



# Memo: Heritage

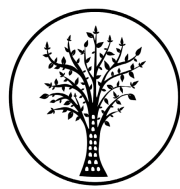
The Final Layout and Environmental Management Programme for the Karreebosch 132kv Overhead Powerline and Substation (14/12/16/3/3/1/2608/AM3/1) within the Karoo Hoogland Local Municipality and the Laingsburg Local Municipality in the Northern Cape Province and Western Cape Province

Walk-down Reports

Karreebosch Wind Farm (RF) (Pty) Ltd

SLR Project No.: 720.026030.00001

19 May 2023



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11/05/2023

Ms N. Higgitt  
Manager: Development Applications Unit  
South African Heritage Resources Agency  
111 Harrington Street  
Cape Town

Dear Ms Higgitt,

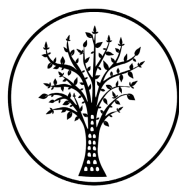
**RE: 132 KV OVERHEAD POWERLINE AND SUBSTATION ASSOCIATED WITH THE KARREEBOSCH WIND FARM, WESTERN AND NORTHERN CAPE**  
**SAHRIS REF: 17397 and 19355**

### **Background**

The proposed 132kV Karreebosch Overhead Powerlines Line (OHPL), 33/132kV on-site Substation and associated infrastructure is located 35km north of Matjiesfontein, and extends across two provinces, namely the Northern and Western Cape Provinces.

Karreebosch Wind Farm (RF) (Pty) Ltd (Karreebosch) received Environmental Authorisation (EA) for its grid infrastructure corridor in December 2022 (EA Ref: 14/12/16/3/3/1/2608) and a split of the EA in April 2023 (EA Ref: 14/12/16/3/3/1/2608/AM3/1). Conditions 12 and 13 of the Grid EA specifically stated that the final layout and Environmental Management Programmes (EMPrs) are not yet approved. The layout and specific tower positions will need to be micro sited and will require a 30 day public participation process before the final layout and EMPrs can be submitted to the Department of Forestry, Fisheries and Environment (DFFE) for approval. Karreebosch now intends to proceed with obtaining approval of the final layout and EMPrs for the grid connection infrastructure.

For the Karreebosch Wind Energy Facility (WEF) (EA Ref: 14/12/16/3/3/2/807/AM6) to evacuate power to the national grid, Karreebosch propose to develop a 132kV double circuit twin tern OHPL and 33/132kV onsite substation. The Karreebosch OHPL will evacuate power from the Karreebosch on site substation to the existing Bon Espirange Substation.



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Technical Specifications:

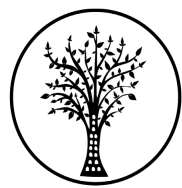
- 132kV twin tern double circuit OHPL (approximately 9km in length);
- OHPL servitude width up to 45m, including a servitude road (right of way servitude up to 14m wide, 7m on either side of the centreline) which will follow beneath the OHPL as far as possible; with additional 4x4 access tracks deviating dependant on terrain;
- One 33/132kV onsite substation (up to 30 000m<sup>2</sup>);
- One O&M building (up to 10 000m<sup>2</sup>) located within the substation footprint;
- Monopole or lattice structures to be constructed;
- It is anticipated that towers will be located on average 200m to 250m apart; however, longer spans may be needed due to terrain, and avoidance of site sensitivities and watercourse crossings.

The entire extent of the proposed 132kV Karreebosch OHPL, 33/132kV Substation and associated infrastructure is located within one (1) of the Strategic Transmission Corridors, namely the Central Corridor, as defined in and in terms of the procedures laid out in Government Notice (GN) No. 113. As mentioned above, the Karreebosch Grid EA has been authorised (EA Ref: 14/12/16/3/3/1/2608/AM3/1). As per Condition 12 the EA, the final site layout plan must be informed by a specialist micro-siting exercise to inform the final placement of the substation, pylon structures and associated road infrastructure. As per Condition 13 of the EA, the EMPRs must be amended to include the final layout for approval and any additional mitigation measures required to be included in the EMPRs.

