HERITAGE IMPACT ASSESSMENT

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

Proposed development of SCSC solar PV and battery storage facility near Northam in the Limpopo and North West Provinces

SAHRIS Ref:

Prepared by CTS Heritage

CTS HERITAGE

For

Savannah Environmental (Pty) Ltd

June 2021

CTS HERITAGE

EXECUTIVE SUMMARY

1. Site Name:

Bagatla Mine SCSC solar PV

2. Location:

Approximately 10km northwest of Northam.

3. Locality Plan:

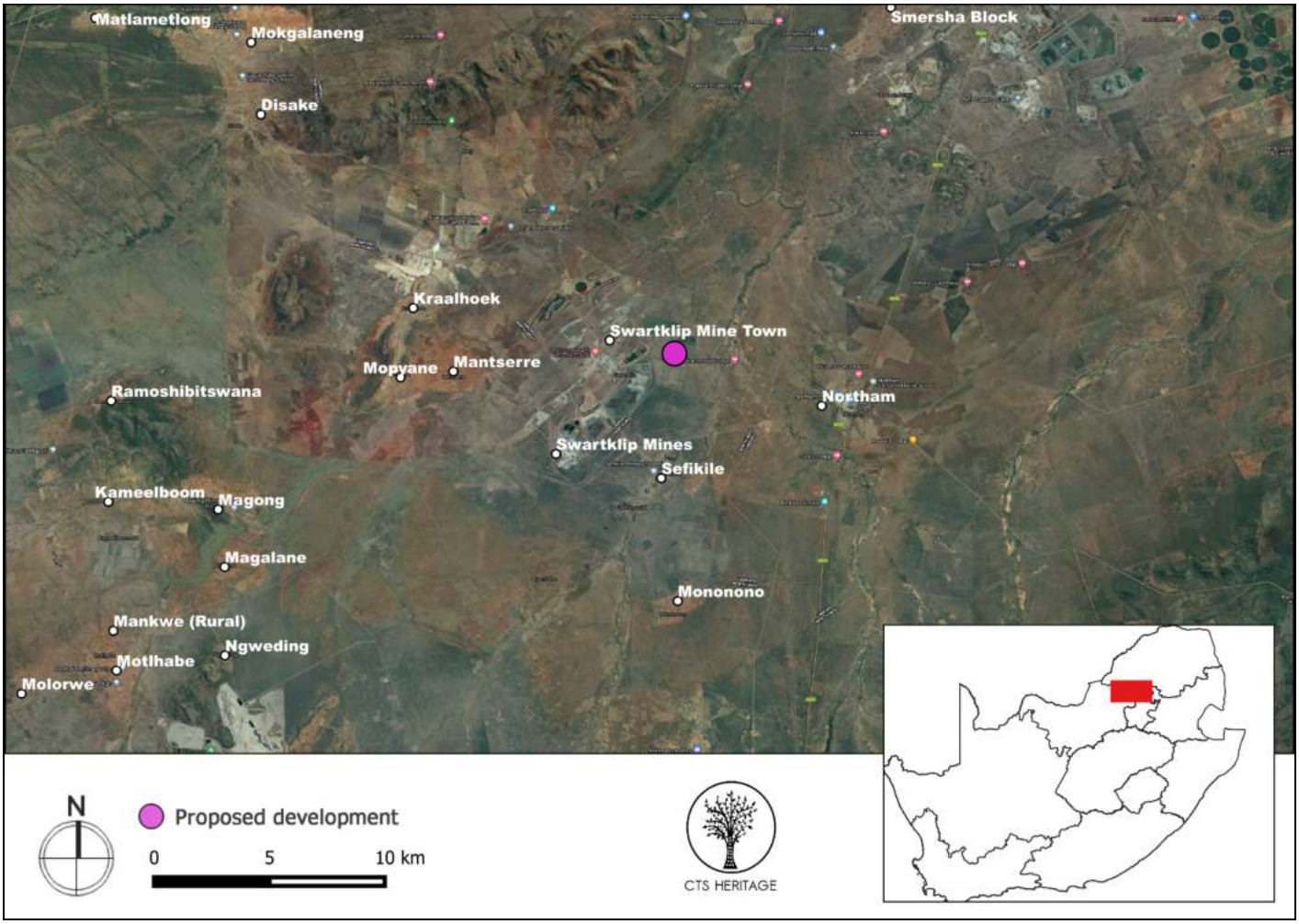

Figure 1: Location of the proposed study area

4. Description of Proposed Development:

Main Street 1886 Proprietary Limited proposes the development of the Solar PV facility and associated infrastructure on a site bordering the eastern end of the Siyanda Bakgatla Platinum Mine area near Northam. The solar PV facility will comprise several arrays of PV panels, a Battery Energy Storage System (BESS), and

associated infrastructure with a contracted capacity of up to 100MW.

5. Heritage Resources Identified in the broader study area:

POINT ID	Site Name	Description	Co-ordinates		Grading	Mitigation
WP001	Observation001	Isolated surface artefact. Low-fired ceramic undecorated sherd. This artefact was found in alluvial deposit with no archaeological context	24°56'12.18"S	27°12'46.12"E	NCW	NA

6. Anticipated Impacts on Heritage Resources:

Overall, the archaeological field assessment has determined that the overall archaeological sensitivity of the development area is low with few ex situ surface scatters identified. These resources are not conservation-worthy and have been sufficiently recorded in this report.

The farmers and landowners were consulted, but they were not aware of any significant *in-situ* archaeological sites or graves on the property. While the field assessment was as thorough as possible, there remains the possibility that archaeological resources that were not recorded are present but are obscured by top soil or vegetation. Recommendations in this regard are included below.

No impacts to palaeontological heritage resources are considered likely due to the Pyramid Gabbro-Norite which has zero palaeontological sensitivity underlying the development area.

7. Recommendations:

There is no objection to the proposed development of the SCSC PV facility and its associated grid infrastructure on condition that:

- Should any previously unrecorded archaeological or palaeontological resources or possible burials be identified during the course of construction activities, work must cease in the immediate vicinity of the find, and SAHRA must be contacted regarding an appropriate way forward.

8. Author/s and Date:

Jenna Lavin

June 2022

Details of Specialist who prepared the HIA

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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CONTENTS

1. INTRODUCTION

1.1 Background Information on Project

Main Street 1886 Proprietary Limited proposes the development of the Solar PV facility and associated infrastructure on a site bordering the eastern end of the Siyanda Bakgatla Platinum Mine area near Northam. The solar PV facility will comprise several arrays of PV panels, a Battery Energy Storage System (BESS), and associated infrastructure with a contracted capacity of up to 100MW.

The purpose of the proposed project is to generate electricity for exclusive use by the Siyanda Mine, following which any excess power produced will be distributed to the national grid, if applicable. The construction of the PV facility aims to reduce the Siyanda Mine's dependency on direct supply from Eskom's national grid for operation activities, while simultaneously decreasing the mine's carbon footprint.

A preferred project site with an extent of ~1138ha and a development area of 574 ha has been identified by Main Street 1886 Proprietary Limited as a technically suitable area for the development of the Solar PV Facility. The study area is located on Portion 4 of Farm Grootkuil 409. The project site falls within the Thabazimbi Local Municipality within the Waterberg District Municipality in the Limpopo Province. The site is located ~6.5km west of the town of Northam and is accessible via the Swartklip Road which branches off the R510 provincial route.

Infrastructure associated with the solar PV facility will include:

- 100MW Solar PV array comprising PV modules and mounting structures.
- Inverters and transformers.
- Cabling between the project components.
- Battery Energy Storage System (BESS).
- On-site facility substation and power lines between the solar PV facility and the Mine and Eskom substation.
- Site offices, Security office, operations and control, and maintenance and storage laydown areas.
- Access roads, internal distribution roads

<u>Grid connection solution.</u>

To evacuate the generated power to the Siyanda Mine, the grid connection solution consisting of the following is proposed:

- The power generated by the solar PV facility will be transferred to the three step up transformers at the on-site/plant substation. Power will then be delivered from each step-up transformer as follows:
    - two 6.6 km, 33 kV transmission lines to the Mortimer substation with four step down transformers (33/6.6 kV; 10 MVA),

- two 4.7 km, 33 kV transmission lines to the Fridge substation with two step down transformers (33/6.6 kV; 10 MVA),
- two 2.9 km, 33 kV transmission lines to the Ivan substation with three step down transformers (33/11 kV; 10 MVA)

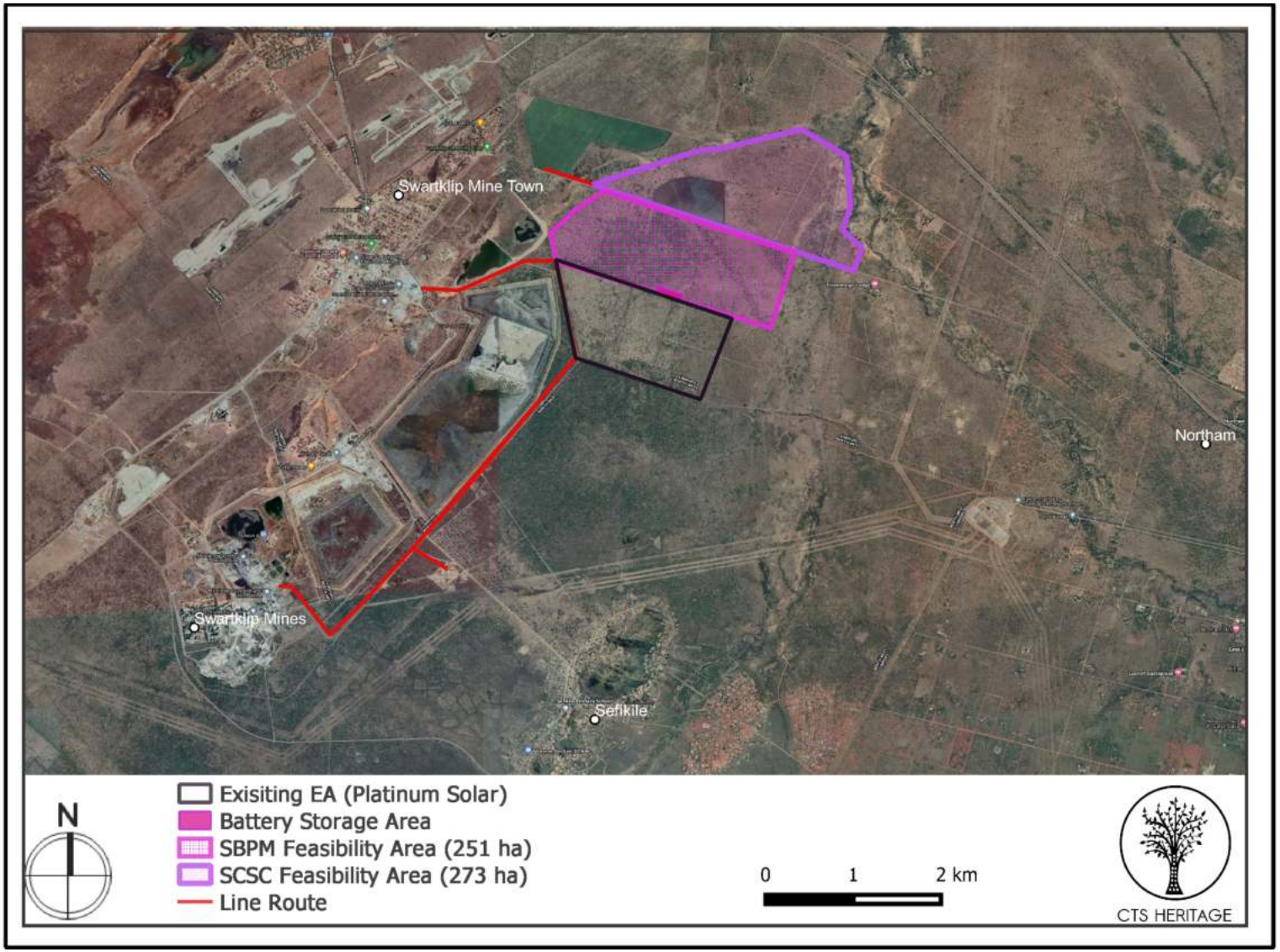
The grid connection is proposed on the following properties:

- Portion 3 of Farm Grootkuil 409
- Portion 4 of Farm Grootkuil 409
- Portion 5 of Farm Grootkuil 409
- Portion 0 of Farm Spitskop 410
- Portion 0 of Farm Turfbult 404
- Portion 1 of Farm Zwartklip 405
- Portion 2 of Farm Zwartklip 405

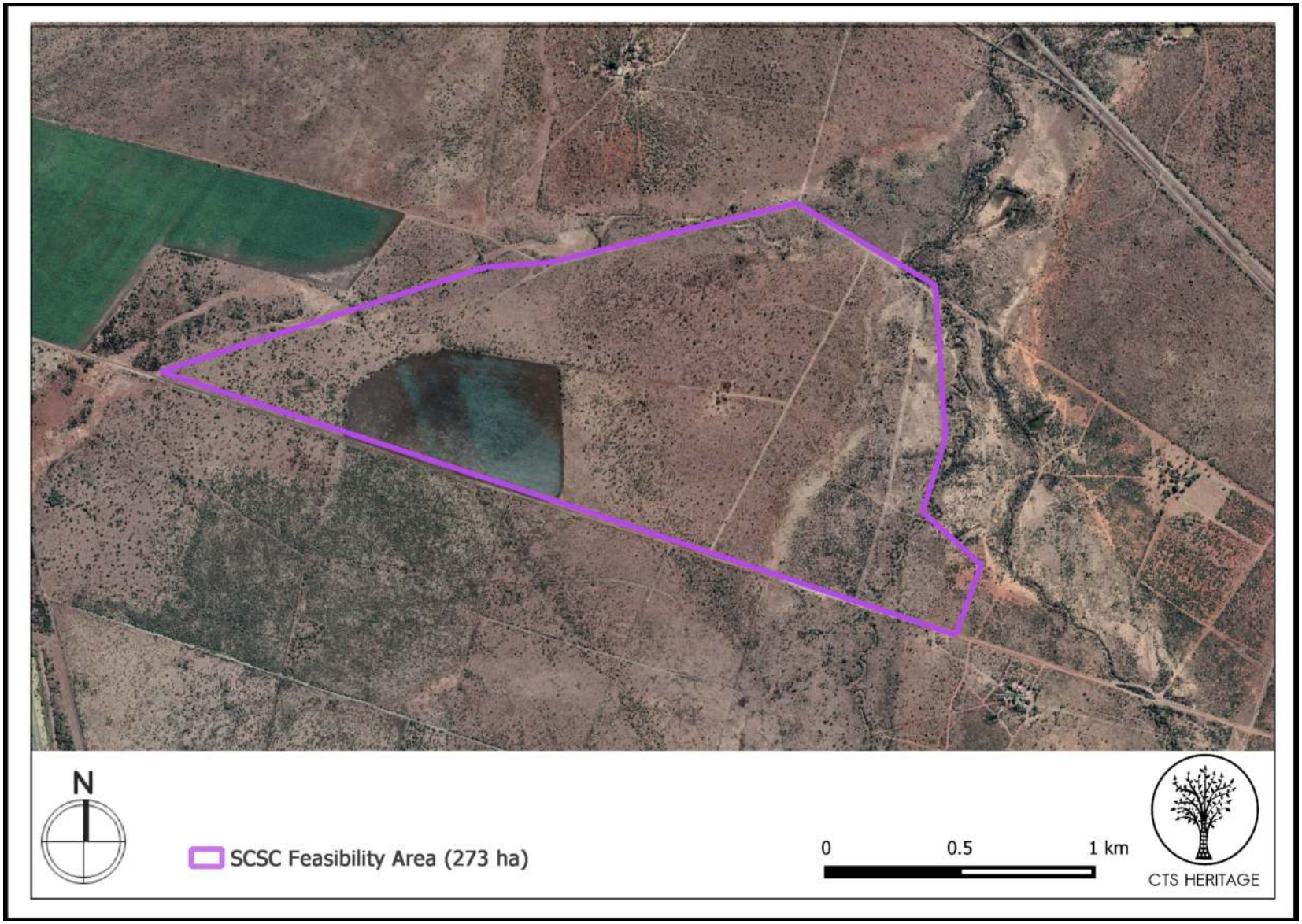
1.2 Description of Property and Affected Environment

The area proposed for development is dominated by Dwaalboom Thornveld. The area is very densely vegetated with thorny trees and shrubs with a few broad-leaved tree species and dominated by an almost continuous layer of various grass species. The study area's terrain is relatively flat, sloping down towards the east. A few small rocky outcrops, predominantly of loamy clay soil (turf), with red soils are located in the northeast, east and southeast of the development footprint. The Bier Spruit lies on the eastern boundary of the development footprint and runs through the southeastern part of the footprint. A tributary to the Bier Spruit traverses the northernmost section of the footprint, causing natural marshes and water catchment areas.

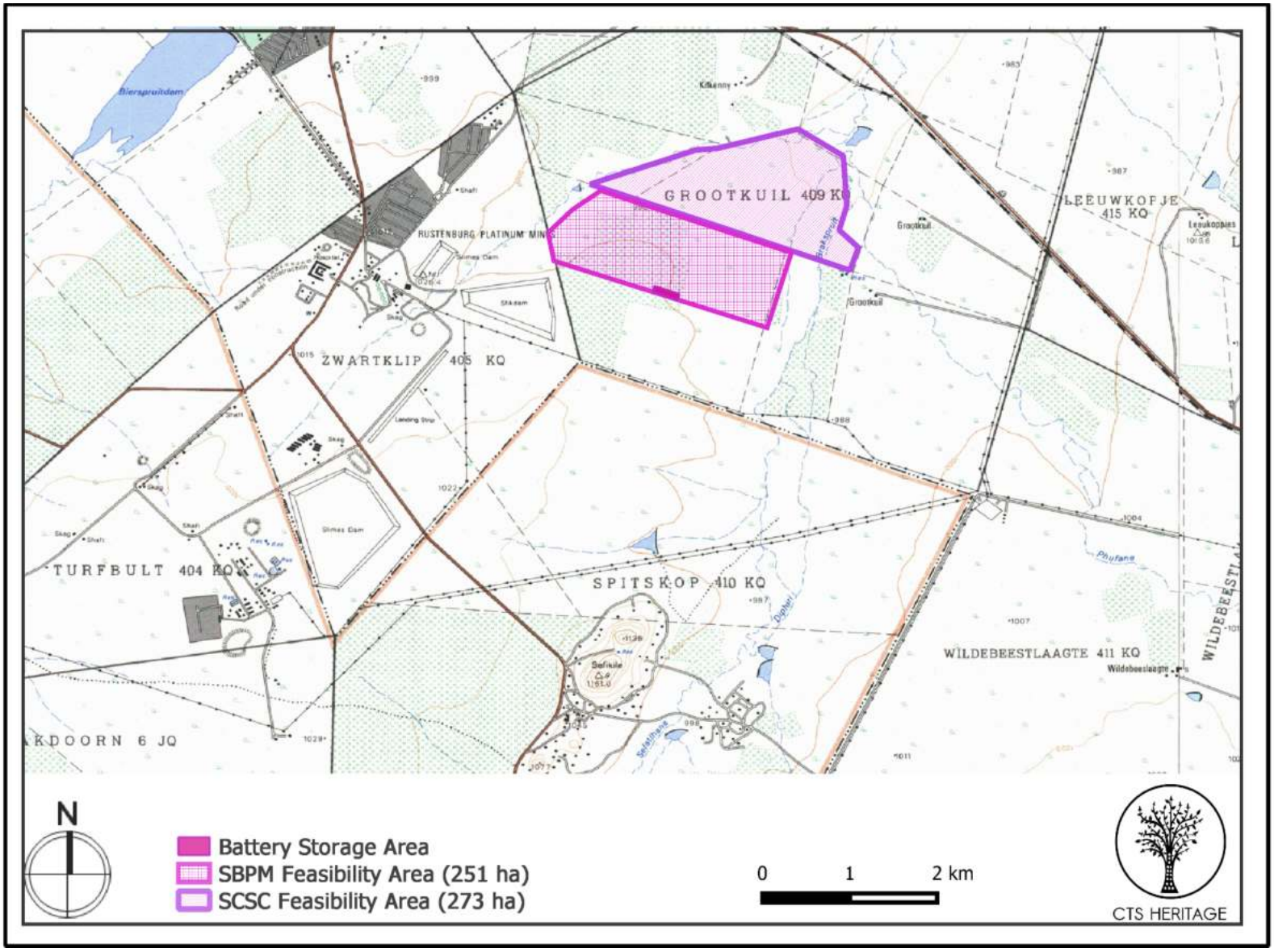
The development area has been recently impacted by flooding and animal grazing. The area is utilised as grazing for herds of cows and wild game such as blue-wildebeest, giraffes, zebras, kudus, and impala. A previously cultivated field, currently filled with grass and weeds, is located in the southeast of the development footprint. An aerial photograph dating to 1987 shows this area has been cultivated since then at least (http://cdngiportal.co.za/photocentres/30K_PAN/498_234_Thabazimbi/498_234_009_01149.jpg).



