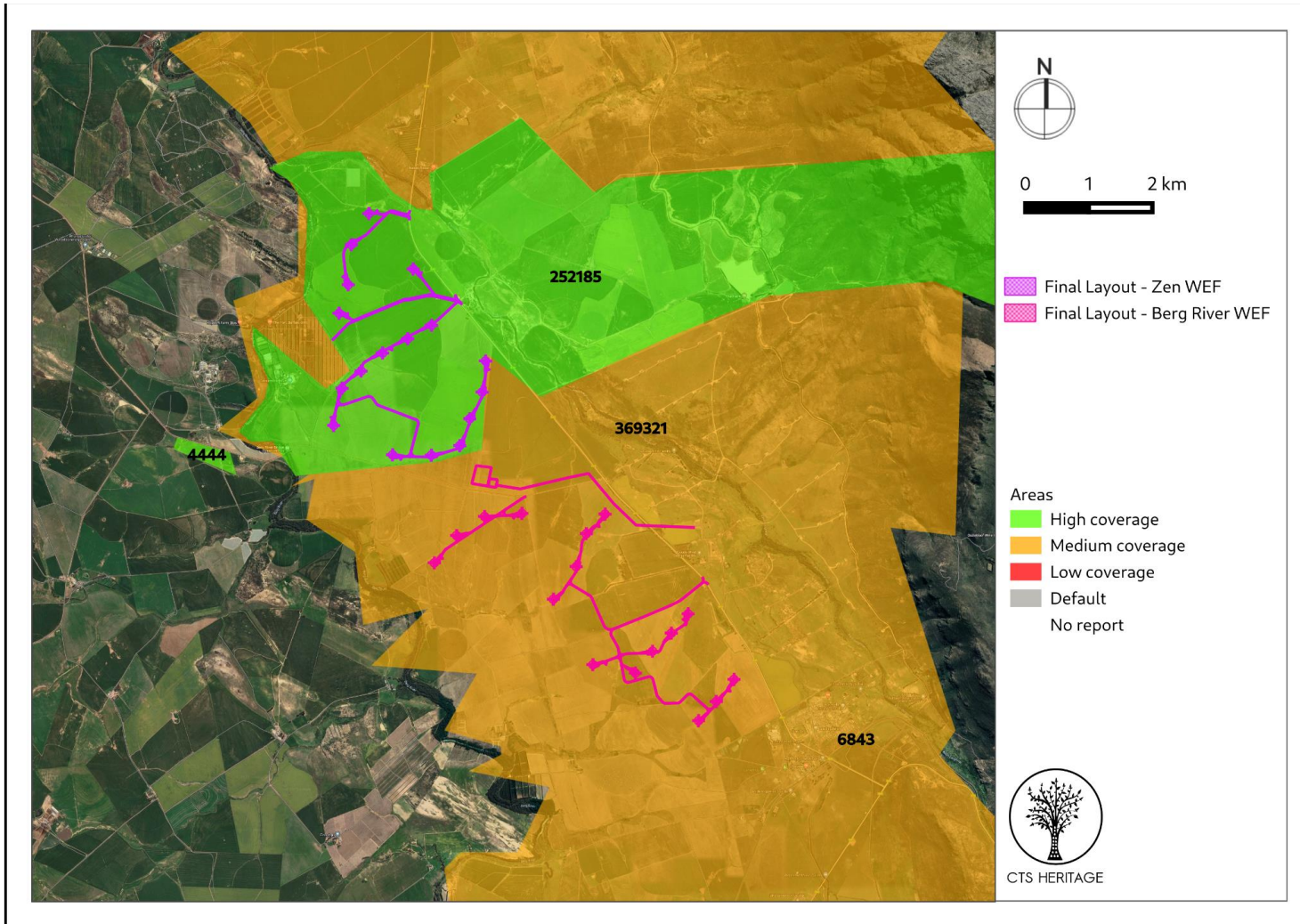


Figure 2: Close up satellite image indicating proposed location of development in relation to heritage studies previously conducted



### 3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT

#### **Background:**

This application is for the proposed development of a Wind Energy Facility on the eastern slopes of the Riebeeck Valley. The Riebeeck Valley was first described by a party of Cape Dutch explorers under leadership of Pieter Cruythoff in 1661. The mountain marking the western edge of the valley, Riebeeck's Kasteel Berg (Riebeeck's Castle Mountain) was named after then Cape commander Jan van Riebeeck by this expedition and the settlements along the eastern slope of the mountain later derived their names from it - Riebeeck West and Riebeeck Kasteel. The picturesque surroundings of the Riebeeck Valley are especially popular for its aesthetic beauty and rural atmosphere.

#### **Archaeology**

A number of archaeological impact assessments have been conducted in the area with few archaeological resources identified. Hart and Finnegan (2008 SAHRIS NID 8488), describe the general context as "a broad rural expanse of low rolling hills interspersed with farms, small communities and towns. Before the advent of wheat farming, the Swartland was characterised by "Renosterveld" plant communities which gave the area a dark-grey olive-green appearance when viewed from afar - hence the name Swartland... The Berg River alluvial terraces contain copious quantities of Early and Middle Stone Age artefacts attesting to the occupation of this landscape by humans for a million years or more. Today the Swartland is one of the most important wheat producing areas of the nation. Almost every farmer is involved in the cultivation of wheat which has given the entire area its particular character and texture."

Based on previous archaeological assessments in the area, there are likely to be Early and Middle Stone Age archaeological resources impacted by the proposed development. There may be some colonial archaeological resources associated with the historic farm werfs in the development area, however the historic farm werfs will not be directly impacted by this proposed development. Orton (2012) conducted an HIA for the Zen WEF and his findings provide a good indication of the kinds of archaeological and heritage resources likely to be found within this development area (SAHRIS ID 252185). In his HIA, Orton (2012) identified a number of archaeological heritage resources in his assessment (Figures 3a to 3d and Appendix 1), none of which were determined to be conservation-worthy.

