CTS HERITAGE

HERITAGE SCREENER

CTS Reference Number:	**CTS21_198**
SAHRIS Case No.	
Client:	**Savannah Environmental (Pty) Ltd**
Date:	**October 2021**
Title:	**Additional development area for the authorised Engie Graspan PV Facility, in the Siyancuma Local Municipality in the Northern Cape Province**

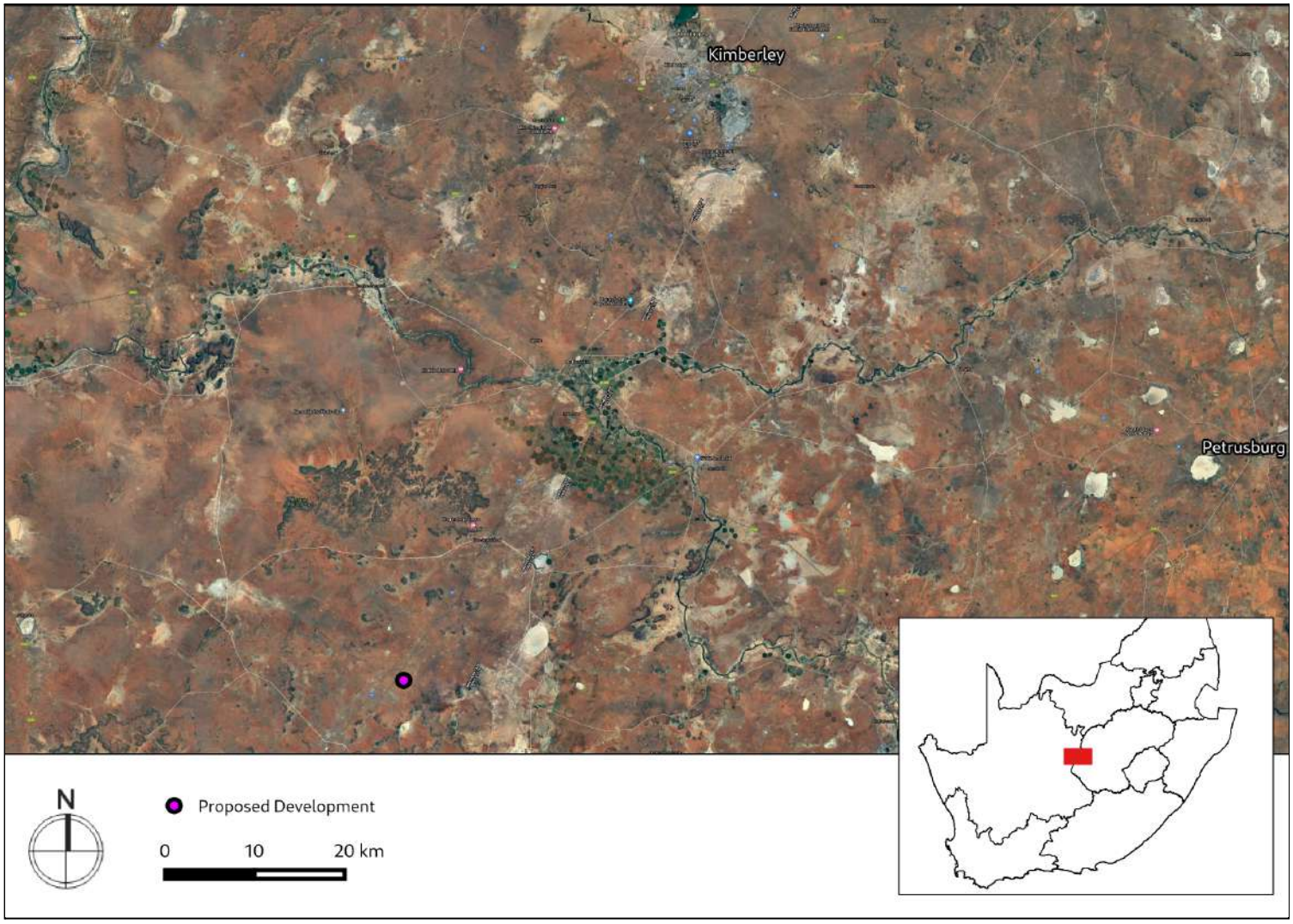

Figure 1a. Satellite map indicating the location of the proposed development in the Northern Cape

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1. Proposed Development Summary

ENGIE Graspan Solar Project (Pty) Ltd received authorization for the proposed Graspan PV Plant Phase 1 (90MW) and associated infrastructure, located on Portion on the Farm Graspan (no. 172), in the Siyancuma Local Municipality, Northern Cape Province in April 2013. The EIA considered includes an area of 150ha for the PV arrays. The applicant is proposing to expand this area by approximately 50ha within which project infrastructure will be placed.

2. Application References

Name of relevant heritage authority(s)	SAHRA
Name of decision making authority(s)	DFFE

3. Property Information

Latitude / Longitude	29°20'49.03"S 24°26'14.01"E
Erf number / Farm number	Portion on the Farm Graspan (no. 172)
Local Municipality	Siyancuma Local Municipality
District Municipality	Pixley ka-Seme District Municipality
Province	Northern Cape
Current Use	Agriculture with approved PV facility
Current Zoning	Agriculture

4. Nature of the Proposed Development

Total Area	50ha
Depth of excavation (m)	2 to 3m
Height of development (m)	3 to 5m

5. Category of Development

x	**Triggers: Section 38(8) of the National Heritage Resources Act**
	Triggers: Section 38(1) of the National Heritage Resources Act
	1. Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.
	2. Construction of a bridge or similar structure exceeding 50m in length.
	3. Any development or activity that will change the character of a site-
x	a) exceeding 5 000m^2 in extent
	b) involving three or more existing erven or subdivisions thereof
	c) involving three or more erven or divisions thereof which have been consolidated within the past five years
	4. Rezoning of a site exceeding 10 000m^2
	5. Other (state):

6. Additional Infrastructure Required for this Development

As per the project description.

