

ZUTARI

APPENDIX F5 Heritage Report



**HERITAGE IMPACT ASSESSMENT:
PROPOSED BATTERY ENERGY STORAGE SYSTEM
AT KOERIS WIND ENERGY FACILITY, NAMAKWA
MAGISTERIAL DISTRICT, NORTHERN CAPE**

Report for:

ZUTARI (PTY) LTD
P.O. Box 494, Cape Town, 8000
Tel: 021 526 6022
Email: Andrea.Siebritz@zutari.com

On behalf of:

KOERIS WIND FARM (PTY) LTD



Dr Jayson Orton
ASHA Consulting (Pty) Ltd
40 Brassie Street, Lakeside, 7945
Tel: (021) 788 1025 | 083 272 3225
Email: jayson@asha-consulting.co.za

1st draft: 06 November 2020
Final report: 18 November 2020

SUMMARY

ASHA Consulting (Pty) Ltd was appointed by Zutari (Pty) Ltd to conduct an assessment of the potential impacts to heritage resources that might occur through the proposed development of a Battery Energy Storage System (BESS) and water reservoir at the Koeris Wind Energy Facility (WEF) located between Springbok and Aggeneys, Northern Cape. The BESS and reservoir are to be located on Portion 3 of the farm Kangnas 77 and Portion 1 of the Farm Koeris No. 78.

No site visit was conducted for this assessment but it was based heavily on the earlier site visit by the present specialist conducted in 2012 as part of the Environmental Impact Assessment. The landscape has two primary components: rocky hills and flat, sandy plains. The proposed development is to be located on the latter landscape type. The 2012 survey showed that most heritage resources are associated with the rocky hills or with the pans that occur infrequently in the sandy plains. These sites include scatters of Later Stone Age artefacts, rock paintings and many grinding hollows associated with the bedrock outcrops at pans. Although important heritage sites have been documented in the surrounding area, none of these sensitive landscape features are known within the presently proposed development footprint and it is thus all considered to be of low sensitivity.

Either alternative for the BESS may be authorised, although the solid state batteries (4 m high) are slightly preferred over the redox flow batteries (15 m high) because of their lower height. Either alternative for the reservoir may be authorised and none is preferred from a heritage point of view.

It is recommended that the proposed project be authorised but subject to the following recommendations:

- If any archaeological material or human burials are uncovered during the course of development, then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist. Such heritage is the property of the state and may require excavation and curation in an approved institution; and
- If technically feasible, the structural components of the chosen BESS should be an earthy colour.

Glossary

Early Stone Age: Period of the Stone Age extending approximately between 2 million and 200 000 years ago.

Hominid: a group consisting of all modern and extinct great apes (i.e. gorillas, chimpanzees, orangutans and humans) and their ancestors.

Later Stone Age: Period of the Stone Age extending over the last approximately 20 000 years.

Middle Stone Age: Period of the Stone Age extending approximately between 200 000 and 20 000 years ago.

Abbreviations

APHP: Association of Professional Heritage Practitioners

ASAPA: Association of Southern African Professional Archaeologists

BA: Basic Assessment

CRM: Cultural Resources Management

DEFF: Department of Environment, Forestry and Fisheries

ECO: Environmental Control Officer

EMPr: Environmental Management Programme

ESA: Early Stone Age

GP: General Protection

GPS: global positioning system

HIA: Heritage Impact Assessment

LSA: Later Stone Age

MSA: Middle Stone Age

NBKB: Ngwao-Boswa Ya Kapa Bokoni

NEMA: National Environmental Management Act (No. 107 of 1998)

NHRA: National Heritage Resources Act (No. 25) of 1999

PPP: Public Participation Process

REDZ: Renewable Energy Development Zone

SAHRA: South African Heritage Resources Agency

SAHRIS: South African Heritage Resources Information System

Contents

Glossary.....	iii
Abbreviations	iii
1. INTRODUCTION	1
1.1. The proposed project	1
1.1.1. Project description	1
1.1.2. Identification of alternatives.....	3
1.1.3. Aspects of the project relevant to the heritage study.....	3
1.2. Terms of reference	3
1.3. Scope and purpose of the report	3
1.4. The author	4
1.5. Declaration of independence	4
2. HERITAGE LEGISLATION	4
3. METHODS.....	6
3.1. Literature survey and information sources	6
3.2. Fieldwork	6
3.3. Impact assessment	6
3.4. Grading	6
3.5. Consultation.....	7
3.6. Assumptions and limitations	7
4. PHYSICAL ENVIRONMENTAL CONTEXT	7
4.1. Site context	7
4.2. Site description	7
5. FINDINGS OF THE HERITAGE STUDY	9
5.1. Archaeology	9
5.2. Graves	13
5.3. Historical aspects and the Built environment	13
5.4. Cultural landscapes and scenic routes	16
5.5. Statement of significance and provisional grading	16
5.6. Summary of heritage indicators	17
6. ASSESSMENT OF IMPACTS	17
6.1. Impacts to archaeological resources and graves	17
6.2. Impacts to the cultural landscape	18
6.3. The No-Go alternative	19
6.4. Existing impacts to heritage resources.....	20
6.5. Cumulative impacts	20
6.6. Levels of acceptable change.....	20
7. INPUT TO THE ENVIRONMENTAL MANAGEMENT PROGRAMME	20
8. EVALUATION OF IMPACTS RELATIVE TO SUSTAINABLE SOCIAL AND ECONOMIC BENEFITS.....	20
9. CONCLUSIONS	21
9.1. Reasoned opinion of the specialist.....	21

10. RECOMMENDATIONS	21
11. REFERENCES	22
APPENDIX 1 – Curriculum Vitae	23
APPENDIX 2 – Site Sensitivity Verification.....	25

1. INTRODUCTION

ASHA Consulting (Pty) Ltd was appointed by Zutari (Pty) Ltd to conduct an assessment of the potential impacts to heritage resources that might occur through the proposed development of a Battery Energy Storage System (BESS) and associated reservoir at the Koeris Wind Energy Facility (WEF) located between Springbok and Aggeneys, Northern Cape (Figure 1). The BESS would be constructed alongside the already authorised but not yet constructed wind farm substation in the vicinity of S29° 37' 20" E18° 26' 16". The BESS and reservoir are to be located on Portion 3 of the farm Kangnas 77 and Portion 1 of the Farm Koeris No. 78.