According to Orton (2012), "Early Stone Age (ESA) material was common but its density varied considerably according to location." Orton (2012) goes on to note that "These occurrences are not really 'sites' in the typical sense, since the material is largely in secondary context having been left on the surface after erosion of the overlying deposits. However, in some areas there were particularly high concentrations of artefacts which must broadly reflect the original locations of concentrations after they were made... In general, ESA material in such contexts is considered of little heritage value but the relatively high densities of artefacts encountered in places around Gouda suggest this not to be the case here – some mitigation might be appropriate if these scatters were to be disturbed."

Orton (2012) also found that "In the areas where ESA artefacts were denser there were certainly also many more isolated artefacts. However, the good scatters were obvious when one encountered them... A peculiar find was an eroding sand dune close to the Klein Berg River and which contained much river gravel and weathered artefacts. These artefacts included a large number of relatively small flakes and very few larger flakes or cores. Whether these are ESA or MSA is unknown but, given the paucity of larger artefacts, they may well be MSA. In one or two areas there were occasional flakes which, from their smaller size and reduced patination, may well have been



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MSA. In general, however, it seems that the MSA is poorly represented on the landscape.”

Orton (2012) also identified two small LSA scatters on the banks of the Berg River. Neither was dense and both included flaked artefacts in quartz. Orton (2012) noted a small number of isolated quartz flakes in sandy ground. These were too dispersed to be able to distinguish any source areas but Orton (2012) surmised that it is likely that an LSA site is present in the immediate vicinity. A light scatter of LSA artefacts was also observed around a small rocky koppie on the southern outskirts of Saron. The koppie was inspected for rock art but found to contain none (Orton, 2012).

Tusenius (2012) identified approximately 12 archaeological observations on the eastern boundary of the development area that have been graded as IIIC on SAHRIS. Based on the descriptions of these resources included in her report (2012, SAHRIS ID 508138), these observations could be determined to be not conservation-worthy as they are mostly observations of single cores or flaks, or low density scatters of flakes (maximum 4).

While it is not anticipated that any built environment elements will be directly impacted by the proposed development, indirect (visual) impacts are likely for the farm houses and outbuildings in the vicinity. The houses at the Kleinberggrivier and Die Mond werfs are significant but have not been given high gradings by Orton (2012). The built environment heritage of Saron and its surrounds has been investigated by Cape Town Properties Histories (Appendix 7).

The archaeological field assessment completed for the Bergriver WEF project by CTS Heritage in 2021 covered the area proposed for development thoroughly. The entire area is cultivated with wheat and has been cultivated for hundreds of years. Three locations were sampled for Stone Age archaeological resources and these include Middle and Early Stone Age artefacts sourced from the abundant quartzite gravels spread across the area along the Berg River. These artefacts are all out of context and have been dug up, ploughed back and dispersed across the area over numerous seasons.

These findings largely align with the findings of Orton (2012) who notes that in general, the eastern side of the area has very few artefacts, while in the west artefacts were present throughout the area but more frequently encountered towards the north than the south. The area assessed in this report is located south of the area assessed by Orton (2012). No engravings, formal or informal graves were identified within the development footprint and the only built structures included modern cattle farming kraals, farm roads, jeep tracks and fences.



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**Table 1: Observations noted during the field assessment completed in 2021**

<b>POINT ID</b>	<b>Site Name</b>	<b>Description</b>	<b>Co-ordinates</b>		<b>Grading</b>	<b>Mitigation</b>
001	<b>Bergriver WEF 001</b>	MSA Quartzite flakes	-33.28151	19.00719	NCW	NA
002	<b>Bergriver WEF 002</b>	MSA Quartzite cobble core, 50% flaked	-33.28768	19.01466	NCW	NA
003	<b>Bergriver WEF 003</b>	ESA Quartzite handaxe	-33.29008	19.02145	NCW	NA



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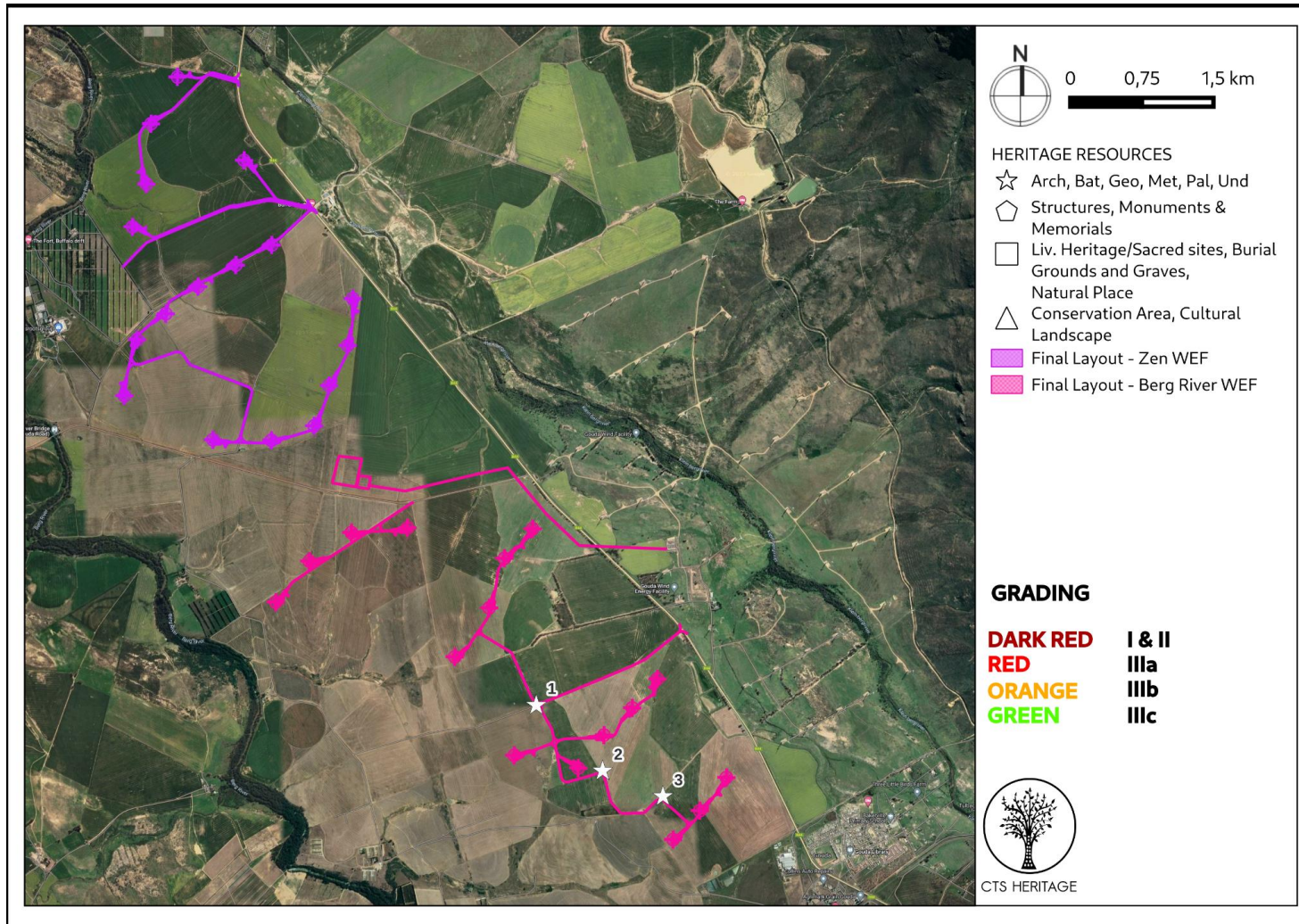