7. Mapping (please see Appendix 3 and 4 for a full description of our methodology and map legends)

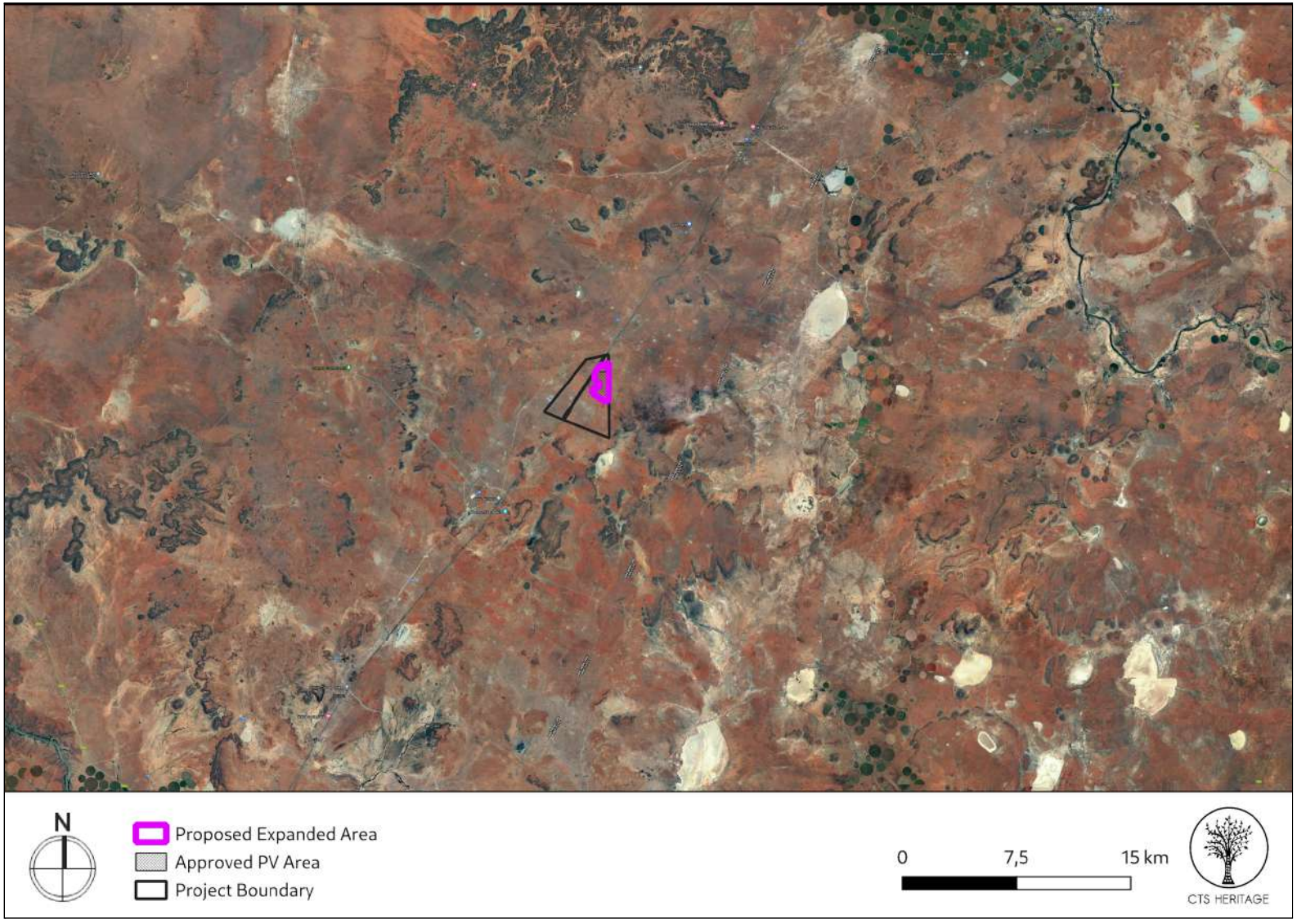

Figure 1b. Overview Map. Satellite image (2020) indicating the approved Graspan PV layout

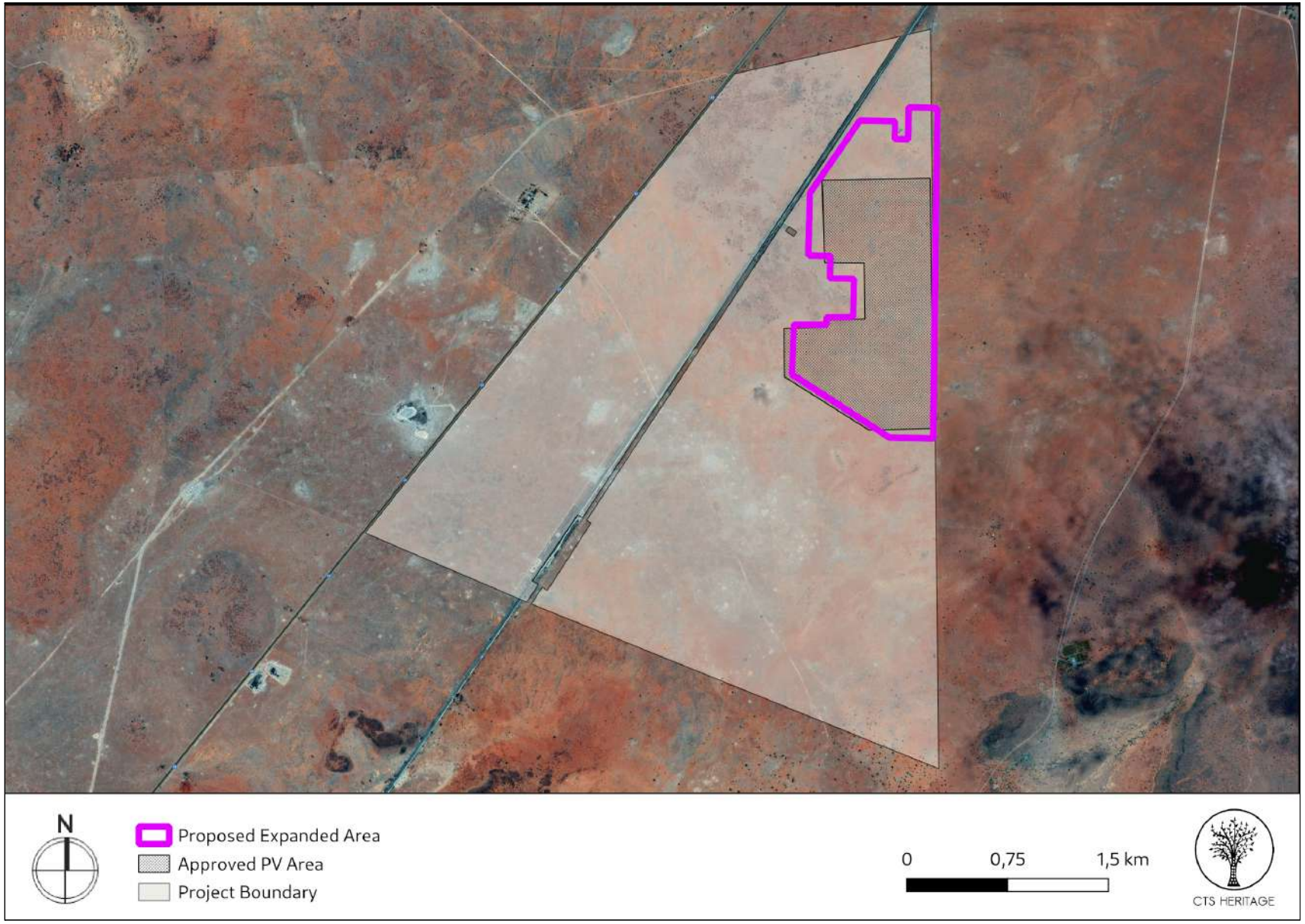

Figure 1c. Overview Map. Satellite image (2020) indicating the proposed development area

