SAHRA CASE ID: 15782

HERITAGE IMPACT ASSESSMENT

PROPOSED CONSTRUCTION OF A 55M HIGH TELECOMMUNICATION MAST ON RE FARM ELANDSHEUWEL NO. 146 HANVOVER, UMSOBOMVU MUNICIPALITY NORTHERN CAPE PROVINCE

Assessment conducted under Section 38 (3) of the National Heritage Resource Act (No. 25 of 1999)

Prepared for

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Applicant:

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By

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MARCH 2021

Executive summary

1. Introduction

ACRM was appointed by Enviroafrica, on behalf of Atlas Tower (Pty) Ltd to conduct a Heritage Impact Assessment (specialist archaeological study) for the proposed construction of a 55m high telecommunications mast and base station on Re Farm Elandsheuwel No. 146 Hanover, Umsobomvu Municipality, in the Northern Cape Province.

The site for the proposed telecommunication mast is located on top of a dolerite kopje alongside the N10, about 36kms south east of Hanover and 21kms south west of Noupoort.

2. The project proposal

The proposed project entails construction of a 55m high, telecommunication mast and base station on Re Farm Elandsheuwel No. 146 Hanover, in Northern Cape Province The mast's base station will be enclosed within a steel palisade fence. A 3m wide, approximately 125m long, twee spoor access road will also be constructed from an existing gravel road to gain access to the proposed mast site. A new overhead powerline ± 420m long will also be constructed from an existing Eskom line to the mast site. The span between the powerline poles is about 100m. The servitude for the powerline will be bush cut, so no coversands will be removed. The total development footprint is approximately 100m².

Enviroafrica is the appointed independent Environmental Assessment Practitioner responsible for facilitating the Basic Assessment process for Environmental Authorization.

3. Aim of the study

The overall purpose of the HIA is to determine the impact of the proposed project on archaeological resources, to determine the potential impacts on such resources, and to avoid and/or minimise such impacts by means of management and/or mitigation measures.

4. Results of the study

Dr Jayson Orton of Asha Consulting undertook a field assessment of the proposed project in November 2020, in which the following heritage resources were recorded:

- Four stone artefacts of mixed age were noted in a small clearing to the southeast of the proposed mast footprint. Three other isolated artefacts were seen along the ridge to the southeast.

- A small, ruined stone structure (probably a kraal) was found at the base of the ridge in the alignment of the proposed powerline but will not be impacted.

4.1 Grading of heritage resources

The heritage resources have been graded as having low (GPC) significance (Orton 2021).

No rock engravings were found despite a careful search of the surrounding area.

6. Impact statement

According to Orton (2020), `no significant archaeological impacts are expected from this project'.

7. Conclusion

Construction of a 55m high telecommunications mast including construction of a 420m long powerline, and a 120m long access road will not impact on important archaeological heritage.

The few isolated tools recorded most likely represent discarded flakes.

A ruined kraal in the powerline servitude will not be impacted.

Therefore, there are no objections to the proposed project proceeding.

8. Recommendations

1. No archaeological mitigation is required.

2. The Environmental Control Officer (ECO) must be briefed in the event of any archaeological resources being uncovered or disturbed during construction activities

The above recommendations must be included in the Environmental Management Plan for the project.

Table of Contents

1. INTRODUCTION

ACRM was appointed by Enviroafrica, on behalf of Atlas Tower (Pty) Ltd to conduct a Heritage Impact Assessment (specialist archaeological study) for the proposed construction of a 55m high telecommunications mast and base station on Re Farm Elandsheuwel No. 146, Umsobomvu Municipality, near Hanover in Northern Cape Province (Figures 1-2).

