

**'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538,
Corner of Quinn and Naude Streets, Kimberley, Sol Plaatje Municipality, Northern Cape**

- 26 June 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 –

- 26 June 2015 -

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Corner of Quinn and Naude Streets, Kimberley, Sol Plaatje Municipality, Northern Cape**

Executive Summary

Terms of Reference –

ArchaeoMaps have been appointed by the project proponent, Tom Pillay, on behalf of the P&V Pillay Family Trust, to advise on HIA requirements, in accordance with Section 38 of the NHRA 1999, that may pertain to the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, SPM, Northern Cape, for purposes of decision making regarding the purchase of the property and related heritage requirements that may pertain thereto, prior to negotiation of a sales agreement and development proposal. The said sales agreement will require subdivision, consolidation and rezoning applications for purposes of creating a new erf. The new erf will be situated at general development co-ordinate S28°43'54.8"; E24°46'01.0" and will comprise an approximate 0.07ha area. Should a sales agreement be further entertained the developer is considering 2 types of development, in accordance with the SPM SDF for the area, being either commercial office space or student accommodation.

ArchaeoMaps recommended that a basic Phase 1 HIA be submitted to SAHRA and that the SAHRA HIA Comment thereon stipulating inferred Phase 2 heritage compliance requirements for development purposes be used for cost budgeting and associated decision making. The basic HIA comprise a:

- o Phase 1 AIA;
- o In accordance with the SAHRIS palaeontological sensitivity map the study site is exempted from a palaeontological study; and
- o A GPR study – based on known heritage sensitivity in the general area being sub-surface restricted.

The Phase 1 Archaeological Impact Assessment –

Project Area: 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, SPM, Northern Cape – app. 0.07ha study site [1:50,000 Map Ref – 2824DB].

Coverage & Gap Analysis: Pre-feasibility and field assessment. [GPR study to be read in conjunction with the Phase 1 AIA].

Field Methodology: One day field assessment; GPS co-ordinates – Garmin Montana 650; Photographic documentation – Pentax K20D. Site significance assessment – SAHRA 2007 system.

Summary:

- o No archaeological or cultural heritage developmental 'fatal flaws' identified;
- o No surface archaeological or cultural heritage resources, as defined and protected by the NHRA 1999, identified.
- o Three (3) recorded features identified during the GPR are not deemed investigation worthy with reference to HIA compliance.
- o Based on 2004 and 2011 / 2015 reported on human remains, identified during construction activity in the near vicinity SAHRA may request additional Phase 2 test excavation prior to and / or monitoring during the course of construction.
- o [Should any incidental archaeological or cultural heritage resources, as defined and protected by the NHRA 1999, be encountered during the course of development the process described in the 'Heritage Protocol for Incidental Finds during the Construction Phase' should be followed.]

Recommendations –

With reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA 1999, it is recommended that proposed development proceed at the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, SPM, Northern Cape, study site.

The SAHRA HIA Comment will state legal requirements for development to proceed, or reasons why, from a heritage perspective, development may not be further considered.

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1 - Terms of Reference

ArchaeoMaps cc (ArchaeoMaps) have been appointed by the project proponent, Tom Pillay, on behalf of the P&V Pillay Family Trust, to advise on Heritage Impact Assessment (HIA) requirements, in accordance with Section 38 of the National Heritage Resources Act, No 25 of 1999 (NHRA 1999), that may pertain to the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, Sol Plaatje Municipality (SPM), Northern Cape, for purposes of decision making regarding the purchase of the property and related heritage requirements that may pertain thereto, prior to negotiation of a sales agreement and development proposal. The said sales agreement will require subdivision, consolidation and rezoning applications for purposes of creating a new erf. The new erf will be situated at general development co-ordinate S28°43'54.8"; E24°46'01.0" and will comprise an approximate 0.07ha area. Should a sales agreement be further entertained the developer is considering 2 types of development, in accordance with the SPM Spatial Development Framework (SDF) for the area, being either commercial office space or student accommodation.

ArchaeoMaps recommended that a basic Phase 1 HIA be submitted to the South African Heritage Resources Agency (SAHRA) and that the SAHRA HIA Comment thereon stipulating inferred Phase 2 heritage compliance requirements for development purposes be used for cost budgeting and associated decision making. The basic HIA comprise a:

- Phase 1 Archaeological Impact Assessment (AIA);
- In accordance with the SAHRIS palaeontological sensitivity map the study site is exempted from a palaeontological study; and
- A Ground Penetrating Radar (GPR) study – based on known heritage sensitivity in the general area being sub-surface restricted.

1.1.1) Development Location, Details and Impact

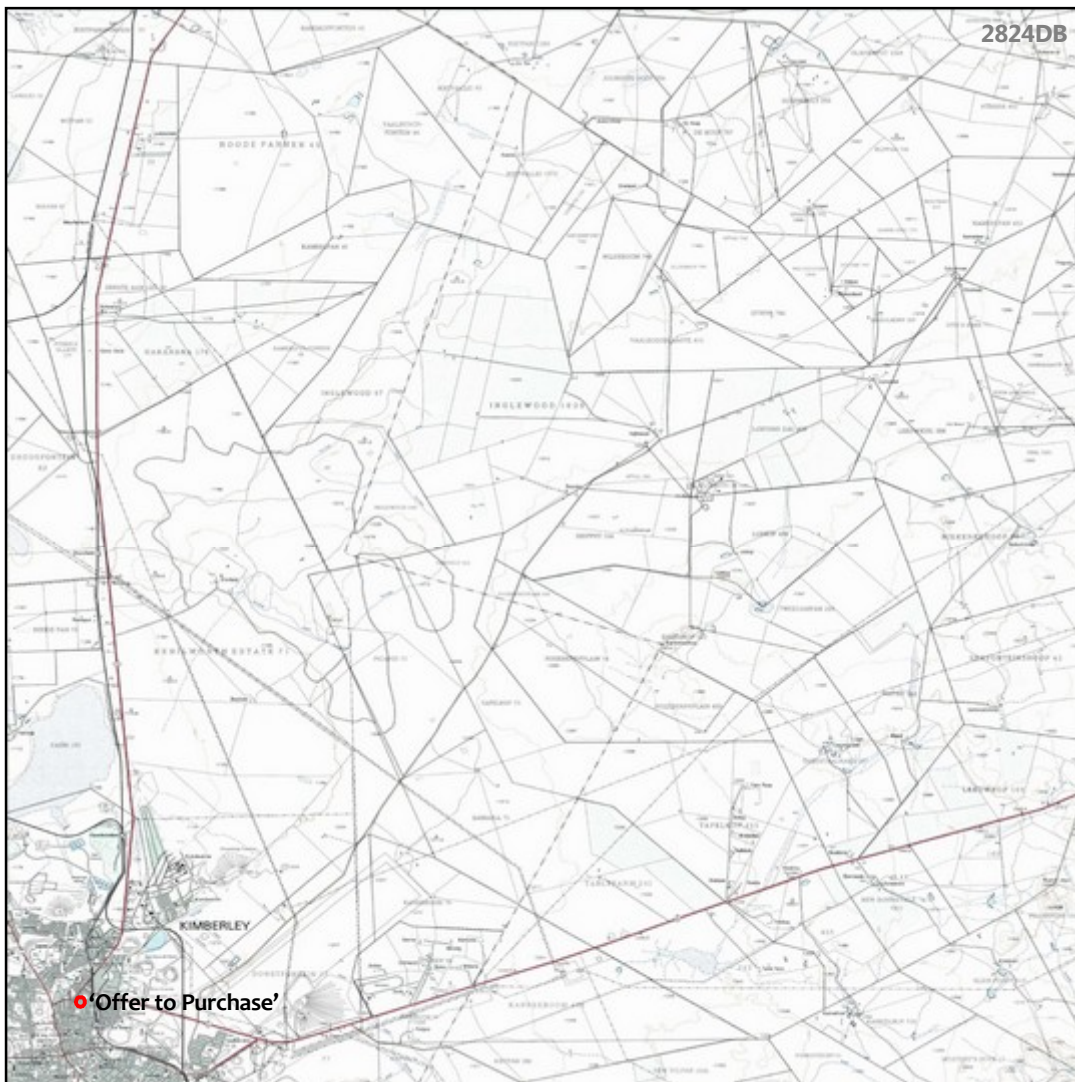
The 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, Sol Plaatje Municipality (SPM), Northern Cape [1:50,000 Map Ref – 2824DB], is situated at general development co-ordinate S28°43'54.8"; E24°46'01.0" and will comprise an approximate 0.07ha area. The said sales agreement will require subdivision, consolidation and rezoning applications for purposes of creating a new erf. Erf 7540, Erf 7541 and Erf 7538 are currently owned by the SPM and comprise 2 erven zoned as residential and 1 erf zoned as roadway, all 3 being vacant land with the portion of the vacant land zoned as roadway being a closed roadway.

The 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, is situated immediately south-east of Erf 44500, subject of a recent HIA, with reference to the inferred archival reported on 1879 Black Migrant Worker Cemetery (DN 1879) and resultant heritage process.

The general area in question is demarcated in the SPM SDF (2008) as 'Residential densification'. Residential densification can simply be defined as '*...making more efficient use of our limited urban space – in other words finding place for more people to live and work*' (CPT 2009). Densification directly addresses economic efficiency and productivity of the urban form and function. It aims to provide efficient, safe, sustainable cities that offer high quality public spaces, access to public transport, services and recreation opportunities, and in many instances address issues of inequality – only possible if a city is dense and compact. The very principle of residential densification is in direct opposition to 'urban sprawl' (Setplan 2008). Tshwane (2005) states: '*The concept of the compact town or city establishes an urban, as opposed to suburban or township model as the dominant model of development.*' Residential densification is associated with both horizontal and vertical expansion, more than often with an emphasis on the vertical, directly related to the inherent development possibilities therein. But residential densification is never restricted to the 'residential' faculty only; it is best implemented with the inclusion of 'mixed-use' areas with specific reference to the emphasis on the standard of living of residents (CPT 2009). Densification does not imply overnight transformation. It is generally achievable over extended periods of time and more than often associated with government intervention: Government need to lead the way in which the urban structure of a

city is developing. Implementation of plans is crucial to the success of these programmes, for which governments are directly dependant on public and private sector investment. Tshwane (2005) comment on the fact that strategies should be devised to ensure that developers invest closer to strategic areas, including amongst others the fast tracking / streamlining of land-use applications in areas demarcated for densification.

In accordance with the above, the project proponent is preliminary considering either development of commercial office space or student accommodation, both being based on recent needs identification including the need for more office space in the inner city as communicated by business owners and entrepreneurs (Van Ryneveld 2015) and secondly relating primarily to the recent establishment of the Sol Plaatje University, with reference to the current and inferred future need for student accommodation in Kimberley.



Map 1: General locality of the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, Kimberley, Northern Cape [1:50,000 Map Ref – 2824DB]



Map 2: General locality of the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, Kimberley, Northern Cape [1]



Map 3: General locality of the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, in relation to Erf 44500, Kimberley, Northern Cape

2 - The Phase 1 Archaeological Impact Assessment

2.1.1) Archaeological Legislative Compliance

The Phase 1 Archaeological Impact Assessment (AIA) for the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, Sol Plaatje Municipality (SPM), Northern Cape, was requested to meet the South African Heritage Resources Agency's (SAHRA) requirements with reference to archaeological and basic cultural heritage resources in terms of the National Heritage Resources Act, No 25 of 1999 (NHRA 1999), with specific reference to Section 38(1)(c)(ii), in the event of the property being purchased and developed.

NHRA 1999, Section 38	
1)	Subject to the provisions of subsections 7), 8) and 9), any person who intends to undertake a development categorized as –
a)	the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
b)	the construction of a bridge or similar structure exceeding 50 m in length;
c)	any development or other activity which will change the character of a site –
	i. exceeding 5 000 m ² in extent; or
	ii. involving three or more existing erven or subdivisions thereof; or
	iii. involving three or more erven or subdivisions thereof which have been consolidated within the past five years; or
	iv. the costs which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
d)	the rezoning of a site exceeding 10 000 m ² in extent; or
e)	any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,
	must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Table 1: Extracts from the NHRA 1999, Section 38

The Phase 1 AIA aimed to locate, identify and assess the significance of cultural heritage resources, inclusive of archaeological deposits / sites, built structures older than 60 years, burial grounds and graves, graves of victims of conflict and basic cultural landscapes or views as defined and protected by the NHRA 1999, that may be affected by the development.

