



22 February 2019
536396

The Case Officer
South African Heritage Resources Agency
111 Harington Street
Cape Town
8001

Attention: Natasha Higgitt

Dear Natasha

Proposed Swartberg Haul Road at Black Mountain Mine, Aggeneys – Letter of Motivation for Exemption to Undertake an HIA (SAHRIS Case ID: 13278)

Black Mountain Mining (Pty) Ltd (BMM) has appointed SRK Consulting (South Africa) (Pty) Ltd (SRK) to undertake a Basic Assessment (BA) and associated authorisation processes in support of applications for Environmental Authorisation (EA), Water Use Authorisation (WUA) and Heritage Approval for the proposed new haul road at Black Mountain Mine ('the Mine') near Aggeneys in the Northern Cape (the project).

SRK submitted an EA application form to the Department of Mineral Resources (DMR) on 26 November 2018 and a 30-day public commenting period on the draft BA Report (BAR) commenced on 27 November 2018. The comment from the South African Heritage Resources Agency, dated 18 January 2019, refers (see Appendix A), whereby it was requested that a Heritage Impact Assessment (HIA) be undertaken for the development footprint.

In response to a telephone conversation with you on 21 January 2019, SRK appointed Cedar Tower Services Heritage (hereafter referred to as "the heritage specialist") to undertake a site survey to identify potential heritage resources within the development footprint. The findings of the site survey are included in the Heritage Study attached as Appendix B. In summary, the heritage specialist concluded that:

- Based on a desktop study, the bedrock underlying the property is unfossiliferous and of no palaeontological interest;
- No heritage resources were identified within the development footprint during the site survey;

Partners R Armstrong, S Bartels, AH Bracken, N Brien, JM Brown, CD Dalgliesh, BM Engelsman, R Gardiner, M Hirsch, W Jordaan, WC Joughin, DA Kilian, S Kisten, F Lake, JA Lake, V Maharaj, I Mahomed, HAC Meintjes, MJ Morris, GP Nel, VS Reddy, T Shepherd, PJ Shepherd, MJ Sim, VM Simposya, JS Stiff, HFJ Theart, KM Uderstadt, AT van Zyl, MD Wanless, ML Wertz, A Wood

Directors AJ Barrett, CD Dalgliesh, WC Joughin, V Maharaj, VS Reddy, PE Schmidt, PJ Shepherd

Associate Partners PJ Aucamp, CM Bauman, LSE Coetser, M du Toit, SG Jones, L Linzer, JI Mainama, L Nedeljkovic, RD O'Brien, S Reuther, M van Huyssteen, D Visser

Consultants JR Dixon, *PrEng*, GC Howell, *PrEng*, T Hart, *MA, TTHD*, PR Labrum, *PrEng*, RRW McNeill, *PrTech Eng*, PN Rosewarne, *PrSci Nat, MSc*, AA Smithen, *PrEng*, TR Stacey, *PrEng*, DSc, PJ Terbrugge, *PrSci Nat, MSc*, DJ Venter, *PrTech Eng*

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South America



- Consequently, the project will have no impact on heritage resources; and
- There is no concern from a heritage perspective and no further heritage studies are required.

Considering the above conclusions, SRK thus motivates for exemption to undertake an HIA for the development footprint.

We await your urgent approval of the exemption as the Final BAR must be submitted to DMR by 15 March 2019.

For any further clarification, please contact Amy Hill at SRK: Tel: (021) 659 3060, Fax: (086) 530 7003, or Email: ahill@srk.co.za

Yours faithfully,

SRK Consulting (South Africa) (Pty) Ltd

SRK Consulting - Certified Electronic Signature

 **srk consulting**

536396/43516/Letter

7284-4742-168-HILL-22/02/2019

This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

Amy Hill

Environmental Consultant

Appendix A:
SAHRIS Comment

Our Ref:



an agency of the
Department of Arts and Culture

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South African Heritage Resources Agency | 111 Harrington Street | Cape Town
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Enquiries: Natasha Higgitt
Tel: 021 462 4502
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CaseID: 13278

Date: Friday January 18, 2019
Page No: 1

Interim Comment

In terms of Section 38(3), 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Black Mountain Mining (PTY) LTD

1 Penge Road
Aggeneys
8893

To alleviate traffic and safety concerns, and to optimise haul distances at Black Mountain Mine, Black Mountain Mining (Pty) Ltd proposes to construct a new haul road at the Mine('the project'). The proposed new haul road will be approximately 1.2 km long and 8 m wide on Portion 4, Farm Zuurwater No 62, Aggeneys, Namakwa District Municipality, Northern Cape.

SRK Consulting has been appointed by Black Mountain Mining (Pty) Ltd to conduct an Environmental Authorisation (EA) Application for the proposed Swartberg Haul Road at Black Mountain Mine, Aggeneys, Northern Cape Province.

A Final Basic Assessment Report (BAR) has been submitted in terms of the National Environmental Management Act, 107 of 1998 (NEMA) and NEMA Environmental Impact Assessment (EIA) Regulations. The proposed activities include the construction of a new 1.2 km long haul road, a laydown area, river crossings and alterations to the existing powerline.

A Heritage Impact Assessment (HIA) conducted by Palaeo Field Services in 2017 has been included in the BAR.

Rossouw, L. 2017. Phase 1 Heritage Impact Assessment for the proposed construction of a 800 m section of gravel road and associated infrastructure at the Black Mountain Decline on the farm Zuurwater 62, Khai-Ma Local Municipality, NC Province.

No heritage resources were identified as part of the HIA, and the author noted that the proposed development area is not palaeontologically significant. No further recommendations were provided.

Interim Comment

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CaseID: 13278

Date: Friday January 18, 2019
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The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit does not accept the submitted report as the report does not assess the development footprint under application including the associated infrastructure. A new HIA must be conducted that assesses the area under application as part of the EA and BAR process. The HIA must comply with section 38(3) of the National Heritage Resources Act, Act 25 of 1999 (NHRA) and the 2007 SAHRA Minimum Standards: Archaeological and Palaeontological Components of Impact Assessments.

SAHRA advises the Environmental Assessment Practitioner (EAP) to apply for an extension of the BAR process in terms of section 19(b) of the NEMA Regulations. Further comments will be issued upon receipt of the above.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

Natasha Higgitt
Heritage Officer
South African Heritage Resources Agency

Phillip Hine
Acting Manager: Archaeology, Palaeontology and Meteorites Unit
South African Heritage Resources Agency

ADMIN:

Proposed Swartberg Haul Road at Black Mountain Mine, Aggeneys

Our Ref:



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Department of Arts and Culture

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Direct URL to case: <http://www.sahra.org.za/node/518880>
(DMR - NC, Ref: NCS 30/5/1/2/2/(517)MR)

Appendix B: Heritage Study

ARCHAEOLOGICAL SPECIALIST STUDY

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

Proposed development of a new haul road at Black Mountain Mine, near Aggeneys in the Northern Cape Province.

SAHRIS Case ID: 13278

Prepared by



CTS HERITAGE

In Association with

SRK

And

Ubique Heritage Consulting

February 2019



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THE INDEPENDENT PERSON WHO COMPILED A SPECIALIST REPORT OR UNDERTOOK A SPECIALIST PROCESS

I Jenna Lavin, as the appointed independent specialist hereby declare that I:

- act/ed as the independent specialist in this application;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- have and will not have no vested interest in the proposed activity proceeding;
- have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2010 (specifically in terms of regulation 17 of GN No. R. 543) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- have ensured that the names of all interested and affected parties that participated in terms of the specialist input/study were recorded in the register of interested and affected parties who participated in the public participation process;
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and
- am aware that a false declaration is an offence in terms of regulation 71 of GN No. R. 543.

