
PHASE 1b ARCHAEOLOGICAL MONITORING

**THE MELKHOUT – OYSTER BAY POWER LINE: PHASE 1B,
HUMANSDORP DISTRICT, EASTERN CAPE, SOUTH AFRICA**

DATE: 2013-11-07



REPORT TO:

THEUNS DUVENHAGE (Aurecon)

Tel: 041 503 3983; Fax: 086 600 4037;
Postal Address: P.O. Box 5328, Walmer, 6065;
E-mail: Theuns.Duvenhage@aurecongroup.com

SELLO MOKHANYA (Eastern Cape Provincial Heritage Resources Authority – EC PHRA, APM Unit)

Tel: 043 745 0888; Fax: 043 745 0889;
Postal Address: P.O. Box 16208, Amathole Valley, 5616;
E-mail: smokhanya@ecphra.org.za

PREPARED BY:

KAREN VAN RYNEVELD (ArchaeoMaps)

Tel: 084 871 1064; Fax: 086 515 6848;
Postal Address: Postnet Suite 239, Private Bag X3, Beacon Bay, 5205;
E-mail: kvanryneveld@gmail.com

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 –

DATE – 2013-11-07

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EXECUTIVE SUMMARY

TERMS OF REFERENCE –

Aurecon has been appointed as ECO by the project proponent, Eskom, for the authorized 132kV *Melkhout – Oyster Bay Power Line: Phase 1B* development, Humansdorp District, Eastern Cape. The development comprises of the construction of an approximate 30km power line from the existing Melkhout sub-station just north of Humansdorp to the Red Cap substation, Farm 826, near Oyster Bay. ArchaeoMaps has been appointed by Aurecon to do a Phase 1b archaeological monitoring ‘walk-through’ of the final *Melkhout – Oyster Bay Power Line: Phase 1B* alignment prior to development.

THE PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT –

PROJECT AREA: Approximate 30km Eskom Melkhout – Oyster Bay Power: Phase 1B, Humansdorp District, Eastern Cape [1:50,000 Map Ref – 3324DC, 3324DD & 3424BA].

COVERAGE & GAP ANALYSIS: Thick vegetation hampered visibility.

FIELD METHODOLOGY: Three day field assessment; GPS co-ordinates – Garmin Oregon 550; Photographic documentation – Pentax K20D. Site significance assessment – SAHRA 2007 system.

SUMMARY:

Map Code	Site	Co-ordinates	Recommendations
Phase 1 AIA – Anderson 2010 [Archaeology – As per the SAHRA Comment (2011)]			
MEL01	Stone Age	S34°00'06.7"; E24°47'00.7"	Destruction under EC PHRA Site Destruction Permit
MEL02	Contemporary & Stone Age	S34°00'14.7"; E24°47'04.6"	
MEL03	Contemporary	S34°00'15.3"; E24°47'07.5"	
MEL04	Stone Age	S34°00'34.9"; E24°46'27.7"	Temporary conservation
MEL05	Stone Age	S34°03'22.6"; E24°42'24.7"	Destruction under EC PHRA Site Destruction Permit
MEL06	Stone Age	S34°04'37.8"; E24°41'41.4"	N/A
MEL07	Colonial Period	S34°09'01.9"; E24°42'27.8"	N/A
Phase 1 PIA – Gess 2011 [Palaeontology – As per the SAHRA Comment (2011)]			
Phase 2 palaeontological mitigation under EC PHRA Permit			
Palaeontological monitoring at the time of construction through the Baviaans Formation.			
Phase 1bAM – Van Ryneveld 2013 [Archaeology]			
MEL08	Colonial Period	S34°00'33.3"; E24°45'48.2"	Temporary conservation
MEL09	Colonial Period	S34°00'11.2"; E24°44'31.7"	N/A [Caution should be taken to ensure no impact on buildings / structures older than 60 years. In the event of impact (alteration or additions) these should be done under an EC PHRA Built Environment Permit]
MEL10	Colonial Period	S34°00'04.0"; E24°44'16.1"	
MEL11	Colonial Period	S34°00'04.2"; E24°44'06.9"	
MEL12	Colonial Period	S34°01'02.3"; E24°44'04.0"	
MEL13	Colonial Period	S34°01'03.9"; E24°44'04.0"	
MEL14	Stone Age	S34°05'50.4"; E24°41'44.8"	
MEL15	Stone Age	S34°07'03.9"; E24°42'49.5"	Archaeological monitoring at the time of foundation excavations – pylons MLK-OYS-71 to MLK-OYS-75
			Archaeological monitoring at the time of foundation excavations – pylons MLK-OYS-80 to MLK-OYS-88

RECOMMENDATIONS –

With reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA 1999, it is recommended that the results of this Phase 1bAM together with Anderson’s (2010) archaeological and Gess’s (2011) palaeontological findings, as commented on in the SAHRA Comment (2011), be complied with prior to and during development of the *Melkhout – Oyster Bay Power Line: Phase 1B* development, Humansdorp District, Eastern Cape.

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1) INTRODUCTION

❖ Terms of Reference

Aurecon has been appointed as Environmental Control Officer (ECO) by the project proponent, Eskom, for the authorized 132kV *Melkhout – Oyster Bay Power Line: Phase 1B* development, Humansdorp District, Eastern Cape. The development comprises of the construction of an approximate 30km power line from the existing Melkhout substation just north of Humansdorp to the Red Cap substation, Farm 826, near Oyster Bay. ArchaeoMaps has been appointed by Aurecon to do a Phase 1b archaeological monitoring ‘walk-through’ of the final *Melkhout – Oyster Bay Power Line: Phase 1B* alignment prior to development.

❖ Background to the Phase 1b Archaeological Monitoring for the Melkhout – Oyster Bay Power Line Phase 1B development

The following documentation refers:

- Anderson, G. (Umlando). 2010. *Heritage Survey of the Proposed Melkhout – Oyster Bay Transmission Line*;
- [Gess, R. (Private). 2011. *Palaeontological Heritage Study for Thuyspunt – Melkhout Electrical Transmission Lines*]; and
- SAHRA Review Comment on Archaeological and Palaeontological Impact Assessment – The Melkhout – Oyster Bay Transmission Line. SAHRA File No: 9/2/044/0001. 2011-03-15.