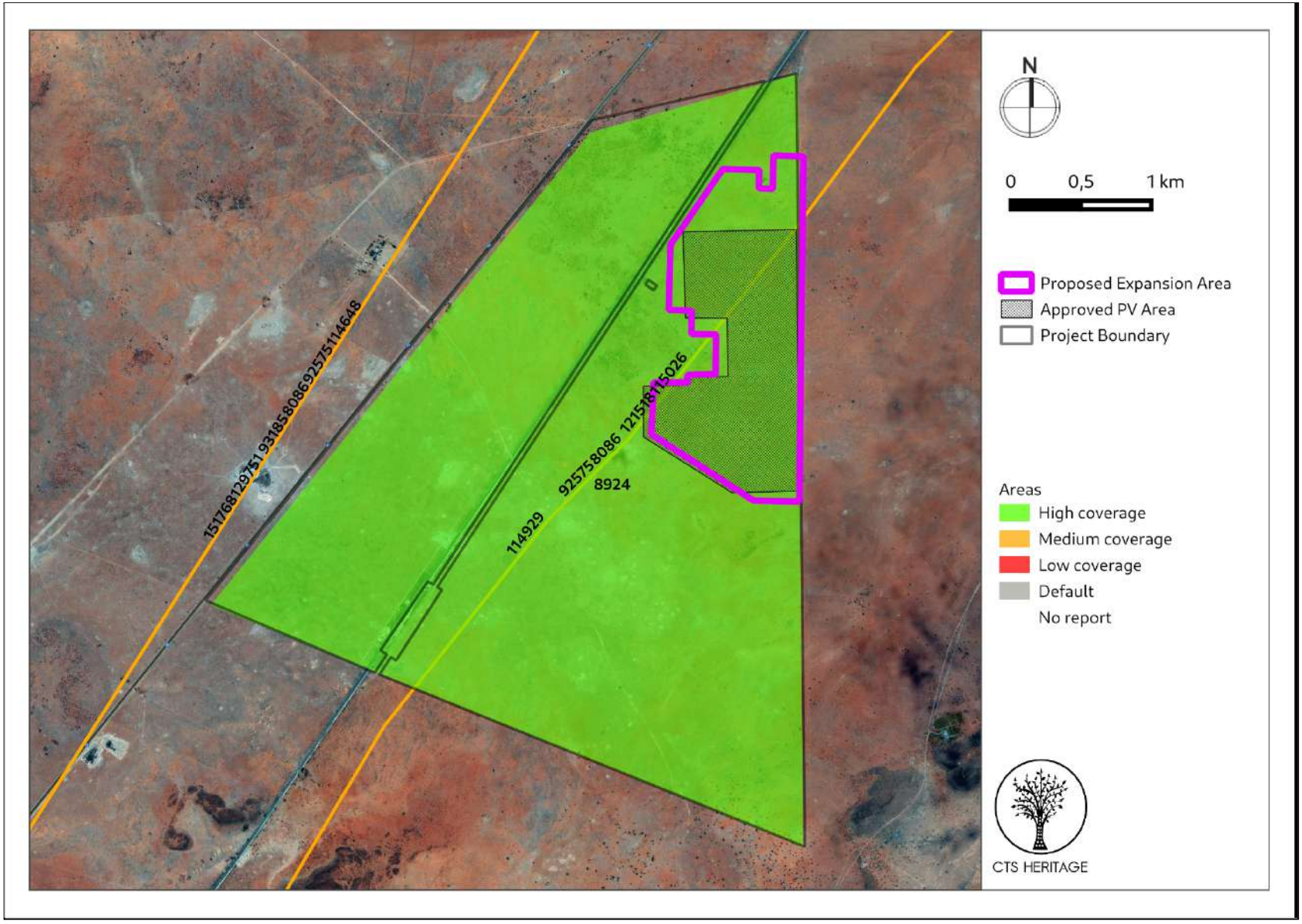

Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments covering the proposed development area with SAHRIS NIDS indicated. Please see Appendix 2 for a full reference list.

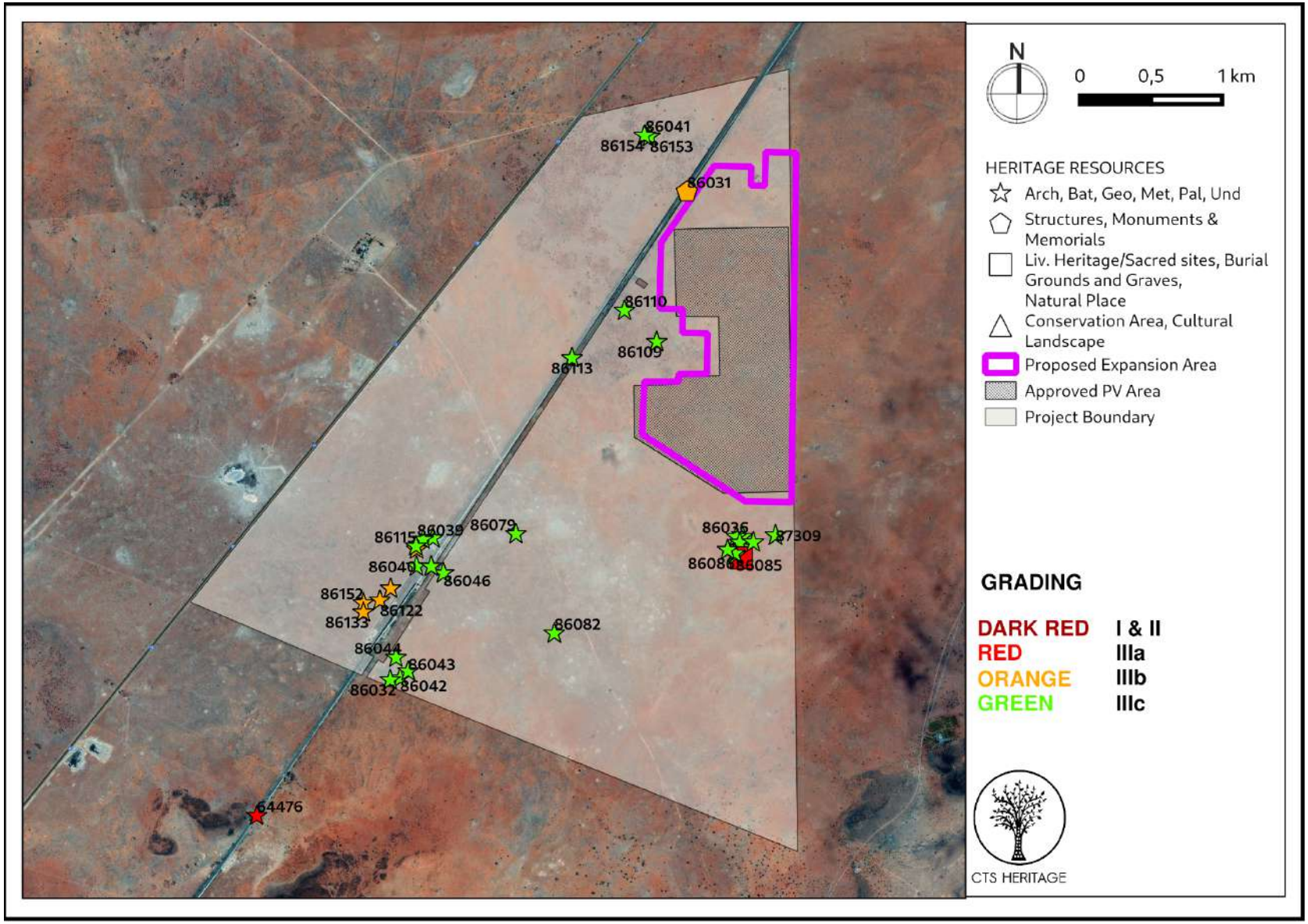

Figure 3. Heritage Resources Map. Heritage Resources previously identified within the study area, with SAHRIS Site IDs indicated in the insets below. Please See Appendix 4 for a full description of heritage resource types.

