

Green Point Stadium

Archaeological Monitoring of Erf 1059

Green Point, Cape Town

(HWC Permit No:2006-04-011)
(SAHRA Permit No:80/07/08/003/51)



Report Prepared for BKS Project Engineers (Pty) Ltd

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EXECUTIVE SUMMARY

This report records the findings of an archaeological monitoring brief undertaken on behalf of BKS Engineers (Pty) Ltd for the City of Cape Town at the 2010 World cup Stadium in Greenpoint. The site has previously been the focus of a First and Second Phase Archaeological Investigation in 2006 and 2008 respectively. These investigations identified land use and ownership of the study erf and recorded the results of trial excavations undertaken at key positions within the stadium footprint prior to the development of the 48.6 hectare site.

Monitoring of bulk earth moving was undertaken in April, May, July and August 2007 and the position of archaeological features recorded by quadrants and GPS co-ordinates. The north east and south east quadrants lying to the north of Fort Wynyard yielded the largest number of archaeological features and artifacts. An analysis of these finds indicates that cultural material associated with the Anglo Boer war (1880-1881, 1899-1902) remained *in-situ* under the current land surface. Several wheel rims and gun carriage artifacts associated with Prince Albert's Own Royal Artillery at the Cape were identified, as well as live ammunition associated with the same period. Pockets of ash, horse shoes and nails were found in the same location which suggests that a blacksmiths smiddy had been located in the area.

An ephemeral scatter of shell and prehistoric stone tools was found in the south west quadrant, indicating a much earlier occupation of the landscape.

Evidence of a human burial was also noted in the south east quadrant. The remains consisted of the fragmentary distal end of a single tibia. The area in which the burial was located was searched for evidence of a burial shaft but none was found. This suggested that the burial was a secondary interment and may have been associated with the exhumation of burials from the Somerset Road burial grounds in the early 20th century. A second burial was explored which did not fall within the stadium footprint but was located at Camp One where the contractors site offices are positioned (opposite Mc Donalds restaurant). This burial also proved to be a secondary interment of a young woman of European origin dating to the same period.

We conclude that monitoring of earth works on the footprint of the new stadium has provided an important insight into the military equipment used at the Cape in the Anglo Boer War. The position of secondary burials also adds to our general body of knowledge regarding the spatial distribution of secondary historic burials associated with the closure of the Somerset Road Burial grounds in. Finally, the presence of a prehistoric footprint, however ephemeral, confirms that the rocky

promontory which became known as Green Point was occupied by the earliest inhabitants of the Cape who practiced a transhumance way of life.

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1. INTRODUCTION

This report was commissioned by BKS Project Engineers on behalf of their client, the City of Cape Town, to complete a series of archaeological interventions associated with the development of the 2010 World Cup Stadium in Green Point.

This project focused on monitoring bulk earthmoving across the site and reporting on cultural material that was exposed during mechanical excavations undertaken by Martin & East (Pty) Ltd.

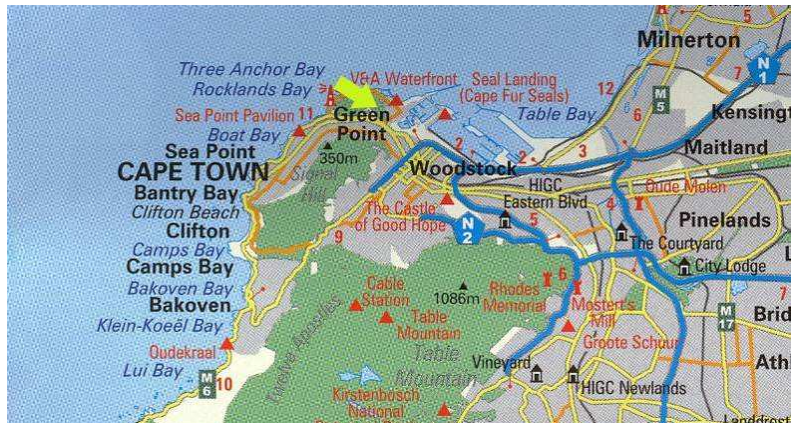


Figure 1: Location of study site (Map reference: Map Studio 2007)

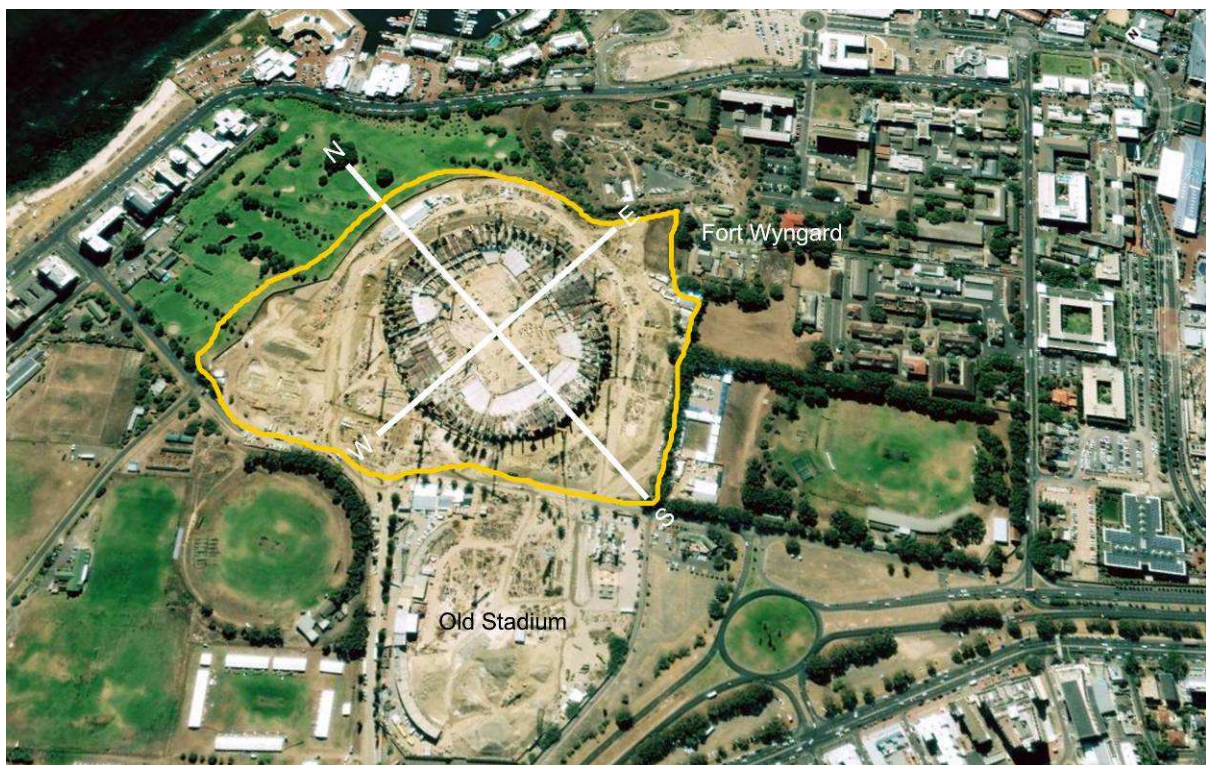


Figure 2: Aerial view of stadium under construction showing area monitored (delineated by yellow line) and section quadrants defined by Martin & East (Map reference: Google Earth 2009)