The Anderson (2011) archaeological assessment of the *Melkhout – Oyster Bay Transmission Line* included 2 alignment options, an eastern and western alignment and extending from the Melkhout substation to Thuyspunt. Seven archaeological and cultural heritage resources, sites and findspots were recorded, namely Sites MEL01 to MEL07. Sites MEL01 to MEL03 are clustered in the vicinity of the Melkhout substation. Site MEL04 is situated just north of Humansdorp and Site MEL05 on the banks of the Geelhoutboom River at Heyns Dam. Following further south along the line route is MEL06 with MEL07 situated south of the Red Cap substation, the southern perimeter of the *Melkhout – Oyster Bay Power Line: Phase 1B* development. Identified sites MEL01 to MEL06 are of Stone Age assignment, including primarily MSA and LSA origin, though Anderson (2010) commented on infrequent artefacts scattered across the study site with ESA singular samples reported on. Site MEL07 constitutes a Colonial Period structure, while Site MEL02 comprises of contemporary farming traces overlying a low density Stone Age deposit.

The SAHRA Comment (2011) required that the developer:

ARCHAEOLOGY:

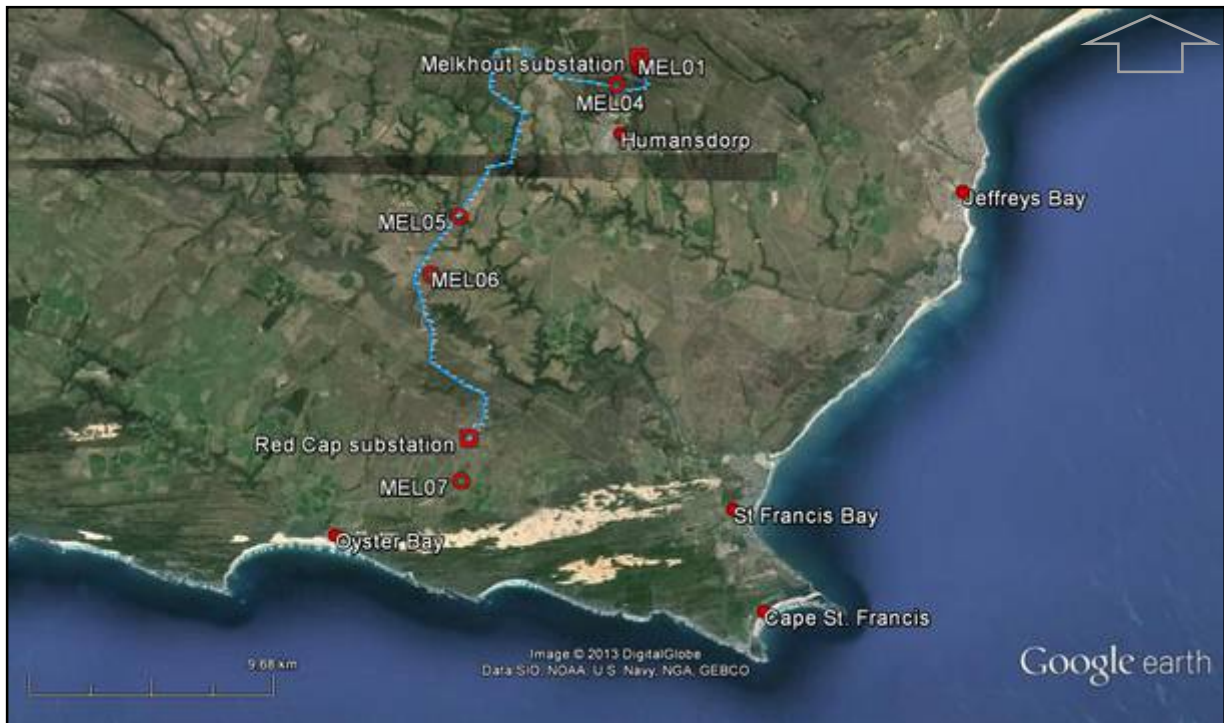
1. Apply for SAHRA (now EC PHRA) Site Destruction Permits for Sites MEL01 and MEL05 prior to development impact; and
2. That Site MEL04 be conserved (temporary fenced off for the tenure of development with no development to take place within the boundary of the fenced area) or alternatively that development be preceded by a Phase 2 archaeological mitigation (systematic excavation and sampling) project.

PALAEONTOLOGY:

1. A Phase 2 palaeontological mitigation (systematic excavation and sampling) project has been requested by SAHRA prior to development impact; and
2. Palaeontological monitoring should be done at the time of construction through the Baviaans Formation.

KNOWN ARCHAEOLOGICAL SITES AND OCCURRENCES: MELKHOUT – OYSTER BAY			
Site Code	Co-ordinate	Type	Description
MEL01	S34°00'06.7"; E24°47'00.7"	Stone Age	Low density LSA scatter
MEL02	S34°00'14.7"; E24°47'04.6"	Contemporary & Stone Age	Contemporary stone alignment & mound related to dam construction Low density LSA scatter
MEL03	S34°00'15.3"; E24°47'07.5"	Contemporary	Contemporary stone cairn related to the dam construction & field clearance
MEL04	S34°00'34.9"; E24°46'27.7"	Stone Age	Low density MSA(?) & LSA(?) scatter
MEL05	S34°03'22.6"; E24°42'24.7"	Stone Age	Low density MSA scatter
MEL06	S34°04'37.8"; E24°41'41.4"	Stone Age	Single ESA cleaver
MEL07	S34°09'01.9"; E24°42'27.8"	Colonial Period	Structure

Table 1: Phase 1 AIA identified archaeological sites and occurrences – Anderson (2010)



Map 1: Known archaeological sites in relation to the *Melkhout – Oyster Bay Power Line: Phase 1B* alignment

2) PHASE 1B ARCHAEOLOGICAL MONITORING

The Phase 1b Archaeological Monitoring (AM) aimed to establish a ‘walk-through’ archaeological and cultural heritage record of the final *Melkhout – Oyster Bay Power Line: Phase 1B* development alignment from the Melkhout substation (S34°00’01.0”; E24°47’02.1”) situated just north of Humansdorp along the approximate 30km line route to the Red Cap substation (S34°08’06.9”; E24°47’02.1”), Farm 826, near Oyster Bay, marking the southern extremity of the development. Thick vegetation hampered assessment along large portions of the development – overall visibility can be described as poor. The Phase 1bAM was done over a 3 day period (2013-10-28 to 10-30) and limited to a Phase 1 surface assessment, no excavation or collection were done. The 1st day of assessment was done in the company of Theuns Duvenhage, Aurecon – ECO and other specialist assessors.

