

WALKDOWN REPORT FOR THE MULILO TOTAL HYDRA TRANSMISSION LINE OUTSIDE DE AAR, NORTHERN CAPE

Prepared for

Arcus Consultancy Services South Africa (Pty) Ltd

On behalf of

Mulilo Renewable Project Developments (Pty) Ltd

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DETAILS OF THE SPECIALIST

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CONSULTANT DECLARATION OF INDEPENDENCE

I, John Gribble, declare that – general declaration:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Signature of the specialist:



Name of company (if applicable): ACO Associates CC

Date: 29 September 2021

EXECUTIVE SUMMARY

ACO Associates CC was appointed by Arcus Consultancy Services South Africa (Pty) Ltd, on behalf of Mulilo Renewable Project Developments (Pty) Ltd, to carry out a pre-construction walkdown survey of the new transmission line between the Hydra substation and the Mulilo Solar PV Cluster 1 on the farm Badenhorst Dam (1/180), outside De Aar in the Northern Cape.

The survey was undertaken by ACO Associates on 28 August 2021 and built on the results of a number of previous surveys of the area conducted in 2011, 2013 and 2020.

Findings: The 2021 survey recorded the presence of a handful of archaeological sites and material on or adjacent to the development footprint, the bulk of which was heavily patinated Middle Stone Age lithics which were assessed not to be conservation-worthy and which need not be conserved should they be impacted by the construction of the transmission line, on-site substation or access road.

A scatter of Later Stone Age, possibly of the Lockshoek industry flaked stone (G021) in the lee of a dolerite dyke near the Hydra substation terminus of the transmission line was graded as IIIC.

Also near the Hydra end of the transmission line, a pile of dolerite boulders mixed with chunks of grey granite and smaller pieces of grey slate was recorded (J043). These rocks could be a grave cairn, although from the location and setting this appears unlikely. However, if this is a grave, its significance will be high and as a precaution was graded IIIC.

The proposed transmission line will be constructed within approximately 30 m of the former and almost directly over the latter. Both sites may thus be subject to disturbance or damage arising from the installation of the transmission line. It is recommended that a no-go buffer of 20 m is established around the co-ordinates of G021, and that J043 is cordoned off and avoided during construction activities.

The 2011 and 2013 surveys found a range of archaeological sites clustered along the rocky ridgeline that runs roughly north-west to south-east across the west of the farm. The route of the proposed access road crosses a gap in the rocky ridge before running south and west of the ridgeline.

Mitigation recommended by both Orton (2011) and Webley and Orton (2013) included the avoidance of the dolerite ridge with all its archaeological features and, where avoidance of sites is not possible, archaeological mitigation in the form of excavation and collection of artefacts. This recommendation has been acted on by Mulilo and they have created heritage no-go areas around most of the sites on the dolerite ridge that are in any way proximate to the proposed access road.

It is recommended that these no-go areas are implemented during the construction of the access road and remain in force in future during the operation of the transmission line.

In all instances contractors must be made aware of the presence of the no-go areas recommended above and Mulilo, through the project Environmental Compliance Officer, must ensure that they implemented and respected.

Should any human remains be encountered at any stage during earthworks associated with the project, work in the vicinity must cease immediately, the remains must be left *in situ* but made secure and the project archaeologist and the South African Heritage Resources Agency must be notified immediately so that a decision can be made about how to mitigate the find.

Conclusion: This assessment has found that impacts to a number of significant heritage resources may arise from the proposed installation of the transmission line, on-site substation and access road.

It is our considered opinion, however, that provided the mitigation measures set out above are implemented, the overall impact of the proposed installation of the transmission line, on-site substation and access road will be of low heritage significance and the proposed activity is acceptable.

GLOSSARY

Archaeology: Remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years, including artefacts, human and hominid remains and artificial features and structures.

Late Stone Age: The archaeology of the last 20 000 years associated with fully modern people.

Middle Stone Age: The archaeology of the Stone Age between 20 000-300 000 years ago associated with early modern humans.

SAHRA: South African Heritage Resources Agency – the compliance authority which protects national heritage.

ACRONYMS

HIA	Heritage Impact Assessment
LSA	Late Stone Age
MSA	Middle Stone Age
SAHRA	South African Heritage Resources Agency

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1 INTRODUCTION

ACO Associates CC was appointed by Arcus Consultancy Services South Africa (Pty) Ltd, on behalf of Mulilo Renewable Project Developments (Pty) Ltd (Mulilo), to carry out a pre-construction walkdown survey of the new transmission line between the Hydra substation and the Mulilo Solar PV Cluster 1 on the farm Badenhorst Dam (1/180), outside De Aar in the Northern Cape (Figure 1).

2 DEVELOPMENT PROPOSAL

Mulilo has environmental authorisation for the construction of a 132 kV transmission line, on-site substation and associated access road for the Mulilo Solar PV Cluster 1 (Figure 2).

The transmission line will run between the PV facility on-site substation and Eskom's Hydra substation, parallel to the existing Hydra-Bushbuck 132 kV line.

The line will consist of 2WT-1294, 2WT-1295, 2WT-1296 and 2WT-1297 steel pole structures which will be embedded in the ground with soil improvement around the base and a concrete cap, while all the guy wires will utilize concrete encased deadman anchors.

The on-site substation will occupy an area of roughly 200 x 150 m on the edge of the Mulilo Solar PV Cluster 1 and will be accessed from the N10 by a road to be constructed from the existing railway crossing on the farm De Aar 180/1 (Figure 2). Access to the transmission line itself will be along the existing Hydra-Bushbuck 132 kV line servitude road.

3 TERMS OF REFERENCE

ACO Associates was commissioned to conduct a pre-construction archaeological walkdown survey of the transmission line, access road and on-site substation site and to provide a report on the results.

The aim of the walkdown was to identify heritage resources which may be impacted by the proposed installation of the transmission line, and construction of the access road and on-site substation, assess their significance and provide recommendations for mitigation.

4 PREVIOUS ASSESSMENTS

The area within which the transmission line, access road and on-site substation are proposed has been subject to several archaeological assessments in recent years, all associated with renewable energy projects.

Portions of the transmission line and access road and their wider environment on farm De Aar 180/1, were surveyed by Orton (2011) and Orton and Webley (2013) as part of the heritage impact assessment for the proposed Badenhorst Dam PV facility (Figure 3).

These surveys found a range of archaeological sites clustered along the rocky ridgeline that runs roughly north-west to south-east across the west of the farm. The route of the proposed access road crosses a gap in the rocky ridge before running south and west of the ridgeline.