The footprint of the new development is positioned on land previously used as the Metropolitan Golf Course, as a military camp during the Anglo Boer War and probably as a seasonal camp by indigenous people prior to colonial contact. The Green Point Common lies on the boundary of the

area designated by the Green Point Protocol as having a potential of finding burials: for this reason, permission was granted by Mrs Mary Leslie of the South African Heritage Resources Agency to undertake this work without a Section 36 permit with the provision that should human skeletal remains be found, that all work would cease and the relevant permit applied for. The trial excavations were undertaken under a Section 35 permit issued by Heritage Western Cape. Figure 1 shows the site location and Figure 2 shows the stadium under construction and the area monitored – divided into four quadrants.

2. BACKGROUND

In 2006, CAS was commissioned by the Cape Town City Council's Environmental Resource Management Department as part of the Environmental Impact Assessment of the Green Point Common (GPC) to assess the likelihood of human burials being found on the site of the proposed stadium as well as identifying other archaeological and/or heritage elements within the study area. The scope of the work was to conduct background archival research, to conduct a field survey of the footprint of the proposed stadium, implement a series of trial test excavations and establish the presence of archaeological elements, both human skeletal and cultural material, including built environment features.

Patrick and Clift (2006) showed that GPC has been utilised by people for centuries with much overlap .It is not easy to unpack these episodes of exploitation which range from grazing, horse racing, war encampments to golf. Patrick and Smith (2007) also pointed out that GPC was used by residents of Cape Town for the dumping of domestic refuse from several locations across the City and it's outlying areas.

A desktop study of the available published material on the Green Point Common as well as a selection of maps and photographs at the Cape Archives formed the basis for the background history of the site. The formal (and informal) cemeteries along Somerset Road, have formed the focus of a number of research dissertations as well as archaeological reports and it is our opinion that a comprehensive understanding now exists of the use of the eastern edge of the city as a burial ground. The implications for this current monitoring brief was to score the presence or absence of burials on the development footprint and evaluate the context in which burials were exposed. In situ burials require a 60 day public consultation process which means that work on the site would have to stop. Human remains found in secondary context, are reported to SAHRA and a joint decision is made about exhumation and relocation.

After the completion of the background history, restricted trial excavations¹ were undertaken on the Metropolitan Golf Course and the old Greenpoint Stadium. These revealed very little cultural material and no human remains.

3. METHODOLOGY

A CAS appointed archaeologist was on site to monitor earth moving during the period 4 April – 26 May 2007. Figure 3 is a plan of the proposed scheduling of excavation by the contractors. The stadium area was divided into quadrants and each was worked from the outside inwards i.e. towards the area designated to be the pitch. The first phase of the site preparation involved the removal of the grass turf on the Golf Course (Figure 4).

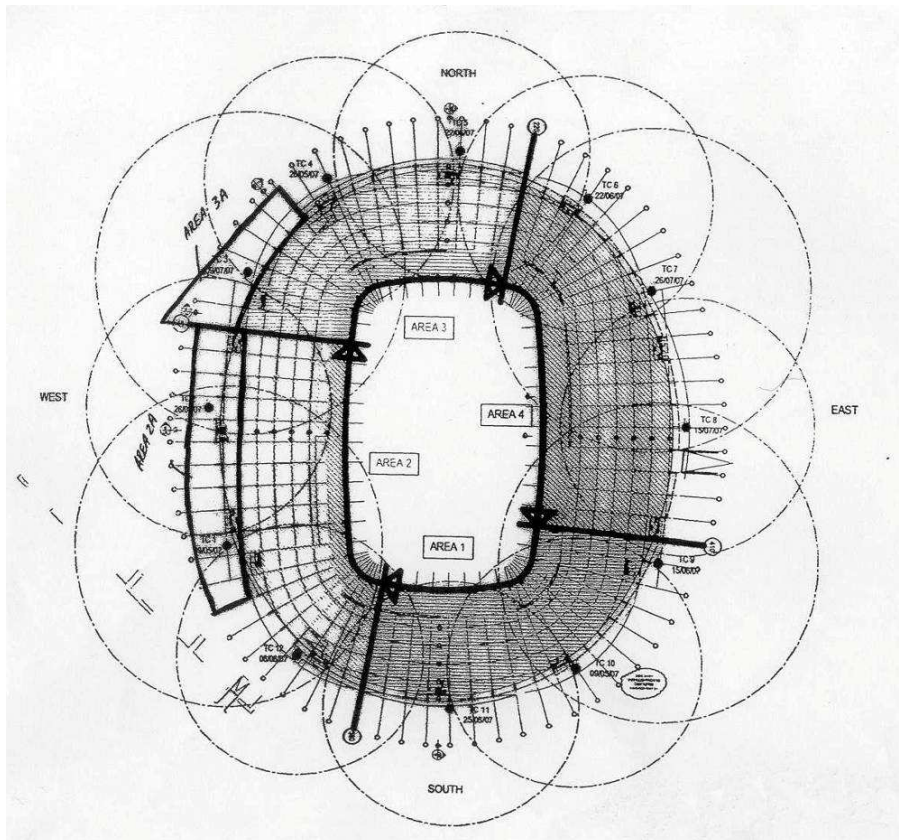


Figure 3: Plan of new stadium and excavation schedule



¹ Excavations were limited spatially, along the fairways and the perimeter of the site and agreed on at a joint meeting between the City & the Metropolitan Golf Club, which remained operational during the 2010 bid process.



