



19 July 2023

Ms Joanne Thomas  
Savannah Environmental (Pty) Ltd  
Email: [joanne@savannahsa.com](mailto:joanne@savannahsa.com)

Dear Ms Thomas,

**THE EXTENSION OF VALIDITY TO THE EA - SANNASPOS SEF  
SAHRIS Case: 17866**

Engie Southern Africa is proposing to amend the Environmental Authorisation (EA) for the Sannaspos PV project and the EA for its associated grid connection infrastructure by extending the EA validity by an additional two (2) years. Extension of the validity of the EA will ensure that the EA remains valid for the undertaking of the authorised activities. This project is a preferred bidder project under Round 5 of the REIPPPP and construction is planned to commence in the near future following Financial and Commercial Close.

To this end, CTS Heritage has been requested to make a statement regarding the proposed extension of the validity of the EA for another 2 years. The following sections summarise the findings of the previous heritage assessments completed for this and other relevant projects.

On 26 June 2013, Environmental Authorisation (EA) was granted for the for the proposed construction of a commercial photovoltaic (PV) solar energy facility (known as the Sannaspos PV Facility) as well as all associated infrastructure on Portion 0 of Farm 1808 Besemkop and Portion 0 of Farm 2962 Lejwe, situated approximately 10 kilometres south of the N8 to Bloemfontein (in the north-west) and Thaba Nchu (in the south-east). Its northern and western boundary is located in a portion of Farm Lejwe 2962.

The EIA considered includes an area of 135ha for the PV arrays. The applicant is proposing to expand this area by just less than 20ha within which project infrastructure will be placed. The area proposed for the Sannaspos PV Facility was thoroughly assessed for impacts to heritage resources in a Heritage Impact Assessment conducted by Tomose (2013, SAHRIS NID 114445) and a Palaeontological Impact Assessment by Bamford (2021, SAHRIS NID 582594). These reports are referred to below in order to determine the likely heritage sensitivity of the area proposed for development.

In November 2012, SAHRA (Case ID 670) issued a comment in support of the Sannaspos PV development stating that:

*"In terms of the archaeological resources, the SAHRA Archaeology, Palaeontology and Meteorites Unit supports the recommendations of the specialist for Sites Sannas-1, Sannas-2, sannas-4 and Sannas-5. For the two cemetery sites, the graves should be restored where these are dilapidated, protected and conserved in perpetuity. For this purpose, a proper fence must be build around them including entry gates to allow visits from relatives and family friends. The fence must be placed 2 metres away from the perimeter of the graves. No development is allowed within 15 metres from the fence line surrounding the graves. Alternatively, The SAHRA Burial Grounds and Graves Unit requires that if the area where the burials are located fall within the development footprint, then provisions stipulated in section 36 of the National Heritage Resources Act (Act No. 25 of 1999) are applicable, and relocation of these might proceed provided that a public consultation process is followed.*

*In terms of the palaeontological resources, the SAHRA Archaeology, Palaeontology and Meteorites Unit supports the recommendations of the specialist and additionally requires that the*



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*construction managers be trained by a qualified palaeontologist prior to any development, to identify fossil resources that may be exposed during the development. The results of the field survey must be submitted to SAHRA APM Unit for commenting.*

*If the recommendations made in the specialist report and in this comment are adhered to, the SAHRA Archaeology, Palaeontology and Meteorite Unit has no objection to the development (in terms of the archaeological and palaeontological component of the heritage resources). If any new evidence of archaeological sites or artefacts, palaeontological fossils, graves or other heritage resources are found during development, construction or mining, SAHRA and a professional archaeologist must be alerted immediately.”*

In 2021, an application was made to amend the EA for this project into two applications. This is recorded as SAHRIS Case ID 424. SAHRA commented as follows:

*“As the NEMA EIA process has long since been concluded, SAHRA cannot provide approval or note any objections to the approved Sannaspos PV facility, powerlines and grid infrastructure (Ref: 14/12/16/3/3/2/360/AM5/1 and Ref: 14/12/16/3/3/2/360/AM5/2) in terms of NEMA. The applicant is advised to note and implement the following:*

- The recommendations provided by the heritage specialists during the EIA phase are supported;*
- The recommendations provided in the Phase 2 PIA and HMP are supported;*
- No comments are required from the Heritage Free State (HFS) in this regard, however, if a permit in terms of section 34 of the NHRA is required at any point for the development, this must be applied for from the HFS;”*

Please find copies of this correspondence attached.

