

McGregor Museum Department of Archaeology



Heritage Impact Assessment (Archaeology) for the proposed mining on farm Dunncan Erf 769, Jan Kempdorp, Phokwane Local Municipality, Northern Cape

Abenicia Henderson assisted by Masa Kedisang
and Cecil Mbanga

March 2023

Abbreviations

APHP:	Association of Professional Heritage Practitioners
ASAPA:	Association of South African Professional Archaeologist
CRM:	Cultural Resource Management
MSA:	Middle Stone Age
PHRA:	Provincial Heritage Resource Agency
Safa:	Society of Africanist Archaeologists
SAHRA:	South African Heritage Resources Agency

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Executive Summary

The area for proposed mining belongs to the S.A.N.D.F. (South African National Defense Force). It was found that the extent of previous disturbance by historic and present-day military activities, has meant that from a heritage perspective very little of significance remains in situ in the area.

It remains possible that some material of significance may still occur subsurface which, if encountered, should be brought to the attention of the heritage authorities for further assessment and mitigation if necessary.

In terms of this report, no significant heritage traces were found in the area, so no further mitigation is required.

The loss of heritage resources is therefore assessed to be of **low** significance with and without the implementation of mitigation.

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1. INTRODUCTION

The McGregor Museum Archaeology Department was appointed on behalf of BATHOPELE Primary Mining Co-operatives by Mr. Desmond Williams with respect to an AIA for the proposed mining on Farm Duncann Erf 769, Jan Kempdorp, Phokwane Local Municipality, Northern Cape. The request was to carry out a Phase 1 assessment of the possible impacts on heritage resources (archaeological and cultural) of this operation.

The site was inspected on foot on the 20th of January and the 21st of February 2023, due to limited visibility and access. Farm Duncann Erf 769 belongs to SANDF, and it was found that the surface was already disturbed. Due to the abovementioned limitations very little heritages features were observed. The relevant observations are indicated in this report.

Fieldnotes and photographs are lodged with the McGregor Museum, Kimberley.

1.1 Focus and content of the specialist report.

This archaeology and heritage specialist study is focused on the site of the proposed development.

This study outlines:

- Introduction, explaining the focus of the report (1.1) and introducing the author in terms of qualifications, accreditation, and experience to undertake the study (1.2)
- Description of the affected environment (2) providing background to the development and its infrastructural components (2.1); background to the heritage features of the area (2.2); and defining environmental issues and potential impacts (2.3)
- Methodology (3) including an assessment of limitations (3.1); potentially significant impact to be assessed (3.2); and determining archaeological significance (3.3)
- Observations and assessment of impacts (4); Fieldwork observations (4.1); characterizing archaeological significance (4.2); and Summary of significance of impacts (4.3).
- Measures for inclusion in a draft Environmental Management Plan for the development are set out in tabular form (5).
- Conclusions and Recommendations (6).

1.2 Author of this report

The author of this report is independent of the organization commissioning this specialist input and provide this heritage assessment (archaeology and colonial history but not palaeontology) within the framework of the National Heritage Resources Act (No 25 of 1999).

The author is a professional archaeologist (master's candidate) and CRM practitioner. As well as a member of the APHP (Association of Professional Heritage Practitioners) and SAfA (Society for Africanist Archaeologists). She has worked as a museum archaeologist and has carried out specialist research and surveys in the Northern and Eastern Cape since 2013.

The National Heritage Resources Act no. 25 of 1999 (NHRA) protects heritage resources which include archaeological and palaeontological objects/sites older than 100 years, graves older than 60 years, structures older than 60 years, as well as intangible values attached to places. The Act requires that anyone intending to disturb, destroy or damage such sites/places, objects and/or structures may not do so without a permit from the relevant heritage resources authority. This means that a Heritage Impact Assessment should be performed, resulting in a specialist report as required by the relevant heritage resources authority/ies to assess whether authorisation may be granted for the disturbance or alteration, or destruction of heritage resources.

Where archaeological sites and palaeontological remains are concerned, the South African Heritage Resources Agency (SAHRA) at national level acts on an agency basis for the Provincial Heritage Resources Agency (PHRA) in the Northern Cape.

2. DESCRIPTION OF THE AFFECTED AREA

Jan Kempdorp is situated in the north-eastern part of the Northern Cape, within the Vaal-Harts irrigation scheme, east of the N18 national road from Warrenton to Vryburg. The area identified for the proposed mining lies on the south-western side of Jan Kempdorp along the R370, east of the Spitskopdam, and 21km north-west from Warrenton.

The landscape surface for the proposed area forms part of the Savanna biome which is characterized by a grassy ground layer with distinct upper layer of woody plants, thorn trees and shrubs. That rests on pre-Karoo Ventersdorp basalts and andesite, overlain by deep Hutton soils in the broad Harts River to the east of the Ghaap escarpment.