Jenna Lavin

Signature of the specialist

CTS Heritage

Name of company

February 2019

Date



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EXECUTIVE SUMMARY

To alleviate traffic and safety concerns, and to optimise haul distances at Black Mountain Mine, Black Mountain Mining (Pty) Ltd proposes to construct a new haul road at the Mine('the project'). The proposed new haul road will be approximately 1.2 km long and 8 m wide on Portion 4, Farm Zuurwater No 62, Aggeneys, Namakwa District Municipality, Northern Cape.

The area proposed for development has been previously disturbed in the south-west as a result of mining and construction activities. There is an existing pipeline traversing the development area, as well as an Eskom powerline running from north-west to south-east across the site. The area proposed for development is dominated by "klipveld" and is sloped from the Black Mountain in the north towards the secondary road in the south. The whole development area is covered in stones, except for two open patches in the south-west. There are at least 7 dry riverbeds crossing the proposed road alignment running from north (upslope) to south. In the south-west, it is apparent that construction machinery have graded a small road towards the north. This road is currently not in use.

The archaeological field assessment identified no heritage resources and as such, there is no objection to the proposed development on heritage grounds.



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1. INTRODUCTION

1.1 Background Information on Project

To alleviate traffic and safety concerns, and to optimise haul distances at Black Mountain Mine, Black Mountain Mining (Pty) Ltd proposes to construct a new haul road at the Mine('the project'). The proposed new haul road will be approximately 1.2 km long and 8 m wide on Portion 4, Farm Zuurwater No 62, Aggeneys, Namakwa District Municipality, Northern Cape.

Black Mountain Mining (Pty) Ltd (BMM) mines and processes copper, lead and zinc at the Black Mountain and Gamsberg Mines near the town of Aggeneys in the Northern Cape. The Black Mountain Mine ('the Mine'), west of Aggeneys, comprises a processing area (including waste management and ancillary facilities) and two underground shafts: Deeps shaft and Swartberg shaft. Trucks transport ore and waste rock from the Swartberg shaft using an existing haul road to the processing area. The haul road intersects numerous ancillary roads in the processing area. Access to the Waste Rock Dump (WRD) at this intersection requires heavy vehicles to turn sharply which presents traffic issues and safety concerns. To alleviate traffic and safety concerns, and to optimise haul distances at the Mine, BMM proposes to construct a new haul road from the top of the WRD to the weighbridge area located adjacent to the existing haul road ('the project').

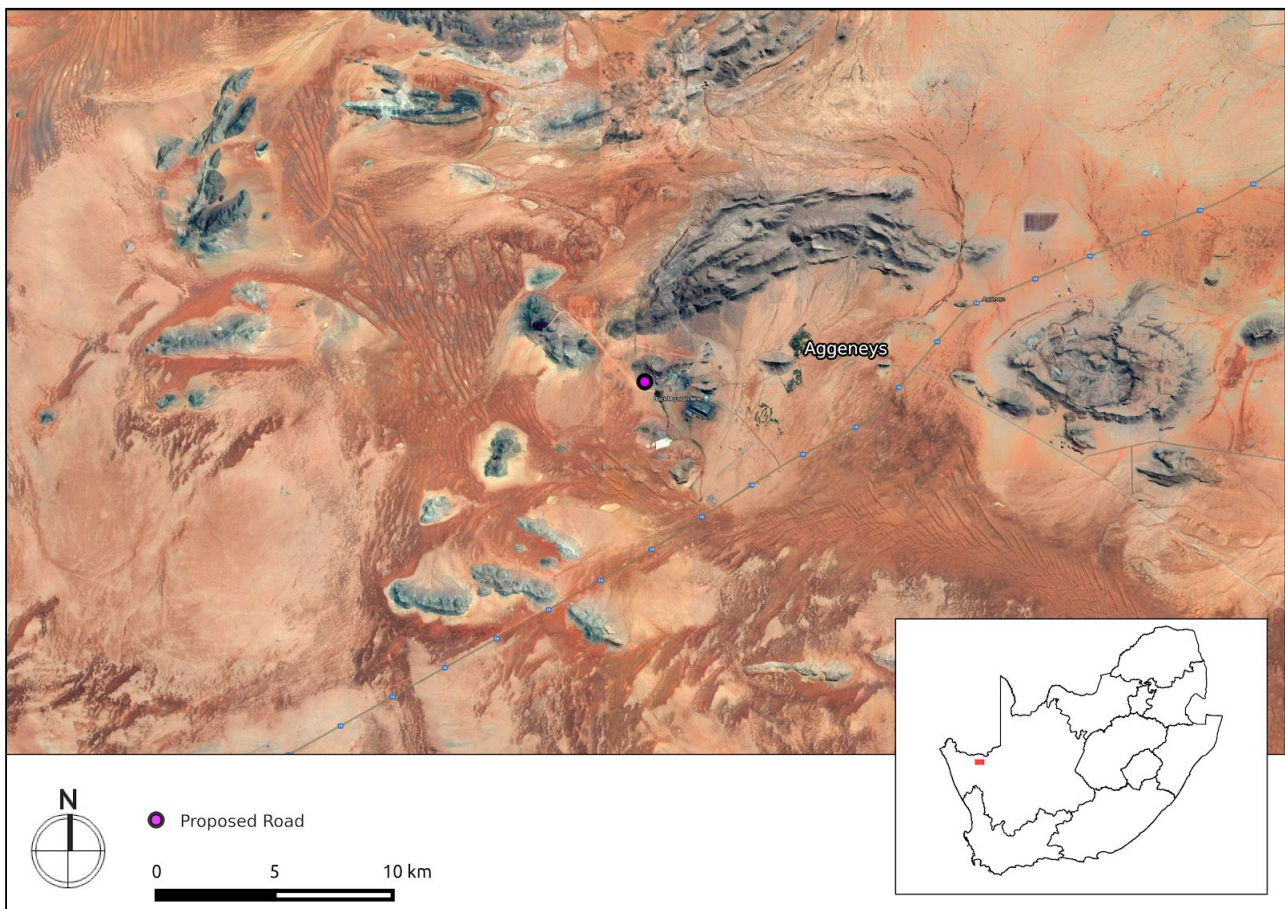


Figure 1.1: Close up satellite image indicating proposed location of development



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1.2 Description of Property and Affected Environment

The area proposed for development has been previously disturbed in the south-west as a result of mining and construction activities. There is an existing pipeline traversing the development area, as well as an Eskom powerline running from north-west to south-east across the site. The area proposed for development is dominated by “klipveld” and is sloped from the Black Mountain in the north towards the secondary road in the south. The whole development area is covered in stones, except for two open patches in the south-west. There are at least 7 dry riverbeds crossing the proposed road alignment running from north (upslope) to south. In the south-west, it is apparent that construction machinery have graded a small road towards the north. This road is currently not in use.