This report comprises a Phase 1 AIA, including a basic pre-feasibility study and field assessment only. [Specialist GPR study to be read in conjunction with the Phase 1 AIA].

No additional relevant legislation pertaining to the Phase 1 AIA is applicable. Site size and proposed development types exempts the developer from compliance with environmental requirements in terms of the National Environmental Management Act, No 107 of 1998 (NEMA 1998) and associated Regulations (2014).

2.1.2) Methodology & Gap Analysis

The Phase 1 AIA includes a basic pre-feasibility study and field assessment:

- The pre-feasibility assessment is based on the Appendices A and B introductory archaeological literature. In addition the SAHRA 2009 Mapping Project Database (MPD) and SAHRIS were consulted. The study excludes consultation of museum and university databases.
- The field assessment was done over a 1 day period (2015-05-07) with fieldwork conducted by the author. The assessment was done by foot and limited to a Phase 1 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 and Google Earth software was used in the display of spatial information.

- The Phase 1 AIA should be read in conjunction with the relevant specialist GPR study, referenced as: Barnardt, B. (Terra Scan). 2015a. *Ground Penetrating Radar Survey of Erf 7540, Erf 7541 and Erf 7538, Corner of Quinn and Naude Streets, Kimberley. Undertaken on Behalf of P&V Pillay Family Trust, 24 January 2015.*

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

2.1.3) Assessor Qualification & Accreditation

Karen van Ryneveld (ArchaeoMaps):

- Qualification: MSc Archaeology (2003) WITS University, Johannesburg / Certificate GIS (2007) NMMU University, Port Elizabeth.
- Accreditation: Association of Southern African Professional Archaeologists (ASAPA) accredited Cultural Resources Management (CRM) practitioner [member nr – 163]
 1. 2004 – Association of Southern African Professional Archaeologists (ASAPA) – Professional Member.
 2. 2005 – ASAPA CRM Section: Accreditation – Field Director (Stone Age, Iron Age, Colonial Period).
 3. 2010 – ASAPA CRM Section: Accreditation – Principle Investigator (Stone Age).

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 300 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).

2.2.1) Pre-feasibility Summary

Based on a basic introductory literature assessment of South African archaeology (See Appendices A and B) and background heritage database research, the probability of archaeological and cultural heritage sites situated within or in direct proximity to the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, SPM, Northern Cape, study site can briefly be described as:

Archaeological and Basic Cultural Probability Assessment – 'Offer to Purchase' Property, Portions of Erf 7540, 7541 and 7538, Kimberley, SPM, Northern Cape			
Primary Type / Period	Sub-Period	Sub-Period Type Site	Probability
EARLY HOMININ / HOMINID	-	-	Low
	Graves / Human remains: High scientific significance		
STONE AGE	Earlier Stone Age (ESA)		None-Low
	Middle Stone Age (MSA)		Low
	Later Stone Age (LSA)		Low
		Rock Art	Low
		Shell Middens	None
	Graves / Human remains: ESA & MSA – High scientific significance; LSA – High scientific & social significance		
IRON AGE	Early Iron Age (EIA)		None
	Middle Iron Age (MIA)		None
	Later Iron Age (LIA)		High
	Graves & Human remains: EIA – High scientific & medium social significance; MIA & LIA: High scientific & social significance		
COLONIAL PERIOD	Colonial Period		High
		LSA – Colonial Period Contact	Medium (pastoralist)
		LIA – Colonial Period Contact	High
		Industrial Revolution	High
		Apartheid & Struggle	Medium
	Graves / Human Remains: Medium-high scientific & high social significance		

Table 3: Archaeological and basic cultural probability assessment

2.2.2) The SAHRA 2009 MPD, SAHRIS & PHS Database, Northern Cape

A number of archaeological Cultural Resources Management (CRM) reports are recorded in the SAHRA 2009 Mapping Project Database (MPD), situated within an approximate 30km radius from the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538 study site. Archaeological CRM studies limited to the Northern Cape can be listed as:

- o Beaumont, P.B. (McGregor Museum). 2005. *Archaeological Impact Assessment of Portion 37, a Portion of Portion 27 (Boland) of the Farm Zoutpansfontein No 34, Kimberley District, Northern Cape.*
- o Beaumont, P.B. (McGregor Museum). 2007. *Phase 1 Heritage Impact Assessment Report on Parts of Portion 2 and the Remainder of the Farm Holsdam 229 near Barkley-West, Frances Baard District Municipality, Northern Cape Province.*
- o Beaumont, P.B. (McGregor Museum). 2008. *Phase 1 Heritage Impact Assessment Report on the Proposed Northgate Housing Development on Portions of the original Farm Roode Pan 70, near Kimberley in the Sol Plaatjie Municipality of the Northern Cape Province.*
- o Dreyer, C. (Private). 2003. *Archaeological and Historical Investigation of the Proposed Pipeline Installation at Hanover, Northern Cape.*
- o Dreyer, C. (Private). 2006. *First Phase Archaeological and Cultural Heritage Assessment of the Proposed Developments at the Big Hole, Kimberley, Northern Cape.*

- Dreyer, C. (Private). 2008. *Archaeological and Culture Historical Assessment of the Proposed Residential Developments at Kimberley, Northern Cape.*
- Morris, D. (McGregor Museum). 2001. *Report on Historical Rubbish Midden at Kamfersdam.*
- Morris, D. (McGregor Museum). 2003. *Archaeological Survey of the Farm Koodoosberg No 141.*
- Morris, D. (McGregor Museum). 2005a. *Site Visit to Inspect an Area of Proposed Debris Washing along Kenilworth Road on Erf 14741, in the Magisterial District of Kimberley.*
- Morris, D. (McGregor Museum). 2005b. *Phase 1 Archaeological Impact Assessment for De Beers Consolidated Mines Ltd (Contract 0616-AC-244-05) to Evaluate Heritage Resources on Properties as Indicated.*
- Morris, D. (McGregor Museum). 2005c. *Phase 1 Archaeological Impact Assessment of the so-called 'Kemo-Dump' (National Site Number 2824DB039) on Remainder of Erf 5024, Erf 6376 and Erf 5058, Vooruitzicht 81, Kimberley, Northern Cape.*
- Morris, D. (McGregor Museum). 2005d. *Site Visit to Inspect Cultural Material on Mine Debris Dumps Adjacent to the Kimberley Mine at the Site of the Proposed Hotel.*
- Morris, D. (McGregor Museum). 2006. *Report on a Phase 1 Archaeological Impact Assessment of a Proposed Clay Quarry at Roodepan 70, Kimberley, Northern Cape (30/5/1/3/2/1/358EM).*
- Nel, J. (Archaic Heritage). 2008. *Final Report: Heritage Resources Scoping Survey and Preliminary Assessment of Transnet Freight Line EIA, Eastern Cape and Northern Cape.*
- Van Ryneveld, K. (McGregor Museum). 2006. *Phase 1 Archaeological Impact Assessment – Erf 49, Erf 687 and Commonage Erf 687, Barkley-West District, Northern Cape, South Africa.*
- Van Ryneveld, K. (National Museum Bloemfontein). 2007. *Phase 1 Archaeological Impact Assessment – Portion of the Farm Platfontein 68, Kimberley District, Northern Cape, South Africa.*

Post compilation of the SAHRA 2009 MPD additional SAHRIS cases, situated within an approximate 15km radius from the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538 study site indicate increasing development in the area. However, many of these pertain to mining / prospecting right applications for which archaeological CRM reports are not as yet available, including SAHRIS Case ID's 1084, 1375, 1790, 2504, 3203, 4617, 5766 and 6088. Four (4) SAHRIS cases include archaeological CRM reports, with information contained therein serving to better describe the greater receiving archaeological and cultural landscape of the study site. Reports are listed as:

- Becker, E. (Envass). 2011. *Archaeological Impact Assessment Technical Report Prepared for !Xun and Khwe – !Xun and Khwe Solar Farm.*
- Becker, E. (Hatch). 2013. *Transnet Capital Projects. Ngqura 16 MTPA Manganese Rail. Phase 1 Heritage Impact Assessment – Rail, Kimberley to De Aar.*
- Morris, D. (McGregor Museum). 2014. *Proposed Boundary Solar Energy Facility on the Farm Karreeboom 1716, East of Kimberley, in the Tokologo Local Municipality, Free State: Heritage Impact Assessment.*
- Van Ryneveld, K. (ArcheoMaps). 2012. *Phase 1 Archaeological Impact Assessment - !Xun and Khwe Solar Project, Platfontein 68, Sol Plaatjie Municipality, Northern Cape, South Africa.*
- Van Vollenhoven, A.C. (Archeoethos). 2014. *Heritage Scoping Report Related to the Eskom Kimberley's Strengthening Phase 4 Project between the Boundary and Ulco Substations in the Northern Cape.*

Previous archaeological CRM reports recorded in the SAHRA 2009 MPD, on SAHRIS and made available by SAHRA, directly pertaining to the immediate cultural receiving environment of the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538 study site are listed as:

- Barnardt, B. (Terra Scan). 2015b. *Ground Penetrating Radar Survey of Erf 44500, Corner of Quinn and Lawrence Streets Kimberley, Undertaken on behalf of P&V Pillay Family Trust, 23-24 January 2015.*
- Gaigher, S. (G&A Heritage). 2014. *Heritage Impact Assessment Report for the Proposed Expansion of the Samy's Wholesalers Warehouse, Kimberley – Northern Cape Province.*
- Morris, D. (McGregor Museum). 2004. *Skeletons found at 78 Transvaal Road, Kimberley, report to SAHRA – Permit 80/04/04/005/51.*

- Morris, D. & Klemp, M. (McGregor Museum). 2015. *Skeletons Found and Salvaged along Lawrence Road and at the Quinn Street Intersection, Kimberley. Preliminary Report: McGregor Museum Archaeology Department. Updated January 2014.*
- Pelsler, A.J. (APAC). 2015. *Interim Report – Samy’s Wholesalers Extension (Samy’s Wholesalers Extension Test Excavation). Test Excavation within the Western Portion of Erf 44500 (SAHRA BGG Unit Permit ID#2016 Case ID#6899).*
- Pelsler, A.J. & Van Ryneveld, K. (APAC). 2015. *Final Report on the Samy’s Wholesalers Extension Test Excavations within the Western Portion of Erf 44500.*
- Van Ryneveld, K. (ArchaeoMaps). 2015. *Archaeological and Cultural Heritage Impact Assessment – Samy’s Wholesalers Extension, Erf 44500, Kimberley, Sol Plaatje Municipality, Northern Cape.*

The Pioneer Cemetery, including the Old Jewish Cemetery, originally declared a National Monument and reassigned Provincial Heritage Site (PHS) status under the NHRA 1999, is situated less than 200m south-west of the ‘Offer to Purchase’ Property, Portions of Erf 7540, Erf 7541 and Erf 7538 study site, with the history of the cemetery directly associated with interpretation of the immediate area. The oldest dated burial in the cemetery dates back to 1871, with the cemetery having been officially closed in 1884, but with family plots recorded to have been used long afterwards. Original burial registers of the main portion of the cemetery, the White and Colored portion thereof, were destroyed by fire. Burial registers of the Jewish section were managed separately, seemingly from early times and during use of the site and are kept by the Synagogue (bygonesandbyways.blogspot.com/2008_06_01_archive.html).