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

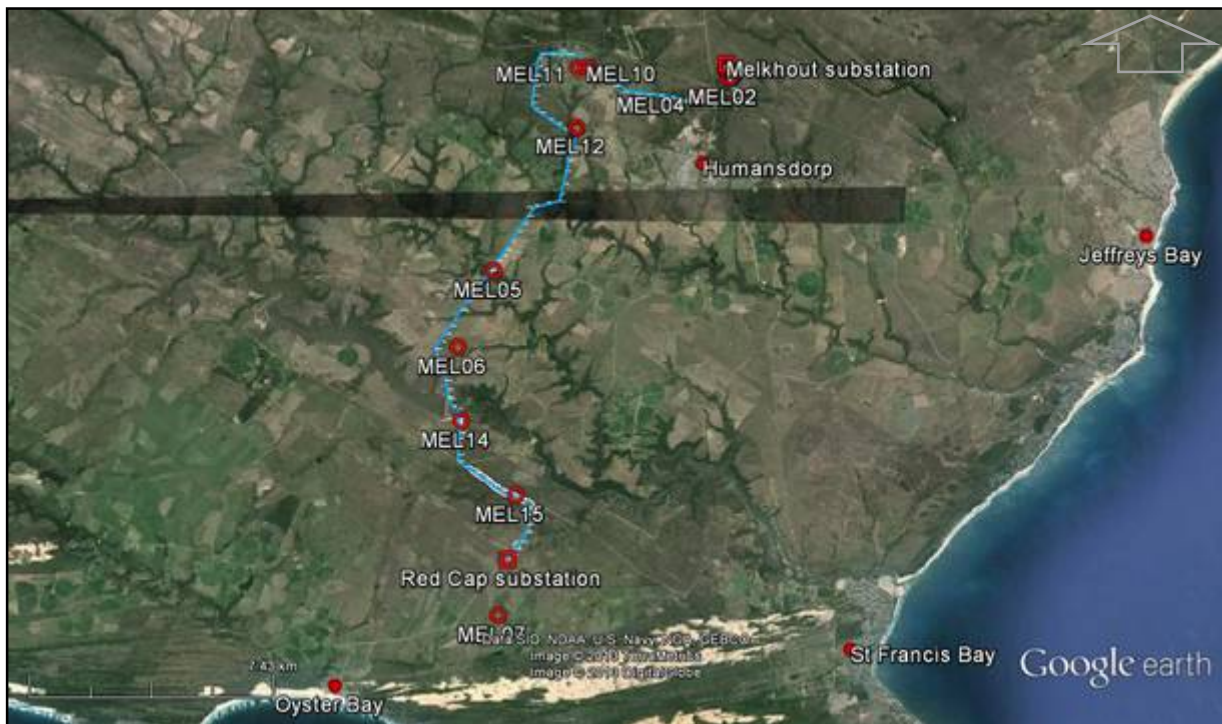
Table 2: SAHRA archaeological and cultural heritage site significance assessment

Anderson (2010) recorded 7 archaeological and cultural heritage sites, namely Sites MEL01 to MEL07, during the initial Phase 1 Archaeological Impact Assessment (AIA) for the project, of which Site MEL07 is situated south of the southern extremity of the *Melkhout – Oyster Bay Power Line: Phase 1B* alignment. Additional sites identified during the Phase 1bAM ‘walk-through’ of the line route (Sites MEL08 to MEL15) are reported on here and recommendations for purposes of development are made. Sites are discussed according to their location along the line route starting from the Melkhout substation and ending at the Red Cap substation.

Along the southern extremity of the line route Eskom is considering realignment to the west of the access road (pylon positions MLK-OYS-91 to MLK-OYS-95). Realignment in this case would not necessitate additional archaeological assessment: Low density Stone Age scatters may be present along the rough pylon MLK-OYS-93 to MLK-OYS-95 area (west of the access road). However, assessment of the 1763_BP02 site, the borrow pit situated just to the west of the access road indicated that no anthropogenic member is present within the exposed sections of the quarry excavation (Van Ryneveld 2011).

NEWLY IDENTIFIED ARCHAEOLOGICAL SITES AND OCCURRENCES: MELKHOUT – OYSTER BAY			
Site Code	Co-ordinate	Type	Description
MEL08	S34°00'33.3"; E24°45'48.2"	Colonial Period	Structure ruins
MEL09	S34°00'11.2"; E24°44'31.7"	Colonial Period	Kruisfontein structure
MEL10	S34°00'04.0"; E24°44'16.1"	Colonial Period	Kruisfontein structure
MEL11	S34°00'04.2"; E24°44'06.9"	Colonial Period	Kruisfontein structure
MEL12	S34°01'02.3"; E24°44'04.0"	Colonial Period	Kruisfontein structure
MEL13	S34°01'03.9"; E24°44'04.0"	Colonial Period	Kruisfontein structure
MEL14	S34°05'50.4"; E24°41'44.8"	Stone Age	Low density MSA & LSA scatter
MEL15	S34°07'03.9"; E24°42'49.5"	Stone Age	Low density MSA & LSA scatter

Table 3: Phase 1b AM identified archaeological sites and occurrences



Map 2: Spatial display of archaeological and cultural heritage sites along the *Melkhout – Oyster Bay Power Line: Phase 1B* alignment

2.1) SITES MELO1, MELO2 & MELO3

The previously identified Sites MELO1 (S34°00'06.7"; E24°47'00.7"), MELO2 (S34°00'14.7"; E24°47'04.6") and MELO3 (S34°00'15.3"; E24°47'04.6") localities are for purposes of construction here discussed under a single heading. Site MELO2 was described by Anderson (2010) as a contemporary site where a mound and a single alignment of stones, approximately 30m in length, were found. The contemporary remains were directly associated with farming activities including field clearing and dam construction of the nearby scraped dam. These remains are not protected by the NHRA 1999. Atop the mound remains Anderson however identified a low density of LSA flakes, described as in ex-situ context and of low archaeological significance. MELO3 is directly linked to MELO2 and comprises of a stone pile, described by Anderson as a 'stone cairn' related to field clearing farming activities. Anderson emphasized the fact that the 'cairn' does not represent a grave and is therefore not of archaeological significance. MELO1 was described as a small stone outcrops, where quarrying evidence was found together with a low density of LSA flakes. The occurrence was ascribed a SAHRA *Low Significance*.