The Vaal-Harts irrigation scheme which dates to the 1930s, covers 36.5ha making it one of the largest irrigation schemes in the world. The Vaal-Harts irrigation scheme waters around 1250 farms in the valley, and as result has led to the growth of the town. As it is known by fertile agricultural and grazing land.

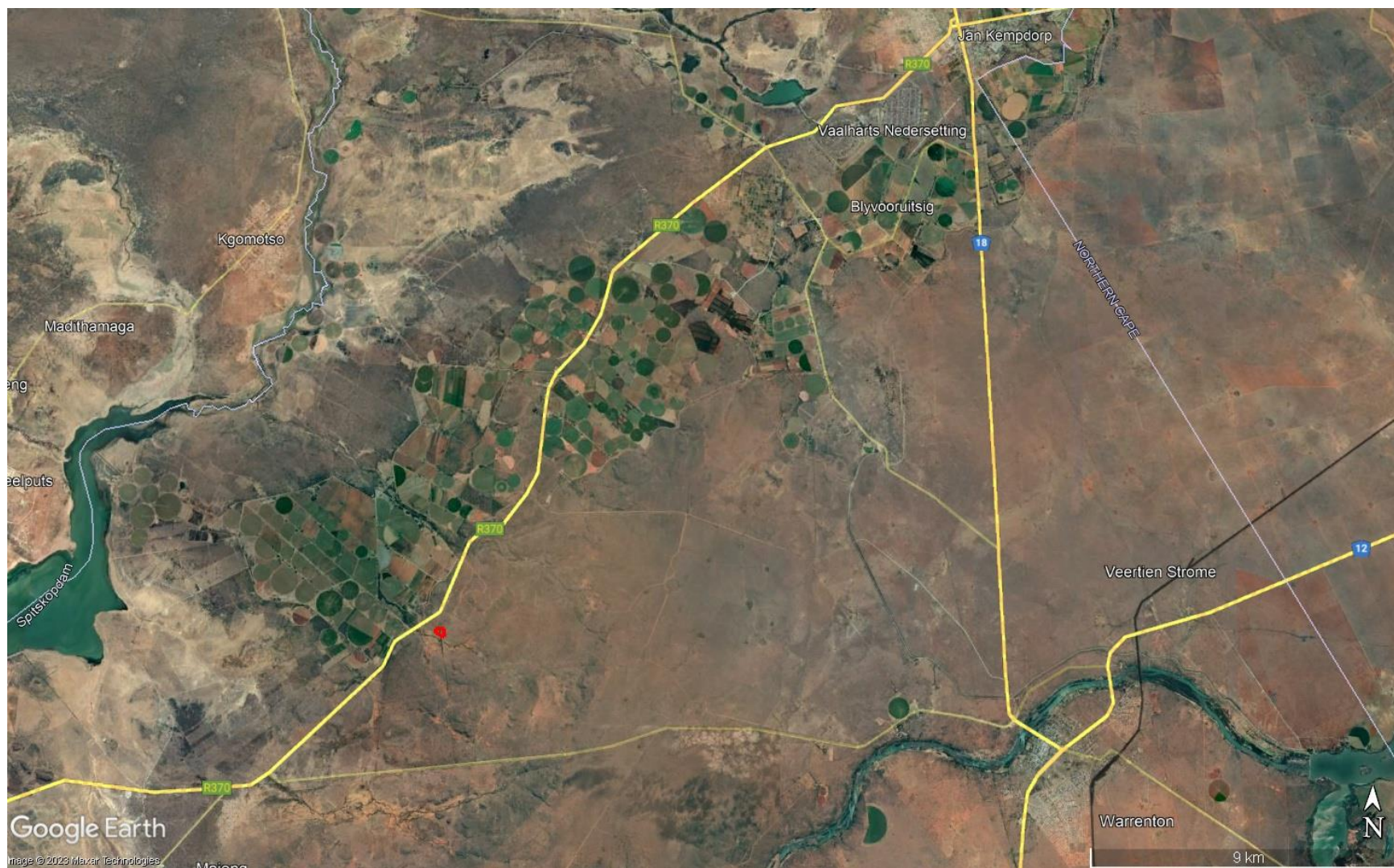


Figure 1: Google Earth image showing the location of the proposed area, south-west from Jan Kempdorp.



Figure 1.1: Study area outlined in red.