### **Heritage Assessment**

CTS Heritage completed a Heritage Impact Assessment for the proposed grid connection in August 2022. This HIA assessed the impact to heritage resources anticipated from various alternatives. This letter is drafted in order to satisfy Conditions 12 and 13 of the EA as noted above.

To this end, we have mapped the final site plan and anticipated pylon placement against the track paths of our field assessment and against the location of known heritage resources of significance (Figures 2 and 3).



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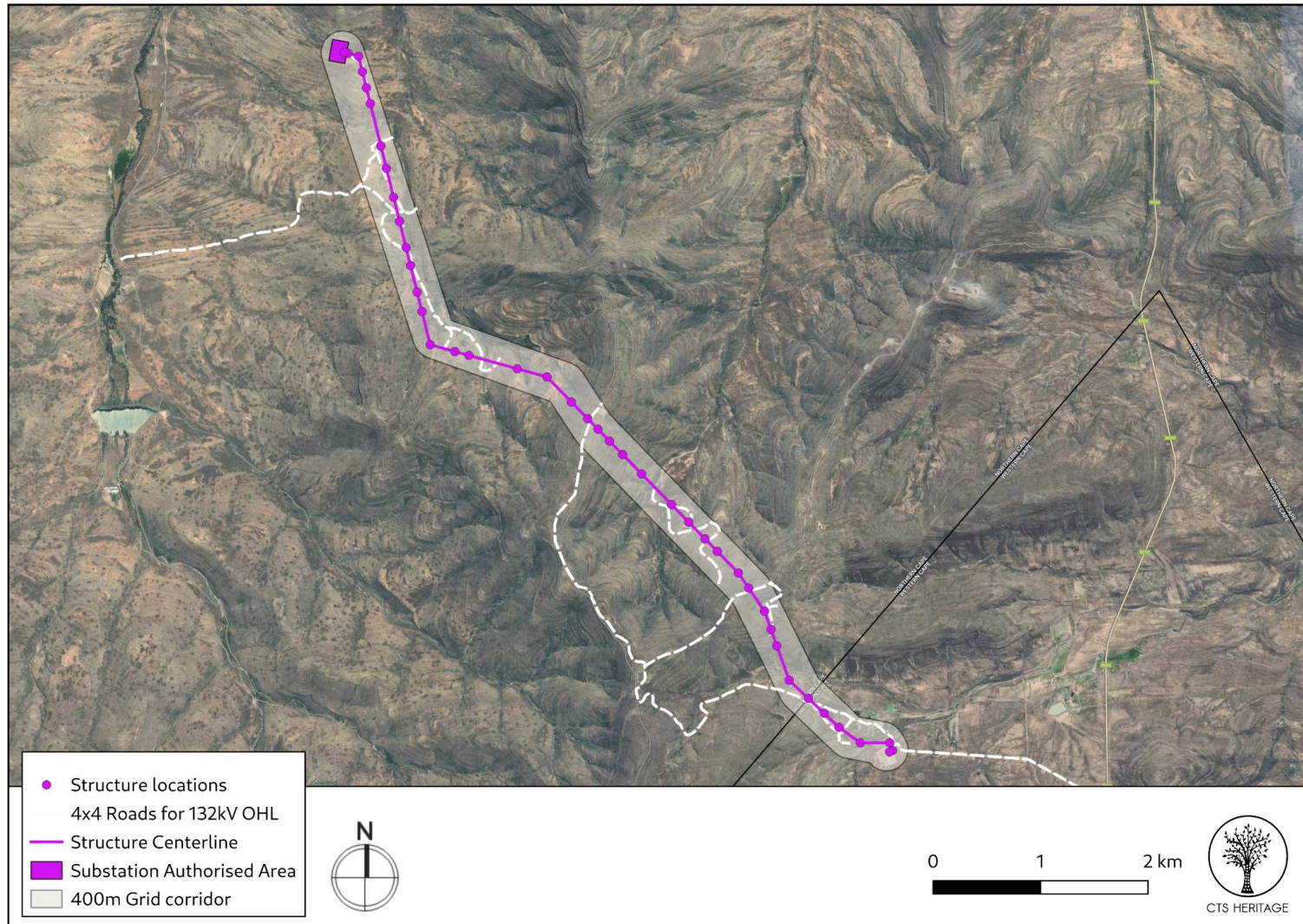
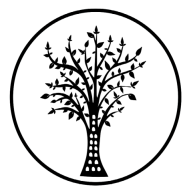