### **Archaeology and Built Environment Heritage**

A broad summary of the archaeology of the Free State is included in Tomose (2013) and is not included here. It is sufficient to note that, scattered throughout the Karoo is evidence of historic and prehistoric occupation in the form of Early, Middle and Later Stone Age lithics and other material remains. The descendents of the historic and prehistoric occupants of the region are found in the indigenous Khoe and San, as well as modern inhabitants of the area. The development area of Sannaspos takes its name from an engagement fought during the Second Boer War (1899-1902). According to Tomose (2013), “Using the new Commandos tactic, Chief Commandant De Wet defeated British forces under Brigadier General RG Broadwood in Sannaspos, some 28km east of Bloemfontein. This is in close proximity to the proposed development area. In this battle the British lost 159 men with the Boer Commandos only losing 13 – a huge and significant blow to the British. The defeated British garrison in Sannaspos had been protecting the Sannaspos water works, the main water supply to the newly captured Bloemfontein by the British forces.”

A monument commemorating this event has been established and it is currently used as one of the tour attractions of the Free State province battlefields tours and is located some 5km from the Sannaspos PV facility. The Sannaspos PV facility development area has been thoroughly assessed by Tomose in his report dated July 2013. In his assessment, he identified 5 sites of heritage significance which needed to be considered for the development of the Sannaspos PV facility.

- Sannas-1 (Grade IIIA) SAHRIS ID 46720

On the foot hill of one of the Koppies, an un-formalised and/or non-municipal cemetery i.e. not formalised in terms of bylaws regulating parks and cemeteries or being declared formal in terms of a traditional council, was located with approximately 13 graves. The graves are characterised



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by stone cairns or stone mound dressing. One grave out of the 13 has a cross to mark the headstone. The graves are all facing east-west in a typical burial orientation. The archaeologist was led to the site by farm workers after he asked about possible graves in the area.

- Sannas-2 (Grade IIIC) SAHRIS ID 46721

Two MSA stone scatters were found at the foothill of a hill in Besemkop in an exposed calcrete layer.

- Sannas-3 (Grade IIIC) SAHRIS ID 46722

Site number 3 is a historic stone shed located within Besemkop farmstead. The main farmhouse and its outbuildings are modernised and the shed is the only remaining historical structure that exists in the farmstead. The shed has 3 north facing windows, 2 doors on either sides, 1 door on its southern façade. The shed is built using stone and has a corrugated iron sheet roof which seems to have been recently added on or refurbished.

- Sannas-4 (NCW) SAHRIS ID 46723

Graffiti inscription site located on the hill located south of Besemkop. The inscriptions show 1990s dates and are considered to be a form of graffiti as they are too young to meet the criteria for rock art consideration. The archaeologist was led to the site after he asked the farm workers about possible rock art sites on the hill.

- Sannas-5 (Grade IIIA) SAHRIS ID 46724

The site is located along the road leading to the farmstead. It is a cemetery, possibly created by the first farm owners of the area, consisting of approximately 8 graves. The graves have granite dressing and headstones. The graves burial orientation is east-west, a typical burial position. This burial site is located within the proposed expanded footprint. These graves are clearly visible and are marked. It is required in the Heritage Management Plan that has been drafted for the Sannaspos PV Facility that these burials are fenced as per the recommendations of the HIA as follows:

*“The burial sites at Sannas-1 (SAHRIS ID 46720) and Sannas-5 (SAHRIS ID 46724) must be fenced using clearview fencing to ensure visual permeability and continuity in terms of sense of place. A gate must be created for access purposes for relatives and relevant community members. The position of this gate must be such that it can be accessed without risk to the Sannaspos PV facility. This fencing must be placed 5m from the nearest identifiable burial.”*

The proposed expanded layout does not impact any known structures directly. One structure of low significance was identified within the development area; however no impact to this structure is anticipated. Should it be necessary that structures that have been graded or structures that are older than 60 years require alteration or demolition during this phase, HFS must be contacted regarding permission in terms of section 34 of the NHRA.