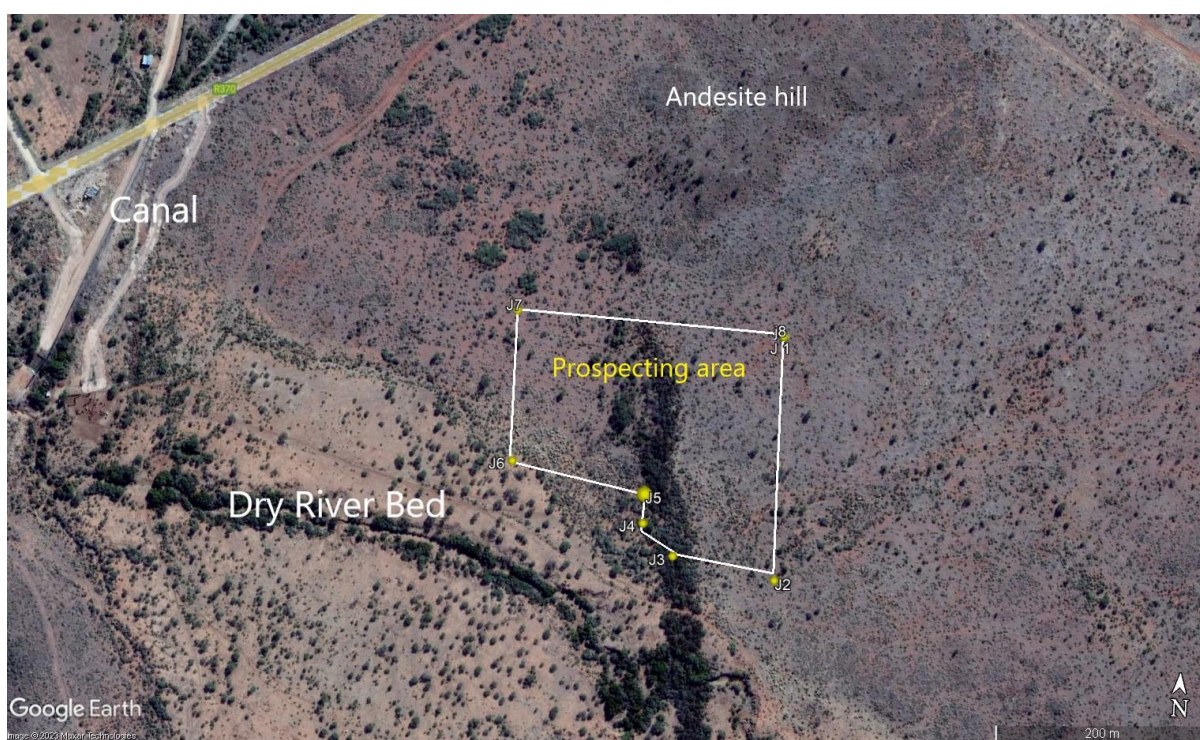


Figure 1.1.2.: The study area outlined in red (proposed mining area). An irrigation canal trends north south and intersects the R370 road. North of the area andesite hills are visible in the Google Earth image, as well as a dry riverbed along the prospecting area.



Figure 2: Irrigation Canal near entrance of the study area.



Figure 2.1: The irrigation Canal that intersects the R370.



Figure 3: Entrance to the proposed mining area.

2.1 Project components

As indicated the extent of the proposed development shown in Figure 1 is for proposed mining.

2.2 Background to heritage features of the area.

The Northern Cape is characterized by a wealth of archaeological landscapes reflecting Stone Age to Colonial histories. Known sites in the Jan Kempdorp area testify to a cultural succession through the Earlier, Middle and Later Stone Age as well as Iron Age (Helgren 1978; Beaumont & Morris 1990; Morris & Beaumont 2004; Morris & Seliane 2008; Gibbon et al 2009). Later Stone Age rock art sites are also found in the wider landscape, including rock engraving locales in the vicinity of Taung (Morris 1988; Fock & Fock 1989; Morris & Mngqolo 1995). The nearby Ghaap Escarpment contains shelters rich in archaeological traces (Humphreys & Thackeray 1984) but is perhaps most notable for its fossil sites such as that at which the Taung Skull was found, at Buxton (Beaumont & Morris 1990). Historical events relating to the conquest of the Southern Tswana, e.g. at Phokwane (Shillington 1985), left traces now part of the heritage of the area, as did the subsequent settlement of the valley. Jan Kempdorp straddled the historical border between the former Transvaal and Cape Provinces.

2.3 Environmental issues and potential impacts

Heritage resources including archaeological sites are in each instance unique and non-renewable resources. Any area or linear, primary, and secondary, disturbance of surfaces in the development locales could have a destructive impact on heritage resources, where present. In the event that such resources are found, they are likely to be of a nature that potential impacts could be mitigated by documentation and/or salvage following approval and permitting by the South African Heritage Resources Agency and, in the case of any built environment features, by the Northern Cape Heritage Authority (previously called Ngwao Bošwa jwa Kapa Bokone). Although unlikely, there may be some that could require preservation in situ and hence modification of intended placement of development features.

