

**Archaeological Impact Assessment
Conradie BLMEP road linkages**

Prepared for

Cindy Postlethway
Heritage Consultant

March 2017



ACO Associates cc
Archaeology and Heritage Specialists

Prepared by
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Summary

ACO Associates CC was appointed by Cindy Postlethwayt, Heritage Consultant, to contribute the archaeological component to an HIA for the road aspects for the Conradie Better Living Model Exemplar Project (CBLMEP) which is situated on the site of the old Conradie Hospital. The concern of this project is the impact of the proposed traffic route which will link the site to Voortrekker Road, Maitland via Aerodrome Road through Maitland Cemetery.

Alternative 1 (“Quarter Link”): This proposal retains the northern section of the proposal, via a link from Forest Drive Extension, into the proposed development and linking with the currently planned alignment through the Jewish Cemetery, across Forest Drive Extension and the Northern railway line and into the Maitland Cemetery site, terminating in Voortrekker Road.

Alternative 2 (“Directional Ramp”): This proposal links directly between Forest Drive Extension and Voortrekker Road via a directional ramp, from a point on Forest Drive Extension to the east of the main access to the development, and linking with the Alternative 1 alignment at the bridge structure over the railway line.

Alternative 3 (“Elevated T”): This proposal provides a direct link between Forest Drive Extension and Voortrekker Road, in the form of an elevated tee junction opposite the railway 2 crossing. Ramps develop on either side of this point on Forest Drive Extension. .

In terms of archaeology all three options are considered satisfactory, however option 1 will impact negatively on the future expansion of the Jewish Cemetery.

No specific recommendations are made other than the precautionary actions needed in the event of an un-anticipated find.

- 1) Human remains can be found anywhere. Given that this specific area was populated in pre-colonial times, human remains are a possibility. In the event of human bone being encountered the find-site must be cordoned off immediately and Heritage Western Cape and SA Police Services informed. If it is determined that foul play is involved, the remains will be moved by SAPS. If the remains are deemed to be archaeological, an archaeologist must apply for an emergency permit and complete the removal.
- 2) Other finds of archaeological material (including ancient shipwrecks) are not expected, however in the event of an un-anticipated find, Heritage Western Cape and/or an archaeologist must be informed in order to inspect and mitigate the find.

Details of the specialist

This study has been undertaken by Tim Hart BA Hons, MA (ASAPA, APHP) of ACO Associates CC, archaeologists and heritage consultants.

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CURRICULUM VITAE

Name: Timothy James Graham Hart

Profession: Archaeologist

Date of Birth: 20/07/60

Parent Firm: ACO Associates

Position in Firm: Director

Years with Firm: 9

Years experience: 30 years

Nationality: South African

HDI Status: n/a

Education: Matriculated Rondebosch Boys High, awarded degrees BA (UCT) BA Hons (UCT) MA (UCT).

Professional Qualifications: Principal Investigator ASAPA, member of Association of Heritage Professionals (APHP)

Languages: Fully literate in English, good writing skills. Conversation in Afrikaans, mediocre writing skills, good reading skills. Some knowledge of Latin.

KEY QUALIFICATIONS

- Bachelor of Arts in Archaeology and Psychology
- BA Honours in archaeology
- MA in Archaeology
- Recipient of Frank Schwietzer Memorial Prize (UCT) for student excellence
- Professional member (no 50) Association of Southern African Professional Archaeologists (ASAPA)
- Principal Investigator, cultural resources management section (ASAPA)
- Professional member in specialist and generalist categories Association of Heritage Professionals (APHP)
- Committee Member Heritage Western Cape, Committee Member SAHRA
- Awarded Department of Arts and Culture and Sport award for best heritage study in 2014.

Some recent Project Experience with respect to large projects:

- Specialist Specialist consultant – Eskom's Kudu Integration project (identifying transmission line routes across Namaqualand)
- Specialist consultant – Eskom's Atantis Open Cycle Gas Turbine project, upgrade and power lines
- Specialaist consultant – Eskom's Mossel Bay Open Cycle Gas Turbine project, substations and power lines
- Specialist consultant – Eskoms proposed Omega sub-station
- Specialist consultant – Eskoms Nuclear 1 programme
- Specialist consultant – Eskoms PBMR programme
- Specialist consultant – Department of Water Affairs raising of Clanwilliam Dam project
- Specialist consultant to De Beers Namaqualand Mines (multiple projects since 1995)
- Specialist consultant – Saldanha Ore Handling Facility phase 2 upgrade
- Three years of involvement in Late Stone Age projects in the Central Great Karoo
- Wind Energy systems: Koekenaap, Hopefield, Darling, Vredendal, Bedford, Sutherland, Caledon
- Specialist consultant – Eskom nuclear 1
- Bantamsklip Nuclear 1 TX lines
- Koeberg Nuclear 1 TX lines
- Karoo uranium prospecting various sites
- HIA Houses of Parliament
- Proposed Ibhubesi gas project, West Coast of South Africa.

Experience

After graduating from UCT with my honours degree I joined the Southern Methodist University (SMU Dallas Texas) team undertaking Stone Age research in the Great Karoo. After working in the field for a year I registered for a Masters degree in pre-colonial archaeology at UCT with support from SMU. On completion of this degree in 1987 I commenced working for the ACO when it was based at UCT. This was the first unit of its kind in RSA.

In 1991 I took over management of the unit with David Halkett. We nursed the office through new legislation and were involved in setting up the professional association and assisting SAHRA with compiling regulations. The office developed a reputation for excellence in field skills with the result that ACO was contracted to provide field services for a number of research organisations, both local and international. Since 1987 in professional practise I have has been involved in a wide range of heritage related projects ranging from excavation of fossil and Stone Age sites to the conservation of historic buildings, places and industrial structures. To date the ACO Associates CC (of which I am co-director) has completed more than 1500 projects throughout the country ranging from minor assessments to participating as a specialist in a number of substantial EIA's as well as international research projects. Some of these projects are of more than 4 years duration

Together with my colleague Dave Halkett, I have been involved in heritage policy development, development of the CRM profession, the establishment of 2 professional bodies and development of professional practice standards. Notable projects I have been involved with are the development of a heritage management plan and ongoing annual mitigation for the De Beers Namaqualand Mines Division, heritage management for Namakwa Sands and other west coast and Northern Cape mining firms. Locally, I was responsible for the discovery of the "Battery Chavonnes" at the V&A Waterfront (now a conserved as a museum – venue for Da Vinci exhibition), the discovery of a massive paupers burial ground in Green Point (now with museum and memorial), the fossil deposit which is now the subject of a public display at the West Coast Fossil Park National Heritage Site as well as participating in the development of the Robben Island Museum World Heritage Site. I have teaching experience within a university setting and have given many public lectures on archaeology and general heritage related matters. I am presently running a NLF funded project to research the historic burial grounds of Green Point.