The sites identified included LSA and MSA stone scatters, stone kraals and circular packed stone structures, some historical material and some possible rock engravings and a rock gong. Their significance ranged from not conservation-worthy (NCW) to grade 3C. Full gazetteers of the sites identified in 2011 and 2013 are attached as Appendices 1 and 2 below.

In 2020 Gribble and Euston-Brown (2020) surveyed the area of the transmission line within the boundary of the Hydra substation and over the road on the farms Wag 'n Bietjie 3/5 and 1/137 as part of the assessment of the grid connection line for the De Aar 2 South Wind Energy Facility (Figure 4). No sites were reported in this area of that survey.

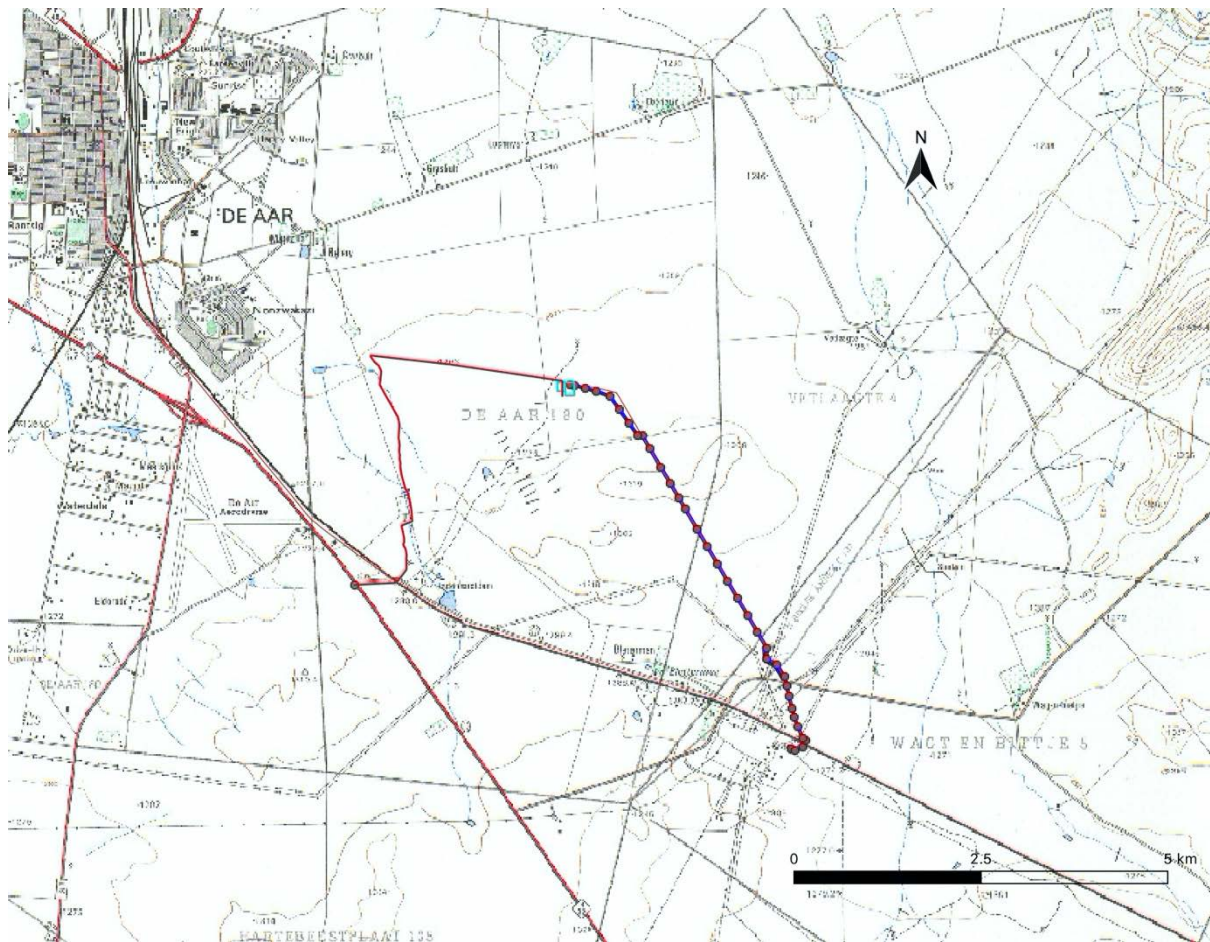


Figure 1: The location of the transmission line (dark blue), on-site substation (light blue) and access road (red) shown on the 1:50,000 map sheet for the area (3024CA) (Source: Chief Directorate: National Geo-Spatial Information. Website: www.ngi.gov.za)