Figure 3. Heritage Resources Map. Heritage Resources previously identified in 2021 relative to the Final Layout





#### 4. IDENTIFICATION OF HERITAGE RESOURCES

##### 4.1 Field Assessment

Given the fortuitous timing of the survey post-harvest, a number of early MSA and MSA open site scatters were found throughout the study area. The artefacts were dominated by local quartzites derived from the beds of the Klein Berg and Berg Rivers which are not far away and a much smaller percentage of quartz tools were also identified. All of these findings have undergone significant disturbance by wheat cultivation over the years and do not provide information from a primary context. However, their presence is noted and adds to the archive of information documenting the extent to which these scatters are distributed throughout the area.

These findings largely align with the findings of the previous assessment completed by CTS Heritage and Orton (2012) in the types of tools identified, however, the preliminary observations made by Orton that: “the eastern side of the area has very few artefacts, while in the west artefacts were present throughout the area but more frequently encountered towards the north than the south”, is not true as the distribution of tools extended across the two WEF study sites and is more consistent with the geography and context of the ubiquity of gravels available between the two river floodplains. The previous surveys were inhibited by extensive wheat coverage and it was not possible for any of the assessors to establish whether the tools were confined to Orton’s original cluster or whether they were more generally dispersed across a much broader area. No engravings, formal or informal graves were identified within the development footprint and the only built structures included modern cattle farming kraals, farm roads, jeep tracks and fences.



Figure 4.1: View of the recently harvested wheat fields with the existing Gouda WEF in the background and the Tulbagh mountains.



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**Figure 4.2: Looking southeast over the fields**



**Figure 4.3: Many of the fields have recently been prepared and ploughed for planting towards the next season.**



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**Figure 4.4: Existing Gouda WEF, and Gouda town in the background.**



**Figure 4.5: View of exposed fields and gravels, Riebeeck West in the distance**



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**Figure 4.6: Existing Gouda WEF along the eastern side of the proposed development**



**Figure 4.8: View of row of gum trees along the R44, existing Gouda WEF**



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**Figure 4.9: View from Buffalo Drift entrance**



**Figure 4.10: View looking eastwards over the proposed WEF site**



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**Figure 4.11: Moving northwards to the Bergriver WEF area and looking southwards towards the existing Gouda WEF**



**Figure 4.12: View onto the dense trees lining the Berg River.**



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**Figure 4.13: View of prepared fields near the Berg River.**



**Figure 4.14: View of the R44 to the left and the proposed Bergriver WEF**



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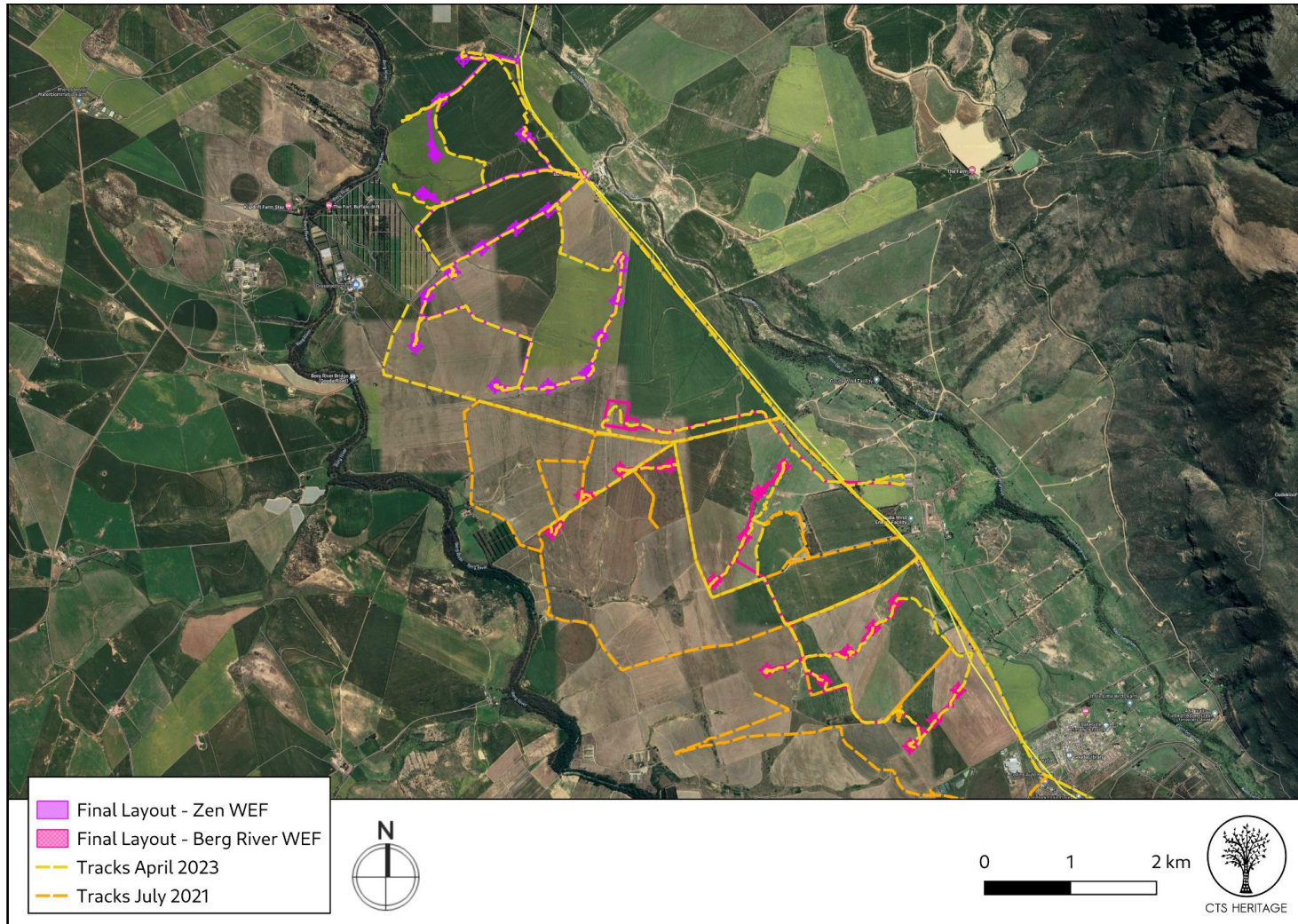