Figure 4 : removal of trees, turf and topsoil from the site

Monitoring techniques were designed to keep close watch on what was being uncovered by heavy earth-moving equipment. In some cases very large areas of 100 x 50m had already been excavated prior to the arrival of the archaeologist on site. These exposed sections and resultant spoil heaps were then checked by the monitor. This, in many ways, was the most efficient method, since it was very difficult, in fact dangerous, for the monitors to get close to any excavation while the diggers were active. The sequence would generally be: removal of grass and shallow top-soil, later followed by deep and more extensive excavation to a depth of 6 meters.

In the case of dumping of soil, the spoil heaps were also checked to see what might have been disturbed. Part of the monitoring brief was also to describe the stratigraphy in order to define potential strata which could be culture-bearing. GPS readings were taken of any significant finds or dumps (Figure 5).

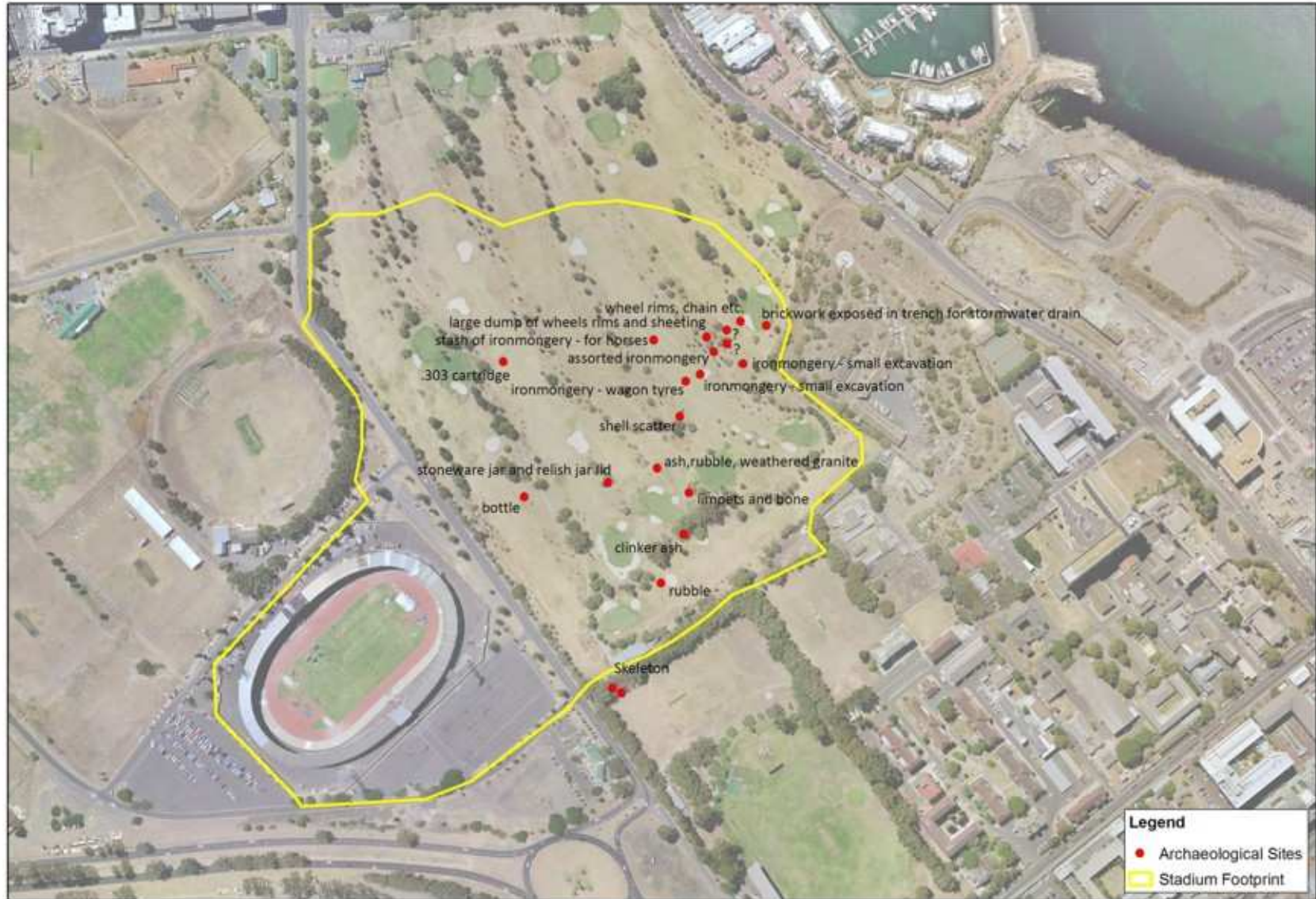


Figure 5: Position of identified archaeological features and artifacts (GIS work by Beuster, Clarke & Associates (2009) superimposed on 2001 aerial photograph)

Close to Fort Wynyard, monitoring was conducted very carefully, especially after live ammunition was found, and definite areas of large quantities of metal were uncovered. A human skull was accidentally uncovered and an additional excavation was undertaken to ascertain whether anymore remains of this individual were buried close by.

4. STRATIGRAPHY

A geological study was conducted for Greenpoint Stadium and twenty-seven test pits were dug (Figure 8). The results have indicated that almost all of the deposit has been transported into the area (see Appendix 2). Whilst the material is consolidated in parts, it is an amalgam of sands, clays, building rubble and debris as well as domestic refuse (Figures 6,7,9 &10). Patrick & Smith (2008) observed this clearly in their test excavations elsewhere on the common and were informed by a resident of the area during the 1950 and 1960s that it was commonplace for people to dump any unwanted items here. During the monitoring of the excavation of this site, it too was clear that much of the domestic refuse recovered can be dated to the 20th century.

Figures 9 and 10 are diagrams of a section cut through part of the Metropolitan Golf Course. It shows clearly the introduction of materials to create “fill” in order to build the fairways and other features on the course.