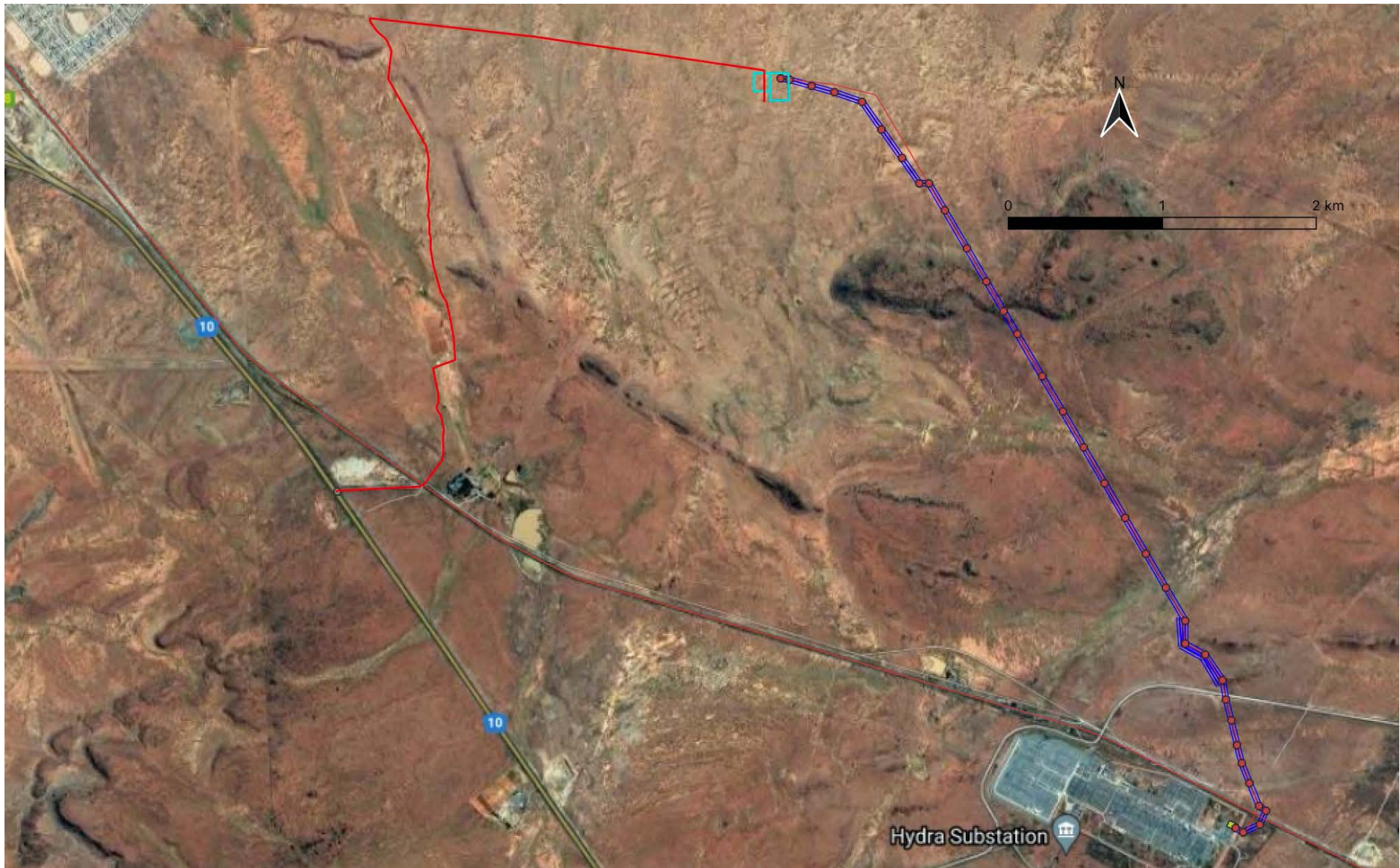


Figure 2: Detail of the access road (red), on-site substation footprint (pale blue) and the transmission line (dark blue) (Source: Google Earth).

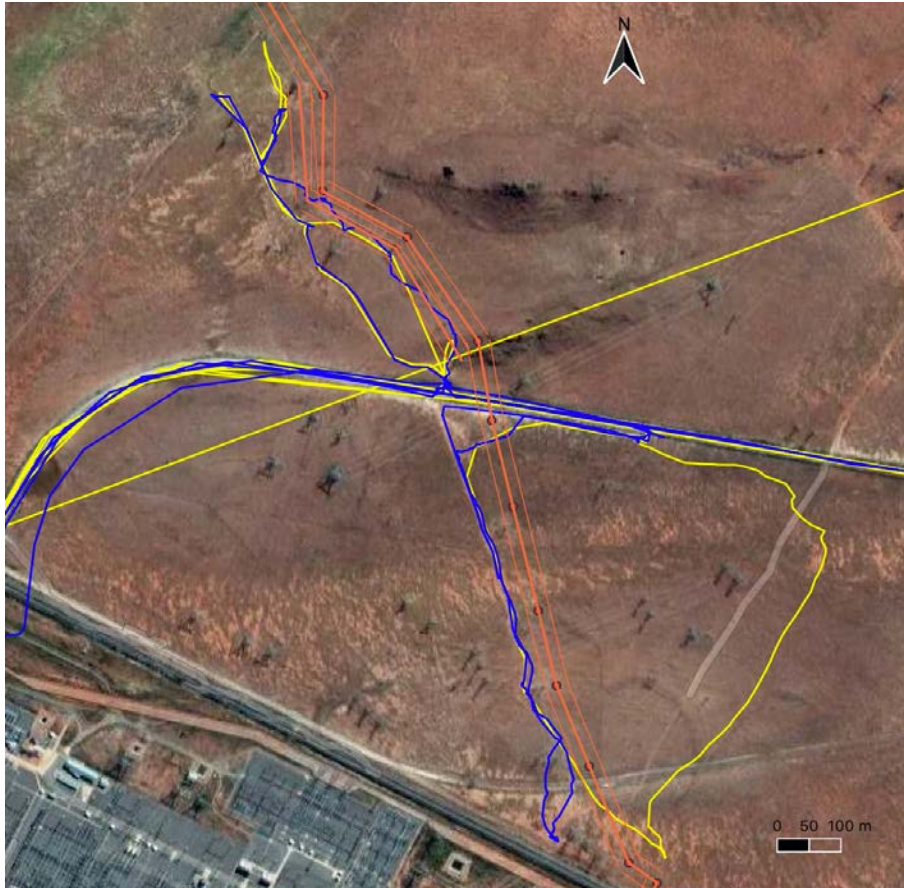


Figure 4: 2020 Gribble & Euston-Brown survey tracks (yellow and dark blue) in the vicinity of the Hydra substation (bottom left) for the De Aar 2 South WEF grid connection. The current transmission route is shown in orange (Source: Google Earth)

5 METHODOLOGY

A physical survey of the proposed transmission line, on-site substation footprint and access road was undertaken by John Gribble and Gail Euston-Brown of ACO Associates on 28 August 2021.

Both members of the field team carried hand-held GPS receivers (using the WGS84 datum), pre-loaded with the footprint of the project elements and other data such as the farm boundaries, and these were used to log the survey tracks (Figure 5) and record the positions of any identified heritage resources.

The field team was suitably qualified and experienced to roughly date and characterise any heritage resources encountered during the survey.

No trial holes were dug and no material was removed from the project area. All observations were based on visible surface material.

5.1 *Restrictions and Assumptions*

The survey area was readily accessible with arrangements having been made with all landowners. Vegetation on the site was predominantly Karoo grasses and although thick in places, surface visibility was generally good enough for the purposes of the field survey.

ACO were made aware only after the site visit that the access road alignment had been amended to that shown in Figure 2 and, as a result the survey followed the route of the earlier proposed alignment which followed the western boundary of the farm, parallel to the railway line (see Figure 5). Much of the revised route alignment was however covered by Orton and Webley's surveys in 2011 and 2013, and from these it is clear that the archaeological sites are clustered on the rocky ridgeline, rather than in the sandy plains that surround them. It is unlikely therefore that the fact that a portion of the access road route was not surveyed as part of the 2021 walkdown survey will be a limitation to this assessment.