Academic Publications

Hart, T.J.G. 1987. Porterville survey. In Parkington, J & Hall, M.J. eds. Papers in the Prehistory of the Western Cape, South Africa. Oxford: BAR International Series 332.

- Sampson, C.G., Hart, T.J.G., Wallsmith, D.L. & Blagg, J.D. 1988. The Ceramic sequence in the upper Sea Cow Valley: Problems and implications. *South African Archaeological Bulletin* 149: 3-16.
- Plug, I. Bollong, C.A., Hart, T.J.G. & Sampson, C.G. 1994. Context and direct dating of pre-European livestock in the Upper Seacow River Valley. *Annals of the South African Museum, Cape Town*.
- Hart, T. & Halkett, D. 1994. Reports compiled by the Archaeology Contracts Office, University of Cape Town. Crossmend, HARG. University of Cape Town.
- Hart, T. & Halkett, D. 1994. The end of a legend? Crossmend, HARG. University of Cape Town.
- Hart, T. 2000. The Chavonnes Battery. *Aquapolis. Quarterly of the International Center for Cities on Water*. 3-4 2000.
- Hine, P, Sealy, J, Halkett, D and Hart, T. 2010. Antiquity of stone walled fish traps on the Cape Coast of South Africa. *The South African Archaeological Bulletin*. Vol. 65, No. 191 (JUNE 2010), pp. 35-44
- Klein, R.G., Avery, G., Cruz-Uribe, K., Halkett, D., Hart, T., Milo, R.G., Volman, T.P. 1999. Duinefontein 2: An Acheulean Site in the Western Cape Province of South Africa. *Journal of Human Evolution* 37, 153-190.
- Klein, R.G., Cruz-Uribe, K., Halkett, D., Hart, T., Parkington, J.E. 1999. Paleoenvironmental and human behavioral implications of the Boegoeberg 1 late Pleistocene hyena den, northern Cape province, South Africa. *Quaternary Research* 52, 393-403.
- Smith, A., Halkett, D., Hart, T. & Mütti, B. 2001. Spatial patterning, cultural identity and site integrity on open sites: evidence from Bloeddrift 23, a pre-colonial herder camp in the Richtersveld, Northern Cape Province, South Africa. *South African Archaeological Bulletin* 56 (173&174): 23-33.
- Smith, A., Halkett, D., Hart, T. & Mütti, B. 2001. Spatial patterning, cultural identity and site integrity on open sites: evidence from Bloeddrift 23, a pre-colonial herder camp in the Richtersveld, Northern Cape Province, South Africa. *South African Archaeological Bulletin* 56 (173&174): 23-33.
- Halkett, D., Hart, T., Yates, R., Volman, T.P., Parkington, J.E., Klein, R.J., Cruz-Uribe, K. & Avery, G. 2003. First excavation of intact Middle Stone Age layers at Ysterfontein, western Cape province, South Africa: implications for Middle Stone Age ecology. *Journal of Archaeological Science*

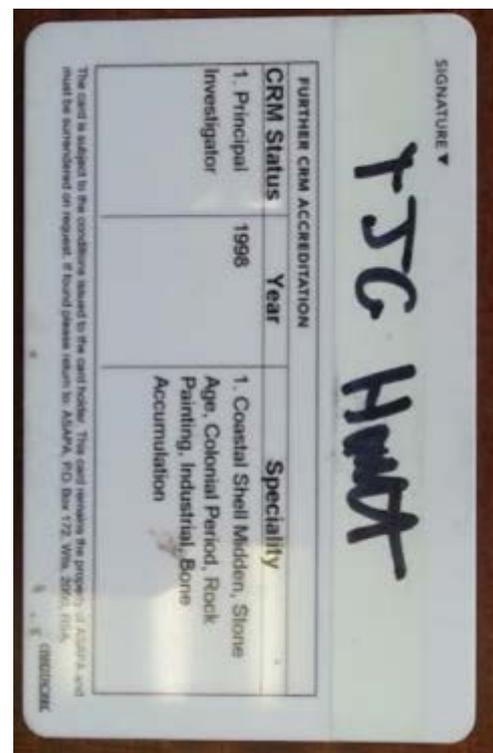
Cruz-Urbe, K., Klein, R.G., Avery, G., Avery, D.M., Halkett, D., Hart, T., Milo, R.G., Sampson, C.G. & Volman, T.P. 2003. Excavation of buried late Acheulean (mid-quaternary) land surfaces at Duinefontein 2, western Cape province, South Africa. *Journal of Archaeological Science* 30.

Parkington, JE. Poggenpoel, C. Halkett, D. & Hart, T. 2004 Initial observations from the Middle Stone Age coastal settlement in the Western Cape In Conard, N. Eds. *Settlement dynamics of the Middle Paleolithic and Middle Stone Age*. Tübingen: Kerns Verlag.

Orton, J. Hart, T. Halkett, D. 2005. Shell middens in Namaqualand: two later Stone Age sites at Rooiwalbaai, Northern Cape Province, South Africa. *South African Archaeological Bulletin*. Volume 60 No 181

G Dewar, D Halkett, T Hart, J Orton, J Sealy, 2006. Implications of a mass kill site of springbok (*Antidorcas marsupialis*) in South Africa: hunting practices, gender relations, and sharing in the Later Stone Age. *Journal of Archaeological Science* 33 (9), 1266-127

Finnegan, E. Hart, T and Halkett, D. 2011. The informal burial ground at Prestwich Street, Cape Town: Cultural and chronological indicators for the informal Cape underclass. *The South African Archaeological Bulletin* Vol. 66, No. 194 (DECEMBER 2011), pp. 136-148



Declaration of independence

PROJECT:

I, **Tim Hart**, as the appointed independent specialist hereby declare that I acted as the independent specialist in this application; and that I

- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- have and will not have no vested interest in the proposed activity proceeding;
- have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2010 (specifically in terms of regulation 17 of GN No. R. 543) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- have ensured that the names of all interested and affected parties that participated in terms of the specialist input/study were recorded in the register of interested and affected parties who participated in the public participation process;
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and

- am aware that a false declaration is an offence in terms of regulation 71 of GN No. R. 543.

Note: The terms of reference must be attached.

Signature of the specialist:

TJG Hunt.