Re-visitation of the identified sites indicated that a low density scatter of mixed MSA and LSA lithics are scattered across the general locale of Sites MELO1, MELO2 and MELO3. Artefact densities are notably low, making it almost impossible to ascribe an artefact ratio (artefacts: m²) to the occurrence. Close to MELO2 of the highest ratios were observed, an estimated 5:1 ratio, but densities decline across the indicated surface area to average ≤1:1-4 as a more accurate artefact ratio description for the occurrence. From MELO1 down towards MELO2 a series of low lying sandstone outcrops are present with varying low densities of artefacts most probably the result of surface soil and vegetation cover. Low artefact densities make any typological description of the assemblage quite impossible, aside from the fact that MSA and LSA types are present. Overall technology can be described as poor, perhaps a result of the few artefacts present based on which assumptions are made.

Foundation impact of pylons MLK-OYS-1, MLK-OYS-2 and MLK-OYS-3 may well impact on associated low density sub-surface deposits.

- **RECOMMENDATIONS:** Contemporary farming remains at Sites MELO2 and MELO3 are not protected by the NHRA 1999. The Low density MSA and LSA Stone Age occurrence across the general Site MELO1, MELO2 and MELO3 locales are ascribed a SAHRA *Low Significance* and a *Generally Protected IV-C Field Rating*. As per the SAHRA Comment (2011) the developer should apply for an EC PHRA Site Destruction Permit for Site MELO1 prior to development impact of specifically pylons MLK-OYS-1, MLK-OYS-2 and MLK-OYS-3 to ensure that destruction of archaeological Stone Age deposits for purposes of development in the general vicinity of Site MELO1 are done legally.



Map 3: Locality of Sites MEL01, MEL02 and MEL03 with the white polygon indicating the rough area where low density MSA and LSA artefact were found on the surface of the site



Plate 1: General view of the MEL03 to MEL02 area



Plate 3: Lithics from the general MEL01 to MEL02 area



Plate 2: View of MEL02 with wall remains covered by thick vegetation



Plate 4: View from the MEL01 outcrops towards MEL02

2.2) SITE MELO4

Site MELO4 (S34°00'34.9"; E24°46'27.7") was described by Anderson (2010) as a rock outcrop that may have, similar to MEL01, been used as a stone tool quarry. The outcrop extends as a ridge of rocky outcrops with isolated stone flakes and evidence of quarrying were observed along the entire ridge. According to Anderson (2010) low densities of artefacts indicate that the ridge was not a well exploited resource. MELO4 was ascribed a SAHRA Low Significance, but it was recommended that Phase 2 mitigation be undertaken in the event of development impact on the occurrence. Recommendations of the report were accepted by SAHRA, stating that either temporary fencing be in place for the tenure of development or that Phase 2 archaeological mitigation precedes development.

The ridge is situated approximately 70m from the final *Melkhout – Oyster Bay Power Line: Phase 1B* development alignment and temporary conservation at the time of development in the vicinity of pylon MLK-OYS-9 is thus possible.

- **RECOMMENDATIONS:** As stated in the SAHRA Comment (2011) Site MELO4 can be conserved. Temporary conservation measures such as a fence of construction netting to clearly demarcate the site and signage indicting the area as a 'no-go' or 'heritage sensitive' area should be in place during work in the vicinity of pylon MLK-OYS-9. All temporary conservation measures should be removed after construction.



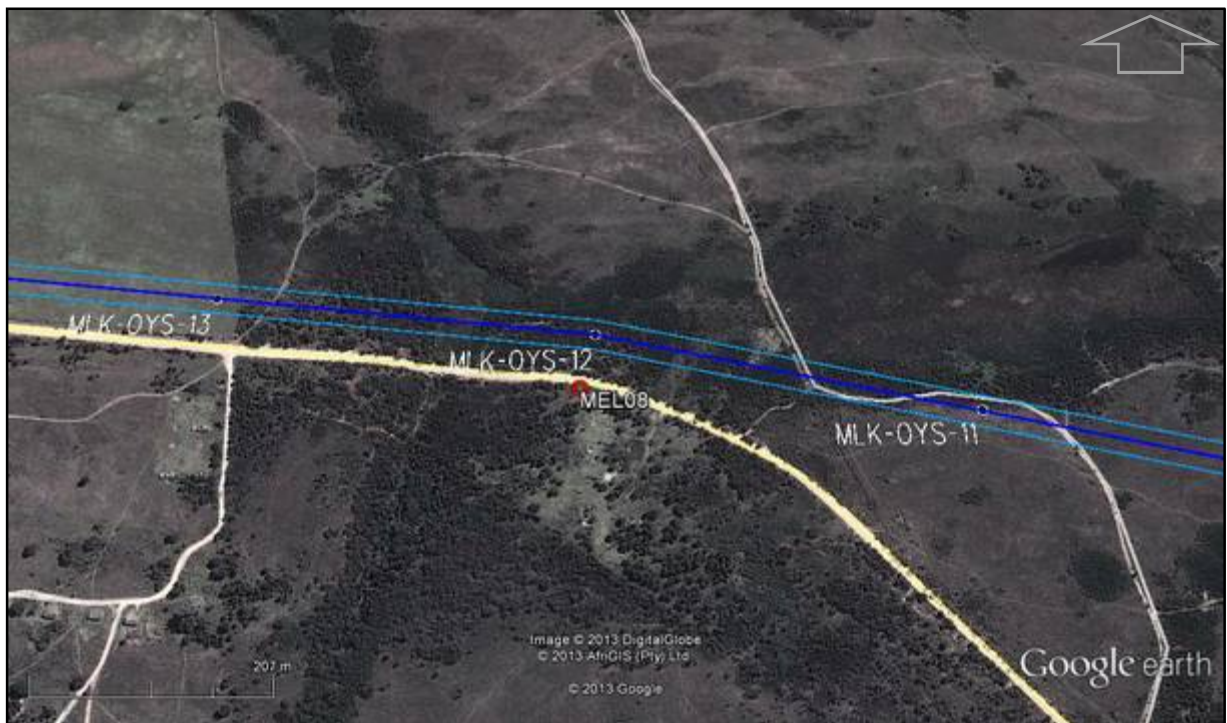
Map 4: The Site MELO4 occurrence in relation to the power line and pylon MLK-OYS-9 with the yellow line indicating the proposed position of the temporary conservation fence

2.3) SITE MEL08

The newly identified site, Site MEL08, is situated approximately 1km west of Site MEL04. Site MEL08 comprises of the Colonial Period ruined remains of a former structure, most probably a residence or barn, presumed to pre-date 60 years of age and by implication formally protected by the NHRA 1999. The site is characterized by the plastered stone built ruins, but additional stone foundation remains are present towards the west of the structure remains with an old cement dam approximately 60m south thereof. Immediately to the east of the structure remains partial remains of a brick-built water tank indicates that the site was used over a fairly extensive period of time, implying a later addition to the original stone built structure.