6 2021 SURVEY RESULTS

The 2021 walkover survey of the transmission line, on-site substation footprint and a portion of the access road recorded the presence of a handful of archaeological sites or material on or adjacent to the development footprint.

The bulk of this material (J044, J045, G020, G022 and G023) (Figure 6) consisted of heavily patinated Middle Stone Age (MSA) lithics which were assessed not to be conservation-worthy. Since these occurrences are considered not conservation-worthy, they need not be conserved should they be impacted by the construction of the transmission line, on-site substation or access road.

A scatter of fresh, unpatinated flaked stone was recorded (G021) in the lee of a dolerite dyke near the Hydra substation terminus of the transmission line. Made mainly on hornfels the scatter includes at least two scrapers (one quite large) and a silcrete flake and appears to be Later Stone Age (LSA), possibly of the Lockshoek industry. This site was graded as III C and although not directly on the transmission line route must be avoided in during its construction (Figure 6 and Plate 1).



Plate 1: Examples of the possible Lockshoek lithics recorded at G021, with one of the scrapers shown on the right (Photos: G Euston-Brown).

Lastly, also near the Hydra end of the transmission line, a pile of dolerite boulders mixed with chunks of grey granite and smaller pieces of grey slate was recorded (J043). Approximately 1.5 x 0.7 m in size, this pile could represent a grave cairn, although from the location and setting this appears unlikely. However, if this is a grave, its significance will be

high and as a precaution it has been graded IIIC and it is recommended that it is avoided during the construction and operation of the transmission line (Figure 6 and Plate 2).



Plate 2: Boulder pile (J043) recorded near the Hydra substation end of the transmission line (Photos: J Gribble).

7 POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

Of the sites recorded during the 2021 walkdown survey only the lithic scatter G021 and boulder pile J043 were assessed to have heritage significance. The proposed transmission line will be constructed within approximately 30 m of the former and almost directly over the latter. Both sites may thus be subject to disturbance or damage arising from the installation of the transmission line.

It is recommended therefore that the stone scatter G021 and the possible grave cairn J043 are avoided and treated as no-go areas during the construction and operation of the transmission line. It is recommended that a no-go buffer of 20 m is established around the co-ordinates of G021, and that J043 is simply cordoned off and avoided during construction activities.

Mitigation recommended by both Orton (2011) and Webley and Orton (2013) included the avoidance of the dolerite ridge with all its archaeological features and, where avoidance of sites is not possible, archaeological mitigation in the form of excavation and collection of artefacts. This recommendation has been acted on by Mulilo and they have created heritage no-go areas around most of the sites on the dolerite ridge that are in any way proximate to the proposed access road (Figure 7). It is recommended that these no-go areas are implemented during the construction of the access road and remain in force in future during the operation of the transmission line.

Contractors must be made aware of the presence of the no-go areas recommended above and Mulilo, through the project Environmental Compliance Officer, must ensure that they implemented and respected.

Should any human remains be encountered at any stage during earthworks associated with the project, work in the vicinity must cease immediately, the remains must be left *in situ* but made secure and the project archaeologist and the South African Heritage Resources Agency must be notified immediately so that a decision can be made about how to mitigate the find.

8 CONCLUSION

This assessment has found that impacts to a number of significant heritage resources may arise from the proposed installation of the transmission line, on-site substation and access road.

It is our considered opinion, however, that provided the mitigation measures set out above are implemented, the overall impact of the proposed installation of the transmission line, on-site substation and access road will be of low heritage significance and the proposed activity is acceptable.