Name of company:

ACO Associates cc

Date: 10 March 2017

GLOSSARY

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

Cultural landscape: *The combined works of people and natural processes as manifested in the form of a landscape*

Heritage: *That which is inherited and forms part of the National Estate (Historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999.*

National Estate: *The collective heritage assets of the Nation*

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

Structure (historic:) *Any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith. Protected structures are those which are over 60 years old.*

Acronyms

DEAT	Department of Environmental Affairs and Tourism
ESA	Early Stone Age
GPS	Global Positioning System
HIA	Heritage Impact Assessment
HWC	Heritage Western Cape
LSA	Late Stone Age
MSA	Middle Stone Age
NHRA	National Heritage Resources Act
SAHRA	South African Heritage Resources Agency

1 Introduction

ACO Associates CC was appointed by Cindy Postlethway, Heritage Consultant, to contribute the archaeological component to an HIA for the road aspects for the Conradie Better Living Model Exemplar Project (CBLMEP) which is situated on the site of the old Conradie Hospital. The concern of this project is the impact of the proposed traffic route which will link the site to Voortrekker Road, Maitland via Aerodrome Road through Maitland Cemetery. The surrounds of the Conradie site are thoroughly urbanised and developed including major infrastructure such as the central main railway line (Figure 1). The challenge has been to identify potential transport linkages with the existing road network to enhance traffic flow to and from the site.

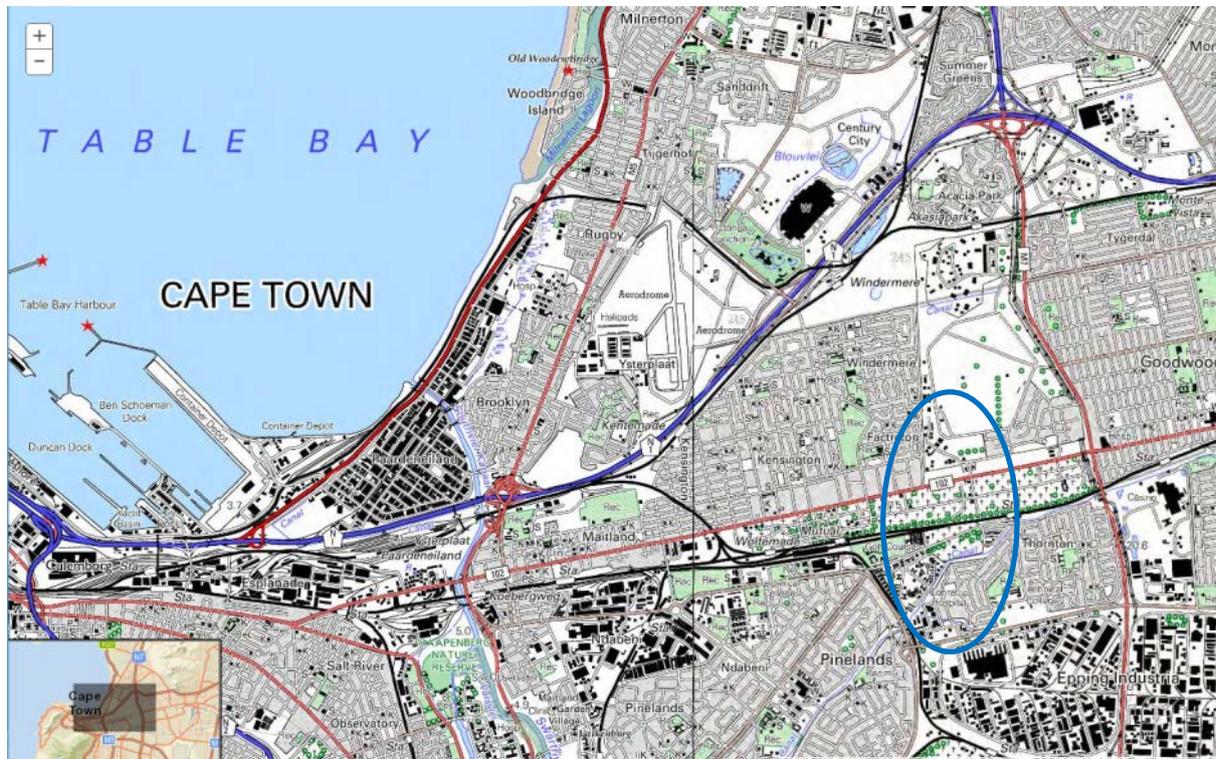


Figure 1 Location of the project area (excerpt from 1:50 00: Elsberg).

Three alternatives have been proposed. All of these will be elevated over the railway line where they cross Maitland Cemetery via Aerodrome Road. Aerodrome Road was an early access route across the cemetery to Wingfield Airport which served as both a civilian and military airport during the early part of the 20th century. Today it serves as an access point to Maitland Cemetery. The proposal is to use the full breadth of Aerodrome Road, however