Map 1a: The proposed study area within which the 100MW PV facility will be located



Map 1b: The proposed study area within which the 100MW PV facility will be located



Map 1c: The proposed study area within which the 100MW PV facility will be located

2. METHODOLOGY

2.1 Purpose of HIA

The purpose of this Heritage Impact Assessment (HIA) is to satisfy the requirements of section 38(8), and therefore section 38(3) of the National Heritage Resources Act (Act 25 of 1999). The broader study area was assessed for heritage resources in order to inform the preferred location for the proposed 10MW PV facility.

2.2 Summary of steps followed

- A Desktop Study was conducted of relevant reports previously written (please see the reference list for the age and nature of the reports used)
- An archaeologist conducted an assessment of the broader study area in order to determine the archaeological resources likely to be disturbed by the proposed development. The archaeologist conducted her site visit on 24 May 2022.
- The identified resources were assessed to evaluate their heritage significance
- Alternatives and mitigation options were discussed with the Environmental Assessment Practitioner

2.3 Assumptions and uncertainties

- The *significance* of the sites and artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

- It should be noted that archaeological and palaeontological deposits often occur below ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted, and it would be required that the heritage consultants are notified for an investigation and evaluation of the find(s) to take place.

However, despite this, sufficient time and expertise was allocated to provide an accurate assessment of the heritage sensitivity of the area.

2.4 Constraints & Limitations

The area has previously been cultivated and disturbed by human and animal activity. As a result, large terrain areas have very soft and disturbed dislodged surface soils. Currently, however, the vegetation is very dense, and in large areas of the terrain, the ground surface is completely obscured.

Due to the dense vegetation, the area was surveyed as best as possible in the time provided and as the vegetation growth allowed. The survey tracks followed the farm roads, from which pedestrian surveys were conducted at various points. In addition, animal tracks were followed as these paths offered the clearest views of the ground surface and allowed for the inspection of areas with noticeable vegetation changes.

Due to the experience of the heritage team, the coverage achieved is sufficient to determine the overall heritage sensitivity of the development area.

2.5 Savannah Impact Assessment Methodology

Direct, indirect and cumulative impacts of the issues identified through the Basic Assessment process were assessed in terms of the following criteria:

- The nature, which shall include a description of what causes the effect, what will be affected and how it will be affected.
- The extent, wherein it will be indicated whether the impact will be local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high).
- The duration, wherein it will be indicated whether:
    - The lifetime of the impact will be of a very short duration (0 – 1 years) – assigned a score of 1.
    - The lifetime of the impact will be of a short duration (2 – 5 years) – assigned a score of 2.
    - Medium-term (5 – 15 years) – assigned a score of 3.
    - Long term (> 15 years) – assigned a score of 4.
    - Permanent – assigned a score of 5.
- The consequences (magnitude), quantified on a scale from 0 – 10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- The probability of occurrence, which shall describe the likelihood of the impact actually occurring. Probability will be estimated on a scale of 1 – 5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).
- The significance, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high.
- The status, which will be described as either positive, negative or neutral.
- The degree to which the impact can be reversed.

- The degree to which the impact may cause irreplaceable loss of resources.
- The degree to which the impact can be mitigated.

The significance is calculated by combining the criteria in the following formula:

S = (E + D + M) x P

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The significance weightings for each potential impact are as follows:

- < 30 points: Low (i.e. where this impact would not have a direct influence on the decision to develop in the area).
- 30 – 60 points: Medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated).
- > 60 points: High (i.e. where the impact must have an influence on the decision process to develop in the area).

3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT

3.1 Desktop Assessment

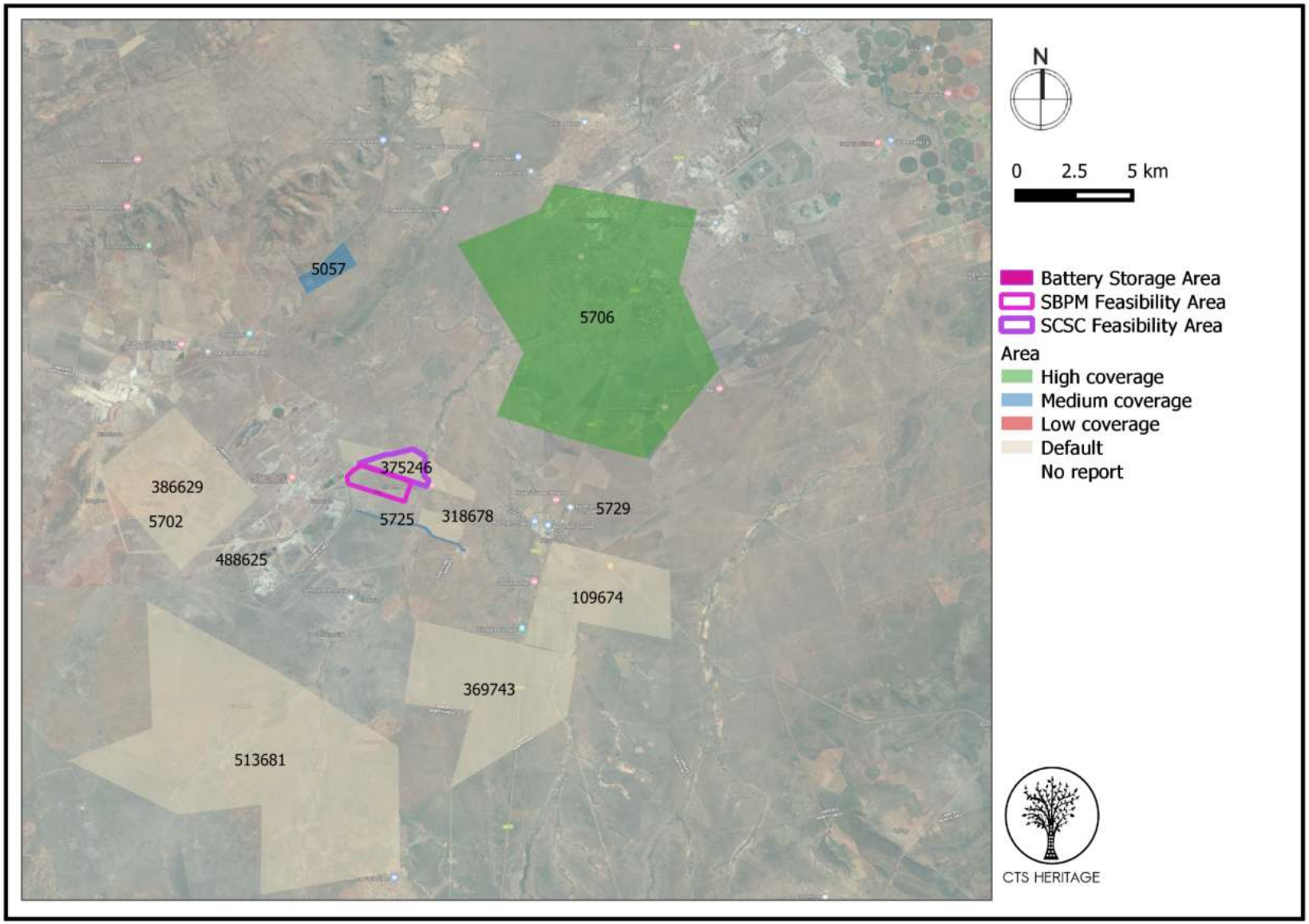
Background

The area proposed for development (Figures 1a, 1b, 1 c, 1d) is adjacent to the town of Swartklip, which is locally governed by the Thabazimbi Local Municipality. In isiZulu, the word Thabazimbi means "iron mountain", and the Zulu and Nyasa speaking people historically worked on this mountain, mining iron. Swartklip is also a mining town, with a population of 3, 517 people, and was built around the Siyanda Bakgatla Platinum Mine, which employs 5, 200 people.

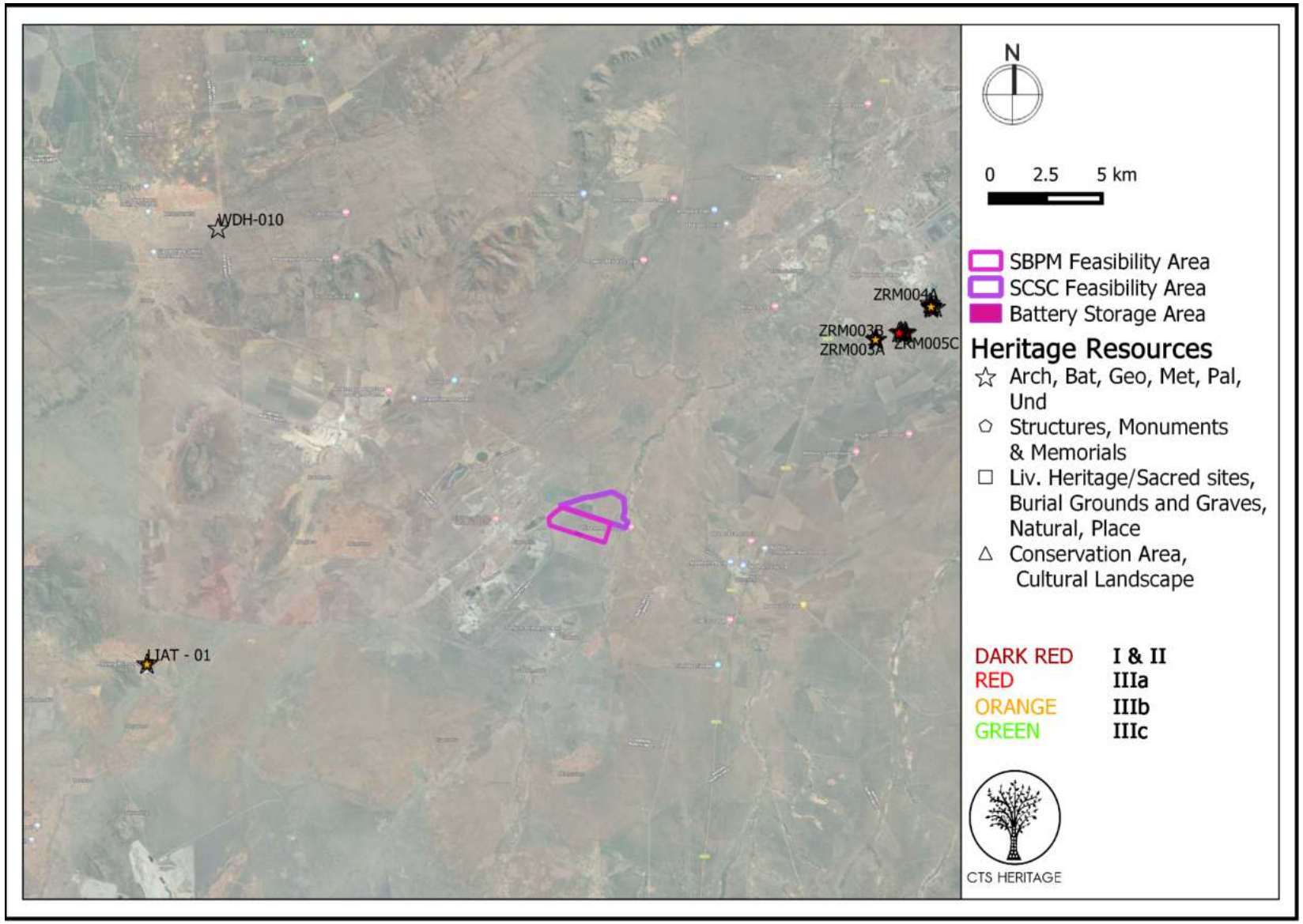
Archaeology

Several archaeological and heritage impact assessments have been conducted in the area. Van Schalkwyk and colleagues conducted a high coverage archaeological survey 5 km away from the area proposed for development (2003, SAHRIS ID 5706). These practitioners reported several Late Iron Age stone-walled sites with faunal and cultural remains, including pottery. They suggested that these sites were likely associated with the Tswana people. The report did not mention the exact number of Iron Age sites that Van Schalkwyk and colleagues encountered during the survey. As for the Stone Age, Van Schalkwyk and colleagues documented only isolated Middle and Later Stone Age specimens. Conversely, other reports (Pistorius 2002, SAHRIS ID 5725; Roodt 2007, SAHRIS ID 50057; Kruger 2014, SAHRIS ID 318678), reported no Stone Age remains. Interestingly, surveys pertaining to the immediate vicinity of the proposed development report minimal amounts of archaeology. Kruger (2014) surveyed the Grootkuil farm (part of portion 5 of the farm, see Figure 2), and documented one historical structure that constituted the original Grootkuil farmhouse. Kruger also mentioned the presence of dense vegetation coverage at the farm that would lower the probability of discovering sub-surface cultural remains. Pistorius (2002) surveyed a narrow strip for the Eskom power line (see Figure 2, id 5725) on a neighbouring farm called Spitskop, and reported several ex situ potsherds.

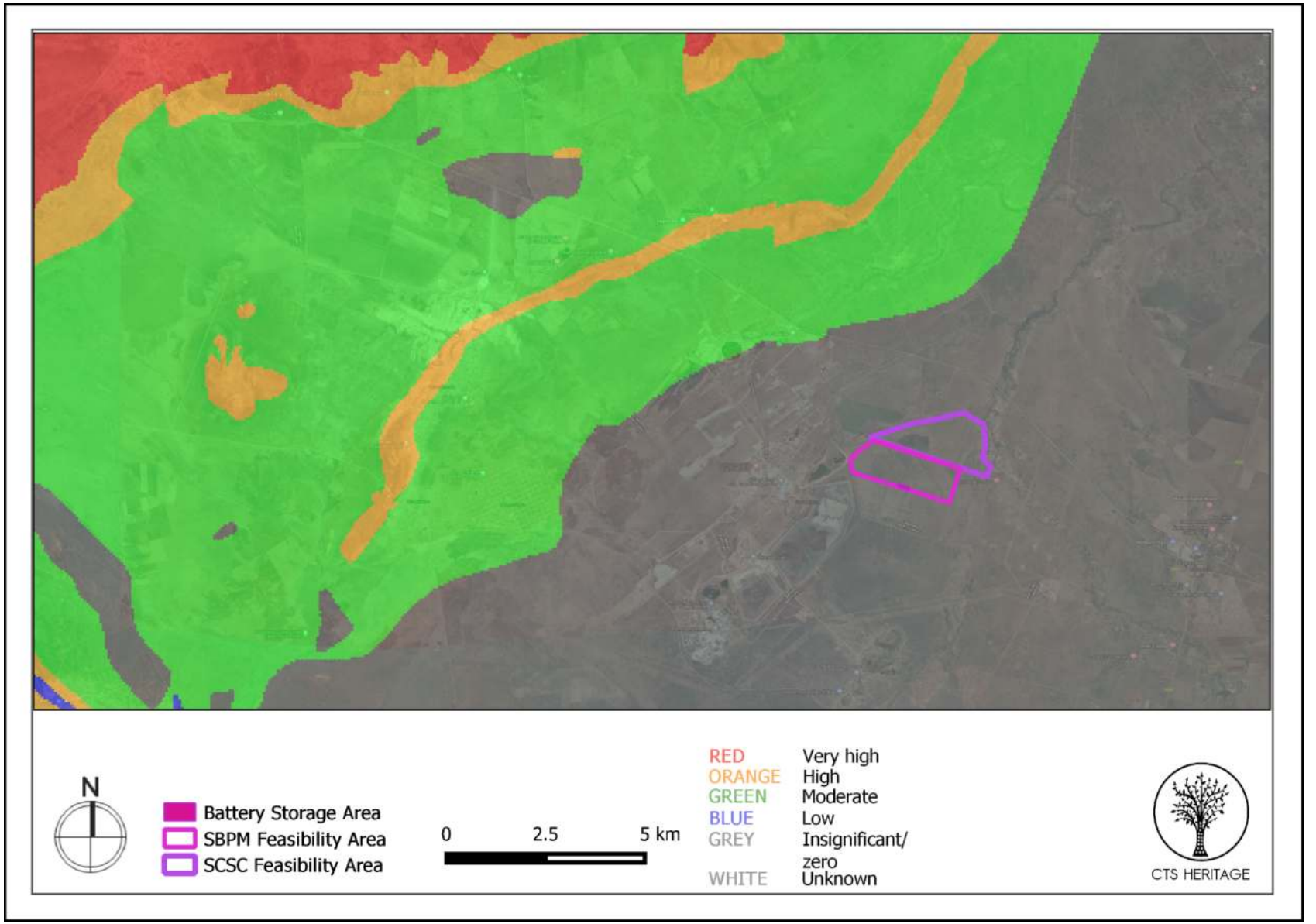
As significant archaeological heritage has been documented in the broader region, it is possible that the prospective development may negatively impact on similar archaeological heritage.



Map 2.2: Spatialisation of heritage assessments conducted in proximity to the broader study area



Map 2.3: Spatialisation of heritage resources known in proximity to the broader study area



Map 3.1: Palaeontological sensitivity of the area surrounding the broader study area

3.2 Palaeontology

According to the SAHRIS Palaeosensitivity Map (Figure 4), the area proposed for development is underlain by sediments of **zero palaeontological sensitivity**. The area proposed for development has been previously assessed in a palaeontological desktop study conducted by Professor Bruce Rubidge (Palaeontological Desktop Study – Siyanda Chrome Smelting Company Pty. Ltd, SAHRIS ID 375246, 2015). In the assessment, Rubidge proposed that since the study area was underlain by gabbros and norites of the Precambrian Bushveld Igneous Complex, fossil preservation was highly unlikely. Rubidge, however, noted that fossil-bearing Quaternary alluvial deposits, although not visible on a geological map, could be still present in low-lying areas. Rubidge, hence, recommended that if fossils were exposed as a result of development activities, that a qualified palaeontologist should be contacted to assess the exposure for fossils before further development took place so that the necessary rescue operations were implemented. This recommendation is reiterated for this project.

4. IDENTIFICATION OF HERITAGE RESOURCES

4.1 Summary of findings of Specialist Reports

The area proposed for development has very low sensitivity for impacts to archaeological heritage.

Only one instance of low-fired ceramics was recorded in the area proposed for the SCSC PV facility. This ceramic sherd is not diagnostic. It is an undecorated, unidentifiable vessel-body fragment. There is no archaeological context for this artefact. No structural features or middens were identified in its vicinity. Instead, it was found along an animal trail where the earth had been dislodged by continuous animal movement. Therefore, the isolated find is not conservation worthy, but subsurface sites may still exist.

The farmers and landowners were consulted, but they were not aware of any significant *in-situ* archaeological sites or graves on the property. While the field assessment was as thorough as possible, there remains the possibility that archaeological resources that were not recorded are present but are obscured by top soil or vegetation. Recommendations in this regard are included below.