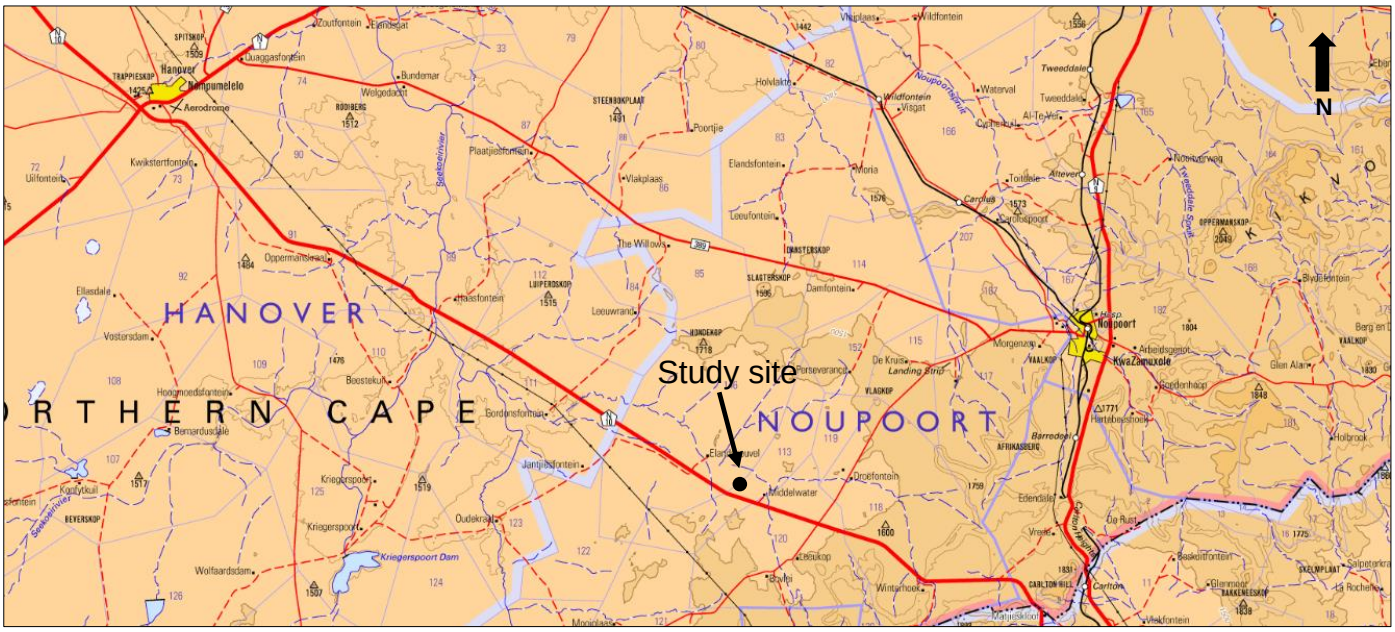

Figure 1. 1:250 000 locality map (3124 Middelburg). Black polygon indicates the location of the site for the proposed telecommunication mast