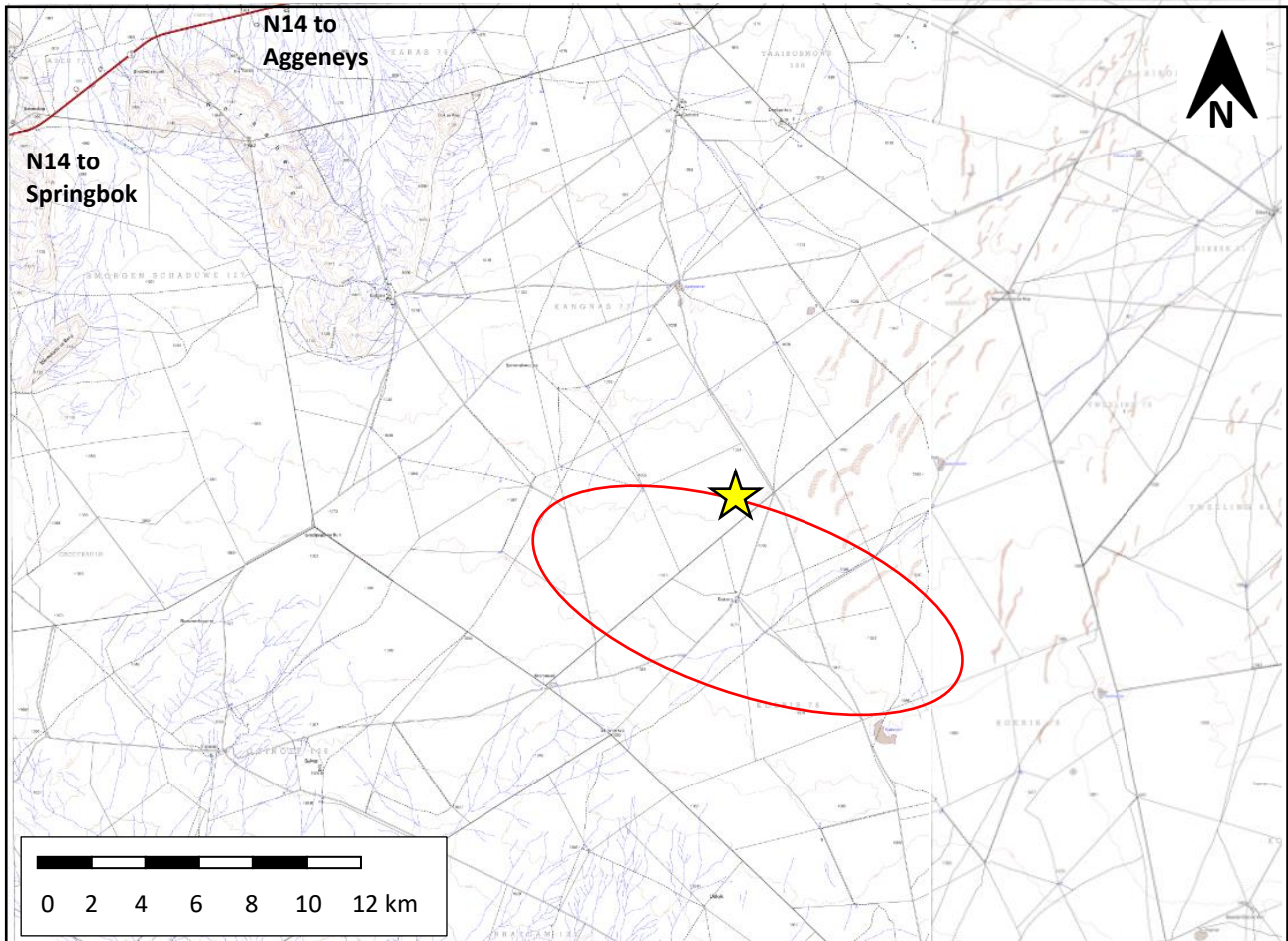


Figure 1: Extract from 1:50 000 topographic map 2918CB showing the approximate locations of the BESS site (yellow star) and WEF (red oval). Source of basemap: Chief Directorate: National Geo-Spatial Information. Website: www.ngi.gov.za.

1.1. The proposed project

1.1.1. Project description

The BESS will be located adjacent to the approved Koeris substation associated with the approved Koeris WEF (Figure 2). To reduce electrical losses the BESS must be located in close proximity to the on-site 33/132kV substation. The study area is approximately 150ha in extent and forms a zone

extending 500 m from the outer edges of the approved substation site. The BESS would occupy an area of up to 2 ha within this zone.



Figure 2: Map showing the location of the approved Koeris WEF buildable area (blue outlines), laydown area (brown polygon) and substation (green polygon). The BESS study area is shown around the substation in pink. The larger rocky hills and the N14 are visible to the northwest of the study area.

The need for a BESS stems from the fact that electricity is only produced by the WEF while the wind is blowing. Peak demand could be at other times. Therefore, the storage of electricity and supply thereof during peak-demand will mean that the facility is more efficient and reliable, and the electricity supply is more constant.

A reservoir is proposed to store approximately 400 000 litres of abstracted ground water. Visually, the reservoir would appear like an above-ground farm reservoir erected on a compacted G5 gravel base. It would be built with corrugated iron sheets held together by steel cables fastened around the outside. The sides would be 2.5 m high and the diameter 15 m. The study area for the reservoir is the entire buildable area for the WEF as shown in Figure 2.

1.1.2. Identification of alternatives

No location alternatives have been identified for the BESS since it needs to be located close to the substation. However, the identified location is substantially larger than required such that micro-siting within this area is feasible. There are two technology alternatives for assessment:

- Solid state batteries which are in shipping containers of 17 m long x 3.5 m wide x 4 m high. The containers would be placed on a 0.3 m thick concrete plinth. Additional instrumentation, including inverters and temperature control equipment, may be positioned between the battery containers; and
- Redox Flow Batteries in which energy is stored as an electrolyte in flow cells contained in banded areas. The footprint of this system is approximately 150 x 100 m, with a height of 15 m. The system consists of two electrolyte storage tanks that are contained within a 2.5 m high berm wall which prevents leakage of the electrolyte chemical into the surrounding environment.

From a heritage perspective, the key difference in these alternatives is the height.

There are also two alternatives for the reservoir:

- Alternative 1 would be within the construction laydown area; and
- Alternative 2 would be anywhere in the buildable area for the WEF.

These reservoir alternatives have little bearing on heritage and are considered equally.

1.1.3. Aspects of the project relevant to the heritage study

All aspects of the proposed development are relevant since excavations for foundations and/or services may impact on archaeological and/or palaeontological remains, while all above-ground aspects create potential visual (contextual) impacts to the cultural landscape and any significant heritage sites that might be visually sensitive.

1.2. Terms of reference

ASHA Consulting was asked to provide (1) a site sensitivity verification report as per the requirements of the Department of Environment, Forestry and Fisheries (DEFF) screening tool and (2) a heritage impact assessment report assessing the potential impacts of the proposed development to all heritage resources other than palaeontology. The work was to be based on the knowledge gained from the original WEF impact assessment with no new fieldwork to be undertaken. The report was to meet the requirements of the National Environmental Management Act (Act 107 of 1998) [as amended] Environmental Impact Assessment (EIA) regulations, Appendix 6.

1.3. Scope and purpose of the report

A heritage impact assessment (HIA) is a means of identifying any significant heritage resources before development begins so that these can be managed in such a way as to allow the development to proceed (if appropriate) without undue impacts to the fragile heritage of South Africa. This HIA report aims to fulfil the requirements of the heritage authorities such that a comment can be issued

by them for consideration by DEFF who will review the Basic Assessment (BA) and grant or refuse authorisation. The HIA report will outline any management and/or mitigation requirements that will need to be complied with from a heritage point of view and that should be included in the conditions of authorisation should this be granted.

1.4. The author

Dr Jayson Orton has an MA (UCT, 2004) and a D.Phil (Oxford, UK, 2013), both in archaeology, and has been conducting Heritage Impact Assessments and archaeological specialist studies in South Africa (primarily in the Western Cape and Northern Cape provinces) since 2004 (please see curriculum vitae included as Appendix 1). He has also conducted research on aspects of the Later Stone Age in these provinces and published widely on the topic. He is an accredited heritage practitioner with the Association of Professional Heritage Practitioners (APHP; Member #43) and also holds archaeological accreditation with the Association of Southern African Professional Archaeologists (ASAPA) CRM section (Member #233) as follows:

- Principal Investigator: Stone Age, Shell Middens & Grave Relocation; and
- Field Director: Colonial Period & Rock Art.

1.5. Declaration of independence

ASHA Consulting (Pty) Ltd and its consultants have no financial or other interest in the proposed development and will derive no benefits other than fair remuneration for consulting services provided.

2. HERITAGE LEGISLATION

The National Heritage Resources Act (NHRA) No. 25 of 1999 protects a variety of heritage resources as follows:

- Section 34: structures older than 60 years;
- Section 35: prehistoric and historical material (including ruins) more than 100 years old as well as military remains more than 75 years old, palaeontological material and meteorites;
- Section 36: graves and human remains older than 60 years and located outside of a formal cemetery administered by a local authority; and
- Section 37: public monuments and memorials.

Following Section 2, the definitions applicable to the above protections are as follows:

- Structures: “any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith”;
- Palaeontological material: “any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace”;
- Archaeological material: a) “material 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”; b) “rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years,

including any area within 10m of such representation”; c) “wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation”; and d) “features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found”;

- Grave: “means a place of interment and includes the contents, headstone or other marker of such a place and any other structure on or associated with such place”; and
- Public monuments and memorials: “all monuments and memorials a) “erected on land belonging to any branch of central, provincial or local government, or on land belonging to any organisation funded by or established in terms of the legislation of such a branch of government”; or b) “which were paid for by public subscription, government funds, or a public-spirited or military organisation, and are on land belonging to any private individual.”

Section 3(3) describes the types of cultural significance that a place or object might have in order to be considered part of the national estate. These are as follows:

- a) its importance in the community, or pattern of South Africa’s history;
- b) its possession of uncommon, rare or endangered aspects of South Africa’s natural or cultural heritage;
- c) its potential to yield information that will contribute to an understanding of South Africa’s natural or cultural heritage;
- d) its importance in demonstrating the principal characteristics of a particular class of South Africa’s natural or cultural places or objects;
- e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- i) sites of significance relating to the history of slavery in South Africa.

