

**Phase 1: Riverbank Wind Energy Facility (WEF), Riverbank 147 and Sandflat 149,  
near Wesley, Amathole District Municipality, Eastern Cape**

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- 1 December 2015 -

**Report to:**

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### Specialist Declaration of Interest

I, Karen van Ryneveld (Company – ArchaeoMaps; Qualification – MSc Archaeology), declare that:

- I am suitably qualified and accredited to act as independent specialist in this application;
- I do not have any financial or personal interest in the application, its' proponent or any subsidiaries, aside from fair remuneration for specialist services rendered; and
- That work conducted has been done in an objective manner – and that any circumstances that may have compromised objectivity have been reported on transparently.



**Signature –**

- 1 December 2015 -

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### Assessor Accreditation –

Karen van Ryneveld (ArchaeoMaps):

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- Accreditation: Association of Southern African Professional Archaeologists (ASAPA) accredited Cultural Resources Management (CRM) practitioner [member nr – 163]
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Karen van Ryneveld is a SAHRA / AMAFA / EC PHRA / HWC listed CRM archaeologist.

Karen has been involved in CRM archaeology since 2003 and has been the author (including selected co-authored reports) of more than 350 Phase 1 AIA studies. Phase 1 AIA work is centered in South Africa, focusing on the Northern and Eastern Cape provinces and the Free State. She has also conducted Phase 1 work in Botswana (2006/2007). In 2007 she started ArchaeoMaps, an independent archaeological and heritage consultancy. In 2010 she was awarded ASAPA CRM Principle Investigator (PI) status based on large scale Phase 2 Stone Age mitigation work (De Beers Consolidated Mines – Rooipoort, Northern Cape – 2008/2009) and has also been involved in a number of other Phase 2 projects including Stone Age, Shell Middens, Grave / Cemetery projects and Iron Age sites.

In addition to CRM archaeology she has been involved in research, including the international collaborations at Maloney's Kloof and Grootkloof, Ghaap plateau, Northern Cape (2005/2006). Archaeological compliance experience includes her position as Head of the Archaeology, Palaeontology and Meteorites (APM) Unit at AMAFA aKwa-Zulu Natali (2004).

## Phase 1: Riverbank Wind Energy Facility (WEF), Riverbank 147 and Sandflat 149, near Wesley, Amathole District Municipality, Eastern Cape

### Executive Summary

#### Project Description & Terms of Reference –

The project proponent, Riverbank Wind Power (Pty) Ltd / Just Energy, proposed to develop the Riverbank WEF, between Hamburg and Wesley in the Amathole District Municipality, Eastern Cape. Savannah Environmental was appointed to manage the EA application for the development, including a SR, EIA and EMPr. Specialist studies included, amongst others, a HIA with the archaeological components thereof referenced as:

- Booth, C. 2010. *An Archaeological Desktop Study for the proposed Riverbank Wind Energy Facility between Hamburg and Wesley, Peddie, Amathole District Municipality, Eastern Cape Province*. [Not available on SAHRIS].
- Binneman, J., Booth, C. & Higgitt, N. 2010. *A Phase 1 Archaeological Impact Assessment (AIA) for the proposed Riverbank Wind Energy Facility between Hamburg and Wesley, Amathole District Municipality, Eastern Cape Province*.

A positive EA was issued for the development by the DEA, upon which the project proponent submitted a request for amendment to split the development, focussing on Phase 1 of the WEF only, including the construction of 10 WTG, situated on the properties Riverbank 147 and Sandflat 149, associated linear infrastructure, a substation and approximate 5km power line connecting the WEF with the existing substation near Wesley. In response the DEA issued a positive EA for Phase 1 of the Riverbank WEF. The project proponent appointed EOH-CES to ensure environmental compliance during the course of development of *Phase 1: Riverbank Wind Energy Facility (WEF)*. ArchaeoMaps was appointed by EOH-CES to conduct the Phase 1b archaeological ground truthing, with specific reference to heritage requirements as stipulated in Section 13.7 of the EA.

#### Phase 1b Archaeological Ground Truthing: Recommendations for Purposes of Development –

- A description of the impact of the Riverbank WEF on the Colonial Period cultural landscape have been omitted from heritage documentation for purposes of the EA, including the Phase 1 AIA and desktop archaeological study. It is, at this late stage, not possible to make adequate mitigatory recommendations with reference to development impact on the cultural landscape. It is nevertheless advised that impact of the development on the Colonial Period cultural landscape be described as such; negative, high and permanent in environmental compliance documentation, if for no other purpose than transparency.
- Eight (8) sites were recorded and reported on for purposes of heritage compliance relating to the *Phase 1: Riverbank Wind Energy Facility (WEF)* development. Of the 8 sites 6 constitute heritage sites, as defined and protected by the NHRA 1999. None of the protected heritage sites will be directly impacted on by development. Additional temporary conservation measures are recommended for Site S10.
  - Should, for any which reason, any development aspect encroach within 30m on a recorded heritage site, the developer should ensure that temporary conservation measures be instated.

Phase 1: Riverbank Wind Energy Facility – Archaeological & Cultural Heritage Recommendations			
Site Nr	Site Type	Co-ordinates	Recommendations
Site S4	LIA: Settlement Site	S33°17'30.3"; E27°22'00.6"	N/A (based on proximity from development aspects)
Site S5	MSA: Stone Age Occurrence	S33°16'52.9"; E27°22'10.0"	N/A (based on proximity from development aspects)
Site S7	MSA: Stone Age Occurrence	S33°16'40.4"; E27°23'16.0"	N/A (based on low archaeological site significance)
Site S8	LSA: Shell Scatter / Midden	S33°17'10.2"; E27°23'30.8"	Not a heritage site
Site S9	LIA / Contemporary: Cemetery / Grave site	S33°17'08.4"; E27°22'43.7"	N/A (based on proximity from development aspects)
Site S10	LIA / Contemporary: Cemetery	S33°17'45.1"; E27°21'26.2"	<ol style="list-style-type: none"> <li>1. Permanent conservation measures (permanent fence and access gate) in place.</li> <li>2. Temporary conservation buffer (2-5m) fence and temporary signage during the course of construction.</li> </ol>
Site S11	LIA / Contemporary: Cattle Kraal	S33°17'44.1"; E27°21'28.3"	Not a heritage site
Site S12	LIA: Settlement Site	S33°17'06.5"; E27°22'36.9"	N/A (based on proximity from development aspects)

- Archaeological monitoring during the course of vegetation clearing and subsurface construction excavation is not deemed necessary. In the event of heritage resources being encountered during the course of construction the procedure described in 'Appendix A – Heritage Protocol for Incidental Finds during the Construction Phase' should be followed.

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## 1.1) Project Description

The project proponent, Riverbank Wind Power (Pty) Ltd / Just Energy, proposed to develop the Riverbank Wind Energy Facility (WEF), between Hamburg and Wesley in the Amathole District Municipality, Eastern Cape. The original proposal included the development of a WEF comprising approximately 22 Wind Turbine Generators (WTG) on the properties Riverbank 147, Sandflat 149, Holstein 148, Porcupine Kop 169 and Bristol 170, with a substation and approximate 5km power line connecting the WEF with the existing Eskom substation near Wesley. Savannah Environmental was appointed to manage the Environmental Authorization (EA) application for the development, including a Scoping Report (SR), an Environmental Impact Assessment (EIA) and Environmental Management Plan report (EMPr) (Savannah 2011). Specialist studies for the SR and EIA included, amongst others, a Heritage Impact Assessment (HIA), with the archaeological components thereof referenced as:

- Booth, C. 2010. *An Archaeological Desktop Study for the proposed Riverbank Wind Energy Facility between Hamburg and Wesley, Peddie, Amathole District Municipality, Eastern Cape Province*. [Not available on SAHRIS].
- Binneman, J., Booth, C. & Higgit, N. 2010. *A Phase 1 Archaeological Impact Assessment (AIA) for the proposed Riverbank Wind Energy Facility between Hamburg and Wesley, Amathole District Municipality, Eastern Cape Province*.