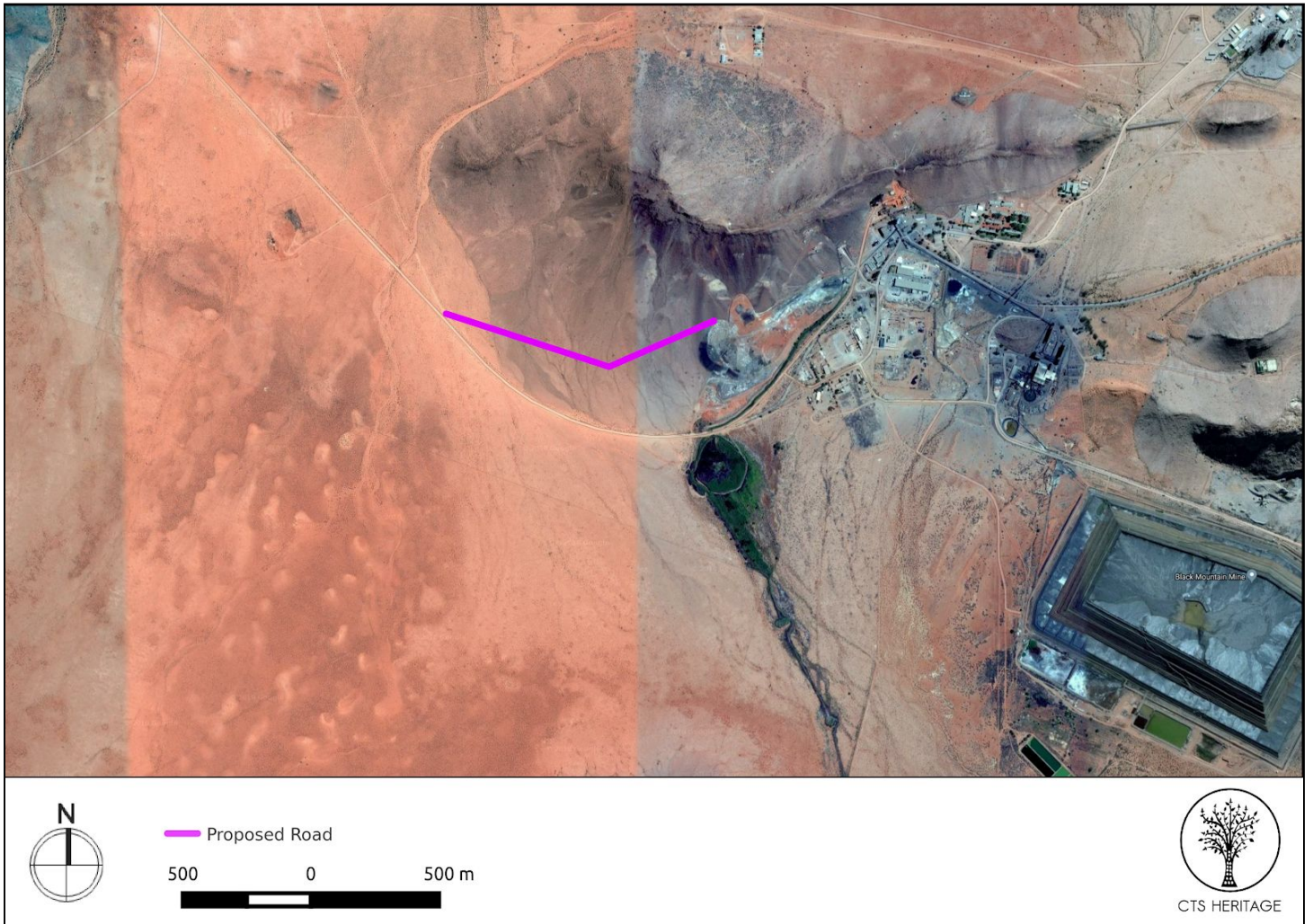


Figure 1.2: Close up satellite image indicating proposed location of development



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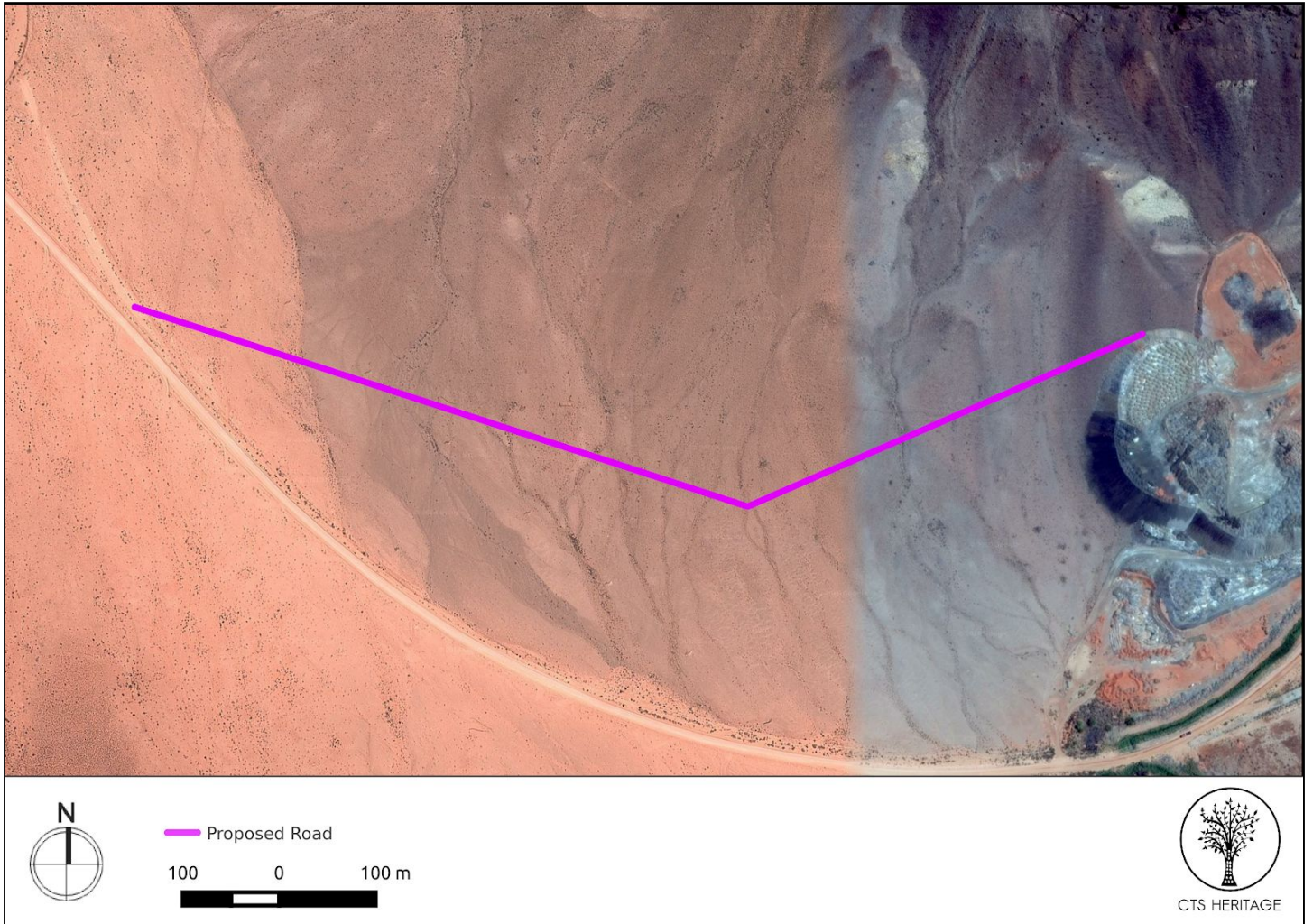


Figure 1.3: Close up satellite image indicating proposed location of development

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 11 February 2019 to determine what archaeological resources are likely to be impacted by the proposed development.
- 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.