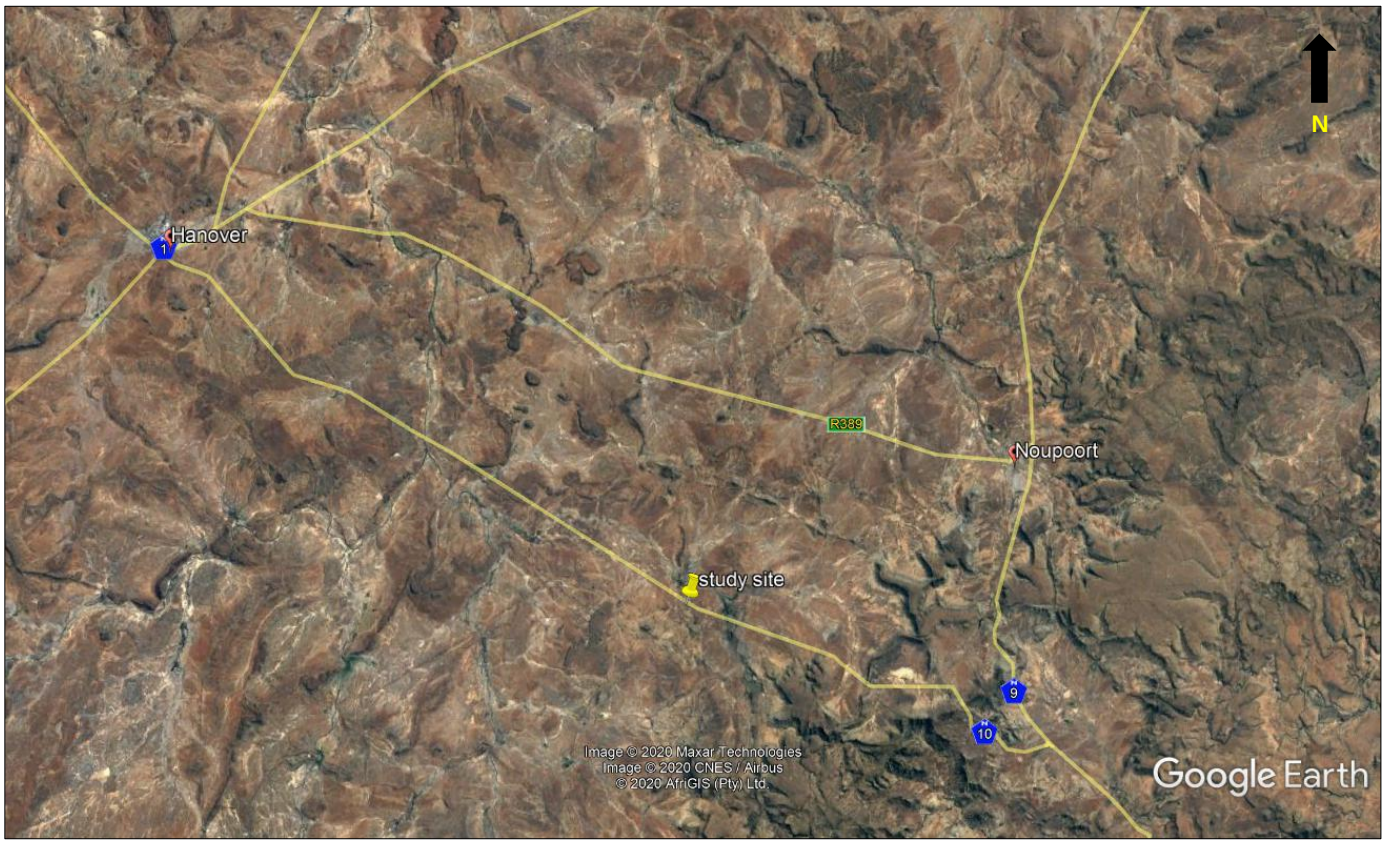

Figure 2.Google earth satellite map indicating the location of the proposed telecommunication mast (yellow pin) in relation to the towns of Hanover and Noupoort in the Northern Cape Province.

2. PROJECT PROPOSAL

The project entails construction of a 55m high, telecommunication mast and base station on Re Farm Elandsheuwel No. 146 Hanover, in Northern Cape Province (Figure 3). The mast's base station will be enclosed with a steel palisade fence. A 3m wide, approximately 125m long twee spoor gravel access road will be constructed to gain access to the proposed mast site. A new overhead powerline about 420m long will also need to be constructed from an existing Eskom line to the tower site. The span between the powerline poles is about 100m. The powerline servitude will be bush cut, so no coversands will be removed from within the servitude. The total development footprint is approximately 100m².

Enviroafrica is the appointed independent Environmental Assessment Practitioner responsible for facilitating the Basic Assessment process for Environmental Authorization.