A positive EA was issued for the development by the Department of Environmental Affairs (DEA), upon which the project proponent submitted a request for amendment to the EA to split the development, focussing on Phase 1 of the WEF only, including the construction of 10 WTG, situated on the properties Riverbank 147 and Sandflat 149, associated linear infrastructure, a substation and approximate 5km power line connecting the WEF with the existing substation near Wesley. In response thereto the DEA issued a positive EA for Phase 1 of the Riverbank WEF [DEAT Reference: DEAT/EIA/12777/2011; DEA Reference: 12/12/20/1836/1]. The DEA amended EA stipulated Phase 1 of the Riverbank WEF development as including (DEA 2011):

- '10 wind turbines with a hub height of up to 90m each, to be secured using concrete foundations (20m [l] x 20m [w] x 2m[d]) to support them.
- New overhead power line to connect to Eskom's existing Wesley substation which is located approximately 5km west of the project study site.
- Internal roads linking the wind turbines and other infrastructure on the site. Existing farm roads will be used as far as possible.
- Underground cabling (1m deep) 22kV, linking the wind turbines to the on-site substation via electrical transformers. The underground cables will be routed to follow the existing and proposed internal roads as far as possible.
- On-site substations to facilitate the connection between the facility and the grid via the Wesley substation (the generated power will be stepped up from 22kV to 66kV via transformer).
- Ancillary infrastructure including control room, workshop, high voltage switchgear room, mess room, ablution facilities, a SCADA room and storeroom.'

The DEA (2011) EA specified WTG and the substation positions as:

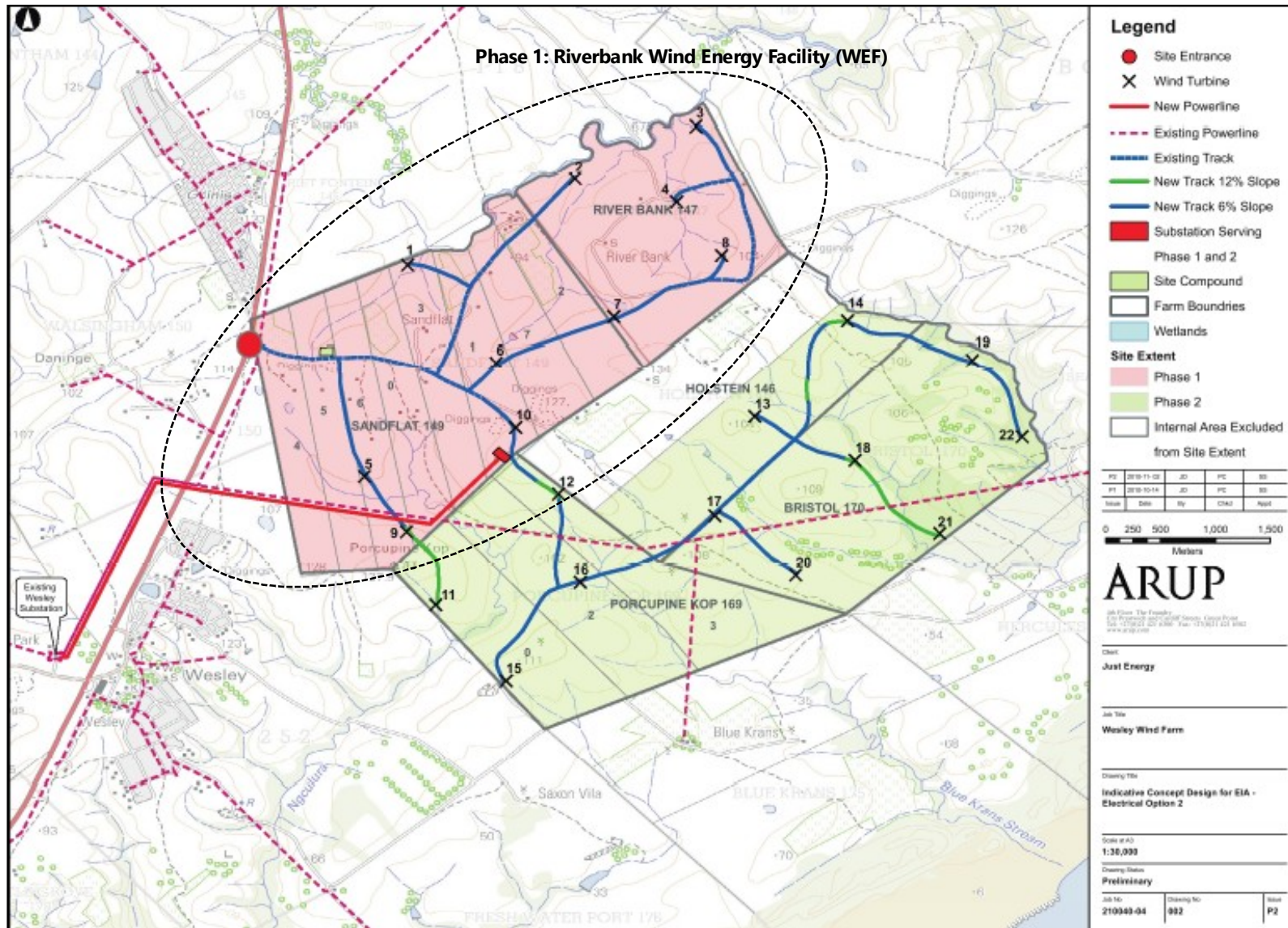
Phase 1: Riverbank Wind Energy Facility (WEF)					
Wind Turbine Generator (WTG) positions					
Map Code	Location		Map Code	Location	
WTG1	S33°17'19.7"	E27°21'31.9"	WTG6	S33°17'45.0"	E27°22'16.9"
WTG2	S33°18'19.2"	E27°22'02.5"	WTG7	S33°17'31.9"	E27°22'40.6"
WTG3	S33°16'36.2"	E27°23'10.6"	WTG8	S33°17'07.0"	E27°23'25.7"
WTG4	S33°16'51.0"	E27°22'51.0"	WTG9	S33°18'40.5"	E27°21'38.1"
WTG5	S33°18'17.1"	E27°21'33.6"	WTG10	S33°18'03.6"	E27°22'14.0"
Substation positions					
Map Code	Location		Map Code	Location	
Substation 1	S33°18'09.6"	E27°21'56.2"	*Wesley substation	S33°19'08.1"	E27°20'01.3"