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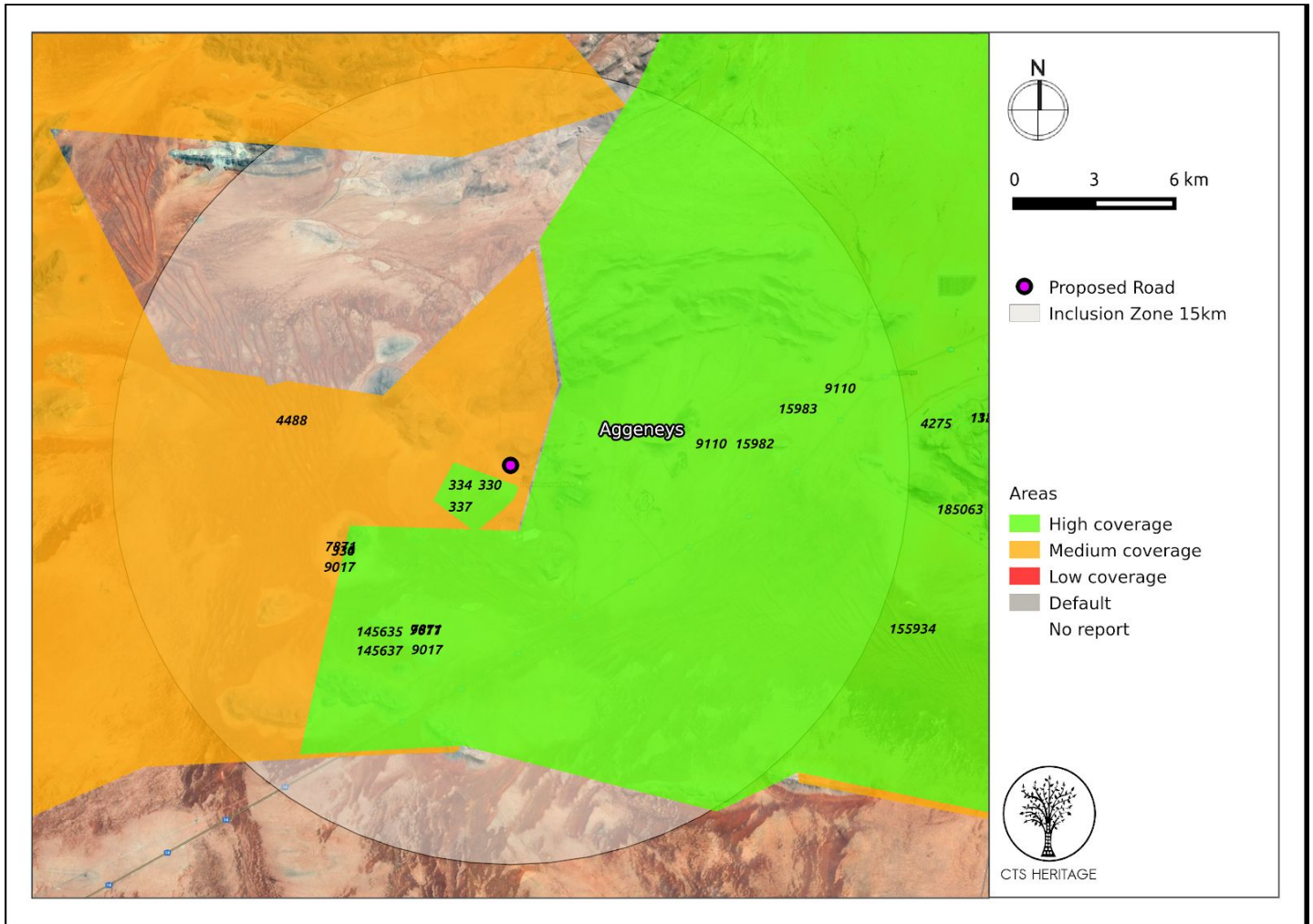


Figure 2: Close up satellite image indicating proposed location of development in relation to heritage studies previously conducted

2.3 Constraints & Limitations

No constraints or limitations were experienced.

3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT

Mining in this area began with the sinking of the first shaft on the Swartberg in 1929. Large scale mining, however, was not undertaken until 1970 when a diamond drilling programme was initiated. Aggeneys town was established in 1976 to facilitate Black Mountain Mine. Prior to mining, it is likely that this area was periodically occupied by Khoe and San herders and hunter-gatherers making their way across the Karoo.

Archaeology

A detailed archaeological assessment was conducted of a nearby area by Halkett and Webley (2012, SAHRIS NID 9110) for a proposed solar energy facility. They noted that “Stone artefacts scatters from the Middle Stone Age are sparsely distributed across the study area and are found on gravel pavements between the vegetation; The absence of associated archaeological material, and lack of discrete individual sites reduces the significance of the material overall; Further mitigation of sites is considered unnecessary in this case. There are no buildings of heritage significance on the



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site.” In addition, Smith (2012, SAHRIS NID 334) conducted a field assessment for a proposed solar facility located approximately 1km away from the proposed development area. Smith noted that “Tracks, dry pans and sub-surface indications using spring-hare and aardvark holes all produced widely scattered material with no concentrations of note.” Similar conclusions were reached by Morris (2011, SAHRIS NID 7871). In addition, the nearest known archaeological resources, according to SAHRIS, are of Grade IIIc significance and are located approximately 7km away from the proposed development area (Figure 3 and Appendix 1).

Palaeontology

The area proposed for development is overlain with Quarternary cover sands (of low palaeontological sensitivity), and is underlain by granites of the Koeipoort FM and quartzite of the Wortel Fm (of zero palaeontological sensitivity). The general area has been subject to numerous palaeontological impact assessments. Butler (2016, SAHRIS NID 406396) notes that “The broader area near Aggeneys is underlain by the Mid-Proterozoic (Mokolian) basement rocks of the Namaqua-Natal Metamorphic Province (Bushmanland Group) as well as Cenozoic superficial deposits. The Proterozoic granite-gneiss basement rocks of the Namaqua-Natal Metamorphic Province do not contain any fossils because they are igneous in origin or too highly metamorphosed and their palaeontological sensitivity is similarly low. The low palaeontological sensitivity of the Cenozoic superficial deposits can be attributed to the scarcity of fossil heritage in these deposits. In Palaeontological terms the significance is thus rated as LOW (negative).” Pether reaches a similar conclusion in his assessment (2012, SAHRIS NID 15982) noting of the general area that the “bedrock underlying the property is unfossiliferous and of no palaeontological interest.”

Cultural Landscape

The landscape within which the proposed development is located is dominated by mining infrastructure. While the evolution of the mine layout has interest in terms of the evolution of technology and its effects through time, this ‘cultural landscape’ has no heritage significance per se. The site identified in Figure 3b, located in close proximity to the development area, is indicated as being “transport infrastructure” on SAHRIS, however no photographs or additional information is available regarding the heritage significance of this site.



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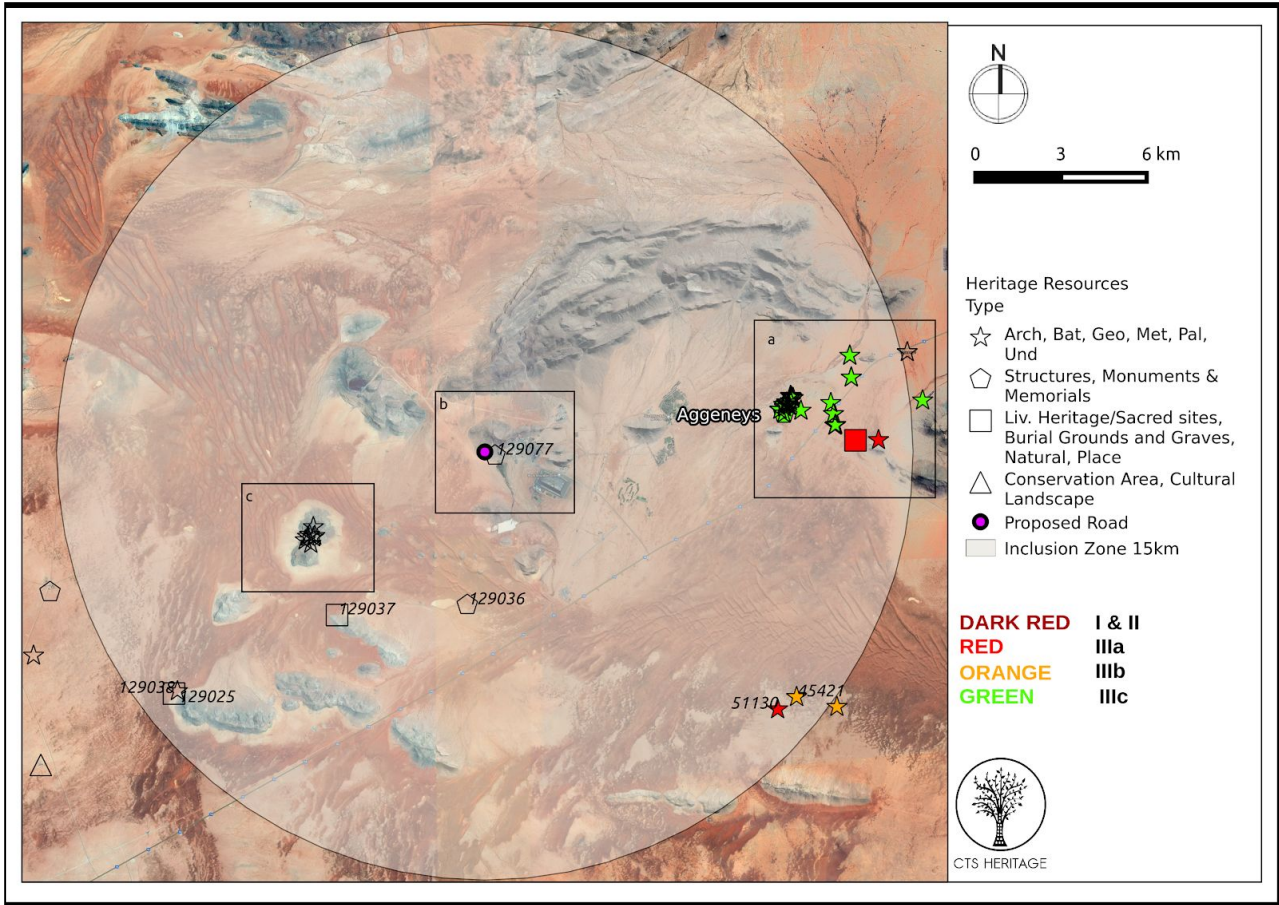