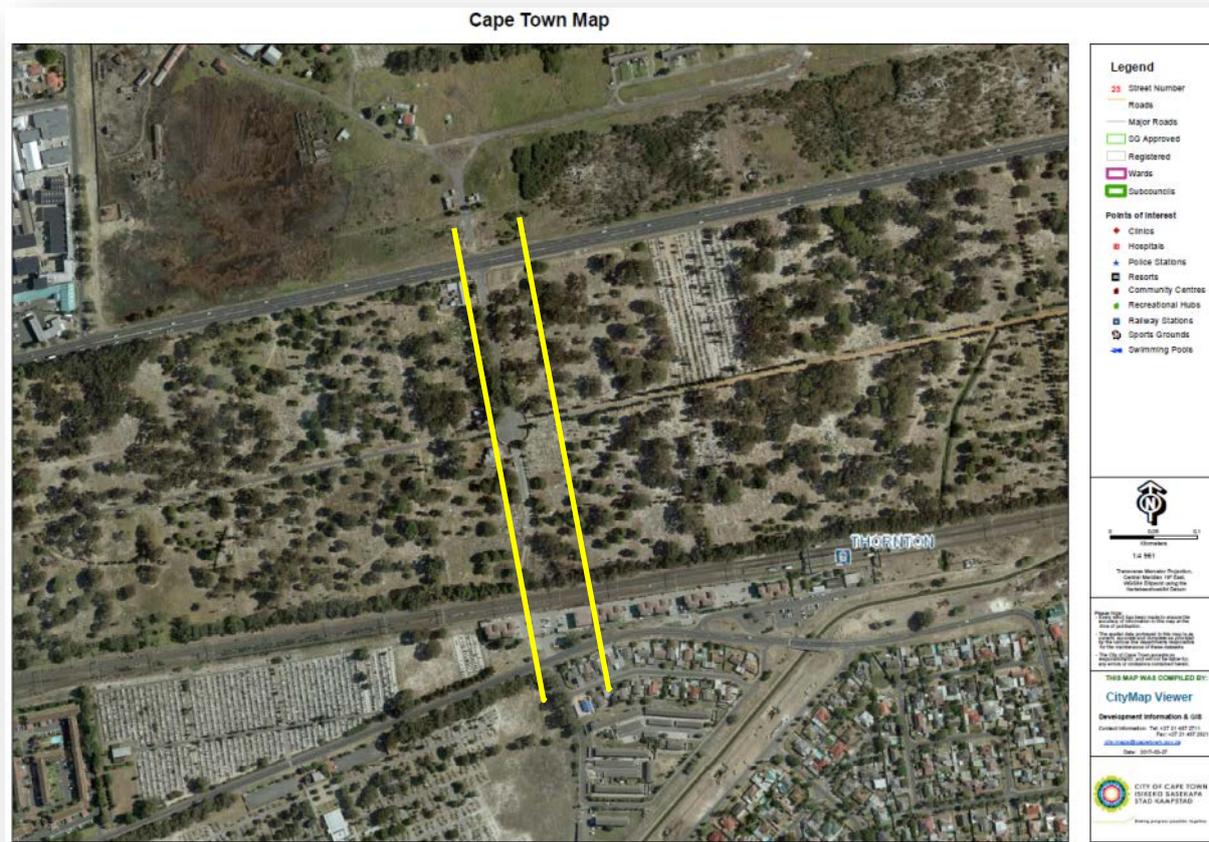


Figure 2 Aerodrome Road lies between the two yellow lines.

works will not encroach on any graves, the positions of which are well known to cemetery staff and are overtly visible.

1.1 The proposed alternatives (after HHO Africa 2017)

Alternative 1 (“Quarter Link”): This proposal (Figure 3) retains the northern section of the proposal, via a link from Forest Drive Extension, into the proposed development and linking with the currently planned alignment through the Jewish Cemetery, across Forest Drive Extension and the Northern railway line and into the Maitland Cemetery site, terminating in Voortrekker Road.

Alternative 2 (“Directional Ramp”): This proposal (Figure 4) links directly between Forest Drive Extension and Voortrekker Road via a directional ramp, from a point on Forest Drive Extension to the east of the main access to the development, and linking with the Alternative

1 alignment at the bridge structure over the railway line. Forest Drive Extension itself will remain at grade, with its east and west bound lanes shifting outwards to accommodate the ramp. This proposal eliminates the alignment of the portion of the link through the Jewish Cemetery (Pinelands 2).

Alternative 3 (“Elevated T”): This proposal (figure 5) similarly provides a direct link between Forest Drive Extension and Voortrekker Road, in the form of an elevated tee junction opposite the railway 2 crossing. Ramps develop on either side of this point on Forest Drive Extension, along which the east- and westbound lanes are (as with Alternative 2) accommodated alongside the ramp structures. It also does not extend into the Jewish Cemetery site to the south. The following study assesses the archaeological potential of the project area, and discusses the prehistoric and proto-colonial history.

2 Method

Given the extensive transformation of the project area indications are that archaeological issues are not a significant concern. The primary heritage resource that needs addressing in terms of the HIA are matters relating to cemeteries and the sense of place associated with them. Open land was identified in the immediate area of the Jewish cemetery adjacent to the Elsieskraal River. Almost all the other ground in the project area has been subject to extensive transformation and are not archaeologically sensitive. As is standard practise, desktop research has been undertaken, legislation which is applicable has been reviewed and included in the pages of this report. The project area has also been physically visited on two separate occasions. The first site inspection took place on 19 April 2016 during which time Aerodrome road was physically inspected. The second site visit took place in December 2016. This focussed on open land that was identified close to the Elsieskraal River within the confines of the Jewish Cemetery in Maitland. Both inspections were done by Tim Hart and Cindy Postlethwayt.

2.1 Restrictions

Generally the project area has many restrictions to visibility of archaeological material. It is highly transformed and mostly under tarmac or hard surface. The only un-utilised land was a small strip of land within the confines of the Jewish cemetery. Maitland cemetery is so full that almost all available space has been utilised, sometimes several times over.