**Table 1:** Phase 1: Riverbank Wind Energy Facility (WEF) – development co-ordinates

## 1.2) Environmental Compliance and the Phase 1b Archaeological Ground Truthing

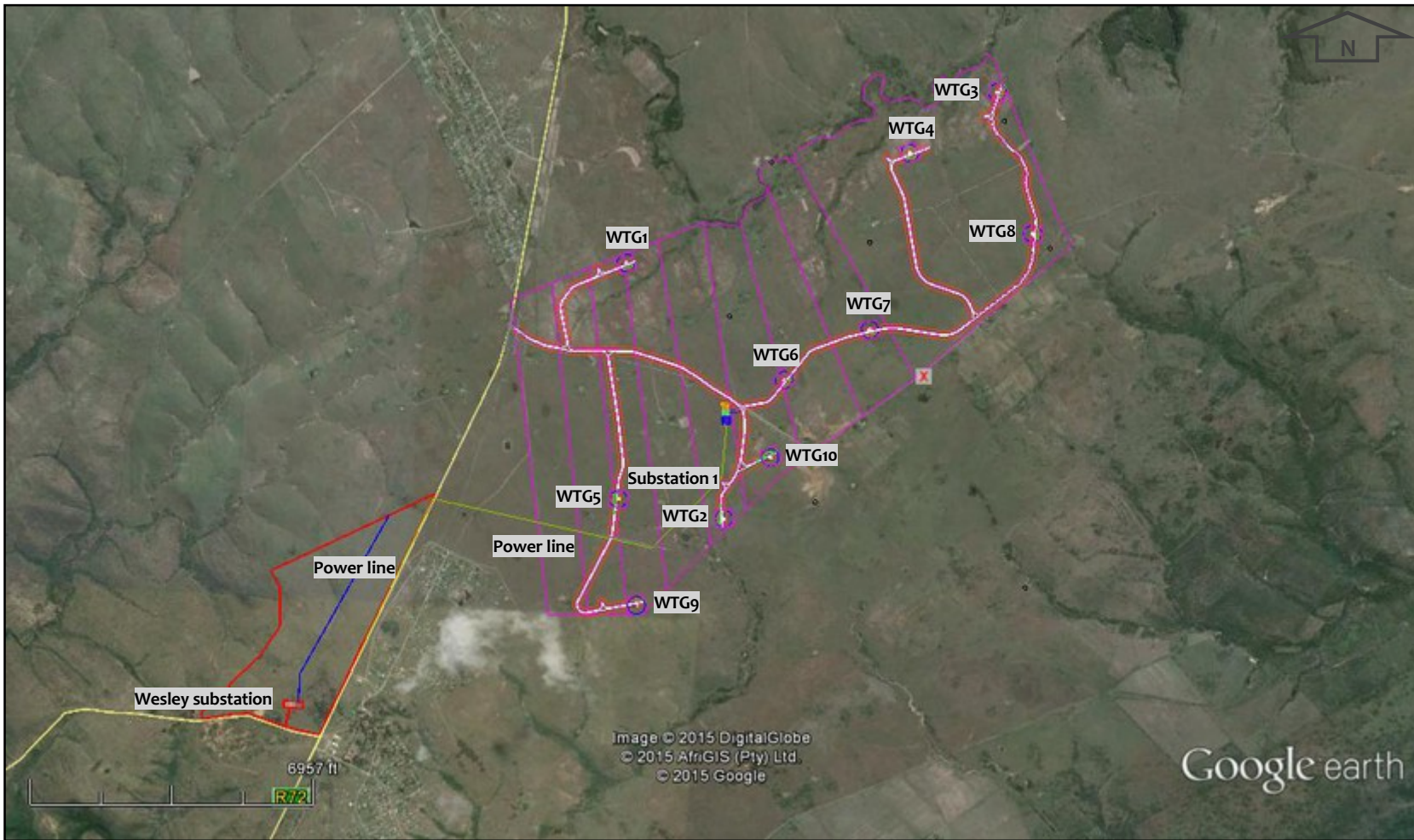
Riverbank Wind Power (Pty) Ltd / Just Energy appointed EOH-Coastal & Environmental Services (EOH-CES) to ensure environmental compliance during the course of development of *Phase 1: Riverbank Wind Energy Facility (WEF)*, Riverbank 147 and sandflat 149, Wesley, Amathole District Municipality, Eastern Cape. ArchaeoMaps was appointed by EOH-CES to conduct the Phase 1b archaeological ground truthing, with specific reference to heritage requirements as stipulated in Section 13.7 of the EA (DEA 2011). Terms of Reference (ToR) for the Phase 1b archaeological ground truthing is specified as:

- Undertake a Phase 1b archaeological ground truthing to identify important archaeological and cultural heritage resources in the area. In particular identify:
  - Potential sites of archaeological and cultural heritage significance (GPS co-ordinates to be provided for planning purposes);
- Describe the findings of the study and their potential implications for the proposed project. This should include a description and assessment of the significance of the impacts of the proposed activities on the heritage resources; and
- Provide detailed guideline measures to manage any impacts, particularly during the construction phase but including the implementation phase, and an assessment of their likely effectiveness.



Map 1: Original layout of the Riverbank WEF, between Hamburg and Wesley, Amathole District Municipality, EC (Savannah Environmental 2011)





Map 2: Phase 1: Riverbank WEF – Final layout (courtesy EOH-CES)



## 2 – Phase 1b Archaeological Ground Truthing

### 2.1) Introduction

The Phase 1b archaeological ground truthing was conducted over a 2 day period (2015-11-28 and 11-29). The assessment was done by vehicle and foot and limited to a Phase 1b surface survey. GPS co-ordinates were taken with a Garmin Montana 650 (Datum: WGS84). Photographic documentation was done with a Pentax K20D camera. A combination of Garmap (Base Camp) and Google Earth software was used in the display of spatial information.

Archaeological and cultural heritage site significance assessment and associated mitigation recommendations were done according to the system prescribed by SAHRA (2007).

SAHRA Archaeological and Cultural Heritage Site Significance Assessment			
Site Significance	Field Rating	Grade	Recommended Mitigation
High Significance	National Significance	Grade I	Site conservation / Site development
High Significance	Provincial Significance	Grade II	Site conservation / Site development
High Significance	Local Significance	Grade III-A	Site conservation or extensive mitigation prior to development / destruction
High Significance	Local Significance	Grade III-B	Site conservation or extensive mitigation prior to development / destruction
High / Medium Significance	Generally Protected A	Grade IV-A	Site conservation or mitigation prior to development / destruction
Medium Significance	Generally Protected B	Grade IV-B	Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
Low Significance	Generally Protected C	Grade IV-C	On-site sampling, monitoring or no archaeological mitigation required prior to or during development / destruction

**Table 2:** SAHRA archaeological and cultural heritage site significance assessment ratings and associated mitigation recommendations

The assessment aimed to validate the findings of the Phase 1 AIA report (Binneman *et. al.* 2010), additional cultural resources reported on by the EOH-CES project team, record any additional heritage sites or occurrences formally protected by the National Heritage Resources Act, No 25 of 1999 (NHRA 1999) and make recommendations regarding their conservation or Phase 2 monitoring or mitigation for purposes of development, including the construction and implementation phases of the *Phase 1: Riverbank Wind Energy Facility (WEF)* development.