While landscapes with cultural significance do not have a dedicated Section in the NHRA, they are protected under the definition of the National Estate (Section 3). Section 3(2)(c) and (d) list “historical settlements and townscapes” and “landscapes and natural features of cultural significance” as part of the National Estate. Furthermore, some of the points in Section 3(3) speak directly to cultural landscapes.

Section 38(8) of the NHRA states that if an impact assessment is required under any legislation other than the NHRA then it must include a heritage component that satisfies the requirements of S.38(3). Furthermore, the comments of the relevant heritage authority must be sought and considered by the consenting authority prior to the issuing of a decision. Under the National Environmental Management Act (No. 107 of 1998; NEMA), as amended, the project is subject to an EIA OR BA. The present report provides the heritage component. Ngwao-Boswa Ya Kapa Bokoni (Heritage Northern

Cape; for built environment and cultural landscapes) and the South African Heritage Resources Agency (SAHRA for archaeology and palaeontology) is/are required to provide comment on the proposed project in order to facilitate final decision making by the DEFF.

3. METHODS

3.1. Literature survey and information sources

A survey of available literature was carried out to assess the general heritage context into which the development would be set. This literature included published material, unpublished commercial reports and online material, including reports sourced from the South African Heritage Resources Information System (SAHRIS). The 1:50 000 map was sourced from the Chief Directorate: National Geo-Spatial Information. Although no field survey was undertaken, the desktop study included the HIA compiled for the Koeris WEF and which is thus directly relevant to the present project.

3.2. Fieldwork

No fieldwork was carried out specifically for this project because the present author had already surveyed the area in the past as part of the Environmental Impact Assessment. This was on 23-28 July 2012. The results of that fieldwork are presented in detail in Orton and Webley (2012) and relied upon heavily for the present desktop review. It is important to note that in this dry landscape erosion is minimal and no change in the visibility of archaeological materials is expected to have occurred and that no particular benefits would be expected from doing a new site visit.

3.3. Impact assessment

For consistency among specialist studies, the impact assessment was conducted through application of a scale supplied by Zutari.

3.4. Grading

S.7(1) of the NHRA provides for the grading of heritage resources into those of National (Grade I), Provincial (Grade II) and Local (Grade III) significance. Grading is intended to allow for the identification of the appropriate level of management for any given heritage resource. Grade I and II resources are intended to be managed by the national and provincial heritage resources authorities respectively, while Grade III resources would be managed by the relevant local planning authority. These bodies are responsible for grading, but anyone may make recommendations for grading.

It is intended under S.7(2) that the various provincial authorities formulate a system for the further detailed grading of heritage resources of local significance but this is generally yet to happen. SAHRA (2007) has formulated its own system¹ for use in provinces where it has commenting authority. In this system sites of high local significance are given Grade IIIA (with the implication that the site should be preserved in its entirety) and Grade IIIB (with the implication that part of the site could be mitigated and part preserved as appropriate) while sites of lesser significance are referred to as

¹ The system is intended for use on archaeological and palaeontological sites only.

having 'General Protection' (GP) and rated as GP A (high/medium significance, requires mitigation), GP B (medium significance, requires recording) or GP C (low significance, requires no further action).

3.5. Consultation

The NHRA requires consultation as part of an HIA but, since the present study falls within the context of a BA which includes a public participation process (PPP), no dedicated consultation was undertaken as part of the HIA. Interested and affected parties would have the opportunity to provide comment on the heritage aspects of the project during the PPP.

3.6. Assumptions and limitations

The study area was not specifically considered in the field for this project which means that the available observations would be fairly general for the area. Heritage resources can occur anywhere on the landscape but it is assumed that the generally expected pattern of not finding sites in open, sandy areas away from landscape features would hold true. The original field study was carried out at the surface only and hence any completely buried archaeological sites would not have been readily located. Similarly, it is not always possible to determine the depth of archaeological material visible at the surface. Despite the length of time between the original survey and the current project it can be assumed, from the general stability of the landscape, that this period of time would have not resulted in any change in the surface visibility of archaeological materials (i.e. through erosion).

4. PHYSICAL ENVIRONMENTAL CONTEXT

4.1. Site context

The site lies in a very remote and largely natural area. It has historically been used for stock farming. The Koeis WEF is currently under development immediately to the south of the substation area around which the BESS is proposed. The location is thus now an industrial-type setting because of the large wind turbines standing on the landscape. It is also noted that the site is within the Springbok Renewable Energy Development Zone (REDZ).

4.2. Site description

The site is open and very flat. The surface is generally sandy with very small bushes. Figure 3 shows a general view of this type of landscape.



Figure 3: View across the open plains of the study area. Source: Orton & Webley (2012: fig. 10).



Figure 4: View across the proposed BESS area (note that the substation has yet to be built). Source: Liandra Scott-Shaw (SiVest).



Figure 5: View across the proposed BESS area (note that the substation has yet to be built. The turbines in view are the adjacent Kangnas WEF). Source: Liandra Scott-Shaw (SiVest).

5. FINDINGS OF THE HERITAGE STUDY

This section describes the heritage resources recorded in the study area during the course of the project. It is based exclusively on desktop work, although this in turn relied heavily on Orton & Webley (2012) which dealt with the broader WEF study area.

5.1. Archaeology

An extensive desktop study for the area appears in Orton and Webley (2012) and is not repeated here. A brief summary that includes their findings is, however, presented.

Early (ESA), Middle (MSA) and Late Stone Age (LSA) materials are all known from the wider region, though the former two are largely only associated with rocky areas (especially the Gamsberg Inselberg) and gravel exposures. Subsequent to the Orton and Webley (2012) study Morris has documented further LSA sites around Gamsberg finding them to be associated with landscape features such as dunes or ephemeral water sources. On and within the inselberg he reported MSA and ESA occurrences. A small rock shelter was found to not have been occupied. Orton (2014) subsequently conducted mitigation work in the area and found the MSA site GI1 to have a layer of artefact-bearing gravel up to 78 cm thick. The rock shelter was tested and found to have a rich LSA deposit some 30 cm deep. Neither of these sites were suitably mitigated but further work never happened. These two sites are highly significant and are unique examples of their types for the wider region.

At Kangnas, Orton and Webley (2012) documented many LSA sites scattered around the rockier parts of the study area. These included scatters of artefacts, vertical panels of cupules hollowed into the bedrock and painted rock art (Orton 2013). Included is a highly significant site known as Kromneus which is located 2 km to the southwest of the WEF buildable area.

Table 1 lists the sites located around the WEF buildable area, while their locations relative to the study area are mapped in Figure 6.

Table 1: List of archaeological heritage resources recorded during the Orton & Webley (2012) survey.

Site	Location	Description	Significance
KNG2012/009	S29 34 47.9 E18 25 25.4	Pan with granite outcrop. Artefact scatter of quartz, CCS, Silcrete. MSA.	Low
KNG2012/011 (Goubies Vlei)	S29 34 08.2 E18 25 53.4	Large pan and surrounds of about 300 m diameter with many bedrock grinding grooves (c. 190) and scatters of artefacts in quartz, CCS. Also much ostrich eggshell and some pottery, the latter including an internally reinforced and horizontally pierced lug. Also some historical glass and ceramics and a harmonica fragment. A water well ('putse') was present in this pan.	High

Site	Location	Description	Significance
KOE2012/001 (Kromneus)	S29 39 43.4 E18 23 42.1	A large granite outcrop located in the centre of a very large depression on the landscape. The rocks have rock art and historical graffiti dating back to 1879. The rock art consists of geometric images, circles, grids and similar shapes. Two gemsbok are also evident. All images are finger-painted. Granite floor with little deposit. Artefact scatter spread to the east of the site and there are bedrock grinding grooves in various places around the outcrop. See also Orton (2013).	High
KOE2012/003 (Springbokvlei)	S29 36 37.0 E18 30 12.1	Large pan and surrounds of about 300 m diameter with many bedrock grinding grooves (c. 100) and scatters of artefacts in quartz, CCS, FGBR. There is also some pottery.	High
KOE2012/004	S29 36 43.3 E18 30 10.2	A water pit (well / 'putse') dug into the base of a pan next to a large granite boulder; roughly circular and lined with rocks.	Medium
KOE2012/005	S29 38 28.7 E18 26 51.1	Kouberg werf. Mid-20 th century shed/ workshop with wool sorting table and work bench inside. Also a house, three windpumps and a big iron pump wheel.	Low
KOE2012/007	S29 39 00.5 E18 28 08.2	Shallow pan with gravel base; artefact scatter of quartz, CCS, banded ironstone. MSA. Lots of retouched pieces.	Medium
KOE2012/008	S29 39 00.0 E18 29 39.8	Shallow pan with gravel base; CCS and quartz artefacts. Likely MSA artefacts but no distinctive MSA attributes	Low