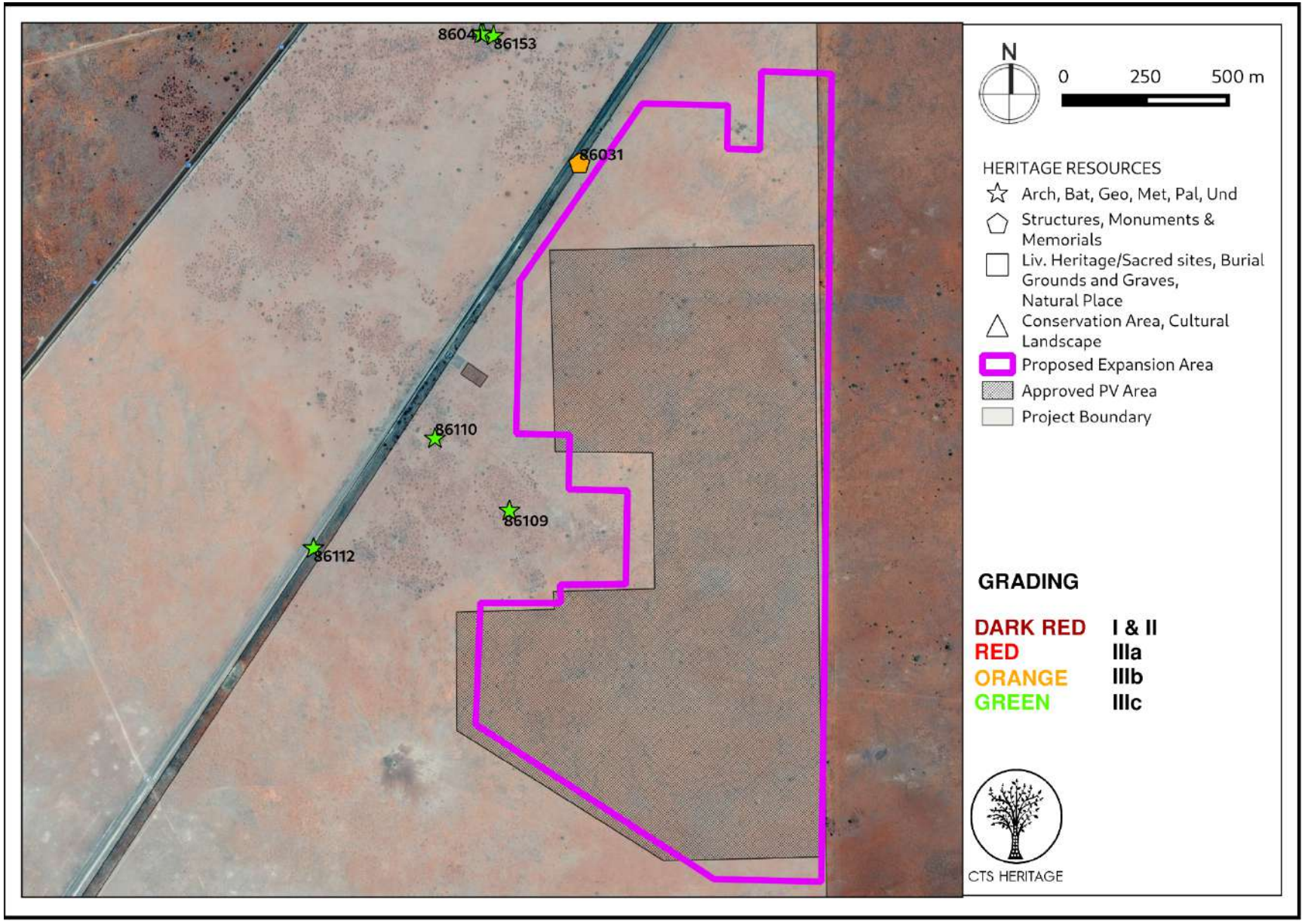

Figure 3a. Heritage Resources Map Inset A

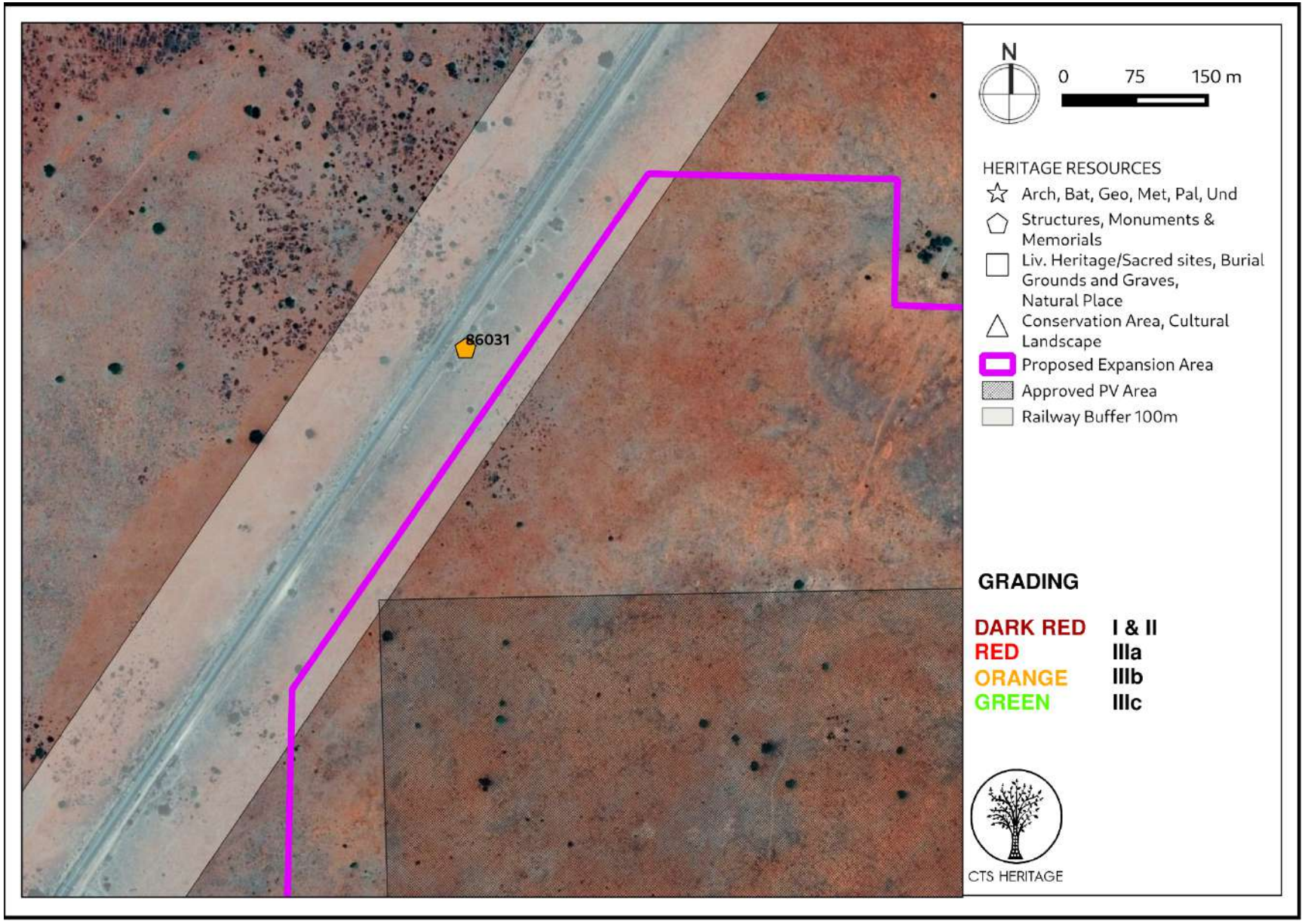

Figure 3b. Heritage Resources Map Indicating the recommended 100m buffer area around the railway line