Palaeontology

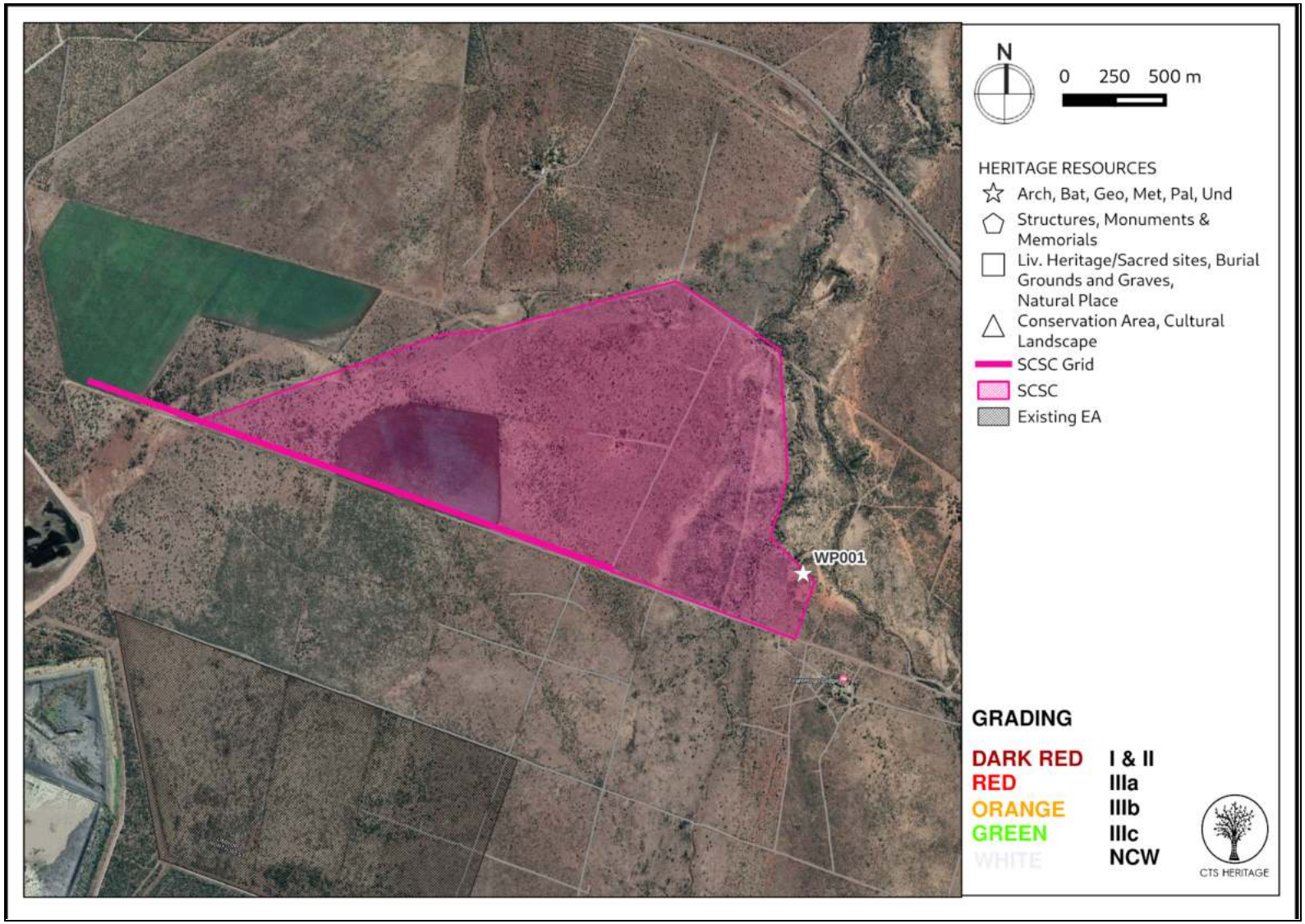
No impacts to palaeontological heritage are expected as the broader study area is underlain by Pyramid Gabbro-Norite which has zero palaeontological sensitivity.

4.2 Heritage Resources identified

Table 2: Heritage resources identified in the broader study area

POINT ID	Site Name	Description	Co-ordinates		Grading	Mitigation
WP001	Observation001	Isolated surface artefact. Low-fired ceramic undecorated sherd. This artefact was found in alluvial deposit with no archaeological context	24°56'12.18"S	27°12'46.12"E	NCW	NA

4.3 Mapping and spatialisation of heritage resources



Map 4: Map of heritage resources identified during the field assessment, relative to the broader study area

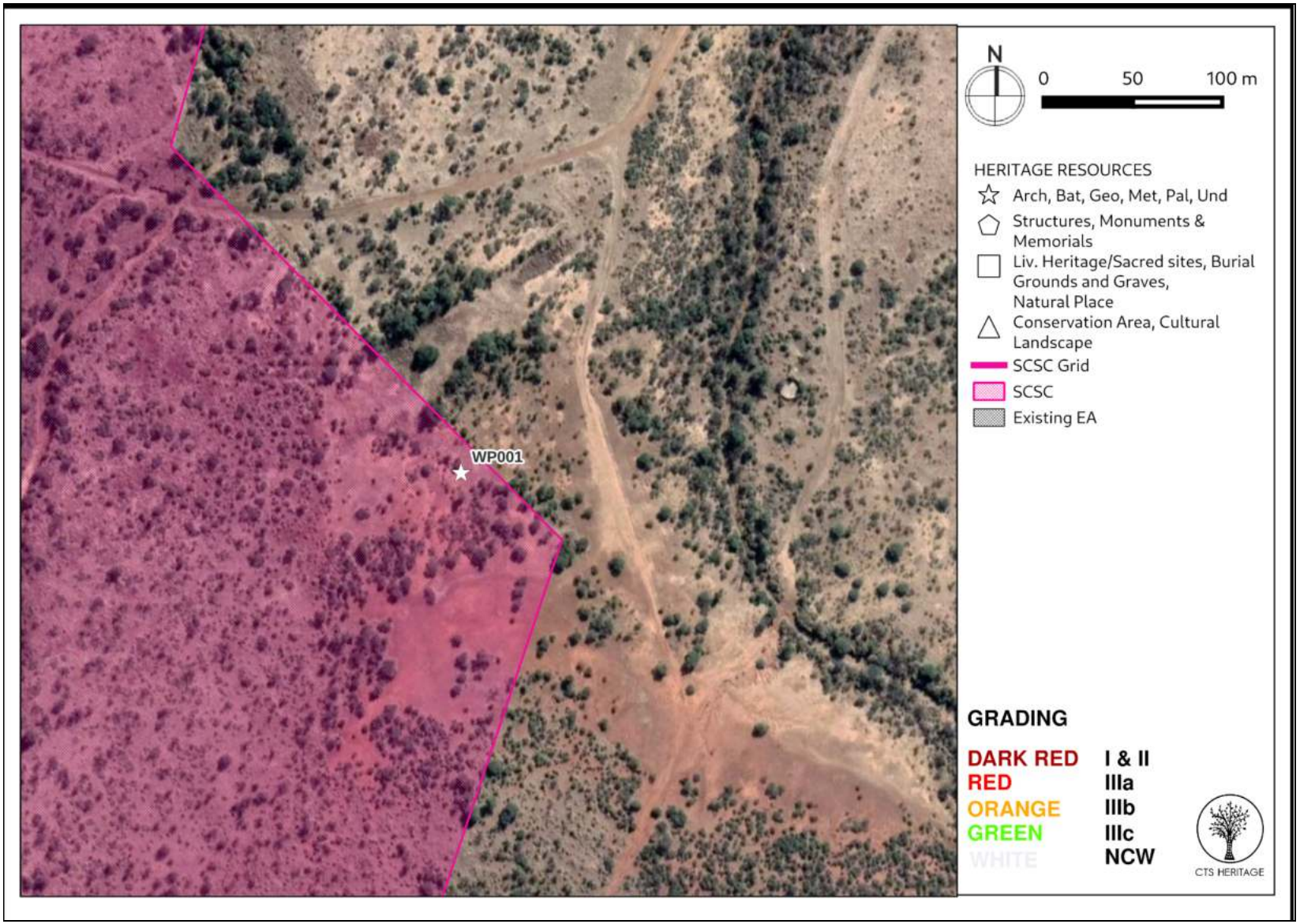


Figure 4.1: Map of heritage resources identified during the field assessment, relative to the broader study area

5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT

5.1 Assessment of impact to Heritage Resources

The only archaeological resource identified within this development area is a low-density surface scatter of ceramics without any archaeological context. These resources are considered to be Not Conservation-Worthy and have been sufficiently recorded in this assessment.

As per Rubidge (2015) "fossil-bearing Quaternary alluvial deposits, although not visible on a geological map, could still be present in low-lying areas. Rubidge, hence, recommended that if fossils were exposed as a result of development activities, that a qualified palaeontologist should be contacted to assess the exposure for fossils before further development took place so that the necessary rescue operations were implemented." This recommendation is reiterated for this project.

Table 4.1: Impacts of the PV facility and associated infrastructure to archaeological resources

NATURE: It is possible that buried archaeological resources may be impacted by the proposed development in the preferred location				
		Without Mitigation		**With Mitigation**
MAGNITUDE	**L (3)**	One archaeological observation was made within the development area. This observation is considered to be Not Conservation-worthy	**L (3)**	One archaeological observation was made within the development area. This observation is considered to be Not Conservation-worthy
DURATION	**H (5)**	Where manifest, the impact will be permanent.	**H (5)**	Where manifest, the impact will be permanent.
EXTENT	**L (1)**	Limited to the development footprint	**L (1)**	Limited to the development footprint
PROBABILITY	**L (1)**	It is unlikely that significant archaeological resources will be impacted	**L (1)**	It is unlikely that significant archaeological resources will be impacted
SIGNIFICANCE	**L**	(3+5+1)x1 = 9	**L**	(3+5+1)x1 = 9
STATUS		Negative		Negative
REVERSIBILITY	**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**	Not Likely	**L**	Not Likely
CAN IMPACTS BE MITIGATED		Yes		
MITIGATION: • Should any previously unrecorded archaeological resources or possible burials be identified during the course of construction activities, work must cease in the immediate vicinity of the find, and SAHRA must be contacted regarding an appropriate way forward.				
RESIDUAL RISK: None				

Table 4.2: Impacts of the 100MW PV facility and associated infrastructure to palaeontological resources

NATURE: It is possible that buried palaeontological resources may be impacted by the proposed development in the preferred location				
		Without Mitigation		**With Mitigation**
MAGNITUDE	**L (1)**	According to the SAHRIS Palaeosensitivity Map (Figure 4), the area proposed for development of the PV facilities is underlain by sediments that have zero palaeontological sensitivity. As such, no palaeontological resources will be impacted by the proposed development	**L (1)**	According to the SAHRIS Palaeosensitivity Map (Figure 4), the area proposed for development of the PV facilities is underlain by sediments that have zero palaeontological sensitivity. As such, no palaeontological resources will be impacted by the proposed development
DURATION	**H (5)**	Where manifest, the impact will be permanent.	**H (5)**	Where manifest, the impact will be permanent.
EXTENT	**L (1)**	Limited to the development footprint	**L (1)**	Limited to the development footprint
PROBABILITY	**L (1)**	It is unlikely that significant fossils will be impacted	**L (1)**	It is unlikely that significant fossils will be impacted
SIGNIFICANCE	**H**	(1+5+1)x1=7	**H**	(1+5+1)x1=7
STATUS		Negative		Negative
REVERSIBILITY	**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?	**H**	Unlikely	**L**	Not Likely
CAN IMPACTS BE MITIGATED		No		
MITIGATION: • Should any previously unrecorded palaeontological resources be identified during the course of construction activities, work must cease in the immediate vicinity of the find, and SAHRA must be contacted regarding an appropriate way forward.				
RESIDUAL RISK: None				

5.2 Sustainable Social and Economic Benefit

The socio-economic benefits can be measured through direct and indirect impacts:

Table 5: Socio-Economic Benefits to be derived from the project

Direct impacts	Indirect
Changes in local business activity occurring as a direct result or consequence of public or private sector capital expenditure Direct economic effects are generated when the new business creates new job and purchases goods and services to operate the new facility Direct impact result in an increase in job creation, production, business sales and household income	Occur when the suppliers of goods and services to the new business experience larger markets and potential to expand. Indirect impacts result in an increase in job creation, GDP and household income.

Based on the available information, the anticipated socio-economic benefits of the proposed development of the 100MW PV Facility outweigh the anticipated impacts to heritage resources on condition that all of the recommendations included below in section 8 are implemented.

5.3 Proposed development alternatives

No alternatives are being considered for the project. As no impacts to heritage resources are anticipated, no assessment of alternatives is required.

5.4 Cumulative Impacts

The preferred area proposed for development is located within an area that has been previously impacted by the development of various mine infrastructure and an existing PV installation. As such, it is not anticipated that the proposed PV development will have a negative cumulative impact on the broader landscape which is already dominated by mining infrastructure and agriculture. In terms of renewable development activities which can have an industrial feel, it is recommended that such infrastructure be grouped or clustered to avoid sprawl across natural landscapes.

Table 6: Cumulative Impact Table

NATURE: Cumulative Impact to the sense of place and known archaeological resources				
		Overall impact of the proposed project considered in isolation		**Cumulative impact of the project and other projects in the area**
MAGNITUDE	**L (4)**	Low	**M (5)**	Moderate
DURATION	**M (3)**	Medium-term	**H (4)**	Long-term
EXTENT	**L (1)**	Low	**L (1)**	Low
PROBABILITY	**L (2)**	Improbable	**H (3)**	Probable
SIGNIFICANCE	**L**	(4+3+1)x2=16	**L**	(5+4+1)x3=30
STATUS		Neutral		Neutral
REVERSIBILITY	**H**	High	**L**	Low
IRREPLACEABLE LOSS OF RESOURCES?	**L**	Unlikely	**L**	Possible
CAN IMPACTS BE MITIGATED		NA		NA
CONFIDENCE IN FINDINGS: High				
MITIGATION: NA				

6. RESULTS OF PUBLIC CONSULTATION

The public consultation process will be undertaken by the EAP during the EIA. No heritage-related comments have been received to-date. SAHRA is required to comment on this HIA and make recommendations prior to the granting of the Environmental Authorisation.

7. CONCLUSION

Overall, the archaeological field assessment has determined that the overall archaeological sensitivity of the development area is low with few ex situ surface scatters identified. These resources are not conservation-worthy and have been sufficiently recorded in this report.

The farmers and landowners were consulted, but they were not aware of any significant *in-situ* archaeological sites or graves on the property. While the field assessment was as thorough as possible, there remains the possibility that archaeological resources that were not recorded are present but are obscured by top soil or vegetation. Recommendations in this regard are included below.

No impacts to palaeontological heritage resources are considered likely due to the Pyramid Gabbro-Norite which has zero palaeontological sensitivity underlying the development area.

8. RECOMMENDATIONS

There is no objection to the proposed development of the SCSC PV facility and its associated grid infrastructure on condition that:

- Should any previously unrecorded archaeological or palaeontological resources or possible burials be identified during the course of construction activities, work must cease in the immediate vicinity of the find, and SAHRA must be contacted regarding an appropriate way forward.

9. REFERENCES

Heritage Impact Assessments				
Nid	**Report Type**	**Author/s**	**Date**	**Title**
109674	HIA Phase 1	M Hutten	01/05/2010	HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED DE PUT RESIDENTIAL TOWNSHIP DEVELOPMENT SOUTH OF NORTHAM, LIMPOPO
318678	AIA Phase 1	Neels Kruger	19/05/2014	ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) OF A DEMARCATED SURFACE PORTION ON THE FARM GROOTKUIL 409KQ FOR THE PROPOSED PLATINUM PHOTOVOLTAIC POWER PLANT DEVELOPMENT, THABAZIMBI LOCAL MUNICIPALITY, WATERBERG DISTRICT MUNICIPALITY, LIMPOPO PROVINCE
369743	Heritage Impact Assessment Specialist Reports	Prof. Anton van Vollenhoven	21/09/2016	HERITAGE IMPACT ASSESSMENT - Input for Environmental Impact Assessment report undertaken in terms of the National Environmental Management Act 107 of 1998
375246	PIA Desktop	Bruce Rubidge	01/12/2015	Palaeontological Desktop Study â€“ Siyanda Chrome Smelting Company Pty. Ltd
5057	AIA Phase 1	Frans Roodt	20/02/2007	Phase 1 Heritage Resources Impact Assessment (Scoping & Evaluation) Rhebokkloof Wild Life Estate Thabazimbi, Limpopo
5702	AIA Phase 1	Johnny Van Schalkwyk	01/02/2003	Arch Survey Mantserre-Kraalhoek-Mopyane Water Scheme, NW Province
5706	AIA Phase 1	Johnny Van Schalkwyk, Frank Teichert, Anton Pelser	01/06/2003	A Survey of Archaeological Sites for the Amandelbult Platinum Mine Seismic Exploration Program
5725	AIA Phase 1	Julius CC Pistorius	01/12/2002	A Cultural Heritage Assessment for Eskom's Proposed New Power Line Between the Spitskop Substation and the Union Plats Substation in the Limpopo
5729	AIA Phase 1	JM Maguire, Calvin van Wijk	12/06/2008	Phase 1 Archaeological Impact Assessment for Portion 128 of the Farm Koedoesdoorns KQ 414, Northam, Limpopo Province

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APPENDICES

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APPENDIX 1: Archaeological Assessment

ARCHAEOLOGICAL SPECIALIST STUDY

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

Proposed development of PV Facilities on Bagatla Mine near Thabazimbi, North West Province

Prepared by

CTS HERITAGE

Jenna Lavin

And Heidi Fivaz
of Ubique Heritage Consultants

In Association with

Savannah Environmental

June 2021

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EXECUTIVE SUMMARY

Main Street 1886 Proprietary Limited proposes the development of the Solar PV facility and associated infrastructure on a site bordering the eastern end of the Siyanda Bakgatla Platinum Mine area near Northam. The solar PV facility will comprise several arrays of PV panels, a Battery Energy Storage System (BESS), and associated infrastructure with a contracted capacity of up to 100MW.

Overall, the archaeological field assessment has determined that the overall archaeological sensitivity of the development area is low with few ex situ surface scatters identified. These resources are not conservation-worthy and have been sufficiently recorded in this report.

A cluster of possible graves was also identified within the SBPM PV development area. As noted above, it is possible to establish whether or not these are graves through the implementation of various technologies such as ground-truthing with sub-surface survey or prospecting technology. Additionally, such intervention could determine whether *unmarked* graves are also present in the area, and the extent of the possible burial ground. This could take place at the discretion of the developer. In the absence of subsurface survey data, it is recommended that a NO-GO ZONE of at least a 50m radius is implemented around the graves to ensure that the graves and their sense of place is not impacted by the proposed development.

The farmers and landowners were consulted, but they were not aware of any significant *in-situ* archaeological sites or graves on the property. While the field assessment was as thorough as possible, there remains the possibility that archaeological resources that were not recorded are present but are obscured by top soil or vegetation. Recommendations in this regard are included below.

Recommendations

There is no objection to the proposed development of the SCSC PV facility and its associated infrastructure on condition that:

- Should any previously unrecorded archaeological resources or possible burials be identified during the course of construction activities, work must cease in the immediate vicinity of the find, and SAHRA must be contacted regarding an appropriate way forward.

There is no objection to the proposed development of the SBPM PV facility and its associated infrastructure on condition that:

- A 50m no-go development buffer is implemented around sites WP007, WP008 and WP009 as per Figure 8
- Should any previously unrecorded archaeological resources or possible burials be identified during the course of construction activities, work must cease in the immediate vicinity of the find, and SAHRA must be contacted regarding an appropriate way forward.

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CONTENTS

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1. INTRODUCTION

1.1 Background Information on Project

Main Street 1886 Proprietary Limited proposes the development of the Solar PV facility and associated infrastructure on a site bordering the eastern end of the Siyanda Bakgatla Platinum Mine area near Northam. The solar PV facility will comprise several arrays of PV panels, a Battery Energy Storage System (BESS), and associated infrastructure with a contracted capacity of up to 100MW.

The purpose of the proposed project is to generate electricity for exclusive use by the Siyanda Mine, following which any excess power produced will be distributed to the national grid, if applicable. The construction of the PV facility aims to reduce the Siyanda Mine's dependency on direct supply from Eskom's national grid for operation activities, while simultaneously decreasing the mine's carbon footprint.

A preferred project site with an extent of ~1138ha and a development area of 574 ha has been identified by Main Street 1886 Proprietary Limited as a technically suitable area for the development of the Solar PV Facility. The study area is located on Portion 4 of Farm Grootkuil 409. The project site falls within the Thabazimbi Local Municipality within the Waterberg District Municipality in the Limpopo Province. The site is located ~6.5km west of the town of Northam and is accessible via the Swartklip Road which branches off the R510 provincial route.

1.2 Description of Property and Affected Environment

The area proposed for development is dominated by Dwaalboom Thornveld. The area is very densely vegetated with thorny trees and shrubs with a few broad-leaved tree species and dominated by an almost continuous layer of various grass species. The study area's terrain is relatively flat, sloping down towards the east. A few small rocky outcrops, predominantly of loamy clay soil (turf), with red soils are located in the northeast, east and southeast of the development footprint. The Bier Spruit lies on the eastern boundary of the development footprint.

The development area has been recently impacted by flooding and animal grazing. The area is utilised as grazing for herds of cows and wild game such as blue-wildebeest, giraffes, zebras, kudus, and impala. A previously cultivated field, currently filled with grass and weeds, is located in the southeast of the development footprint. The whole area within the development footprints shows signs of disturbance. Continuous animal movement across the site has caused a soft "tilled" soil effect, eroding the ground surface. An aerial photograph dating to 1987 shows this area has been cultivated since then at least (http://cdngiportal.co.za/photocentres/30K_PAN/498_234_Thabazimbi/498_234_009_01149.jpg).