### 2.2) Known Heritage Resources: The Phase 1 AIA and Additionally Recorded Heritage Resources

Binneman *et. al.* (2010) recorded 8/9 archaeological and cultural heritage resources during their initial Phase 1 AIA, labelled Sites S1-S8 (excluding Site S2[?]) and Site GPS14, for purposes of this report labelled Site S9. Of the identified sites 5 are situated on the properties Riverbank 147 and Sandflat 149, or the *Phase 1: Riverbank Wind Energy Facility (WEF)* study site, including Site S4, Site S5, Site S7, Site S8 and Site GPS14 (Site S9). Subsequent to compilation of the Phase 1 AIA an additional 2 cultural sites set within the said study site were reported on by the EOH-CES project team, labelled Site S10 and Site S11. Known archaeological and cultural heritage resources located within the *Phase 1: Riverbank Wind Energy Facility (WEF)* study site, at the time of the Phase 1b AIA, can briefly be listed as:

- Site S4: (S33°17'30.3"; E27°22'00.6") - Possible Iron Age Settlement (Binneman *et. al.* 2010)
- Site S5: (S33°16'52.9"; E27°22'10.0") - MSA stone artefact scatter and glass bead in donga (Binneman *et. al.* 2010)
- Site S7: (S33°16'40.4"; E27°23'16.0") - MSA stone artefact scatter in dam (Binneman *et. al.* 2010)
- Site S8: (S33°17'10.2"; E27°23'30.8") - Fragmented shell scatter in farm road (Binneman *et. al.* 2010)
- GPS14 (Site S9): (S33°17'11.1"; E27°22'39.4") - Possible informal stone-packed burials and modern grave (Binneman *et. al.* 2010)
- Site S10: (S33°17'45.2"; E27°21'25.6") - Cemetery (EOH-CES)
- Site S11: (S33°17'44.2"; E27°21'29.1") - Iron Age cattle kraal (EOH-CES).

### 2.3) The Phase 1b Archaeological Ground Truthing – Site Descriptions

One additional archaeological and cultural heritage resource, as defined and protected by the NHRA 1999, was identified during the Phase 1b archaeological ground truthing assessment. The identified site, labelled Site S12, comprises a Later Iron Age (LIA) settlement site. The site will not be impacted by development.

Site descriptions provided, including archaeological site significance ratings and recommendations for development purposes aim to represent an inclusive assessment of all tangible heritage resources situated on the affected properties, Riverbank 147 and Sandflat 149 for purposes of the *Phase 1: Riverbank Wind Energy Facility (WEF)* development. Where co-ordinates recorded during the Phase 1b archaeological ground truthing assessment differed from those formerly recorded, co-ordinates recorded during the Phase 1b replaced formerly recorded co-ordinates.

#### 2.3.1) Site S4: (S33°17'30.3"; E27°22'00.6") – LIA: Settlement Site

Site S4 was described by Binneman *et. al.* (2010) as: 'Heavy disturbances next to the farm road at the area marked S4 (S33°17'30.30"; E27°22'00.60") heeded investigation as the impressions in and on ground, covering an area of about 100m x 100m, familiarly resembled those of Iron Age settlements. There were a few raised circular areas ranging between 1m x 1m to 6m x 6m in diameter, which may represent hut floors. There were also a few depression hollows in the ground about 1m x 1m in diameter, which could be storage pits. The area is approximately 100m from the farmhouse and may be related to recent or current farming activities. No archaeological materials were found in association with these features and the depression hollows seem to be used by the occupants as dumping areas.' Phase 1b archaeological ground truthing confirmed the presence of the LIA settlement site as described.

##### ○ SITE SIGNIFICANCE & RECOMMENDATIONS:

Site Significance: Site S4 is ascribed a SAHRA / EC PHRA Medium Significance and a Generally Protected IV-B Field Rating.

Recommendations: The Site S4 LIA settlement remains are situated more than 500m from the closest development aspects, being various WEF access roads. Based on proximity it is recommended that development proceeds without the developer having to comply with additional heritage compliance conservation requirements for development purposes.

#### 2.3.2) Site S5: (S33°16'52.9"; E27°22'10.0") – MSA: Stone Age Occurrence

Heavy rains during the week preceding the Phase 1b archaeological ground truthing resulted in muddy, inaccessible access tracks, increasingly so closer to the Nyulutsi River – Site S5, situated within a donga of the riverbank was thus not accessed. Site S5 was described by Binneman *et. al.* (2010) as: 'Random scatters of Middle Stone Age stone artefacts were observed at the area marked S5 (S33°16'52.98"; E27°22'10.02") at the bottom of a 4m-5m deep donga. A few stone artefacts were observed within the donga walls demonstrating that the stone artefacts had, over time, been washing down the hill and therefor are not in primary archaeological context. The Middle Stone Age stone artefacts comprised mainly of flakes, with the characteristic prepared core method of manufacture indicating the period of origin, made predominantly on shale, silcrete and quartz raw materials. A blue glass bead was also documented, although this may be modern as the farmhouse is situated approximately 200m to the south of the area marked S5.'

##### ○ SITE SIGNIFICANCE & RECOMMENDATIONS

Site Significance: Based on the Binneman *et. al.* (2010) site description Site S5 is preliminary assigned a SAHRA / EC PHRA Low Significance with a Generally Protected IV-C Field Rating.

**Recommendations:** Site S5 is situated approximately 900m from the closest proposed development feature, being the access road to WTG4 and will not be impacted by development. No conservation or mitigation measures for purposes of development need to be implemented.

### 2.3.3) Site S7: (S33°16'40.4"; E27°23'16.0") – MSA: Stone Age Occurrence

Site S7 was originally described by Binneman et. al. (2010) as: 'A scatter of Middle Stone Age stone artefacts were observed within the dam area marked S7 (S33°16'40.44"; E27°23'16.02") between the surface and approximately 50cm below ground. The stone artefacts were predominantly made on fine-grained quartzite and silcrete raw materials and consisted of flakes, chunks and cores. It is likely that the stone artefact scatter may continue below ground surface and the vegetation cover.'

A few scattered Middle Stone Age (MSA) flakes were encountered on the general surface of the Site S7 dam area. Surface artefact ratios (artefacts: m<sup>2</sup>) were too low to be recorded, being in the region of ≤1:50. All artefacts observed were produced from quartzite; no silcrete lithics were recorded. The few artefacts encountered comprised of flakes and waste-flakes only, of inferior MSA technology, resulting in substandard typological pieces. No MSA lithics were encountered in-situ section at varying exposed sections at the site, ranging from approximately 50cm-2+m in depth dominated by mudstone and silty sand stratigraphies. No evidence thus exists of the extremely low density MSA occurrence having any stratigraphic sub-surface component. The presence of the few observed surface artefacts may represent low level use of the landscape or may equally be interpreted as the result of post-depositional processes across the wider landscape.

#### o SITE SIGNIFICANCE & RECOMMENDATIONS

**Site Significance:** The extremely low density, seemingly surface restricted, MSA lithic occurrence at recorded Site S7 is ascribed a SAHRA / EC PHRA Low Significance and a Generally Protected IV-C Field Rating.

**Recommendations:** Site S7 is situated approximately 70m east of the access road to WTG3. The low density MSA occurrence is however of such low archaeological significance that no conservation or mitigation measures for purposes of development are deemed necessary.

### 2.3.4) Site S8: (S33°17'10.2"; E27°23'30.8") – LSA: Shell Scatter / Midden

Site S8 was described by Binneman et. al. (2010) as: 'Scatters of very fragmented shell were observed within the farm road mostly at the most eastern end of the property at S8 (S33°17'10.26"; E27°23'30.84"). The shell was too fragmented to make any positive identification, although the scatter seemed to consist mostly of the smaller inedible species of shellfish. The area is situated approximately 6km from the coast and it may be that the shell was collected at the coast and consumed within the area or the shell may have been brought in for construction of the farm road.' A similar occurrence was identified, originally described by Binneman et. al. (2010) as locality GPS10, situated in the access track towards the farmstead, approximately 200m south of Site S5. According to the Phase 1 AIA project team the GPS10 '... shell component was exactly the same as that previous found, smaller inedible shellfish and too fragmented to make any positive identification for consumption.'