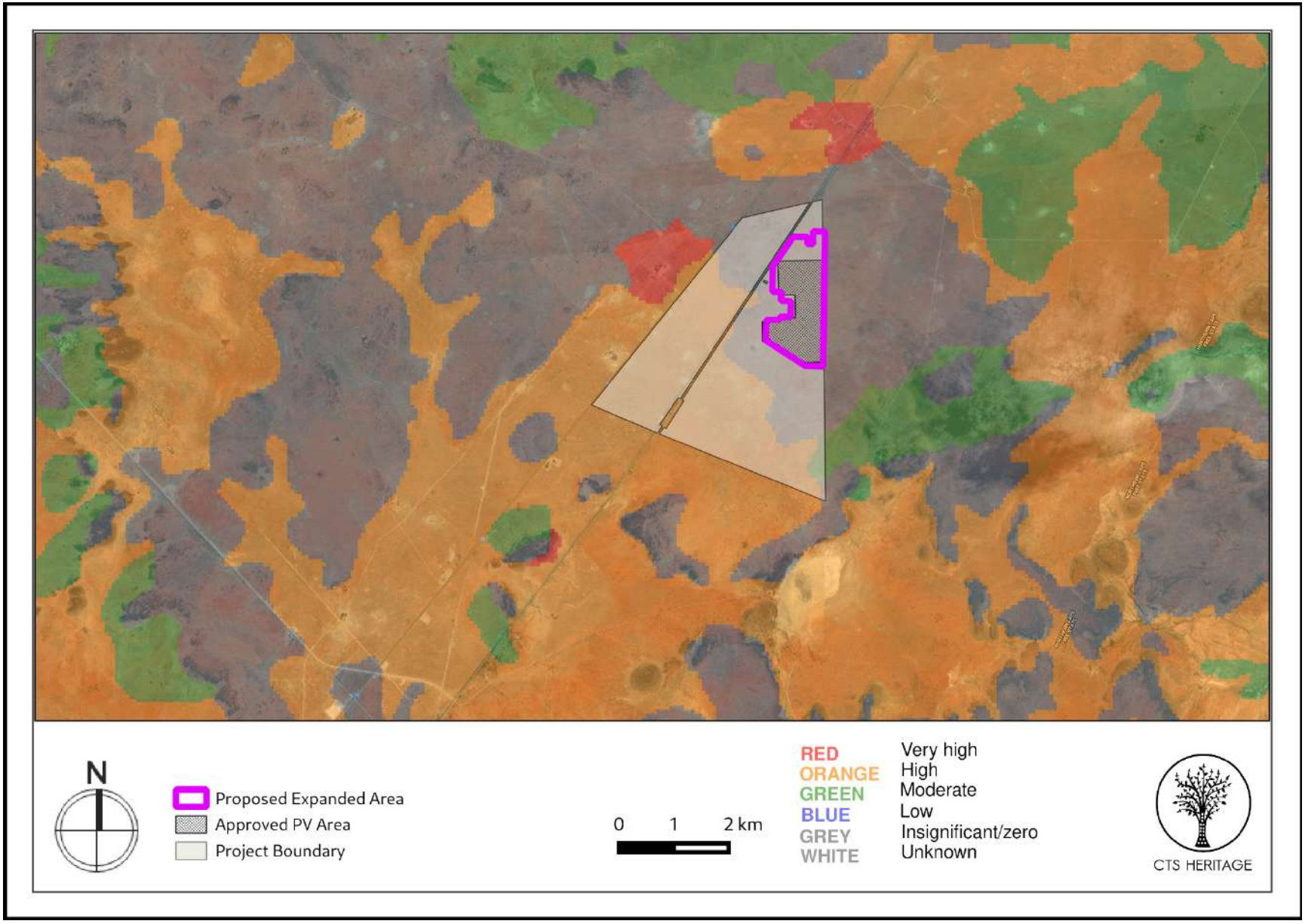

Figure 4a. Palaeosensitivity Map. Indicating fossil sensitivity underlying the study area. Please See Appendix 3 for a full guide to the legend.

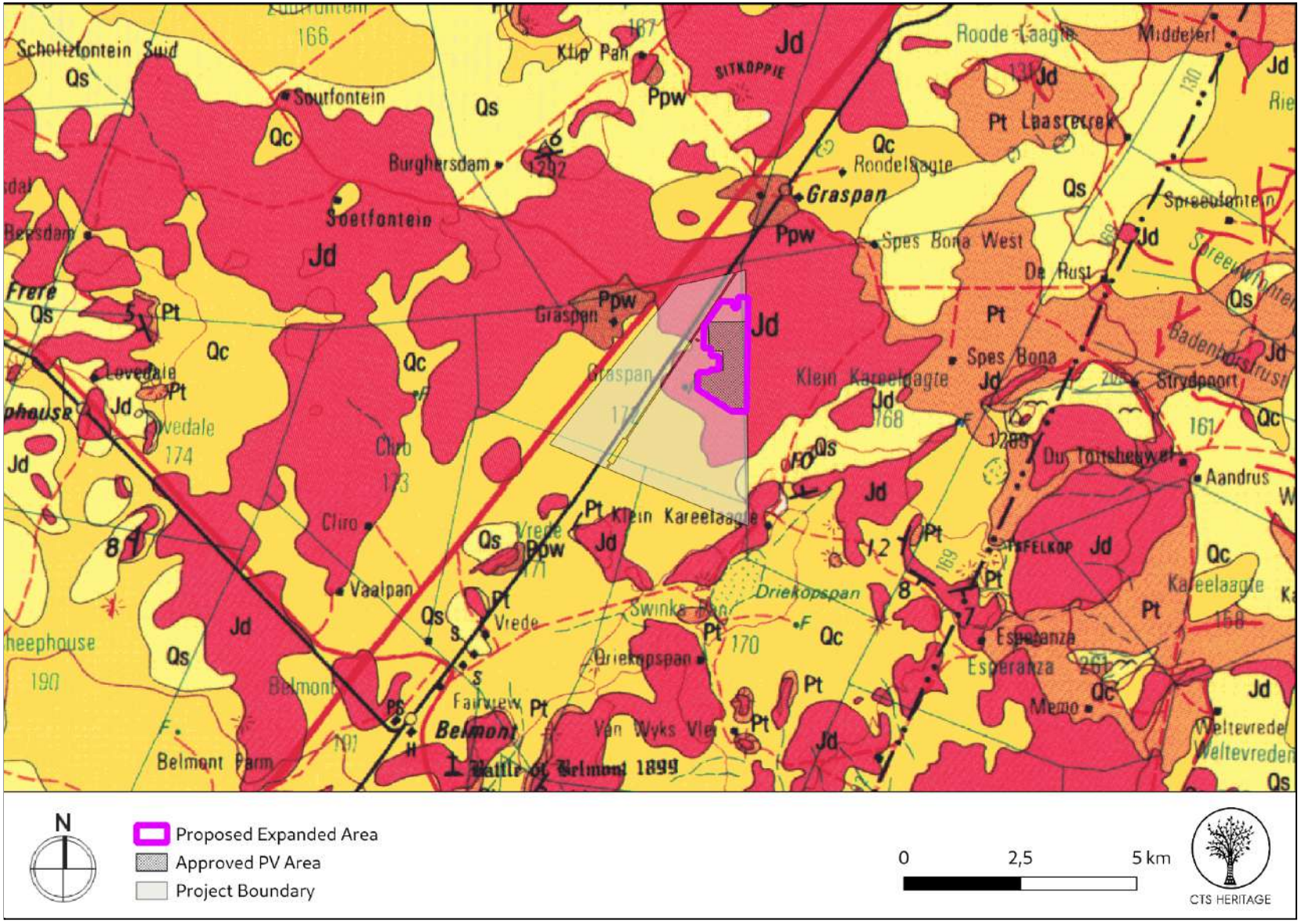

Figure 4b. Geology Map.Extract from the CGS 2924 Koffiefontein Map indicating that the development area for the Graspan PV is underlain by Quaternary Sands (Qc) and Jurassic Dolerite (Jd)

8. Heritage Assessment

Background

On 30 April 2013, Environmental Authorisation (EA) was granted for the for the proposed construction of a commercial photovoltaic (PV) solar energy facility (known as the Graspan PV Facility) as well as all associated infrastructure on Portion on the Farm Graspan (no. 172), situated between the N12 highway (west) and the border of the Northern Cape and Free State (east) between Heuningskloof to the north and Witput to the south.

The EIA considered includes an area of 150ha for the PV arrays. The applicant is proposing to expand this area by aqpproximately 50ha within which project infrastructure will be placed. The area proposed for the Graspan PV Facility was thoroughly assessed for impacts to heritage resources in a Heritage Impact Assessment conducted by ACO Associates (2012, SAHRIS NID 92728) and a Palaeontological Impact Assessment by Botha-Brink (2012, SAHRIS NID 8924). These reports are referred to below in order to determine the likely heritage sensitivity of the area proposed for the expansion.

Archaeology and Built Environment Heritage

A broad summary of the archaeology of the area is included in the ACO Report (2012) 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 indigeous Khoe and San, as well as modern inhabitants of the area. In their field assessment, the ACO identified stone artefact scatters, dolerite boulders with grinding surfaces, a single incidence of historical graffiti on a dolerite boulder, a circular stone structure near the railway line, some calcrete cairns and a distribution of late 19th/early 20th century historical dump material along the railway line. These sites are all mapped relative to the proposed expansion in Figure 3 and 3a.