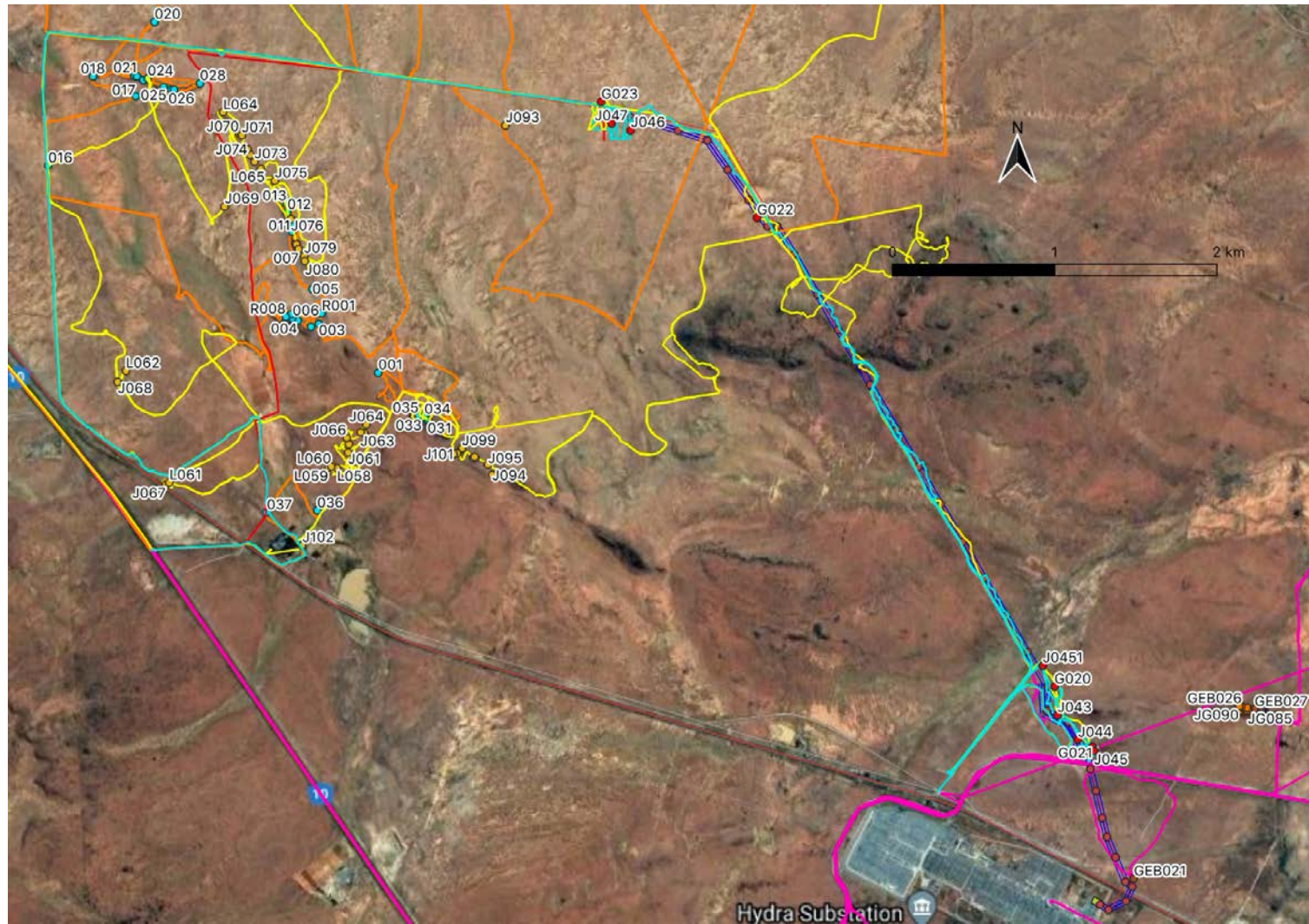


Figure 5: ACO survey track plots (2021 = pale blue; 2019 = pink; 2013 = yellow; 2011 = orange), overlaid on the project elements. All findspots recorded are shown as numbered items.(Source: Google Earth).

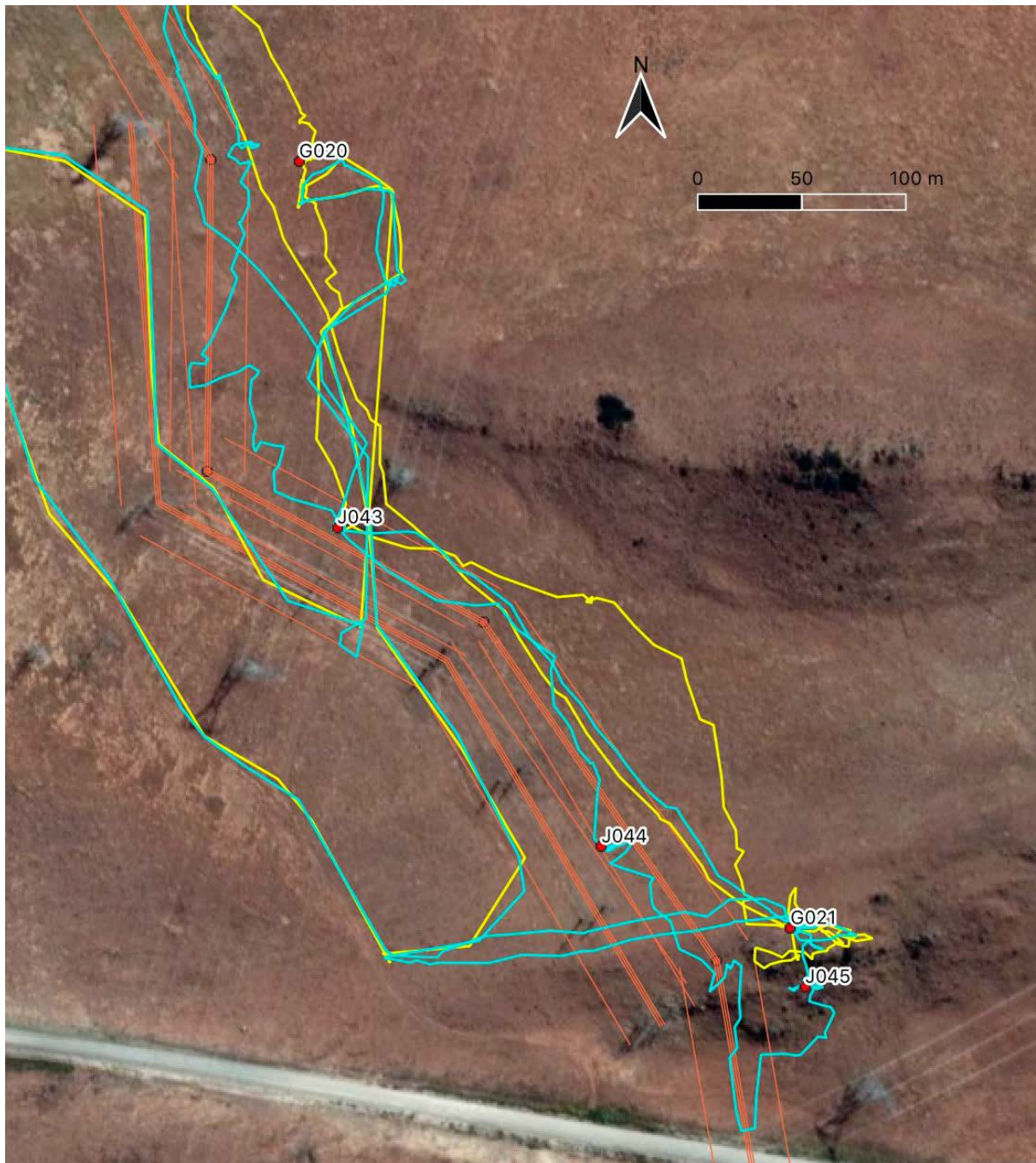


Figure 6: Sites recorded during the 2021 walkdown survey near the Hydra terminus of the transmission line (Google Earth).