### **Palaeontology**

According to the SAHRIS Palaeosensitivity Map, the area proposed for the PV Facility is underlain by sediments of very high and zero palaeontological sensitivity (Figure 4). According to the extract from the CGS 2926 Bloemfontein Map, the development area is underlain by sediments of the Adelaide Subgroup and Jurassic Dolerite. Bamford (2021) completed a palaeontological field assessment of the development area. In the report, it is noted that the area proposed for development is underlain by geological sediments of the Adelaide Subgroup of the Beaufort Group (of very high paleontological sensitivity), and Jurassic Dolerite that has zero palaeontological sensitivity. According to the updated biostratigraphy (Smith et al., 2020), the whole of the Adelaide Subgroup has been divided into five Assemblage Zones based on the dominant or temporally exclusive vertebrate fossils.



If vertebrate fossils were common in this region and had been well mapped then the specific Assemblage Zone would have been indicated in the literature. Common names for the fossils that could occur here are fish, amphibians, reptiles, therapsids, terrestrial and freshwater tetrapods, as well as freshwater bivalves, trace fossils including tetrapod trackways and burrows. Where the vertebrates do not occur it is possible to find sparse to rich assemblages of vascular plants of the late Glossopteris Flora, including some petrified logs), and insects are also prevalent at some sites.

From the updated Karoo Biozone map in Smith et al. (2020) the Sannaspos site is in the Daptocephalus Assemblage Zone and on the margin of the two subzones, the lower Dicynodon-Therignathus subzone and upper Lystrosaurus maccaigi—Moschinus subzone. Fossil plants also occur in the Adelaide Subgroup and they are from the Glossopteris flora and include leaf impressions of Glossopteris, early gymnosperms, lycopods, sphenophytes, ferns and silicified wood. They are not common however. The Sannaspos PV facility area was walked by a palaeontologist and no fossil material or significance palaeontological resources were identified (Bamford, 2021). Bamford (2021) notes that “Based on the nature of the project, surface activities may impact upon the fossil heritage if preserved in the development footprint. The geological structures suggest that the rocks are the right age and type to contain fossils. No fossils were seen during the site visit. Furthermore, the material to be disturbed are the loose surface soils and sands and they do not preserve fossils.”

Since there is a very small chance that fossils from the Adelaide Subgroup below the ground surface may be disturbed, Bamford (2021) recommended that a Fossil Chance Find Protocol be implemented during development. This recommendation has been included in the management plan for this site developed by CTS Heritage.

### **Impact Ratings**

The impact ratings articulated in Tomose (2013) remain appropriate and applicable.

### **Cumulative Impacts**

The cumulative impact of a development is the impact that development will have when its impact is added to the incremental impacts of other past, present or reasonably foreseeable future activities that will affect the same environment. It is important to note that the cumulative impact assessment for a particular project, like what is being done here, is not the same as an assessment of the impact of all surrounding projects. The cumulative assessment for this project is an assessment only of the impacts associated with this project, but seen in the context of all surrounding impacts. It is concerned with this project’s contribution to the overall impact, within the context of the overall impact. But it is not simply the overall impact itself.

The most important concept related to a cumulative impact is that of an acceptable level of change to an environment. A cumulative impact only becomes relevant when the impact of the proposed development will lead directly to the sum of impacts of all developments causing an acceptable level of change to be exceeded in the surrounding area. If the impact of the development being assessed does not cause that level to be exceeded, then the cumulative impact associated with that development is not significant.

In REDZ areas, there is a reasonable expectation that the cultural landscape of an area will be changed to be dominated, or at least heavily altered, by renewable energy development. In fact, this is the intention of the REDZ areas. It must be noted that this development is NOT located within a REDZ.



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In terms of cumulative impacts to heritage resources, impacts to archaeological and palaeontological resources are sufficiently dealt with on a case by case basis. The primary concern from a cumulative impact perspective would be to the cultural landscape. The cultural landscape is defined as the interaction between people and the places that they have occupied and impacted. In some places in South Africa, the cultural landscape can be more than 1 million years old where we find evidence of Early Stone Age archaeology (up to 2 million years old), Middle Stone Age archaeology (up to 200 000 years old), Later Stone Age archaeology (up to 20 000 years old), evidence of indigenous herder populations (up to 2000 years old) as well as evidence of colonial frontier settlement (up to 300 years old) and more recent agricultural layers.

Modern interventions into such landscapes, such as renewable energy development, constitute an additional layer onto the cultural landscape which must be acceptable in REDZ areas. The primary risk in terms of negative impact to the cultural landscape resulting from renewable energy development lies in the eradication of older layers that make up the cultural landscape. There are various ways that such impact can be mitigated.