Map 4: Locality of the study site in relation to the Pioneer Cemetery, a declared PHS

2.2.3) General Discussion

Archaeological CRM reported on Stone Age records are ample and representative of the major temporal Industrial phases: Earlier Stone Age (ESA) deposits were recorded on from the greater Barkley-West (Beaumont 2007; Van Ryneveld 2006) and Koodoosberg areas (Morris 2003). Morris (2014) reported on a Fauresmith occurrence, often interpreted as a 1st

transitional phase or technology. Middle Stone Age (MSA) reports are plentiful, reported on from the Kimberley area (Becker 2011; Morris 2006; Van Ryneveld 2007, 2012), but to as far afield as Barkley-West (Van Ryneveld 2006) and the Free State (Morris 2014). Later Stone Age (LSA) artefact records, often occurring in association with the MSA, imply an equally wide distribution range and including records of both macrolithic and microlithic technologies (Beaumont 2007; Becker 2011; Morris 2003; Van Ryneveld 2007, 2012). LSA lithic deposits found in direct association with rock engravings serves as testimony to the more varied LSA cultural record (Morris 2003). The archaeological CRM Stone Age record, despite wide distribution and temporal and Industrial representation hardly does justice to the significance thereof: Ongoing research at Canteen Koppie, near Barkley-West, a Stone Age site with significant, fairly continuous stratigraphic sequencing spanning the ESA – LSA is increasingly drawing palaeolithic research interest to the area (Chazan *et. al.* 2013), while reanalysis of the 1929 discovered Canteen Koppie (CK) skull has confirmed the specimen as of KhoeSan physical type dating to the Holocene (Smith *et. al.* 2012). The Wildebeest Kuil Rock Art Centre, a declared Provincial Heritage Site (PHS) situated just outside Kimberley focusses on both research and educational tourism. Research centers on the Stone Age and Rock Art record at the site, an open air museum (www.wildebeestkuil.itgo.com), but include Colonial Period aspects on the property (Weiss 2009).

The Iron Age record of the greater area, primarily a Later Iron Age (LIA) history is hardly represented in archaeological CRM reports. LIA Sotho-Tswana and Nguni people settled the Northern Cape from the rough 1600's onwards with Dithakong – 'The Place of Ruins', being the major Thlaping (Tswana) polity, but with the polity often moving location (Huffman 2007; Morris 1990), though generally sited roughly 200km north-west of Kimberley. However, instability of Mzilikazi's *Difaqane* affected the greater Kimberley area from the 1820's onwards; displaced Tlokwa, Fokeng, Hlakwa and Phuteng increasingly settled in the area (De Jong 2010), thereby setting the stage for the emerging mixed, displaced and *en large* expatriate Black community that was soon to characterize the cultural landscape of Kimberley.

Colonial Period archaeological CRM records reflect a faceted history, including historical buildings and structure remains (Becker 2011, 2013; Morris 2014; Nel 2008; Van Ryneveld 2012), a number of middens (Morris 2001, 2005b, 2005c, 2005d; Morris & Kaplan 2001), early mining village remains (Morris 2005b) and associated industrial infrastructural remnants (Becker 2013). Remains are often associated with records of cemeteries and grave sites of cross cultural tradition and including amongst them a Colonial Period grave site reported on by Becker (2013), the Du Toitspan cemetery (Morris 2005b), Phase 2 mitigation (excavation) records of previously unknown graves at the Gladstone cemetery (Morris *et. al.* 2004) and recently mitigated graves from the Greenpoint suburb of Kimberley (SAHRIS CaseID 5153), amongst others.

* * *

In 1866 the 15 year old Erasmus Jacobs discovered a 'bright pebble' (diamond) on his fathers' farm, De Kalk, near Kimberley. Passed on to their neighbor Schalk van Niekerk, the diamond was traded through Dr. Guyborn Atherstone and became known as the 21.25 carat 'Eureka'. Merely 3 years later (1869) Schalk van Niekerk sold another diamond, obtained from a Griqua, for £11,200 – a diamond that was to become internationally known as the 'Star of Africa'. The same year witnessed the discovery of an 83.5 carat diamond on the farm Vooruitzicht, then owned by the brothers Diederick Arnoldus and Johannes Nicolaas de Beer (Giliomee & Mbenga 2007). Between 1869 and 1871 surface outcrops of four diamondiferous pipes were located, all in fair proximity to the Vaal River, on land then held under Orange Free State titles by Dutch speaking farmers (Mabin 1986). The 'Diamond Rush' that followed was to forever change the cultural landscape of the area: During the latter part of the 1860's / early 1870's only Cape Town, Port Elizabeth and Kimberley¹ had populations of over 10,000 (Mitchell 2002). An 1878 census recorded Kimberley's population as 14,169 including Europeans (6,574) and non-Europeans (7,595) (DN 1879). During the 1880's Kimberley's population had grown to over 50,000 (Giliomee & Mbenga 2007).

Dispute over ownership of the diamond fields immediately followed the discovery of diamonds; involving the Transvaal and

¹ Originally called 'New Rush', renamed (and **proclaimed**) as Kimberley in 1873, after the Earl of Kimberley, British Secretary of State for the Colony. Kimberley and the nearby town of Beaconsfield were 2 separate towns, only to be merged in 1912 as Kimberley.

Orange Free State Boer Republics, Griqua, Korana and Thlaping communities and the Cape Colonial Government. Through the Keate Arbitration of 1871 the diamond fields were awarded to the Griqua, directly to the Chief of the Griqua, Nicolaas Waterboer; thereby effectively proclaimed British territory under the name Griqualand-West. In 1879 Griqualand-West was annexed to the Cape Colony (De Jong 2010).

The population of Kimberley at the time was mixed, comprising Cape Colonists, mainly English and Dutch speaking, of varying racial groups and socio-economic backgrounds, as well as many African wage laborers (Mabin 1986). The complexity of only indigenous Africans in Kimberley was at the time further described by Rev. Tyamzashe (Christian Express newspaper, 1874, after Gaigher 2014): *'From the missionary point of view, it is not easy to deal with such a mixture of tribes as we have on the diamond fields. There are San, Khoikhoi, Griquas, Bathlaping, Damaras, Barolong, Barutse..., Bapedi, Baganana, Basutu, Maswaza, Matanga, Matabele, Mabaca, Mampondo, Mamfengu, Batembu, Maxhosa etc. Many of these (people) can hardly understand each other, and in many cases they have to converse through the medium of either Dutch, Sesotho or Xhosa. Those coming from far up in the interior such as the Bapedi come with the sole purpose of securing guns. Some of them therefor resolve to stay no longer here than is necessary to get some £6-£7 for the gun. Hence you will see hundreds of them leaving the fields, and as many arriving from the north almost every day.'*

During the late 1860's to early 1870's claims were primarily worked by independent claimholders, providing for a fairly fragmented system of production, nonetheless accounting for in excess of £400,000 in diamond exports in 1871. The following year diamond production surpassed £1.6 million, opening up greater possibilities of capital investment. Resultantly the early 1870's saw a number of small companies forming, but with restrictions on racial claim ownership, in turn leading to the unsuccessful *'Black Flag Revolt'* of 1875. Following a radical drop in diamond prices in 1876 diamond merchants were able to raise funds to purchase more claims – a time which marked the beginning of company formation and industrialized mining, directly associated with large scale infrastructural (primarily transport) development in South Africa and further north. To give a simple example of development in the industrialized mining sector at the time: 16 steam engines employed on Kimberley's mines in 1877 were increased to 306 in 1881 (Mabin 1986). As early as 1872 work also commenced on connecting Kimberley by rail to cities along the Cape Colony's coastline, then under management of the Cape Government Railways, with the line between Cape Town and Kimberley completed in 1885 ([en.wikipedia.org/wiki/User: Firefishy/SA_Rail/History](http://en.wikipedia.org/wiki/User:Firefishy/SA_Rail/History)).

Between 1877 and 1885 British Imperial troops conquered many a Xhosa, Zulu, Pedi and Tswana polity, described by Mabin (1986) as resulting in a *'... "willingness" by large numbers of Africans to be recruited into laboring jobs at minimal pay.'*

An emphasis on company formation, increasing numbers of *'cheap'* wage laborers (associated also with theft on the mines) and the *'boom-and-bust'* of the share mania led to ownership of the mines being in the hands of less than 12 companies by 1883. Depression marked the period 1883 to 1885 – share price dropped from 30s in 1882 to below 23s in 1883, with a direct effect on capital – labor relationships: Unemployment numbers rose drastically and employers took advantage of radically reduced wages, employing minimal employees, with tighter control taken over both White and Black workers. Increasing racial labor division, directly associated with remuneration became prominent, characterized by higher wages reserved for White employees than their Black counterparts. This resulted in an adverse statistic with reference to job losses: From employment of 3,900 laborers on the Kimberley mines in 1881 to a mere 1,210 in 1884, with a lesser percentage of Black job losses than White job losses, a direct result of lower Black wages. Company restructuring to reduce production cost became progressively imperative. 1883 saw the introduction of a system of formally searching mine workers after each shift with working hours strictly monitored. Companies increasingly focused on formalization of housing to further monitor their work force: Compound housing, townships and workers villages were increasingly supported and later imposed by company policy, with aspects thereof successively formalized by law (Mabin 1986).

In 1888 Cecil John Rhodes became chairman of the newly founded De Beers Diamond Mining Company (DBDMC), and soon thereafter focused his attention on the then French owned portion of the mine, the *Compagnie Francaise des Mines de Diamants du Cap de Bonne Esperance*. An agreement between Rhodes and Barney Bernato ensured the French mine in ownership of Bernato in 1889, with a significant shareholding by Rhodes. Shares in the mine quickly rose from £14-£49, but

overproduction soon resulted in the market hitting an all-time low upon which Rhodes proposed to merge the DBDMC with the Kimberley Central Diamond Mining Company (KCDMC), forming 1 consolidated company, De Beers Consolidated Mines. A shareholder appeal to the merger was granted by court, resulting in KCDMC being liquidated and bought by De Beers Consolidated Mines. Soon thereafter De Beers Consolidated Mines also purchased the Bultfontein and Du Toitspan mines, thereby establishing a monopoly over the Kimberley mines that were to last for decades to come (en.wikipedia.org/wiki/Barney_Bernato).

Later Colonial Period history of Kimberley includes the Siege of Kimberley in 1899, during the Anglo-Boer War (1899-1902). Apartheid and Struggle histories are also well awarded on the town (en.wikipedia.org/wiki/Kimberley,_Northern_Cape).

* * *

Reconstruction of the history of the more immediate area of the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538 have been the subject of significant heritage attention in the recent past, triggered by the 2004 report by the developer, P&V Pillay Family Trust, to the South African Police Service (SAPS), of skeletal remains having been encountered during the course of construction activities at 78 Transvaal Road. Initial mitigation of the remains of a single individual was undertaken by the SAPS, but upon further identification of human remains the case was handed over to the McGregor Museum, Kimberley. Phase 2 archaeological mitigation at the site yielded the remains of a total of 4 individuals, including remains mitigated by the SAPS. Based primarily on the findings of the Phase 2 archaeological mitigation, Morris (2004) postulated the 1st hypothesis aiming to explain the presence of human remains in the general area north of the Pioneer Cemetery. Morris argued that skeletal remains are reflective of the locality of the 'Black' migrant worker cemetery, reported on in a Diamond News newspaper report, dated March 29, 1879 (DN 1879). At the time Morris also proposed that the area be conserved and declared as a Provincial Heritage Site (PHS).

Diamond News newspaper report, March 29, 1879 (DN 1879) – 'Report on the Sanitary Condition of Kimberley – Burial Grounds'

'Within the Municipality there are three burial grounds: -

- 1) *The cemetery, which is used for Europeans and coloured people only. This spot about 5 acres in extent, is situated on the Transvaal Road below the goal. Neatly surrounded by a wall, the regularity with which it is laid out, the order everywhere exhibited, and the perfect state in which the grounds are kept, reflect great credit on the Committee to whose management it is entrusted. We observe that the graves were dug to a fair depth, and that sufficient space was allowed between each.*
- 2) *The burial ground for natives – This is situated in close proximity to the European cemetery, a very different state of matters, however, exists here. The digging of these graves is entrusted to black convicts and native police (who by the way employ the Sabbath for the purpose) without any white supervision, so the near residents informed us, consequently little or no uniformity of arrangement can be expected or is it to be found.*

The graves seen by us 'ready made', awaiting their dead, were of a depth totally inadequate to prevent the effects of decomposition becoming apparent, even to passers by. Those we examined were extremely shallow, varying in depth from two feet to three feet four inches, and were only from six to eight inches apart. A gentleman residing near told us he had on several occasions, on measuring, found the bodies within six inches from the surface and had also observed them lying exposed to the surface for two to three hours awaiting burial.