At recorded Site S8 scattered, fragmented shell pieces were observed. However, shell fragments are those of land snails (*Achatina*). The findspot is thus indicative of ecological biorhythms rather than of anthropogenic origin. In conclusion, recorded Site S8 does not constitute a heritage site as defined and protected by the NHRA 1999. [It needs to be emphasised that pre-historic man exploited shellfish seafood resources for consumption purposes, there is to date no evidence of any anthropogenic collection of inedible shellfish. On much rarer occasion shellfish was exploited for the manufacture of pendants etc., to date no middens related exclusively to such activities have been identified].

- SITE SIGNIFICANCE & RECOMMENDATIONS

Site Significance: Site S8 is not a heritage site – a site significance assignment is not applicable.

Recommendations: Site S8 is not a heritage site – heritage recommendations do not apply.

### 2.3.5) Site S9: (S33°17'08.4"; E27°22'43.7") – LIA / Contemporary: Cemetery / Grave site

Site S9, initially documented as locality GPS14 was 1<sup>st</sup> identified and described by Binneman *et. al.* (2010) simply as ‘... a modern grave was observed close to one of the houses at GPS14 (S33°17'11.16"; E27°22'39.48).’ The modern grave is however not situated at the said co-ordinate but at S33°17'08.4"; E27°22'43.7, approximately 140m north-east thereof. The site comprises a single modern style grave situated within a formally fenced area. Current conservation measures, including a permanent fence and access gate, comply with SAHRA / EC PHRA Minimum Site Conservation Standards.

[In addition to the reported on modern grave Binneman *et. al.* (2010) commented on the presence of packed stones that may represent graves, situated approximately 100m east of the said grave, but without a GPS co-ordinate provided for the occurrence. The reported on packed stones could not be relocated, but the initial report on their presence should serve a cautionary note that archaeological sites and occurrences, including grave sites, may be uncovered during the course of vegetation clearing and sub-surface construction excavation. In the event of archaeological sites and occurrences being uncovered during the course of construction the developer should follow the guidelines provided in ‘Appendix A – Heritage Protocol for Incidental Finds during the Construction Phase’].

- SITE SIGNIFICANCE & RECOMMENDATIONS

Site Significance: The Site S9 cemetery is assigned a SAHRA / EC PHRA *High-Medium Significance* and a *Generally Protected IV-A Field Rating*.

Recommendations: Site S9 is situated approximately 180m west of the closest development aspect, being the access road to WTG4. With current conservation measures complying with SAHRA / EC PHRA Minimum Site Conservation Standards associated with proximity of Site S9 from development aspects, it is recommended that development proceed without the developer having to comply with additional heritage site conservation compliance requirements.

### 2.3.6) Site S10: (S33°17'45.1"; E27°21'26.2") – LIA / Contemporary: Cemetery

Site S10 was 1<sup>st</sup> reported on for heritage compliance purposes by the EOH-CES project team. The site comprises a contemporary small family cemetery of Later Iron Age (LIA) cultural tradition. The cemetery contains 2 easily identifiable modern style graves. The cemetery is formally fenced with an access gate, complying with SAHRA / EC PHRA Minimum Site Conservation Standards.

- SITE SIGNIFICANCE & RECOMMENDATIONS

Site Significance: The Site S10 cemetery is assigned a SAHRA / EC PHRA *High-Medium Significance* and a *Generally Protected IV-A Field Rating*.

Recommendations: Site S10 is situated approximately 25-30m west of the proposed WTG5 / WTG9 access road. The site will not be directly impacted by development. However, based on proximity it is recommended that a minimum 2-5m conservation buffer be maintained between the Site S10 cemetery fence and any development impact. It is recommended that the conservation buffer be temporarily demarcated with construction netting and that temporary signage indicating

the site as a 'No Entry – Heritage Site' be attached to the temporary conservation fence. All temporary conservation measures should be removed upon completion of construction activities in the vicinity of the site.

### **2.3.7) Site S11: (S33°17'44.1"; E27°21'28.3") – LIA / Contemporary: Cattle Kraal**

Site S11 comprises a contemporary cattle kraal or livestock enclosure of Later Iron Age (LIA) cultural tradition. The site was 1<sup>st</sup> reported on for heritage compliance purposes by the EOH-CES project team. The Site S11 cattle kraal does not constitute a heritage site as defined and protected by the NHRA 1999. It is inferred that the site, situated approximately 20m east of the proposed WTG5 / WTG9 access road was recorded for planning purposes.

#### ○ SITE SIGNIFICANCE & RECOMMENDATIONS

Site Significance: Site S11 is not a heritage site – a site significance assignment is not applicable.

Recommendations: Site S11 is not a heritage site – heritage recommendations do not apply.

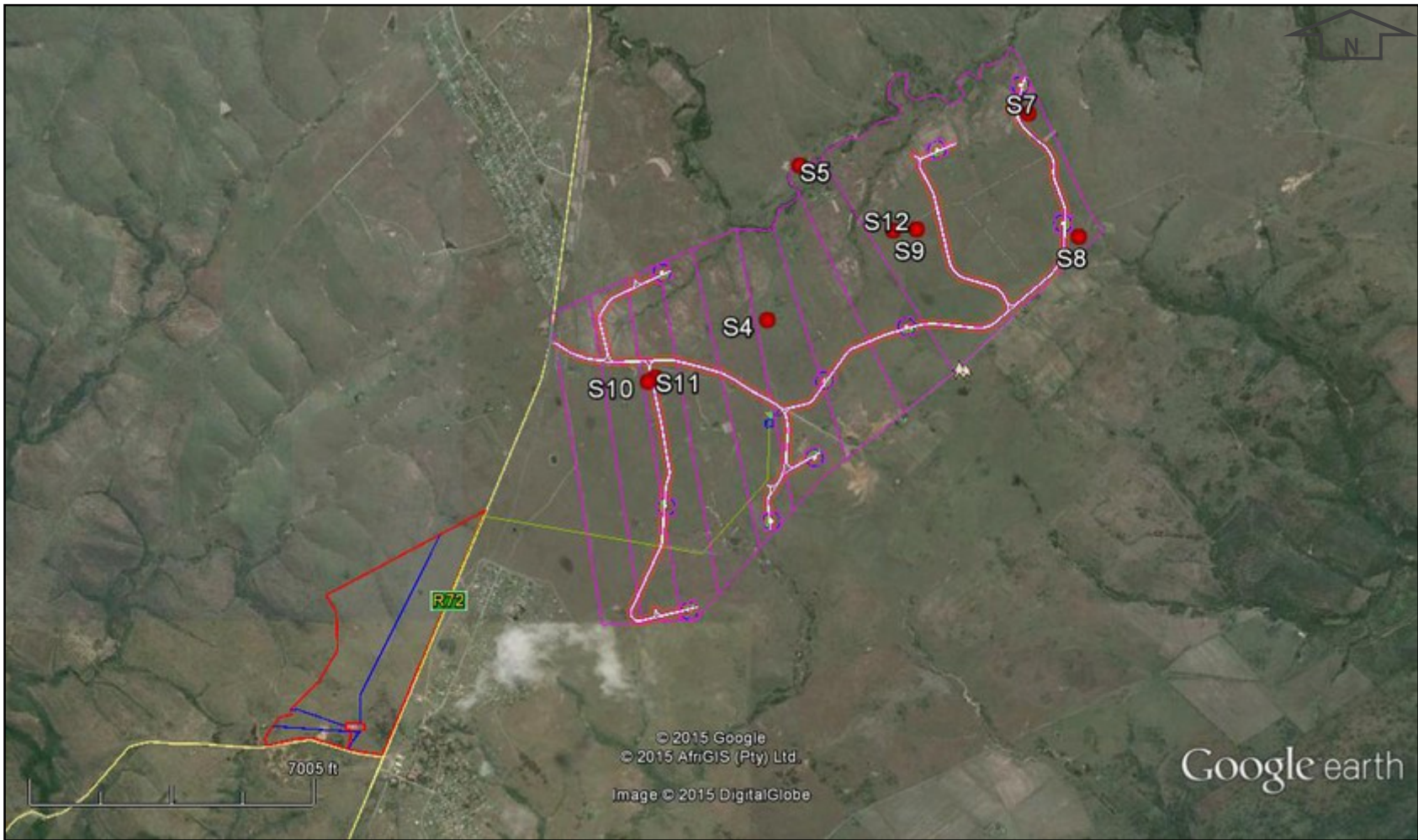
### **2.3.8) Site S12: (S33°17'06.5"; E27°22'36.9") – LIA: Settlement Site**