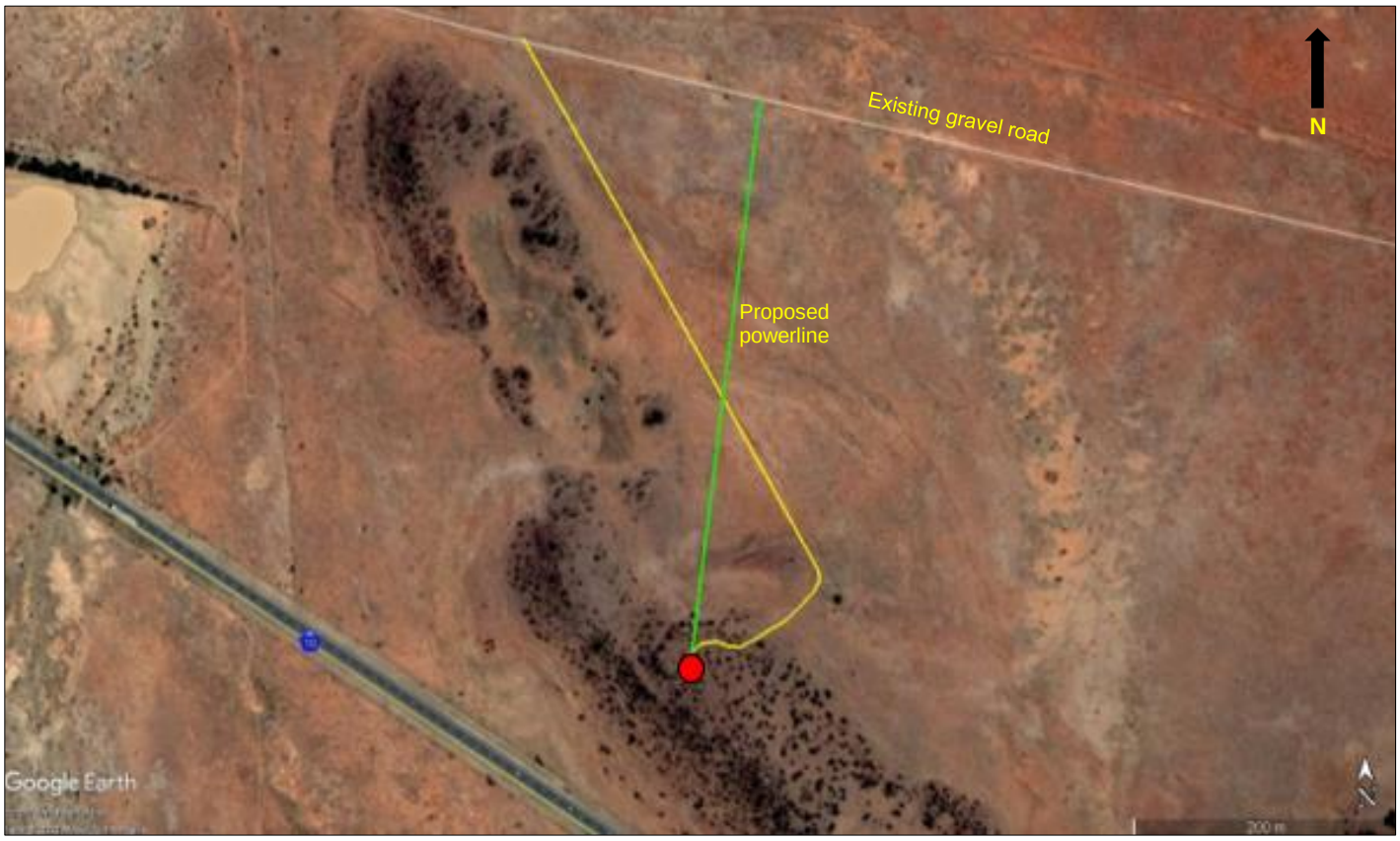

Figure 3. Google Earth image showing the location of the proposed telecommunication mast (red placemark. The proposed 3m wide gravel access road is indicated by the yellow line, and the proposed 420m overhead powerline is indicated by the green line.

3. HERITAGE LEGISLATION

The National Heritage Resources Act (Act No. 25 of 1999) makes provision for a compulsory HIA when an area exceeding 5000m² is being developed. This is to determine if the area contains heritage sites and to take the necessary steps to ensure that they are not damaged or destroyed during development. The Act provides protection for the following categories of heritage resources:

- Landscapes, cultural or natural (Section 3 (3))
- Buildings or structures older than 60 years (Section 34);
- Archaeological sites, palaeontological material and meteorites (Section 35);

- Burial grounds and graves (Section 36);
- Public monuments and memorials (Section 37);
- Living heritage (including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships) (Section 2 (d) (xxi)).

In addition, Section 38 (1) (a) of the NHRA also stipulates that any person constructing a powerline, pipeline or road, or similar linear development or barrier, exceeding 300m in length is required to notify the responsible heritage resources authority, who will in turn advise whether a Heritage Impact Assessment report is needed, before development can take place.

4. TERMS OF REFERENCE

The terms of reference for the study were to:

- Determine whether there are likely to be any important archaeological remains that may be impacted by the proposed development;

- Indicate any archaeological constraints that would need to be taken into, account in considering the development proposal;

- Recommend mitigation action

5. THE STUDY SITE

The site for the proposed telecommunication mast is located on top of a prominent dolerite kopje about 140m from the N10, ± 36kms south east of Hanover and 21kms south west of Noupoort. There is some grass cover on the rocky kopje, and a few small sporadic trees and shrubs covering the kopje and rock covered slopes (Figures 4-6). The route for the proposed access road and powerline is flat and covered in short dry grass and loose surface stone. According to the EAP, the existing twee-spoor track is barely visible. Surrounding land use is agriculture (marginal grazing) and farm roads, including the N10.

Figure 4. Marking the position of the proposed telecommunication mast. View facing north west (Enviroafrica 2020)

Figure 5. View of the proposed access road and powerline facing north (Enviroafrica 2020)

Figure 6. View north of the dolerite kopje, taken from the proposed access road and powerline route (Enviroafrica 2020). The existing twee-spoor track is barely visible.