Figure 1: Satellite image indicating the location of the Final Karreebosch OHL alignment, within the authorised 400m corridor of alignment 1A and 3 (DFE REF: 14/12/16/3/3/1/2608/AM3/1)

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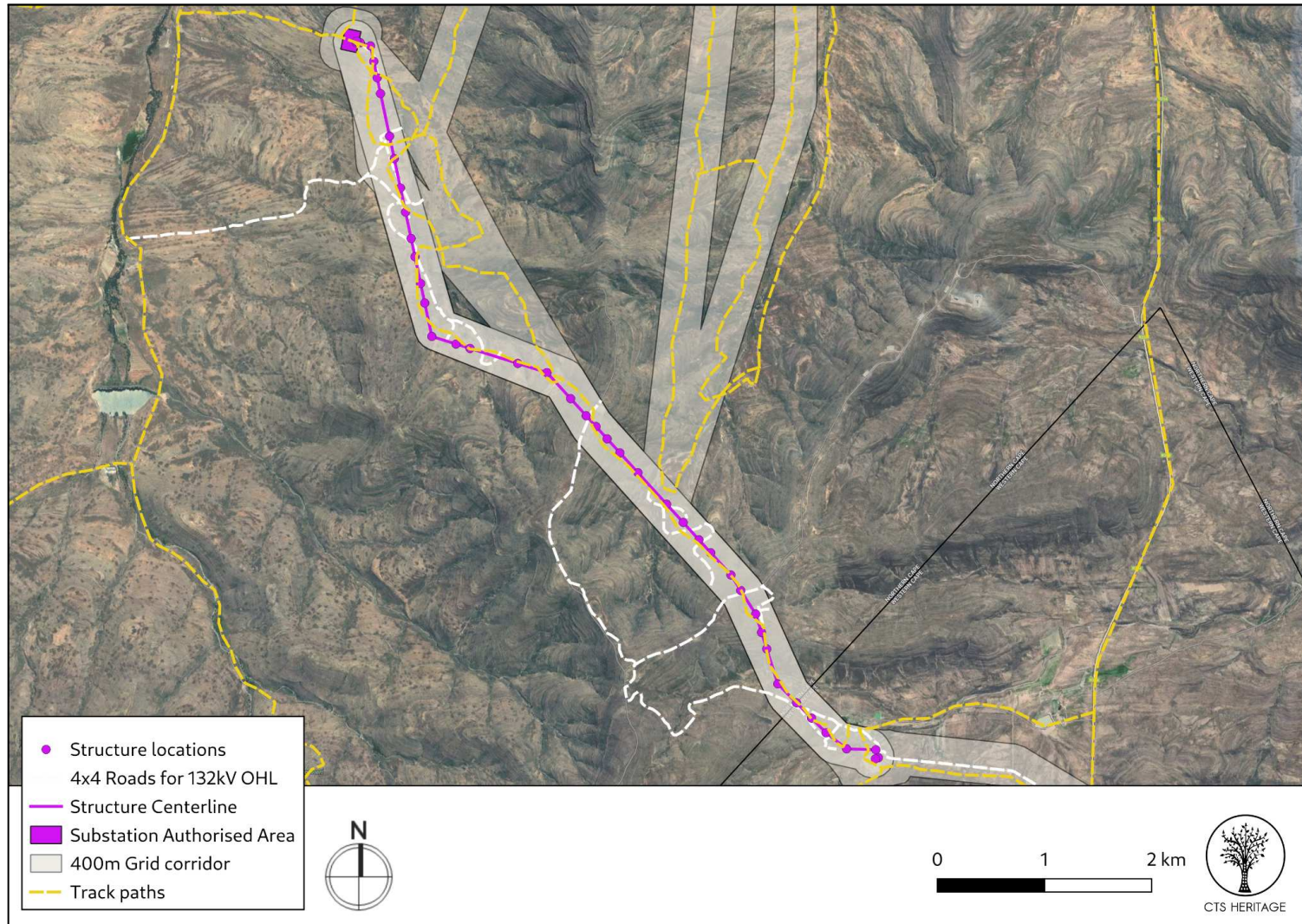
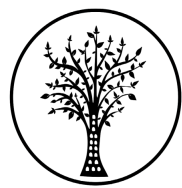