Site S12 is situated immediately east of the access road to a contemporary farmstead, approximately 150-170m north-west of the Site S9 LIA cemetery / grave site. Site extent measures more or less 150x100m, with the terrain characterized by distinctive vegetation, in cases demarcating former site features and representative of cultural practice. Thick vegetation covered the undulated surface of the site, with a number of distinctive site features still identifiable, including hut mounds and hut foundation mounds with rough 6m in diameter dimensions, at least 1 rectangular structure foundation mound, of roughly 10x8m in size and a number of smaller mounds, varying in size from 1-1.5m in diameter, indicative of smaller site features such as cooking stands. Approximate 1m in diameter depressions is interpreted as grain storage pits. Contemporary cultural overlay is evident at the site, including a branch-built livestock encampment. Thick grass cover obscured surface visibility – no related LIA artefacts were found on the surface of the site. The site is interpreted as being of fairly recent LIA origin, most probably directly ancestral to occupants of the adjacent farmstead.

#### ○ SITE SIGNIFICANCE & RECOMMENDATIONS

Site Significance: Site S12 is ascribed a SAHRA / EC PHRA *Medium Significance* and a *Generally Protected IV-B Field Rating*.

Recommendations: The Site S12 LIA settlement remains are situated more than 300m from the closest development aspect, being the access road to WTG4. Based on proximity it is recommended that development proceeds without the developer having to comply with additional heritage compliance conservation requirements for development purposes.



Map 3: Archaeological and cultural heritage sites in relation to the Phase 1: Riverbank Wind Energy Facility (WEF) study site





**Plate 1:** General view of the Site S4 LIA settlement site terrain



**Plate 3:** Hut mound remains at Site S4 [1]



**Plate 2:** Distinctive vegetation demarcating former LIA site features



**Plate 4:** Hut mound remains at Site S4 [2]





**Plate 5:** View of the Site S7 dam



**Plate 7:** Close-up of the general anthropogenic sterile mudstone context at Site S7



**Plate 6:** A quartzite MSA lithic from Site S7



**Plate 8:** Anthropogenic sterile mudstone sections in excess of 2m at Site S7





**Plate 9:** Anthropogenic sterile silty sand sections of approximately 50-60cm at Site S7



**Plate 11:** Close-up of fragmented shell at the S8 locality [1]



**Plate 10:** Fragmented shell pieces in the Site S8 access road



**Plate 12:** Close-up of fragmented shell at the S8 locality [2]





**Plate 13:** View of the Site S9 cemetery / grave site



**Plate 15:** View of the Site S11 cattle kraal



**Plate 14:** View of the Site S10 cemetery



**Plate 16:** General view of the Site S12 LIA settlement terrain



**Plate 17:** Distinctive vegetation demarcating former site features at Site S12



**Plate 19:** Remains of a hut mound at Site S12



**Plate 18:** The undulated surface at Site S12 indicative of former anthropogenic activity



**Plate 20:** Remains of a former rectangular structure at Site S12



## 2.4) General Site Observations

### 2.4.1) Impact on the Cultural Landscape

The *Phase 1: Riverbank Wind Energy Facility (WEF)* study site is situated in general approximately 4.5km from Wesley, with the closest visually significant development aspect, WTG9, within 2km from the village. Wesley, then Wesleyville, was founded by Rev William Shaw of the Wesleyan Missionary Society in 1823 and named after the founder of the Wesleyan Methodist Church, John Wesley ([en.wikipedia.org/wiki/Wesley,\\_Eastern\\_Cape](http://en.wikipedia.org/wiki/Wesley,_Eastern_Cape)).

John Wesley, often described as believing that the ‘*world was his parish*’ founded the Wesleyan Methodist Missionary Society early in the 19<sup>th</sup> Century with the aim of spreading the gospel throughout the rapidly expanding British Empire. In 1816 the 1<sup>st</sup> of its missionaries, Rev Barnabas Shaw was sent to the Cape Colony, initially to preach salvation to the ‘heathens’, but with the arrival of the 1820 settlers, many of which were Methodists, a new dimension, pastoral care of the settlers, was added (Buckley 1997). The plan of the British Government was to send out the 1820 settler parties in groups of 10, 20, 50 or 100 families. Where 100 families combined to form 1 party they were allowed to choose a minister of their choice denomination, with the government committing to an annual grant towards his support. In accordance a number of Wesleyan families, mainly from London, decided to take with them a Wesleyan minister, being the Rev William Shaw (selected to the London or Sephton party). The party arrived in Algoa Bay in April 1820 and soon settled near Salem, where the Rev Shaw wrote: ‘*There is not a single missionary between my residence and the northern extremity of the Red Sea...*’ (Whiteside 1906), already setting his thoughts well beyond Salem and established Colonial boundaries. Rev Shaw, the great settler missionary of the Eastern Cape, planned a chain of mission stations from Grahamstown through Pondoland and into Natal (Buckley 1997). An early Wesleyan missionary inscription includes the following statement: ‘*In the Eastern Cape from 1823 onwards, our missionaries, under the leadership of Rev William Shaw, moved north of Grahamstown. Chief Kama of the Ciskei was converted and the first of our mission stations, Wesleyville, was established near his kraal. Then followed Mount Coke (1824), where the New Testament was printed in Xhosa in 1846, and the whole Bible in 1859. Shaw’s dream of a chain of mission stations from Grahamstown to Natal finally came true with the establishment of Butterworth (1827), Morley (1829), Clarkebury (1830), Buntingville (approximately 1830), Shawbury (1839). Later still came McClear (1864), Fletcherville and Tsitsana.*’ ([www.westeringmethodist.co.za](http://www.westeringmethodist.co.za)).

Impact of the *Phase 1: Riverbank Wind Energy Facility (WEF)* development, with reference to its proximity to Wesley and the associated Colonial Period cultural landscape, including early Wesleyan missionary history, specifically with Wesleyville having been the 1<sup>st</sup> of the mission stations established as part of the Rev Shaw’s ‘chain of mission stations’ throughout the Eastern Cape and beyond, associated 1820 settler history and the relationship between the Wesleyville mission station and the Later Iron Age (LIA) people of Chief Kama, the descendants of whom today form the primary direct community of Wesley’s surrounds, can be described a negative, high and permanent.