Figure 5: Overall track paths of foot survey from both 2021 (orange) and 2023 (yellow)





## 4.2 Archaeological Resources identified

**Table 2: Observations noted during the field assessment completed April 2023**

POINT ID	Description	Type	Period	Density	Co-ordinates		Grading	Mitigation
001	Quartzite cobble core	Artefacts	MSA	0 to 5	-33.28475	19.010343	NCW	NA
002	Early MSA quartzite core, ~30% cortex	Artefacts	MSA	0 to 5	-33.284664	19.010927	NCW	NA
003	More Early MSA – core with several dorsal scars	Artefacts	MSA	0 to 5	-33.284544	19.011048	NCW	NA
004	Quartzite flake with hinge terminations	Artefacts	MSA	0 to 5	-33.284597	19.011295	NCW	NA
005	Quartzite radial core	Artefacts	MSA	0 to 5	-33.284787	19.012448	NCW	NA
006	Quartzite cores, flakes	Artefacts	MSA	5 to 10	-33.2849	19.014262	NCW	NA
007	Quartzite core	Artefacts	MSA	0 to 5	-33.283356	19.017041	NCW	NA
008	Early MSA quartzite flakes, cores	Artefacts	MSA	5 to 10	-33.285886	19.007322	NCW	NA
009	Quartzite cobble core with flake scars	Artefacts	MSA	0 to 5	-33.292512	19.023577	NCW	NA
010	Core, quartzite	Artefacts	MSA	0 to 5	-33.291392	19.026057	NCW	NA
011	Various quartzite flakes, prep. Platforms	Artefacts	MSA	5 to 10	-33.271187	19.002687	NCW	NA
012	Quartzite flake	Artefacts	MSA	0 to 5	-33.269405	19.004586	NCW	NA
013	Hammerstone and point, quartzite	Artefacts	MSA	0 to 5	-33.270259	19.003185	NCW	NA
014	Large silcrete core with several scars, partial radial core. Quartzite cores, flakes	Artefacts	MSA	5 to 10	-33.269452	19.004096	NCW	NA
015	Quartzite cores, flakes	Artefacts	MSA	5 to 10	-33.26805	19.005048	NCW	NA
016	Quartzite core	Artefacts	MSA	0 to 5	-33.267244	19.005452	NCW	NA
017	Quartzite cores, flakes	Artefacts	MSA	5 to 10	-33.265673	19.006568	NCW	NA
018	Quartzite flake, dorsal spine and hinge termination	Artefacts	MSA	0 to 5	-33.256998	18.971708	NCW	NA
019	Radial core, cores, flakes, quartzite	Artefacts	MSA	10 to 30	-33.235169	18.98188	NCW	NA
020	Quartzite cores and flakes in ploughed area	Artefacts	MSA	5 to 10	-33.246404	18.986436	NCW	NA
021	Quartzite cores	Artefacts	MSA	0 to 5	-33.238093	18.97879	NCW	NA
022	Flakes and cores, quartzite	Artefacts	MSA	5 to 10	-33.254991	18.982999	NCW	NA
023	Quartz flake, quartzite core	Artefacts	MSA	0 to 5	-33.245035	18.965898	NCW	NA
024	Quartzite cobbles and cores	Artefacts	MSA	5 to 10	-33.24061	18.973141	NCW	NA
025	Quartzite flakes	Artefacts	MSA	0 to 5	-33.237265	18.960932	NCW	NA
026	More Early MSA cobbles, cores, flakes	Artefacts	MSA	5 to 10	-33.237454	18.964205	NCW	NA
027	Quartzite flakes and cores	Artefacts	MSA	0 to 5	-33.228679	18.95989	NCW	NA
028	Quartzite core flakes, point	Artefacts	MSA	0 to 5	-33.222156	18.969463	NCW	NA
029	Quartzite core and flakes	Artefacts	MSA	5 to 10	-33.229726	18.974679	NCW	NA