In terms of impacts to heritage resources, it is preferred that this kind of infrastructure development is concentrated in one location and is not sprawled across an otherwise agricultural landscape. The proposed development is therefore unlikely to result in unacceptable risk or loss, nor will the proposed development result in a complete change to the sense of place of the area or result in an unacceptable increase in impact due to its location. The landscape within which the proposed project areas are located, is not worthy of formal protection as a heritage resource and has the capacity to accommodate such development from a heritage perspective.

No additional heritage cumulative impacts were identified by the specialist as a result of the proposed extension. Therefore, the cumulative impacts identified by the Heritage Impact Assessment (2013) remain unchanged and would be applicable for the proposed extension.

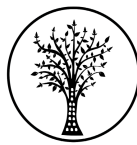
### **Statement on the likely impacts of extending the validity of the EA on archaeological and palaeontological heritage**

Archaeological and palaeontological heritage resources reflect the environments of the past and are unlikely to change drastically in as short a geological time span as 10 years. Some changes to the visible heritage resources may take place through processes of erosion and deposition but these finds tend to represent heavily disturbed contexts.

Furthermore, the heritage resources identified have been appropriately mitigated through the recommendations in the HIA (Tomose, 2013) as well as the subsequent assessments by CTS Heritage as well as the completed Heritage Management Plan (2021).

It is the opinion of this specialist that additional heritage resources are unlikely to have revealed themselves since the assessment completed in 2013. However, it is noted that, in their most recent correspondence pertaining to the amendment of the issued EA for the expansion of the Sannaspos PV facility, SAHRA (Case ID 17866) has determined that:

*“The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit cannot endorse this proposed development and advises the DFFE to reject the proposed expansion of the Sannaspos PV Plant Project on Portion 0 of Farm 1808 Besemkop and Portion 0 of Farm 2962 Lejwe, about 30 east south-east of Bloemfontein, Mangaung Local Municipality, Free State Province as no HIA that complies with section 24(4)b(iii) of the NEMA and section 38(3) or section 38(8) of the NHRA has been completed as part of the EA application.*



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*This comment must be forwarded directly to the competent authorities and proof of the submission and receipt thereof must be provided to SAHRA.”*

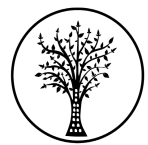
As such, and in light of the above, it is up to SAHRA to determine whether or not it supports the proposed extension of the validity of the EA by 2 years as described herein.

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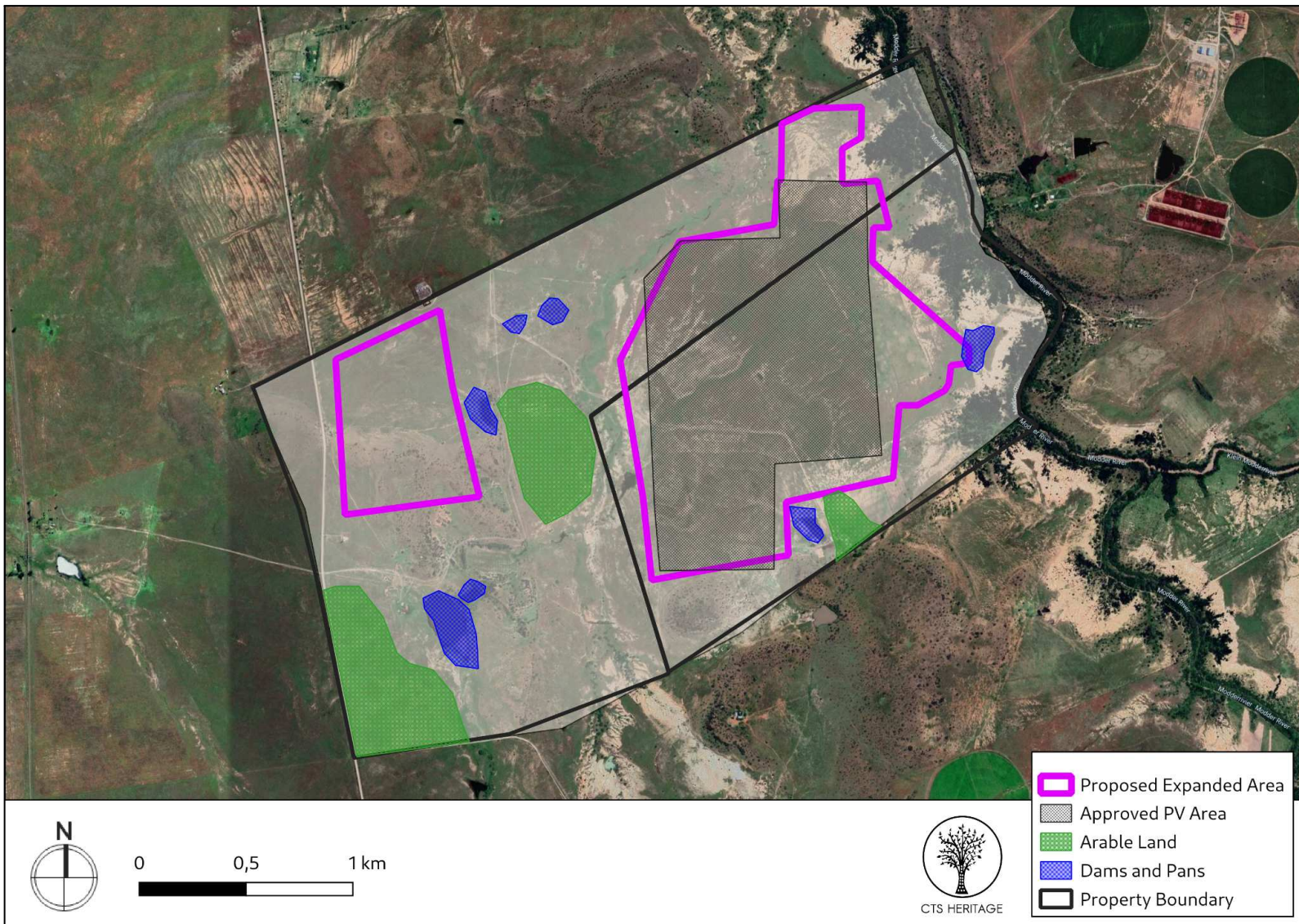
Jenna Lavin