Figure 2: Satellite image indicating the location of the Final Karreebosch OHL alignment, within the authorised 400m corridor of alignment 1A and 3 (DFFE REF: 14/12/16/3/3/1/2608/AM3/1) with field assessment track paths

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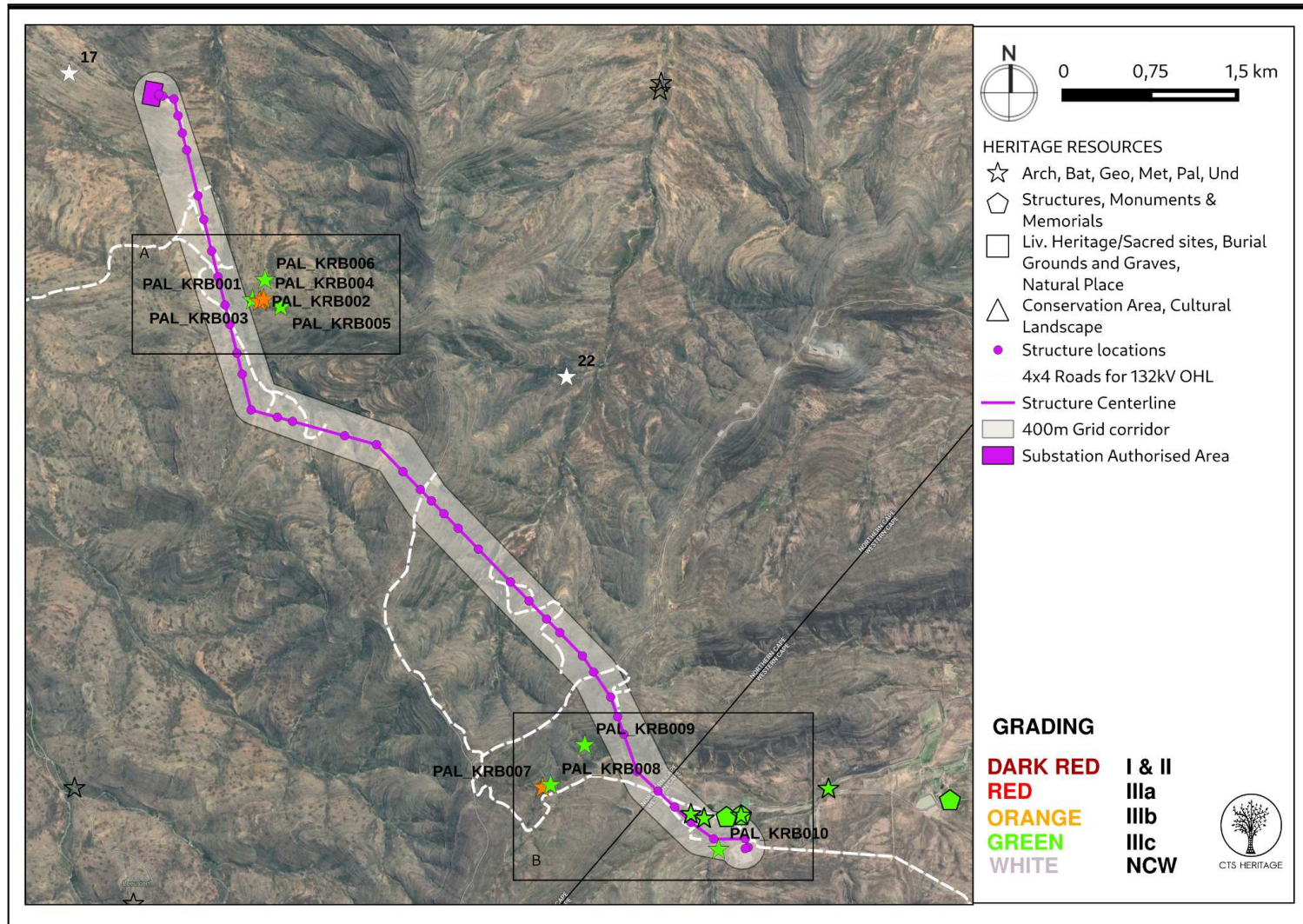
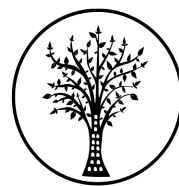