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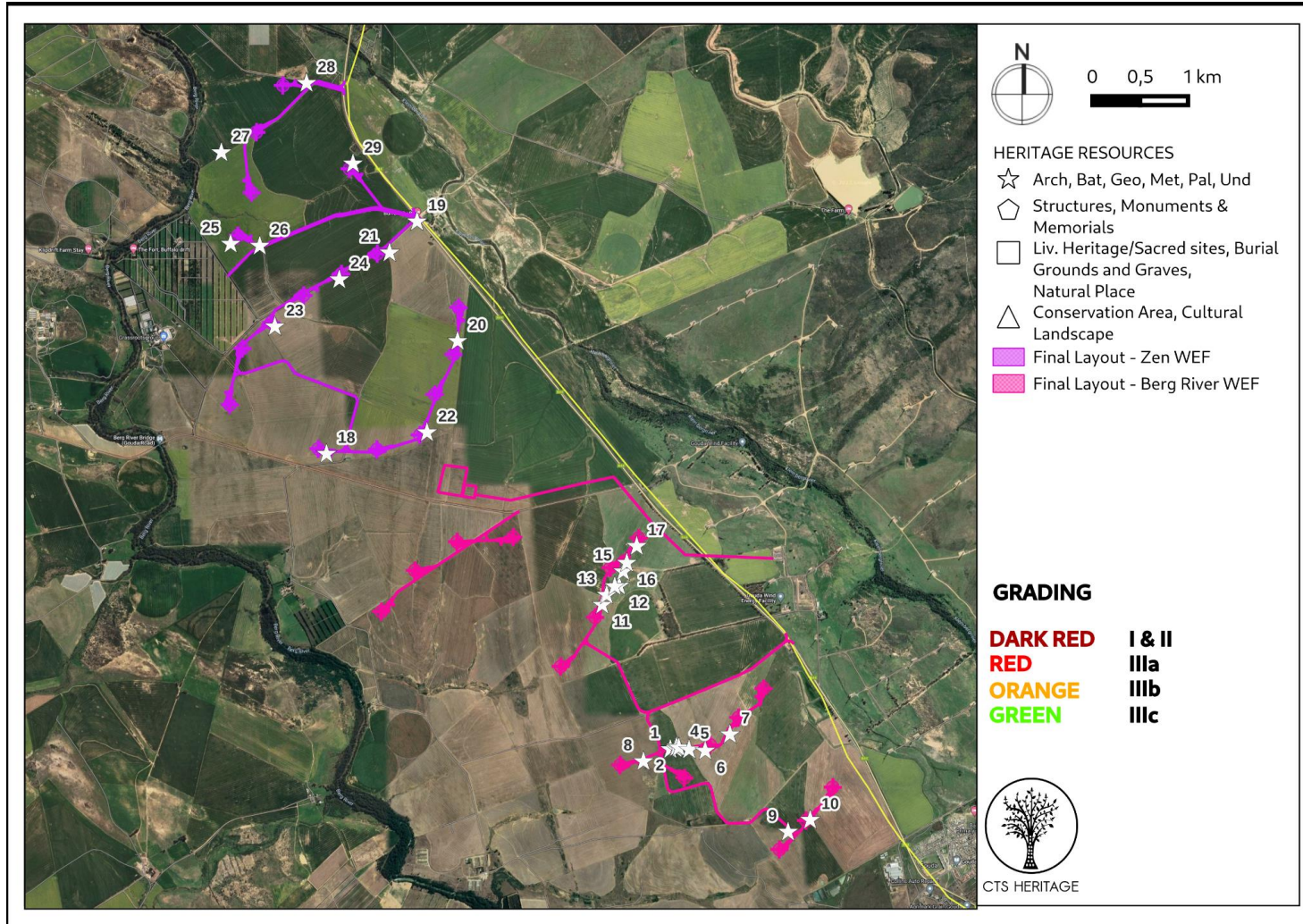


Figure 6: Map of heritage resources identified during the field assessment relative to the proposed development footprint



4.3 Selected photographic record (a full photographic record is available upon request)



Figure 6.1: Observation 001



Figure 6.2: Observation 002



Figure 6.3: Observation 003



Figure 6.4 Observation 004



Figure 6.5 Observation 005



Figure 6.6 Observation 006



Figure 6.7 Observation 007



Figure 6.8 Observation 008



Figure 6.9 Observation 009



Figure 6.10 Observation 010



Figure 6.11 Observation 011



Figure 6.12 Observation 012



Figure 6.13 Observation 013



Figure 6.14 Observation 014



Figure 6.15 Observation 015



Figure 6.16 Observation 016



Figure 6.17 Observation 017



Figure 6.18 Observation 018





Figure 6.19 Observation 019



Figure 6.20 Observation 020



Figure 6.21 Observation 021



Figure 6.22 Observation 022



Figure 6.23 Observation 023



Figure 6.24 Observation 024



Figure 6.25 Observation 025



Figure 6.26 Observation 026



Figure 6.27 Observation 027



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Figure 6.28 Observation 028



Figure 6.29 Observation 029



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## **5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT**

### **5.1 Assessment of impact to Archaeological Resources**

The proposed development will not have a negative impact on the heritage resources identified within the Zen and Bergriver WEF facility footprints. The lithic material identified is of low significance (not conservation-worthy), and even though a very small percentage of the resources may be destroyed during construction, the impact is inconsequential. Most of the Stone Age material will remain in the gravels covering these fields.

Furthermore, often archaeological sites are located in proximity to water sources such as the Berg River that runs along the western edge of the development area, although in this instance, no archaeological resources were identified here. It is important to note that the nearest proposed infrastructure to the Berg River is more than 800m away, and as such, it is unlikely that any archaeological resources located near to the river will be negatively impacted.

No mitigation is required for archaeological material recorded in the footprint areas of the proposed Zen and Bergriver WEF facilities.