The expected impact in this instance would be an area disturbance.

Destructive impacts that are possible in terms of heritage resources would tend to be direct, once-off events occurring during construction. In the long term, the proximity of operations in a given area could result in secondary indirect impacts resulting from the movement of people or vehicles in the immediate or surrounding vicinity. It is to be noted that the site is surrounded completely by existing considerable disturbance in the form of built environment of Jan Kempdorp, and agricultural development within the Vaal-Harts Scheme.

3. METHODOLOGY

The area proposed for mining was inspected on foot by the author and assistant on the 20th of January and the 21st of February 2023. An assessment was made of heritage traces at the proposed area. In preparation for this:

- A desktop study was done of the development footprint and environmental area.
- A search was done on the SAHRIS database to determine what Archaeological and Heritage Impact studies had been done in the area.

It was anticipated that limited indications of the archaeology of the site would be visible at the present surface, which was overgrown by fynbos and other horticultural features diminishing visibility. It is however possible that artefacts may occur sub-surface.

Observations that were noted are characterised below and evaluated.

3.1 Assumption and limitations

It is assumed that, by and large in this landscape, some sense of the archaeological traces to be found in the area would be readily apparent from surface observations (including assessment of places with erosion or past excavations that expose erstwhile below-surface features). Given a prevailing erosion regime in much of this landscape, it was not considered necessary to conduct excavations as part of the full HIA to establish the potential of sub-surface archaeology. A proviso is routinely given, however, that should site or features of significance be encountered during construction (this could include an unmarked burial, an ostrich eggshell water flask cache, or a high density of stone tools, for instance), specified steps are necessary (cease work, report to heritage authority).

With regard to fossils, a report and/or field assessment of the likelihood of their occurring here should be obtained from a palaeontologist.

3.2 Potentially significant impacts to be assessed.

Any area or linear, primary, and secondary, disturbance of surfaces in the development locales could have a destructive impact on heritage resources, where present. In the event that such resources are found, they are likely to be of a nature that potential impacts could be mitigated by documentation and/or salvage following approval and permitting by the South African Heritage Resources Agency and, in the case of any built environment features, by the Northern Cape Heritage Authority (previously called Ngwao Bošwa jwa Kapa Bokone). Although unlikely, there may be some that could require preservation in situ and hence modification of intended placement of development features.

Disturbance of surfaces includes any mining, construction or agricultural farming (quarries, pits, roads, pipelines, pylons, sub-stations or plants, buildings), or any other clearance of, or excavation into, a land surface. In the event of archaeological materials being present such activity would alter or destroy their context (even if the artefacts themselves are not destroyed, which is also obviously possible). Without context, archaeological traces are of much reduced significance. It is the contexts as much as the individual items that are protected by the heritage legislation.

3.3 Determining archaeological significance

In addition to guidelines provided by the NHRA, a set of criteria based on Deacon (nd) and Whitelaw (1997) for assessing archaeological significance has been developed for Northern Cape settings (Morris 2000a). These criteria include estimation of landform potential (in terms of its capacity to contain archaeological traces) and assessing the value of any archaeological traces (in terms of their attributes or their capacity to be construed as evidence, given that evidence is not given but constructed by the investigator). These significance assessment criteria are appended in table form at the end of this report.

Estimating site potential

Table 1 (below) is a classification of landforms and visible archaeological traces used for estimating the potential of archaeological sites (after J. Deacon nd, National Monuments Council). Type 3 sites tend to be those with higher archaeological potential, but there are notable exceptions to this rule, for example the renowned rock engravings site Driekopseiland near Kimberley which is on landform L1 Type 1 – normally a setting of lowest expected potential. It should also be noted that, generally, the older a site the poorer the preservation, so that sometimes any trace, even of only Type 1 quality, can be of exceptional significance. In light of this, estimation of potential will always be a matter for archaeological observation and interpretation.

Assessing site value attribute

Table 2 is adapted from Whitelaw (1997), who developed an approach for selecting sites meriting heritage recognition status in KwaZulu-Natal. It is a means of judging a site's archaeological value by ranking the relative strengths of a range of attributes (given in the second column of the table). While aspects of this matrix remain qualitative, attribute assessment is a good indicator of the general archaeological significance of a site, with Type 3 attributes being those of highest significance.

Table 1. Classification of landforms and visible archaeological traces for estimating the potential for archaeological sites (after J. Deacon, National Monuments Council).