6. STUDY APPROACH

6.1 Method

The purpose of the study is to assess the sensitivity of archaeological resources in the study area, to determine the potential impacts on such resources, and to avoid and/or minimize such impacts by means of management and/or mitigation measures.

The significance of archaeological resources was assessed in terms of their content and context. Attributes considered in determining significance include artefact and/or ecofact types, rarity of finds, exceptional items, organic preservation, potential for future research, density of finds and the context in which archaeological traces occur.

A field assessment was undertaken by Dr Jayson Orton of Asha Consulting, and assistant archaeologist Ms Anja Huisamen, on 31 October 2020 (refer to Appendix A).

The position of identified archaeological resources were plotted using a handheld GPS unit set on the map datum WGS 84.

Although two archaeologists conducted the survey, only one GPS track log was recorded (Figure 7).

A literature survey was also carried out to assess the heritage context surrounding the proposed telecoms site. All the source material was accessed from the SAHRA content management information system (SAHRIS).

6.2 Constraints and limitations

There were no constraints or limitations associated with the study. Archaeological visibility was very good.

6.3 Identification of potential risks

Indications are that the proposed project will not impact on important archaeological heritage.

7. ARCHAEOLOGICAL CONTEXT

The Karoo landscape is known for its richness of Stone Age archaeological traces both in the form of surface scatters of stone tools and of rock engravings on dolerite outcrops (Beaumont & Morris 1990; Morris 1988). Surface scatters and quarry sites are sometimes also found at the foot of dolerite hills where hornfels outcrops occur.

Around Noupoort, which is about 21kms south west from the proposed site, there is some archaeological information available on the Stone Age occupation of the area. Apart from the well-known Blydefontein Shelter (Sampson 1970; Bousman 2005), scatters of LSA sites, and isolated MSA tools have been recorded during surveys for several solar energy farms north of the town (Booth & Sanker 2012; Booth 2011a, b; van Schalkwyk 2012). Large numbers of LSA tools were also recorded by Rossouw (2010) associated with several proposed borrow pits alongside the N9, south of Noupoort.

The closest work undertaken near the study site was for a large wind farm south of the N10, between Noupoort and Middelburg by Anderson (2018), who recorded dispersed scatters of stone tools and a Stone Age quarry site.

8. FINDINGS

Four weathered hornfels flakes (Point 241) of mixed age were noted in a small clearing to the southeast of the mast footprint (Figure 8). Three other isolated artefacts were seen along the ridge to the southeast.

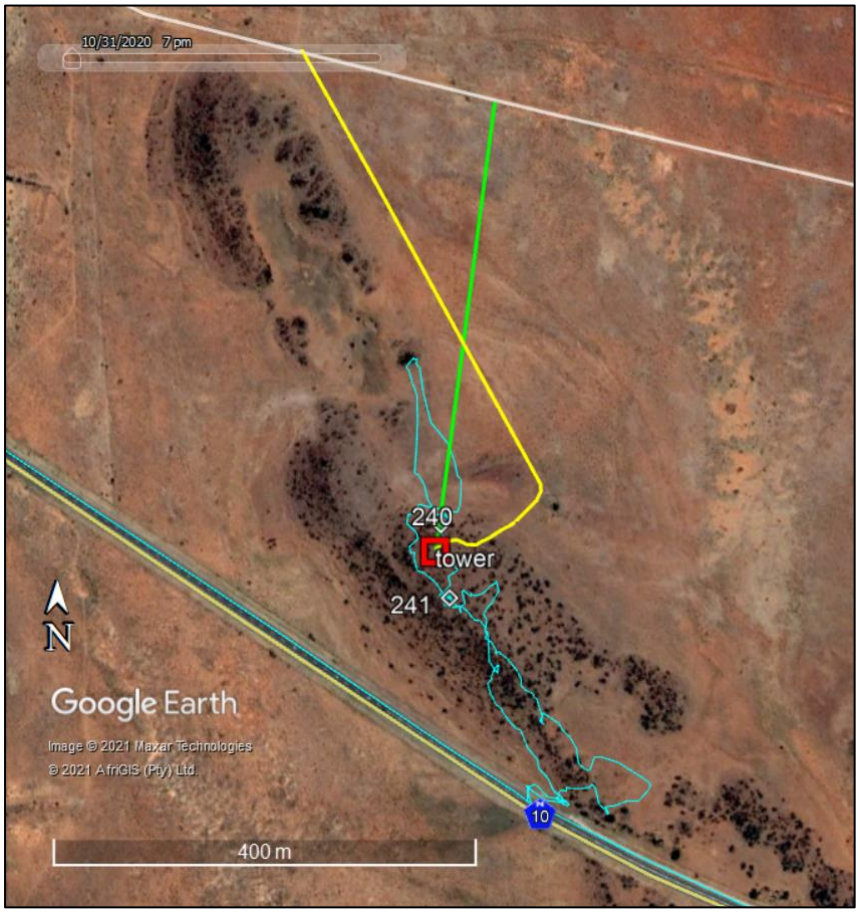

Figure 7. Trackpaths in blue & waypoints of archaeological finds (Orton 2020)