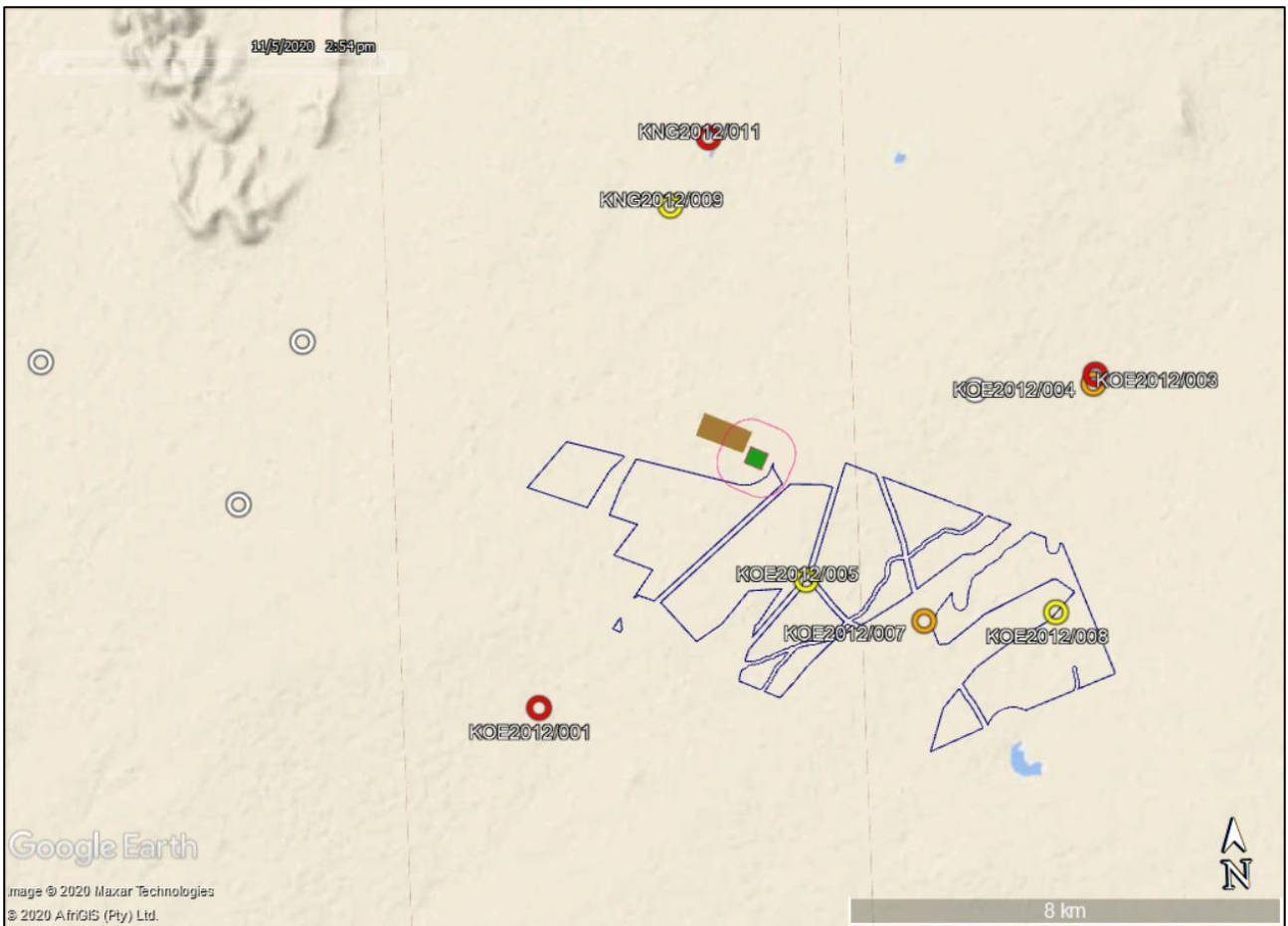


Figure 6: Aerial view of the vicinity of the Koeris WEF showing the known archaeological sites located around the final WEF area from the Orton and Webley (2012) survey. Red, orange and yellow symbols denote high, medium and low cultural significance, while white circles are other insignificant occurrences.

Some highlights of the archaeological sites found in the vicinity of the Koeris WEF include the very large pan with much occupation debris and many grinding grooves at KNG2012/011 (Figures 7 & 8). Of high significance in the regional context is the rock art site at KOE2012/001 (Kromneus; Figure 9). The site contains many geometric images ascribed to the Khoekhoe people (Figure 10). An unusual finger-painted gemsbok also appears at this site and is also part of the geometric tradition (Figure 11).



Figure 7: Stone artefacts, pottery and ostrich eggshell fragments from KNG2012/011. Source: Orton & Webley (2012: fig. 15).



Figure 8: Bedrock grinding grooves from KNG2012/011. 15cm ruler for scale. Source: Orton & Webley (2012: fig. 15).

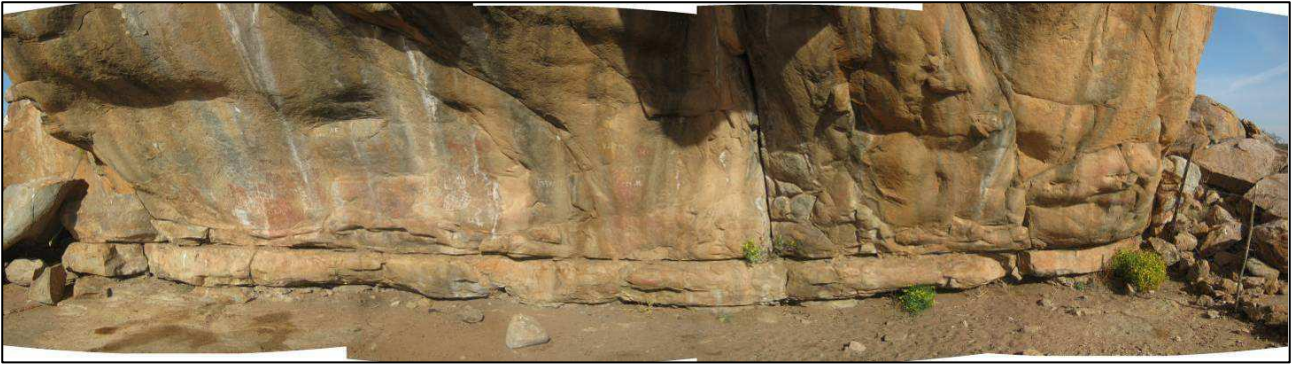


Figure 9: Panoramic view of the entire painted rock face at KOE2012/001 (Kromneus). Source: Orton & Webley (2012: fig. 26).



Figure 10: Geometric imagery at KOE2012/001 (Kromneus). Source: Orton & Webley (2012: fig. 27).



Figure 11: A finger-painted gemsbok at KOE2012/001 (Kromneus). Source: Orton & Webley (2012: fig. 28).

5.2. Graves

A number of graves or possible graves were encountered by Orton and Webley (2012) but none were out in the open area under consideration for the present project. In addition, the farm complexes were also found to have graveyards associated with them. There is always a chance that unmarked precolonial or even colonial period graves could be located anywhere on the landscape. Their locations cannot be determined or predicted.

5.3. Historical aspects and the Built environment

The nearest towns to the west of the study area are Springbok, O’Kiep, Concordia and Carolusberg. These owe their origins primarily to the 19th century copper mining industry and preserve extensive mining and Anglo-Boer War heritage. To the east Aggenys is a modern mining town and Pofadder and Pella are 19th century mission settlements (Northern Cape Tourism Board 2007).

The map in Figure 12 shows the scarcity of water on the landscape. The Koeris WEF is located in the large, open area that is crossed by a track but has no other features marked on it.