Site MEL08 is situated to the south of the access road. The *Melkhout – Oyster Bay Power Line: Phase 1B* power line will be constructed north of the access road. The site will thus not be impacted on by development, but the developer should ensure that temporary conservation measures are in place at the time of development in the vicinity of pylon MLK-OYS-12 to avoid any accidental impact on the site.

- **RECOMMENDATIONS:** The MEL08 structure remains, comprising of a structure older than 60 years, receives automatic EC PHRA protection as a site of *High Significance* with a *Provincial Grade II Field Rating*. The site is however architecturally of low significance. Structure remains should be conserved: It is recommended that a temporary fence of construction netting be erected around the site ruins to clearly demarcate the site and signage indicating the area as a ‘no-go’ or ‘heritage sensitive’ area should be in place during work in the vicinity of pylon MLK-OYS-12. All temporary conservation measures should be removed after construction.



Map 5: Locality of Site MEL08 in relation to pylon MLK-OYS-12



Plate 5: General view of Site MEL08



Plate 7: An old cement dam in close proximity to the structure ruins



Plate 6: Close-up of the MEL08 stone built structure remains



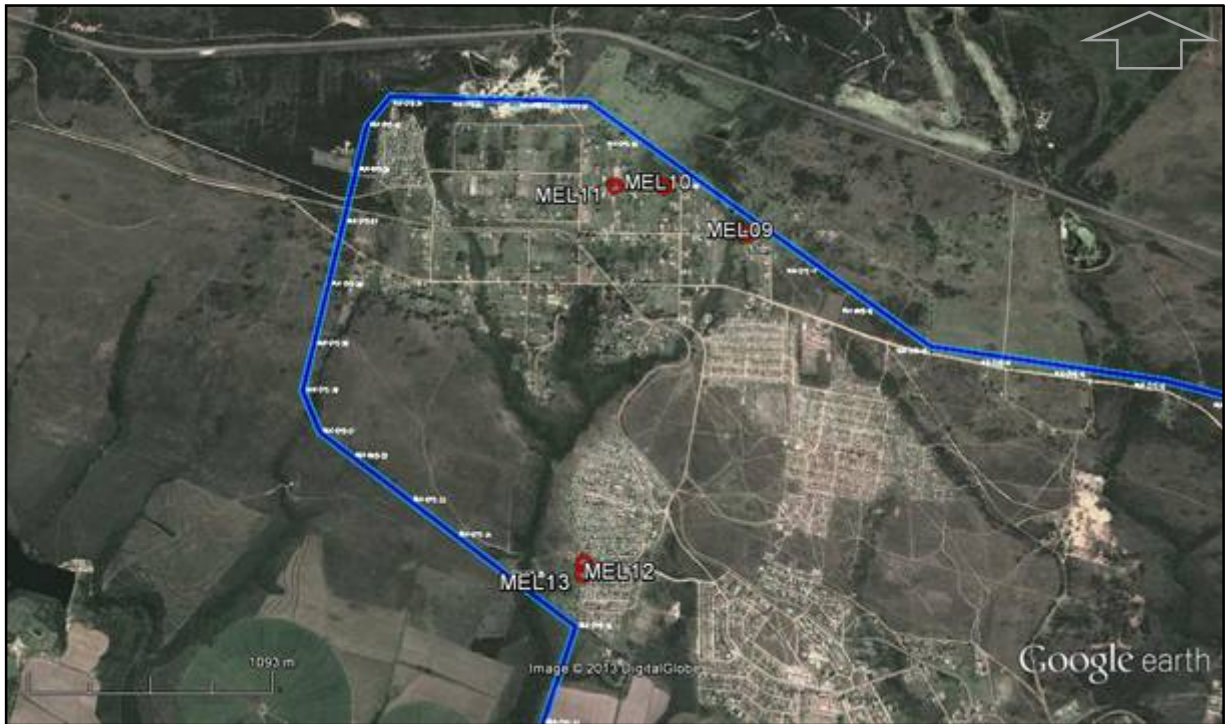
Plate 8: The later addition brick and cement water tank at Site MEL08

2.4) SITE MELO9, MEL10, MEL11, MEL12 & MEL13

The Kruisfontein residential area of Humansdorp is characterized by its unique Colonial Period architecture. Many a residence pre-dates 60 years of age, by implication formally protected by the NHRA 1999 as sites of *High Significance* with *Provincial Grade II Field Ratings*. However, pristine examples of Colonial Period ‘*township architecture*’ are rapidly disappearing. Informal renovations and additions are diminishing the architectural significance of the area, while many examples of Colonial Period architecture have waned into nothing more than derelict ruins. The ‘*Kruisfontein United Congregational Church*’, situated centrally within the residential area, dates to 1839. Based on architectural style the nearby ‘*Kruisfontein United Office*’ must have been constructed around the same time, implying over 170 year old structures – and many of the residences or residential ruins may well date to the same era.

Sites MEL09 (S34°00’11.2”; E24°44’31.7”), MEL10 (S34°00’04.0”; E24°44’16.1”), MEL11 (S34°00’04.2”; E24°44’06.9”), MEL12 (S34°01’02.3”; E24°44’04.0”) and MEL13 (S34°01’03.9”; E24°44’04.0”) are recorded examples where residences pre-dates 60 years of age, situated alongside the *Melkhout – Oyster Bay Power Line: Phase 1B* alignment. None of these structures will be impacted on and no conservation action on behalf of the developer is required. The developer should however be cognisant of the architectural significance of Kruisfontein whilst working in the region (pylon positions MLK-OYS-16 to MLK-OYS-36) to ensure no accidental impact on protected structures. Should a site office or accommodation be arranged in Kruisfontein during the construction phase, the developer should ensure that, where this entails any alteration to structures older than 60 years, alterations should be done under an EC PHRA Built Environment Permit.