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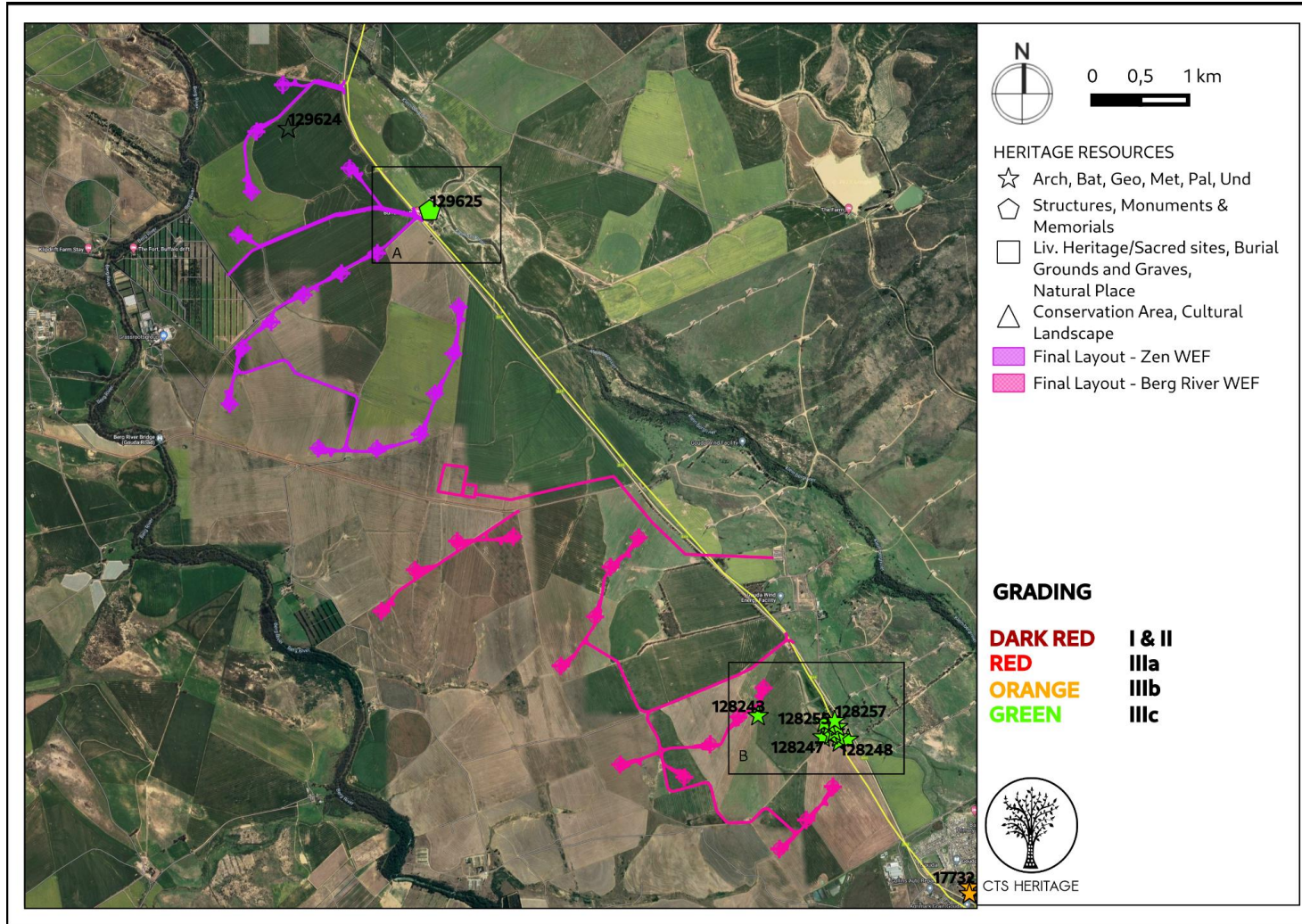


Figure 7.1: Map of all significant heritage resources within the proposed development layout



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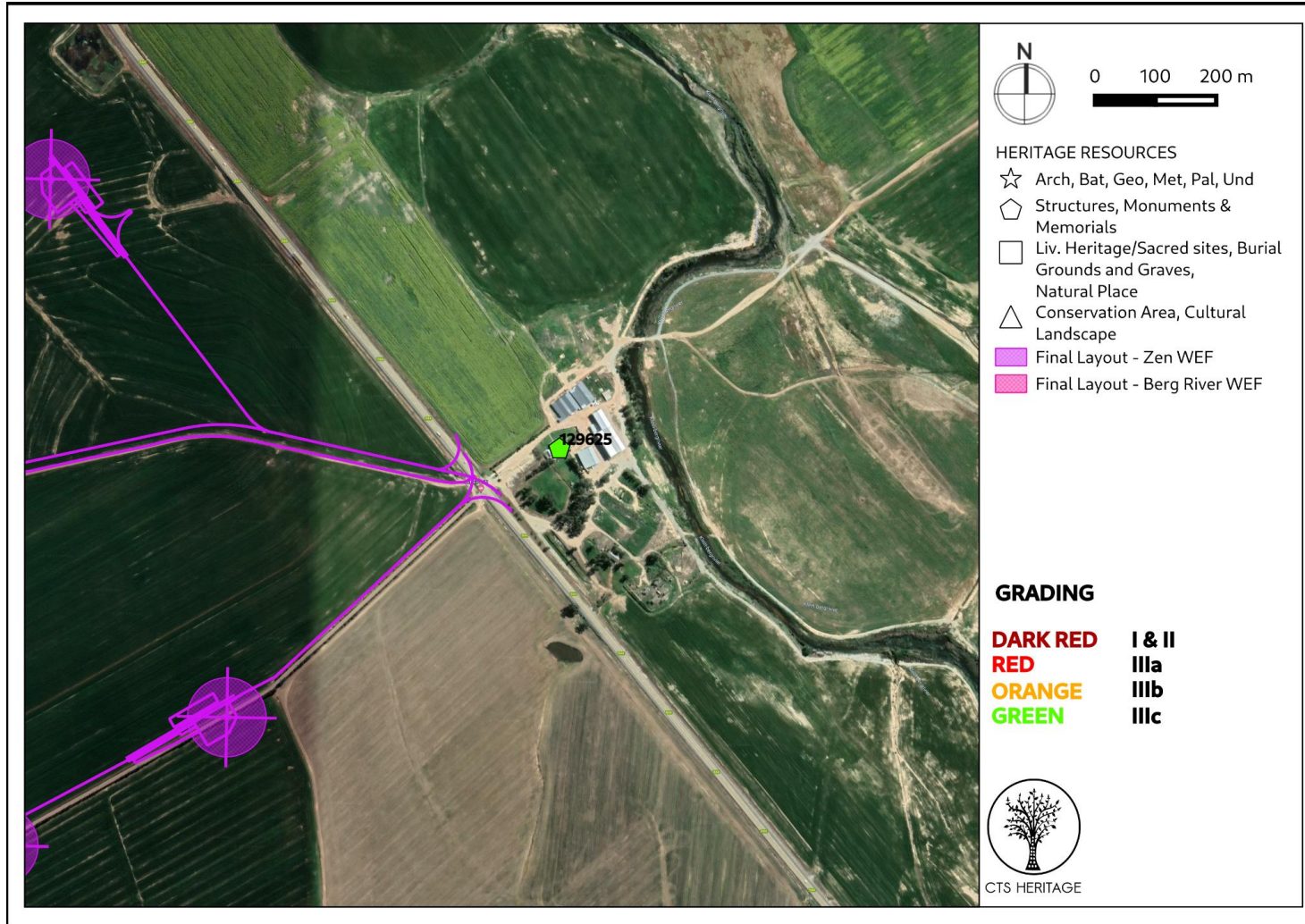