Figure 3. Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SahrIs Site IDs indicated

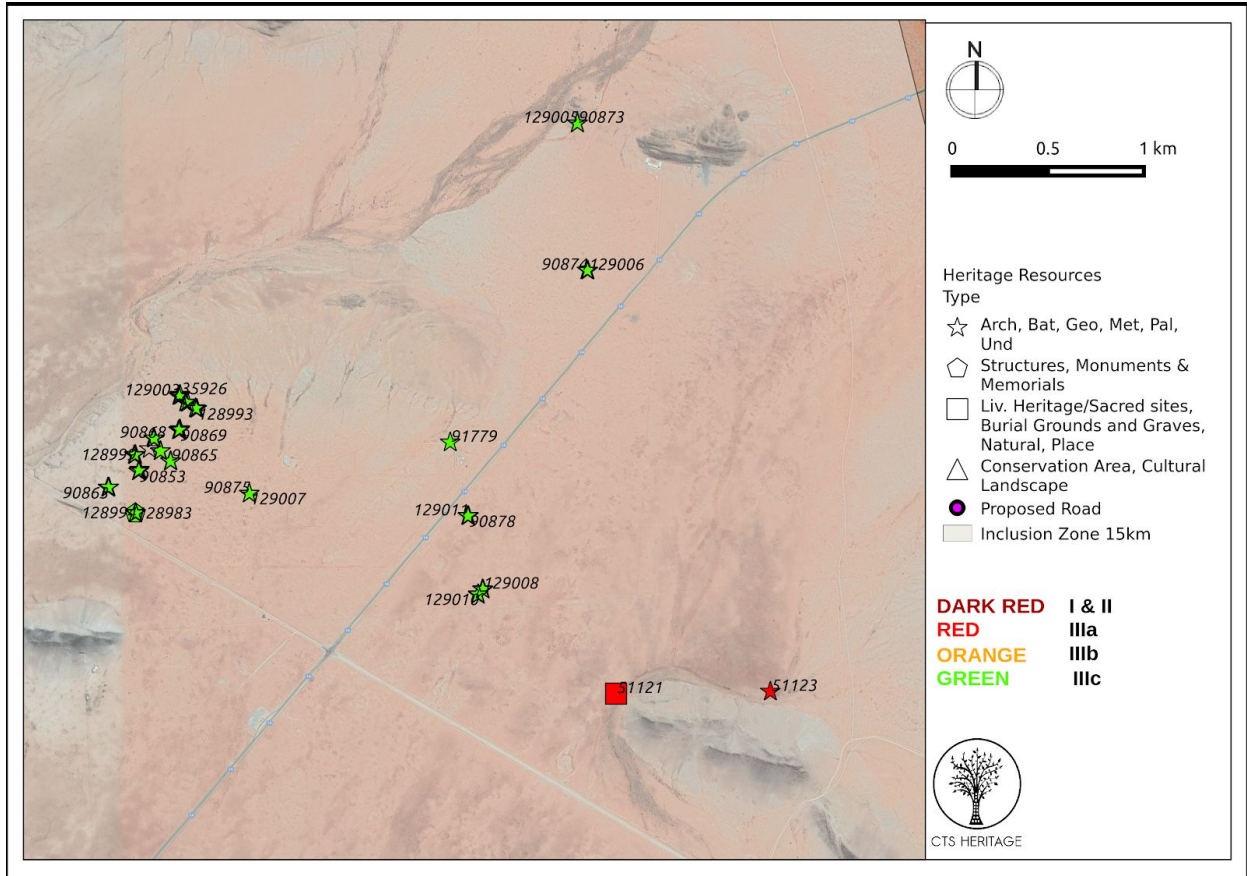


Figure 3a. Inset



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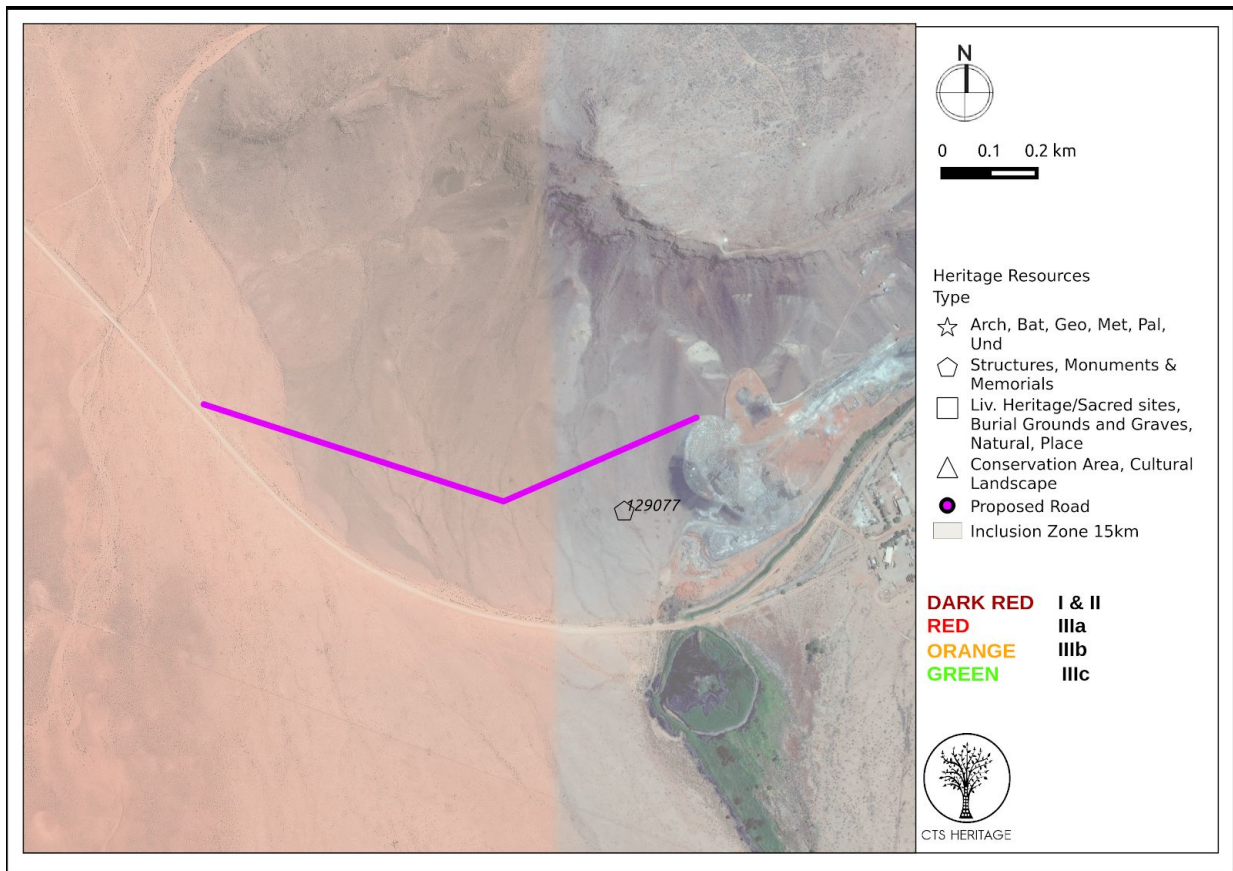