- **RECOMMENDATIONS:** The Colonial Period ‘*township architecture*’ of Kruisfontein is of noteworthy significance. Many a structure in the residential area, including MEL09, MEL10, MEL11, MEL12 and MEL13, are older than 60 years and formally protected by the NHRA 1999 as sites of *High Significance* with *Provincial Grade II Field Ratings*. Development of the *Melkhout – Oyster Bay Power Line: Phase 1B* will not impact on any of the structures and no conservation action on behalf of the developer is required. The developer should however be cognisant of the architectural significance of Kruisfontein whilst working in the region (pylon positions MLK-OYS-16 to MLK-OYS-36) to ensure no accidental impact on protected structures. In the event of any of the structures being used for purposes of the development and where this requires alteration to the structures, the developer should ensure that this be done under an EC PHRA Built Environment Permit.



Map 6: Localities of MEL09, MEL10, MEL11, MEL12 & MEL13 of Kruisfontein in relation to the power line



Plate 9: Site MEL09



Plate 11: Site MEL11



Plate 10: Site MEL10



Plate 12: General view of a Kruisfontein residence



Plate 13: Site MEL12



Plate 15: The '*Kruisfontein United Congregational Church*', 1839



Plate 14: Site MEL13

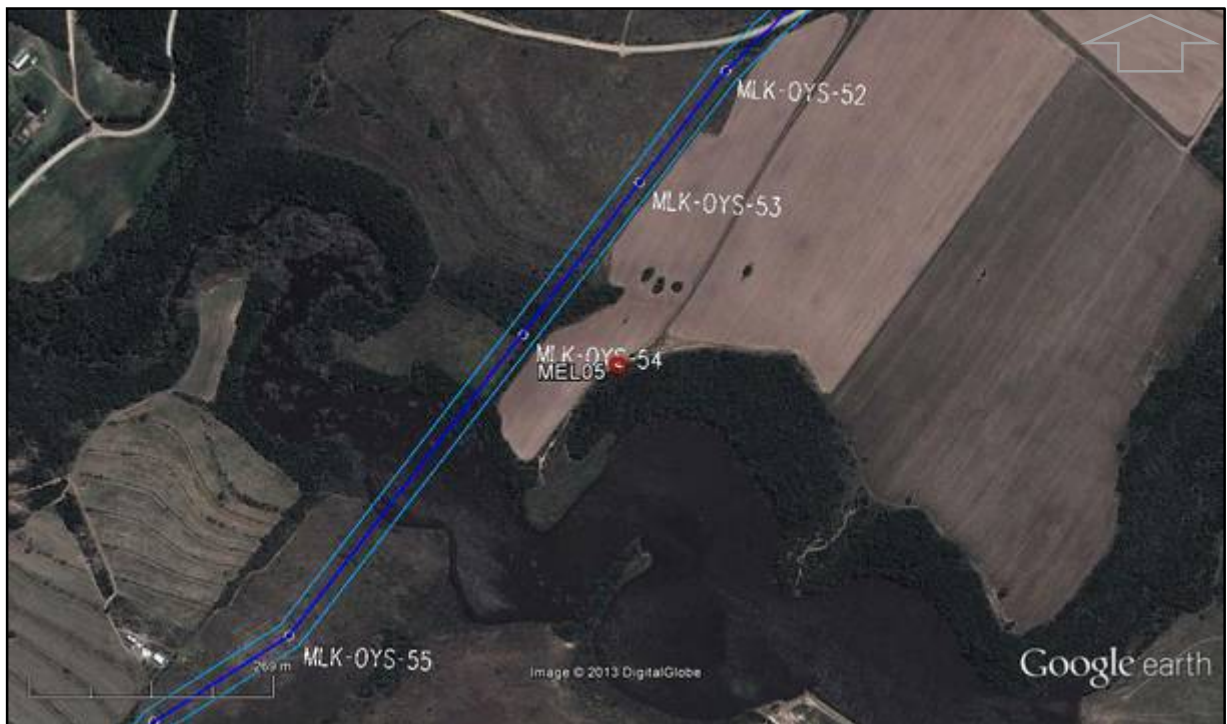


Plate 16: The '*Kruisfontein United Office*'

2.5) SITE MELO5

Anderson (2010) described Site MEL05 (S34°03'22.6"; E24°42'24.6") as 'located along the top of a hill', with shallow soils overlying the essential sandstone surface. A low density of inferred secondary context MSA artefacts were found scattered across the surface of the hill and a SAHRA *Low Significance* was ascribed to the occurrence. The SAHRA Comment (2011) stated that the occurrence be impacted on under a SAHRA Site Destruction Permit.

- **RECOMMENDATIONS:** The Site MEL05 MSA Stone Age occurrence was ascribed a SAHRA *Low Significance* and as stated in the SAHRA Comment (2011) the developer should apply for a SAHRA (now EC PHRA) Site Destruction Permit prior to development in the region of pylon MLK-OYS-54.