Figure 6: Details of the deposit showing dumped materials



Figure 7: Details of the deposit showing dumped materials used to create the fairways

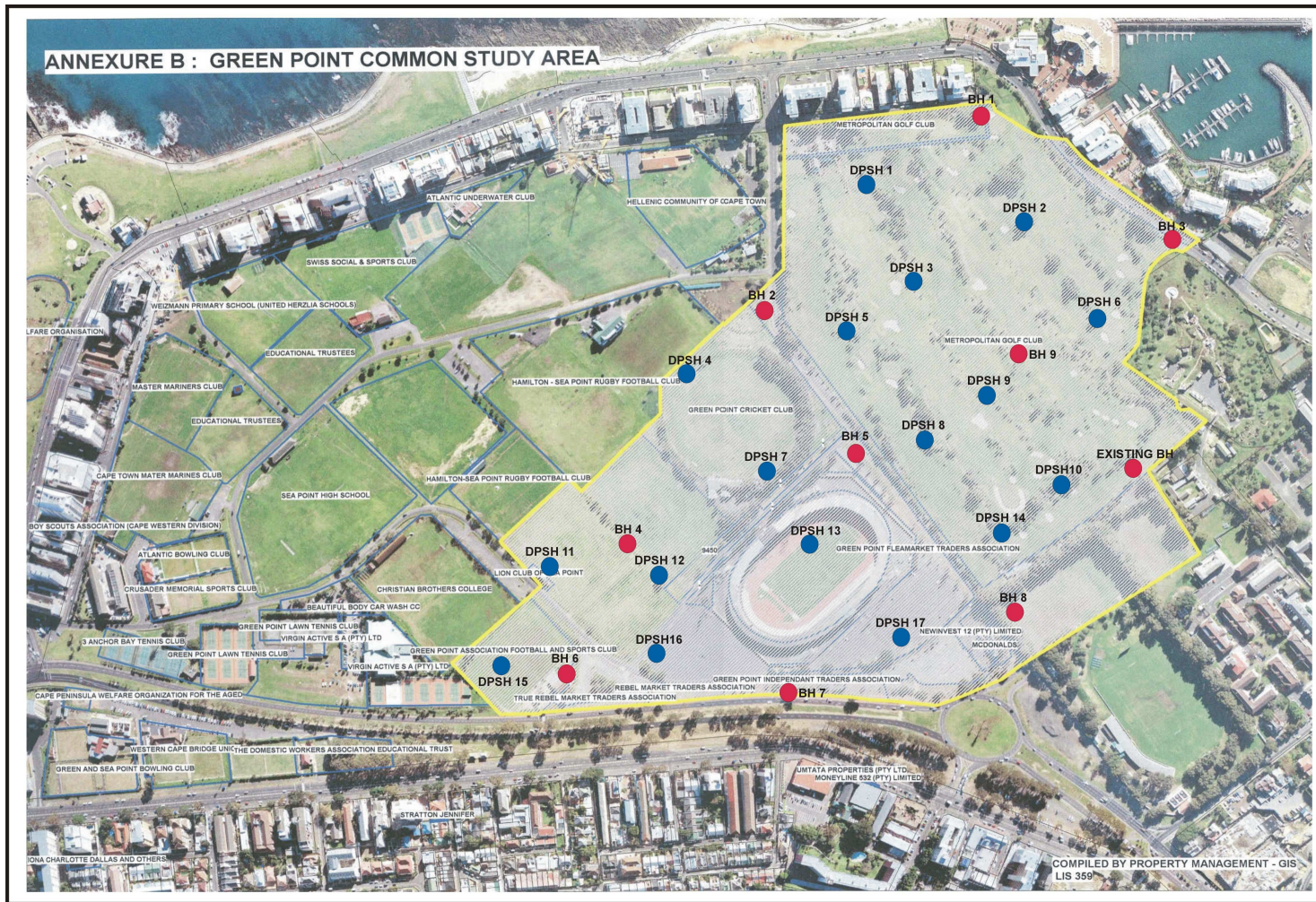


Figure 8: Position of geotechnical test pits to test for subsurface services (Map reference Steve Horwood, WSP Environmental)