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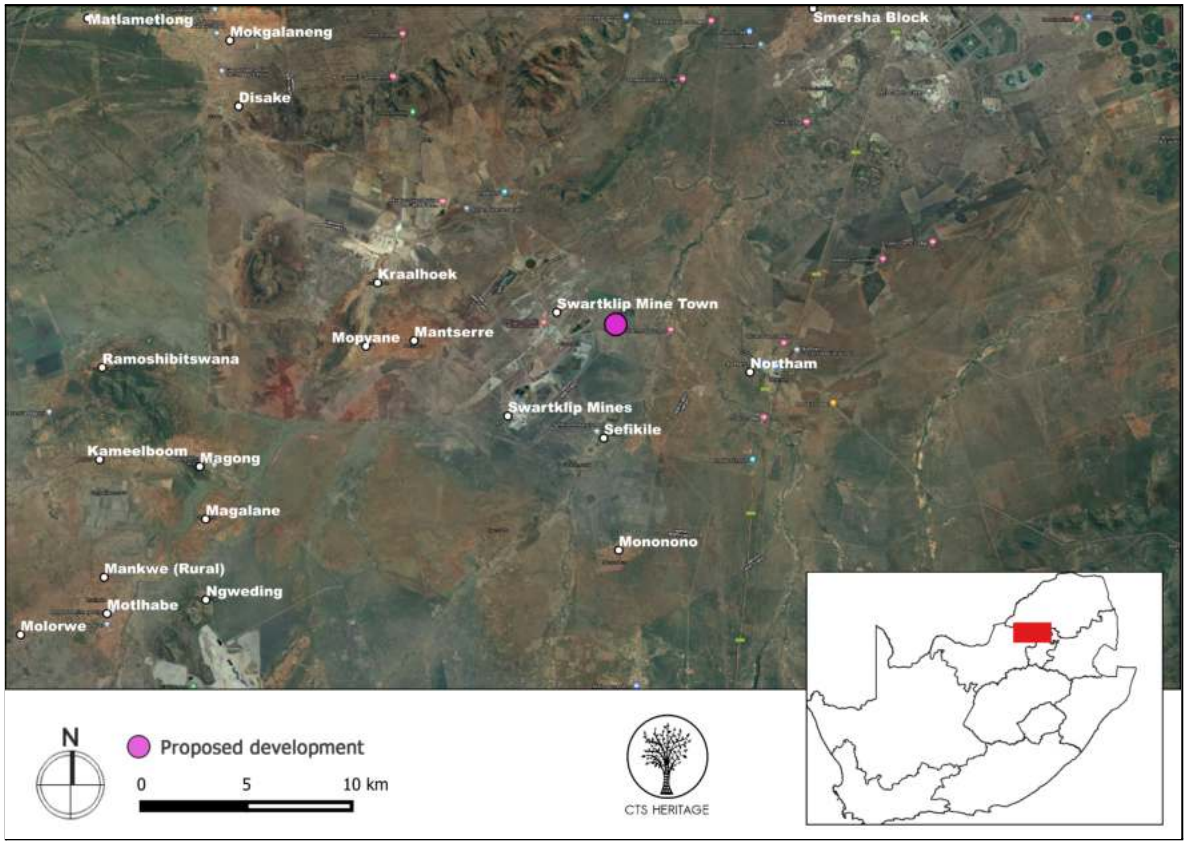

Figure 1.1: Close up satellite image indicating proposed location of study area

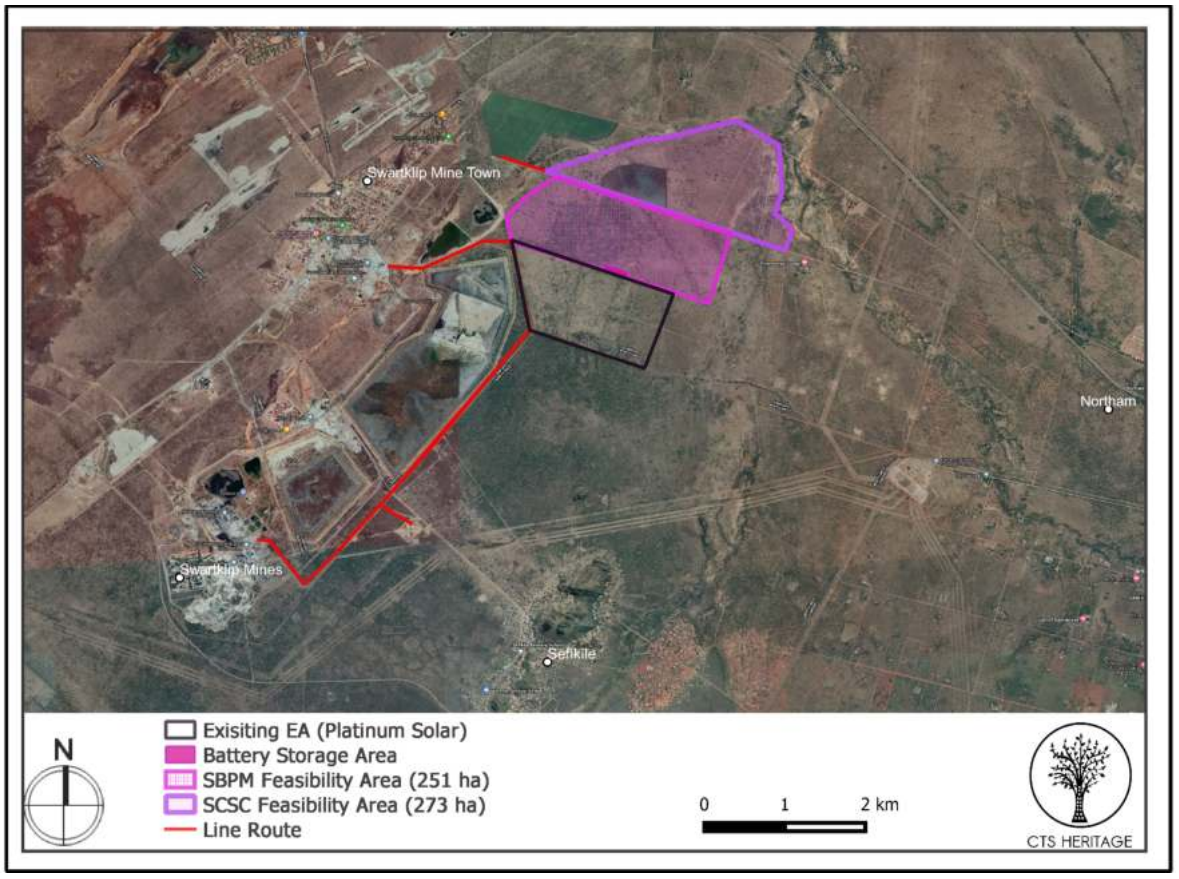

Figure 1.2: Study Area

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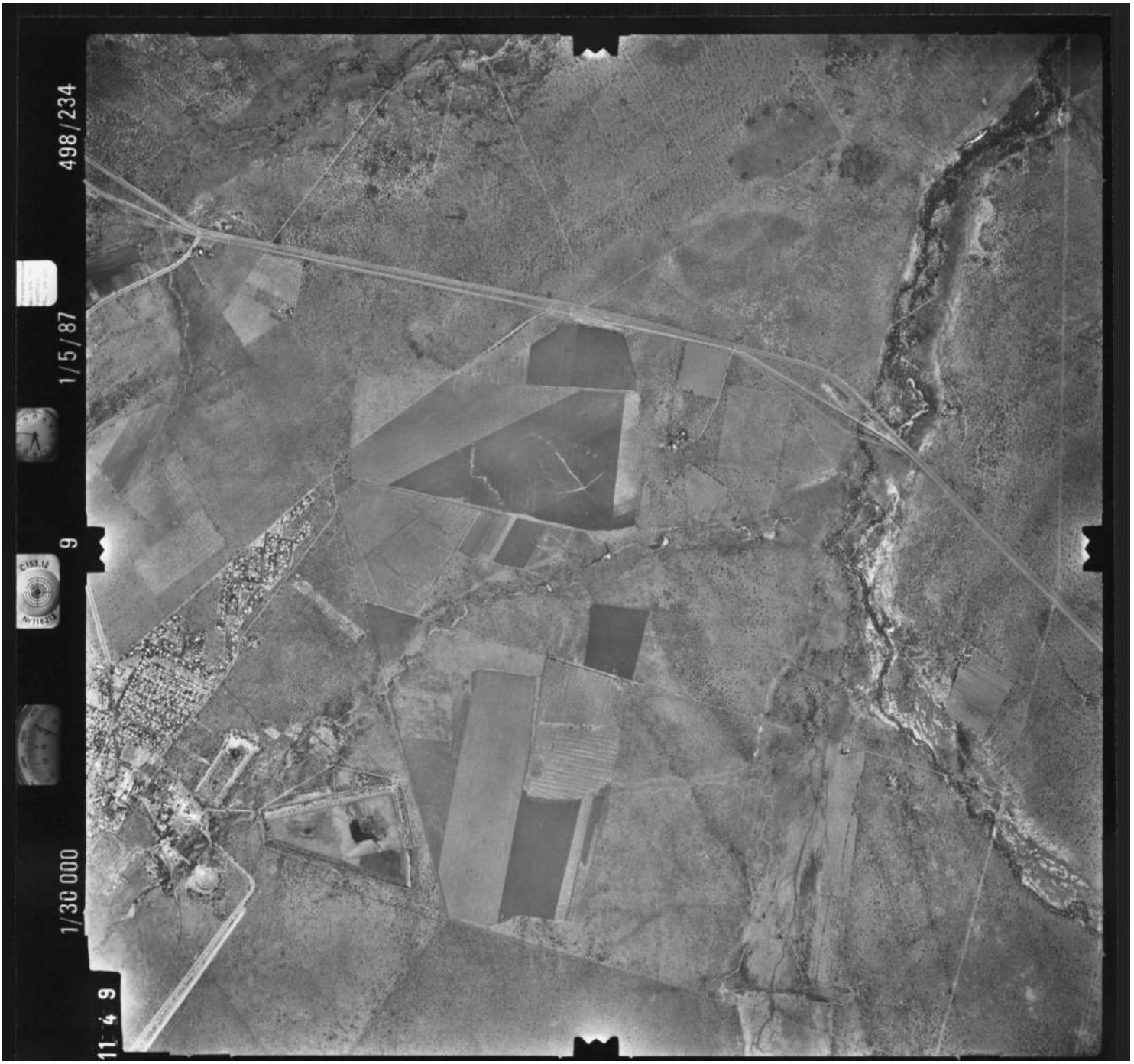

Figure 1.3: 1987 Aerial Photograph

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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 survey of the site and its environs on 23, 24 and 25 May 2022 to determine what archaeological resources are likely to be impacted by the proposed development.
- The study area was assessed on foot in transects, 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.

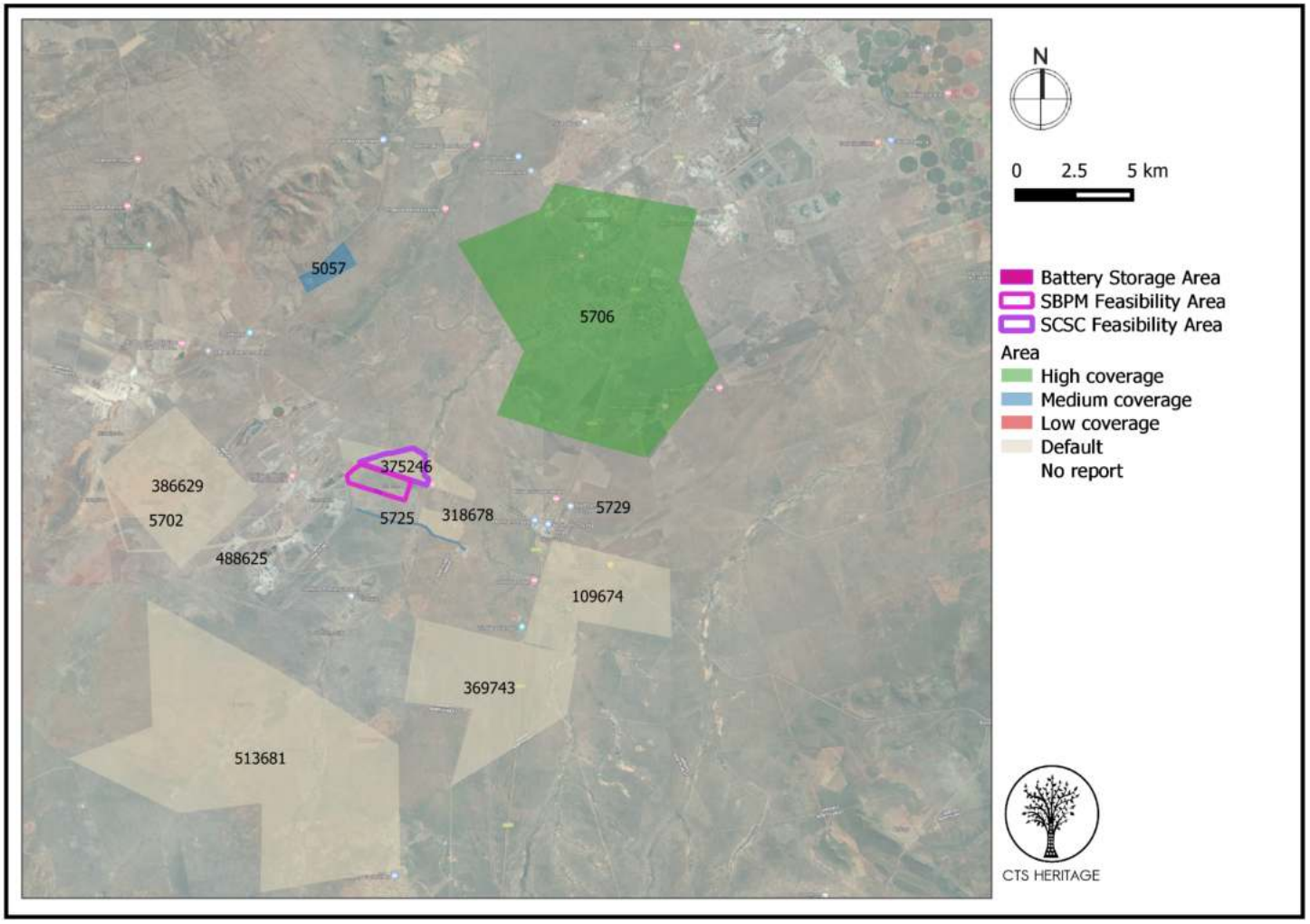

Figure 2a: Close up satellite image indicating proposed location of the study area in relation to heritage studies previously conducted

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2.3 Constraints & Limitations

The area has previously been cultivated and disturbed by human and animal activity. As a result, large terrain areas have very soft and disturbed dislodged surface soils. Currently, however, the vegetation is very dense, and in large areas of the terrain, the ground surface is completely obscured.

Due to the dense vegetation, the area was surveyed as best as possible in the time provided and as the vegetation growth allowed. The survey tracks followed the farm roads, from which pedestrian surveys were conducted at various points. In addition, animal tracks were followed as these paths offered the clearest views of the ground surface and allowed for the inspection of areas with noticeable vegetation changes.

Due to the experience of the heritage team, the coverage achieved is sufficient to determine the overall heritage sensitivity of the development area.

3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT

Several archaeological and heritage impact assessments have been conducted in the area. Van Schalkwyk and colleagues conducted a high coverage archaeological survey 5 km away from the area proposed for development (2003, SAHRIS ID 5706). These practitioners reported several Late Iron Age stone-walled sites with faunal and cultural remains, including pottery. They suggested that these sites were likely associated with the Tswana people. The report did not mention the exact number of Iron Age sites that Van Schalkwyk and colleagues encountered during the survey. As for the Stone Age, Van Schalkwyk and colleagues documented only isolated Middle and Later Stone Age specimens. Conversely, other reports (Pistorius 2002, SAHRIS ID 5725; Roodt 2007, SAHRIS ID 50057; Kruger 2014, SAHRIS ID 318678), reported no Stone Age remains. Interestingly, surveys pertaining to the immediate vicinity of the proposed development report minimal amounts of archaeology. Kruger (2014) surveyed the Grootkuil farm (part of portion 5 of the farm, see Figure 2), and documented one historical structure that constituted the original Grootkuil farmhouse. Kruger also mentioned the presence of dense vegetation coverage at the farm that would lower the probability of discovering sub-surface cultural remains. Pistorius (2002) surveyed a narrow strip for the Eskom power line (see Figure 2, id 5725) on a neighbouring farm called Spitskop, and reported several ex situ potsherds.

As significant archaeological heritage has been documented in the broader region, it is possible that the prospective development may negatively impact on similar archaeological heritage.

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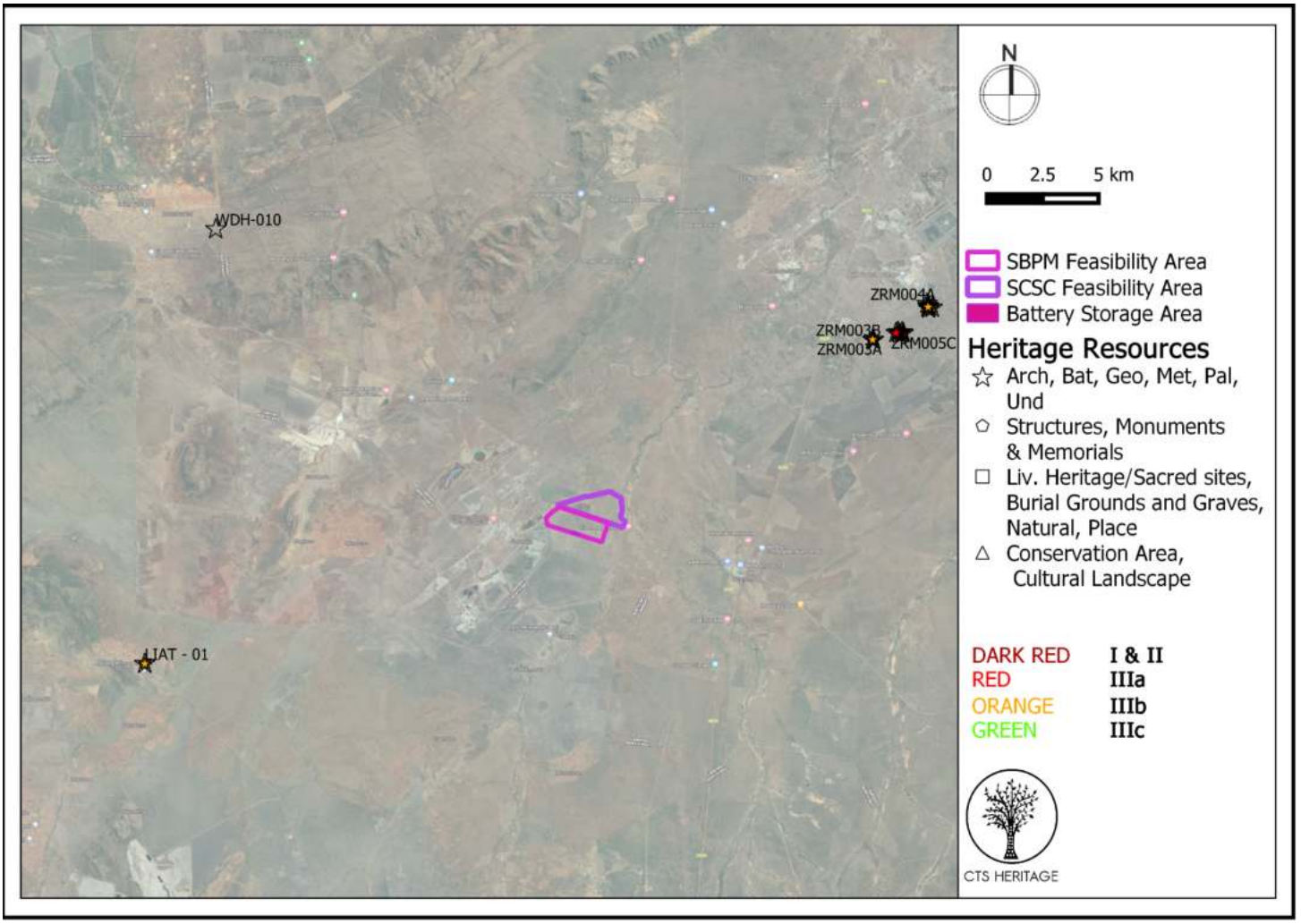

Figure 3a. Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated (see Heritage Screening Assessment for insets)

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4. IDENTIFICATION OF HERITAGE RESOURCES

4.1 Field Assessment

Five MSA/early LSA lithic material occurrences were recorded in the study area. These include three scrapers, one blade, and a flake that has rudimentary retouching, probably abandoned before it was completed as a formal tool. Unfortunately, none of the lithic materials was found in an archaeological context. Instead, they were found along animal trails where the earth had been dislodged by continuous animal movement. Areas around the finds were inspected, pushing aside vegetation to see the ground surface, but no context was discovered. Therefore, the isolated finds are not conservation worthy, but subsurface sites may exist.

Five occurrences of low-fired ceramics were recorded. Four in SBPM and one in SCSC. None of the ceramic sherds are diagnostic. They are undecorated, unidentifiable vessel-body fragments. One isolated small, broken upper grindstone was recorded. There is no archaeological context for these artefacts. No structural features or middens were identified in their vicinity. Instead, they were found along animal trails where the earth had been dislodged by continuous animal movement. Therefore, the isolated finds are not conservation worthy, but subsurface sites may exist.