As these bodies are buried without coffins, and as the soil in that neighborhood is of a loose nature, decomposition rapidly sets in. Heavy rains had just fallen previous to our visit, and the effluvia from the graves was simply horrible. In some places funnels had even been established by the water to the putrifying mass beneath.

Six hundred and four natives were interred here during the past year, and we consider it a matter for which to be thankful that the prevailing winds come from a quarter that waft these pernicious smells from the camp, otherwise with this glaring neglect of all sanitary precautions, dire consequences must ere this have ensued.

- 3) *The remaining burial ground situated midway between Kimberley and Old de Beers, on the left of the road has been in disuse for several years; unprotected from desecration by either wall or ditch, trampled over by pigs and cattle, it is a crying disgrace to the civilized portion of this community.*

The recommendations we have to make on this subject relate only to the Kafir burial ground, and we would suggest –

- 1) That the graves be dug in regular order.*
- 2) That they be dug to a depth of not less than five feet.*
- 3) That a space of at least two feet be allowed between each.*
- 4) That the area allotted for this native burial ground be either enclosed by a wall or encompassed by a bank and ditch.*
- 5) That the residents in the neighborhood be cautioned against drinking water from the wells in the near locality.*
- 6) That the bodies be buried at once on being brought to the graveyard.*
- 7) And lastly, That no more internments take place at the present site, but that a new locality at a further distance from the Township be at once chosen as a burial ground for the native population.'*

The initial discovery of graves at 78 Transvaal Road, coined with archival evidence led Morris (2004) to postulate the hypothesis that the general area forms part of the 'Black' migrant worker cemetery referred to in the DN 1879 report. With reference to the 78 Transvaal Road graves Morris (2004) stated: *'The four graves lay in a regular row and, together, are highly suggestive that this site is part of a larger burial ground. ...geographically, it corresponds with the locality indicated in the 1879 report, and the graves found are all unexpectedly shallow.'* Morris (2004) continues: *'Subject to further findings, it could be that there are up to four to five thousand burials in this relatively informal 1870's African pioneers burial ground.'* The report highlights the problematic concern that the boundary of the said cemetery is unknown, but addresses, at least in part, adherence to the 7th recommendation regarding the 'Black' cemetery; Morris (2004) states: *'Burials subsequently took place at a spot which in 1883 was officially proclaimed as the new Gladstone cemetery'*, but at present it is uncertain whether burial at the 'Black' migrant worker cemetery ceased immediately after the 1879 report, or closer to, or in 1883, at the time of establishment of the Gladstone cemetery.

In 2011 additional unmarked graves were discovered along Lawrence Street during a Neotel fiber optic cable development. Skeletal remains of 8 individuals were mitigated, clustered in 3 areas; 2 in the vicinity of 16 Lawrence Road, 3 near 10 Lawrence Road and an additional 3 at the Lawrence Road-Quinn Street intersection. Morris & Klemp (2015) stated that some graves were deep enough not to be impacted by the development trench, and were left in-situ, with the base of the trench in these locales marked by brick lining to demarcate grave positions. Morris & Klemp (2015) commented on at least 3 identified, but not mitigated graves from the Lawrence Road-Quinn Street intersection and 1 from further north along Lawrence Road. They described the 'Black' migrant worker cemetery site as: *'It remained uncertain how far this burial ground extends – but it was estimated that it may stretch three or more blocks north and north-west of the Pioneer Cemetery'*, reconfirming Morris' (2004) hypothetical interpretation of the area being the 1879 reported on 'Black' migrant worker cemetery (DN 1879).

In October 2014 development at Erf 44500 was stopped under a Cease Work Order issued by Ngwao-Boswa Ya / Jwa Kappa Bokone (NBKB), the Northern Cape Provincial Heritage Resources Authority (PHRA). The NBKB Cease Work Order (2014) stated that: *'...The site in question is said to be 100% cemetery, 1870's burial ground in Kimberley North...'* and made requirements, including amongst others registration of a Notification of Intent to Develop (NID) and the commissioning of a Heritage Impact Assessment (HIA) and stating that the NBKB shall *'... within 14 days of receipt of a notification in terms of Section 38, Subsection 1, notify the developer or applicant of the decision of the Provincial Heritage Resources Authority Permit*

Committee as well as comments by the South African Heritage Resources Agency'. The requested NID was completed and the HIA submitted on 3 & 5 November 2014 respectively. The HIA postulated the primary locality of the 'Black' migrant worker cemetery as the locale of the Diamandveld Primary School (Gaigher 2014), situated between the Pioneer Cemetery and Quinn Street. Gaigher (2014) stated: 'In 1939 the Diamandveld Primary School was erected on the largest part of the cemetery. Due to the possible size of this cemetery (4,000-5,000 graves) it is possible that it extended beyond Quinn Street. It should however also be realized that the graves were dug very close to each other and that the actual surface coverage could be less than anticipated'. The author continued: 'The exact extent of the original Pioneer Black migrant workers cemetery is not known at this stage and neither is its layout... There is a possibility that the site proposed for development (Erf 44500) falls outside of the area affected by the burial sites.' Recommendations of the HIA report included, amongst others, the commissioning of a Ground Penetrating Radar (GPR) study for purposes of decision making.

Attempts to follow up on a NBKB and SAHRA response on the submitted documentation, as per the NBKB Cease Work Order stipulation failed and on 5 January 2015 development commenced, stopped again under a SAHRA Cease Work Order, dated 6 January 2015, with a SAHRA HIA Comment (2015a) on the Gaigher (2014) HIA stating that the HIA was 'not adequate' for decision making purposes and that '...It is therefore required that a new heritage report should be commissioned that would focus on the impact of the warehouse extension on the historical cemetery.'

The 2nd HIA reiterated the primary locality of the 'Black' migrant worker cemetery as the locale of the Diamandveld Primary School and posed a 2nd hypothesis attempting to explain the presence of skeletal remains in the area north of Quinn Street as the result of customary Later Iron Age (LIA) burial practice at a homestead associated with a then Black residential area (Van Ryneveld 2015).

Based on archival maps Van Ryneveld (2015) argued the locality of the 'Black' migrant worker cemetery as the Lot 88-104 property, today forming part of the Diamandveld Primary School. Site size was described as fitting the site locale, explained as: 'If an estimate is taken of approximately 600 burials per year over 8 years, equaling 4,800 graves in total (600x8=4,800), then Morris' description of an expected 4,000-5,000 graves seems very accurate. If an estimate of approximately 3m² is assigned to each grave, considering described close proximity then 600 burials over an 8 year period at 3m² per grave gives an estimated cemetery site size of 1.44ha (600x8x3m²=14,400m² or 1.44ha) for the site in question. Should a slightly more lenient grave size be considered, say 4m², then proposed cemetery site size can reach 1.92ha (600x8x4m²=19,200m² or 1.92ha). In conclusion the estimated 4,800 graves comprising the 'Black' migrant worker cemetery may well be inferred to relate to a rough 1.4-2ha cemetery site area.' With cognizance to contemporary municipal cemetery grave plots being estimated at 3.75m² the possibility of the 'Black' migrant worker cemetery conforming to the lower bracket calculated site size was argued as fitting, including that slight realignment of streets recorded in archival maps may have impacted on the site, but that the cemetery in question did not necessarily extend beyond the Lot 88-104 demarcation, and not north of the railway line, completed in 1885, again with cognizance to the fact the burial at the site ceased sometime between 1879 and 1883. Following the basic alignment of the railway siding Quinn Street was constructed in the 1980's.

Van Ryneveld (2015) continued to argue that development of the Diamandveld Primary School allowed for a maximum 59 year period from the time of the cemetery having become defunct to the time of development, a time period that equates to approximately 2 generations. Van Ryneveld (2015) stated that: 'It is likely, considering weathering of traditional LIA grave demarcations, the recorded high rotational flux in Kimberley's early population, described as early as 1874 by Tyamzashe as: '... you will see hundreds of them leaving the fields, and as many arriving... almost every day' directly related to time frames associated with 'memory' of the deceased and the greater time afforded natural rehabilitation of sanitary concerns reported on in 1879, that 'memory' of, affection with and visual demarcation of a 'Black' migrant worker cemetery may well have been lost on 1930's development planning.'

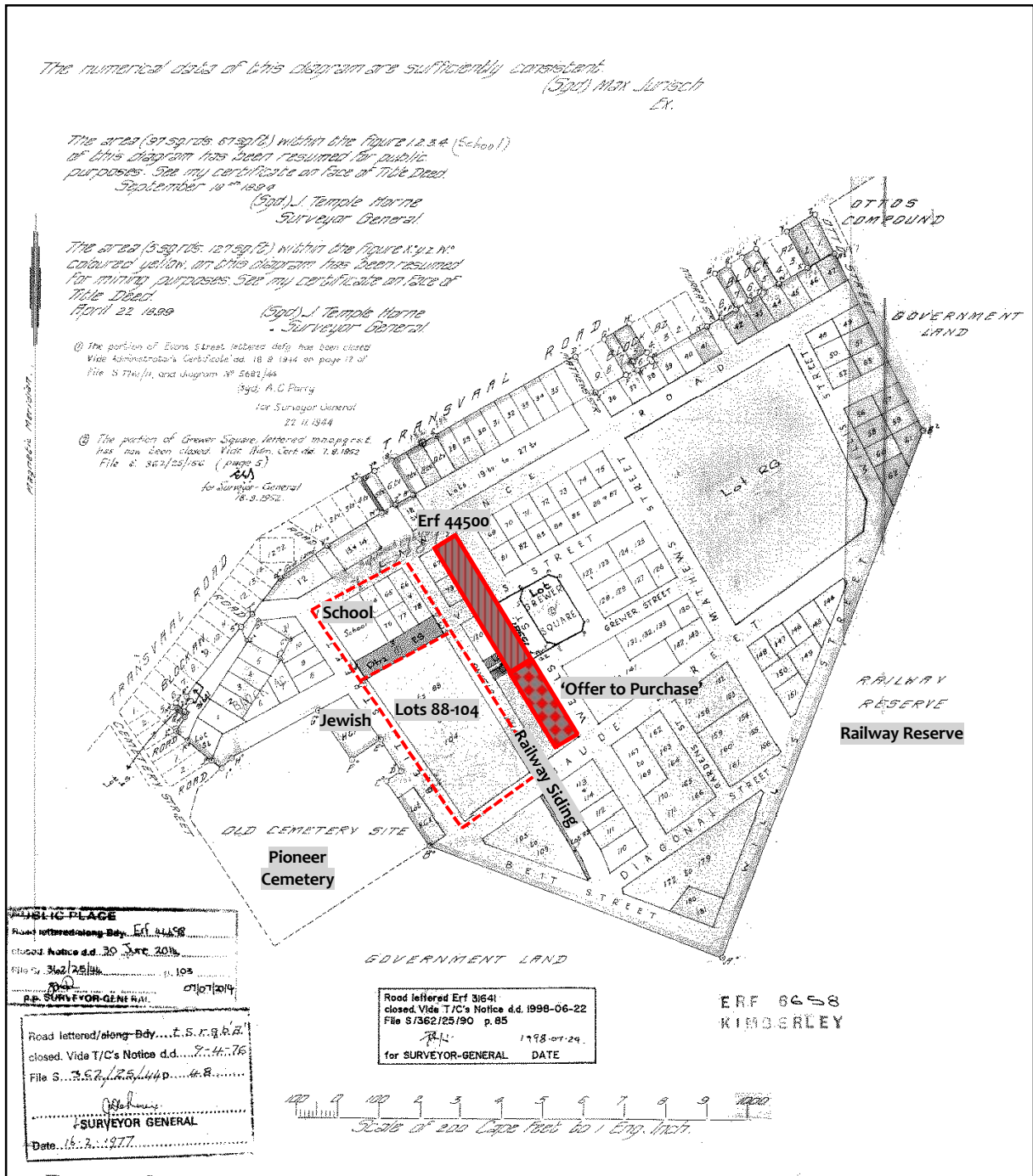
Van Ryneveld (2015) posed a 2nd hypothesis aiming to explain the presence of skeletal remains in the area north of Quinn Street: 'It is suggested that the residential area east of Transvaal Road and north of Quinn Street, encompassing the Erf 44500 study site was an early primarily Black residential area, perhaps during the late 1860's and throughout the major part of the 1870's. Grave sites encountered to date conform to widely practiced Later Iron Age (LIA) burial custom of burial at a homestead