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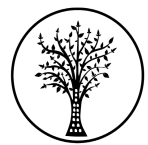


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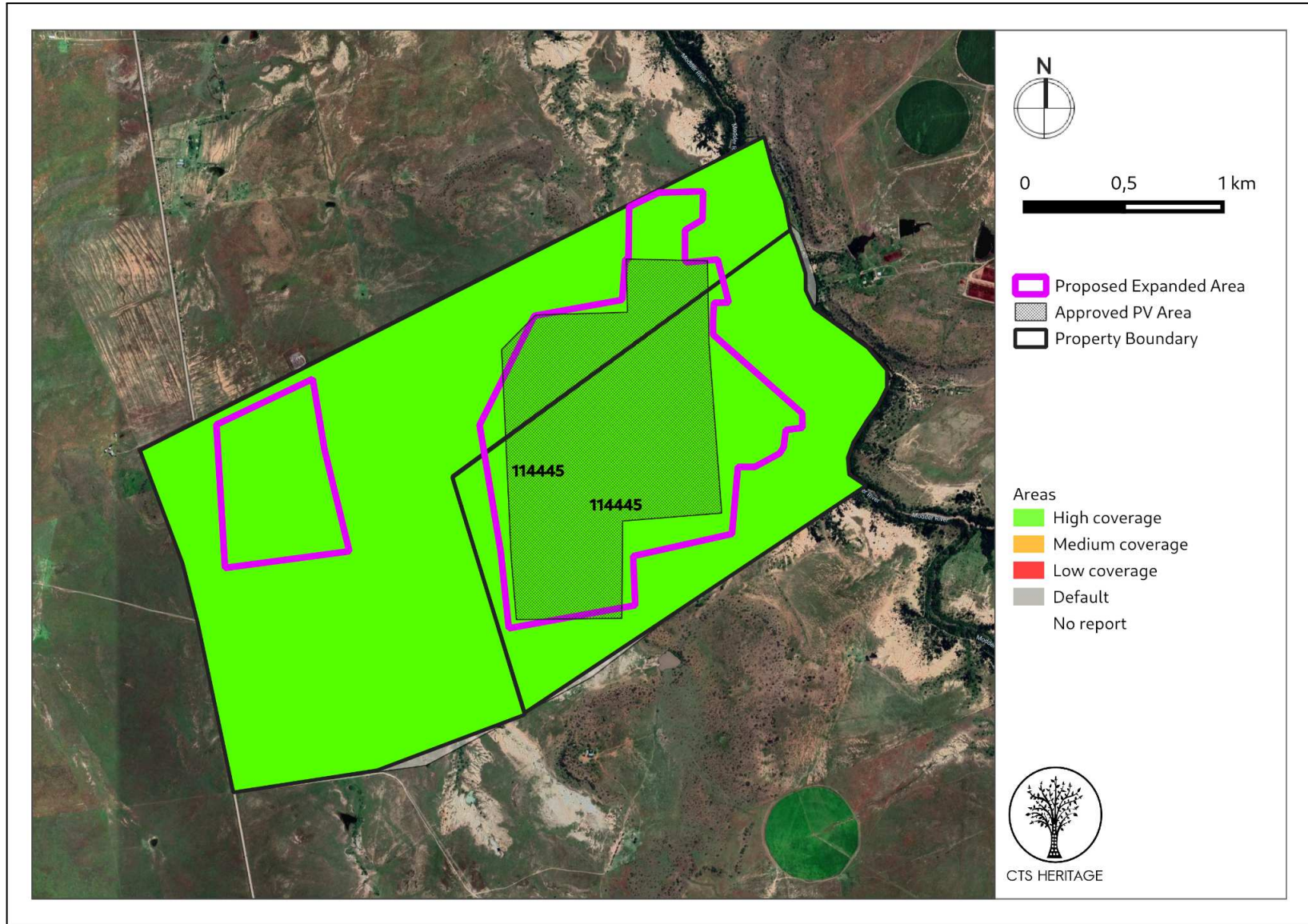