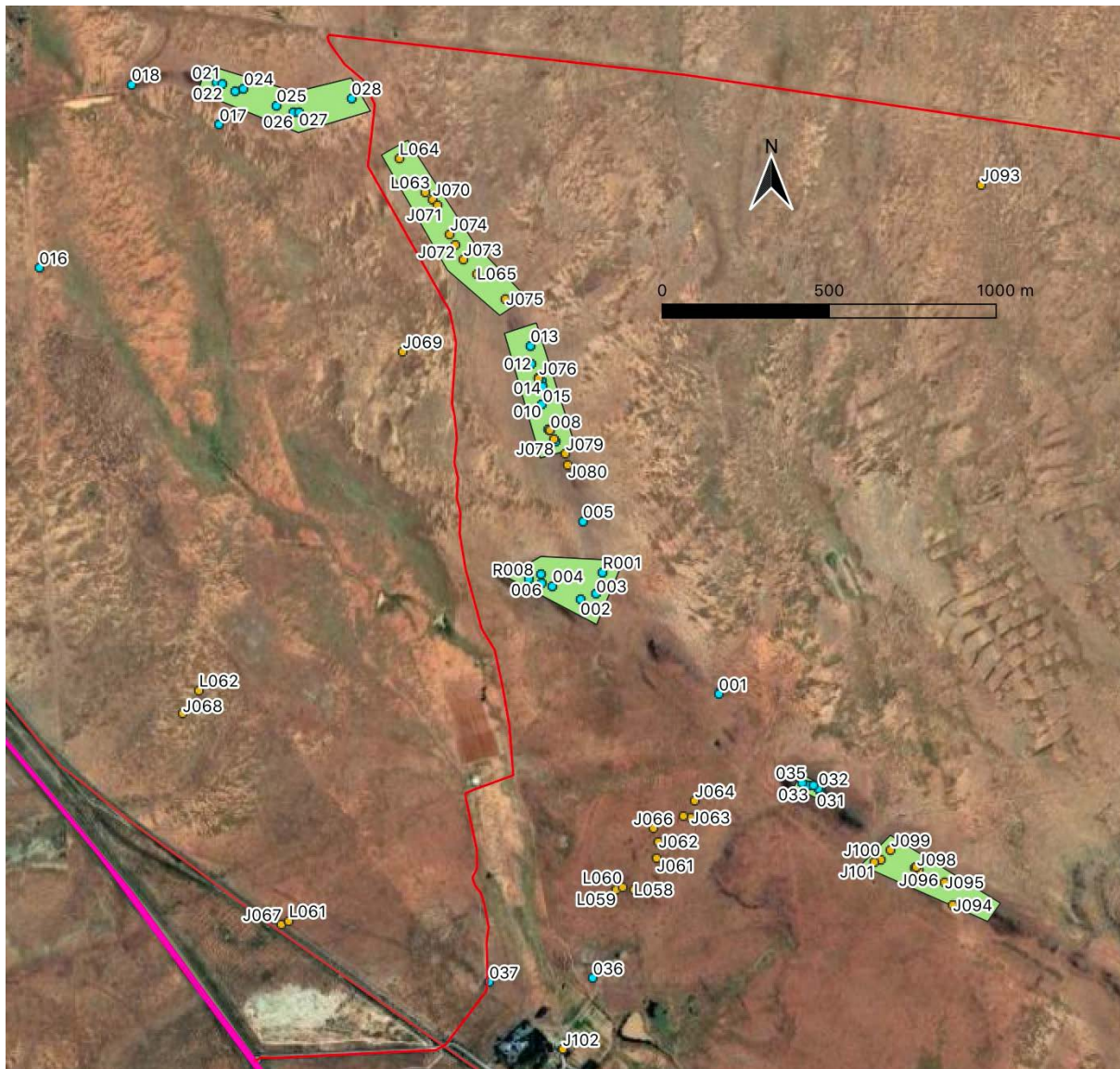


Figure 7: Heritage no-go areas (green polygons) demarcated by Mulilo around the archaeological sites on the dolerite ridges adjacent to the proposed access road (red line) (Source: Google Earth).

9 REFERENCES

Gribble, J. and Euston-Brown G.E. 2020. *Heritage Impact Assessment: Proposed Grid Connection for the De Aar 2 South Wind Energy Facility, De Aar, Northern Cape*. Unpublished report prepared for Arcus Consultancy Services South Africa (Pty) Ltd. ACO Associates. Cape Town.

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APPENDIX 1: GAZETTEER OF SITES AND FINDSPOTS RECORDED DURING THE 2011 SURVEY (AFTER ORTON 2011)

Field No	Site No	Description	Co-ordinate location	Significance & grade
001 [∞]	DAR2011/001	Possible kraal at base of ridge.	S30 41 24.2 E24 03 13.2	Low
002	DAR2011/002	LSA scatter of hornfels plus a few MSA artefacts. Also some ostrich eggshell but association may not be real.	S30 41 16.3 E24 02 59.8	Low
003 [∞]		MSA and LSA artefact scatter in the saddle on the ridge. Probably background scatter	S30 41 15.8 E24 03 01.4	Very low
004 [∞]	DAR2011/003	MSA scatter in the saddle on the ridge. Mostly MSA but occasional LSA as well.	S30 41 15.2 E24 02 57.1	Very low
005		MSA hornfels scatter on the ridge. Probably background.	S30 41 09.8 E24 03 00.1	Very low
006 [∞]	DAR2011/004	LSA hornfels scatter on the ridge.	S30 41 14.9 E24 02 56.1	Low
007 [∞]	DAR2011/005	Three small stone circles, some stone artefacts and recent glass on the ridge.	S30 41 03.1 E24 02 57.4	Medium Grade 3C
008	DAR2011/006	Stone circle 2.5 x 3 m on the ridge.	S30 41 02.1 E24 02 56.9	Low-medium Grade 3C
009 [∞]	DAR2011/007	Scratched rock on the ridge.	S30 41 02.2 E24 02 56.7	Low-medium
010 [∞]	DAR2011/008	Stone circle and small section of adjacent walling on the ridge. Not closed.	S30 41 00.1 E24 02 56.1	Medium Grade 3C
011 [∞]	DAR2011/009	Stone pile on the ridge.	S30 40 57.9 E24 02 55.8	Low-medium
012 [∞]	DAR2011/010	Possible but dubious stone circle on the ridge. Also a scratched and/or ground rock nearby.	S30 40 56.7 E24 02 55.1	Very low
013	DAR2011/012	Stone semi-circle at the base of the ridge on its east side. 2 m diameter.	S30 40 55.2 E24 02 55.0	Medium Grade 3C
014	DAR2011/011	Stone circle on the ridge. 2 m diameter.	S30 40 58.1 E24 02 56.1	Medium Grade 3C
015 [∞]	DAR2011/013	Stone circle, three scratched rocks and one rubbed/ground rock on the lower slope of the ridge on its east side.	S30 40 58.6 E24 02 56.2	Medium Grade 3C
016 [∞]		MSA hornfels artefacts in "pan" area.	S30 40 48.7 E24 02 07.4	Very low
017		MSA hornfels artefacts in "pan" area.	S30 40 36.8 E24 02 24.9	Very low
018		Historical/recent dam with stone-packed overflow.	S30 40 33.4 E24 02 16.3	Very low