Figure 3: Satellite image indicating the location of the Final Karreebosch OHL alignment relative to the known heritage resources of significance



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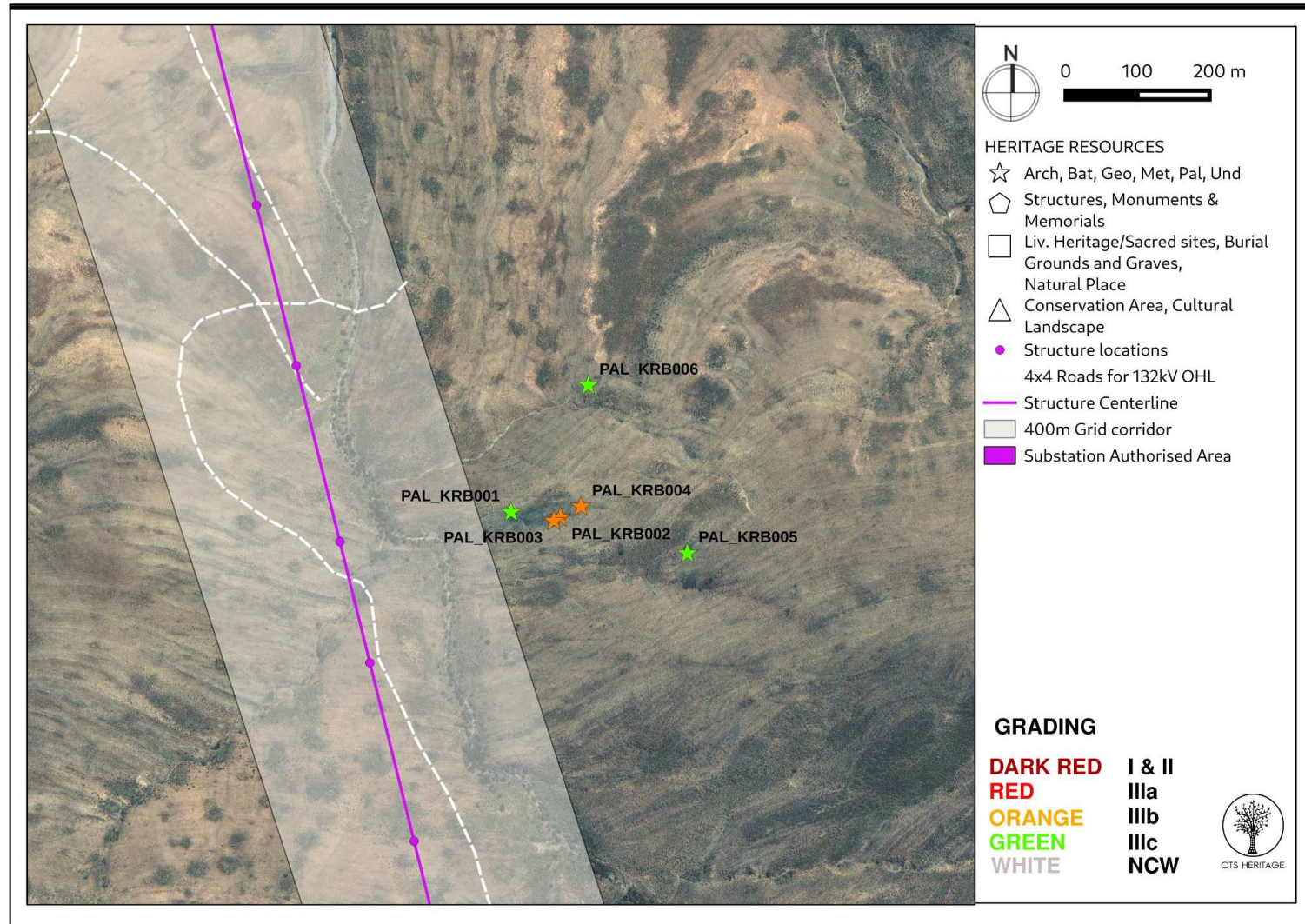
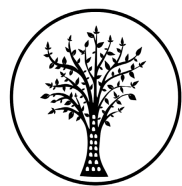