Figure 8. Stone flakes (Point 241). Scale is in cm (Orton November 2020)

The remains of a small, ruined stone structure, probably a kraal (Point 240), was found at the base of the ridge in the powerline servitude (Figures 9 & 10). Many of its stones have been removed and no associated artefactual material was found.

Figure 9. Remains of an ephemeral kraal (Point 240) at the foot of the kopje under the bush extending toward the top left (Orton November 2020)

Figure 10. Remains of an ephemeral kraal (Point 240) looking uphill from the lower slopes of the kopje (Orton November 2020). The lowermost rocks appear to have been removed

A careful examination of the ridge from its high point to look for suitable rocks for engraving yielded only one potential location, to the southeast of the mast footprint. This area was searched but no rock engravings were found.

Regarding the proposed powerline route and (existing) twee spoor access road, the surrounding area towards the north was looked at from the kopje, which afforded a good view. No potential locations for archaeological sites were seen in the grasslands to the north of the ridge (Orton 2021:2). Orton notes that `if anything were found in the grassland, the chances of it being significant would be near zero'.

8.1 Grading of heritage resources

The heritage resources have been graded as having low (GPC) significance (Orton 2021).

9. IMPACT STATEMENT

According to Orton (2021:2), `no significant archaeological impacts are expected from this project'.

The overall impact significance of the proposed project on heritage resources is therefore assessed as LOW.

10. CONCLUSION

Construction of a proposed telecommunications mast including construction of a 420m long new powerline, and 120m long access road, is not likely to impact on important archaeological heritage. The few isolated tools recorded most likely represent discarded flakes.

A ruined kraal in the powerline servitude will not be impacted.

Therefore, there are no objections to the proposed project proceeding.

11. RECOMMENDATIONS

Regarding the proposed construction of a 55m high telecommunications mast, including construction of an 120m long access road and ± 420m long powerline servitude on Re Farm Elandsheuwel No. 146, near Hanover, the following recommendations are made.

1. No archaeological mitigation is required.

2. The Environmental Control Officer (ECO) must be briefed in the event of any archaeological resources being uncovered or disturbed during construction activities

The above recommendations must be included in the Environmental Management Plan (EMP) for the proposed project.

12. REFERENCES

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Appendix A

Field assessment report by Dr Jayson Orton

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10 March 2021

Jonathan Kaplan
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ARCHAEOLOGICAL FIELDWORK FOR PROPOSED TELECOMS MAST ALONG THE N10, NEAR NOUPOORT

Dear Jonathan

This letter serves to describe the fieldwork undertaken in the preliminary phase of this project. It is noted here for record purposes that, although your project, I conducted the fieldwork for you because I happened to be close by at the right time.

The site was visited by two archaeologists (myself and Anja Huisamen) on 31 October 2020. In this kind of landscape (which is common in central South Africa) experience has shown that Later Stone Age (LSA) archaeological sites can occur on, or in close proximity to, dolerite ridges such as that on which the telecommunications mast has been proposed. Artefact scatters, in particular, tend to be found on the tops of these ridges, often in small clearings such as that proposed for the mast footprint. Historical sites can also occur but are generally located either at the foot of such ridges or else in other areas close to water sources. The survey was never intended to be a comprehensive field survey of the whole study area. It aimed only to check the most sensitive locations and briefly check the surroundings for obvious heritage resources. Although two archaeologists were present, only one GPS track log was recorded (illustrated below). In the event, four stone artefacts of mixed age were noted in a small clearing to the southeast of the mast footprint (waypoint 241), and a small, ruined stone structure (probably a kraal) was found at the base of the ridge (waypoint 240). Although the stone artefacts may well be damaged or destroyed during construction, they are of no cultural significance and are of no further concern – suggested grade GPC. The small stone kraal will be crossed by the overhead powerline but will not be impacted. It has already had many of its stones removed and given its condition and lack of associated artefactual material, it too has very little cultural significance – suggested grade GPC. Three other isolated artefacts were seen along the ridge to the southeast.