According to the ACO report (2012), this area is of historical importance because of the Battle of Graspan (also known as Enslin or Rooilaagte) which took place over a large area, commencing some 2.5km to the north of the proposed facility. The battle was an important engagement of the Second Anglo-South African War of 1899-1902. The Battle of Graspan dates to the 25 November 1899. British troops advanced across the open countryside and stormed the Boer's hilltop positions. After taking the koppies, they gave chase to the Boers as they rode away across the veld. Most of the military action therefore seems to have taken place between Graspan station and the surrounding hills. The British casualties amounted to some 197 men, while the Boers are thought to have lost around 20 men. The dead were buried in graves near to the battlefield, but according to Morris were exhumed in 1963 and re-interred in the Garden of Remembrance, West End Cemetery, Kimberley. Since the exhumation was undertaken by an undertaker, it is possible not all human remains were recovered and that some might still be located at the original place of burial.

The Graspan PV facility development area has been thoroughly assessed by ACO Associates in their report dated May 2012. In this assessment, 4 sites of heritage significance were identified which need to be considered for the development of the expanded Graspan PV facility.

- ***GRAS001 (Grade IIIB)*** SAHRIS ID 86031
  Two concentric stone circles, inner with diameter of 4m, outer with diameter of 1m. Made of substantial stone boulders. Next to the railway line. Late 19th century history tin and glass debris nearby, also a flat dolerite boulder with scratch marks. According to the ACO report (2012), "The circular stone structure may be the remnants of a fortification dating to the South African War, built expressly to protect the railway line. However, it is unlikely that it dates to the battles of Belmont and Graspan, as the military moved through this area fairly rapidly. Nevertheless, the dense distribution of historic dump material alongside the railway line is of interest. The material may have been dumped over a long period of time, from the construction of the line in 1885, and does not necessarily relate to the Battles of Belmont and Graspan of 1899."

- ***GRAS049 (Grade IIIC)*** SAHRIS ID 86109
  Clear bottle glass fragments, a broken wine bottle and several bits of barbed wire in the area.

- ***GRAS050 (Grade IIIC)*** SAHRIS ID 86110
  Grindstone/rubbed stone.

- ***GRAS052 (Grade IIIC)*** SAHRIS ID 86112
  2 tin cans, wire, 1 ceramic (railways), several wire fragments, cans and barbed wire spindle: ISCOR, Barbed wire 100lbs, IOWA pattern 535 yds min.

In order to mitigate any impact to the historical material identified in proximity to the railway line and the circular stone structure, the ACO recommended that no development takes place within 100m of the railway line to ensure the stone structure and historical material relating to the railway line (and possibly the South African War), are not destroyed. Based on the information provided regarding the proposed expanded PV area, the boundaries of the expanded area are located within 65m of the railway line. It is therefore recommended that the boundary of the expanded area be moved to respect the recommended 100m buffer around the railway line (Figure 3b).

Palaeontology

According to the SAHRIS Palaeosensitivity Map, the area proposed for the PV Facility is underlain by sediments of high and zero palaeontological sensitivity (Figure 4a). According to the extract from the CGS 2924 Koffiefontein Map, the development area is underlain by Quaternary Sand sediments and Jurassic Dolerite (Figure 4b). Botha-Brink (2012) completed a palaeontological field assessment of the development area.

In the report, it is noted that in the area proposed for development part of the Ecca Group "is overlain by Late Cenozoic superficial deposits, which are approximately 2.6 million years old (Quaternary) to Recent (Walker and Geissman, 5 2009). Those on Graspan contain Quaternary Calcrete. Although the flatter areas containing these deposits generally contain few fossils, numerous quaternary fossils have been found in river gulleys. These fossils are known as the Florisian Mammal Fauna. Most species of this time have modern counterparts, but there are some extinct animals such as the giant long-horned buffalo Pelorovis and the giant hartebeest, Megalotragus. The Florisian Mammal fauna includes mostly mammals such as lagomorphs, rodents, carnivores, perissodactyls, numerous artiodactyls and bovids. Amphibians, reptiles and birds are rarely found in Florisian deposits (Brink, 1987)." The PIA report also notes that "The Ecca Group sediments on Graspan are intruded by non-fossiliferous Early Jurassic Karoo dolerite and cover a large portion of the development area. The Karoo Dolerite Suite comprises a network of igneous intrusions (dykes, sills) that intruded into older sediments of the Beaufort Group in the main Karoo Basin. These intrusions represent major eruptions of volcanic lava, which were triggered by the separation of Gondwana (an amalgamation of today's southern continents) approximately 183 million years ago."

Based on the information provided, the proposed expanded PV area is located in such a way that it will only impact areas that contain non-fossiliferous Jurassic dolerite (Figure 4a and 4b). However, it must be noted that Quaternary deposits and rocks of the Tierberg Formation, Ecca Group may also be impacted. According to Botha-Brink (2012), "Quaternary fossils are usually found in gulleys (dry river beds) and the low-lying relief and absence of potentially fossiliferous gulleys suggests that fossils of this geological age are absent here. Fossils from the Ecca Group are exceedingly rare, and only a small portion of the development will encroach into rocks of this age. Thus, considering the rarity of fossil-bearing sediments and lack of appropriate exposure (i.e. steep-sided gulleys) at the proposed site, the impact on palaeontological material is negligible (rated Low or negative)."

Botha-Brink (2012) recommends that "The ECO responsible for the development must remain aware that all sedimentary deposits have the potential to contain fossils and he/she should thus monitor all substantial excavations into sedimentary bedrock for fossil remains; In the case of any significant fossils (e.g. vertebrate teeth, bones, burrows, petrified wood) being found during construction, they must be safeguarded and the relevant heritage management authority (SAHRA) be informed so that a professional palaeontologist should be consulted in order to facilitate the necessary rescue operations."

RECOMMENDATION

There is no objection to the proposed expansion for the Graspan PV Facilities on heritage grounds on condition that the recommendations outlined in the HIA, and repeated below, are followed, and as such, no further assessment of impacts to heritage resources is recommended.

It is unlikely that the proposed expansion will impact significant heritage resources on condition that:

- **The Environmental Officer (EO) responsible for the development must remain aware that all sedimentary deposits have the potential to contain fossils and he/she should thus monitor all substantial excavations into sedimentary bedrock for fossil remains. If any fossils are found during construction, SAHRA should be notified immediately;**
- **No construction should be allowed on the koppie to the north and south of the proposed facility. This includes access roads, underground cabling or power lines;**
- **No development takes place within 100m of the railway line to ensure the stone structure and historical material relating to the railway line and possibly the South African War, are not destroyed;**
- **If concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately and be reported to SAHRA so that systematic and professional investigation/ excavation can be undertaken.**

Table 2: Impact Assessment Table

NATURE: Significant archaeological, built environment and palaeontological heritage resources may be impacted by the construction phase of the proposed expansion								
		Archaeology, Built Environment and Cultural Landscape without Mitigation		**Archaeology, Built Environment and Cultural Landscape with Mitigation**		**Palaeontology without Mitigation**		**Palaeontology with Mitigation**
MAGNITUDE	**H (8)**	Based on the layout provided, it is likely that significant archaeological heritage associated with site GRAS001 and the railway line will be impacted by the expansion	**L (1)**	Based on the amended mitigated layout, it is unlikely that significant archaeological heritage associated with site GRAS001 and the railway line will be impacted by the expansion	**H (8)**	The sediments underlying the proposed development have high palaeontological sensitivity.	**H (10)**	The sediments underlying the proposed development have high palaeontological sensitivity.
DURATION	**H (5)**	Where manifest, the impact will be permanent.	**H (5)**	Where manifest, the impact will be permanent.	**H (5)**	Where manifest, the impact will be permanent.	**H (5)**	Where manifest, the impact will be permanent.
EXTENT	**L (1)**	Localised within the site boundary	**L (1)**	Localised within the site boundary	**L (1)**	Localised within the site boundary.	**L (1)**	Localised within the site boundary.
PROBABILITY	**H (4)**	Highly probable	**L (1)**	Probability is low	**P (2)**	It is possible that fossils would be impacted	**I (1)**	It is improbable that fossils would be impacted
SIGNIFICANCE	**M**	(8+5+1)x4=56 (Medium)	**L**	(1+5+1)x1=7 (Low)	**M**	(8+5+1)x2=28 (Low)	**L**	(10+5+1)x1=16 (Low)
STATUS		Negative		Neutral		Negative		Neutral
REVERSIBILITY	**L**	Any impacts to heritage resources that do occur are irreversible	**L**	Any impacts to heritage resources that do occur are irreversible	**L**	Any impacts to heritage resources that do occur are irreversible	**L**	Any impacts to heritage resources that do occur are irreversible
IRREPLACEABLE LOSS OF RESOURCES?	**L**	Possible	**L**	Possible	**L**	Possible	**L**	Possible
CAN IMPACTS BE MITIGATED		Yes				Yes		