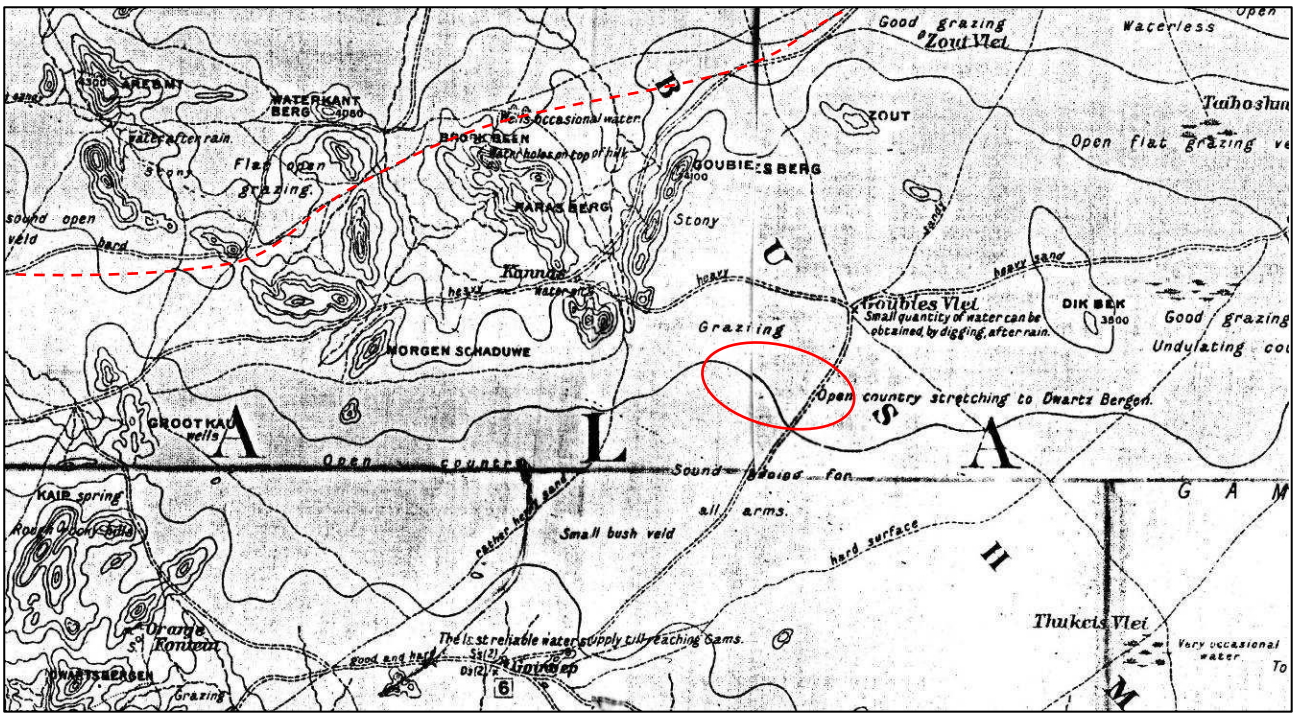


Figure 12: Military Map of 1906 showing the position of wagon tracks and sources of water in and around the study area. Notable here is Goubies Vlei (KNG2012/011). The red dashed line shows the present position of the N14. Source: Orton & Webley (2012: fig. 11).

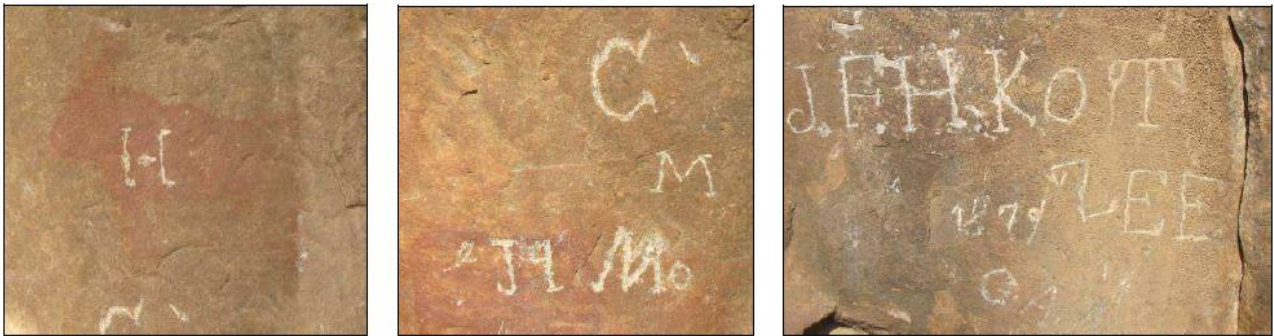
The Anglo-Boer War is relevant to the broader area and Orton and Webley (2012) found a few remnants from this time in the mountains to the northwest of the study area. It is unlikely that any such finds would be made in open areas such as where the present project is located.

Their survey also yielded several small, piled stone structures that they considered likely to relate to the historical use of the landscape for livestock grazing. Being so remote, such historical practices could well have still been in operation into the early 20th century. All of these stone-walled sites were located in the rocky mountains to the northwest.

The last type of historical archaeological resource we noted were ‘putse’ excavated by hand during the late 19th and early 20th centuries. These are essentially water wells but only had the uppermost parts lined with stones. Two were found by Orton & Webley (2012) in the vicinity of the present study area – one in Goubies Vlei) and one in Springbokvlei. These two were obviously excavated in pans where water frequently collects so as to maximise their yield. While Goubies Vlei is marked on the Figure 7 map, it is perhaps curious that Springbok Vlei and Kromneus were not. This could indicate that the water well at Goubies Vlei was already present and thus this was a reliable water source.

At Kromneus, many examples of historical graffiti were found (Figures 13 to 17). The discernible lettering is listed below but another name, written on the floor of the site, was too worn to decipher.

- J.F.H. Kotzee 1879;
- C.W. Meyer 1879;
- J. v. Niekerk;
- D.J. Coetzee;
- 1900 (possibly associated with D.J. Coetzee and maybe J. v. Niekerk);
- A J v Zyl
- G.A.;
- EM;
- CM
- H;
- AE;
- ARM;
- J; and
- J9 Mo.



Figures 13-15: Historical graffiti from Kromneus.



Figures 16-17: Historical graffiti from Kromneus.

The only built environment resources located close to the study area are at the Kouberg farmstead which lies within the WEF study area but is excluded from the buildable area. The structures are all mid-20th century in age and are of low cultural significance (Figure 18). Of some interest is an old pump that would have been driven by an engine (Figure 19). The main farm house at this complex was in ruin at the time of the 2012 survey and looked like it was no older than the 1960s.



Figure 18: A mid-20th century outbuilding at KOE2012/005.



Figure 19: Wind pumps, cement reservoir and an old water pump at KOE2012/005.

5.4. Cultural landscapes and scenic routes

The site is located in a very remote location that has minimal anthropogenic influence. The farms of the area are generally used for the grazing of small stock and the only interventions into the landscape, aside from the sporadic farm complexes, are tracks, fences and wind pumps. The landscape is vast but, importantly, this part of it has already been altered through the addition of an electrical layer in the form of the WEF. The site is located within a REDZ and more such facilities can be expected in the future.

The N14 is considered to be a scenic route as it passes through some spectacular landscapes. The substation and WEF are located at least 15 km from the N14, however, which means that the visibility of the proposed BESS would be fairly low. The reservoir would, to all intents and purposes, not be visible from the N14. Although the BESS may be up to 15 m high, this is very low compared to the existing wind turbines and the BESS would certainly not dominate the landscape as viewed from the N14.

5.5. Statement of significance and provisional grading

Section 38(3)(b) of the NHRA requires an assessment of the significance of all heritage resources. In terms of Section 2(vi), “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. The reasons that a place may have cultural significance are outlined in Section 3(3) of the NHRA (see Section 2 above).

The archaeological resources in the vicinity are deemed to have high to low cultural significance for their scientific value. Some sites are certainly worthy of a IIIA grading, but others are as low as GPC.

Graves are deemed to have high cultural significance for their social value and are graded IIIA.

The built heritage resources are of low cultural significance for their architectural, historical and social values.

The cultural landscape is of medium to high cultural significance for its aesthetic value.

5.6. Summary of heritage indicators

- **Indicator:** Archaeological resources should not be damaged or destroyed without examination and/or mitigation as required.
- **Indicator:** Graves should be avoided but if found accidentally they must be rescued with the approval of the heritage authorities.
- **Indicator:** Built heritage resources should be avoided.
- **Indicator:** The cultural landscape should not be dominated by the proposed development and earthy colouring should be used for the built elements if technically feasible.