Figure 3a: Satellite image indicating the location of the Final Karreebosch OHL alignment relative to the known heritage resources of significance



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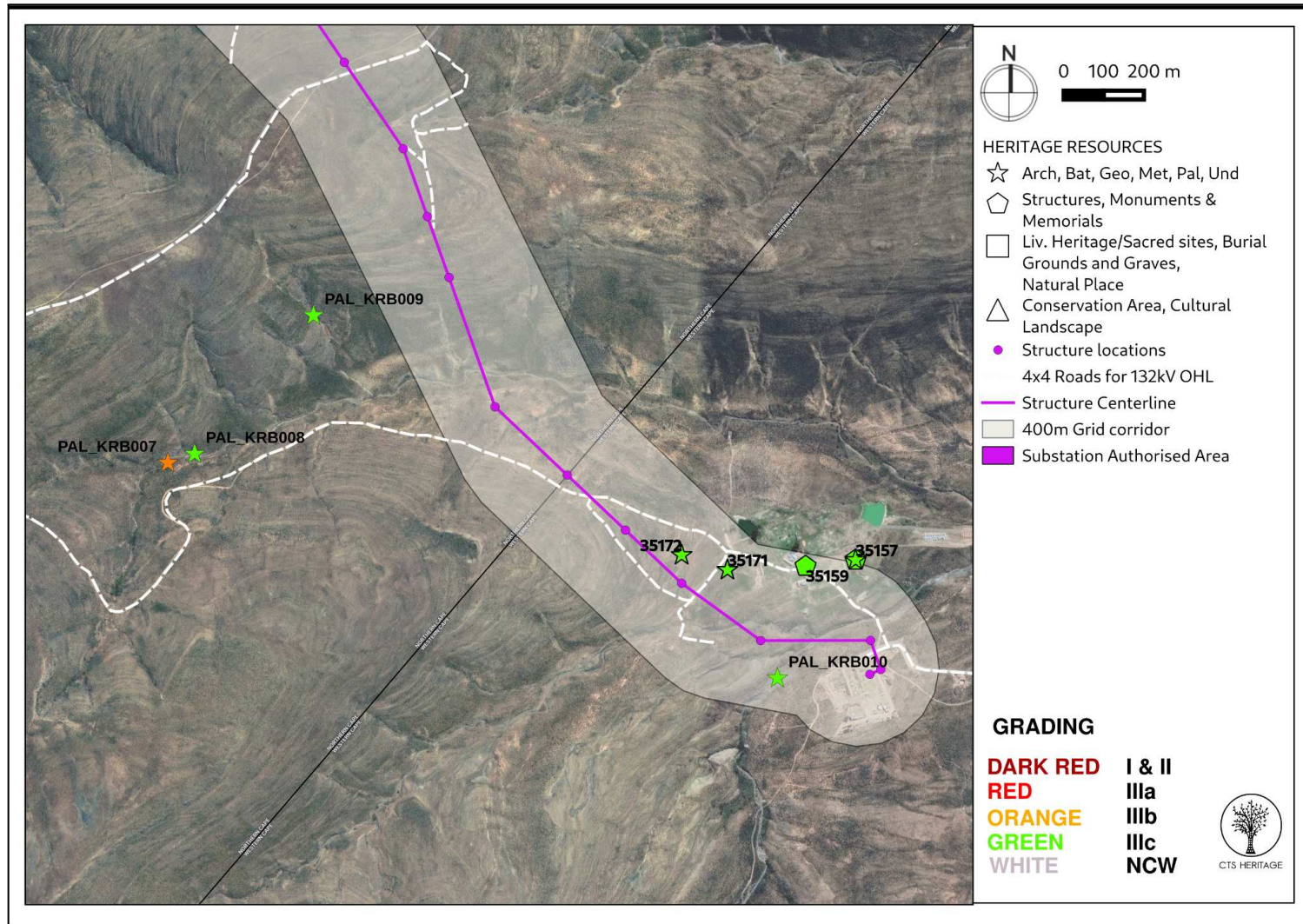
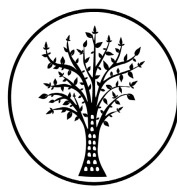