with specific cognizance to Kimberley's 1889 recorded layout; with graves encountered identified on the rough perimeters of former lot stands. In accordance it can reasonably be inferred that more graves will be present in the area, expected to be fairly strategically placed towards the outer perimeters of early stands and varying in number per stand. 1889 Formalization of the layout is inferred to have had its roots in earlier, less formal settlement pattern: Layout may reflect recording of a primarily Black residential settlement pattern at the time. More likely it may reflect the formalization of a development renewal program, with its basic layout adopted from the preceding settlement pattern. An 1889 development renewal program, based on a largely adopted layout, would be in striking accord with the 1940's 'residential' development, effectively little more than a residential renewal program, again with minimal effect on basic layout of the immediate area.' The hypothesized Black residential area was explained in terms of customary LIA burial practice at a homestead, set against the compromised LIA cultural community of Kimberley at the time and related socio-economic circumstances, including the increasing emphasis on the removal of Blacks from Kimberley town and growing tension in capital – labor relationships.

The 2nd HIA by Van Ryneveld (2015) was compiled in conjunction with a GPR study (Barnardt 2015b), forming an integrated part of the methodology of the assessment for decision making purposes. Barnardt (2015) concluded that: 'During the on-site survey, no consistent high or lower density patterns of subsurface disturbance were detected that could reflect rows or row-like patterns, or infrequent random scatters of graves as described in the ToR (i, ii, iii & vi), with grave like disturbance inferred to be variable in size, primarily rectangular in shape, but which may approach 'square shaped' disturbances (double or multiple graves) and which may approach 'oval' shapes. No disturbance other than object 'A' and 'B' penetrate the geological member situated at 56cm below ground surface', and including that 'the change in geology extends across the subsurface extent of Erf 44500', and that object 'A' and 'B' both referred to subsurface infrastructural objects. The GPR scan identified a number of infrastructural alignments and disturbances clustered primarily towards the western perimeter of the site, and in part conforming to municipal records pertaining to the 1940's residential development.

Heritage compliance process related recommendations of the SAHRA HIA Comment (2015b) on the 2nd HIA, referring specifically to the Morris & Klemp (2015) report included that: '...at least three burials have been left in situ on the western portion of Erf 44500... At least three graves are therefore known to occur on the property where the proposed development is to take place... These graves, reported to be present, were not identified during the Ground Penetrating Radar Survey', and SAHRA requested that test excavations (and grave mitigation) be done under a SAHRA Burial Grounds & Graves (BGG) Unit permit.

Test excavations, in accordance with SAHRA Permit nr 2016 was reported on by Pelsler (2015) and Pelsler & Van Ryneveld (2015). Test trenching along the western periphery of the study site centred along the Neotel trench, limited to the portion of the trench that directly borders the study site and based on the premise that if skeletal remains were identified and left in situ, it must have been identified within the trench section: Accordingly reported remains should be re-exposed in a trench directly bordering the Neotel trench. Additional trenching was done in the general western portion of the study site and 6 test pits dug across the remainder of the site. All trenching and test excavations were dug down to the geological basal member, situated on average at 1.2-1.6m below the present day surface, with test pit 6 having been dug down to a level of 0.3m, when a concrete slab was encountered, interpreted to relate to structural 1889 archival map recorded development (Pelsler 2015). No graves were identified during the Phase 2 test excavations. One (1) bone of probable human origin was identified, being an inferred ulna (long bone). Pelsler & Van Ryneveld (2015) explained: 'Last mentioned long bone was broken in two (not during the 2015 excavations) and was clean, with no soil / dirt adhering to it. No other remains were uncovered and it seems as if this bone could have been left behind during earlier work on the Neotel line mitigation.' Low density artefactual remains including bottle glass, ceramic, brick and metal were uncovered, dating to 2 clearly distinguishable phases being the latter part of the 1800's / early 1900's and the rough 1940's, thus confirming the known anthropogenic sequence at the site. Test pit excavations also confirmed the presence of a low rising dolerite outcrop characterizing the western sub-surface portion of the study site (Pelsler 2015). Pelsler & Van Ryneveld (2015) concluded that development at Erf 44500 will not impact on 'a cemetery or any unknown burials' and conclusively verified the site in question as not forming part of the 1879 reported on 'Black' migrant worker cemetery (DN 1879). Results of the test excavations were approved by the SAHRA BGG Unit (2015c).



Map 5: Extract from the 'Deed of Grant - KimF1-12' area, Kimberley North, 1889 (CSG Record 6658-8/1889)

2.3.1) Archaeological Field Assessment Results



Map 6: Phase 1 AIA assessment findings – The ‘Offer to Purchase’ Property, Portions of Erf 7540, Erf 7541 and Erf 7538 study site

Surface assessment of the ‘Offer to Purchase’ Property, Portions of Erf 7540, Erf 7541 and Erf 7538 study site yielded no archaeological or cultural heritage resources, as defined and protected by the NHRA 1999. No sub-surface sections were present for purposes of a preliminary sub-surface interpretation, with cognisance to sub-surface reported on low density artefactual remains at the adjacent Erf 44500 study site (Pelser 2015; Pelser & Van Ryneveld 2015). Findings of the Phase 1 AIA field assessment is in accord with the known heritage sensitivity of the area, with reported on surface anthropogenic sterility, but with sub-surface concerns primarily relating to the presence of human remains reported on from the near vicinity (Morris 2004; Morris & Klemp 2015).

2.3.2) GPR Study Results – Summary

Findings of the GPR study indicated that: ‘No consistent high or lower density patterns of sub-surface disturbance were detected that could reflect rows or row-like patterns, or infrequent random scatters of graves...’ (Barnardt 2015a), thereby confirming that the ‘Offer to Purchase’ Property, Portions of Erf 7540, Erf 7541 and Erf 7538 study site do not form part of the DN (1879) reported on ‘Black’ migrant worker cemetery.

Three (3) sub-surface features were identified, including (Barnardt 2015b):

- VA1 (S28°43’54.1”; E24°45’59.9”): Interpreted as a small dump site, including multiple small objects;
- VB1 (S28°43’55.3”; E24°46’01.5”) – VB2 (S28°43’54.4”; E24°45’59.9”): Sub-surface linear earthworks along the southern boundary of the study site may reflect construction activities related to the railway line.

- VC1 (S28°43'54.8"; E24°46'01.3") – VC2 (S28°43'54.9"; E24°46'01.2"): Feature disturbance is typical of a rubble dump, most probably used for disposal of building rubble.

No infrastructural indicators pertaining to the known 1940's residential development were located at the study site, implying that the zoned residential erven were not developed.



Plate 1: View of the 'Offer to Purchase' study site, Kimberley [1]



Plate 3: View of the 'Offer to Purchase' study site, Kimberley [3]



Plate 2: View of the 'Offer to Purchase' study site, Kimberley [2]



Plate 4: View of the 'Offer to Purchase' study site, Kimberley [4]

3 - Recommendations

With reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA 1999, it is recommended that proposed development proceed at the 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, SPM, Northern Cape, study site.

- No archaeological or cultural heritage developmental 'fatal flaws' identified;
- No surface archaeological or cultural heritage resources, as defined and protected by the NHRA 1999, identified.
- Three (3) recorded features identified during the GPR are not deemed investigation worthy with reference to HIA compliance.
- Based on 2004 and 2011 / 2015 reported on human remains, identified during construction activity in the near vicinity SAHRA may request additional Phase 2 test excavation prior to and / or monitoring during the course of construction.
- [Should any incidental archaeological or cultural heritage resources, as defined and protected by the NHRA 1999, be encountered during the course of development the process described in the 'Heritage Protocol for Incidental Finds during the Construction Phase' should be followed.]

The SAHRA HIA Comment will state legal requirements for development to proceed, or reasons why, from a heritage perspective, development may not be further considered.

Archaeological and Basic Cultural Heritage Compliance Summary – 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, Kimberley, SPM, Northern Cape			
Map Code	Site	Co-ordinates	Recommendations
'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538			
-	'Offer to Purchase' Property, KBY, NC	S28°43'54.8"; E24°46'01.0"	N/A

Table 4: Archaeological and cultural heritage compliance summary: 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, corner of Quinn and Naude Streets, Kimberley, SPM, Northern Cape

Simplified guide to the identification of archaeological sites:

- ❖ **Stone Age** – Knapped stone display flakes that appear unnatural and may result in similar type 'shaped' stones often concentrated in clusters or forming a distinct layer in the geological stratigraphy. ESA shapes may represent 'pear' or oval shaped stones, often in the region of 10cm in length or larger. Typical MSA types include blade-like or triangular shaped stones often associated with randomly shaped stones that display use or edge-wear around the rim of the artefact. LSA types may well be small, informally shaped stones, often associated with bone, pieces of charcoal and in cases ceramic shards.
 - Rock Art** – Includes both painted and engravings images.
 - Shell Middens** – Include compact shell lenses that may be quite extensive in size or small ephemeral scatters of shell food remains, often associated with LSA artefact remains, but may also be of MSA and Iron Age cultural association.
- ❖ **Iron Age** – Iron Age sites are often characterized by stone features, i.e. the remains of former livestock enclosures or typical household remains, huts are often identified by either mound or depression hollows. Typical artefacts include ceramic remains, farming equipment, beads and trade goods, metal artefacts (including jewelry) etc. Remains of the 'Struggle' – events, histories and landmarks associated therewith are often, based on cultural association, classed as part of the Iron Age heritage of South Africa.
- ❖ **Colonial Period** – Built environment remains, either urban or rural, are of a western cultural affiliation with typical artefacts representing early western culture, including typical household remains, trade and manufactured goods, such as old bottles, porcelain and metal artefacts. War memorial remains including the vast array of associated graves and the history of the Industrial Revolution form important parts of South Africa's Colonial Period heritage.