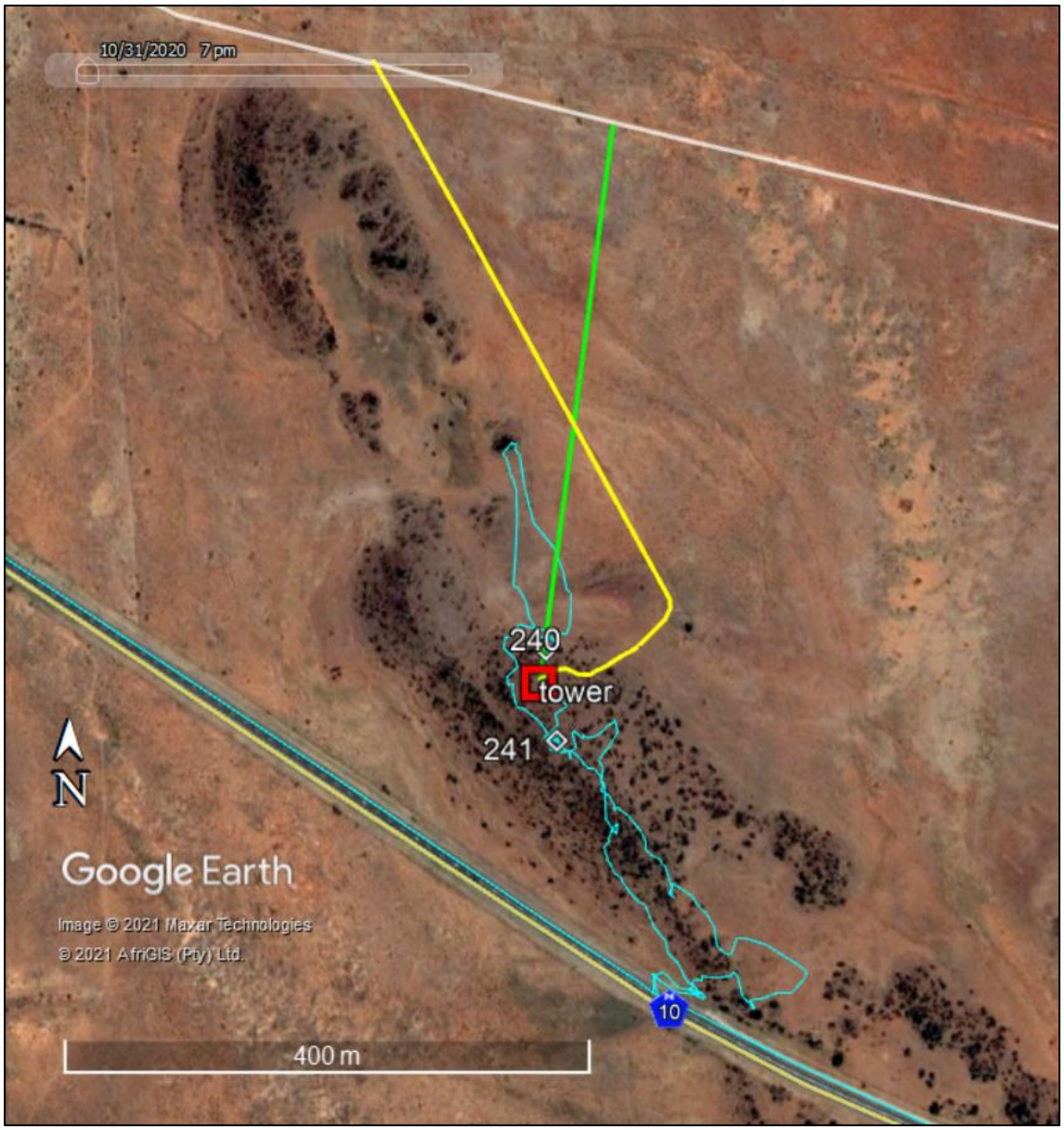
The possibility of rock engravings was also considered. A careful examination of the ridge from its high point to look for suitable rocks for engraving yielded only one potential location, to the southeast of the mast footprint. This area was searched but to no avail. The rock on the small koppie to the northwest was too friable for engraving.