Figure 3b: Satellite image indicating the location of the Final Karreebosch OHL alignment relative to the known heritage resources of significance

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### **Specialist Comment - Condition 12**

As indicated in Figure 2, the Final Site Plan was surveyed as part of the HIA process completed for the OHL. As is evident in Figure 3a and 3b, the Final Site Plan avoids direct impact to known significant heritage resources.

This letter is therefore drafted to confirm that the final site plan for the Karreebosch OHL and substation does not impact any known heritage resources and adheres to the recommendations included in the CTS Heritage HIA report for this development (August 2022) which concludes that *“There is no objection to the proposed development of the Karreebosch OHL and onsite substation in terms of impacts to heritage resources and there is no preferred alternative for the OHL route or onsite substation on condition that:*

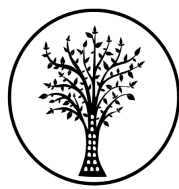
- *Should OHL Alternative 1B be developed, a walkdown of final alignment must be conducted by a palaeontologist with an approved workplan for the collection of sensitive fossil resources that are at risk.*
- *The attached Chance Fossil Finds Procedure must be implemented throughout the construction phase of the development*
- *The mitigation measures proposed in section 9 of the VIA are implemented*
- *Should any buried archaeological resources or burials be uncovered during the course of development activities, work must cease in the vicinity of these finds. The relevant heritage authority (the South African Heritage Resources Agency (SAHRA) in the Northern Cape and Heritage Western Cape (HWC) in the Western Cape) must be contacted immediately in order to determine an appropriate way forward.”*

As route alignment 1A and 3 were authorised in the Karreebosch OHL EA (DFFE REF: 14/12/16/3/3/1/2608/AM3/1), the recommendation pertaining to OHL Alternative 1B is no longer applicable.

There is no objection to the implementation of the Final Site Plan from a heritage perspective.

### **Specialist Comment - Condition 13**

As the final site plan avoids impact to known significant heritage resources, no site specific mitigation is required. No additional mitigation measures are required to be included in the EMPs.



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**Conclusion**

There is no objection to the proposed Final Site Plan in terms of impacts to heritage resources. No additional mitigation measures are required to be included in the EMPs.

Please feel free to contact me should you have any further questions or concerns in this regard.

**Yours sincerely**

A handwritten signature in black ink, appearing to read 'Jenna Lavin', written in a cursive style.

**Jenna Lavin**

**Archaeologist**

**Heritage Assessment Practitioner**