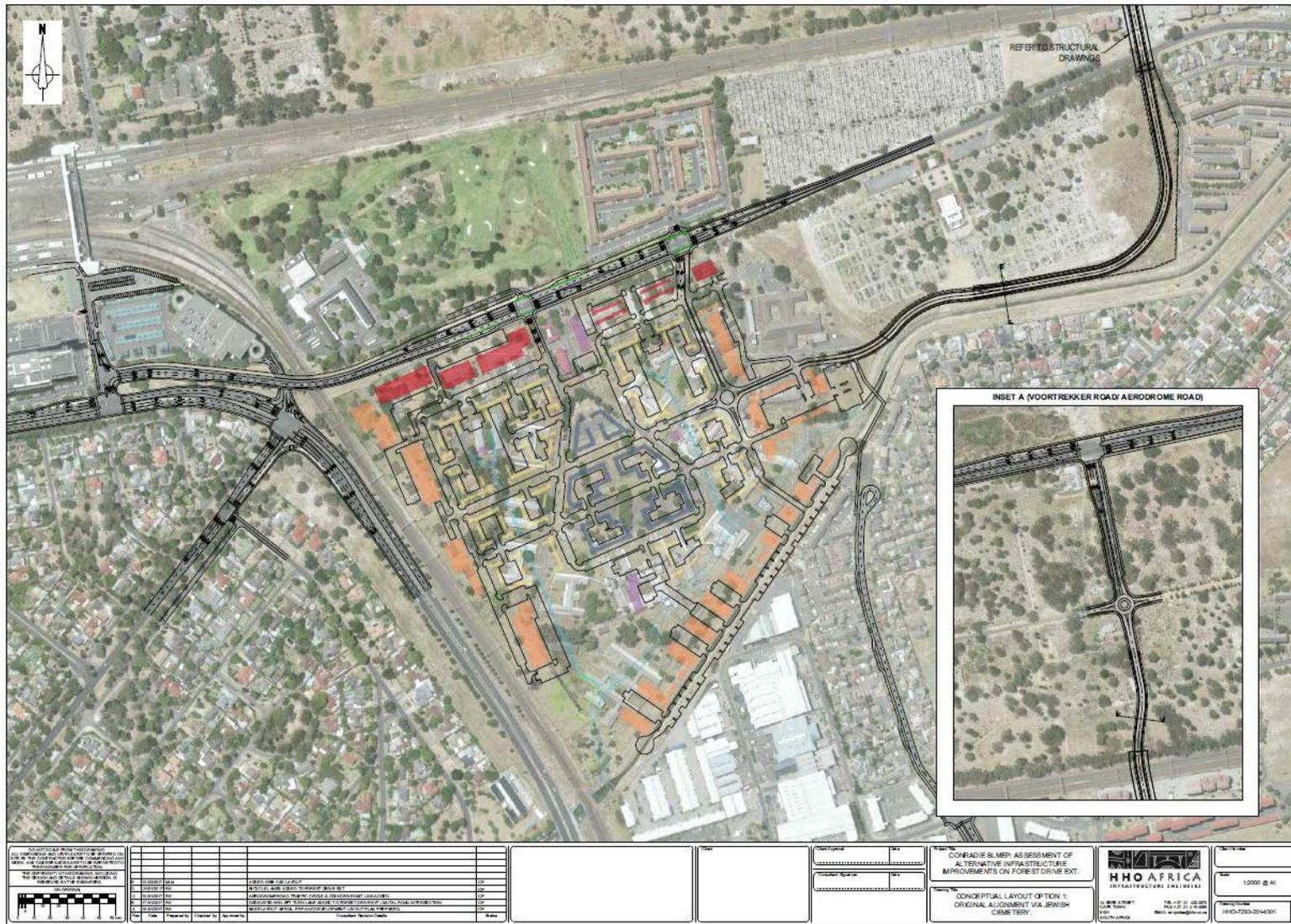


Figure 3 Alternative 1 which uses the edge of the Jewish Cemetery, thereafter crossing the railway line to Aerodrome Road

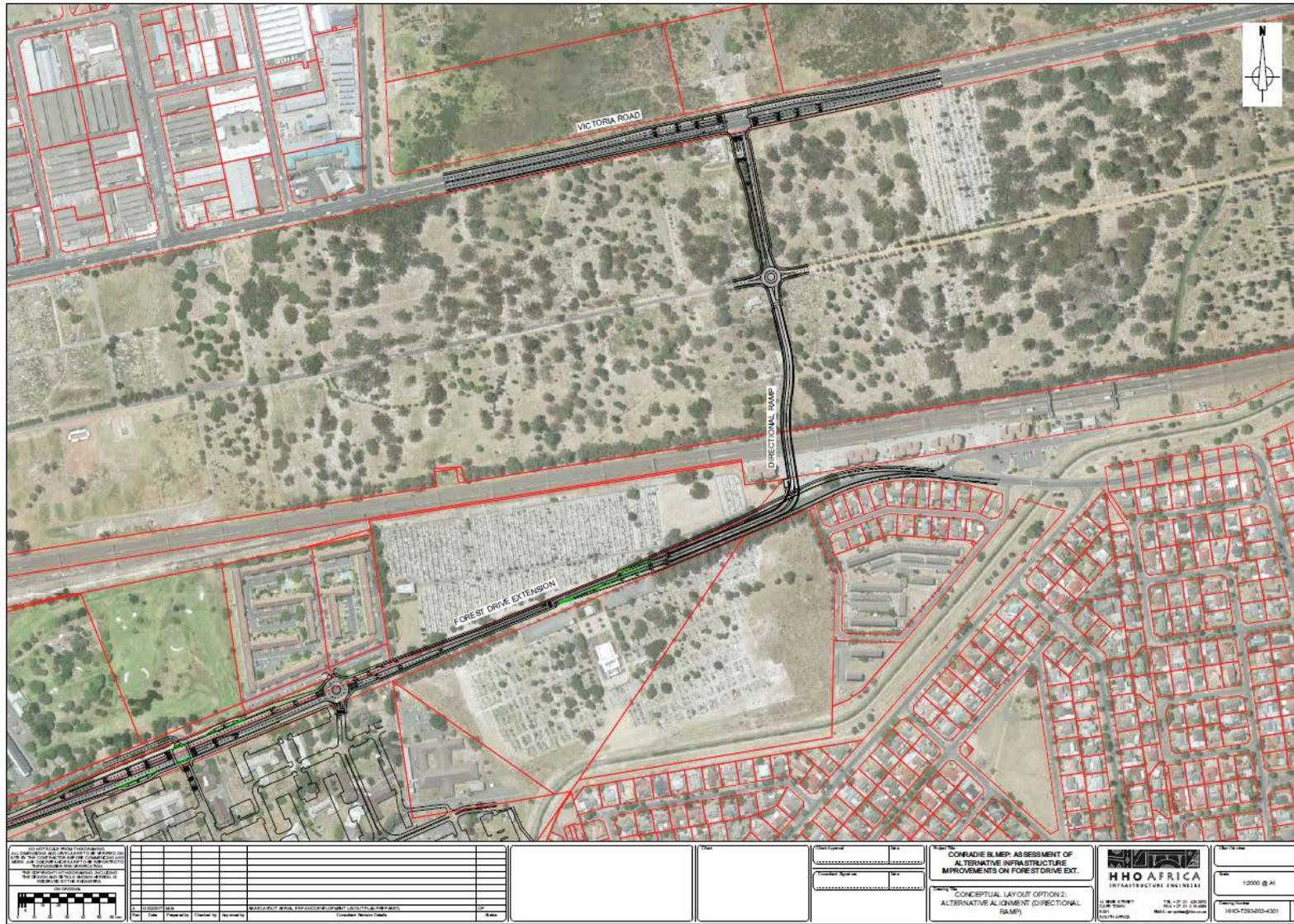


Figure 4 Alternative 2, off ramp from Forest Drive extension over the railway lines to Aerodrome Road.