6. ASSESSMENT OF IMPACTS

6.1. Impacts to archaeological resources and graves

Direct impacts to archaeological resources would occur during the construction phase. They would be permanent because archaeological materials are irreplaceable. Although some resources of very high cultural significance are known in the area, finds in the study area are likely to be of low significance. For precautionary reasons, a local extent and moderate intensity have been assigned. The overall impact significance calculates to **negligible negative**. Since no archaeological sites or graves are known within the areas that could potentially be impacted, the only recommended mitigation measure is to ensure that if any finds are made during development they should be protected and reported. The best practice measure of minimising the disturbance footprint would also reduce the chances of impacts occurring. With mitigation the potential impact significance would still be **negligible negative**. There are no fatal flaws in terms of impacts to archaeology and graves.

Table 1: Assessment of archaeological impacts for Alternative 1.

IMPACT DESCRIPTION: Impacts to archaeological resources and graves				
Predicted for project phase:	Pre-construction	Construction	Operation	Decommissioning
Dimension	Rating	Motivation		
PRE-MITIGATION				
Duration	Permanent (7)	Archaeological sites and graves cannot be recreated.	Consequence: Moderately detrimental (-13)	Significance: Negligible - negative (-26)
Extent	Local (3)	Significance of as yet undiscovered finds is unlikely to go beyond the local area.		
Intensity x type of impact	Moderate - negative (-3)	Likely low heritage significance of sites in the study area therefore only moderate intensity impacts.		
Probability	Improbable (2)	Archaeological sites and graves have a very low likelihood of being present away from the rocky outcrops and pans in the wider area.		
MITIGATION:				
- Any archaeological materials or graves found on site should be protected in situ and reported to an archaeologist for assessment prior to further disturbance. - Minimise the disturbance footprint to minimise the chances of impacts occurring.				
POST-MITIGATION				
Duration	Permanent (7)	Archaeological sites and graves cannot be recreated.	Consequence: Moderately detrimental (-11)	

Extent	Limited (2)	Once sampled, the significance of materials remaining on site is unlikely to go beyond the site.	Significance: Negligible - negative (-11)
Intensity x type of impact	Low - negative (-2)	Intensity of impacts is reduced if some of the archaeological materials are sampled or graves are rescued.	
Probability	Highly unlikely (1)	The chances of significant impacts are reduced if finds are reported and assessed prior to disturbance.	
BROADER CONSIDERATIONS			
Confidence	High	From extensive fieldwork experience in the area, the distribution of archaeological remains on the open plains is extremely sparse.	
Reversibility	Low	Damage to archaeological materials and graves is irreversible, since they are deemed to be unique.	
Irreplaceability	High	No archaeological materials or graves can be replaced because of their uniqueness.	

6.2. Impacts to the cultural landscape

Impacts from the proposed water reservoir are expected to be neutral and make no contribution to the assessment of significance. As such, they are not assessed further. The BESS options differ in height and thus visibility and it is this factor that results in a reduced intensity of impact for the lower solid state batteries. Direct impacts for both options would last for the lifetime of the project and thus occur during all phases, but the extent of impacts would be limited. Overall, the significance of potential impacts to the cultural landscape for both alternatives calculates to **minor negative** (Tables 2 & 3). The only feasible mitigation measures are to ensure that disturbed areas are kept as small as possible and for the structural components to be a colour that matches the landscape. It is noted, however, that the colour of equipment is often required to be white for technical reasons and this recommendation is thus not mandatory. With mitigation the potential impact significance would still be **minor negative**. There are no fatal flaws in terms of impacts to archaeology and graves.

Table 2: Assessment of impacts to the cultural landscape (solid state batteries).

IMPACT DESCRIPTION: Impacts to cultural landscapes				
Predicted for project phase:	Pre-construction	Construction	Operation	Decommissioning
Dimension	Rating	Motivation		
PRE-MITIGATION				
Duration	Project Life (5)	Once decommissioned and rehabilitated, the impacts would cease.	Consequence: Slightly detrimental (-7)	Significance: Minor - negative (-49)
Extent	Very limited (1)	Because of the context of the site (existing WEF) and distance from N14, the extent would be limited.		
Intensity x type of impact	Very low - negative (-1)	Because of the context of the site (existing WEF) and low height of the BESS, the intensity of the impacts would be very low.		
Probability	Certain (7)	If the project is constructed, the impacts will definitely happen.		
MITIGATION:				
-Keep disturbance footprint as small as possible. -Avoid bright colours (including white) for the BESS structures if possible.				
POST-MITIGATION				
Duration	Project Life (5)	As above	Consequence: Slightly detrimental (-7)	Significance: Minor - negative (-49)
Extent	Very limited (1)	As above		
Intensity x type of impact	Very low - negative (-1)	As above		

Probability	Certain (7)	As above
BROADER CONSIDERATIONS		
Confidence	High	The WEF includes very tall structures so it is clear that the BESS will not dominate views across the area.
Reversibility	High	If decommissioning and rehabilitation occur, then the impacts can be reversed.
Irreplaceability	Moderate	Although every part of the landscape is unique, it is an extensive landscape and other similar areas do exist.

Table 3: Assessment of impacts to the cultural landscape (redox flow batteries).

IMPACT DESCRIPTION: Impacts to cultural landscapes				
Predicted for project phase:	Pre-construction	Construction	Operation	Decommissioning
Dimension	Rating	Motivation		
PRE-MITIGATION				
Duration	Project Life (5)	Once decommissioned and rehabilitated, the impacts would cease.	Consequence: Slightly detrimental (-9)	Significance: Minor - negative (-63)
Extent	Limited (2)	Because of the context of the site (existing WEF) and distance from N14, the extent would be limited.		
Intensity x type of impact	Low - negative (-2)	Because of the context of the site (existing WEF), the intensity of the impacts would be low.		
Probability	Certain (7)	If the project is constructed, the impacts will definitely happen.		
MITIGATION:				
<ul style="list-style-type: none"> -Keep disturbance footprint as small as possible. -Avoid bright colours (including white) for the BESS structures if possible. 				
POST-MITIGATION				
Duration	Project Life (5)	As above	Consequence: Slightly detrimental (-8)	Significance: Minor - negative (-56)
Extent	Limited (2)	As above		
Intensity x type of impact	Very low - negative (-1)	There would be a slight reduction in intensity through the avoidance of bright colours.		
Probability	Certain (7)	As above		
BROADER CONSIDERATIONS				
Confidence	High	The WEF includes very tall structures so it is clear that the BESS will not dominate views across the area.		
Reversibility	High	If decommissioning and rehabilitation occur, then the impacts can be reversed.		
Irreplaceability	Moderate	Although every part of the landscape is unique, it is an extensive landscape and other similar areas do exist.		

6.3. The No-Go alternative

The no-go alternative would see the project not being implemented. This would mean that energy could not be stored for distribution at times of need. Given the existing WEF, implementing the no-go alternative for the currently proposed development would make virtually zero difference to the existing impacts and all new impacts would be regarded as of **neutral significance**. There are thus no advantages or disadvantages in terms of heritage impacts to the no-go alternative.

6.4. Existing impacts to heritage resources

There are currently no obvious threats to archaeological heritage resources on the site aside from the natural degradation, weathering and erosion that will affect rock art and archaeological materials. Trampling from grazing animals and/or farm/other vehicles may also occur. In terms of visual impacts to the cultural landscape, the existing WEF will likely have a far greater impact than the proposed BESS and reservoir would have.

6.5. Cumulative impacts

Given (1) the small footprint of the proposed BESS and reservoir in comparison to the existing WEF and (2) the likely near absence of archaeological heritage resources in the study area, the cumulative impacts to archaeology from the proposed development are considered to be negligible. Likewise, because of the visual prominence of the existing turbine structures, no significant cumulative impacts to the cultural landscape are expected.

6.6. Levels of acceptable change

Any impact to an archaeological or palaeontological resource or a grave is deemed unacceptable until such time as the resource has been inspected and studied further if necessary. Impacts to the landscape are difficult to quantify but in general a development that visually dominates the landscape from many vantage points is undesirable. Because of the height of the existing WEF relative to that of the proposed development, such an impact is not envisaged.