Class	Landform	Type 1	Type 2	Type 3
L1	Rocky surface	Bedrock exposed	Some soil patches	Sandy/grassy patches
L2	Ploughed land	Far from water	In floodplain	On old river terrace
L3	Sandy ground, inland	Far from water	In floodplain or near feature such as hill	On old river terrace
L4	Sandy ground, Coastal	>1 km from sea	Inland of dune cordon	Near rocky shore
L5	Water-logged deposit	Heavily vegetated	Running water	Sedimentary basin
L6	Developed urban	Heavily built-up with no known record of early settlement	Known early settlement, but buildings have basements	Buildings without extensive basements over known historical sites
L7	Lime/dolomite	>5 myrs	<5000 yrs	Between 5000 yrs and 5 myrs
L8	Rock shelter	Rocky floor	Sloping floor or small area	Flat floor, high ceiling
Class	Archaeo-logical traces	Type 1	Type 2	Type 3
A1	Area previously excavated	Little deposit remaining	More than half deposit remaining	High profile site

Class	Landform	Type 1	Type 2	Type 3
A2	Shell or bones visible	Dispersed scatter	Deposit <0.5 m thick	Deposit >0.5 m thick; shell and bone dense
A3	Stone artefacts or stone walling or other feature visible	Dispersed scatter	Deposit <0.5 m thick	Deposit >0.5 m thick

Table 2. Site attributes and value assessment (adapted from Whitelaw 1997)

Class	Attribute	Type 1	Type 2	Type 3
1	Length of sequence/context	No sequence Poor context Dispersed distribution	Limited sequence	Long sequence Favourable context High density of arte/ecofacts
2	Presence of exceptional items (incl regional rarity)	Absent	Present	Major element
3	Organic preservation	Absent	Present	Major element
4	Potential for future archaeological investigation	Low	Medium	High
5	Potential for public display	Low	Medium	High
6	Aesthetic appeal	Low	Medium	High
7	Potential for implementation of a long-term management plan	Low	Medium	High

4. OBSERVATIONS AND ASSESSMENT OF IMPACTS

The manner in which archaeological and other heritage traces or values might be affected by proposed mining on Farm Dunnican Erf 769, Jan Kempdorp may be summed up in the following terms: it would be any act or activity that would result immediately or in the future in the destruction, damage, excavation, alteration, removal or collection from its original position, any archaeological material or object (as indicated in the National Heritage Resources Act (No 25 of 1999)). The obvious impact in this case would be land surface disturbance associated with any proposed mining.

4.1 Fieldwork observations

The area identified for the proposed mining was visited on foot on the 20th of January and the 21st of February 2023. The proposed area is abandoned military combat campground and has not been utilised in years. The mixed grassland, thorn trees and amount of vegetation and shrubs greatly lowered visibility in the study area, which proved to be a dire constraint. Sections of the surrounding area however were visible due to weathering and overgrown patches of erosional exposure close to the riverbed and rocky outcrops. The rest of the area can largely be described as previously disturbed due to past military activities.

4.1.1 Archaeological traces in the parameter footprint

Due to heavily grown vegetation, I was not able to access and assess the footprint.

4.1.2 Archaeological traces revealed in exposures.

The exposed sections and river gravel deposits were investigated for archaeological material. All artefacts noted outside the exposed river gravel deposit were in disturbed contexts. Dug out trenches with exposed profiles afforded insight into the subsurface stratigraphies and archaeological content.

There were no marked concentrations of artefacts, and densities in general were found to be low and isolated. All artefacts observed were of Late Pleistocene (MSA) age, made from andesite, hornfel, quartzite and quartz.

Stone tools that were recorded were just outside the parameter footprint and scattered across the area, so no archaeological sites of importance were identified in the footprint area.

Table 3: Plotted observations outside the parameter footprint:

	Latitude	Longitude	Comment	Significance
1	28°05'27.5"	24°40'42.5"	MSA flakes found in trench floor (Fig. 9)	LOW
2	28°05'27.3"	24°40'42.3"	MSA blade found on exposed area near dug out trench (Fig. 10).	LOW
3	28°05'27.4"	24°40'42.5"	MSA flake found in floor near western wall of dug out trench (Fig. 11).	LOW
4	28°05'05.1"	24°40'17.9"	Isolated grave found near andesite hill. As is synonymous with graves in the area the Head stone faces the western end (Fig. 12). Outside of footprint so it will not impact the development.	HIGH
5	28°05'04.3"	24°40'17.4"	Quartzite flake at the base of the andesite hill, isolated scatter (Fig. 13).	LOW
6	28°05'2.0"	24°40'15.9"	Quartzite flake on andesite hill-dispersed scatter (Fig. 14).	LOW
7	28°05'22.9"	24°40'18.6"	MSA in-situ materials (Fig. 15a-c)	MEDIUM