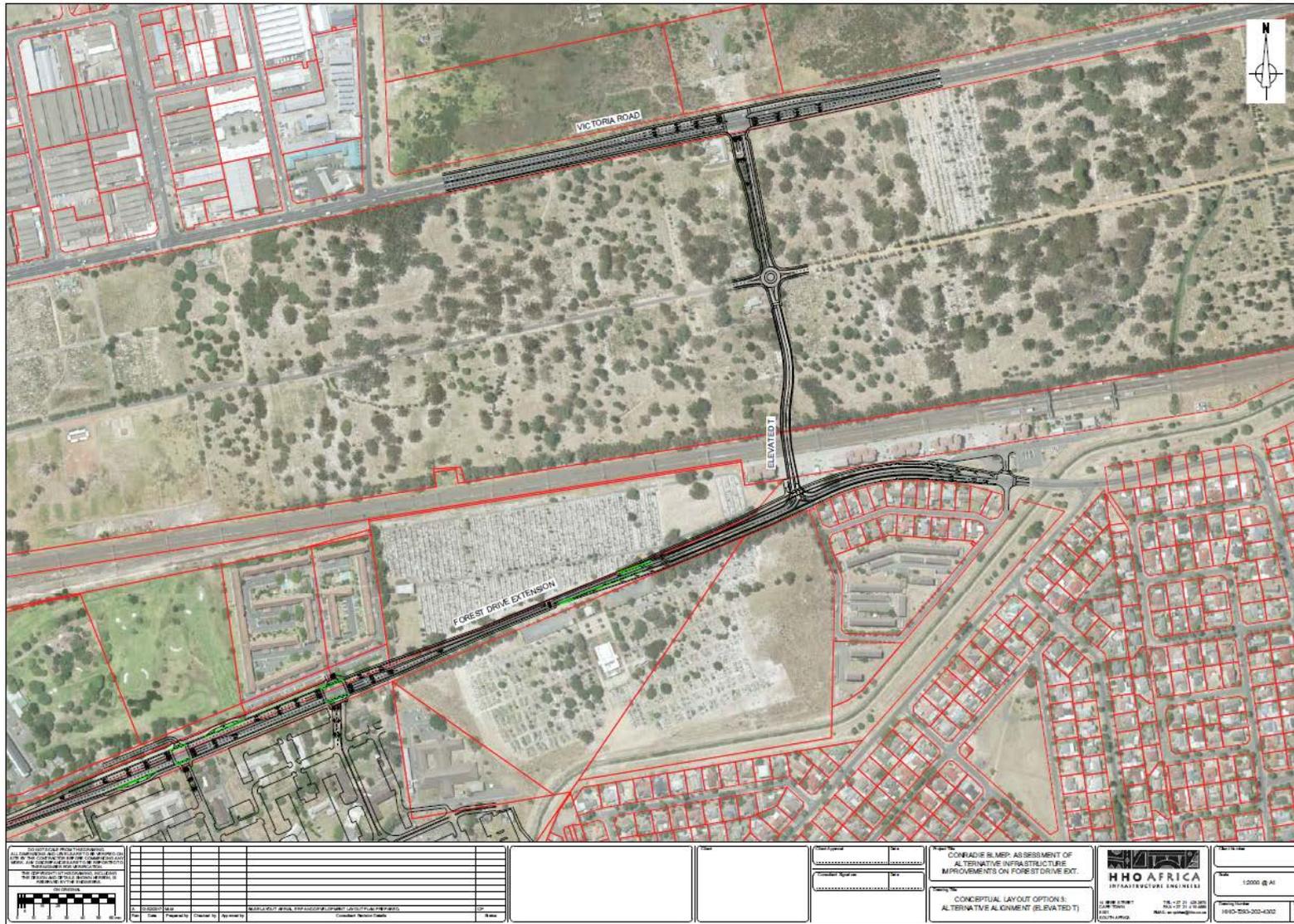


Figure 5 Alternative 3. An elevated "T" junction of which a branch crosses the railway to link with Aerodrome Road.

3 The historical context

The historic record indicates that a number of the Khoikhoi groups were quite wealthy in terms of the number of cattle they owned: evidently herds of several hundred to more than 1000 head were not unknown of. Farming and moving a herd of this size is no simple task. It requires a very good knowledge of the land, the seasonal availability of grazing and water resources. The Khoikhoi knew how to do this and would alternate the landscapes they used according to season and grazing quality. This is known as *transhumance* – an adaptive and generally well formulated strategy used by most pastoralist groups in the more arid areas of the world. In the Cape, this deep knowledge of the landscape and the seasons was the key to survival and prosperity.

The geology of the Cape is as highly varied as is the climate. The summers are relatively long and dry, becoming increasingly more so the further northwest one travels. While good winter rains often create a lush landscape, in summer only the most southern areas (Southern Cape and Peninsula) get occasional rain, as once in a while cold fronts in the South Atlantic clip the African landmass. These weather factors played an important role in how the Khoikhoi used the land as cattle need to drink at least once a day to survive. Hence cycling one's movements between rainfall areas would have been important (Smith 1984).

The Cape's unique geology means that in certain areas the soils contain the necessary trace elements to raise cattle and other areas where, no matter how good the grazing is, stock will in time get ill from lack of copper and molybdenum (Smith 1984, Hart 1984). The Table Mountain Sandstone derived soils of the Cape are depleted and do not contain the necessary elements for the maintenance of a good herd for a long period. In contrast, the shale derived soils of the Swartland and the granites of the Vredenberg Peninsula give rise to good grazing. In the past, it were these areas that carried the abundance of game, and are now used for wheat farming (Table Mountain Sandstone derived soils will not support more than 2-3 wheat harvests).

Smith (1984), in analysing the historic record, observed that major visits to Table Bay by powerful groups of Khoikhoi such as the Cochoqua took place almost exclusively in the summer months – records attest to huge herds of animals and people camping in the Salt River area. This was because if any rainfall was to be had at this time of year in the south west Cape, it would fall on the Peninsula. Thanks to the permanent aquifers under Table Mountain that supplied the Liesbeek River with water year round, the marshlands at the confluence of the Liesbeek, Salt and Black Rivers would have been extremely important for Khoikhoi herders, especially for those with large herds when they visited from the north west on their summer visits.

2 December 1652 "In the evening we perceived the whole country covered with fires, from which, as well as from Herry, we learnt that there are thousands of people hereabouts ..." (Moodie p20)

6 December 1652 "meanwhile observed that on the ascent of Table Mountain the pasture was everywhere crowded with cattle and sheep like grass on the fields." (Moodie p22)

7 December 1653 “The Saldaniers, who lay in thousands about Salt River with their cattle in countless numbers, having indeed grazed 2,000 sheep and cattle within half a cannon-shot of our fort.” (Moodie p22)

7 April 1654 “On advancing about 1,5 mile from the Fort, behind the mountain, saw several herds of cattle and sheep, and a little further a whole encampment of inhabitants, with women and children, about 100 in numbertheir camp, which consisted of 16 tolerably large dwellings, neatly disposed in a circle and enclosed with brushwood fastened together as a breastwork, with two openings or passages, for the cattle to be driven out and in ...” (Moodie p47)

24 November 1655 “Near and beyond the Redoubt Duynhoop (Duynhoop was close to the Salt River mouth), we found the country everywhere so full of cattle and sheep, as far as the wood, where our people lie, fully 3 mylen from this, and fully ½ myl broad, that we could hardly get along the road, and the cattle required to be constantly driven out of our way by the Hottentoots, otherwise it seemed impossible to get through; not only were the numbers of cattle impossible to be counted, but the same might be said of the number of herds of cattle; and it was just the same with the people, of whom we could see at one look around us, probably 5000 or 6000, young and old, for their curiosity to see us was such that we were so enclosed by them, that we could scarcely see over them from horseback; there were also 4 to 500 houses, rather large, and pitched in circles close to each other, within which the cattle are kept at night, the circles could scarcely be walked round in a half hour, and looked like regular camps.” (Moodie p76).