7. INPUT TO THE ENVIRONMENTAL MANAGEMENT PROGRAMME

The environmental management programme (EMPr) must ensure that provision is made for the reporting of any chance finds of archaeological materials or human remains. Rock outcrops located in the development footprint should be examined by the environmental control officer (ECO) prior to development for any signs of archaeology, although the chances of rock outcrops being present are considered extremely small.

8. EVALUATION OF IMPACTS RELATIVE TO SUSTAINABLE SOCIAL AND ECONOMIC BENEFITS

Section 38(3)(d) of the NHRA requires an evaluation of the impacts on heritage resources relative to the sustainable social and economic benefits to be derived from the development. It is clearly advantageous to be able to supply electricity to the people of South Africa at any time, whether the wind is blowing or not. The project will thus result in socio-economic benefits. There are no known heritage impacts expected that would outweigh these benefits.

9. CONCLUSIONS

While significant heritage resources are known from the surrounding area, none occur close to the study area and none will be impacted. Table 4 summarises the project responses to the heritage indicators. Other than impacts to built heritage, there are no feasible project responses. Hence, recommendations have been provided to assist with meeting the heritage indicators where necessary.

Table 4: Heritage indicators and project responses.

Indicator	Project Response
Archaeological resources should not be damaged or destroyed without examination and/or mitigation as required.	No known sites occur in the development footprint. Recommendation to be included to deal with chances finds.
Graves should be avoided but if found accidentally they must be rescued with the approval of the heritage authorities.	No known graves occur in the development footprint. Recommendation to be included to deal with chances finds.
Built heritage resources should be avoided.	No structures will be impacted.
The cultural landscape should not be dominated by the proposed development and earthy colouring should be used for the built elements if technically feasible.	Given the existing WEF, the proposed development will not dominate the landscape. Recommendation to be included to use earthy colours if possible.

There are no outstanding heritage concerns for this project and, because of the distance between known significant sites and the project area, no buffers around heritage sites are required.

In terms of alternatives:

- Solid state batteries (4 m high) are preferred over the redox flow batteries (15 m high) because of the reduced height and hence visibility of the former.
- Either location alternative for the water reservoir may be used because the distribution of heritage resources on the landscape is likely to be minimal in both areas.

9.1. Reasoned opinion of the specialist

Given the very low significance of all impacts for all alternatives, it is the opinion of the heritage specialist that the proposed BESS and reservoir may be authorised using any of the alternatives under consideration.

10. RECOMMENDATIONS

It is recommended that the proposed project be authorised but subject to the following recommendations:

- If any archaeological material or human burials are uncovered during the course of development, then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist. Such

heritage is the property of the state and may require excavation and curation in an approved institution; and

- If technically feasible, the structural components of the chosen BESS should be an earthy colour.

11. REFERENCES

Morris, D. 2013. Archaeological and Cultural Heritage Investigation for the Environmental and Social Impact Assessment (ESIA) for the Gamsberg Zinc Mine and Associated Infrastructure in Northern Cape, South Africa. Kimberley: McGregor Museum.

Orton, J. 2013. Geometric rock art in western South Africa and its implications for the spread of early herding. *South African Archaeological Bulletin* 68: 27-40.

Orton, J. 2014. Final archaeological mitigation report for the Gamsberg Zinc Mine, Aggeneys, Northern Cape. Unpublished report prepared for ERM Southern Africa (Pty) Ltd. Diep River: ACO Associates cc.

Orton, J. & Webley, L. 2012. Heritage impact assessment for the proposed Kangnas Wind and Solar Energy Facilities, Namakwa Magisterial District, Northern Cape. Unpublished report prepared for Aurecon South Africa (Pty) Ltd. Diep River: ACO Associates cc.

Northern Cape Tourism Board. 2007.
http://www.northerncape.org.za/getting_around/towns/Pofadder/,
http://www.northerncape.org.za/getting_around/towns/Pella/,
http://www.northerncape.org.za/getting_around/towns/Springbok &
http://www.northerncape.org.za/getting_around/towns/Okiep Website accessed 5th July 2012.

SAHRA. 2007. Minimum Standards: archaeological and palaeontological components of impact assessment reports. Document produced by the South African Heritage Resources Agency, May 2007.

APPENDIX 1 – Curriculum Vitae



Curriculum Vitae

Jayson David John Orton

ARCHAEOLOGIST AND HERITAGE CONSULTANT

Contact Details and personal information:

Address: 40 Brassie Street, Lakeside, 7945
Telephone: (021) 789 0327
Cell Phone: 083 272 3225
Email: jayson@asha-consulting.co.za

Birth date and place: 22 June 1976, Cape Town, South Africa
Citizenship: South African
ID no: 760622 522 4085
Driver's License: Code 08
Marital Status: Married to Carol Orton
Languages spoken: English and Afrikaans

Education:

SA College High School	Matric	1994
University of Cape Town	B.A. (Archaeology, Environmental & Geographical Science) 1997	
University of Cape Town	B.A. (Honours) (Archaeology)*	1998
University of Cape Town	M.A. (Archaeology)	2004
University of Oxford	D.Phil. (Archaeology)	2013

*Frank Schweitzer memorial book prize for an outstanding student and the degree in the First Class.

Employment History:

Spatial Archaeology Research Unit, UCT	Research assistant	Jan 1996 – Dec 1998
Department of Archaeology, UCT	Field archaeologist	Jan 1998 – Dec 1998
UCT Archaeology Contracts Office	Field archaeologist	Jan 1999 – May 2004
UCT Archaeology Contracts Office	Heritage & archaeological consultant	Jun 2004 – May 2012
School of Archaeology, University of Oxford	Undergraduate Tutor	Oct 2008 – Dec 2008
ACO Associates cc	Associate, Heritage & archaeological consultant	Jan 2011 – Dec 2013
ASHA Consulting (Pty) Ltd	Director, Heritage & archaeological consultant	Jan 2014 –

Professional Accreditation:

Association of Southern African Professional Archaeologists (ASAPA) membership number: 233

CRM Section member with the following accreditation:

- Principal Investigator: Coastal shell middens (awarded 2007)
Stone Age archaeology (awarded 2007)
Grave relocation (awarded 2014)
- Field Director: Rock art (awarded 2007)
Colonial period archaeology (awarded 2007)

Association of Professional Heritage Practitioners (APHP) membership number: 43

- Accredited Professional Heritage Practitioner

➤ **Memberships and affiliations:**

South African Archaeological Society Council member	2004 – 2016
Assoc. Southern African Professional Archaeologists (ASAPA) member	2006 –
UCT Department of Archaeology Research Associate	2013 –
Heritage Western Cape APM Committee member	2013 –
UNISA Department of Archaeology and Anthropology Research Fellow	2014 –
Fish Hoek Valley Historical Association	2014 –
Kalk Bay Historical Association	2016 –
Association of Professional Heritage Practitioners member	2016 –

Fieldwork and project experience:

Extensive fieldwork and experience as both Field Director and Principle Investigator throughout the Western and Northern Cape, and also in the western parts of the Free State and Eastern Cape as follows:

Feasibility studies:

- Heritage feasibility studies examining all aspects of heritage from the desktop

Phase 1 surveys and impact assessments:

- Project types
 - Notification of Intent to Develop applications (for Heritage Western Cape)
 - Desktop-based Letter of Exemption (for the South African Heritage Resources Agency)
 - Heritage Impact Assessments (largely in the Environmental Impact Assessment or Basic Assessment context under NEMA and Section 38(8) of the NHRA, but also self-standing assessments under Section 38(1) of the NHRA)
 - Archaeological specialist studies
 - Phase 1 archaeological test excavations in historical and prehistoric sites
 - Archaeological research projects
- Development types
 - Mining and borrow pits
 - Roads (new and upgrades)
 - Residential, commercial and industrial development
 - Dams and pipe lines
 - Power lines and substations
 - Renewable energy facilities (wind energy, solar energy and hydro-electric facilities)

Phase 2 mitigation and research excavations:

- ESA open sites
 - Duinefontein, Gouda, Namaqualand
- MSA rock shelters
 - Fish Hoek, Yzerfontein, Cederberg, Namaqualand
- MSA open sites
 - Swartland, Bushmanland, Namaqualand
- LSA rock shelters
 - Cederberg, Namaqualand, Bushmanland
- LSA open sites (inland)
 - Swartland, Franschhoek, Namaqualand, Bushmanland
- LSA coastal shell middens
 - Melkbosstrand, Yzerfontein, Saldanha Bay, Paternoster, Dwarskersbos, Infanta, Knysna, Namaqualand
- LSA burials
 - Melkbosstrand, Saldanha Bay, Namaqualand, Knysna
- Historical sites
 - Franschhoek (farmstead and well), Waterfront (fort, dump and well), Noordhoek (cottage), variety of small excavations in central Cape Town and surrounding suburbs
- Historic burial grounds
 - Green Point (Prestwich Street), V&A Waterfront (Marina Residential), Paarl

Awards:

Western Cape Government Cultural Affairs Awards 2015/2016: Best Heritage Project.