**Map 1: Location of proposed development**





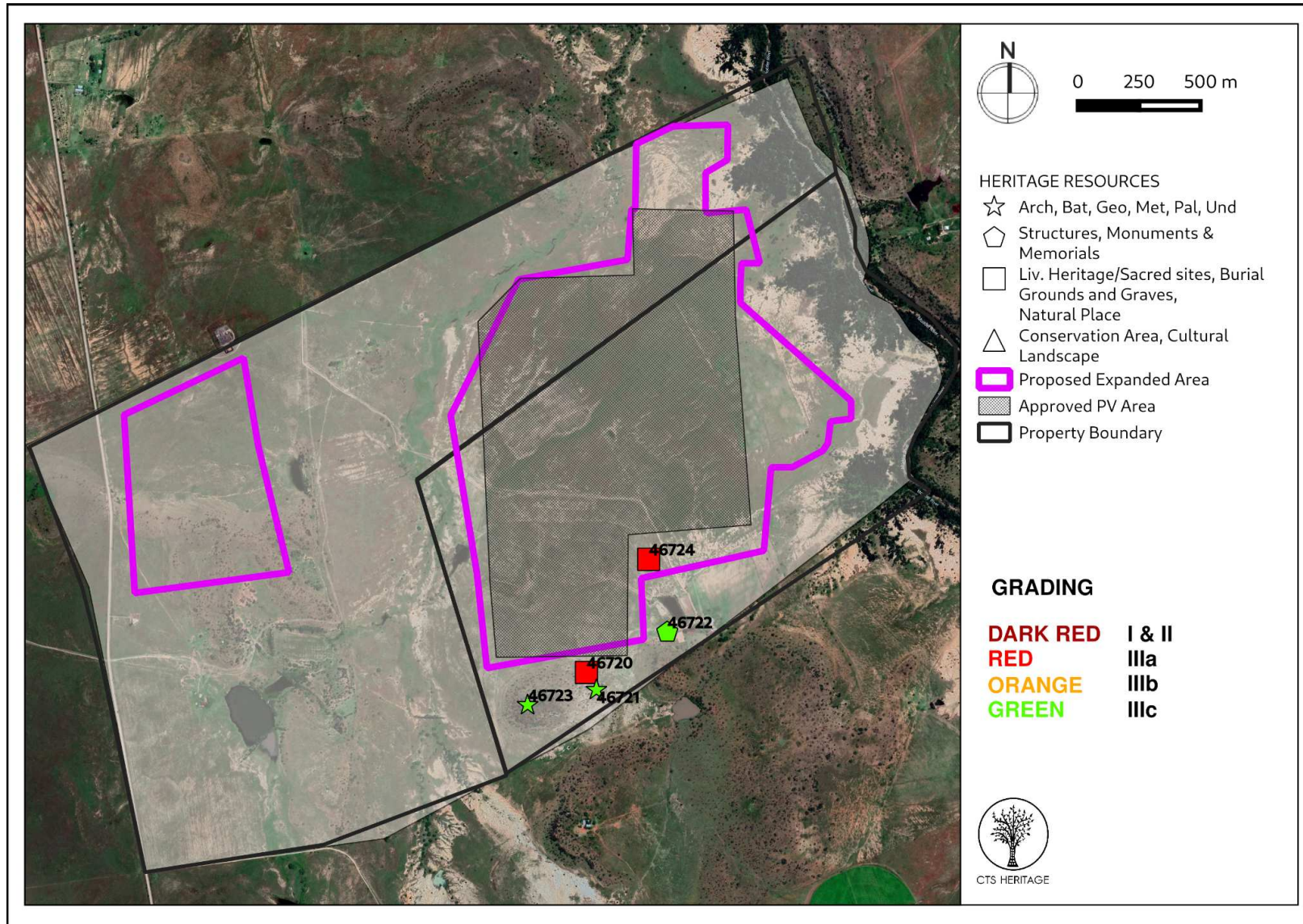
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**Map 2: Map of previous assessments completed**