4 - Acronyms and Abbreviations

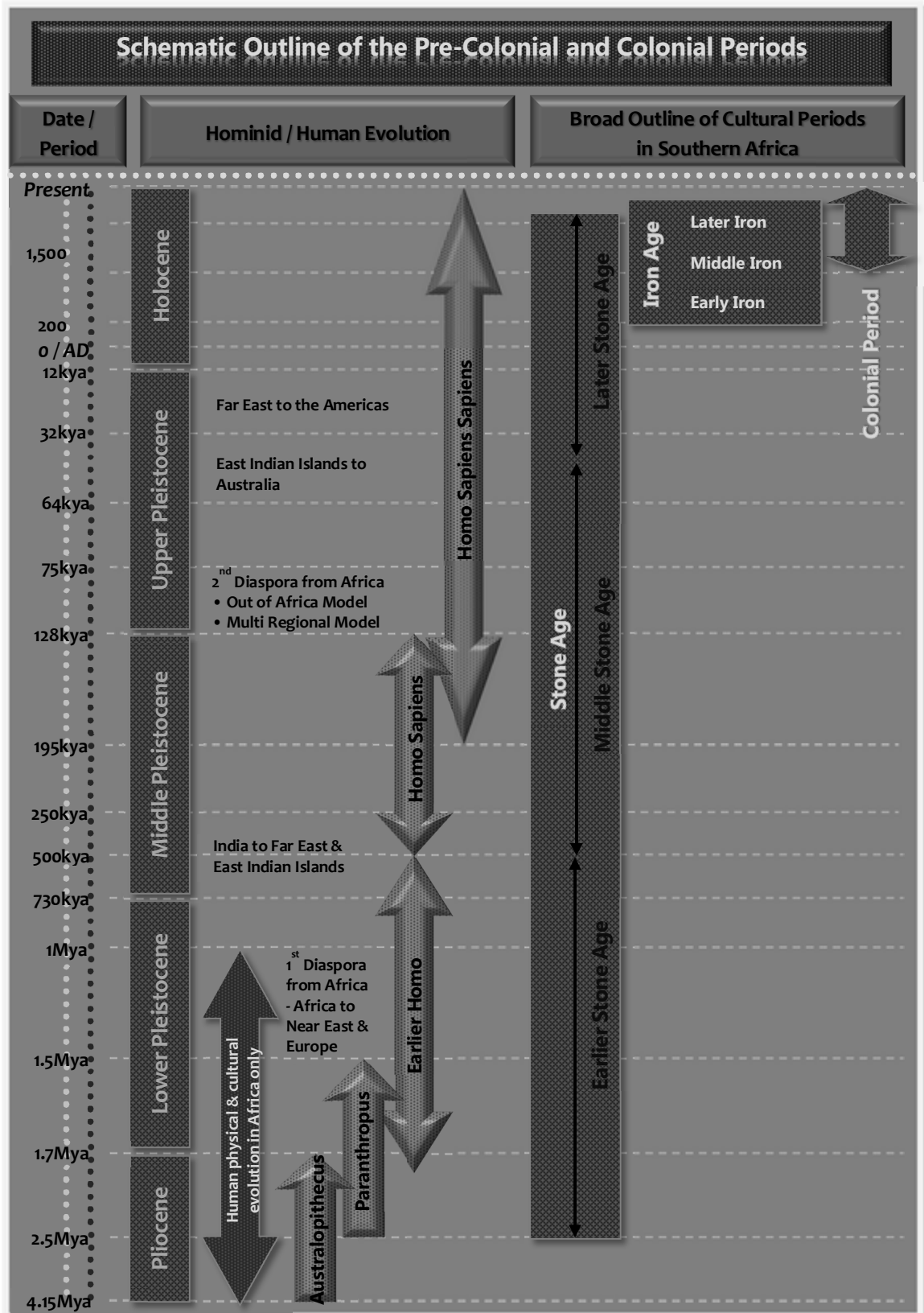
AD	: Anno Domini (the year 0.)
AIA	: Archaeological Impact Assessment
AMAFA	: Amafa aKwaZulu-Natali
ASAPA	: Association of Southern African Professional Archaeologists
BAR	: Basic Assessment Report
BC	: Before the Birth of Christ (the year 0.)
BCE	: Before the Common Era (the year 0.)
BIA	: Basic Impact Assessment
BID	: Background Information Document
BP	: Before the Present (the year 1950.)
cm	: Centimeter
CRM	: Cultural Resources Management
DAC	: Department of Arts and Culture
DEAT	: Department of Environmental Affairs and Tourism
DEDEAT	: Department of Economic Development, Environmental Affairs and Tourism
DME	: Department of Minerals and Energy
DSACR	: Department of Sport, Arts, Culture and Recreation
ECO	: Environmental Control Officer
EAP	: Environmental Assessment Practitioner
EC PHRA	: Eastern Cape Provincial Heritage Resources Authority
EIA	: Environmental Impact Assessment
EIA ₁	: Early Iron Age
EMPr	: Environmental Management Plan report
ESA	: Earlier Stone Age
ha	: Hectare
HIA	: Heritage Impact Assessment
HWC	: Heritage Western Cape
HCMP	: Heritage Conservation Management Plan
ICOMOS	: International Council on Monuments and Sites
IEM	: Integrated Environmental Management
km	: Kilometer
Kya	: Thousands of years ago
LIA	: Later Iron Age
LSA	: Later Stone Age
m	: Meter
m ²	: Square Meter
MIA	: Middle Iron Age
mm	: Millimeter
MPRDA (2002)	: Mineral and Petroleum Resources Development Act, No 28 of 2002
MSA	: Middle Stone Age
Mya	: Millions of years ago
NEMA (1998)	: National Environmental Management Act, No 107 of 1998
NHRA (1999)	: National Heritage Resources Act, No 25 of 1999
PIA	: Palaeontological Impact Assessment
PHRA	: Provincial Heritage Resources Authority
PSSA	: Palaeontological Society of South Africa
PPP	: Public Participation Process
SAHRA	: South African Heritage Resources Agency
SAHRIS	: South African Heritage Resources Information System
ScIA	: Socio-cultural Impact Assessment
SIA	: Social Impact Assessment

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Appendix B:

Introduction to the Archaeology of South Africa

Archaeologically the southern African cultural environment is roughly divided into the Stone Age, the Iron Age and the Colonial Period, including its subsequent Industrial component. This cultural division has a rough temporal association beginning with the Stone Age, followed by the Iron Age and the Colonial Period. The division is based on the identified primary technology used. The hunter-gatherer lifestyle of the Stone Age is identified in the archaeological record through stone being the primary raw material used to produce tools. Iron Age people, known for their skill to work iron and other metal, also practiced agriculture and animal husbandry. Kingdoms and civilizations associated with the Iron Age are indicative of a complex social hierarchy. The Colonial Period is marked by the advent of writing, in southern Africa primarily associated with the first European travelers (Mitchell 2002).

During the latter part of the Later Stone Age (LSA) hunter-gatherers shared their cultural landscape with both pastoralists and Iron Age people, while the advent of the Colonial Period in South Africa is marked by a complex cultural mosaic of people; including LSA hunter-gatherers, pastoralists, Later Iron Age farming communities and Colonial occupation.

1) Early Hominin Evolution

DNA studies indicate that humans and chimpanzees shared a common ancestor between 6-8Mya (Sibley & Ahlquist 1984). By 4Mya, based on fossil evidence from Ethiopia and Kenya, hominins (humans and their immediate fossil ancestors and relatives) had already evolved. The earliest fossils are ascribed to *Ardipithecus ramidus* (4.4Mya), succeeded by *Australopithecus anamensis* (4.2-3.9Mya). These fossils are inferred to lie at the base from which all other hominins evolved (Leakey et al. 1995; White et al. 1994).

In South Africa the later hominins are classed into 3 groups or distinct genera; *Australopithecus* (*gracile australopithecines*), *Paranthropus* (*robust australopithecines*) and *Homo*. South Africa has 3 major hominin sites: Taung in the North-West Province, where Raymond Dart identified the first *Australopithecus* fossil in 1924 (Dart 1925); The Cradle of Humankind (Sterkfontein Valley) sites in Gauteng, the most prolific hominin locality in the world for the period dating 3.5-1.5Mya which have yielded numerous *Australopithecus*, *Paranthropus* and limited *Homo* fossils (Keyser et al. 2000; Tobias 2000); and Makapansgat in the Limpopo Province, where several more specimens believed to be older than most of the Cradle specimens were discovered (Klein 1999).

A. africanus, represented at all 3 sites are believed to have been present on the South African landscape from about 3Mya. From approximately 2.8Mya they shared, at least in the Cradle area, the landscape with *P. robustus* and from roughly 2.3Mya with early forms of *Homo* (Clarke 1999). Global climatic cooling around 2.5Mya may have stimulated a burst of species turnover amongst hominins (Vrba 1992); the approximate contemporary appearance of the first stone tools suggests that this was a critical stage in human evolution. But exactly which early hominin population is to be accredited as the ancestor of *Homo* remains elusive.

H. ergaster is present in the African palaeo-anthropological record from around 1.8Mya and shortly thereafter the first exodus from Africa is evidenced by *H. erectus* specimens from China, Indonesia and even Europe (Klein 1999).

2) The Stone Age

2.1) The Earlier Stone Age

In South Africa the only Earlier Stone Age (ESA) Oldowan lithic assemblage comes from Sterkfontein Cave. The predominant quartz assemblage is technologically very simple, highly informal and inferred to comprise exclusively of multi-purpose tools (Kuman et al. 1997). The latter part of the ESA is characterized by the Acheulean Industrial Complex, present in the archaeological record from at least 1.5Mya. Both *H. ergaster* and *P. robustus* may be accredited with the production of these tools. The association between stone tools and increased access to meat and marrow supporting the greater dietary breadth of *Homo* may have been vital to *Homo*'s evolutionary success; and the eventual extinction of the robust australopithecines (Klein 1999).

Probably the longest lasting artefact tradition ever created by hominins, the Acheulean is found from Cape Town to north-western Europe and India, occurring widely in South Africa. Despite the many sites it is still considered a 'prehistoric dark age' by many archaeologists, encompassing one of the most critical periods in human evolution; the transition from *H. ergaster* to archaic forms of *H. Sapiens* (Klein 1999).

The Acheulean industry is characterized by handaxes and cleavers as *fosilles directeurs* (signatory artefact types), in association with cores and flakes. Handaxes and cleavers were multi-purpose tools used to work both meat and plant matter (Binneman & Beaumont 1992). Later Acheulean flaking techniques involved a degree of core preparation that allowed a single large flake of predetermined shape and size to be produced. This *Victoria West technique* indicates an origin within the Acheulean for the *Levallois technique* of the Middle Stone Age (Noble & Davidson 1966). The lithic artefact component was supplemented by wood and other organic material (Deacon 1970).

2.2) The Middle Stone Age

The Middle Stone Age (MSA), dating from approximately 500kya to 40-27/23kya is interpreted as an intermediate technology between the Acheulean and the Later Stone Age (LSA) (Goodwin & van Riet Lowe 1929). The MSA is typologically characterized by the absence of handaxes and cleavers, the use of prepared core techniques and the production of blades, triangular and convergent flakes, with convergent dorsal scars and faceted striking platforms, often produced by means of the *Levallois technique* (Volman 1984). The widespread occurrence of MSA technology across Africa and its spread into much of Eurasia

in Oxygen Isotope Stage (OIS) 7 is viewed as part of a process of population dispersal associated with both the ancestors of the later Neanderthals in Europe and anatomically modern humans in Africa (Foley & Lahr 1997).

After the riches offered by the Cradle sites and Makapansgat, southern Africa's Middle Pleistocene fossil record is comparatively poor. Early Middle Pleistocene fossil evidence suggests an archaic appearance and fossils are often assigned to *H. heidelbergensis* and *H. sapiens rhodesiensis* (Rightmire 1976). Modern looking remains, primarily from Border Cave (KwaZulu-Natal) and Klasies River Mouth (Eastern Cape) raised the possibility that anatomically modern humans had, by 120kya, originated south of the Sahara before spreading to other parts of the world (Brauer 1982; Stringer 1985). Subsequent studies of modern DNA indicated that African populations are genetically more diverse and probably older than those elsewhere (Cann *et al.* 1994). Combined, the fossil and genetic evidence underpins the so-called *Out of Africa 2* model (arguing that gene flow and natural selection led regional hominin populations along distinct evolutionary trajectories after *Homo*'s expansion from Africa in the Lower Pleistocene *Out of Africa 1* model) of modern human origins and the continuing debate as to whether it should be preferred to its *Multiregional* alternative (arguing that modern humans evolved more or less simultaneously right across the Old World) (Mellars & Stringer 1989; Aitken *et al.* 1993; Nitecki & Nitecki 1994).

Persuasive evidence of ritual activity or bodily decoration is evidenced by the widespread presence of red ochre at particularly MSA 2 sites (after Volman's 1984 MSA 1-4 model; Hensilwood & Sealy 1997), while evidence from Lion Cave, Swaziland, indicates that specularite may have been mined as early as 100kya (Beaumont 1973). Evidence for symbolic behavioral activity is largely absent; no evidence for rock art or formal burial practices exists.

2.3) The Later Stone Age

Artefacts characteristic of the Later Stone Age (LSA) appear in the archaeological record from 40/27-23kya and incorporates microlithic as well as macrolithic assemblages. Artefacts were produced by modern *H. sapien* or *H. sapien sapien*, who subsisted on a hunter-gatherer way of life (Deacon 1984; Mitchell 2002).