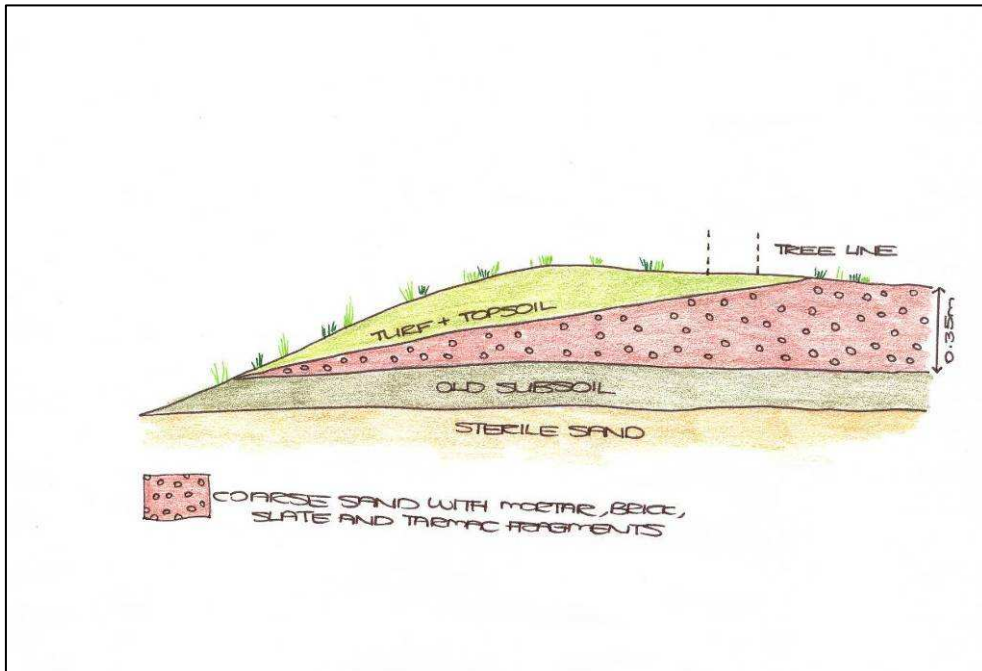


Figure 9: Section cut through the Metropolitan Golf Course

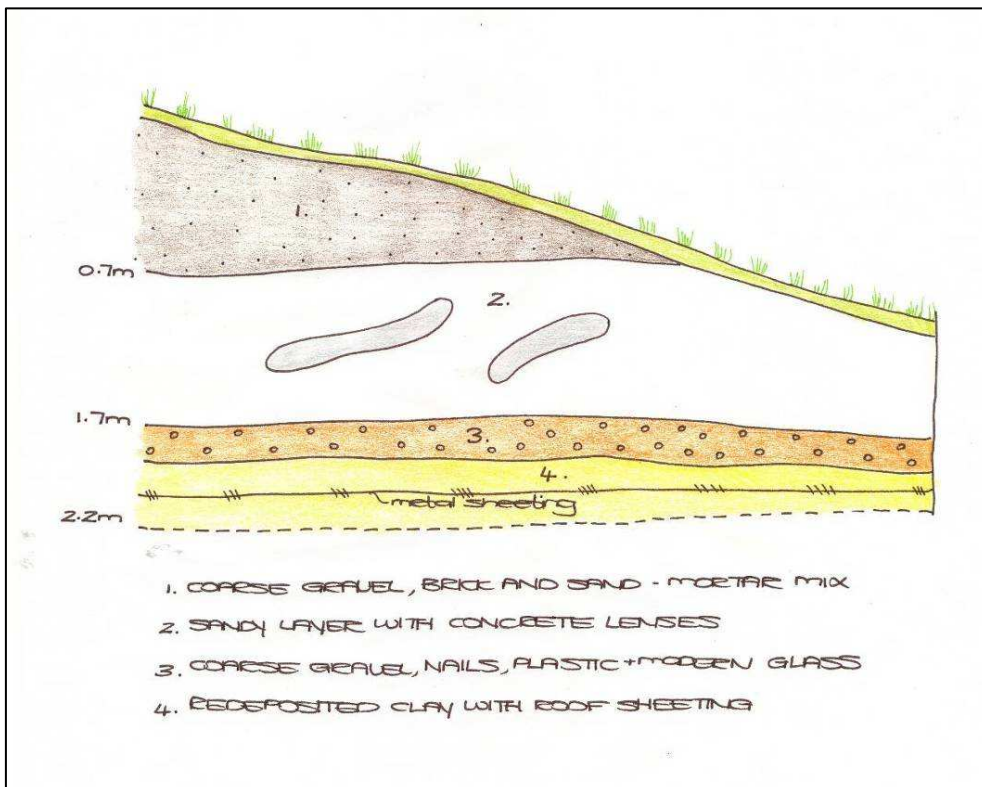


Figure 10: Section cut through the Metropolitan Golf Course

5. MATERIAL REMAINS

1.1 Ceramics

Figure 11 shows fragments of late 19th and 20th century British plates ; lined rim whiteware (white and pink) single coloured whiteware - post 1820 - (blue & white) cup handles, a pipe stem and 19th century British Stoneware jars. A British 'dwarf ink' stoneware ink pot manufactured by Doulton & Watts and a metal door knob. The neck of a 19th century carbonated beverage bottle is visible along the top row (Klose 2007, Lastovika 1990).



Figure 11: A selection of ceramics and glass recovered during monitoring

1.2 Glass

Figure 12 shows (from top left), possibly an ink bottle with a burst top, a medicinal bottle manufactured by Arnot & Sons, London which contained Hydroiodide Rub, a stopper from Ohlsson's Cape Brewery Ltd., a stopper for a medicinal bottle and a marble from a beverage bottle.



Figure 12: Glass bottles and other glassware recovered during monitoring

Figure 13 shows a marble stoppered bottle commonly called a 'Codd' on the left. Developed by Hiram Codd in 1870 is seen as a 'highlight' in bottle manufacturing. The bottle contained either a carbonated beverage or ginger beer and the gaseous liquid in the bottle forced the marble to the top of the neck which made the bottle airtight. The middle bottle is mineral water, or lemonade bottle made by Wordon & Pegran in Rondebosch, who traded under the name Excelsior Mark. It can probably be dated to the late 19th century. The bottle on the far right is a 20th century milk bottle from the Royal Milk Dairy, Cochrane Lane, Cape Town.



Figure 13: Glass bottles recovered during monitoring

In Figure 14, the bottle on the far left is a 20th century wine or spirit bottle. Next to it is a 20th century household machine made bottle with a screw top. To its right is a green skittle-shaped bottle known as a Hamilton, made before 1809. It is also described as a club-shape, a club soda, egg-shaped with a flat bottom, or a flat-bottom Hamilton. This bottle was manufactured into the 20th century and was superseded by crown tops in the 1900s. The bottle on the far right is a small deodorant bottle, manufacturer unknown.



Figure 14: Glass bottles recovered during monitoring

Figure 15 shows a possible sauce bottle inscribed with the name Goodall Backhouse. The two bottles to the right are spirit flasks for brandy. The moulded marks around the lips date the bottles to the last quarter of the 19th century.



Figure 15: Glass bottles recovered during monitoring

1.3 Stone Artefacts

Aside from an ephemeral scatter of shell (Figure 16), two stone artifacts are the only indicators of a prehistoric signature on Greenpoint Common. Figure 17 shows two sides of a bored stone in the process of manufacture. Pecking is visible on both surfaces of the stone. The second artefact is a well worn Middle Stone Age quartzite core (Figure 18).



Figure 16: Ephemeral shell scatter



Figure 17: Two surfaces of a partially manufactured bored stone



Figure 18: Middle Stone Age core

5.4 Military Equipment

Greenpoint Common has known many military occupants and various parts of it have been used in all the wars of the last two centuries. The first military camp on the common was believed to have been that of Prince Alfred's Own Cape Volunteer Artillery in 1882 during the smallpox epidemic. Many military reviews have been held on the common, one of the biggest being held in honour of Queen Victoria's Jubilee in 1887. Union Day parades of Cape Town's military units were held there until the late 1930s, and it was a military camp during the Boer War of 1889-1902. Prince Alfred's Own Cape Volunteer Artillery camped there from 17 October 1899 and the Cape Garrison artillery were camped near Fort Wynyard from October 1899 for about 5-6 months. The Canadian Field Battery was stationed there in February 1900. Later, there was a prisoner of war camp where Boer prisoners were held before being shipped to St. Helena or Ceylon.

5.4.1 Metal Workshop:

During the Anglo Boer War, the Royal Artillery experienced problems in the field with its guns, carriages and wagons. There were two reasons for this: the first concerned the guns which were found to be suffering wear in the barrels from the excessive number of rounds being fired; and the second was the rough terrain. Gun wheels and those of the limbers and ammunition wagons made for the softer grounds of Europe suffered in the hard South African veld (Colonel LA Crook SA Artillery (Rtd) pers.comm).

It is not inconceivable that an artillery workshop was set up on Greenpoint Common as a repair base near to Fort Wynyard where both administrative and logistical support was available. The amount of gun and wagon material and other pieces of iron work found in the area of the fort suggest a workshop layout.



Figure 19: A selection of belt buckles, horse shoes and helmet badge

5.4.2 Metal Military Uniform Button:

A single British military general service button was found (Figure 20). During the second half of the eighteenth century, manufacturers of metal buttons began to 'brand' their products by marking the backs with their names and often their addresses. These 'backmarks' can provide useful information for dating the buttons, as details of the various companies, and when they were operating, can be found in contemporary trade directories and other documentary sources.