MITIGATION:

- The Environmental Officer (EO) responsible for the development must remain aware that all sedimentary deposits have the potential to contain fossils and he/she should thus monitor all substantial excavations into sedimentary bedrock for fossil remains. If any fossils are found during construction, SAHRA should be notified immediately;
- No construction should be allowed on the koppie to the north and south of the proposed facility. This includes access roads, underground cabling or power lines;
- No development takes place within 100m of the railway line to ensure the stone structure and historical material relating to the railway line and possibly the South African War, are not destroyed;

RESIDUAL RISK:

- If concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately and be reported to SAHRA so that systematic and professional investigation/ excavation can be undertaken.

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APPENDIX 1

Summary of Specialist Expertise

Jenna Lavin, an archaeologist with an MSc in Archaeology and Palaeoenvironments, and currently completing an MPhil in Conservation Management , heads up the heritage division of the organisation, and has a wealth of experience in the heritage management sector. Jenna's previous position as the Assistant Director for Policy, Research and Planning at Heritage Western Cape has provided her with an in-depth understanding of national and international heritage legislation. Her 8 years of experience at various heritage authorities in South Africa means that she has dealt extensively with permitting, policy formulation, compliance and heritage management at national and provincial level and has also been heavily involved in rolling out training on SAHRIS to the Provincial Heritage Resources Authorities and local authorities.

Jenna is on the Executive Committee of the Association of Professional Heritage Practitioners (APHP), and is also an active member of the International Committee on Monuments and Sites (ICOMOS) as well as the International Committee on Archaeological Heritage Management (ICAHM). In addition, Jenna has been a member of the Association of Southern African Professional Archaeologists (ASAPA) since 2009. Recently, Jenna has been responsible for conducting training in how to write Wikipedia articles for the Africa Centre's WikiAfrica project.

Since 2016, Jenna has drafted over 50 Heritage Impact Assessments throughout South Africa.

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APPENDIX 2

Reference List with relevant AIAs and PIAs

Heritage Impact Assessments				
Nid	**Report Type**	**Author/s**	**Date**	**Title**
8924	PIA Phase 1	Jennifer Botha-Brink	05/03/2012	PIA of the proposed Graspan Solar Farm, Pixley Ka Seme District Municipality, Northern Cape Province
92728	HIA Phase 1	Lita Webley, Jayson Orton, Jennifer Botha-Brink	01/05/2012	HERITAGE IMPACT ASSESSMENT: PROPOSED CONSTRUCTION OF THE 90 MW GRASPAN PHOTOVOLTAIC POWER FACILITY, PIXLEY KA SEME DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE

Known heritage resources located within the project area

Site id	Site No	Full Site Name	Site Type	Grading
86132	GRAS072	Graspan 072	Artefacts	Grade IIIb
86133	GRAS073	Graspan 073	Artefacts	Grade IIIb
86134	GRAS074	Graspan 074	Artefacts	Grade IIIb
86135	GRAS075	Graspan 075	Artefacts	Grade IIIb
86136	GRAS076	Graspan 076	Artefacts	Grade IIIb
86137	GRAS077	Graspan 077	Artefacts	Grade IIIb
86141	GRAS080	Graspan 080	Artefacts	Grade IIIb
86125	GRAS065	Graspan 065	Artefacts	Grade IIIb
86126	GRAS066	Graspan 066	Artefacts	Grade IIIb
86138	GRAS078	Graspan 078	Artefacts	Grade IIIb

86139	GRAS079	Graspan 079	Artefacts	Grade IIIb
86152	GRAS081	Graspan 081	Artefacts	Grade IIIb
86153	GRAS082	Graspan 082	Artefacts	Grade IIIc
86154	GRAS083	Graspan 083	Archaeological	Grade IIIc
86086	GRAS027	Graspan 027	Artefacts	Grade IIIc
86095	GRAS035	Graspan 035	Artefacts	Grade IIIc
86096	GRAS036	Graspan 036	Artefacts	Grade IIIc
86097	GRAS037	Graspan 037	Artefacts	Grade IIIc
86099	GRAS039	Graspan 039	Artefacts	Grade IIIc
86100	GRAS040	Graspan 040	Artefacts	Grade IIIc
86101	GRAS041	Graspan 041	Artefacts	Grade IIIc
86102	GRAS042	Graspan 042	Artefacts	Grade IIIc
86103	GRAS043	Graspan 043	Artefacts	Grade IIIc
86104	GRAS044	Graspan 044	Artefacts	Grade IIIc
86105	GRAS045	Graspan 045	Artefacts	Grade IIIc
86106	GRAS046	Graspan 046	Artefacts	Grade IIIc
86107	GRAS047	Graspan 047	Artefacts	Grade IIIc
86109	**GRAS049**	**Graspan 049**	**Artefacts**	**Grade IIIc**
86110	**GRAS050**	**Graspan 050**	**Artefacts**	**Grade IIIc**
86113	GRAS053	Graspan 053	Artefacts	Grade IIIc

86115	GRAS054	Graspan 054	Artefacts	Grade IIIc
86127	GRAS067	Graspan 067	Artefacts	Grade IIIb
86031	**GRAS001**	**Graspan 001**	**Structures**	**Grade IIIb**
86033	GRAS003	Graspan 003	Artefacts	Grade IIIc
86034	GRAS004	Graspan 004	Artefacts	Grade IIIc
86036	GRAS006	Graspan 006	Artefacts	Grade IIIc
86037	GRAS007	Graspan 007	Artefacts	Grade IIIc
86038	GRAS008	Graspan 008	Artefacts	Grade IIIc
86039	GRAS009	Graspan 009	Artefacts	Grade IIIc
86040	GRAS010	Graspan 010	Artefacts	Grade IIIc
86041	GRAS011	Graspan 011	Archaeological	Grade IIIc
86042	GRAS012	Graspan 012	Artefacts	Grade IIIc
86045	GRAS015	Graspan 015	Artefacts	Grade IIIc
86046	GRAS016	Graspan 016	Artefacts	Grade IIIc
86048	GRAS018	Graspan 018	Archaeological	Grade IIIc
86032	GRAS002	Graspan 002	Artefacts	Grade IIIc
86035	GRAS005	Graspan 005	Artefacts	Grade IIIc
86043	GRAS013	Graspan 013	Artefacts	Grade IIIc
86044	GRAS014	Graspan 014	Artefacts	Grade IIIc
86047	GRAS017	Graspan 017	Archaeological	Grade IIIc

86074	GRAS019	Graspan 019	Artefacts	Grade IIIc
86075	GRAS020	Graspan 020	Artefacts	Grade IIIc
86077	GRAS021	Graspan 021	Artefacts	Grade IIIc
86079	GRAS022	Graspan 022	Artefacts	Grade IIIc
86080	GRAS023	Graspan 023	Artefacts	Grade IIIc
86082	GRAS024	Graspan 024	Artefacts	Grade IIIc
86083	GRAS025	Graspan 025	Artefacts, Burial Grounds & Graves	Grade IIIa
86085	GRAS026	Graspan 026	Artefacts	Grade IIIc
86088	GRAS028	Graspan 028	Artefacts	Grade IIIc
86089	GRAS029	Graspan 029	Artefacts	Grade IIIc
86090	GRAS030	Graspan 030	Artefacts	Grade IIIc
86091	GRAS031	Graspan 031	Artefacts	Grade IIIc
86092	GRAS032	Graspan 032	Artefacts	Grade IIIc
86093	GRAS033	Graspan 033	Artefacts	Grade IIIc
86094	GRAS034	Graspan 034	Artefacts	Grade IIIc
86098	GRAS038	Graspan 038	Artefacts	Grade IIIc
86108	GRAS048	Graspan 048	Artefacts	Grade IIIc
86111	GRAS051	Graspan 051	Artefacts	Grade IIIc
86112	**GRAS052**	**Graspan 052**	**Artefacts**	**Grade IIIc**