Four possible graves were documented in the western area of the development footprint. The graves have no head or footstone markers and no inscriptions. Unfortunately, the fieldstone cairns are not well preserved, and stones are scattered. However, some stones remain *in situ.* The possibility exists that the stones are part of a natural formation, although the grouping and orientation of the cairn remains do suggest the presence of graves. Without sub-surface investigation, it is best to err on the side of caution.

The terrain has been repeatedly reused for grazing and crop cultivation, and it is unlikely that any sizeable, recognizable significant heritage sites have remained undisturbed.

- SBPM Powerline route1: The route follows an existing, wide farm road westward till the end of the development footprint, where the route crosses over into the heavily disturbed area of the mine's slime dams towards the Ivan substation. No *in-situ* sites would be located along this route.
- SBPM Powerline route 2: From the southwestern corner of the development footprint the route continues southeast and then southwest along the existing powerline into the North West Province around the slime dams towards the Mortimer substation. This route was not surveyed in its entirety but no significant heritage sites are expected along the route.
- SBPM Powerline route 3: The route is the same as the previous, except it turns southeast towards Sefikile and the Fridge substation. This route was not surveyed in its entirety but no significant heritage sites are expected along the route.

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Figure 4.1: South-western area of SCSC PV Area

Figure 4.2: South-western area of SCSC PV Area

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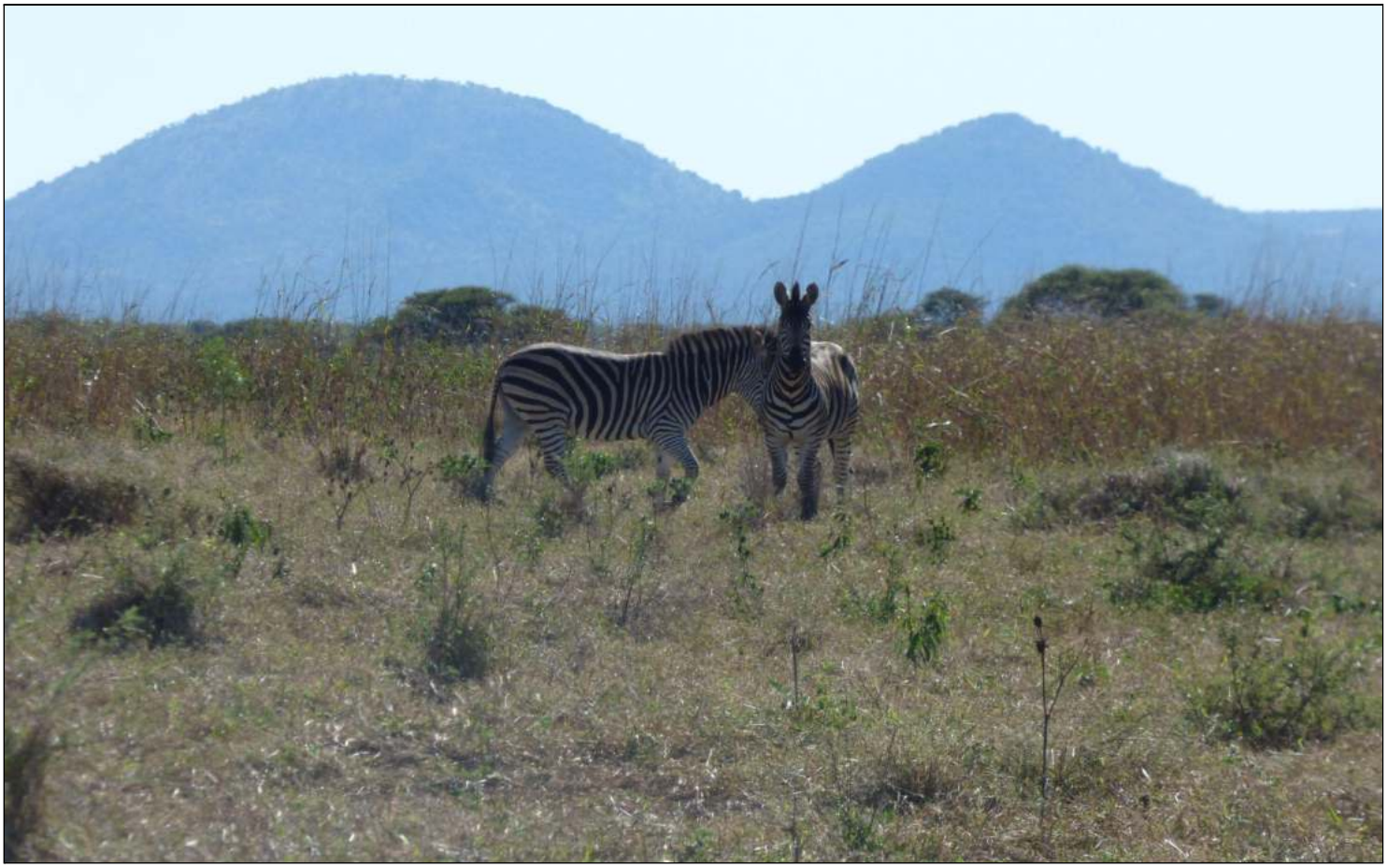

Figure 4.3: Previously cultivated area in SCSC PV Area

Figure 4.4: Northern area of SCSC PV area

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Figure 4.5: Southern area of the SCSC PV Area

Figure 4.6: Image along powerline alignment for SCSC PV

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Figure 4.7: Central northern area of SBPM PV footprint

Figure 4.8 Middle area of SBPM PV Footprint

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Figure 4.9 Area proposed for the BESS

Figure 4.10 South-eastern area of SBPM PV Footprint

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Figure 4.11 Taken along the proposed SBPM Powerline alignment

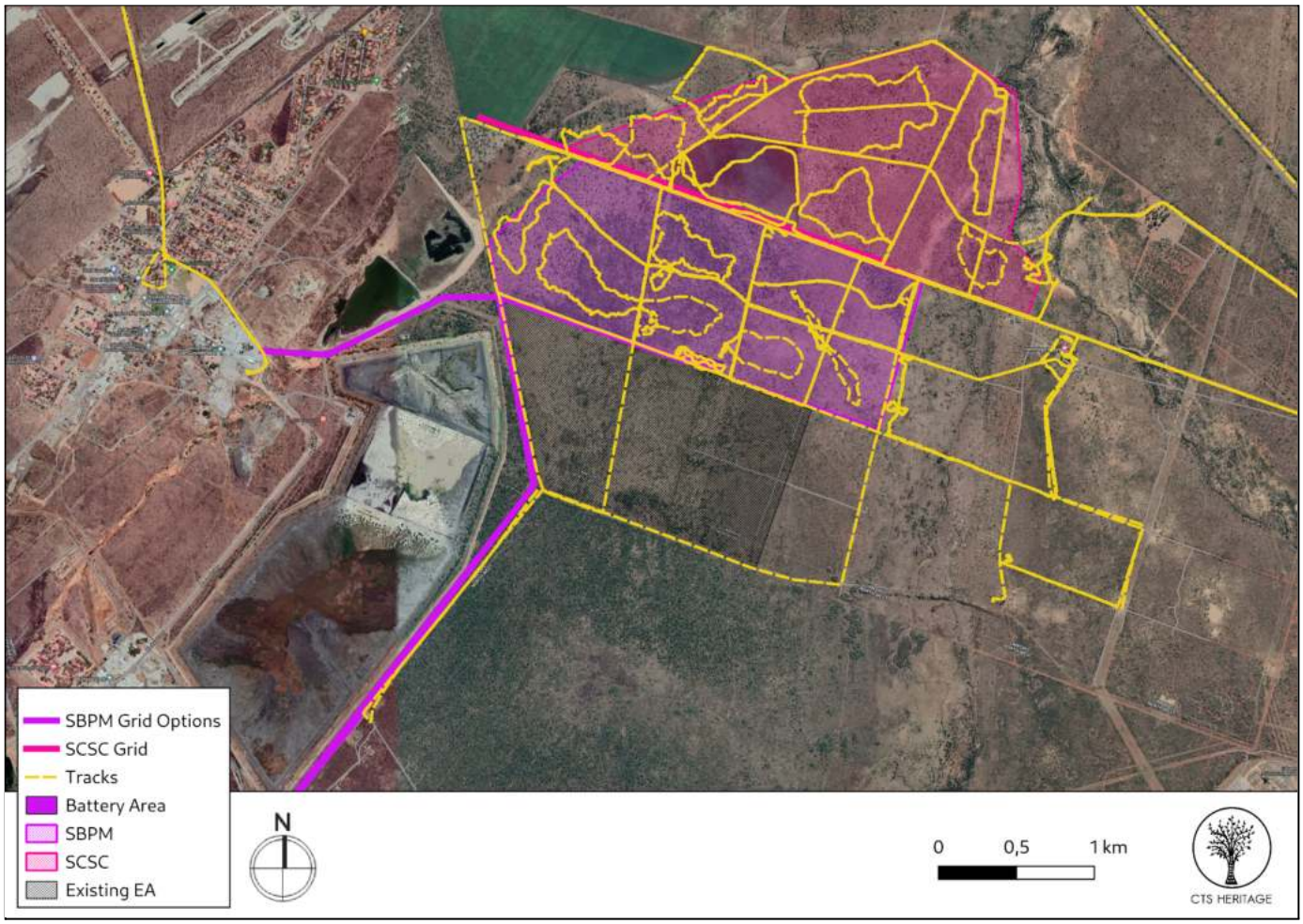

Figure 5: Overall track paths of foot survey

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4.2 Archaeological Resources identified

Table 1: Observations noted during the field assessment

Site No.	Project Name	Description	Co-ordinates		Grading	Mitigation
WP001	SCSC PV 1	Isolated surface artefact. Low-fired ceramic undecorated sherd. This artefact was found in alluvial deposit with no archaeological context	24°56'12.18"S	27°12'46.12"E	NCW	NA
WP002	SBPM PV 2	Isolated surface scatter, no archaeological context. Dolerite early LSA scraper, and single upper grindstone.	24°56'1.84"S	27°11'25.66"E	NCW	NA
WP003	SBPM PV 2	Surface scatter of Low-fired ceramics, undecorated. No archaeological context.	24°5'612.66"S	27°11'36.36"E	NCW	NA
WP004	SBPM PV 2	MSA Stone flake with possible retouch and Low-fired ceramics, undecorated. Isolated surface scatter, no archaeological context	24°56'13.71"S	27°11'20.77"E	NCW	NA
WP005	SBPM PV 2	Dolerite blade. Early LSA. Isolated surface scatter. No archaeological context.	24°55'55.60"S	27°10'56.50"E	NCW	NA
WP006	SBPM PV 2	Dolerite MSA scraper and Low-fired ceramics, undecorated.. Isolated surface scatter. No archaeological context. Located in disturbed area next to the road with open, visible ground surface and loose stones on the surface. Stones have no noticeable pattern.	24°56'19.63"S	27°11'16.35"E	NCW	NA
WP007	SBPM PV 2	Fieldstone cairn, no head or footstones. Possible grave. Stones from the cairn are scattered around the mound. With east-west orientation.	24°56'6.18"S	27°10'56.12"E	IIIA	No development buffer of 50m
WP008	SBPM PV 2	Few *in-situ* stones, possible fieldstone cairn, no head or footstones. Possible grave. Loose stones are scattered around these stones. With North-south orientation	24°56'5.56"S	27°10'55.78"E	IIIA	No development buffer of 50m
WP009	SBPM PV 2	2 Graves. Few *in-situ* stones, with a possible fieldstone cairn, no head or footstones. Possible graves. Loose stones are scattered around these stones Grave 1: 75cmx50cm Grave 2: 1x2m	24°56'5.84"S	27°10'55.61"E	IIIA	No development buffer of 50m
WP010	SBPM PV 2	Dolerite MSA scraper and Low-fired ceramics, undecorated. Isolated surface scatter. No archaeological context	24°56'12.59"S	27°10'53.24"E	NCW	NA

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4.3 Selected photographic record

(a full photographic record is available upon request)

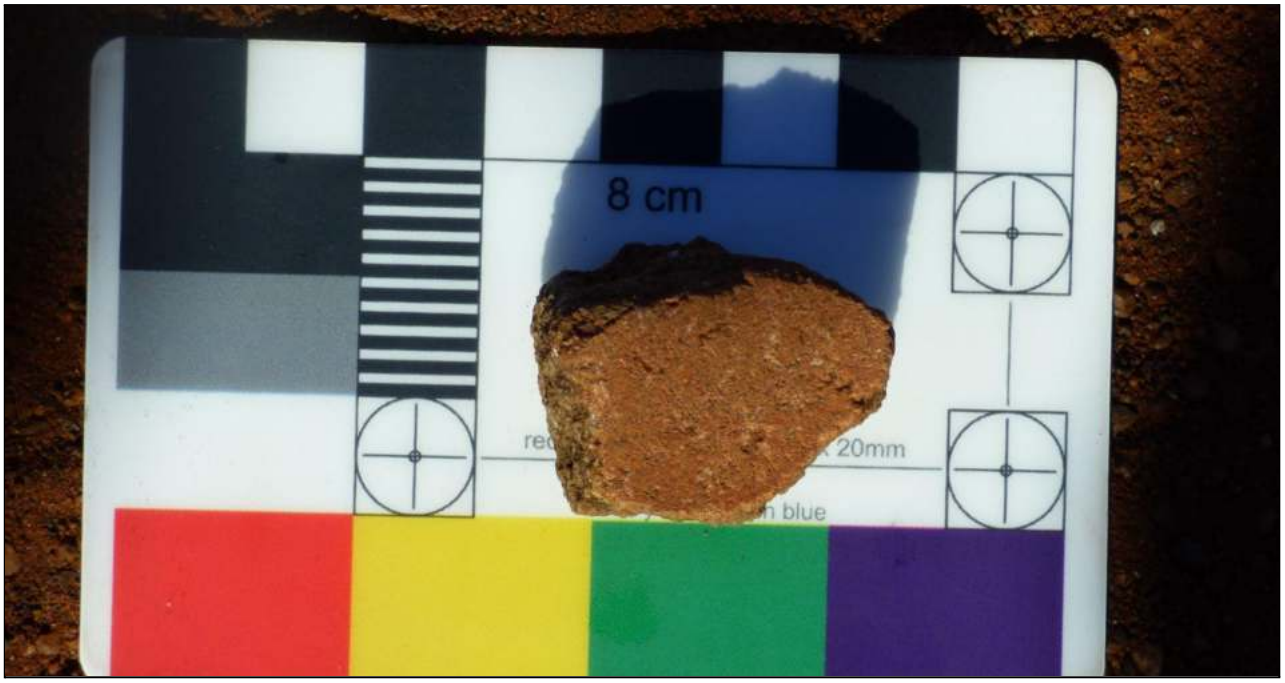

Figure 6.1: WP001

Figure 6.2: WP002

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Figure 6.3: WP003

Figure 6.4: WP004

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Figure 6.5 WP005

Figure 6.6 WP006

Figure 6.7 WP006

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Figure 6.8 WP007

Figure 6.9 WP008

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Figure 6.10 WP009

Figure 6.11 WP010

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5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT

5.1 Assessment of impact to Archaeological Resources

The majority of the resources identified are low-density surface scatters of MSA or early LSA lithics without any archaeological context. These resources are considered to be Not Conservation-Worthy and have been sufficiently recorded in this assessment.

The area in which the possible graves are situated is highly sensitive. It is possible to establish whether or not these are graves through the implementation of various technologies such as ground-truthing with sub-surface survey or prospecting technology. Additionally, such intervention could determine whether *unmarked* graves are also present in the area, and the extent of the possible burial ground. This could take place at the discretion of the developer. In the absence of subsurface survey data, it is recommended that a NO-GO ZONE of at least a 50m radius is implemented around the graves to ensure that the graves and their sense of place is not impacted by the proposed development.

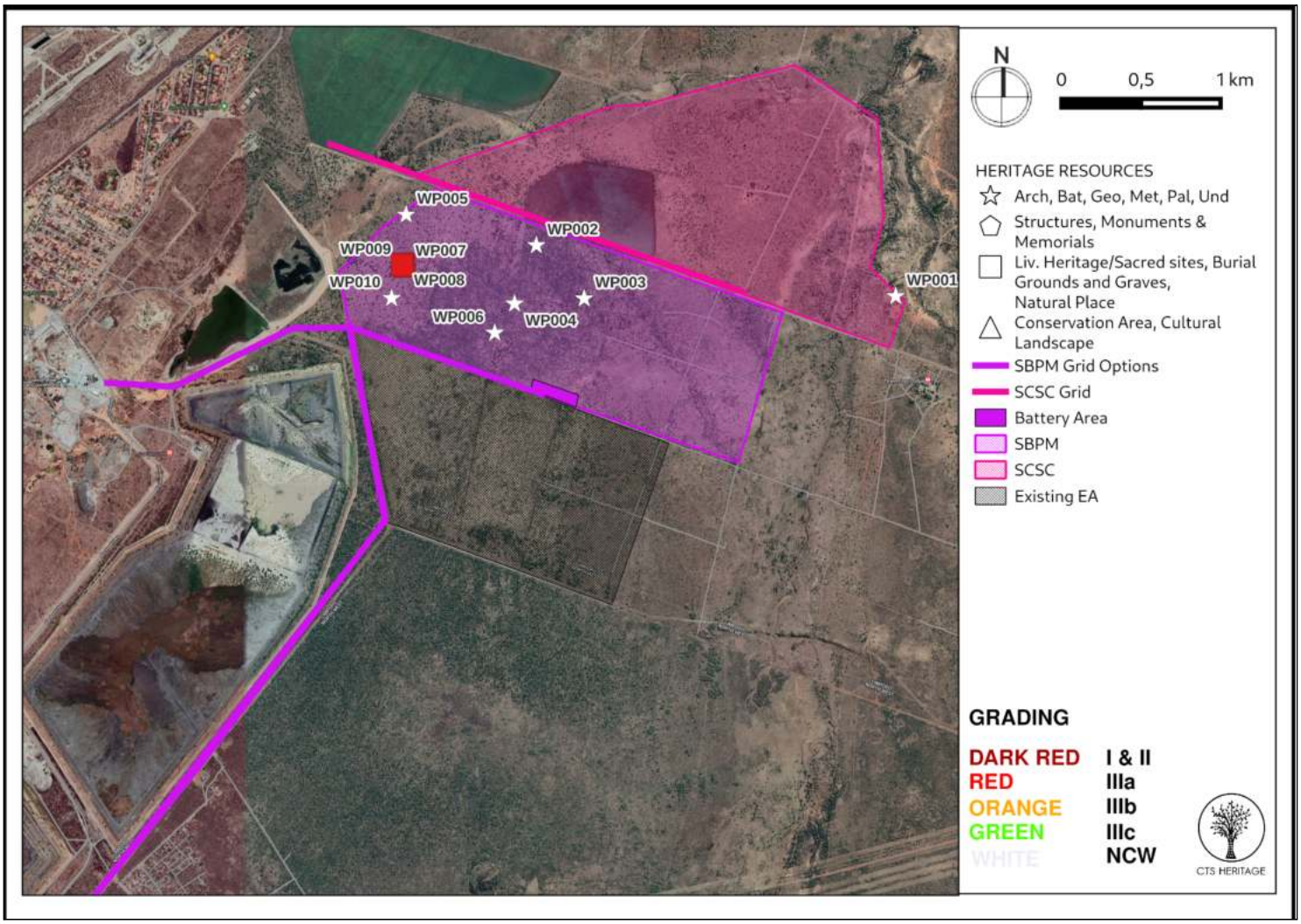

Figure 7.1: Map of heritage resources identified during the field assessment, relative to the proposed study area