It is hypothesised that while van Riebeeck believed that these large groups came down south from Saldanha and further north, specifically to trade with the Dutch, this was not the case. It was just a leg of a seasonal round that had been practised since the Khoikhoi acquired cattle – possibly more than 1000 years ago. After fattening up their cattle on the greener pastures around the Peninsula’s permanent rivers, groups such as the Cochoqua from Saldanha would break camp after summer and return to the nutritious winter grazing of the Swartland and the Vredenberg Peninsula. These large groups of Khoikhoi had well trained riding and pack oxen, woven mat houses (*matjieshuise*) that could be quickly taken down and packed when the entire community moved to the next grazing area at short notice.

It was on the Ysterplaat Flats that anyone intent of entering the early Cape Colony would have to camp before entering the early Cape Colony. What is clear from the historic record is that a number of the Khoikhoi groups were wealthy in terms of the number of cattle they owned: evidently herds of several hundred to more than 1000 head were not unknown of. Farming and moving a herd of this size is no simple task. It requires a very good knowledge of the land, the seasonal availability of grazing and water resources. The Khoikhoi knew how to do this. They were not “nomadic” as described in many history books but would alternate the landscapes they used according to season and grazing quality. This is known as *transhumance* – an adaptive and generally well formulated strategy used by most pastoralist groups in the more arid areas of the world. In the Cape, this deep knowledge of the landscape and the seasons was the key to survival and prosperity.

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the Hottentoots, otherwise it seemed impossible to get through; not only were the numbers of cattle impossible to be counted, but the same might be said of the number of herds of cattle; and it was just the same with the people, of whom we could see at one look around us, probably 5000 or 6000, young and old, for their curiosity to see us was such that we were so enclosed by them, that we could scarcely see over them from horseback; there were also 4 to 500 houses, rather large, and pitched in circles close to each other, within which the cattle are kept at night, the circles could scarcely be walked round in a half hour, and looked like regular camps.” (Moodie p76).

It is hypothesised that while van Riebeeck believed that these large groups came down south from Saldanha and further north, specifically to trade with the Dutch, this was not the full picture. While trade was important to the Khoikhoi in the proto-historical period, it was just a leg of a seasonal round that had been practised since the Khoikhoi acquired cattle – possibly more than 1000 years ago. After fattening up their cattle on the greener pastures around the Peninsula’s permanent rivers and estuaries, groups such as the Cochoqua from Saldanha would break camp after summer and return to the nutritious winter grazing of the Swartland and the Vredenberg Peninsula. These large groups of Khoikhoi had well trained riding and pack oxen, woven mat houses (*matjieshuise*) that could be quickly taken down and packed when the entire community moved to the next grazing area at short notice.

The Salt River, Liesbeek River and Black River had a common confluence flowing into a large lagoon and wetland that extended all the way northwards to Rietvlei. Paarden Eiland was essentially a very large sand bar and a true island in the past. The river broke through this sand bar close to where the eastern side of Duncan Dock is today, and again further north closer to Milnerton (and probably at other places in the height of winter). This massive estuary would have been natural resource, not only for grazing cattle on grasses and young reeds but it also served as a fishing ground of very high quality. In the early 20th century much of this great estuary was drained to make way for the Culemborg shunting yards and railway workshop. Entry over the drift to Cape Town (which was rendered almost an island by the lagoon system) was guarded at the crossing by at least two small forts (Duinhoop and Zandhoop). Varsche Drift still exists, as this point of limited access was used for the Union Rail network circa 1870 and for the Voortrekker road crossing into the hinterland (the river has been canalised at this point). This highly historical landscape area is now a plethora of rail and road crossing points that give little credence to the role of the “place” in the past.

In time European Farmers took over much of the land occupied by Khoikhoi groups, but they too used the same well-trodden routes to bring their stock to Cape Town to trade. The Zysterplaat flats and the broader area known as Maitland was in part a huge informal outspan where travellers and traders camped with their cattle and sheep before crossing the Black River Estuary into the city. By 1880 an areas had been formally designated and outspan and continued to exist until it was developed in part, while much of it was taken over by Government to build Ysterplaat Airforce Base.

Hence the project area has a general but not very well known proto-historical significance – a camping and grazing area used for hundreds of years from the prehistoric past to the 19th century.

3.1 Legend of the Phoenician ship

Being heavily transformed the Maitland area has not attracted any previous archaeological research and very few archaeological observations have been made. Not with standing this, there have been persistent rumours of a wreck of a Phoenician galley being found on the banks of the Elsieskraal River at the turn of the late 19th early 20th centuries. It is pertinent to mention this as the assertion has been made in a number of popular texts. This was in part fuelled by scholars of Herodotus who alluded to ancient mariners rounding the cape. In 1992 an interested amateur historian (Bernard O' Sullivan) followed up the legend and identified the possible find site of the Phoenician Galley, which was situated on the police cricket grounds in Maitland a short distance (1.5 km) from the project area. He obtained funding to sink investigative cores which revealed the presence of foreign wood that was radio-carbon dated to more than 2000 years ago. The find generated much excitement at the time. ACO then based at UCT was appointed to do a systematic excavation to establish the origin of the apparently ancient wood. The police cricket field then became the subject of a massive excavation which revealed the presence of a buried dump polluted by fossil fuels containing much discarded wood and furniture. Clearly, the fragments of wood found by Mr O' Sullivan were not part of an ancient wreck, but were fragments of furniture discarded in the polluted reclaimed land. The pollution by fossil fuels had given a false radio-carbon date. The mysterious early date on the wood fragments was a result of modern furniture fragments polluted by fossil fuel giving a false early reading. Fragments of wood found in the underlying clays were found to be fossilised remains of *Widringtonia* sp which were greater than 40 000 years of age. Despite the conclusive findings refuting the presence of an ancient vessel at that location the legend the "Cape Flats Galley" continues to persist (Hart and Halkett (1994).