Figure 3b. Inset

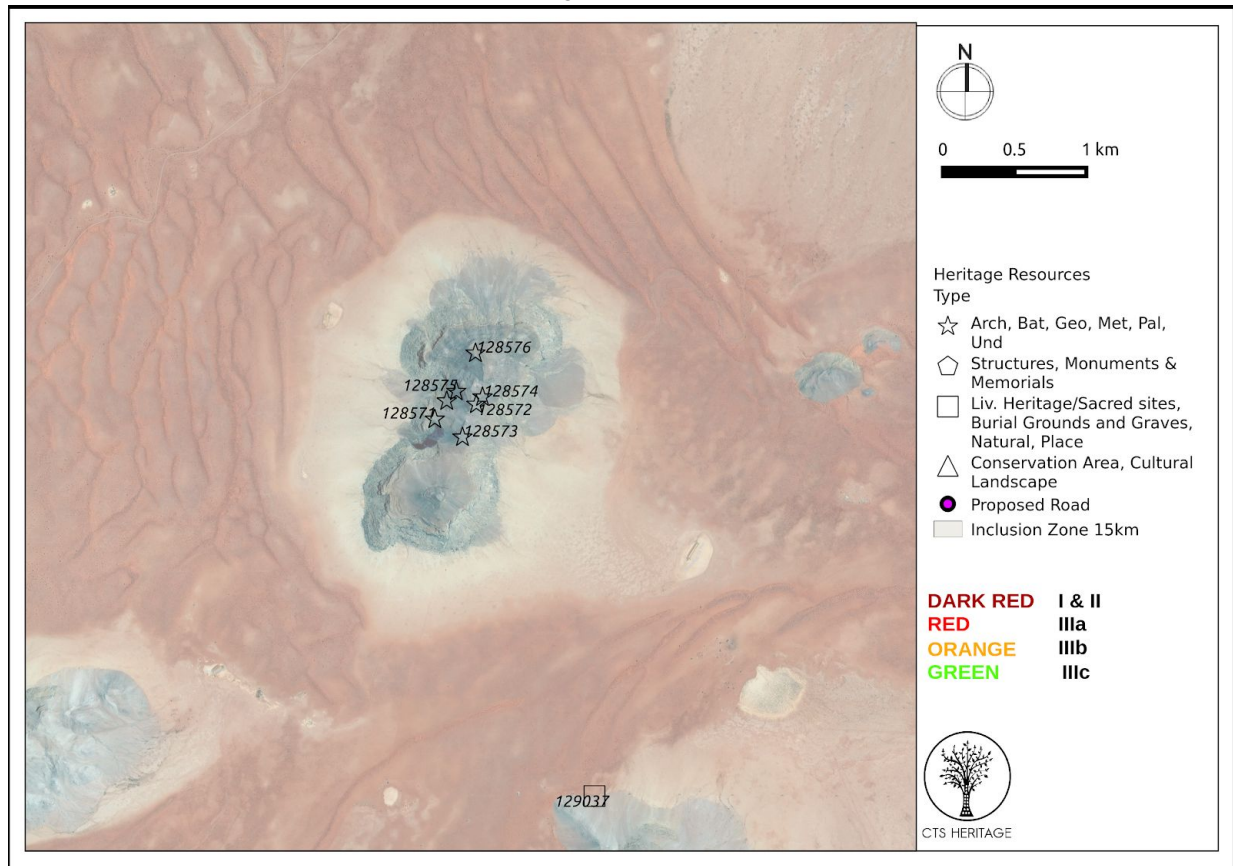


Figure 3c. Inset



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4. IDENTIFICATION OF HERITAGE RESOURCES

4.1 Field Assessment



Figure 4.1: Contextual Images

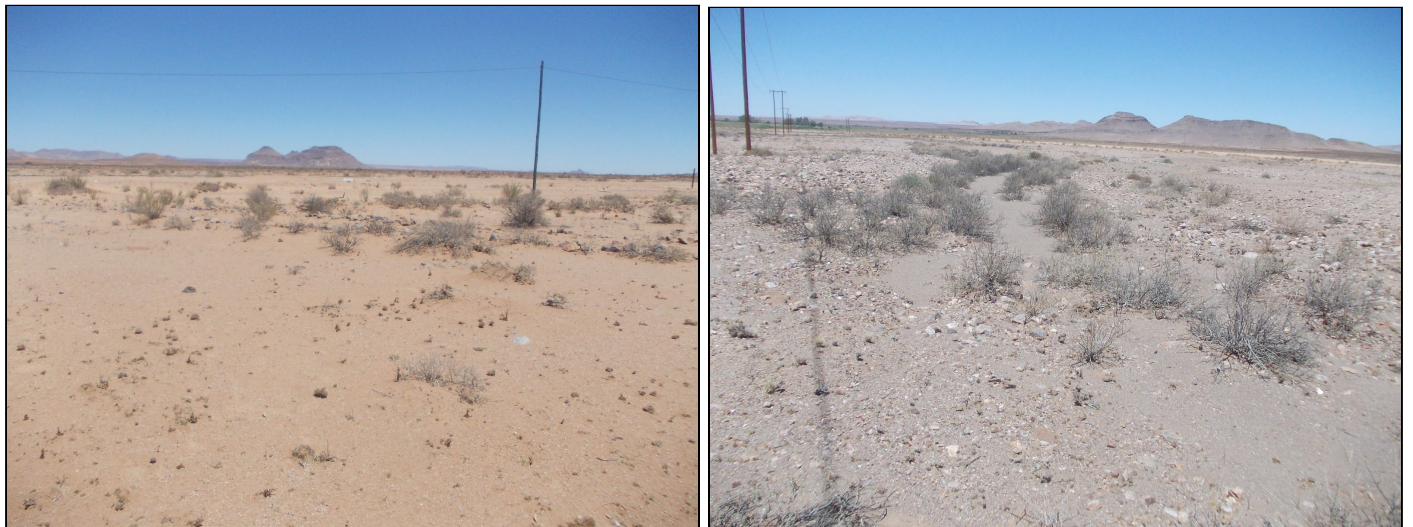


Figure 4.2: Contextual Images



Figure 4.3: Contextual Images



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Figure 4.4: Contextual Images



Figure 4.5: Contextual Images



Figure 4.6: Contextual Images



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Figure 5: Overall track paths of foot survey

4.2 Archaeological Resources identified

No heritage resources were identified within the development area.

5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT

5.1 Assessment of impact to Archaeological Resources

As no heritage resources were identified, the proposed development will have no impact on any heritage resources.

6. CONCLUSION AND RECOMMENDATIONS

There is no objection to the proposed development on heritage grounds and no further heritage studies are required.