Figure 20: British military general service metal button

The marking is invariably produced by die stamping, which is an inherent part of the manufacturing process, and backmarks produced in this way continue to be used to the present day (UK Detector Finds Database: www.ukdfd.co.uk). The backmark visible on this button has the marking: Smith & Wright Ltd Birminham. The company manufactured military uniform buttons and between 1888 and 1889 began using the stamp Smith & Wright Ltd. Prior to this date, the Ltd was absent from the

back of the buttons. Another indicator of the period of manufacture is the Royal Coat of Arms on the front of the buttons. The crown is that of Queen Victoria who reigned from 1837 to 1901. A detail of her coat of arms is visible in Figure 21.



5.4.3 Gun Carriages:

A significant observation during the monitoring process was the *in situ* discovery of the remains of several Anglo- Boer- War horse-drawn gun carriage wheel rims, chains and other associated metalwork (see Figures 5 and section drawing). These were identified by military historian Colonel L.A. Crook (Rtd) of the South African Artillery. Figure 22 is a selection of photographs detailing the exposure of these artifacts. Figures 23-26 illustrate how these carriages were constructed and what they would have looked like when operational (reproduced from the *Treatise on Military Carriages and Stores Connected with them.* – no date). Shaded areas demonstrate parts of the gun carriages recovered from the site which are now housed at Fort Wynyard to form part of an interpretive display.

Figure 21: Queen Victoria's Coat of Arms



Figure 22: Exposure of Anglo- Boer- War gun carriages and associated metalwork

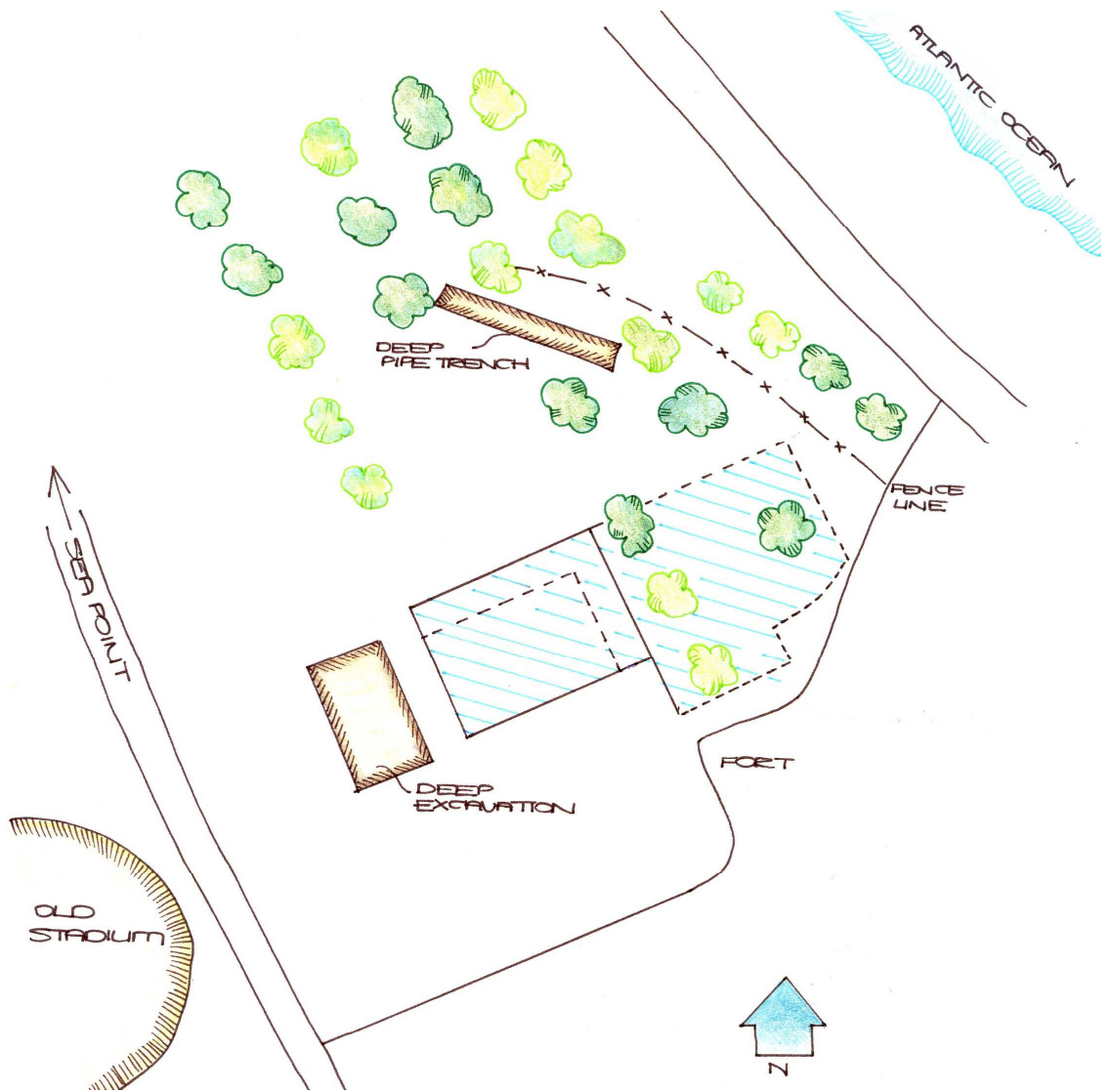
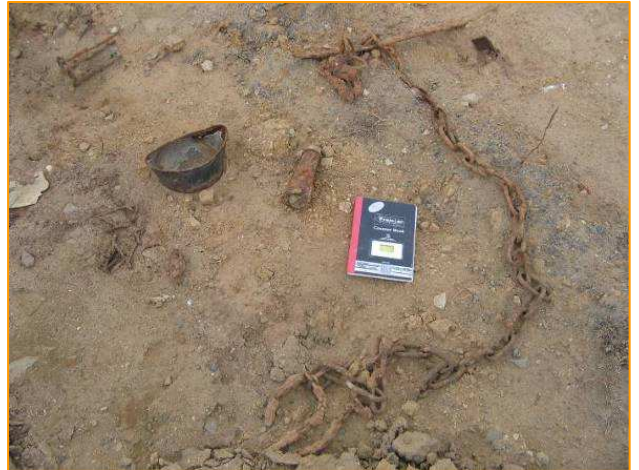


Figure 22: Schematic drawing showing the geographical position of the trench and controlled archaeological excavation that yielded the Anglo – Boer war artefacts. (see photographic record and line drawings page 15- 19).