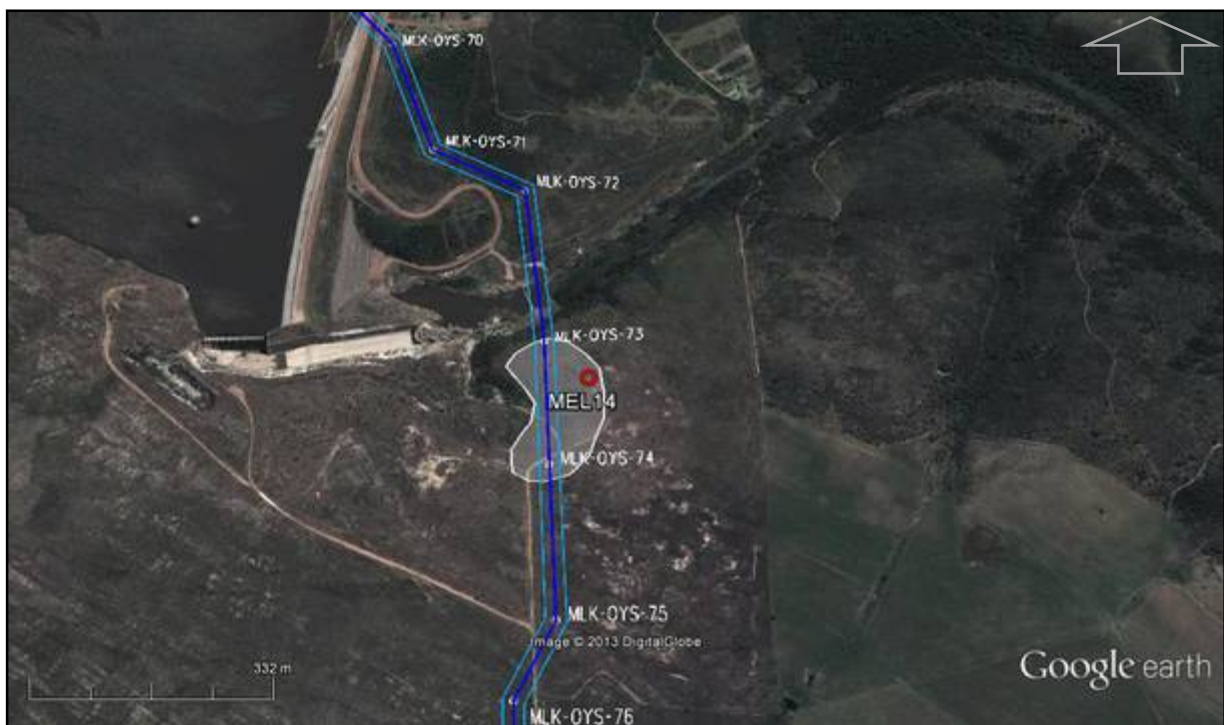
Map 7: General locality of Site MEL05 in relation to the *Melkhout – Oyster Bay Power Line: Phase 1B* alignment and specifically pylon MLK-OYS-54

2.5) SITE MEL14

Site MEL14 (S34°05'50.4"; E24°41'44.8") is situated on the banks of the Krom River at the Impofu dam. While only the infrequent artefact was found during assessment of the north bank a few more exposed scatters were identified on the south bank. Here small scatters of lithic artefacts were documented, with scatters as a norm approximating 2x2m in size. Artefacts were produced from local quartzite with types being primarily representative of the MSA, but including a few LSA samples. Technologically artefacts are of poor quality, but marking these rather ephemeral occurrences as very similar to what is present in terms of the Stone Age along the line route.

Earth overburden may well cover stratigraphic information relating to the occurrences, or sub-surface components thereof and may also be the reason why less archaeological material seems to characterize the north than the south bank. While fresh water was evidently an important draw card to any landscape in pre-historic times, caution should be taken to ensure that possible sealed riverbank deposits aren't unnecessarily impacted on or destroyed. With reference to the above it is recommended that Phase 2a archaeological monitoring be done at the time of development impact (pylon foundation excavations) in the vicinity of the Krom River, including pylon positions MLK-OYS-71 to MLK-OYS-75. Should significant subsurface Stone Age deposits be identified during the Phase 2a archaeological monitoring a full Phase 2 mitigation (rescue excavation) may be necessary.

- **RECOMMENDATIONS:** The Site MEL14 low density scattered MSA Stone Age occurrence is ascribed a SAHRA *Low Significance* and a *Generally Protected IV-C Field Rating*. Surface river bank deposits may however be associated with more significant sub-surface archaeological deposits and it is recommended that Phase 2a archaeological monitoring be done at the time of foundation excavations for pylons MLK-OYS-71, MLK-OYS-72, MLK-OYS-73, MLK-OYS-74 and MLK-OYS-75. A report on the Phase 2a archaeological monitoring should be submitted to the EC PHRA for consideration.



Map 8: General locality of the Site MEL14 ephemeral Stone Age occurrences



Plate 17: General view of the Impofu dam wall area



Plate 19: Selected artefacts from the Site MEL14 area



Plate 18: View from the power line alignment at the Krom River



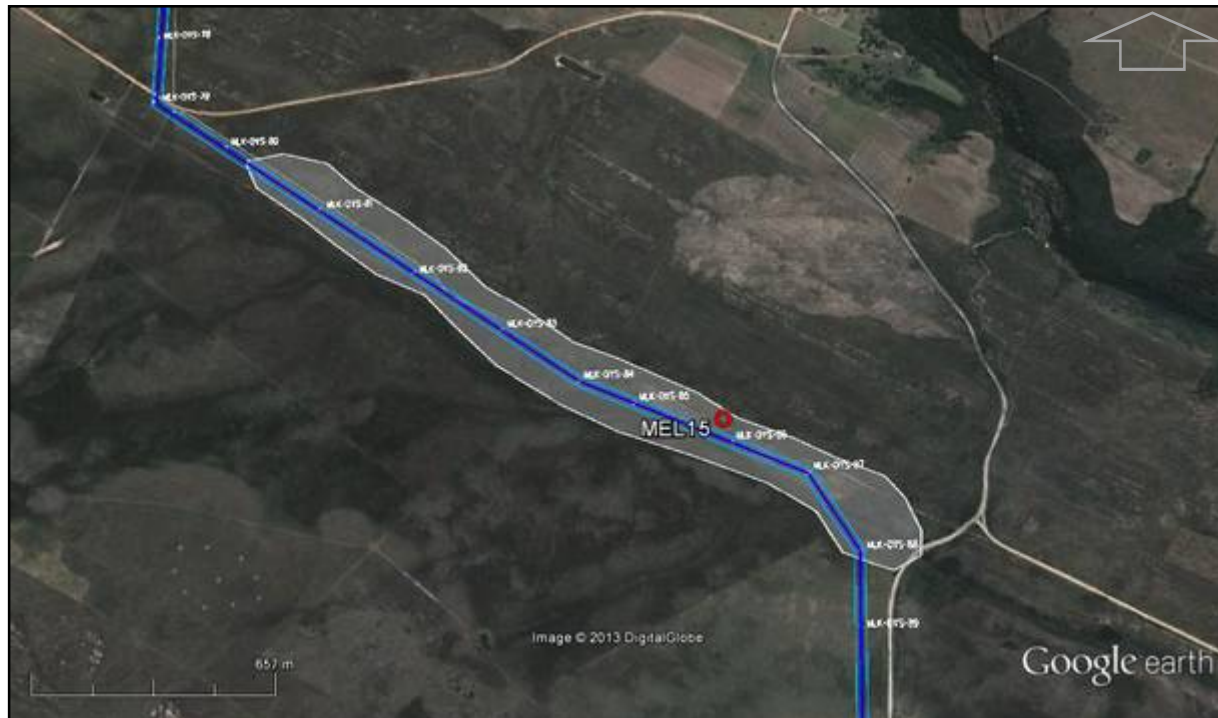
Plate 20: The banks of the Krom River

2.6) SITE MEL15

Site MEL15 (S34°07'03.9"; E24°42'49.5") is characterized by a rocky ridge along which the *Melkhout – Oyster Bay Power Line: Phase 1B* alignment runs roughly between pylon positions MLK-OYS-80 to MLK-OYS-88. The ridge differs from shallow outcrops exposures to areas where fairly thick overburden can be inferred. Along the ridge a low density of primarily MSA, but including a few possible LSA flakes were identified. Surface artefact ratios (artefacts: m²) are too low to attempt an artefact density description, but higher concentrations, lenses or occurrences may be present sub-surface. All identified artefacts were produced from the local quartzite and traces of quarrying at the ridge were present.