According to Deacon (1984) the LSA can temporally be divided into 4 broad units directly associated with climatic, technological and subsistence changes:

1. Late Pleistocene microlithic assemblages (40-12kya);
2. Terminal Pleistocene / early Holocene non-microlithic assemblages (12-8kya);
3. Holocene microlithic assemblages (8kya to the Historic Period); and
4. Holocene assemblages with pottery (2kya to the Historic Period) closely associated with the influx of pastoralist communities into South Africa (Mitchell 2002).

Elements of material culture characteristic of the LSA reflect modern behavior. Deacon (1984) summarizes these as:

1. Symbolic and representational art (paintings and engravings);
2. Items of personal adornment such as decorated ostrich eggshell, decorated bone tools and beads, pendants and amulets of ostrich eggshell, marine and freshwater shells;
3. Specialized hunting and fishing equipment in the form of bows and arrows, fish hooks and sinkers;
4. A greater variety of specialized tools including bone needles and awls and bone skin-working tools;
5. Specialized food gathering tools and containers such as bored stone digging stick weights, carrying bags of leather and netting, ostrich eggshell water containers, tortoiseshell bowls and scoops and later pottery and stone bowls;
6. Formal burial of the dead in graves (sometimes covered with painted stones or grindstones and accompanied by grave goods);
7. The miniaturization of selected stone tools linked to the practice of hafting for composite tools production; and
8. A characteristic range of specialized tools designed for making some of the items listed above.

➤ Rock Art

Rock Art is one of the most visible and informative components of South Africa's archaeological record. Research into LSA ethnography (as KhoiSan history) has revolutionized our understanding of both painted and engraved (petroglyph) images, resulting in a paradigm shift in Stone Age archaeology (Deacon & Dowson 2001). Paintings are concentrated in the Drakensberg / Maluti mountains, the eastern Free State, the Cape Fold Mountains, the Waterberg Plateau and the Soutpansberg mountains. Engravings on the other hand are found throughout the Karoo, the western Free State and North-West Province (Mitchell 2002). Both forms of LSA art drew upon a common stock of motifs, derived from widely shared beliefs and include a restricted range of naturalistically depicted animals, geometric imagery, human body postures and non-realistic combinations of human and animal figures (anthropomorphic figurines). LSA Rock Art is closely associated with spiritual or magical significance (Lewis-Williams & Dowson 1999).

Aside from LSA or KhoiSan Rock Art, thus art produced by both hunter-gatherer and pastoralist and agro-pastoralist groups, Rock Art produced by Iron Age populations are known to be present towards the north of the country.

➤ Shell Middens ('Strandloper' Cultures)

South Africa's nearly 3,000km coastline is dotted by thousands of shell middens, situated between the high water mark and approximately 5km inland, bearing witness to long-term exploitation of shellfish mainly over the past 12,000 years. These LSA shell middens are easily distinguishable from natural accumulations of shells and deposits can include bones of animals eaten such as shellfish, turtles and seabirds, crustaceans like crabs and crayfish and marine mammal remains of seals, dolphins and occasionally whales. Artefacts and hearth and cooking remains are often found in shell midden deposits. Evidence exist that fish were speared, collected by hand, reed baskets and by means of stone fish traps in tidal pools (Mitchell 2002).

Shell midden remains were in the past erroneously assigned to 'Strandloper cultures'. Deacon & Deacon (1999) explain that 'no biological or cultural group had exclusive rights to coastal resources.' Some LSA groups visited the coast periodically while others stayed year round and it is misleading to call them all by the same name. Two primary sources of archaeological enquiry serves to shed more light on the lifestyles of people who accumulated shell middens, one being the

analysis of food remains in the middens itself and the other being the analysis of LSA human skeletal remains of people buried either in shell middens or within reasonable proximity to the coast.

Shell middens vary in character ranging from large sites tens of meters in extent and with considerable depositional depth to fairly small ephemeral collections, easily exposed and destroyed by shifting dune action. Shell middens are also found inland, along rivers where fresh water mussels occur. These middens are often fairly small and less common; in the Eastern Cape often dated to within the past 3,000 years (Deacon & Deacon 1999).

In addition shell middens are not exclusively assigned to LSA cultures; shellfish were exploited during the Last Interglacial, indicating that the practice was most probably continuous for the past 120,000 years (MSA shell middens). Along the coast of KwaZulu-Natal evidence exist for the exploitation of marine food resources by Iron Age communities. These shell middens are easily distinguished from Stone Age middens by particularly rich, often decorated ceramic artefact content. Colonial Period shell middens are quite rare and extremely ephemeral in character; primarily the result of European shipwreck survivors and reported on along the coast of KwaZulu-Natal and the Transkei, Eastern Cape.

3) The Iron Age

For close to 2 millennia people combining cereal agriculture with stock keeping have occupied most of southern Africa's summer rainfall zone. The rapid spread of farming, distinctive ceramics and metallurgy is understood as the expansion of a Bantu-speaking population, in archaeological terms referred to as the Iron Age.

3.1) The Early Iron Age

Ceramic typology is central to current discussions of the expansion of iron using farming communities. The most widely used approach is that of Huffman (1980), who employs a multidimensional analysis (vessel profile, decoration layout and motif) to reconstruct different ceramic types. Huffman (1998) argues that ceramics can be used to trace the movements of people, though not necessarily of specific social or political groupings. Huffman's Urewe Tradition coincides largely with Phillipson's (1977) Eastern Stream. A combined Urewe Tradition / Eastern Stream model for the Early Iron Age can be summarized as:

1. The Kwale branch (extending along the coast from Kenya to KwaZulu-Natal);
2. The Nkope branch (located inland and reaching from southern Tanzania through Malawi and eastern Zambia into Zimbabwe); and
3. The Kalundu branch (stretching from Angola through western Zambia, Botswana and Zimbabwe into South Africa).

In southern Africa, recent work distinguishes two phases of the Kwale branch: The earlier Silver Leaves facies (250-430AD) occurring as far south as the Northern Province. The later expression or Mzonjani facies (420-580AD) occurs in the Northern Province as well as along the KwaZulu-Natal coastal belt (Huffman 1998). Since the Silver Leaves facies is only slightly younger than the Kwale type site in Kenya, very rapid movement along the coast, perhaps partly by boat, is inferred (Klapwijk 1974). Subsequently (550-650AD) people making Mzonjani derived ceramics settled more widely in the interior of South Africa.

Assemblages attributable to the Nkope branch appear south of the Zambezi but north of South Africa from the 5th Century. Ziwa represents an early facies, with Gokomere deriving jointly from Ziwa and Bambata. A subsequent phase is represented by the Zhizo facies of the Shashe-Limpopo basin, and by Taukome (Huffman 1994). Related sites occur in the Kruger National Park (Meyer 1988). Zhizo (7th – 10th Century) is ancestral to the Toutswe tradition which persisted in eastern Botswana into the 13th Century.

Kalundu origins need further investigation; its subsequent development is however better understood. A post Bambata phase is represented by the 5th – 7th Century sites of Happy Rest, Klein Africa and Maunatlana in the Northern Province and Mpumalanga (Prinsloo 1974, 1989). Later phases are present at the Lydenburg Heads site (Whitelaw & Moon 1996) and by the succession of Mzuluzi, Ndongonwane and Ntshekane in KwaZulu-Natal (7th – 10th Centuries) (Prins & Grainger 1993). Later Kalundu facies include Klingbeil and Eiland in the northern part of the country (Evers 1980) with Kgotolwe being a lowveld variant in Mpumalanga (10th – 12th Century). Broadhurst and other sites indicate a still later survival in Botswana (Campbell 1991).

Despite the importance accorded to iron agricultural implements in expanding the spread of farming and frequent finds of production debris, metal objects are rare. Metal techniques were simple, with no particular sign of casting, wire drawing or hot working. Jewelry (bangles, beads, pendants etc.) constitute by far the largest number of finds but arrows, adzes, chisels, points and spatulae are known (Miller 1996).

Early Iron Age people were limited to the Miombo and Savannah biomes; excluded from much of the continent's western half by aridity and confined in the south during the 1st millennium to bushveld areas of the old Transvaal. Declining summer rainfall restricted occupation to a diminishing belt close to the East Coast and north of S33° (Maggs 1994); sites such as Canasta Place (800AD), Eastern Cape, mark the southern-most limit of Early Iron Age settlement (Nogwaza 1994).

➤ The Central Cattle Pattern

The Central Cattle Pattern (CCP) was the main cognitive pattern since the Early Iron Age (Huffman 1986). The system can be summarized as opposition between male pastoralism and female agriculture; ancestors and descendants; rulers and subjects; and men and women. Cattle served as the primary means of transaction; they represented symbols exchanged for the fertility of wives, legitimacy of children and appeasement of ancestors. Cattle were also used as tribute to rulers confirming sub-ordination and redistribution as loan cattle by the ruler to gain political support. Cattle represented healing and fertilizing qualities (Huffman 1998; Kuper 1980).

This cognitive and conceptual structure underlies all cultural behavior, including the placement of features in a settlement. The oppositions of male and female, pastoralism and agriculture, ancestors and descendants, rulers and subjects, cool and hot are represented in spatial oppositions, either concentric or diametric (Huffman 1986).

A typical CCP village comprise of a central cattle enclosure (byre) where men are buried. The *Kgotla* (men's meeting place / court) is situated adjacent to the cattle enclosure. Surrounding the enclosure is an arc of houses, occupied according to seniority. Around the outer perimeter of the houses is an arc of granaries where women keep their pots and grinding stones (Huffman 1986). The model varies per ethnic group which helps to distinguish ethnicity throughout the Iron Age, but more studies are required to recognize the patterns.

3.2) The Middle Iron Age

The hiatus of South African Middle Iron Age activity was centered in the Shashe-Limpopo Valley and characterized by the 5-tier hierarchical Mapungubwe State spanning some 30,000km². By the 1st millennium ivory and skins were already exported overseas, with sites like Sofala and Chibueni, Mosambique, interfacing between interior and transoceanic traders. Exotic glass beads, cloth and Middle Eastern ceramics present at southern African sites mark the beginning of the regions incorporation into the expanding economic system that, partly tied together with maritime trading links across the Indian Ocean, increasingly united Africa, Asia and Europe long before Da Gama or Columbus (Eloff & Meyer 1981; Meyer 1998).

Occupation was initially focused at Bambandanyalo and K2. The Bambandanyalo main midden (1030-1220AD) stands out above the surrounding area, reaching more than 6m in places and covering more than 8ha the site may have housed as many as 2,000 people (Meyer 1998). The CCP was not strictly followed; whether this is ideologically significant or merely a reflection of local topography remains unclear. The midden, the size of which may reflect the status of the settlement's ruler, engulfed the byre around 1060-1080AD, necessitating relocation of the cattle previously kept there. The re-organization of space and worldview implied suggests profound social changes even before the sites' abandonment in the early 13th century, when the focus of occupation moved to Mapungubwe Hill, 1 km away (Huffman 1998).

Excavations at Mapungubwe Hill, though only occupied for a few decades (1220-1290AD), yielded a deep succession of gravel floors and house debris (Eloff & Meyer 1981). Huffman (1998) suggests that the suddenness with which Mapungubwe was occupied may imply a deliberate decision to give spatial expression to a new social order in which leaders physically removed themselves from ordinary people by moving onto more inaccessible, higher elevations behind the stone walls demarcating elite residential areas. Social and settlement changes speak of considerable centralization of power and perhaps the elaboration of new ways of linking leaders and subjects.

At Bambandanyalo and Mapungubwe elite burial grave goods include copper, bone, ivory and golden ornaments and beads. Social significance of cattle is reinforced by their importance among the many human and animal ceramic figurines and at least 6 'beast burials' (Meyer 1998).