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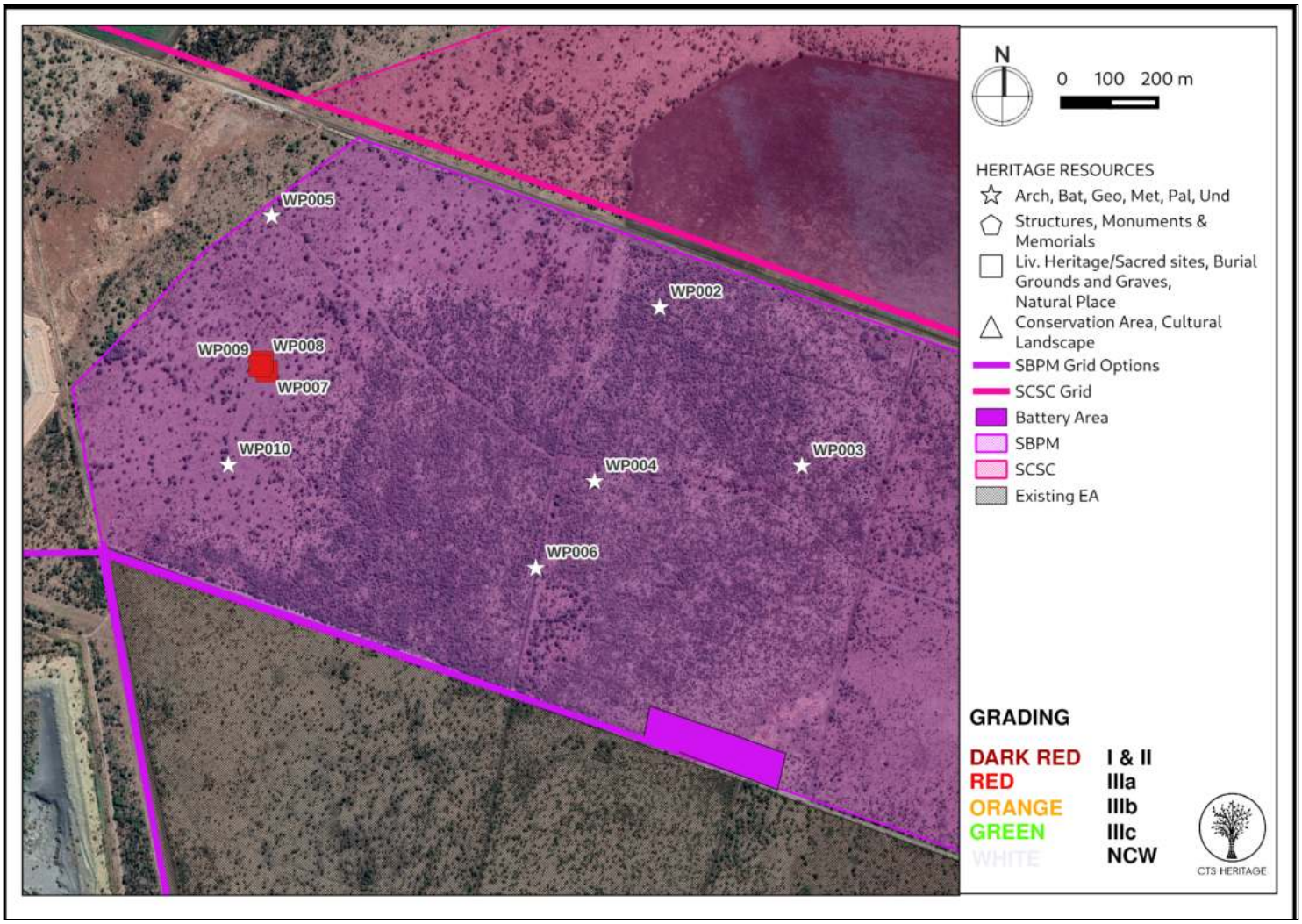

Figure 7.2: Map of heritage resources identified during the field assessment

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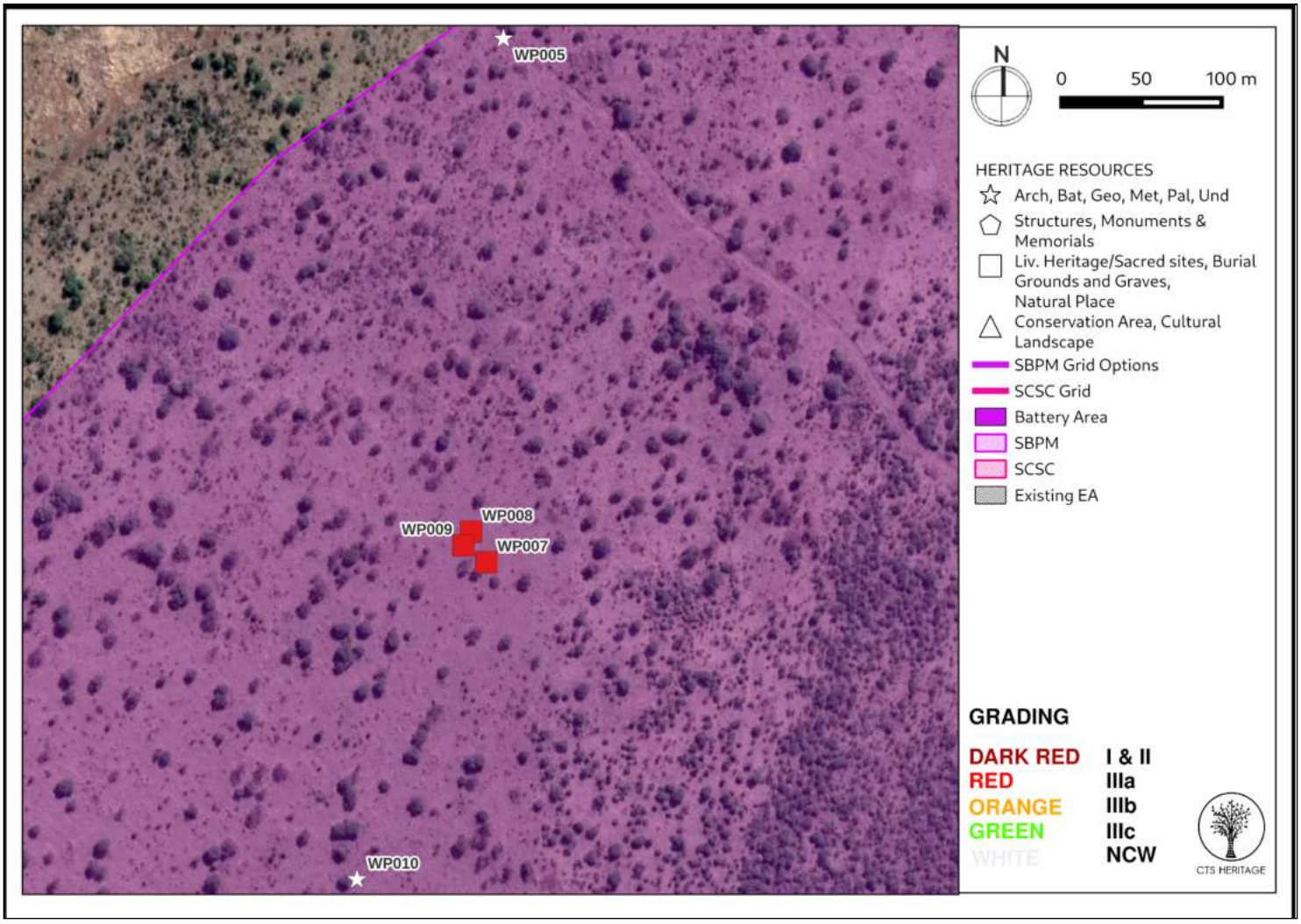

Figure 7.3: Map of heritage resources identified during the field assessment

6. CONCLUSION AND RECOMMENDATIONS

Overall, the archaeological field assessment has determined that the overall archaeological sensitivity of the development area is low with few ex situ surface scatters identified. These resources are not conservation-worthy and have been sufficiently recorded in this report.

A cluster of possible graves was also identified within the SBPM PV development area. As noted above, it is possible to establish whether or not these are graves through the implementation of various technologies such as ground-truthing with sub-surface survey or prospecting technology. Additionally, such intervention could determine whether *unmarked* graves are also present in the area, and the extent of the possible burial ground. This could take place at the discretion of the developer. In the absence of subsurface survey data, it is recommended that a NO-GO ZONE of at least a 50m radius is implemented around the graves to ensure that the graves and their sense of place is not impacted by the proposed development.

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The farmers and landowners were consulted, but they were not aware of any significant *in-situ* archaeological sites or graves on the property. While the field assessment was as thorough as possible, there remains the possibility that archaeological resources that were not recorded are present but are obscured by top soil or vegetation. Recommendations in this regard are included below.

Recommendations

There is no objection to the proposed development of the SCSC PV facility and its associated infrastructure on condition that:

- Should any previously unrecorded archaeological resources or possible burials be identified during the course of construction activities, work must cease in the immediate vicinity of the find, and SAHRA must be contacted regarding an appropriate way forward.

There is no objection to the proposed development of the SBPM PV facility and its associated infrastructure on condition that:

- A 50m no-go development buffer is implemented around sites WP007, WP008 and WP009 as per Figure 8
- Should any previously unrecorded archaeological resources or possible burials be identified during the course of construction activities, work must cease in the immediate vicinity of the find, and SAHRA must be contacted regarding an appropriate way forward.

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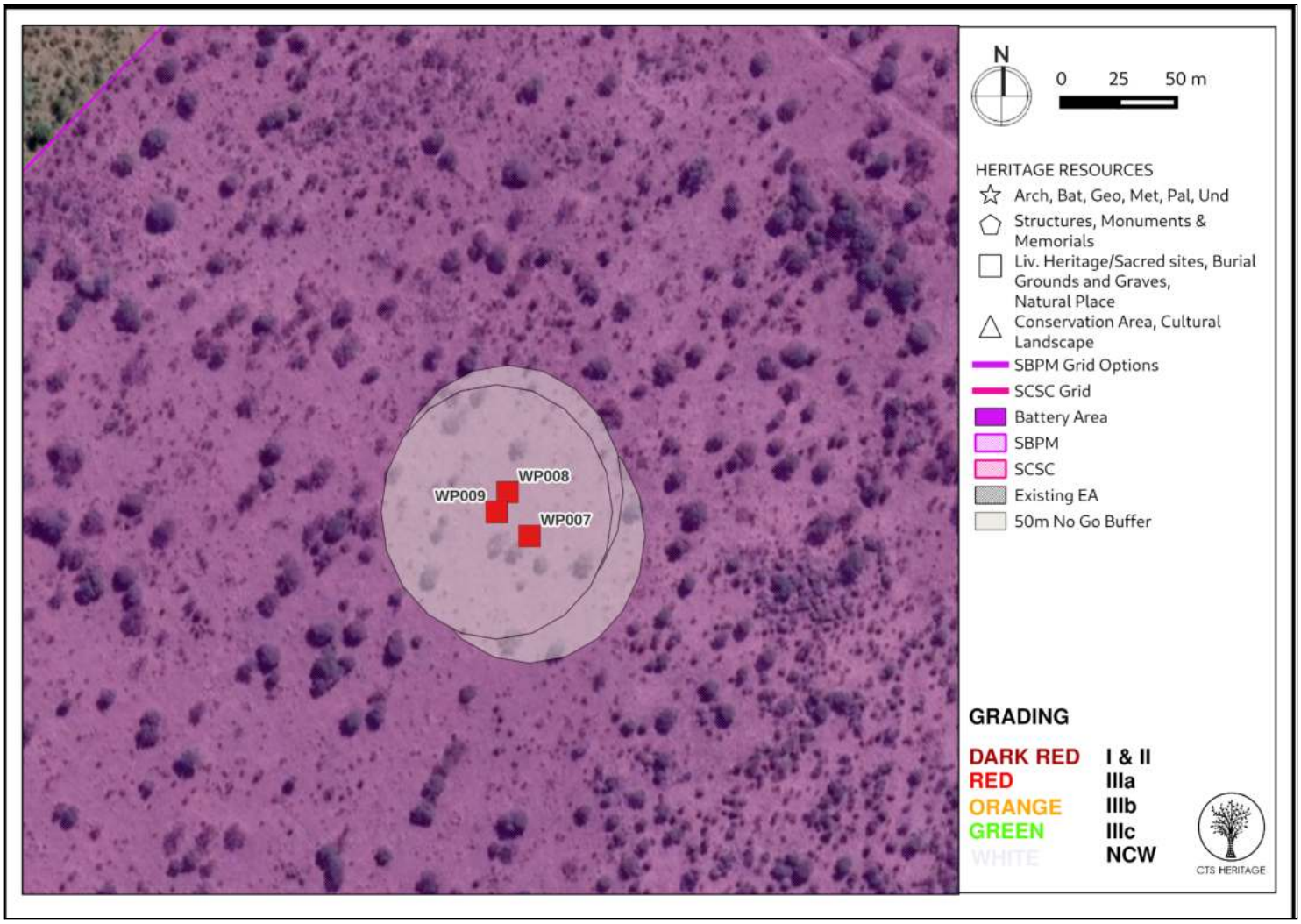

Figure 7.3: Map of heritage resources with recommended buffer of 50m

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7. REFERENCES

Heritage Impact Assessments				
Nid	**Report Type**	**Author/s**	**Date**	**Title**
109674	HIA Phase 1	M Hutten	01/05/2010	HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED DE PUT RESIDENTIAL TOWNSHIP DEVELOPMENT SOUTH OF NORTHAM, LIMPOPO
318678	AIA Phase 1	Neels Kruger	19/05/2014	ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) OF A DEMARCATED SURFACE PORTION ON THE FARM GROOTKUIL 409KQ FOR THE PROPOSED PLATINUM PHOTOVOLTAIC POWER PLANT DEVELOPMENT, THABAZIMBI LOCAL MUNICIPALITY, WATERBERG DISTRICT MUNICIPALITY, LIMPOPO PROVINCE
369743	Heritage Impact Assessment Specialist Reports	Prof. Anton van Vollenhoven	21/09/2016	HERITAGE IMPACT ASSESSMENT - Input for Environmental Impact Assessment report undertaken in terms of the National Environmental Management Act 107 of 1998
375246	PIA Desktop	Bruce Rubidge	01/12/2015	Palaeontological Desktop Study Siyanda Chrome Smelting Company Pty. Ltd
5057	AIA Phase 1	Frans Roodt	20/02/2007	Phase 1 Heritage Resources Impact Assessment (Scoping & Evaluation) Rhebokkloof Wild Life Estate Thabazimbi, Limpopo
5702	AIA Phase 1	Johnny Van Schalkwyk	01/02/2003	Arch Survey Mantserre-Kraalhoek-Mopyane Water Scheme, NW Province
5706	AIA Phase 1	Johnny Van Schalkwyk, Frank Teichert, Anton Pelser	01/06/2003	A Survey of Archaeological Sites for the Amandelbult Platinum Mine Seismic Exploration Program
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FIELD NOTES

Phase 1 Archaeological/Heritage Impact Assessment

Site ID: SCSC solar PV and battery storage facility near Northam in the Limpopo and North West Provinces

Phase 1 survey conducted				
CRM Archaeologist	Heidi Fivaz		Date/s	2022-05-24
Additional surveyors	None			
Type of survey	Pedestrian/Vehicular		Transects	Dictated by landscape
Technical equipment	GPS	Locus App	Camera	Canon Lumix

PROJECT PARTICULARS

Technical information

Project description	
Project name	CTS21_280_1 Savannah Bakgatla Mine PV1 Northam
Description	Proposed development of SCSC solar PV and battery storage facility near Northam in the Thabazimbi Local Municipality within the Waterberg District Municipality in the Limpopo Province
Developer	
Main Street 1886 Proprietary Limited	
Development type	Solar Power Infrastructure
Consultants	
Environmental	Savannah
Heritage and archaeological	CTS (Fieldwork by UBIQUE Heritage Consultants)
Paleontological	
Property details	
Province	Limpopo
District municipality	Waterberg District Municipality
Local municipality	Thabazimbi Local Municipality
Topo-cadastral map	1: 50 000 2427CC
Farm name	Portion 3 of Farm Grootkuil 409
Closest town	Northam, Swartklip
GPS Co-ordinates	24°55'50.03"S/ 27°12'6.29"E

Property size	621.6 ha
Development footprint size	273 ha
Land use	
Previous	Agriculture
Current	Agriculture, grazing
Rezoning required	No
Sub-division of land	No

Development criteria in terms of Section 38(1) NHRA	Yes/No
Construction of a road, wall, power line, pipeline, canal or other linear forms of development or barrier exceeding 300m in length.	Yes
Construction of bridge or similar structure exceeding 50m in length.	No
Construction exceeding 5000m ^{2}.	Yes
Development involving three or more existing erven or subdivisions.	No
Development involving three or more erven or divisions that have been consolidated within the past five years.	No
Rezoning of site exceeding 10 000m ^{2}.	No
Any other development category, public open space, squares, parks, recreation grounds.	No

GENERAL ENVIRONMENT, INFRASTRUCTURE AND LANDSCAPE

Site description

Description of the general area affected by development
Type of environment
Dwaalboom Thornveld
Terrain description
The study area's terrain is relatively flat, sloping down towards the east.
Geology
Few small rocky outcrops, predominantly loamy clay soil (turf), with red soils in the northeast, east and southeast of the footprint.
Vegetation
Very densely vegetated with thorny trees and shrubs with a few broad-leaved tree species and dominated by an almost continuous layer of various grass species.
Waterways/sources
The Bier Spruit lies on the eastern boundary of the development footprint and runs through the southeastern part of the footprint. A tributary to the Bier Spruit traverses the northernmost section of the footprint, causing natural marshes and water catchment areas.
Site boundaries
Northern boundary: Fence, road, water tributary Eastern boundary: Bier Spruit Southern boundary: Fence and road. The proposed SCSC powerline runs along the fence and road. Western boundary: Open veldt and sunflower field

Site access		GPS Co-ordinates
Access from the main gate to the east of the development footprint		24°56'7.49"S 27°13'28.87"E
Disturbances		
Natural erosion	Flooding, animal grazing The area is utilised as grazing for herds of cows and wild game like blue-wildebeest, giraffes, zebras, kudus, and impala.	
Human-made	A previously cultivated field, currently filled with grass and weeds, is located in the southeast of the development footprint. An aerial photograph dating to 1987 shows this area has been cultivated since then at least (http://cdngiportal.co.za/photocentres/30K_PAN/498_234_Thabazimbi/498_234_009_01149.jpg)	
Notes		
The whole area within the development footprint shows signs of disturbance.		

Environmental recording

Way point	Photo number	Description	Location
Site-specific points of interest/ natural significance			
N/A	Folder Group 1	The southwestern area of the footprint	24°55'44.19"S 27°11'9.57"E
N/A	Folder Group 2	Waterlogged areas in the southwestern area of the footprint	24°55'40.87"S 27°11'25.44"E
N/A	Folder Group 3	Previously cultivated area	24°55'52.30"S 27°11'38.20"E
N/A	Folder Group 4	The northern area of the footprint	24°55'29.55"S 27°12'21.35"E 24°55'39.95"S 27°11'56.68"E
N/A	Folder Group 5	The southern area of the footprint	24°56'8.02"S 27°12'13.45"E
N/A	Folder Group 6	The southeastern area of the footprint along the dry riverbed of the Bier Spruit and water-eroded red sanded area to the east.	24°56'12.22"S 27°12'37.57"E 24°56'14.72"S 27°12'47.05"E
N/A	Powerline	Views along the path of the proposed powerline	24°55'44.75"S 27°10'46.90"E

HERITAGE RESOURCES RECORDING

Stone Age Resources Identified

Point ID & Site #	Photo #	Description		Period	Location	Field rating/ Significance/ Recommended Mitigation
NONE RECORDED		Type lithic/s				
		Raw material				
		N in m².				
		Context				
		Additional				

Historical Period Resources Identified

Point ID & Site #	Photo #	Description		Period	Location	Field rating/ Significance/ Recommended Mitigation
NONE RECORDED		Type of feature				No Mitigation Required
		Material				
		N in m².				
		Context				
		Additional				

Iron Age/ Agri-pastoral Early Farming Communities Resources Identified

Point ID & Site #	Photo #	Description		Period	Location	Field rating/ Significance/ Recommended Mitigation
WP001	P1130409	Type of feature	Isolated surface scatter		24°56'12.18"S 27°12'46.12"E	NCW No mitigation required
		Material	Low-fired ceramic sherd, undecorated			
		N in m².	1			
		Context	Alluvial deposit, no archaeological context			
		Additional	None			

Graves Identified

Point ID & Site #	Photo #	Description		Period	Location	Field rating/ Significance/ Recommended Mitigation
NONE RECORDED		Grave markers				
		Inscription				
		Graves' Orientation				
		Dimensions/ Extent				
		Additional				

Intangible Heritage Resources/ Cultural Landscape Identified

Point ID & Site #	Photo #	Description		Period	Location	Field rating/ Significance/ Recommended Mitigation
NONE RECORDED		Nature				
		Cultural evidence				
		Access				
		Affected community				
		Additional				

IDENTIFIED HERITAGE RESOURCES DISCUSSION

Specialist comments

Stone Age finds
N/A
Iron Age/ Agri-pastoralist Early Farming communities finds
A small piece of low-fired, undecorated pottery sherd was recorded *ex-situ* in an area showing water erosion signs. There is no archaeological context, and it is most likely an alluvial deposit from further north of the recording point
Historical finds
N/A
Identified graves
N/A

Intangible Heritage/ Cultural Landscape
N/A
Other
N/A

IDENTIFIED HERITAGE RESOURCES MITIGATION

Specialist recommendations

Stone Age finds
N/A
Iron Age/ Agri-pastoralist Early Farming communities finds
No mitigation is required as the find has no context and is not conservation worthy.
Historical finds
N/A
Identified graves
N/A
Intangible Heritage/ Cultural Landscape
N/A
Other
The area has previously been cultivated and disturbed by human and animal activity. Currently, however, the vegetation is very dense, and in large areas of the terrain, the ground surface is completely obscured. I consulted with the farmers and landowners, but they did not know of any significant in-situ sites or graves on the property. I recommend that CTS provide the developer with a Chance Finds Protocol to help mitigate any sites that may be sub-surface or covered with vegetation.