In order to ensure an archaeological record of the inferred essentially sub-surface MSA and LSA occurrence it is recommended that Phase 2a archaeological monitoring be done at the time of development impact (pylon foundation excavations) between pylon positions MLK-OYS-80 and MLK-OYS-88. Should significant subsurface Stone Age deposits be identified during the Phase 2a archaeological monitoring a full Phase 2 mitigation (rescue excavation) may be necessary.

- **RECOMMENDATIONS:** The Site MEL15 low density MSA and LSA Stone Age occurrence is ascribed a SAHRA *Low Significance* and a *Generally Protected IV-C Field Rating*. It is recommended that Phase 2a archaeological monitoring be done at the time of foundation excavations for pylons MLK-OYS-80, MLK-OYS-81, MLK-OYS-82, MLK-OYS-83, MLK-OYS-84, MLK-OYS-85, MLK-OYS-86, MLK-OYS-87 and MLK-OYS-88. A report on the Phase 2a archaeological monitoring should be submitted to the EC PHRA for consideration.



Map 9: General view of the Site MEL15 Stone Age occurrence along the rocky outcrops towards the south of the *Melkhout – Oyster Bay Power Line: Phase 1B* alignment near the Red Cap substation



Plate 21: General view of the MLK-OYS-80 to MLK-OYS-88 ridge, image taken from the south



Plate 23: Close-up of a portion of the ridge [1]



Plate 22: Close-up of a portion of the ridge [1]



Plate 24: Selected artefacts from the MLK-OYS-80 to MLK-OYS-88 ridge

3) RECOMMENDATIONS

With reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA 1999, it is recommended that the results of this Phase 1bAM together with Anderson's (2010) archaeological and Gess's (2011) palaeontological findings, as commented on in the SAHRA Comment (2011), be complied with prior to and during development of the *Melkhout – Oyster Bay Power Line: Phase 1B* development, Humansdorp District, Eastern Cape.

PHASE 1b AM – MELKHOUT – OYSTER BAY POWER LINE: PHASE 1, HUMANSDORP, EC			
Map Code	Site	Co-ordinates	Recommendations
Phase 1 AIA – Anderson 2010 [Archaeology – As per the SAHRA Comment (2011)]			
MEL01	Stone Age	S34°00'06.7"; E24°47'00.7"	Destruction under EC PHRA Site Destruction Permit
MEL02	Contemporary & Stone Age	S34°00'14.7"; E24°47'04.6"	
MEL03	Contemporary	S34°00'15.3"; E24°47'07.5"	
MEL04	Stone Age	S34°00'34.9"; E24°46'27.7"	Temporary conservation
MEL05	Stone Age	S34°03'22.6"; E24°42'24.7"	Destruction under EC PHRA Site Destruction Permit
MEL06	Stone Age	S34°04'37.8"; E24°41'41.4"	N/A
MEL07	Colonial Period	S34°09'01.9"; E24°42'27.8"	N/A
Phase 1 PIA – Gess 2011 [Palaeontology – As per the SAHRA Comment (2011)]			
Phase 2 palaeontological mitigation under EC PHRA Permit			
Palaeontological monitoring at the time of construction through the Baviaans Formation.			
Phase 1bAM – Van Ryneveld 2013 [Archaeology]			
MEL08	Colonial Period	S34°00'33.3"; E24°45'48.2"	Temporary conservation
MEL09	Colonial Period	S34°00'11.2"; E24°44'31.7"	N/A [Caution should be taken to ensure no impact on buildings / structures older than 60 years. In the event of impact (alteration or additions) these should be done under an EC PHRA Built Environment Permit]
MEL10	Colonial Period	S34°00'04.0"; E24°44'16.1"	
MEL11	Colonial Period	S34°00'04.2"; E24°44'06.9"	
MEL12	Colonial Period	S34°01'02.3"; E24°44'04.0"	
MEL13	Colonial Period	S34°01'03.9"; E24°44'04.0"	
MEL14	Stone Age	S34°05'50.4"; E24°41'44.8"	
MEL15	Stone Age	S34°07'03.9"; E24°42'49.5"	Archaeological monitoring at the time of foundation excavations – pylons MLK-OYS-71 to MLK-OYS-75
			Archaeological monitoring at the time of foundation excavations – pylons MLK-OYS-80 to MLK-OYS-88

Table 4: Heritage compliance summary for the *Melkhout – Oyster Bay Power Line: Phase 1B* development, Humansdorp District, Eastern Cape.

NOTES:

- Should any archaeological or cultural heritage resources, including human remains / graves, as defined and protected by the NHRA 1999, and not reported on in this report be identified during the course of development the developer should immediately cease operation in the vicinity of the find and report the site to the EC PHRA and an ASAPA accredited CRM archaeologist. Human remains confirmed younger than 60 years are to be reported directly to the nearest police station.

4) REFERENCES

1. Anderson, G. (Umlando). 2010. *Heritage Survey of the Proposed Melkhout – Oyster Bay Transmission Line*.
2. Gess, R. (Private). 2011. *Palaeontological Heritage Study for Thuyspunt – Melkhout Electrical Transmission Lines*.
3. SAHRA Review Comment on Archaeological and Palaeontological Impact Assessment – The Melkhout – Oyster Bay Transmission Line. SAHRA File No: 9/2/044/0001. 2011-03-15.
4. Van Ryneveld, K. (ArchaeoMaps). 2011. *Phase 1 Archaeological Impact Assessment. Cacadu District and Inaccessible Roads Project, Eastern Cape, South Africa*.