Today the drought prone Shashe-Limpopo Valley receives less than 350mm of rainfall per annum, making cereal cultivation virtually impossible. The shift to drier conditions in the late 1200's across the Shashe-Limpopo basin and the eastern Kalahari may have been pivotal in the break-up of the Mapungubwe polity, the collapse of Botswana's Toutswe tradition and the emergence of Great Zimbabwe (1220-1550AD), southern Africa's best known and largest (720ha) archaeological site (Meyer 1998).

South of the Limpopo and north of the Soutpansberg, Mapungubwe derived communities survived into the 14th Century, contemporary with the establishment of Sotho-speaking makers of Maloko pottery.

3.3) The Later Iron Age

South African farming communities of the 2nd millennium experienced increased specialization of production and exchange, the development of more nucleated settlement patterns and growing political centralization, albeit not to the same extent as those participating in the Zimbabwe tradition. However, together they form the background to the cataclysmic events of the late 18th / early 19th Century *Mfecane* (Mitchell 2002).

Archaeological evidence of settlement pattern, social organization and ritual practice often differ from those recorded ethnographically. The Moloko ceramic tradition seems to be ancestral to modern Sotho-Tswana speakers (Evers 1980) and from about 1,100AD a second tradition, the Blackburn tradition, appears along South Africa's eastern coastline. Blackburn produced mostly undecorated pottery (Davies 1971), while Mpambanyoni assemblages, reaching as far south as Transkei, includes examples of rim notching, incised lines and burnished ochre slip (Robey 1980). At present, no contemporary farming sites are known further inland in KwaZulu-Natal or the Eastern Cape.

Huffman (1989) argues that similarities between Blackburn and early Maloko wares imply a related origin, presumably in the Chifumbaze of Zambia or the Ivuna of Tanzania, which contains a range of ceramic attributes important in the Blackburn as well as beehive grass huts similar to those made by the Nguni. This is one of the few suggestions of contact between Sotho-Tswana and Nguni speakers on the one hand and farming communities who, if Huffman is correct, were already long established south of the Limpopo. Both ethnographic and archaeological data demonstrate that Sotho-Tswana and Nguni are patrilineal and organize their settlements according to the CCP (Kuper 1980).

From 1,300AD there is increasing evidence for the beginning of agro-pastoralist expansion considerably beyond the area of previous occupation. It is also to this time that the genealogies of several contemporary Bantu speaking groups can be traced (Wilson & Thompson 1969). Associated with this expansion was the regular employment of stone, rather than wood, as building material, an adaptation that has greatly facilitated the discovery and identification of settlements. Maggs (1976) describes 4 basic settlement types all characterized by the use of semi weathered dolomite to produce hard binding *daga* for house floors and a wall building tradition employing larger more regular stones for the inner and outer faces and smaller rubble for the infill. As with the more dispersed homesteads of KwaZulu-Natal and the Eastern Cape, sites tend to be in locally elevated situations, reflecting a deep seated Sotho and Nguni preference for benign higher places rather than supernaturally dangerous riverside localities; another important contrast to both 1st millennium (Maggs 1976) and later Zulu Kingdom settlement patterns (Hall & Maggs 1979).

The lack of evidence for iron production in the interior and eastern part of South Africa emphasize exchange relationships between various groups and associated more centralized polities. By the 19th Century iron production in KwaZulu-Natal was concentrated in particular clans and lineages and associated with a range of social and religious taboos (Maggs 1992). South of Durban comparatively few smelting sites are known (Whitelaw 1991), a trend even more apparent in Transkei (Feely 1987). However, metal remained the most important and archaeologically evident item traded between later farming communities. (Other recorded trade items include glass and ostrich eggshell beads; Indian Ocean seashells; siltstone pipes; *dagga*, and later on tobacco; pigments including ochre, graphite and specularite; hides and salt.)

Rising polity settlements are particularly evident in the north of the country and dated to the 17th Century, including Molokwane, capital of the Bakwena chiefdom (Pistorius 1994) and Kaditshwene, capital of a major section of the Hurutshe, whose population of 20,000 in 1820 almost equals contemporary Cape Town in size (Boeyens 2000). The agglomeration of Tswana settlements in the north of the country was fuelled by both population growth and conflict over access to elephant herds for ivory and long distance trade with the East Coast. During this period ceramic decoration became blander and more standardized than the earlier elaborate decoration that included red ochre and graphite coloring.

The *Mfecane* refers to the wars and population movements of the early 19th Century which culminated in the establishment of the Zulu Kingdom and came to affect much of the interior, even beyond the Zambezi: The late 18th Century was marked by increasing demands for ivory (and slaves) on the part of European traders at Delagoa Bay; as many as 50 tons of ivory were exported annually from 1750-1790. As elephant populations declined, competition increased both for them and for the post 1790 supply of food to European and American whalers calling at Delagoa Bay (Smith 1970). Cattle raiding, conflict over land and changes in climatic and subsistence strategies characterized much of the cultural landscape of the time.

Competition for access to overseas trade encouraged some leaders to replace locally organized circumcision schools and age-sets with more permanently maintained military regiments. These were now used to gain access through warfare to land, cattle and stored food. By 1810 three groups, the Mthethwa, Ndwandwe and Ngwane dominated northern KwaZulu-Natal (Wright 1995). The Mthethwa paramountcy was undermined by the killing of its leader Dingiswayo in circa 1818, which led to a brief period of Ndwandwe dominance. In consequence one of Dingiswayo's former tributaries, Shaka, established often forceful alliances with chiefdoms further south. Shaka's Zulu dominated coalition resisted the Ndwandwe who in return fled to Mozambique. As the Zulu polity expanded it consolidated its control over large areas, incorporating many communities into it. Others sought refuge from political instability by moving south of the Thukela River, precipitating a further *domino effect* as far as the Cape Colony's eastern border (Wright 1995).

4) The Colonial Period

In the 15th Century Admiral Zheng He and his subordinates impressed the power of the Ming Dynasty rulers in a series of voyages as far afield as Java, Sri Lanka, southern Arabia and along the East African coast, collecting exotic animals *en route*. But nothing more came of his expeditions and China never pursued opportunities for trade or colonization (Mote 1991).

Portuguese maritime expansion began around the time of Zheng He's voyages; motivated by a desire to establish a sea route to the riches of the Far East. By 1485 Diogo Cao had reached Cape Cross, 3 years later Bartolomeu Dias rounded the Cape of Good Hope and less than a decade later Vasco da Gama called at several places along South Africa's coast, trading with Khoekhoen (Khoi) at Mossel Bay before reaching Mozambique and crossing the ocean to India. His voyage initiated subsequent Portuguese bases from China to Iraq. In Africa interest was focused on seizing important coastal trading towns such as Sofala and gaining access to the gold of Zimbabwe. Following the 1510 Portuguese-Khoekhoen battle at Table Bay, in which the viceroy of India was killed, Portuguese ships ceased to call along the South African coast (Elphick 1985).

A number of shipwrecks, primarily along the eastern coast attest to Portuguese activity including the Sao Joao, wrecked in 1552 near Port Edward and the Sao Bento, destroyed in 1554 off the Transkei coast. Survivors' accounts provided the 1st detailed information on Africa's inhabitants (Auret & Maggs 1982).

By the late 1500's Portuguese supremacy of the Indian Ocean was threatened. From 1591 numerous Dutch and English ships called at Table Bay and in 1652 the Dutch East India Company (VOC) established a permanent base, with the intent to provide fresh food and water to VOC ships. In an attempt to improve the food supply a few settlers (free burghers) were allowed to establish farms. The establishment of an intensive mixed farming economy failed due to shortages of capital and labor, and free burghers turned to wheat cultivation and livestock farming. While the population grew slowly the area of settlement expanded rapidly with new administrative centers established at Stellenbosch (1676), Swellendam (1743) and Graaf-Reinet (1785). By the 1960's the Colony's frontier was too long to be effectively policed by VOC officials (Elphick 1985).

From the 1700's many settlers expanded inland over the Cape Fold Mountain Belt. The high cost of overland transport constrained the ability to sell their produce while settlement of the interior was increasingly made difficult by resident KhoiSan groups, contributing due to a lack of VOC military support to growing Company opposition in the years before British control of the Cape (1795 / 1806) (Davenport & Saunders 2000).

In 1820 a major British settlement was implanted on the eastern frontier of the Cape Colony, resulting in large numbers of the community moving into the interior, initially to KwaZulu-Natal, and then after Britain annexed Natal (1843), further into the interior to beyond the Vaal River. Disruptions of the *Mfecane* eased their takeover of African lands and the Boers (farmers) established several Republics. A few years later the 2nd South African War saw both the South African and Orange Free State Republics annexed by Britain, a move largely motivated by British desire to control the goldfields of the Witwatersrand. With adjacent regions of the sub-continent also falling, directly or indirectly, under British rule and German colonization of Namibia, European control of the whole of southern Africa was firmly established before the 1st World War (Davenport & Saunders 2000).

➤ Xhosa Iron Age Cultures meets Colonists in the Eastern Cape

From the late 1600's conflict between migrants from the Cape (predominantly Boers) and Xhosa people in the region of the Fish River were strife, ultimately resulting in a series of 9 Frontier Wars (1702-1878) (Milton 1983). Both cultures were heavily based and reliant on agriculture and cattle farming. As more Cape

migrants, and later settlers from Britain (1820) and elsewhere arrived, population pressures and competition over land, cattle and good grazing became intense. Cattle raiding became endemic on all sides, with retaliatory raids launched in response. As missionaries arrived with evangelical messages, confrontations with hostile chiefs who saw them as undermining traditional Xhosa ways of life resulted in conflicts which flared into wars.

As pressures between the European settlers and the Xhosa grew, settlers organized themselves into local militia, counteracted by Xhosa warring skills: But both sides were limited by the demands of seasonal farming and the need for labor during harvest. Wars between the Boers and the Xhosa resulted in shifting borders, from the Fish to the Sundays River, but it was only after the British annexed the Cape in 1806 that authorities turned their attention to the Eastern regions and petitions by the settlers about Xhosa raids. British expeditions, in particular under Colonel John Graham in 1811 and later Harry Smith in 1834, were sent not only to secure the frontier against the Xhosa, but also to impose British authority on the settlers, with the aim to establish a permanent British presence. Military forts were built and permanently manned. Over time the British came to dominate the area both militarily and through occupation with the introduction of British settlers. The imposition of British authority led to confrontations not only with the Xhosa but also with disaffected Boers and other settlers, and other native groups such as the Khoikhoi, the Griqua and the Mpondo. The frontier wars continued over a period of about 150 years; from the 1st arrival of the Cape settlers, and with the intervention of the British military ultimately ending in the subjugation of the Xhosa people. Fighting ended on the Eastern Cape frontier in June 1878 with the annexation of the western areas of the Transkei and administration under the authority of the Cape Colony (Milton 1983).

➤ The Industrial Revolution

The Industrial Revolution refers roughly to the period between the 18th - 19th Centuries, typified by major changes in agriculture, manufacturing, mining, transport, and technology. Changing industry had a profound effect on socio-economic and socio-cultural conditions across the world: The Industrial Revolution marks a major turning point in human history; almost every aspect of daily life was eventually influenced in some way. Average income and population size began to exhibit unprecedented growth; in the two centuries following 1800 the world's population increased over 6-fold, associated with increasing urbanization and demand of resources. Starting in the latter part of the 18th century, the transition from manual labor towards machine-based manufacturing changed the face of economic activity; including the mechanization of the textile industries, the development of iron-making techniques and the increased use of refined coal. Trade expansion was enabled by the introduction of canals, improved roads and railways. The introduction of steam power fuelled primarily by coal and powered machinery was underpinned by dramatic increases in production capacity. The development of all-metal machine tools in the first two decades of the 19th century facilitated the manufacture of more production machines in other industries (More 2000).

Effects of the Industrial Revolution were widespread across the world, with its enormous impact of change on society, a process that continues today as 'industrialization'.

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Heritage Impact Assessment (HIA) - 'Offer to Purchase' Property, Portions of Erf 7540, Erf 7541 and Erf 7538, Corner of Quinn and Naude Streets, Kimberley, Sol Plaatje Municipality, Northern Cape

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-internment / 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.