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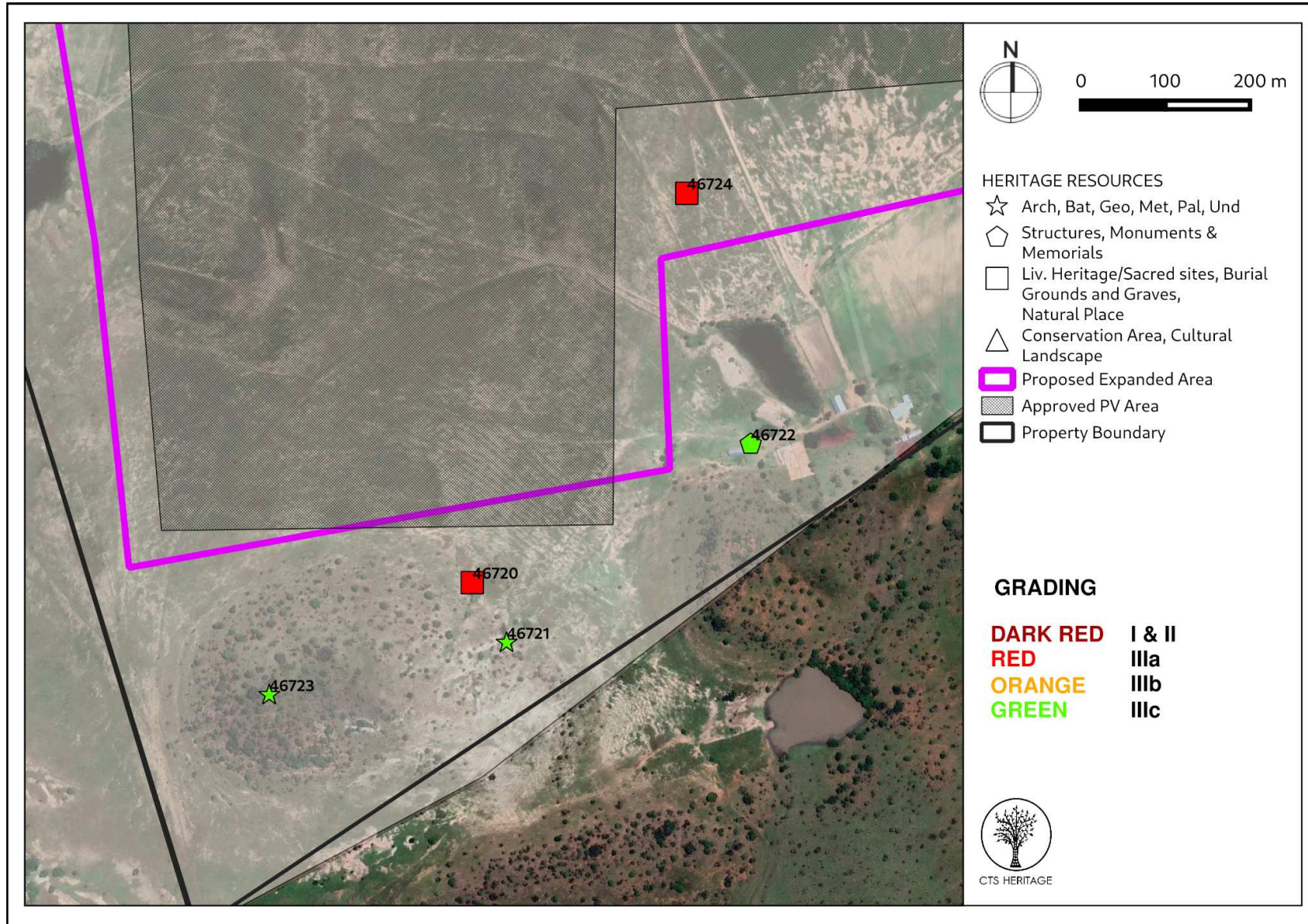