ADDITIONAL NOTES AND RESOURCES

Attached Field Data

Filename	File type	Description
Bakgatla SCSC PV1>Photos	Folder, jpgs	Folders named Group 1-6, Powerline, with photographs of the surveyed area and cultural material found
Survey Tracks	kml	Survey tracks of the study area, combined files from tracks recorded on Samsung S20FE with Locus Map app, and Garmin G-Trex 10

23_24_25 May 2022 combined		
WP001	kml	Waypoint recorded cultural material found
Aerial photograph 1987	jpg	Aerial photograph downloaded from CDNGI Geospatial Portal http://cdngiportal.co.za/photocentres/30K_PAN/498_234_Thabazimbi/498_234_009_01149.jpg
Additional Notes		
The area was surveyed as best as possible in the time provided and as the vegetation growth allowed. The survey tracks followed the farm roads, from which I conducted pedestrian surveys at various points. In addition, I followed animal tracks as these paths offered the clearest views of the ground surface and inspected areas with noticeable vegetation changes.		

Declaration of independence:

I, Heidi Flvaz, hereby confirm my independence as a heritage specialist and declare that:

- I am suitably qualified and accredited to act as an independent specialist in this application;
- I do not have any vested interests (either business, financial, personal or other) in the proposed development project other than remuneration for the heritage assessment and heritage management services performed;
- The work was conducted objectively and ethically, in accordance with a professional code of conduct and within the framework of South African heritage legislation.

Signed:

Date:

HEIDI FIVAZ

CRM ARCHAEOLOGIST & OBJECT CONSERVATOR

Heidi Fivaz has been a part of UBIQUE Heritage Consultants since 2016 and took over ownership in 2018. She is responsible for project management, surveys, research and report compilation. She holds a B.Tech. Fine Arts degree (2000) from Tshwane University of Technology, a BA Culture and Arts Historical Studies degree (2012) from UNISA and received her BA (Hons) Archaeology in 2015 (UNISA). She has received extensive training in object conservation from the South African Institute of Object Conservation and specialises in glass and ceramics conservation. She is also a skilled artefact and archaeological illustrator. Ms Fivaz was awarded her MA in Archaeology (with distinction) in 2021 by the University of South Africa (UNISA), focusing on historical and industrial archaeology. She is a professional member of the Association of South African Archaeologists and has worked on numerous archaeological excavation and surveying projects over the past twelve years.

CTS HERITAGE

APPENDIX 2: Heritage Screening Assessment

CTS HERITAGE

HERITAGE SCREENER

CTS Reference Number:	**CTS21_280_1**
SAHRA Case No.	**TBA**
Client:	**Savannah**
Date:	**February 2022**
Title:	**Proposed development of SCSC solar PV and battery storage facility near Northam in the Limpopo and North West Provinces**

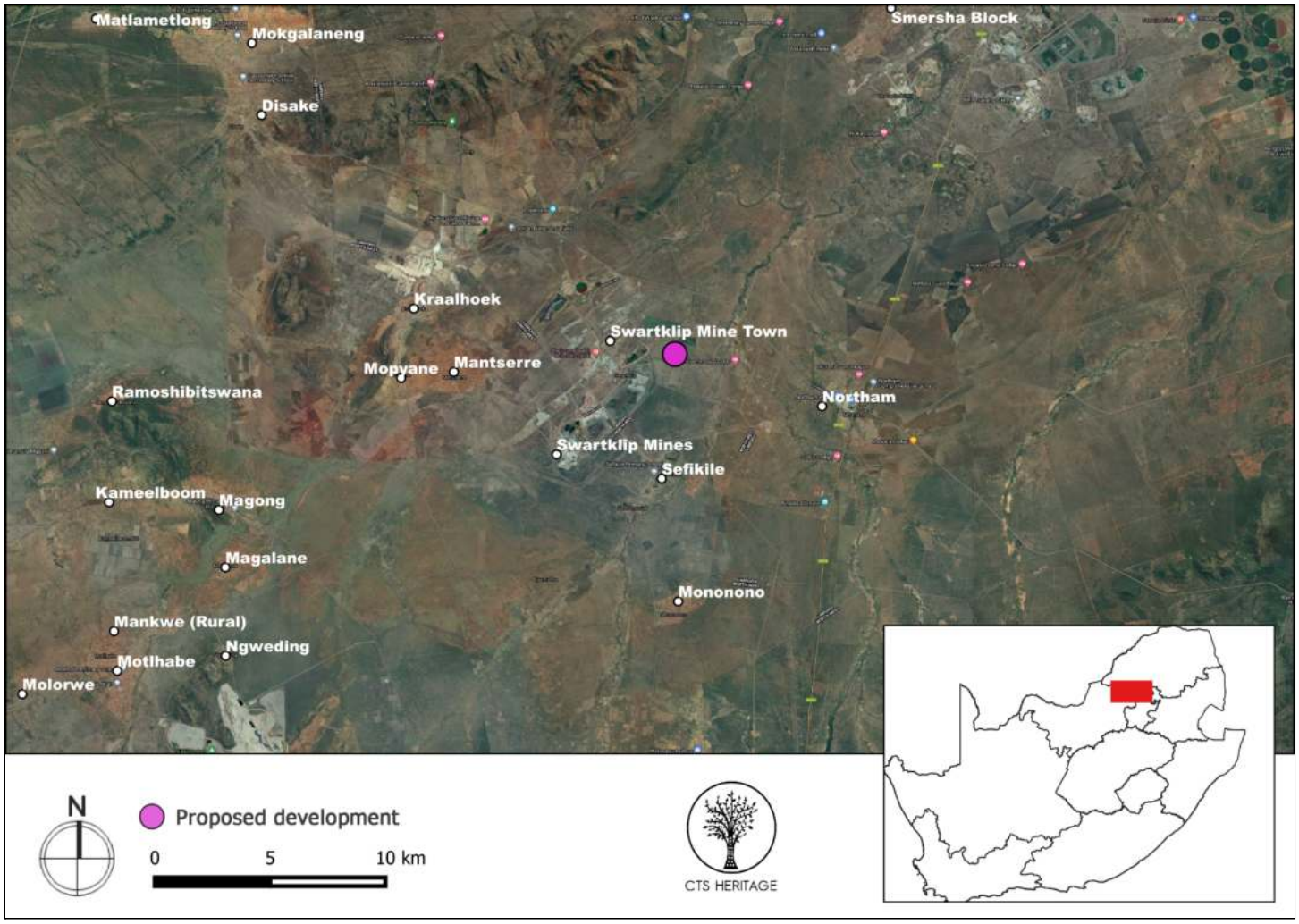

Figure 1a. Satellite map indicating the location of the proposed development in the Limpopo and North West Provinces

Recommendation:	**RECOMMENDATION** **Due to the potential for impact to significant heritage resources, it is recommended that an HIA is completed that assesses impacts to archaeological heritage.**

CTS Heritage
16 Edison Way, Century City, 7441
Tel: +27 (0)87 073 5739 **Email:** info@ctsheritage.com **Web:** www.ctsheritage.com

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1. Proposed Development Summary

Main Street 1886 Proprietary Limited proposes the development of the Solar PV facility and associated infrastructure on a site bordering the eastern end of the Siyanda Bakgatla Platinum Mine area near Northam. The solar PV facility will comprise several arrays of PV panels, a Battery Energy Storage System (BESS), and associated infrastructure with a contracted capacity of up to 100MW.

The purpose of the proposed project is to generate electricity for exclusive use by the Siyanda Mine, following which any excess power produced will be distributed to the national grid, if applicable. The construction of the PV facility aims to reduce the Siyanda Mine's dependency on direct supply from Eskom's national grid for operation activities, while simultaneously decreasing the mine's carbon footprint.

A preferred project site with an extent of ~1138ha and a development area of 574 ha has been identified by Main Street 1886 Proprietary Limited as a technically suitable area for the development of the Solar PV Facility. The study area is located on Portion 4 of Farm Grootkuil 409. The project site falls within the Thabazimbi Local Municipality within the Waterberg District Municipality in the Limpopo Province. The site is located ~6.5km west of the town of Northam and is accessible via the Swartklip Road which branches off the R510 provincial route.

Infrastructure associated with the solar PV facility will include:

- 100MW Solar PV array comprising PV modules and mounting structures.
- Inverters and transformers.
- Cabling between the project components.
- Battery Energy Storage System (BESS).
- On-site facility substation and power lines between the solar PV facility and the Mine and Eskom substation.
- Site offices, Security office, operations and control, and maintenance and storage laydown areas.
- Access roads, internal distribution roads

<u>Grid connection solution.</u>

To evacuate the generated power to the Siyanda Mine, the grid connection solution consisting of the following is proposed:

- The power generated by the solar PV facility will be transferred to the three step up transformers at the on-site/plant substation. Power will then be delivered from each step-up transformer as follows:
    - two 6.6 km, 33 kV transmission lines to the Mortimer substation with four step down transformers (33/6.6 kV; 10 MVA),
    - two 4.7 km, 33 kV transmission lines to the Fridge substation with two step down transformers (33/6.6 kV; 10 MVA),
    - two 2.9 km, 33 kV transmission lines to the Ivan substation with three step down transformers (33/11 kV; 10 MVA)

The grid connection is proposed on the following properties:

- Portion 3 of Farm Grootkuil 409
- Portion 4 of Farm Grootkuil 409
- Portion 5 of Farm Grootkuil 409
- Portion 0 of Farm Spitskop 410
- Portion 0 of Farm Turfbult 404

- Portion 1 of Farm Zwartklip 405
- Portion 2 of Farm Zwartklip 405

2. Application References

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

3. Property Information

Latitude / Longitude	24°55'50.03"S/ 27°12'6.29"E
Erf number / Farm number	» Portion 0 of Farm Grootkuil 409 » Portion 4 of Farm Grootkuil 409 » Portion 5 of Farm Grootkuil 409
Local Municipality	Thabazimbi Local Municipality and the Moses Kotane Local Municipality
District Municipality	Waterberg District Municipality and the Bojanala Platinum District Municipality
Province	Limpopo and North West
Current Use	Agricultural
Current Zoning	Agricultural

4. Nature of the Proposed Development

Total Surface Area	273 Ha
Depth of excavation (m)	TBA
Height of development (m)	TBA

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

TBA

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

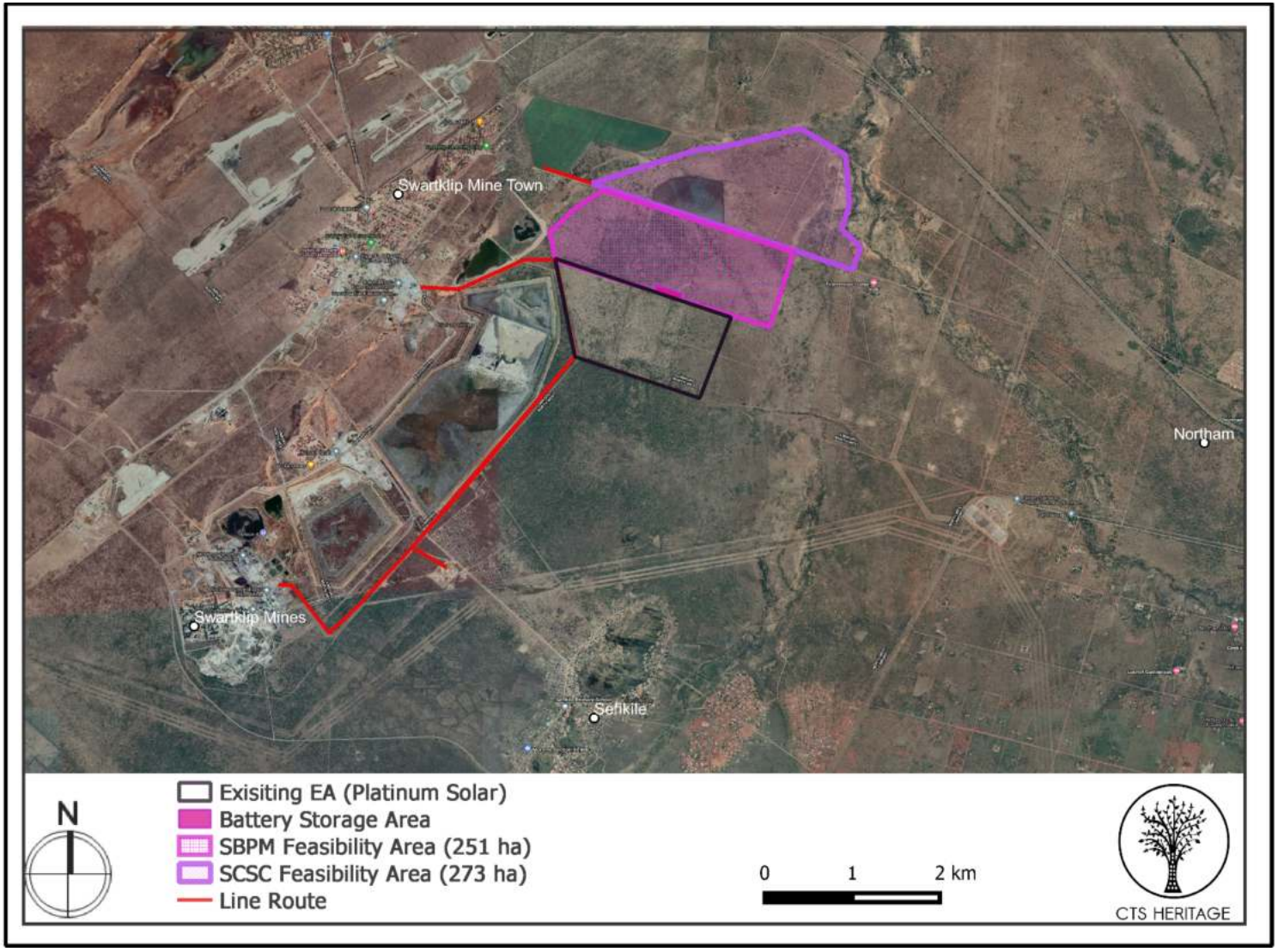

Figure 1b Overview Map. Satellite image (2019) indicating the proposed study area

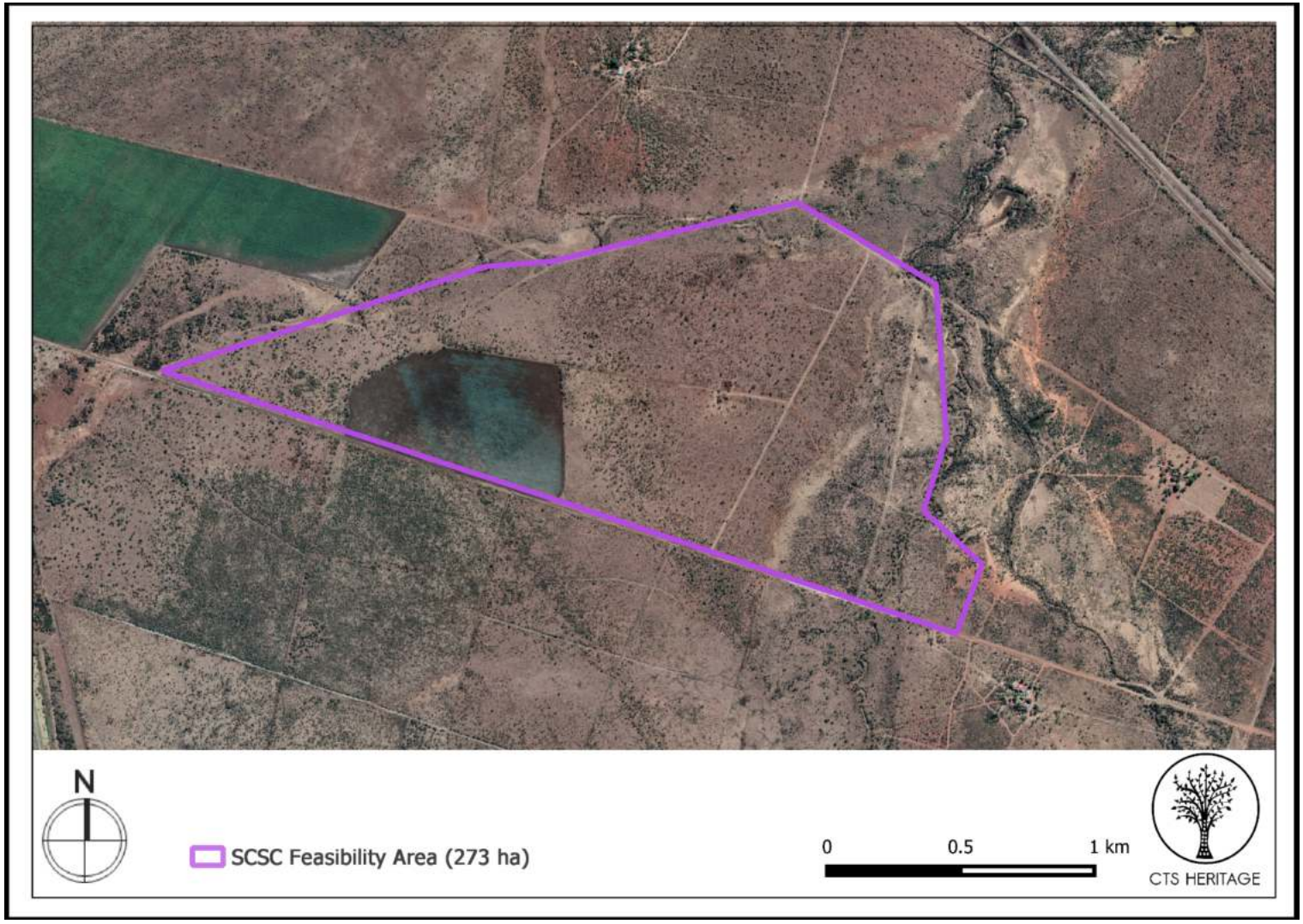

Figure 1c. Overview Map. Satellite image (2019) indicating the proposed study area at closer range.

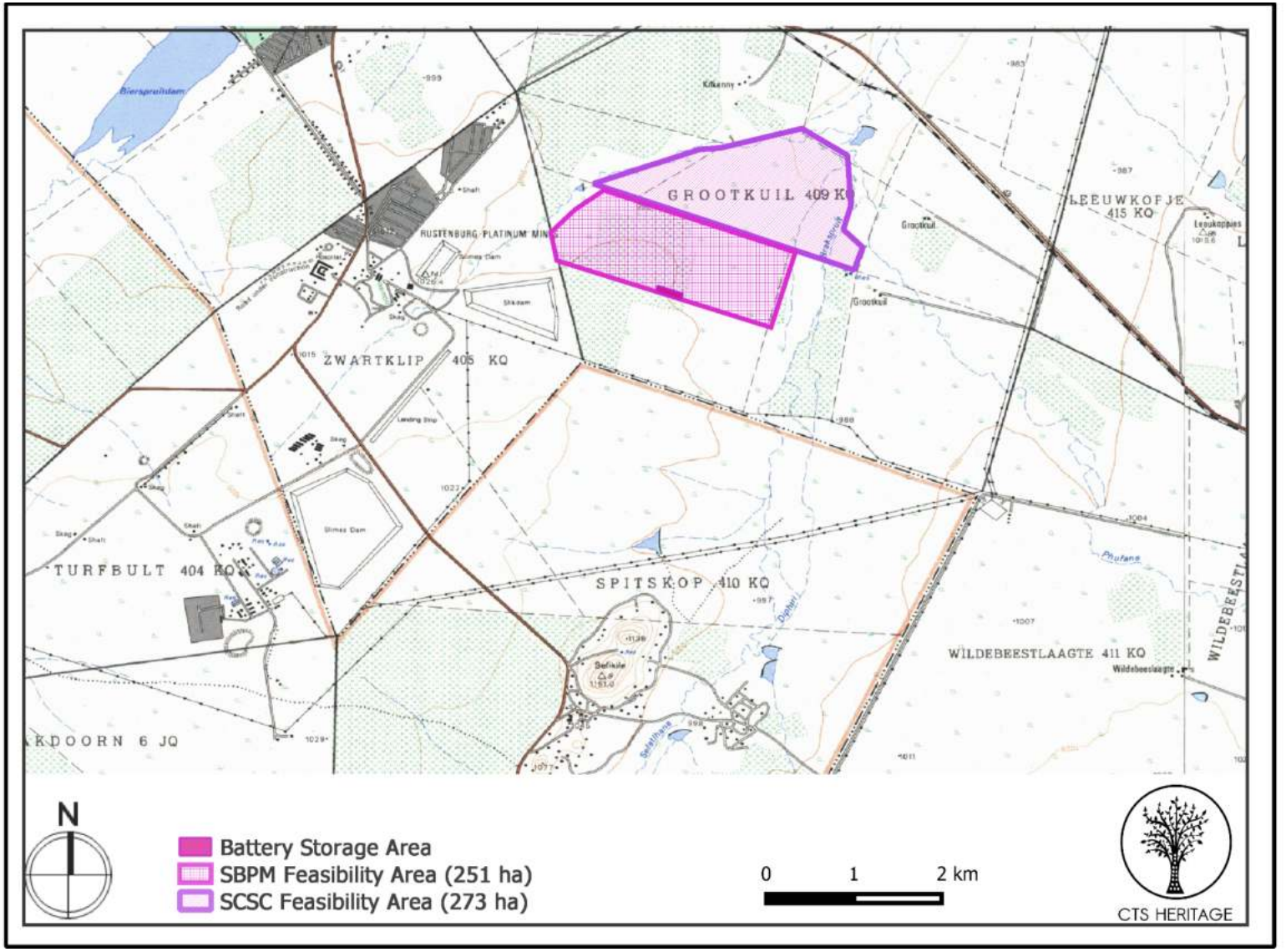

Figure 1d. Overview Map. 1:50 000 Topo Map indicating the proposed study area at closer range.