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7. REFERENCES

Impact Assessment References				
Nid	Report Type	Author/s	Date	Title
330	HIA	Stefan de Kock	01/04/2012	DRAFT PHASE ONE INTEGRATED HERITAGE IMPACT ASSESSMENT COMPILED IN TERMS OF SECTION 38(8) OF THE NATIONAL HERITAGE RESOURCES ACT, 1999 (ACT 25 OF 1999) PROPOSED BOESMANLAND SOLAR FARM (75MW): PORTION (300HA) OF THE FARM ZUURWATER 62/6, NAMAQUALAND DISTRICT
334	AIA	Andrew B Smith	01/03/2012	ARCHAEOLOGICAL REPORT Proposed 75MW Solar Facility on Farm 62 Zuurwater, Aggeneys, Northern Cape Province
15982	PIA	John Pether	23/04/2012	BRIEF PALAEOLOGICAL IMPACT ASSESSMENT PROPOSED ORLIGHT SA DEVELOPMENT OF A SOLAR PHOTOVOLTAIC POWER PLANT NEAR AGGENEYS, NORTHERN CAPE PROVINCE
15983	PIA	John Pether	23/04/2012	BRIEF PALAEOLOGICAL IMPACT ASSESSMENT PROPOSED ORLIGHT SA DEVELOPMENT OF A SOLAR PHOTOVOLTAIC POWER PLANT NEAR AGGENEYS, NORTHERN CAPE PROVINCE Portion 1 of Farm Aroams 57 RD
337	PIA	John E Almond	01/03/2012	RECOMMENDED EXEMPTION FROM FURTHER SPECIALIST PALAEOLOGICAL STUDIES OR MITIGATION: PROPOSED 75 MW SOLAR FACILITY ON FARM ZUURWATER 62 (PORTIONS 2 & 3) NEAR AGGENEYS, NORTHERN CAPE PROVINCE
185063	HIA	Timothy Hart, Lita Webley, Dave Halkett, Natalie Kendrick	23/11/2015	Heritage Impact Assessment for the Proposed Khai-Ma WEF on farm portions south of Pofadder in the NC Province
9110	HIA	Lita Webley, Dave Halkett	01/04/2012	Heritage Impact Assessment: Proposed Aggeneys Photo-voltaic Solar Power Plant on Portion 1 of the Farm Aroams 57, Northern Cape Province
9017	PIA	John E Almond	28/09/2011	RECOMMENDED EXEMPTION FROM FURTHER SPECIALIST PALAEOLOGICAL STUDIES OR MITIGATION: Proposed Sato Energy Holdings (Pty) Ltd photovoltaic project on Portion 3 of Farm Zuurwater 62 near Aggeneys, Northern Cape Province
7871	AIA	David Morris	04/12/2011	Sato Energy Holdings Zuurwater Photovoltaic energy generation facility development near Aggeneys, Northern Cape
4488	PIA	Bruce Rubidge	06/08/2007	Palaeontological Desktop Study in Namaqualand
7871	AIA	David Morris	04/12/2011	Sato Energy Holdings Zuurwater Photovoltaic energy generation facility development near Aggeneys, Northern Cape
145635	HIA	David Morris	31/05/2013	Heritage Impact Assessment for Four Solar Energy Facilities on the Farm Zuurwater near Aggeneys, Northern Cape
155934	HIA	David Morris	01/04/2013	HERITAGE IMPACT ASSESSMENT: PROPOSED AGGENEYS PHOTOVOLTAIC SOLAR ENERGY FACILITY AT BLOEMHOEK NEAR AGGENEYS, NORTHERN CAPE PROVINCE
145637	PIA	John E Almond	30/09/2011	Palaeontological studies



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Appendix 1: Known heritage resources within 15km of the proposed development

Site ID	Site No	Site Name	Site Type	Grading
35913	ARO006	Aggeneys Orlight 006	Artefacts	Grade IIIc
35914	ARO007	Aggeneys Orlight 007	Structures	Grade IIIc
35915	ARO008	Aggeneys Orlight 008	Artefacts	Grade IIIc
35916	ARO009	Aggeneys Orlight 009	Artefacts	Grade IIIc
35917	ARO010	Aggeneys Orlight 010	Artefacts	Grade IIIc
35918	ARO011	Aggeneys Orlight 011	Artefacts	Grade IIIc
35919	ARO012	Aggeneys Orlight 012	Artefacts	Grade IIIc
51121	GAMS04	Gamsberg 04	Burial Grounds & Graves	Grade IIIa
51123	GAMS05	Gamsberg 05	Artefacts	Grade IIIa
35925	ARO013	Aggeneys Orlight 013	Artefacts	Grade IIIc
35926	ARO014	Aggeneys Orlight 014	Artefacts	Grade IIIc
35927	ARO015	Aggeneys Orlight 015	Artefacts	Grade IIIc
35928	ARO016	Aggeneys Orlight 016	Artefacts	Grade IIIc
35929	ARO017	Aggeneys Orlight 017	Artefacts	Grade IIIc
35930	ARO018	Aggeneys Orlight 018	Artefacts	Grade IIIc
35931	ARO019	Aggeneys Orlight 019	Archaeological	Grade IIIc
51130	GAMS09	Gamsberg 09	Artefacts	Grade IIIa
45421	BLOEM02	Bloemhoek 02	Artefacts	Grade IIIb
91778	ASEF001	Aggeneys Solar Energy Facility 001	Artefacts	Grade IIIc
91779	ASEF002	Aggeneys Solar Energy Facility 002	Artefacts	Grade IIIc
90852	AROA002	Aroams 57/ 002	Artefacts	Grade IIIc
90853	AROA003	Aroams 57/ 003	Artefacts	Grade IIIc
90854	AROA004	Aroams 57/ 004	Artefacts	Grade IIIc
90856	AROA006	Aroams 57/ 006	Artefacts	Grade IIIc
90858	AROA008	Aroams 57/ 008	Artefacts	Grade IIIc
90859	AROA009	Aroams 57/ 009	Artefacts	Grade IIIc
90860	AROA010	Aroams 57/ 010	Artefacts	Grade IIIc
90862	AROA012	Aroams 57/ 012	Artefacts	Grade IIIc
90863	AROA013	Aroams 57/ 013	Artefacts	Grade IIIc
90864	AROA014	Aroams 57/ 014	Artefacts	Grade IIIc
90851	AROA001	Aroams 57/ 001	Artefacts	Grade IIIc
90861	AROA011	Aroams 57/ 011	Artefacts	Grade IIIc
90865	AROA015	Aroams 57/ 015	Artefacts	Grade IIIc
90866	AROA016	Aroams 57/ 016	Artefacts	Grade IIIc
90867	AROA017	Aroams 57/ 017	Artefacts	Grade IIIc
90868	AROA018	Aroams 57/ 018	Artefacts	Grade IIIc
90869	AROA019	Aroams 57/ 019	Artefacts	Grade IIIc
90870	AROA020	Aroams 57/ 020	Artefacts	Grade IIIc
90871	AROA021	Aroams 57/ 021	Artefacts	Grade IIIc
90872	AROA022	Aroams 57/ 022	Artefacts	Grade IIIc