Impact of the development on the Colonial Period cultural landscape was omitted from the Phase 1 AIA for the development (Binneman et. al. 2010), with the Phase 1 AIA report preceded by a desktop archaeological study (Booth 2010). Binneman et. al. (2010), having had addressed the tangible resources located on the original study site only, concluded that: ‘*The area is of medium-low cultural sensitivity...*’. Resultantly the EA (DEA 2011) states: ‘*All information presented to the Department was taken into account in the Department’s consideration of the application. A summary of the issues which, in the Department’s view, were of the most significance is set out below... c) The Heritage Assessment and Visual Assessment both concluded that the proposed wind energy facility will have a visual impact on the scenic resources and pastoral character of the region which will generally add new modern elements onto an old rural landscape. The overall visual impact is considered medium to low with recommended mitigations.*’ An evident discrepancy exists between the description of impact on a ‘scenic’, ‘pastoral’ and ‘old rural’ landscape versus the heritage significance of the Colonial Period cultural landscape.

It is, at this late stage, with specific reference to project planning being at a mature stage and with an EA already issued, not possible to make adequate mitigatory recommendations with reference to impact on the Colonial Period cultural landscape



that will be affected by the *Phase 1: Riverbank Wind Energy Facility (WEF)* development. It is however advised that impact of the development on the Colonial Period cultural landscape be described as such; negative, high and permanent in environmental compliance documentation, if for no other purpose than transparency with respect to the actual impact of development on the Colonial Period cultural landscape of Wesley and its immediate surrounds.

#### **2.4.2) The General *Phase 1: Riverbank Wind Energy Facility (WEF)* Study Site**

The general *Phase 1: Riverbank Wind Energy Facility (WEF)* study site was characterized by thick grass cover at the time of the Phase 1b archaeological ground truthing. Vegetation cover may well have obscured surface identifiable archaeological and cultural heritage resources. Aside from surface identifiable resources, which may well be uncovered during the course of vegetation clearing the possibility of sub-surface archaeological and cultural heritage resources being encountered during the course of construction excavation activities cannot be excluded. The study site is rich in erosion gullies and subsurface sections of differing dimensions. A number of these exposed subsurface sections were inspected during the Phase 1b assessment. Inspected sub-surface sections proved unanimously anthropogenically sterile. It is thus highly unlikely that fairly large scale sub-surface resources, such as Stone Age members or stratigraphic lenses, will be uncovered or impacted on during the course of development. However caution should be taken with respect to smaller, individual type resources, including specifically graves and human remains, but which may extend from the physical anthropological arena to the cultural arena, i.e. clusters of artefacts, structure remains, individual cultural objects and midden remains.

Based on the findings of the Phase 1 AIA (Binneman et. al. 2010) and the Phase 1b archaeological ground truthing, including specifically verification of anthropogenic sterility at inspected subsurface sections, archaeological monitoring at the time of vegetation clearing or during the course of construction excavation is not deemed necessary. But the possibility of archaeological and cultural heritage resources, as defined and protected by the NHRA 1999, being encountered during the course of construction cannot be excluded; in which case the procedure described in 'Appendix A – Heritage Protocol for Incidental Finds during the Construction Phase' should be followed.

### 3 – Recommendations

1. A description of the impact of the Riverbank Wind Energy Facility (WEF) on the Colonial Period cultural landscape, including early Wesleyan missionary history, specifically with Wesleyville having been the 1<sup>st</sup> of the mission stations established as part of the Rev William Shaw's 'chain of mission stations' throughout the Eastern Cape and beyond, associated 1820 settler history and the relationship between the Wesleyville mission station and the Later Iron Age (LIA) people of Chief Kama, the descendants of whom today form the primary direct community of Wesley's surrounds, have been omitted from heritage documentation for purposes of the EA, including the Phase 1 AIA (Binneman *et. al.* 2010), with the Phase 1 AIA having been preceded by a desktop archaeological study (Booth 2010). The Phase 1 AIA focused on tangible heritage resources identified within the proposed study site at the time, resulting in the conclusion that the area is of medium-low cultural sensitivity. The heritage sensitivity conclusion was accordingly accommodated in the EA (DEA 2011). Impact of the *Phase 1: Riverbank Wind Energy Facility (WEF)* on the Colonial Period cultural landscape is however described as negative, high and permanent. It is, at this late stage, not possible to make adequate mitigatory recommendations with reference to development impact on the cultural landscape that will be affected. It is nevertheless advised that impact of the development on the Colonial Period cultural landscape be described as such; negative, high and permanent in environmental compliance documentation, if for no other purpose than transparency.
2. Eight (8) sites were recorded and reported on for purposes of heritage compliance relating to the *Phase 1: Riverbank Wind Energy Facility (WEF)* development, including 5 sites documented in the Phase 1 AIA (Binneman *et. al.* 2010), 2 sites reported on by the EOH-CES project team and 1 additional site located during the Phase 1b archaeological ground truthing. Of the 8 sites 6 constitute heritage sites, as defined and protected by the NHRA 1999. None of the protected heritage sites will be directly impacted on by development. Additional temporary conservation measures are recommended for Site S10, a LIA / contemporary cemetery site, based on proximity to the WTG5 / WTG9 access road.
  - Should, for any which reason, any development aspect encroach within 30m on a recorded heritage site, the developer should ensure that temporary conservation measures be instated, including a temporary conservation fence (with an approximate 5-10m conservation buffer between the site and the conservation fence) with temporary signage indicating the site as a 'No Entry – Heritage Site' zone attached to the conservation fence.

Phase 1: Riverbank Wind Energy Facility – Archaeological & Cultural Heritage Recommendations			
Site Nr	Site Type	Co-ordinates	Recommendations
Site S4	LIA: Settlement Site	S33°17'30.3"; E27°22'00.6"	N/A (based on proximity from development aspects)
Site S5	MSA: Stone Age Occurrence	S33°16'52.9"; E27°22'10.0"	N/A (based on proximity from development aspects)
Site S7	MSA: Stone Age Occurrence	S33°16'40.4"; E27°23'16.0"	N/A (based on low archaeological site significance)
Site S8	LSA: Shell Scatter / Midden	S33°17'10.2"; E27°23'30.8"	Not a heritage site
Site S9	LIA / Contemporary: Cemetery / Grave site	S33°17'08.4"; E27°22'43.7"	N/A (based on proximity from development aspects)
Site S10	LIA / Contemporary: Cemetery	S33°17'45.1"; E27°21'26.2"	<ol style="list-style-type: none"> <li>1. Permanent conservation measures (permanent fence and access gate) in place.</li> <li>2. Temporary conservation buffer (2-5m) fence and temporary signage during the course of construction.</li> </ol>
Site S11	LIA / Contemporary: Cattle Kraal	S33°17'44.1"; E27°21'28.3"	Not a heritage site
Site S12	LIA: Settlement Site	S33°17'06.5"; E27°22'366.9"	N/A (based on proximity from development aspects)

**Table 3:** Summarized archaeological and cultural heritage compliance requirements for sites situated within the *Phase 1: Riverbank Wind Energy Facility (WEF)* study site

3. Based on the findings of the Phase 1 AIA (Binneman *et. al.* 2010) and the Phase 1b archaeological ground truthing, including inspection of sub-surface exposed sections archaeological monitoring during the course of vegetation clearing and subsurface construction excavation is not deemed necessary. The possibility of archaeological and cultural heritage resources, as defined and protected by the NHRA 1999, being encountered during the course of

construction cannot be excluded, in which case the procedure described in 'Appendix A – Heritage Protocol for Incidental Finds during the Construction Phase' should be followed.