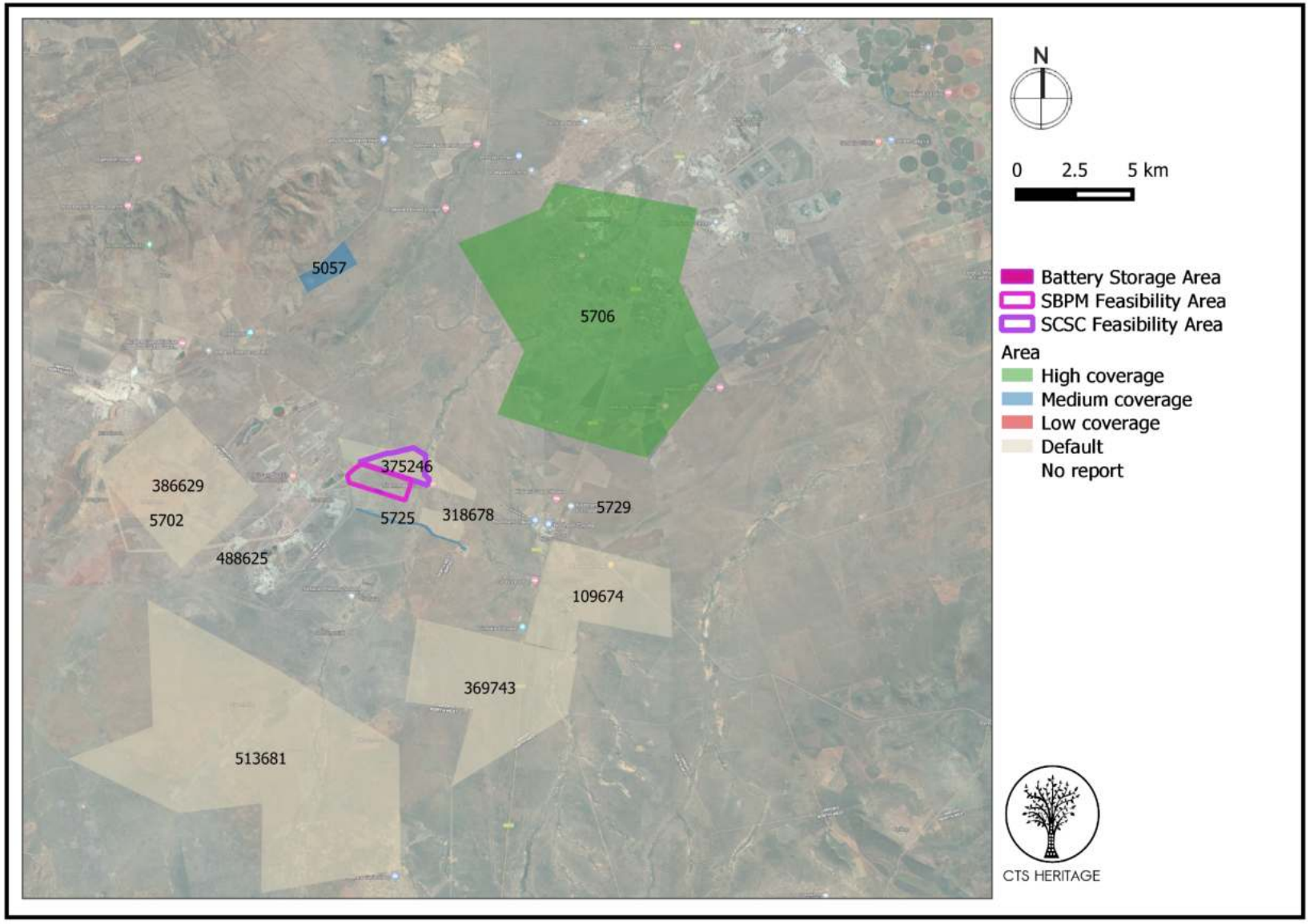

Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed study area within 10km, with SAHRIS NIDS indicated. Please see Appendix 2 for a full reference list.

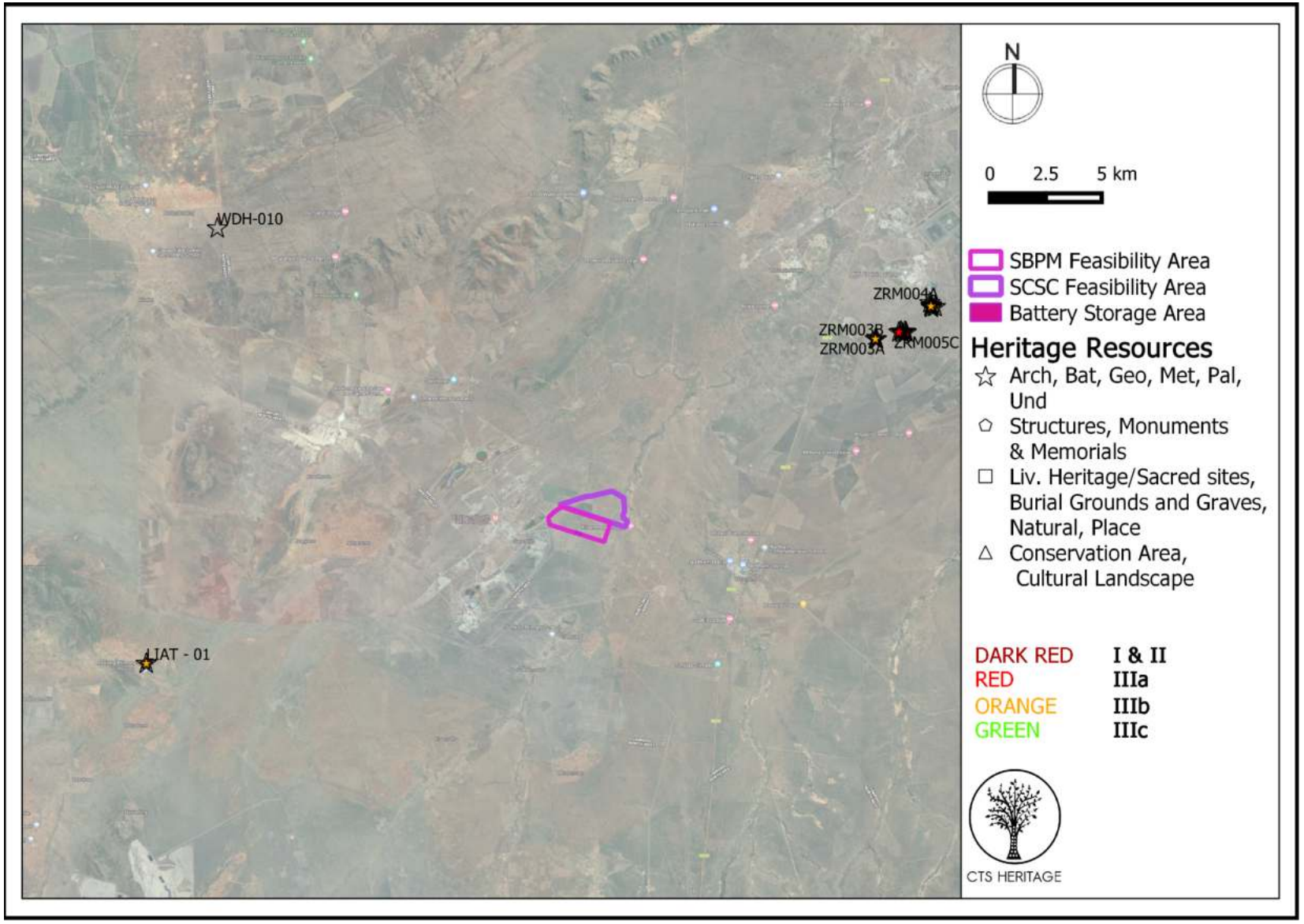

Figure 3. Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated. Please See Appendix 4 for a full description of heritage resource types.

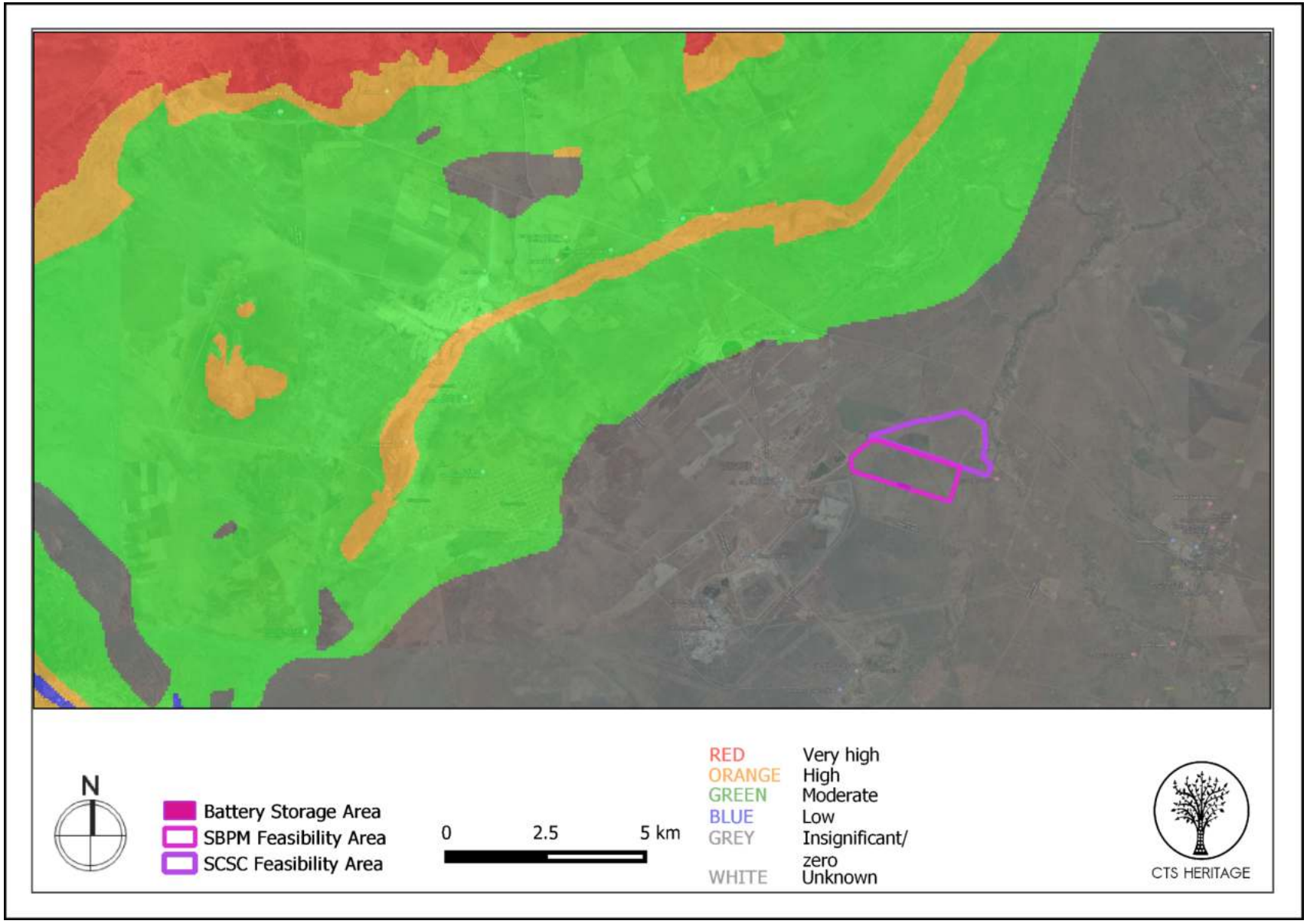

Figure 4. Palaeosensitivity Map. Indicating varied fossil sensitivity underlying the study area. Please See Appendix 3 for a full guide to the legend.

CTS HERITAGE

8. Heritage statement and character of the area

Background

The area proposed for development (Figures 1a, 1b, 1 c, 1d) is adjacent to the town of Swartklip, which is locally governed by the Thabazimbi Local Municipality. In isiZulu, the word Thabazimbi means "iron mountain", and the Zulu and Nyasa speaking people historically worked on this mountain, mining iron. Swartklip is also a mining town, with a population of 3, 517 people, and was built around the Siyanda Bakgalta Platinum Mine, which employs 5, 200 people.

Archaeology

Several archaeological and heritage impact assessments have been conducted in the area. Van Schalkwyk and colleagues conducted a high coverage archaeological survey 5 km away from the area proposed for development (2003, SAHRIS ID 5706). These practitioners reported several Late Iron Age stone-walled sites with faunal and cultural remains, including pottery. They suggested that these sites were likely associated with the Tswana people. The report did not mention the exact number of Iron Age sites that Van Schalkwyk and colleagues encountered during the survey. As for the Stone Age, Van Schalkwyk and colleagues documented only isolated Middle and Later Stone Age specimens. Conversely, other reports (Pistorius 2002, SAHRIS ID 5725; Roodt 2007, SAHRIS ID 50057; Kruger 2014, SAHRIS ID 318678), reported no Stone Age remains. Interestingly, surveys pertaining to the immediate vicinity of the proposed development report minimal amounts of archaeology. Kruger (2014) surveyed the Grootkuil farm (part of portion 5 of the farm, see Figure 2), and documented one historical structure that constituted the original Grootkuil farmhouse. Kruger also mentioned the presence of dense vegetation coverage at the farm that would lower the probability of discovering sub-surface cultural remains. Pistorius (2002) surveyed a narrow strip for the Eskom power line (see Figure 2, id 5725) on a neighbouring farm called Spitskop, and reported several ex situ potsherds.

As significant archaeological heritage has been documented in the broader region, it is possible that the prospective development may negatively impact on similar archaeological heritage.

Palaeontology

According to the SAHRIS Palaeosensitivity Map (Figure 4), the area proposed for development is underlain by sediments of zero palaeontological sensitivity. The area proposed for development has been previously assessed in a palaeontological desktop study conducted by Professor Bruce Rubidge (Palaeontological Desktop Study – Siyanda Chrome Smelting Company Pty. Ltd, SAHRIS ID 375246, 2015). In the assessment, Rubidge proposed that since the study area was underlain by gabbros and norites of the Precambrian Bushveld Igneous Complex, fossil preservation was highly unlikely. Rubidge, however, noted that fossil-bearing Quaternary alluvial deposits, although not visible on a geological map, could be still present in low-lying areas. Rubidge, hence, recommended that if fossils were exposed as a result of development activities, that a qualified palaeontologist should be contacted to assess the exposure for fossils before further development took place so that the necessary rescue operations were implemented. This recommendation is reiterated for this project.

RECOMMENDATION

Due to the potential for impact to significant heritage resources, it is recommended that an HIA is completed that assesses impacts to archaeological heritage.

9. Scoping Assessment Impact Table

Impact

- Impact to archaeological and built environment resources
- Impact to palaeontological resources
- Impact to Cultural Landscape
- Cumulative Impact

Desktop Sensitivity Analysis of the Site

- Impact to significant archaeological resources such as Stone Age artefact scatters, remnants of Iron Age settlements, burial grounds and graves, historical artefacts, historical structures and rock art engravings through destruction during the development phase and disturbance during the operational phase is possible.
- Impacts to palaeontological resources are unlikely.
- There is the potential for the cumulative impact of proposed solar energy facilities to negatively impact the cultural landscape due to a change in the landscape character from rural and mining to semi-industrial, however, due to the density of mining activities in the area, the impact on the experience of the cultural landscape is not foreseen to be significant.

Issue	Nature of Impact	Extent of Impact	No-Go Areas
Impact to significant heritage resources through destruction during the development phase and disturbance during the operational phase.	Destruction of significant heritage resources	Local scale with broader impacts to scientific knowledge	None known at present

Gaps in knowledge & recommendations for further study

The heritage resources in the area proposed for development are not yet sufficiently recorded

Based on the available information, including the scale and nature of the proposed development, it is likely that significant heritage resources will be impacted by the proposed development and as such it is recommended that further heritage studies are required in terms of section 38 of the NHRA with specific focus on impacts to archaeological heritage.

CTS HERITAGE

APPENDIX 1: List of heritage resources in proximity to the development area

Site ID	Site no	Full Site Name	Site Type	Grading
134428	ZRM003A	ZONDEREINDE MINE	Stone walling	Grade IIIb
134431	ZRM003B	ZONDEREINDE MINE	Stone walling	Grade IIIb
134433	ZRM004A	ZONDEREINDE MINE	Stone walling	Grade IIIb
134434	ZRM004B	ZONDEREINDE MINE	Stone walling	Grade IIIb
134435	ZRM004C	ZONDEREINDE MINE	Stone walling	Grade IIIb
134436	ZRM004D	ZONDEREINDE MINE	Stone walling	Grade IIIb
134438	ZRM004E	ZONDEREINDE MINE	Stone walling	Grade IIIb
134443	ZRM005A	ZONDEREINDE MINE	Stone walling	Grade IIIa
134444	ZRM005B	ZONDEREINDE MINE	Stone walling	Grade IIIa
134445	ZRM005C	ZONDEREINDE MINE	Stone walling	Grade IIIa
134446	ZRM005D	ZONDEREINDE MINE	Stone walling	Grade IIIa
134448	ZRM005E	ZONDEREINDE MINE	Stone walling	Grade IIIa
138436	WDH-010	Woodhouse	Artefacts	
25271	LIAT - 01	LIA Tswana site	Settlement	Grade IIIb

CTS HERITAGE

APPENDIX 2: Reference List

Nid	Report Type	Author/s	Date	Title
109674	HIA Phase 1	M Hutten	01/05/2010	HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED DE PUT RESIDENTIAL TOWNSHIP DEVELOPMENT SOUTH OF NORTHAM, LIMPOPO
318678	AIA Phase 1	Neels Kruger	19/05/2014	ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) OF A DEMARCATED SURFACE PORTION ON THE FARM GROOTKUIL 409KQ FOR THE PROPOSED PLATINUM PHOTOVOLTAIC POWER PLANT DEVELOPMENT, THABAZIMBI LOCAL MUNICIPALITY, WATERBERG DISTRICT MUNICIPALITY, LIMPOPO PROVINCE
369743	Heritage Impact Assessment Specialist Reports	Prof. Anton van Vollenhoven	21/09/2016	HERITAGE IMPACT ASSESSMENT - Input for Environmental Impact Assessment report undertaken in terms of the National Environmental Management Act 107 of 1998
375246	PIA Desktop	Bruce Rubidge	01/12/2015	Palaeontological Desktop Study â€“ Siyanda Chrome Smelting Company Pty. Ltd
5057	AIA Phase 1	Frans Roodt	20/02/2007	Phase 1 Heritage Resources Impact Assessment (Scoping & Evaluation) Rhebokkloof Wild Life Estate Thabazimbi, Limpopo
5702	AIA Phase 1	Johnny Van Schalkwyk	01/02/2003	Arch Survey Mantserre-Kraalhoek-Mopyane Water Scheme, NW Province
5706	AIA Phase 1	Johnny Van Schalkwyk, Frank Teichert, Anton Pelser	01/06/2003	A Survey of Archaeological Sites for the Amandelbult Platinum Mine Seismic Exploration Program
5725	AIA Phase 1	Julius CC Pistorius	01/12/2002	A Cultural Heritage Assessment for Eskom's Proposed New Power Line Between the Spitskop Substation and the Union Plats Substation in the Limpopo
5729	AIA Phase 1	JM Maguire, Calvin van Wijk	12/06/2008	Phase 1 Archaeological Impact Assessment for Portion 128 of the Farm Koedoesdoorns KQ 414, Northam, Limpopo Province

CTS HERITAGE

APPENDIX 3 - Keys/Guides

Key/Guide to Acronyms

AIA	Archaeological Impact Assessment
DARD	Department of Agriculture and Rural Development (KwaZulu-Natal)
DEFF	Department of Environment, Forest 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.

CTS HERITAGE

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.