Figure 7.2: Map of all significant heritage resources within the proposed development layout



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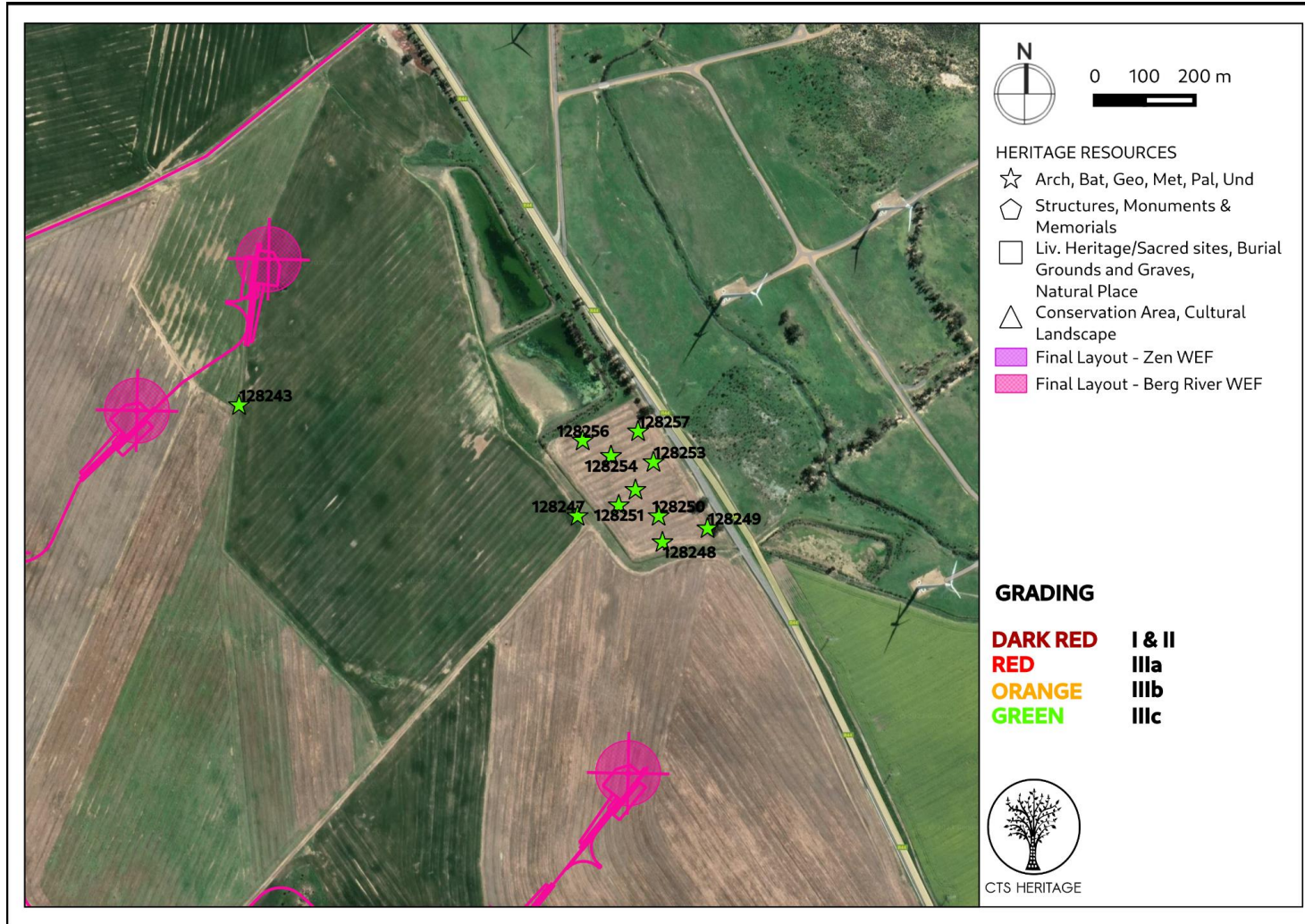


Figure 7.3: Map of all significant heritage resources within the proposed development layout





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## 6. CONCLUSION AND RECOMMENDATIONS

Based on the assessment of the potential impact of the development on the identified archaeological resources, it is not anticipated that significant archaeological resources will be impacted. There is no objection to the proposed development on archaeological grounds on condition that:

- Although all possible care has been taken to identify sites of archaeological significance during the investigation of the study area, it is always possible that hidden or subsurface sites or burials could be overlooked during the assessment. If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations or burials), fossils or other categories of heritage resources are found during the proposed development, HWC must be alerted regarding a way forward.