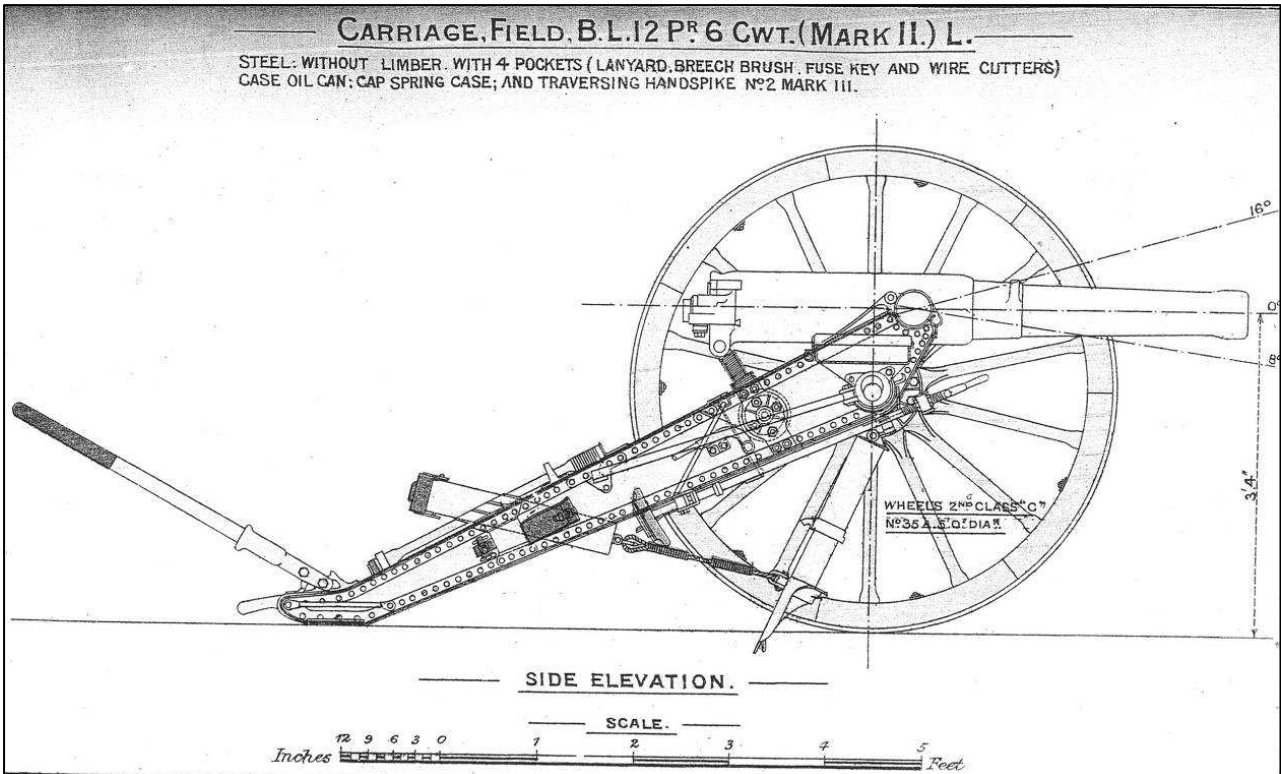


Figure 23: Line drawing of a gun carriage of the type recovered at the Greenpoint Stadium (side elevation). Shaded area show the section of the gun recovered during the monitoring brief.

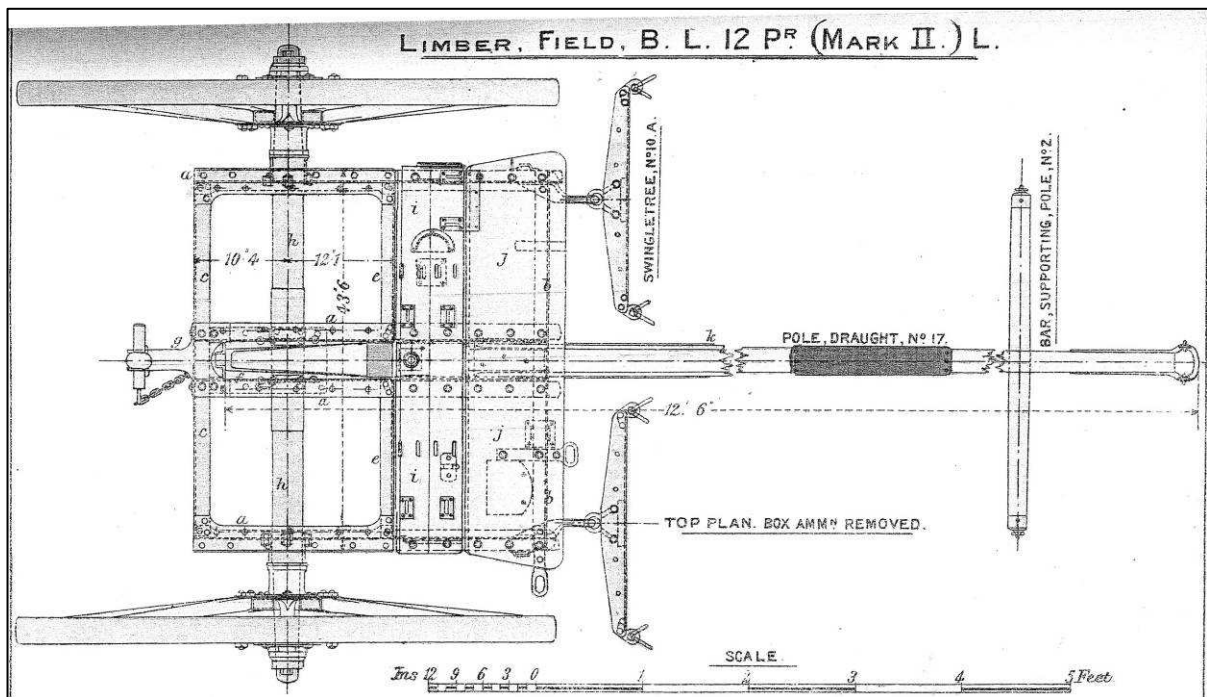


Figure 24: Line drawing of gun carriage of the type recovered at the Greenpoint Stadium (top plan)