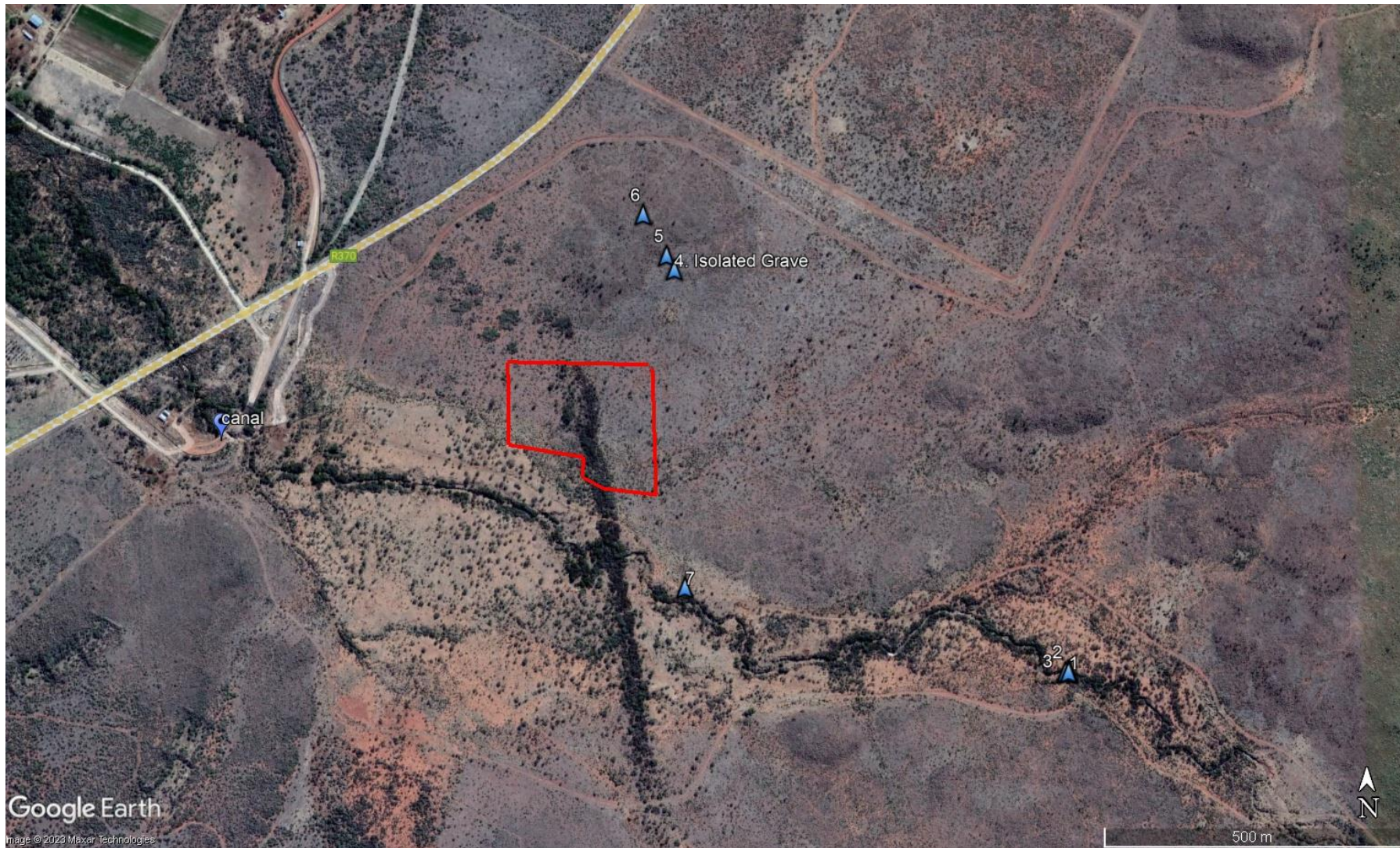


Figure 4: Area parameter footprint with the observed points indicated by blue arrow listed in Table 3.



Figure 5: Garmin GPS track.



Figure 6: Parameter footprint area covered by dense vegetation and thorn trees.



Figure 7: Surrounding landscape of the parameter area



Figure 8: Dry Riverbed with exposed gravel deposit



Figure 9: Middle Stone Age flakes in floor of dug out trench close to the dry riverbed at point 1 in Figure 4.



Figure 10: MSA blade at point 2



Figure 11: Hornfel flake at point 3.



Figure 12: Isolated grave located near andesite hill at point 4.



Figure 13: Quartzite flake at base of andesite hill



Figure 14: Quartzite flake on andesite hill.