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90873	AROA023	Aroams 57/ 023	Artefacts	Grade IIIc
90874	AROA024	Aroams 57/ 024	Artefacts	Grade IIIc
90875	AROA025	Aroams 57/ 025	Artefacts	Grade IIIc
90876	AROA026	Aroams 57/ 026	Artefacts	Grade IIIc
90877	AROA027	Aroams 57/ 027	Artefacts	Grade IIIc
90878	AROA028	Aroams 57/ 028	Archaeological	Grade IIIc
129025	2918BC/SI3PF/2016/007	Sol Invictus 3 Pv Facility- Site 007	Artefacts	Ungraded
129036	2918BC/SI3PF/2016/008	Sol Invictus 3 Pv Facility- Site 008	Structures	Ungraded
129037	2918BC/SI3PF/2016/009	Sol Invictus 3 Pv Facility- Site 009	Burial Grounds & Graves	Ungraded
129038	2918BC/SI3PF/2016/010	Sol Invictus 3 Pv Facility- Site 010	Burial Grounds & Graves	Ungraded
129077	Portion 4, Farm Zuurwater No 62	Portion 4, Farm Zuurwater No 62	Transport infrastructure	
128571	2918BC/FZ62/2012/122	Farm Zuurwater 62	Artefacts	Ungraded
128572	2918BC/FZ62/2012/123	Farm Zuurwater 62- site 123	Artefacts	Ungraded
128573	2918BC/FZ62/2012/124	Farm Zuurwater 62- site 124	Artefacts	Ungraded
128574	2918BC/FZ62/2012/125	Farm Zuurwater 62- site 125	Artefacts	Ungraded
128575	2918BC/FZ62/2012/126	Farm Zuurwater 62- site 126	Artefacts	Ungraded
128576	2918BC/FZ62/2012/131	Farm Zuurwater 62- site 131	Artefacts	Ungraded
128577	2918BC/FZ62/2012/130	Farm Zuurwater 62- site 130	Artefacts	Ungraded
128983	2918BB/70MWSF/2012/L01	70MW Solar Facility-Site L01	Artefacts	Ungraded
128984	2918BB/70MWSF/2012/L02	70MW Solar Facility-Site L02	Artefacts	Ungraded
128985	2918BB/70MWSF/2012/L03	70MW Solar Facility-Site L03	Artefacts	Ungraded
128986	2918BB/70MWSF/2012/L04	70MW Solar Facility-Site L04	Artefacts	Ungraded
128989	2918BB/70MWSF/2012/L06	70MW Solar Facility-Site L06	Artefacts	Ungraded
128990	2918BB/70MWSF/2012/L08	70MW Solar Facility-Site L08	Artefacts	Ungraded
128991	2918BB/70MWSF/2012/L09	70MW Solar Facility-Site L09	Artefacts	Ungraded
128992	2918BB/70MWSF/2012/L010	70MW Solar Facility-Site L010	Artefacts	Ungraded
128993	2918BB/70MWSF/2012/L011	70MW Solar Facility-Site L011	Artefacts	Ungraded
128994	2918BB/70MWSF/2012/001	70MW Solar Facility-Site 001	Artefacts	Ungraded
128995	2918BB/70MWSF/2012/002	70MW Solar Facility-Site 002	Artefacts	Ungraded
128996	2918BB/70MWSF/2012/003	70MW Solar Facility-Site 003	Artefacts	Ungraded
128997	2918BB/70MWSF/2012/004	70MW Solar Facility-Site 004	Artefacts	Ungraded
128998	2918BB/70MWSF/2012/005	70MW Solar Facility-Site 005	Artefacts	Ungraded
128999	2918BB/70MWSF/2012/006	70MW Solar Facility-Site 006	Artefacts	Ungraded
129000	2918BB/70MWSF/2012/007	70MW Solar Facility-Site 007	Artefacts	Ungraded
129001	2918BB/70MWSF/2012/008	70MW Solar Facility-Site 008	Artefacts	Ungraded
129002	2918BB/70MWSF/2012/009	70MW Solar Facility-Site 009	Artefacts	Ungraded
129003	2918BB/70MWSF/2012/010	70MW Solar Facility-Site 010	Artefacts	Ungraded
129004	2918BB/70MWSF/2012/011	70MW Solar Facility-Site 011	Artefacts	Ungraded
129005	2918BB/70MWSF/2012/012	70MW Solar Facility-Site 012	Artefacts	Ungraded
129006	2918BB/70MWSF/2012/013	70MW Solar Facility-Site 013	Artefacts	Ungraded
129007	2918BB/70MWSF/2012/014	70MW Solar Facility-Site 014	Artefacts	Ungraded
129008	2918BB/70MWSF/2012/015	70MW Solar Facility-Site 015	Artefacts	Ungraded
129010	2918BB/70MWSF/2012/016	70MW Solar Facility-Site 016	Artefacts	Ungraded
129011	2918BB/70MWSF/2012/017	70MW Solar Facility-Site 017	Artefacts	Ungraded



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Appendix: Ubique Field Notes

Phase 1 Archaeological/Heritage Impact Assessment

Site ID: **Black Mountain Mine Haul Road**

Phase 1 survey conducted			
CRM Archaeologist	Jan Engelbrecht	Date/s	2019-02-11
Additional surveyors	Niclaas Titus		
Type of survey	Pedestrian/Vehicular	Transects	30m
Technical equipment	GPS	ETracks 10 Garmin	Camera Nikon Coolpix

Technical information

Project description	
Project name	Black Mountain Mine Haul Road proposed development and construction-Aggenys
Description	
Developer	
Black Mountain Mine: Mr. P.D. Venter	
Contact information	054-9839802
Development type	Haul Road
Land owner	
Contact information	As above: Mr. P.D. Venter Tel: 054-9839802
Consultants	
Environmental	Black Mountain Mine and CTS Heritage
Heritage and archaeological	UBIQUE Heritage Consultants
Paleontological	Banzai Environmental
Property details	
Province	Northern Cape
District municipality	Namakwa District Municipality
Local municipality	Kai-Ma Local Municipality
Topo-cadastral map	1:50000 and Google Earth images
Farm name	Aggenys 56 Portion 1
Closest town	Pofadder
GPS Co-ordinates	29° 15' 11.26" South 18° 46' 30.46" East
Property size	1,6ha
Development footprint size	Linear road alignment from Mine to secondary road 1,6ha
Land use	
Previous	Previous disturbance by construction machinery in the Southwest.

Current	None except for surface pipeline running through the site as well as an Eskom line from Northwest to South-east.	
Re- zoning 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 form of development or barrier exceeding 300m in length.		Yes
Construction of bridge or similar structure exceeding 50m in length.		No
Construction exceeding 5000m ² .		No
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

Site description

Description of general area affected by development	
Type of environment	
"Klipveld" throughout. Slope from north to south from the mountain in the north, towards the existing secondary road.	
Terrain description	
Slope from north to south. Stones cover the whole terrain, except for two open patches to the southwest.	
Geology	
Gneiss formation. Quartzite, Amphibolite bands, Magnetite and quartz.	
Vegetation	
<i>Acacia mellifera</i> (Blackthorn), <i>Ruschia muelerri</i> (Vygiebos)	
Water ways/sources	
There are at least 7 dry riverine beds crossing the proposed road from North to south	
Site boundaries	
The mine heap/dump on the eastern side, a mountain on the northern side, a secondary road on the southern side and south-western side of the site.	
Site access	GPS Co-ordinates
Entry point was from the southwest. Transects of approximately 30m were surveyed throughout the site and outside of the footprint as well.	29° 15' 04.67"S 18° 46' 07.12" E
Disturbances	
Natural erosion	
Dry riverines caused minor erosion on the site.	
Man made	
In the southwest of the site construction machinery graded a short road towards the north. This road is currently not in use.	

Notes
N/A

Environmental recording

Way point	Photo number	Description	Location	Field rating/ Significance
Site specific points of interest/ natural significance				
		None		

Heritage recording

Way point	Photo number	Description	Period	Location	Field rating/ Significance
Stone Age					
		Type lithic/s	None identified		
		Raw material			
		N in m ² .			
		Context			
		Additional			
Historical					
		No historical features were identified.			
Graves					
		Grave markers	No graves were identified		
		Inscription			
		Orientation			

Discussion

Stone Age finds
None
Historical finds
None
Identified graves
None

Recommendation

Stone Age finds
Project can continue

Historical finds
Project can continue
Identified graves
Project can continue
Other

Additional notes

No mitigation measures. We recommend that the project can continue. No archaeological features or objects identified or located on this site. Pedestrian/foot surveys were conducted throughout the site.



UBIQUE
HERITAGE CONSULTANTS

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HERITAGE SPECIALIST

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Declaration of independence:

I, Jan Engelbrecht, hereby confirm my independence as heritage specialist and declare that:

- I am suitably qualified and accredited to act as 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 in an objective and ethical manner, in accordance with a professional code of conduct and within the framework of South African heritage legislation.



Signed:
J.A.C. Engelbrecht

Date: 2019-02-13
UBIQUE Heritage Consultants