019		Nearest corner of the modern municipal graveyard just outside the farm.	S30 40 19.4 E24 02 07.4	n/a
020		Stone dam, cement dam, cement dam foundation.	S30 40 24.1 E24 02 28.6	Very low
021	DAR2011/014	Small 1.5 m diameter probable stone circle and, 10 m west, a short section of walling extending northwards from the ridge.	S30 40 33.3 E24 02 24.6	Low
022	DAR2011/015	Stone circle that utilises mostly natural outcrop on the ridge.	S30 40 33.4 E24 02 25.2	Low-medium Grade 3C
023	DAR2011/016	Ephemeral stone walling with no particular form on the ridge.	S30 40 34.0 E24 02 26.4	Low
024 [∞]	DAR2011/017	Small stone circle on the ridge.	S30 40 33.8 E24 02 27.2	Low-medium Grade 3C
025	DAR2011/018	MSA hornfels scatter in a flat area on the ridge. Also some LSA including one CCS flake.	S30 40 35.2 E24 02 30.4	Low
026 [∞]	DAR2011/019	Large LSA hornfels scatter in a flat area on the ridge. Includes one thumbnail scraper. Also occasional MSA.	S30 40 35.7 E24 02 32.0	Low-medium Grade 3C
027	DAR2011/020	MSA hornfels scatter on a flat area on the ridge. Also occasional LSA artefacts.	S30 40 35.8 E24 02 32.6	Low
028	DAR2011/021	Historical stone circle made with two skins and rubble fill near the base of the ridge. Also a short (1m) section of probable walling about 6 m to the south.	S30 40 34.6 E24 02 37.6	Low-medium
029		MSA hornfels artefacts in "pan" area.	S30 39 39.9 E24 04 36.1	Very low
030 [∞]		MSA hornfels artefacts in "pan" area.	S30 40 18.7 E24 04 04.3	Very low
031		LSA scratched rock on the ridge.	S30 41 32.3 E24 03 23.0	Low-medium
032	DAR2011/022	East end of historical graffiti.	S30 41 32.1 E24 03 22.9	Medium Grade 3C
033		LSA scratched rock here.	S30 41 31.8 E24 03 21.9	
034		More graffiti with one being over LSA scratches.	S30 41 31.8 E24 03 22.4	
035		West end of historical graffiti.	S30 41 31.6 E24 03 21.3	
036 [∞]	DAR2011/023	Remains of a historical rectangular kraal up against a low dolerite ridge.	S30 41 47.9 E24 03 01.0	Low-medium
037	DAR2011/024	Two mid-20 th century outbuildings of unknown age but no heritage significance. Farm buildings all seem mid-20 th century and later.	S30 41 48.2 E24 02 51.0	Very low
R001		Scatter of hornfels and ostrich eggshell fragments on ridge.	S30 41 14.1 E24 03 02.0	Low
R004		Hornfels scatter on ridge.	S30 41 14.2 E24 02 56.0	Very low

R008		Hornfels scatter on ridge.	S30 41 14.6 E24 02 54.8	Very low
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APPENDIX 2: GAZETTEER OF SITES AND FINDSPOTS RECORDED DURING THE 2013 SURVEY (AFTER WEBLEY & ORTON 2013)

Field No.	Site No.	Co-ordinates	Description	Significance / Grade / Mitigation
J060		S30 41 39.5 E24 03 06.9	Rock with ground surface that has striations visible on it.	Very low
J061		S30 41 37.9 E24 03 07.2	Scratched rock	Very low
J062		S30 41 36.5 E24 03 07.4	Possible ground rock (unlikely)	Very low
J063		S30 41 34.5 E24 03 10.5	Possible ground rock (unlikely), some recent engraving over the top	Very low
J064		S30 41 33.1 E24 03 10.9	Possible ground rock (unlikely)	Very low
J065		S30 41 34.4 E24 03 09.8	Possible ground rock (unlikely)	Very low
J066		S30 41 35.4 E24 03 06.9	Possible ground rock (unlikely)	Very low
J067	DAR2013/001	S30 41 43.4 E24 02 30.9	Stone house ruin on the south side of the railway line. Probably a railway building. The house was probably the source of the historical material recorded at L061.	Medium
J068	DAR2013/002	S30 41 25.8 E24 02 21.3	MSA hornfels scatter in an ephemeral pan area. The scatter has many blades and some classic triangular MSA flakes. Points are ends of exposure.	Low-medium
L062		S30 41 23.9 E24 02 22.9		
J069		S30 40 55.7 E24 02 42.6	MSA hornfels scatter in pan area.	Very low
J070	DAR2013/003	S30 40 43.0 E24 02 45.5	Stone circle about 1.5 m in diameter. Very clear.	Low
J071	DAR2013/004	S30 40 43.5 E24 02 46.0	Stone circle made with two skins and a rubble fill. It lies at the base of the ridge on its north side. Two metal fragments nearby.	Low
J072	DAR2013/005	S30 40 46.8 E24 02 47.7	Stone semi-circle made with two skins and a rubble fill. About 1.5 m diameter and it lies on the north side of the ridge crest, although the ridge is too low here to provide any shelter.	Low
J073	DAR2013/006	S30 40 48.0 E24 02 48.5	Remains of a probable stone semi-circle made with two skins and a rubble fill. It lies on the north side of the ridge crest, although the ridge is too low here to provide any shelter.	Low

J074	DAR2013/007	S30 40 45.9 E24 02 47.2	Remains of a probable stone semi-circle made with two skins and a rubble fill. It lies on the north side at the base of the ridge.	Low
J075	DAR2013/008	S30 40 51.3 E24 02 52.6	Possible stone walling/semi-circle on crest of ridge.	Very low
J076	DAR2013/009	S30 40 57.9 E24 02 55.8	Short section of stone walling on north side of ridge crest.	Low
J077	DAR2013/010	S30 41 02.2 E24 02 56.9	Stone circle on crest of ridge. Probably pre-colonial.	Low
J078	DAR2013/011	S30 41 03.0 E24 02 57.3	Two stone circles on the crest of the ridge. They partly use the natural outcrop and one has glass inside it.	Low
J079	DAR2013/012	S30 41 04.2 E24 02 58.4	Stone semi-circle on the north side of the ridge at its base.	Low
J080	DAR2013/013	S30 41 05.1 E24 02 58.6	LSA hornfels scatter spread over the crest and north side of the ridge. It is c. 20 m in diameter.	Low
J081	DAR2013/014	S30 39 59.8 E24 04 50.5	081: Dense MSA hornfels scatter on the side of a low, wide ridge/hill. Artefacts are very widespread. 082: More of 081. 083: Lower density at the foot of the hill. 084: Lower density at the foot of the hill. 085: Lower density at the foot of the hill.	Low-medium
J082		S30 39 58.2 E24 04 50.4		
J083		S30 39 56.5 E24 04 49.6		
J084		S30 39 56.9 E24 04 52.5		
J085		S30 39 55.6 E24 04 53.4		
J086		S30 39 59.5 E24 04 53.1	MSA and LSA artefact scatter on western slope and crest of the low ridge/hill.	Low-medium
J087		S30 39 59.9 E24 04 52.3		
J088		S30 40 00.5 E24 04 52.8		
L066		S30 40 00.4 E24 04 51.9		
J089		S30 40 01.8 E24 04 52.8		
J090	S30 40 01.8 E24 04 52.2	Stone cairn, LSA hornfels scatter and historical artefacts (glass, Martini Henry and Westley Richards cartridges, metal) on the crest of the low ridge/hill.	Low	
J091	S30 40 03.6 E24 04 52.1	LSA hornfels scatter on the crest of the low ridge/hill.	Low	