4 Applicable Legislation (Cemeteries)

There are three main sources of legislation that govern the management of graves and human remains.

The National Health Act no 61 2003 plays a role in the management of human remains in terms of the handling and treatment of mortal remains, the permitting of people and organisations that work with human remains. Regulations relating to the management of human remains were thereafter published in 2013. These prescribe in some detail processes for the regulation of human burials, the development of cemeteries and the procedures for exhumation and reburial.

The National Heritage Resources Act 25 of 1999 (section 36) governs the management and protection of human graves that lie **outside** of the jurisdiction of a municipality. These include unregulated farm and historical burial grounds and accidentally discovered graves. The emphasis of the legislation is the protection of historical graves that are over 60 years of age (section 36) as well as the protection of graves of Victims of Conflict within and outside the borders of the county. Section 35 of the National Heritage Resources Act protects

archaeological material which includes human remains that are over 100 years of age in any place. Hence human remains within a managed cemetery that are over 100 years of age are considered to be archaeological in nature and should be treated as such.

4.1 Cemeteries bylaw

For cemeteries that lie within the jurisdiction of a city or are a municipal cemetery such as Maitland this by law applies. It is similar to the National Health Act regulations but allows the City certain powers to authorise the relocation of a grave to another cemetery or part of the same cemetery once they have been buried for more than 20 years. Besides regulating the health and environmental aspects relating to the management, care, burial, exhumation and transportation of human remains, the bylaw also indicates appropriate conduct within a cemetery and places some emphasis on the maintenance of dignity and tranquillity.

4.1.1 Applicability of legislation to Maitland and Jewish Cemeteries

The regulations of the National Health Act of 2013 and the cemeteries by-law of the city of Cape Town are the two bodies of legislation that are for the main part applicable to Maitland. The relocation of all human remains that are less than 100 years of age must be done in terms of methods and requirements of this legislation.

The National Heritage Resources Act is applicable in part. All graves of persons that are victims of conflict lies within the jurisdiction of the National Heritage Resources Act therefore permission to move a war grave or a grave of a victim of conflict must be obtained from the SAHRA burials unit. Human remains that are greater than 100 years of age are deemed to be archaeological in nature and therefore need to be exhumed by an archaeologist with the relevant permit. The same applies to secondary burials over 100 years of age of which there are a number at Maitland.

4.1.2 Appeal

Both the cemeteries by-law of the City of Cape Town and the National Heritage Resources Act allows the rights for appeal for any person affected by an action involving human remains.

In the case of the proposed Aerodrome Road the applicable legislation with respect to any appeal will be that of the City of Cape Town. The mechanism of appeal is not indicated in the by-law and it is unclear if this has ever been tested, however the by-law does provide a mechanism for community liaison.

Only matters relating to victims of conflict or graves of more than 100 years of age will invoke the appeals process of the National Heritage Resources Act. This process was comprehensively put to the test during the archaeological excavations at Prestwich Street where an appeal process against the issuing of an exhumation process took some 3 years to resolve. The entire cycle of appeal was invoked from initially within SAHRA to eventually a national tribunal. While the outcome of the appeal was favourable to the developer, the process was tortuous, long and expensive and a potential fatal flaw in itself.

4.1.3 Permitting

It is expected that the vast majority of graves in the affected areas will be less than 100 years of age and will not be victims of conflict. Indications are the moving of graves will not be necessary in terms of the current proposals. In case this scenario changes, information about grave relocation processes is offered. The permit for the relocation of graves is a municipal matter and needs to be issued from the appropriate department within the City of Cape Town. The work should be done by a registered undertaker operating under the general conditions of the regulations regarding human remains in the National Health Act. The City of Cape Town is likely to require that permission from families of the deceased be obtained, although they reserve the right to relocate graves that are greater than 20 years of age.

Graves of victims of conflict and graves over 100 years of age will require a permit from SAHRA in addition to the above. SAHRA may require that such work is done by an archaeologist. In addition SAHRA will require evidence to confirm that a concerted effort had been made to contact interested and affected parties before issuing a permit for the work.

Cultural and religious beliefs among communities and religious groups will affect the degree to which the relocation of human remains is acceptable. Christian religions of European origin do accommodate the notion as relocation of graves and reburial is common in Europe where available land is at a premium. In Islam this is less commonly done and may be forbidden among more conservative groups while it is forbidden in Judaism. Hence latitude must be given in the planning of the proposed activity to accommodate what can be long public processes as well as the possibility of failure to arrive at consensus.

5 Findings of the field survey

5.1 Option 1 Odin Rd extension via Jewish cemetery and Odin Rd.

No archaeological material was recorded within the Aerodrome Road crossing of Maitland Cemetery. The area that will be affected is an existing road. The development proposal will entirely be within its confines (Figure 7)

The open land adjacent to the Elsieskraal River within the confines of the Jewish cemetery was found to be archaeologically insensitive. There is evidence of previous landscape transformation in the river has been canalised and the banks levelled out. In addition there are plough marks showing that the earth has been tilled from time to time to keep it clear of unwanted vegetation (Figure 6).

While development of this alternative will not impact any known human remains or archaeological material, development of this alternative has implications for future use of the Jewish Cemetery in that the cemetery will lose the last of its available ground.

5.2 Option 2 Forest Drive extension to Aerodrome Road

Involving the construction of a directional ramp on Forest Drive extension to cross into Maitland cemetery over the railway line and Aerodrome Road, this alternative is archaeologically insensitive as the entire route is composed of transformed and surfacehardened landscape.

5.3 Option 3 Forest Drive extension to Aerodrome Road Road.

This involves the construction of an elevated "T" with a branch elevated over the railway line to Join Aerodrome Road through Maitland Cemetery. This area is surface hardened and transformed which means it is not archaeologically sensitive.

6 Conclusion

In terms of archaeology all three options are considered satisfactory, however option 1 will impact negatively on the future expansion of the Jewish Cemetery.

No specific recommendations are made other than the precautionary actions needed in the event of an un-anticipated find.

- 3) Human remains can be found anywhere. Given that this specific area was populated in pre-colonial times, human remains are a possibility. In the event of human bone being encountered the find-site must be cordoned off immediately and Heritage Western Cape and SA Police Services informed. If it is determined that foul play is involved, the remains will be moved by SAPS. If the remains are deemed to be archaeological, an archaeologist must apply for an emergency permit and complete the removal.
- 4) Other finds of archaeological material (including ancient shipwrecks) are not expected, however in the event of an un-anticipated find, Heritage Western Cape and/or an archaeologist must be informed in order to inspect and mitigate the find.

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