Map 3.1: Map of heritage resources previously identified





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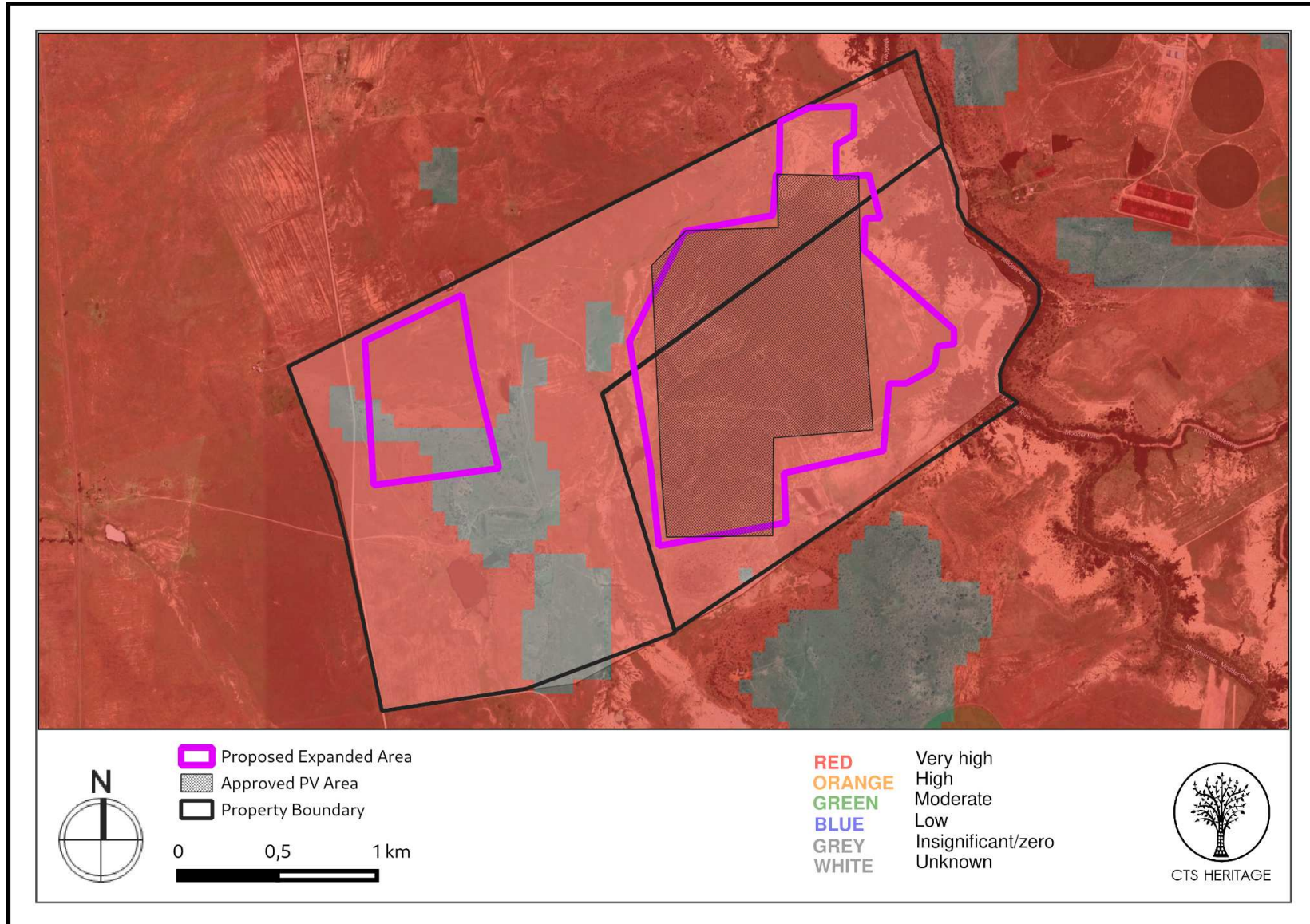


Map 3.2: Map of heritage resources previously identified





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Map 5: Map of palaeontological sensitivity of the development area (very high)