Figure 15: View from Andesite hill its rough surface appears not suited to the making of rock engravings, and none were seen.



Figure 16a: MSA flake found in floor of riverbed.

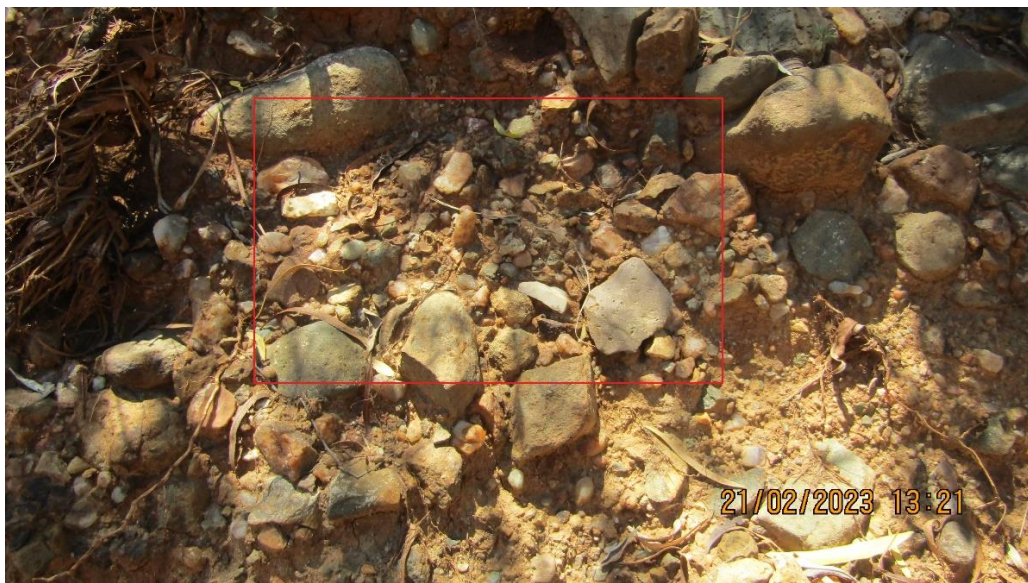


Figure 16b: In situ MSA assemblage at northern wall of riverbed at point 7.



Figure 16c: Prepared core embedded in wall of exposed riverbed at point 7.

4.1.3 Rock outcrops may be support for rock engravings.

Ventersdorp andesite may formerly have underlain shallow gravels. Its rough surface appears not suited to the making of rock engravings, and none were seen.

4.1.4 Colonial era/historical structures and artefacts

Considerable historical disturbance has already occurred at the site. No historical structures were found or seen within the parameter footprint. This shoe metal plate was observed outside the parameter.



Figure 17: Metal plate placed at the bottom of work shoes. Possibly dating to the 1940s.

4.2 Characterising the archaeological significance (Refer to 3.3 above)

In terms of the significance matrices in Tables 1 and 2 under 3.3 above, the archaeological observations fall under Landform L5, Type 1, i.e., of potentially high significance; but in terms of actual archaeological observations, they fall under Class A1 and A3 Type 1, i.e. low significance, in part because of previous disturbance and partly owing to low density, being widely dispersed. For site attribute and value assessment (Table 2), the observations may be characterised as Type 1 for each of the Classes 1-7, again reflecting low significance. On archaeological grounds, the Stone Age occurrences, being sparse and in disturbed context, can be said to be of generally low significance. No rock art occurs. Minimal traces of the historical era were seen.

4.3 Characterising the significance of impacts

The criteria on which significance of impacts is based include **nature**, **extent**, **duration**, **magnitude** and **probability of occurrence**, with quantification of significance being grounded and calculated as follows:

- The **nature**, namely a description of what causes the effect, what will be affected, and how it will be affected.
- The **extent**, indicating the geographic distribution of the impact:

- local extending only as far as the development site area – assigned a score of 1;
 - limited to the site and its immediate surroundings (up to 10 km) – assigned a score of 2;
 - impact is regional – assigned a score of 3;
 - impact is national – assigned a score of 4; or
 - impact across international borders – assigned a score of 5.
- The **duration**, measuring the lifetime of the impact:
 - very short duration (0–1 years) – assigned a score of 1;
 - 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;
 - or permanent - assigned a score of 5.
- The **magnitude**, quantified on a scale from 0-10:
 - 0 is small and will have no affect on the environment;
 - 2 is minor and will not result in an impact on environmental processes;
 - 4 is low and will cause a slight impact on environmental processes;
 - 6 is moderate and will result in environmental processes continuing but in a modified way;
 - 8 is high (environmental 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 environmental processes.
- The **probability of occurrence**, indicating the likelihood of the impact actually occurring (scale of 1-5)
 - 1 is highly 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**, determined by a synthesis of the characteristics described above and expressed as low, medium or high. Significance is determined by the following formula:
 $S = (E + D + M) P$; where S = Significance weighting; E = Extent; D = Duration; M = Magnitude; P = Probability.
- The **status**, either positive, negative, or neutral, reflecting:
 - 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 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).