APPENDIX 2 – Site Sensitivity Verification

A site sensitivity verification was undertaken in order to confirm the current land use and environmental sensitivity of the proposed project area. The details of the site sensitivity verification are noted below:

Date of Site Visit	None for this assessment but based on the site visit of 23-28 July 2012
Specialist Name	Dr Jayson Orton
Professional Registration Number	ASAPA: 233; APHP: 043
Specialist Affiliation / Company	ASHA Consulting (Pty) Ltd

- Provide a description on how the site sensitivity verification was undertaken using the following means:

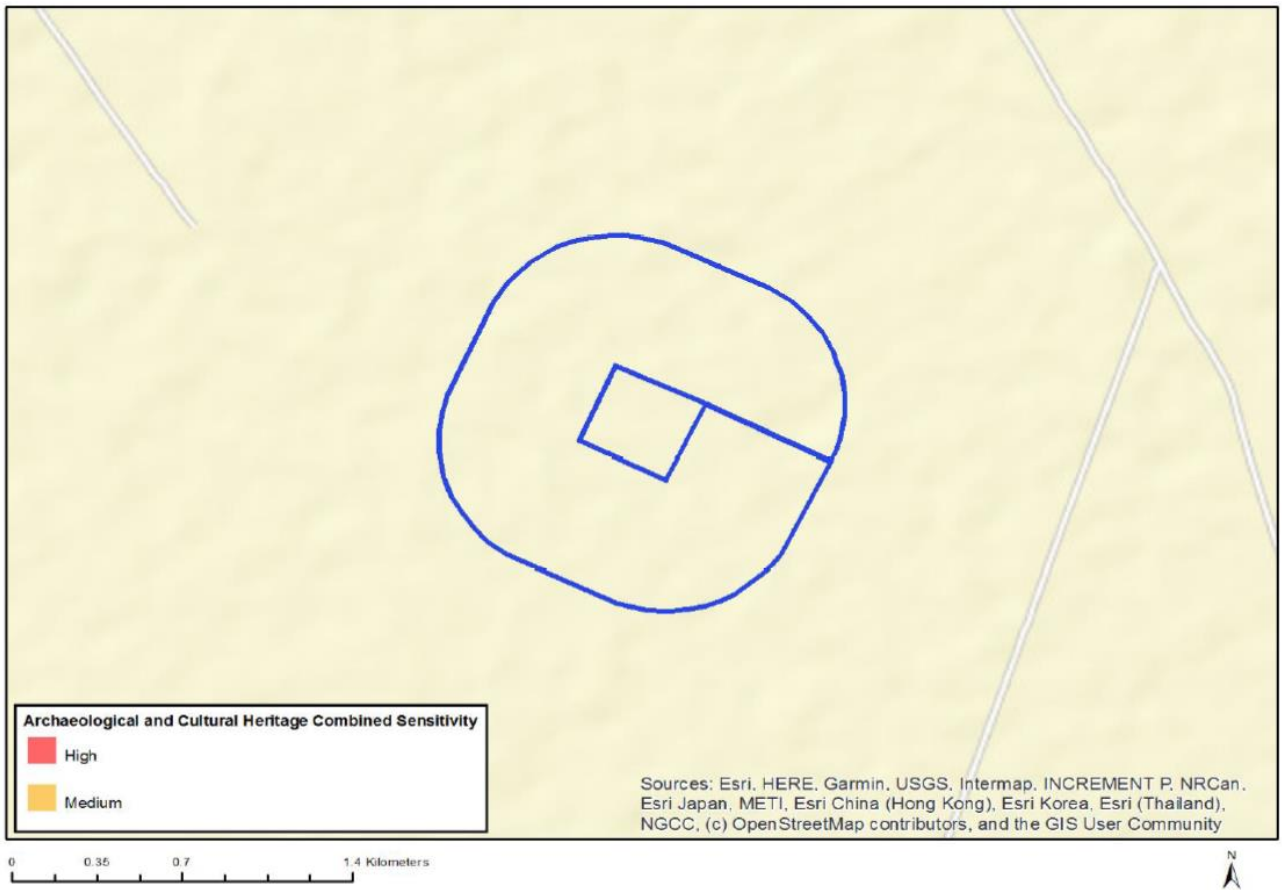
- (a) desk top analysis, using satellite imagery;
- (b) preliminary on -site inspection; and
- (c) any other available and relevant information.

Initial work was carried out using satellite aerial photography in combination with the author's accumulated knowledge of the local landscape. This was used to determine that the study area was likely to be of very low archaeological sensitivity because it was very far from (1) any rock outcrops and (2) any archaeological sites already known in the area to be sensitive. Desktop research was also used to inform on the heritage context of the area. This information is presented in the report (Section 5).

- Provide a description of the outcome of the site sensitivity verification in order to:

- (a) confirm or dispute the current use of the land and the environmental sensitivity as identified by the screening tool, such as new developments or infrastructure, the change in vegetation cover or status etc.; and
- (b) include a motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity.

The map below is extracted from the screening tool report and shows the archaeological and heritage sensitivity of the Koeris Substation area (site of the proposed BESS) to be low. Similarly, the areas proposed for the reservoir are all of low cultural sensitivity. The 2012 site visit showed that in fact the majority of the broader area is of very low sensitivity with only small pockets (where archaeological resources and rock art were found) considered to be of medium to high sensitivity. Known sensitive sites are mapped in Figure 6 of the main impact assessment report with all intervening areas considered to be of low to very low sensitivity. In addition, the new use of the land for the Koeris Wind Energy Facility has resulted in a new cultural landscape layer which reduces the sensitivity of the landscape to visual/contextual impacts. A photographic record and description of the relevant heritage resources is contained within the impact assessment report.





environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

File Reference Number:	(For official use only)
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

Proposed construction and operation of the Battery Energy Storage System (BESS) and associated infrastructure and inclusion of additional listed activities for the authorised Koeris Wind Energy Facility, located near the town of Springbok in the Nama Khoi Municipality, Namakwa District in the Northern Cape Province South Africa.

Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.environment.gov.za/documents/forms>.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address:

Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Private Bag X447
Pretoria
0001

Physical address:

Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Environment House
473 Steve Biko Road
Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:
Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

Specialist Company Name:	ASHA Consulting (Pty) Ltd		
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	4	Percentage Procurement recognition
			0
Specialist name:	Dr Jayson Orton		
Specialist Qualifications:	D.Phil (Archaeology, Oxford, UK) MA (Archaeology, UCT)		
Professional affiliation/registration:	ASAPA CRM member No. 233 APHP member No. 043		
Physical address:	40 Brassie Street, Lakeside, 7945		
Postal address:	40 Brassie Street, Lakeside		
Postal code:	7945	Cell:	083 272 3225
Telephone:	021 788 1025	Fax:	n/a
E-mail:	jayson@asha-consulting.co.za		

2. DECLARATION BY THE SPECIALIST

I, JAYSONORTON, declare that -

- 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

ASHA CONSULTING (PTY) LTD.

Name of Company:

Date

23/11/2020

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, JAYSON ORTON, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

[Signature]
Signature of the Specialist

ASHA CONSULTING (PTY) LTD.
Name of Company

23/11/2020
Date

I certify that the DEPENDENT has acknowledged that he / she knows and understands the contents of this affidavit, that he / she does not have any objection to taking the oath, and that he / she considers it to be binding on his / her conscience, and which was sworn to and signed before me and that the administering oath complied with regulations contained in Government Gazette No. 1258 of 21 July 1972, as amended.

[Signature]
Signature of the Commissioner of Oaths
SIGNATURE
Commissioner of Oaths
Designation: BRANCH MANAGER ex officio Republic of South Africa
Date: 23/11/2020

Place: _____
Date: _____
Business Address: _____

BRANCH MANAGER
Post Office
23 NOV 2020
CONSTANTIA 7848