J092		S30 40 05.0 E24 04 52.5	MSA and LSA artefact scatter on the crest of the low ridge/hill. This area has good density and is quite extensive. 092B is a lower grindstone found lying face up.	Low-medium
J092B		S30 40 05.5 E24 04 52.7		
J093	DAR2013/015	S30 41 41.8 E24 03 38.6	Rock gong with faint line drawing engravings on it. Three striking areas. Makes a high pitched metallic sound.	Medium
J094	DAR2013/016	S30 41 40.3 E24 03 35.9	Ephemeral LSA (?mixed age LSA) hornfels scatter on ridge. Also four scratched rocks here, one with four scratched patches on it.	Low
J095	DAR2013/017	S30 41 39.9 E24 03 35.1	Historical/recent engraving of an animal and a rock with "RP" lightly scratched onto it.	Very low
J096	DAR2013/018	S30 41 38.9 E24 03 32.6	Stone circle with some dark glass fragments, a piece of metal and a hornfels flake.	Low-medium
J097	DAR2013/019	S30 41 38.7 E24 03 32.2	Small LSA hornfels scatter on the crest of the ridge.	Very low
J098	DAR2013/020	S30 41 38.6 E24 03 32.4	Two stone circles on the crest of the ridge. Each about 1.5 m in diameter. One is heavily collapsed but they are historical as they are made with two skins and a rubble fill.	Low
J099	DAR2013/021	S30 41 37.2 E24 03 29.9	Stone semi-circle on the summit of a small hill. Looks LSA but some glass fragments and a modern bullet cartridge (model: PMP 270 WIN) occur nearby.	Low
J100	DAR2013/022	S30 41 38.0 E24 03 28.9	Stone horse-shoe-shaped enclosure of about 2 m diameter on the south side of the ridge. It is rough-packed.	Low
J101	DAR2013/023	S30 41 38.2 E24 03 28.3	Stone circle of about 2 m diameter on the south side of the ridge. It is rough-packed. A small, white ?glass button lay alongside it.	Low
J102	DAR2013/024	S30 41 53.8 E24 02 58.1	Historical outbuilding at the farm werf. Windows and door suggest c. 1930s. Stone additions to east side probably not much more recent.	Low-medium
L058		S30 41 40.5 E24 03 05.0	Small rocky koppie near farmhouse contains one possible lower grinding surface on a large flat rock, nearby one possible hornfels flake and one fragment of dark green bottle glass.	Very low
L059		S30 41 40.5 E24 03 03.2	Another possible grinding surface	Very low
L060		S30 41 40.3 E24 03 03.9	Two possible grinding surfaces, one weathered hornfels flake, one ostrich eggshell fragment.	Very low

L061		S30 41 43.1 E24 02 31.6	Historic material (rusty tin cans, one piece of mauve glass and one piece of white ceramic) near railway line. South of railway line is the ruin of a stone building. Perhaps all related to railway activities.	Low
L063		S30 40 42.4 E24 02 44.8	Very small, circular area cleared of rocks on the top of a koppie, with some evidence of stone packing on one side. The cleared area is only 1m ² . No artefacts inside	Low
L064		S30 40 39.6 E24 02 42.3	Short section of packed stone walling, very rough packing, about 3m long, along the lower margins of a ridge, providing some cover as a hunting blind? No artefacts nearby	Low
L065		S30 40 49.2 E24 02 49.8	Rough semi-circle of stone, roughly packed, with back to the wind on the edge of a rocky koppie. Circle about 2m in width, no artefacts nearby	Low
L067		S30 39 59.4 E24 04 53.3	One possible cairn on the same ridge – unlikely to be a grave	?High

APPENDIX 3: GAZETTEER OF SITES AND FINDSPOTS RECORDED DURING THE WALKDOWN SURVEY

(NCW = Not Conservation-worthy)

Label	Latitude	Longitude	Description	Grade
J043	-30.706373°	24.091288°	Stone pile ± 1.5 x 0.7 m. Dolerite boulders mixed with chunks of grey granite and smaller pieces of grey slate. Oriented SE-NW. Possible grave, but unlikely. Avoid	IIIC
J044	-30.707557°	24.092428°	Thin scatter of lithics on hornfels. Mostly unpatinated and possibly mid-LSA Lockshoek. Large scraper on earlier MSA flake. Scatter covers area of ± 2 x m ²	NCW
J045	-30.708078°	24.093307°	Handful of MSA lithics. Large flake with convergent flake scars along with other flakes and chunks. In area of ± 3 x 2 m ²	NCW
J046	-30.678503°	24.067662°	Geotechnical test pit. ± 2 m ² dug to a depth of about 1 m. Dorbank for much of the depth (hard dark red soil) below which is soft grey shale	N/A
J047	-30.678190°	24.066582°	Geotechnical test pit. ± 2 m ² dug to a depth of about 1 m. Dorbank for much of the depth (hard dark red soil) below which is soft grey shale with lenses of calcrete	N/A
G020	-30.705014°	24.091123°	Handful of worn and heavily patinated MSA lithics in and areas of ± 2m ²	NCW
G021	-30.707860°	24.093243°	Scatter of fresh, unpatinated flaked stone in the lee of a dolerite dyke. Predominantly hornfels but silcrete flake also noted. Includes at least two scrapers (one quite large). Likely LSA, possibly Lockshoek.	IIIC
G022	-30.682684°	24.074655°	Small pan ± 14m across with a number of very weather MSA lithics visible on the surface.	NCW
G023	-30.677159°	24.066024°	Large pan (still in use to water stock) adjacent to the northern boundary of the on-site substation. Worn MSA lithics visible on the surface. ± 1 piece / m ²	NCW