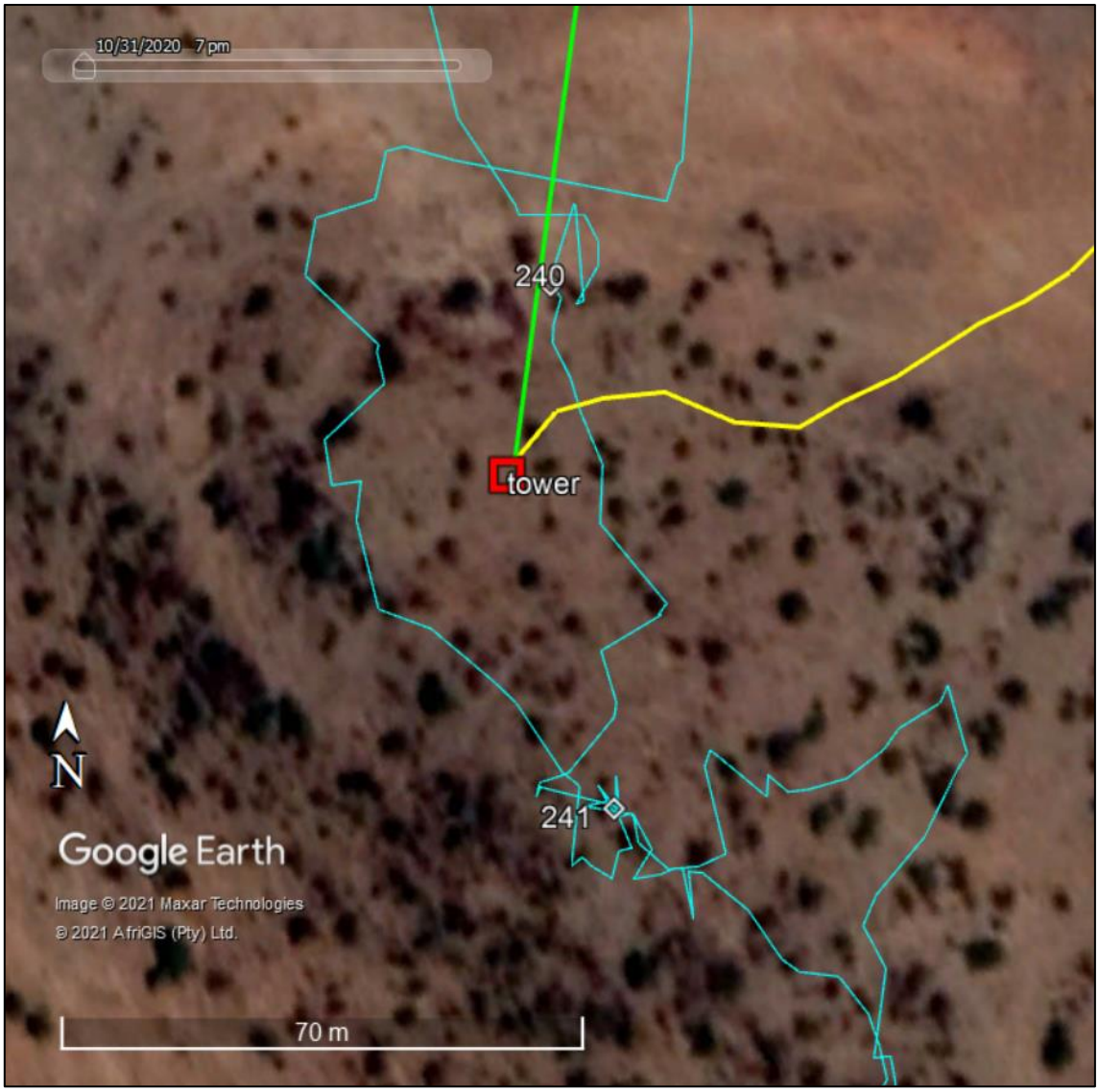
The surrounding area towards the north was looked at from the ridge which afforded a good view. No potential locations for archaeological sites were seen in the grasslands to the north of the ridge but the small dolerite koppie to the northwest was visited in case it had associated archaeology (which turned out not to be the case).

It is the professional opinion of the present writer that further survey of the study area would be pointless as the chances of finding any further archaeological materials are near zero. The most likely locations along the ridge were checked and archaeological materials were found to be very sparse. If anything were found in the grassland, the chances of it being significant would be near zero. No significant archaeological impacts are expected from this project.

Yours sincerely

Jayson Orton

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