4.4 Summary of the significance of impacts

Significance of Impacts, with and without mitigation – based on the worst-case scenario – for the area investigated.

Nature: Acts or activities resulting in disturbance of surfaces and/or sub-surfaces containing artefacts (causes) resulting in the destruction, damage, excavation, alteration, removal, or collection from its original position (consequences), of any archaeological or other heritage material or object (what affected). The following assessment refers to impact on physical archaeological/heritage traces.		
	Without mitigation	With mitigation
Extent	1	1
Duration	5	5
Magnitude	2	2
Probability	2	2
Significance	16	16
Status (positive or negative)	WEAKLY NEGATIVE	
Reversibility	No	No
Irreplaceable loss of resources?	Where present	Where present
Can impacts be mitigated?	Yes	
Mitigation: Not needed		
Cumulative impacts: Cumulative Impacts: where any archaeological contexts occur, direct impacts are once-off permanent destructive events. Secondary cumulative impacts may occur with the increase in operational activity associated with the life of the proposed mining.		
Residual impacts: -		

5. MEASURES FOR INCLUSION IN THE DRAFT ENVIRONMENTAL MANAGEMENT PLAN.

The objective

Archaeological or other heritage materials that may occur in the path of any surface or sub-surface disturbances associated with any aspect of the mining are likely to be subject to destruction, damage, excavation, alteration, or removal. The objective is to limit such impacts to the primary activities associated with the mining and hence to

limit secondary impacts during the medium- and longer-term operational life of the proposed mining.

Project component/s	Any infrastructure construction potentially impacting unanticipated below-surface heritage traces.
Potential Impact	The potential impact if this objective is not met is that possible but unanticipated heritage traces may be subject to destruction, damage, excavation, alteration, or removal.
Activity/risk source	Activities which could impact on achieving this objective include deviation from any planned development without taking heritage impacts into consideration.
Mitigation: Target/Objective	An environmental management plan that takes cognizance of the potential for unanticipated heritage resources occurring sub-surface. Mitigation (based on present observations and mining proposal as communicated) is not considered to be necessary.

Mitigation: Action/control	Responsibility	Timeframe
Provision for on-going heritage monitoring in an environmental management plan which also provides guidelines on what to do in the event of any major heritage feature being encountered during any phase of construction/maintenance.	Environmental management provider with on-going monitoring role for the construction phase and for any instance of periodic or on-going land surface modification thereafter.	Environmental management plan to be in place before commencement of construction.
Should unexpected finds be made (e.g., precolonial burials; ostrich eggshell container cache; or localised Stone Age sites with stone tools, pottery, ash midden with bone/pottery; military remains), the relevant Heritage Authority should be contacted.	Environmental Control Officer should report to the Heritage Authority as needed (see next column).	In the event of finding any of the features mentioned in column 1, reporting by the developer to relevant heritage authority should be immediate. Contact: SAHRA Ms N. Higgins 021-4624502 or NC Heritage Resources Authority Mr Andrew Timothy 0790369294.

Performance Indicator	Inclusion of further heritage impact consideration in construction and future phases of the development.
Monitoring	Officials from relevant heritage authorities (National, Provincial or Local) to be permitted to inspect the site at any time in relation to the heritage component of the management plan.

6. CONCLUSIONS AND RECOMMENDATIONS

The way archaeological and other heritage traces might be affected by the proposed mining on Farm Dunnican 769 has been indicated above. In summary, it would be any act or activity that would result immediately or in the future in the destruction, damage, excavation, alteration, removal, or collection from its original position, of any heritage material, object, or value (as indicated in the National Heritage Resources Act (No 25 of 1999)). The most obvious impact in this case would be land surface disturbance associated with infrastructure construction.

There is a remote chance, as noted above, that some material of significance may still occur subsurface which, if encountered, should be brought to the attention of heritage authorities. In such an event, in the course of the operation, work should halt and SAHRA and/or the Northern Cape Heritage Resources Agency be contacted to allow for further assessment and mitigation recommendations.

In conclusion, no significant heritage traces were found that are considered to require further mitigation.

Acknowledgements

We thank Miss Masa Kedisang, Mr. Cecil Mbanga (McGregor Museum Archaeology Intern and staff member) together with Colonel Tsekiso Matebesi and BATOPELE personnel who granted us access and accompanied us to the proposed mining area.

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