**7. REFERENCES**

Heritage Impact Assessments				
Nid	Report Type	Author/s	Date	Title
4402	AIA Phase 1	Jonathan Kaplan	01/12/2005	A Phase 1 Archaeological Impact Assessment of Two Proposed Borrow Pits Along the DR 1154 Riebeek Kasteel
4406	AIA Phase 1	Jonathan Kaplan	01/02/2007	Phase 1 Archaeological Impact Assessment: Proposed Development Ongegund Phase 2 Portion of Farm 1177 and Farm 618 Malmesbury, Western Cape Province
4419	AIA Phase 1	Jonathan Kaplan	01/11/2005	Phase 1 Archaeological Impact Assessment Proposed Housing Development Portion 11 of the Farm Vrischgewaagd No. 401 Malmesbury
4420	AIA Phase 1	Jonathan Kaplan	01/01/2006	Phase 1 Archaeological Impact Assessment Proposed Development Farm Drie Heuvels No.399 Malmesbury
4424	AIA Phase 1	Jonathan Kaplan	01/02/2007	Archaeological Investigation Proposed Realignment of DR 1153 Riebeeks Rivier Malmesbury
4444	AIA Phase 1	Jonathan Kaplan	02/05/2007	Phase 1 Archaeological Impact Assessment of the Proposed Construction of Chicken Houses on Portions 4 & 18 of the Farm Schoenmakersfontein No. 486 Riebeek West, Western Cape Province
4530	AIA Phase 1	Hilary Deacon	21/08/2007	Archaeological Impact Assessment: Tomis Abattoir Compost Facility (Farm Annex Schoongezicht 254/5, Division Tulbagh, Drakenstein Municipality, Western Cape)
4736	AIA Phase 1	Jonathan Kaplan	01/01/2006	Phase 1 Archaeological Impact Assessment Proposed Development Farm Erfdeel No.374 Tulbagh
4737	AIA Phase 1	Jonathan Kaplan	01/01/2007	Phase 1 Archaeological Impact Assessment: Proposed Development Life Style Village Portion 13 (Portion of Portion 3) of the Farm 244 Zagte Valley Tulbagh
6619	AIA Phase 1	Jonathan Kaplan	04/08/2008	Archaeological Impact Assessment: Proposed Development of Erf 2021, Riebeek Kasteel, Western Cape Province
6625	AIA Phase 1	Jonathan Kaplan	11/08/2008	Archaeological Scoping Proposed Development of Erf 321, Riebeek Kasteel, Western Cape Province
6635	AIA Phase 1	Jonathan Kaplan	30/01/2009	Archaeological Assessment: Proposed Rezoning of Erf 407, Riebeek Kasteel, Western Cape Province
6750	AIA Phase 1	Jonathan Kaplan	29/05/2008	Archaeological Impact Assessment: Proposed Vodacom Base Station and Connecting Powerline Heuningberg (Nuwedrif Farm) Malmesbury
6843	AIA Phase 1	Jayson Orton	01/10/2008	Archaeological Impact Assessment: Gouda Erf 20010, Western Cape
7638	AIA Phase 1	Jonathan Kaplan	26/05/2009	Archaeological Impact Assessment: Proposed Development of Portion of Erf 326 and 327, Riebeek West, Western Cape Province
7776	AIA Phase 1	Jonathan Kaplan	08/09/2008	Archaeological Impact Assessment: Proposed Development of Erf 42, Riebeek Kasteel, Western Cape Province



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7876	AIA Phase 1	Jonathan Kaplan	01/02/2005	Phase 1 Archaeological Impact Assessment Schalkenbosch Estate Tulbagh: The Proposed Conservancy Estate
7877	AIA Phase 1	Jonathan Kaplan	01/04/2005	Phase 1 Archaeological Impact Assessment Schalkenbosch Estate Tulbagh the Proposed Golf Estate and Wellness Centre
7878	AIA Phase 1	Jonathan Kaplan	01/09/2004	Phase 1 Archaeological Impact Assessment, Schalkenbosch Estate, Tulbagh
8298	AIA Phase 1	Jonathan Kaplan	24/01/2008	Phase 1 Archaeological Impact Assessment: Proposed Borrow Pit for the Reconstruction of Trunk Road 22 and Main Road 305 Between Gouda and Wolseley, Western Cape Province
8488	HIA Phase 1	Timothy Hart, Erin Finnegan	01/03/2008	Heritage Impact Assessment of Proposed Expansion of the Riebeeck West Portland Cement Facility Malmesbury District, Western Cape
252185	Heritage Impact Assessment Specialist Reports	Jayson Orton	09/11/2012	Heritage Impact Assessment for the Proposed ZEN Wind Energy Facility, Tulbach Magisterial District, Western Cape Province



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## Appendix 1: Response from HWC on original Berg River WEF HIA (2022)

**Our Ref:** HM/ CAPE WINELANDS / DRAKENSTEIN/ GOUDA/  
 FARM 3/88, 7/88, 4/83, 1/88, 1/397, 2/397  
**Case No:** 21052610SB0526E  
**Enquiries:** Stephanie Bamardt  
**E-mail:** Stephanie.Bamardt@westerncape.gov.za  
**Tel:** 021 483 5959



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**RESPONSE TO HERITAGE IMPACT ASSESSMENT: FINAL COMMENT**  
**In terms of Section 38(8) of the National Heritage Resources Act (Act 25 of 1999) and the Western Cape**  
**Provincial Gazette 6061, Notice 298 of 2003**

**HERITAGE IMPACT ASSESSMENT: PROPOSED DEVELOPMENT OF THE BERGRIVER WIND ENERGY FACILITY ON HARTEBEESTE KRAAL 88 PORTION 3, HARTEBEESTE KRAAL 88 PORTION 7, BONNE ESPERANCE 83 PORTION 4, HARTEBEESTE KRAAL 88 PORTION 1, FARM 397 PORTION 1, FARM 397 PORTION 1 NEAR SARON, SUBMITTED IN TERMS OF SECTION 38(1) OF THE NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)**

The matter above has reference.

This matter was discussed at the Impact Assessment Committee (IACom) meeting held on 15 June 2022

**FINAL COMMENT:**

The Committee confirmed that the HIA meets the requirements of S.38.3 of the NHRA. The Committee endorses the findings and recommendations of the HIA together with the layout included with the following recommendations:

1. Final archaeological walkdown is undertaken
2. Chance finds procedure to be put in place

HWC reserves the right to request additional information as required.

Should you have any further queries, please contact the official above and quote the case number.

  
 .....  
 Waseefa Dhansay  
 Acting Deputy Director

 Heritage Western Cape  
 Erfenis Wes-Kaap  
 ILifa leMveli leNtshona Koloni

**28 June 2022**



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