86114	GRAS055	Graspan 055	Artefacts	Grade IIIb
86116	GRAS056	Graspan 056	Artefacts	Grade IIIb
86117	GRAS057	Graspan 057	Artefacts	Grade IIIc
86118	GRAS058	Graspan 058	Artefacts	Grade IIIb
86119	GRAS059	Graspan 059	Artefacts	Grade IIIb
86120	GRAS060	Graspan 060	Artefacts	Grade IIIb
86121	GRAS061	Graspan 061	Artefacts	Grade IIIb
86122	GRAS062	Graspan 062	Artefacts	Grade IIIb
86123	GRAS063	Graspan 063	Artefacts	Grade IIIc
86124	GRAS064	Graspan 064	Artefacts	Grade IIIb
87309	GRASP024	Graspan_PV 024	Artefacts	Grade IIIc
86128	GRAS068	Graspan 068	Artefacts	Grade IIIb
86129	GRAS069	Graspan 069	Artefacts	Grade IIIb
86130	GRAS070	Graspan 070	Artefacts	Grade IIIb
86131	GRAS071	Graspan 071	Artefacts	Grade IIIb

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APPENDIX 3 - Keys/Guides

Key/Guide to Acronyms

AIA	Archaeological Impact Assessment
DARD	Department of Agriculture and Rural Development (KwaZulu-Natal)
DEFF	Department of Environmental, Forestry and Fisheries (National)
DEADP	Department of Environmental Affairs and Development Planning (Western Cape)
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism (Eastern Cape)
DEDECT	Department of Economic Development, Environment, Conservation and Tourism (North West)
DEDT	Department of Economic Development and Tourism (Mpumalanga)
DEDTEA	Department of economic Development, Tourism and Environmental Affairs (Free State)
DENC	Department of Environment and Nature Conservation (Northern Cape)
DMR	Department of Mineral Resources (National)
GDARD	Gauteng Department of Agriculture and Rural Development (Gauteng)
HIA	Heritage Impact Assessment
LEDET	Department of Economic Development, Environment and Tourism (Limpopo)
MPRDA	Mineral and Petroleum Resources Development Act, no 28 of 2002
NEMA	National Environmental Management Act, no 107 of 1998
NHRA	National Heritage Resources Act, no 25 of 1999
PIA	Palaeontological Impact Assessment
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
VIA	Visual Impact Assessment

Full guide to Palaeosensitivity Map legend

	RED:	VERY HIGH - field assessment and protocol for finds is required
	ORANGE/YELLOW:	HIGH - desktop study is required and based on the outcome of the desktop study, a field assessment is likely
	GREEN:	MODERATE - desktop study is required
	BLUE/PURPLE:	LOW - no palaeontological studies are required however a protocol for chance finds is required
	GREY:	INSIGNIFICANT/ZERO - no palaeontological studies are required
	WHITE/CLEAR:	UNKNOWN - these areas will require a minimum of a desktop study.

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APPENDIX 4 - Methodology

The Heritage Screener summarises the heritage impact assessments and studies previously undertaken within the area of the proposed development and its surroundings. Heritage resources identified in these reports are assessed by our team during the screening process.

The heritage resources will be described both in terms of **type**:

- Group 1: Archaeological, Underwater, Palaeontological and Geological sites, Meteorites, and Battlefields
- Group 2: Structures, Monuments and Memorials
- Group 3: Burial Grounds and Graves, Living Heritage, Sacred and Natural sites
- Group 4: Cultural Landscapes, Conservation Areas and Scenic routes

and **significance** (Grade I, II, IIIa, b or c, ungraded), as determined by the author of the original heritage impact assessment report or by formal grading and/or protection by the heritage authorities.

Sites identified and mapped during research projects will also be considered.

DETERMINATION OF THE EXTENT OF THE INCLUSION ZONE TO BE TAKEN INTO CONSIDERATION

The extent of the inclusion zone to be considered for the Heritage Screener will be determined by CTS based on:

- the size of the development,
- the number and outcome of previous surveys existing in the area
- the potential cumulative impact of the application.

The inclusion zone will be considered as the region within a maximum distance of 50 km from the boundary of the proposed development.

DETERMINATION OF THE PALAEONTOLOGICAL SENSITIVITY

The possible impact of the proposed development on palaeontological resources is gauged by:

- reviewing the fossil sensitivity maps available on the South African Heritage Resources Information System (SAHRIS)
- considering the nature of the proposed development
- when available, taking information provided by the applicant related to the geological background of the area into account

DETERMINATION OF THE COVERAGE RATING ASCRIBED TO A REPORT POLYGON

Each report assessed for the compilation of the Heritage Screener is colour-coded according to the level of coverage accomplished. The extent of the surveyed coverage is labeled in three categories, namely low, medium and high. In most instances the extent of the map corresponds to the extent of the development for which the specific report was undertaken.

Low coverage will be used for:

- desktop studies where no field assessment of the area was undertaken;
- reports where the sites are listed and described but no GPS coordinates were provided.
- older reports with GPS coordinates with low accuracy ratings;
- reports where the entire property was mapped, but only a small/limited area was surveyed.
- uploads on the National Inventory which are not properly mapped.

Medium coverage will be used for

- reports for which a field survey was undertaken but the area was not extensively covered. This may apply to instances where some impediments did not allow for full coverage such as thick vegetation, etc.
- reports for which the entire property was mapped, but only a specific area was surveyed thoroughly. This is differentiated from low ratings listed above when these surveys cover up to around 50% of the property.

High coverage will be used for

- reports where the area highlighted in the map was extensively surveyed as shown by the GPS track coordinates. This category will also apply to permit reports.

RECOMMENDATION GUIDE

The Heritage Screener includes a set of recommendations to the applicant based on whether an impact on heritage resources is anticipated. One of three possible recommendations is formulated:

(1) The heritage resources in the area proposed for development are sufficiently recorded - The surveys undertaken in the area adequately captured the heritage resources. There are no known sites which require mitigation or management plans. No further heritage work is recommended for the proposed development.

This recommendation is made when:

- enough work has been undertaken in the area
- it is the professional opinion of CTS that the area has already been assessed adequately from a heritage perspective for the type of development proposed

(2) The heritage resources and the area proposed for development are only partially recorded - The surveys undertaken in the area have not adequately captured the heritage resources and/or there are sites which require mitigation or management plans. Further specific heritage work is recommended for the proposed development.

This recommendation is made in instances in which there are already some studies undertaken in the area and/or in the adjacent area for the proposed development. Further studies in a limited HIA may include:

- improvement on some components of the heritage assessments already undertaken, for instance with a renewed field survey and/or with a specific specialist for the type of heritage resources expected in the area
- compilation of a report for a component of a heritage impact assessment not already undertaken in the area

- undertaking mitigation measures requested in previous assessments/records of decision.

(3) The heritage resources within the area proposed for the development have not been adequately surveyed yet - Few or no surveys have been undertaken in the area proposed for development. A full Heritage Impact Assessment with a detailed field component is recommended for the proposed development.

Note:
The responsibility for generating a response detailing the requirements for the development lies with the heritage authority. However, since the methodology utilised for the compilation of the Heritage Screeners is thorough and consistent, contradictory outcomes to the recommendations made by CTS should rarely occur. Should a discrepancy arise, CTS will immediately take up the matter with the heritage authority to clarify the dispute.