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## 4 – References

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1. Binneman, J., Booth, C. & Higgit, N. 2010. *A Phase 1 Archaeological Impact Assessment (AIA) for the proposed Riverbank Wind Energy Facility between Hamburg and Wesley, Amathole District Municipality, Eastern Cape Province.*
2. Buckley, D. 1997. 'We Come Unto Our Fathers' God; 'Their Rock is Our salvation'. *The Story of the Metropolitan Methodist Church, Pietermaritzburg (The Chapel Street Society), 1846-1996.* Natalia 26: 59-73.
3. DEA. 2011. *Amendment of Environmental Authorization (EA) issued on 15 August 2011: Splitting of EA for the Establishment of Riverbank Wind Energy Facility and Associated Infrastructure near Wesley, Eastern Cape Province: Riverbank* [DEAT Reference: DEAT/EIA/12777/2011; DEA Reference: 12/12/20/1836/1].
4. [en.wikipedia.org/wiki/Wesley,\\_Eastern\\_Cape](http://en.wikipedia.org/wiki/Wesley,_Eastern_Cape).
5. Savannah Environmental. 2011. *Proposed Riverbank Wind Energy Facility, Eastern Cape Province. Construction and Operation Environmental Management Plan.*
6. South African Government. 1999 (No 25 of). *National Heritage Resources Act.*
7. South African Heritage Resources Agency. 2007. *Minimum Standards for the Archaeological and Heritage Components of Impact Assessments.* [Unpublished guidelines].
8. Whiteside, J. 1906. *History of the Wesleyan Methodist Church of South Africa.* Cape Town: Juta & Co. Methodist Book Room.

## Appendix A

### Heritage Protocol for Incidental Finds during the Construction Phase

Should any palaeontological, archaeological or cultural heritage resources, including human remains / graves, as defined and protected by the NHRA 1999, be identified during the construction phase of development (including as a norm during vegetation clearing, surface scraping, trenching and excavation phases), it is recommended that the process described below be followed.

#### ➤ On-site Reporting Process:

1. The identifier should immediately notify his / her supervisor of the find.
2. The identifier's supervisor should immediately (and within 24 hours after reporting by the identifier) report the incident to the on-site SHE / SHEQ officer.
3. The on-site SHE / SHEQ officer should immediately (and within 24 hours after reporting by the relevant supervisor) report the incident to the appointed ECO / ELO officer. [Should the find relate to human remains the SHE / SHEQ officer should immediately notify the nearest SAPS station informing them of the find].
4. The ECO / ELO officer should ensure that the find is within 72 hours after the SHE / SHEQ officers report reported on SAHRIS and that a relevant heritage specialist is contacted to make arrangements for a heritage site inspection. [Should the find relate to human remains the ECO / ELO officer should ensure that the archaeological site inspection coincides with a SAPS site inspection, to verify if the find is of forensic, authentic (informal / older than 60 years), or archaeological (older than 100 years) origin].
5. The appointed heritage specialist should compile a 'heritage site inspection' report based on the site specific findings. The site inspection report should make recommendations for the destruction, conservation or mitigation of the find and prescribe a recommended way forward for development. The 'heritage site inspection' report should be submitted to the ECO / ELO, who should ensure submission thereof on SAHRIS.
6. SAHRA / the relevant PHRA will state legal requirements for development to proceed in the SAHRA / PHRA Comment on the 'heritage site inspection' report.
7. The developer should proceed with implementation of the SAHRA / PHRA Comment requirements. SAHRA / PHRA Comment requirements may well stipulate permit specifications for development to proceed.
  - Should permit specifications stipulate further Phase 2 archaeological investigation (including grave mitigation) a suitably accredited heritage specialist should be appointed to conduct the work according to the applicable SAHRA / PHRA process. The heritage specialist should apply for the permit. Upon issue of the SAHRA / PHRA permit the Phase 2 heritage mitigation program may commence.
  - Should permit specifications stipulate destruction of the find under a SAHRA / PHRA permit the developer should immediately proceed with the permit application. Upon the issue of the SAHRA / PHRA permit the developer may legally proceed with destruction of the palaeontological, archaeological or cultural heritage resource.
  - Upon completion of the Phase 2 heritage mitigation program the heritage specialist will submit a Phase 2 report to the ECO / ELO, who should in turn ensure submission thereof on SAHRIS. Report recommendations may include that the remainder of a heritage site be destroyed under a SAHRA / PHRA permit.
  - Should the find relate to human remains of forensic origin the matter will be directly addressed by the SAPS: A SAHRA / PHRA permit will not be applicable.

**NOTE:** Note that SAHRA / PHRA permit and process requirements relating to the mitigation of human remains requires suitable advertising of the find, a consultation, mitigation and re-interment / deposition process.

#### ➤ Duties of the Supervisor:

1. The supervisor should immediately upon reporting by the identifier ensure that all work in the vicinity of the find is ceased.
2. The supervisor should ensure that the location of the find is immediately secured (and within 12 hours of reporting by the identifier), by means of a temporary conservation fence (construction netting) allowing for a 5-10m heritage conservation buffer zone around the find. The temporary conserved area should be sign-posted as a 'No Entry – Heritage Site' zone.
3. Where development has impacted on the resource, no attempt should be made to remove artefacts / objects / remains further from their context, and artefacts / objects / remains that have been removed should be collected and placed within the conservation area or kept for safekeeping with the SHE / SHEQ officer. It is imperative that where development has impacted on

palaeontological, archaeological and cultural heritage resources the context of the find be preserved as good as possible for interpretive and sample testing purposes.

4. The supervisor should record the name, company and capacity of the identifier and compile a brief report describing the events surrounding the find. The report should be submitted to the SHE / SHEQ officer at the time of the incident report.

➤ **Duties of the SHE / SHEQ Officer:**

1. The SHE / SHEQ officer should ensure that the location of the find is recorded with a GPS. A photographic record of the find (including implementation of temporary conservation measures) should be compiled. Where relevant a scale bar or object that can indicate scale should be inserted in photographs for interpretive purposes.
2. The SHE / SHEQ officer should ensure that the supervisors report, GPS co-ordinate and photographic record of the find be submitted to the ECO / ELO officer. [Should the find relate to human remains the SHE / SHEQ officer should ensure that the mentioned reporting be made available to the SAPS at the time of the incident report].
3. Any retrieved artefacts / objects / remains should, in consultation with the ECO / ELO officer, be deposited in a safe place (preferably on-site) for safekeeping.

➤ **Duties of the ECO / ELO officer:**

1. The ECO / ELO officer should ensure that the incident is reported on SAHRIS. (The ECO / ELO officer should ensure that he / she is registered on the relevant SAHRIS case with SAHRIS authorship to the case at the time of appointment to enable heritage reporting).
2. The ECO / ELO officer should ensure that the incident report is forwarded to the heritage specialist for interpretive purposes at his / her soonest opportunity and prior to the heritage site inspection.
3. The ECO / ELO officer should facilitate appointment of the heritage specialist by the developer / construction consultant for the heritage site inspection.
4. The ECO / ELO officer should facilitate access by the heritage specialist to any retrieved artefacts / objects / remains that have been kept in safekeeping.
5. The ECO / ELO officer should facilitate coordination of the heritage site inspection and the SAPS site inspection in the event of a human remains incident report.
6. The ECO / ELO officer should facilitate heritage reporting and heritage compliance requirements by SAHRA / the relevant PHRA, between the developer / construction consultant, the heritage specialist, the SHE / SHEQ officer (where relevant) and the SAPS (where relevant).

➤ **Duties of the Developer / Construction Consultant:**

The developer / construction consultant should ensure that an adequate heritage contingency budget is accommodated within the project budget to facilitate and streamline the heritage compliance process in the event of identification of incidental palaeontological, archaeological and cultural heritage resources during the course of development, including as a norm during vegetation clearing, surface scraping, trenching and excavation phases, when resources not visible at the time of the surface assessment may well be exposed.