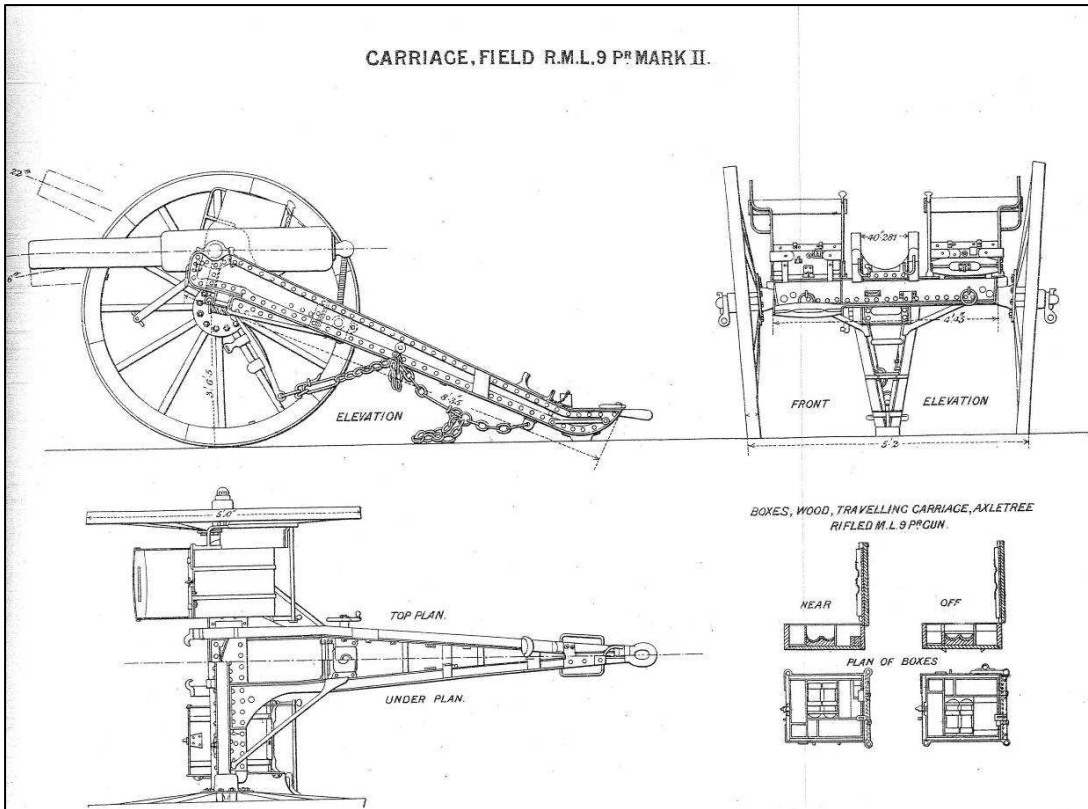


Figure 25: Line drawing showing a gun carriage type recovered at the Greenpoint Stadium

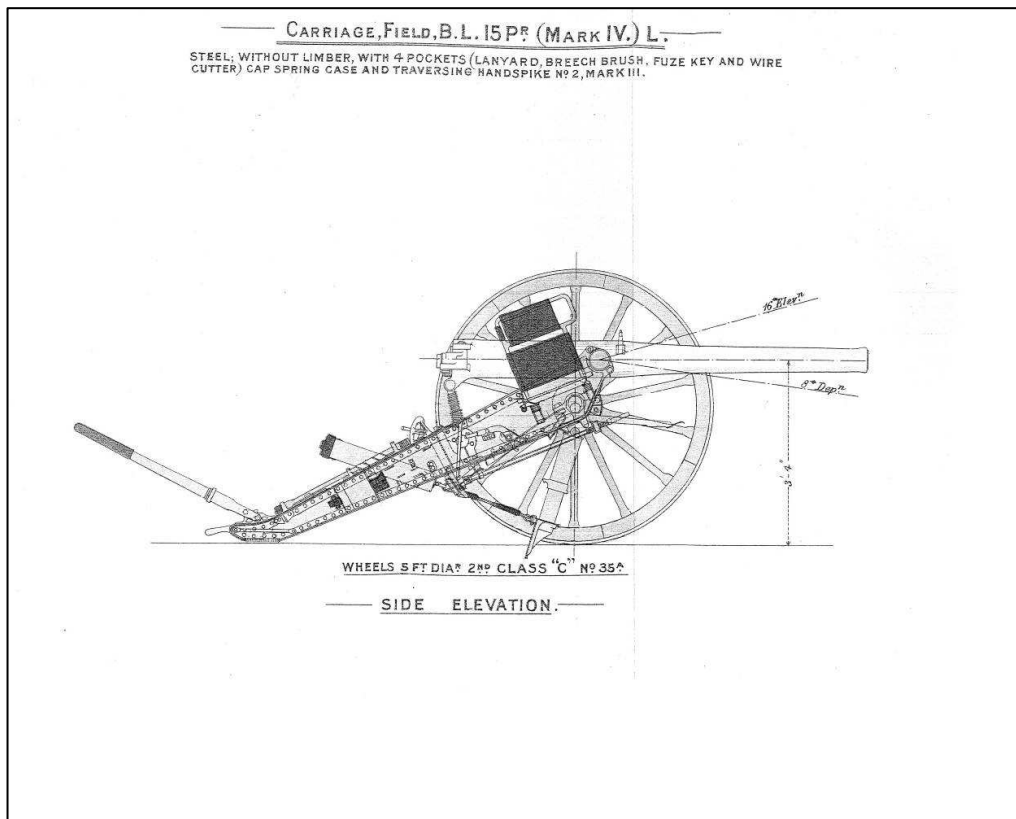


Figure 26: Line drawing show the side elevation of a gun carriage recovered at the Greenpoint Stadium

5.4.4 Ammunition:

Twenty one .303 rifle bullets were found in tact along with twelve shell casings (Figures 27 and 28). These are regarded as live ammunition and potentially posed a safety risk. This would have been true particularly if larger explosive devices had been unearthed. A risk assessment investigation was undertaken at the request of CAS by Murray and Roberts and strict procedures were put in place in accordance with the *Ammunitions and Explosives Regulations (RSA) Army and Airforce*.

This included cordoning off the area and contacting Sup. Reynders of the Explosive Unit: Tel- 021 506 2201, Cell- 082 699 0230 for collection of future ammunition found. All of the bullets recovered were removed from the site and are currently being stored at Fort Wynyard.



Figure 27 and 28: .303 Bullets and Bullet Shells

An analysis of the headstamps of the bullets indicates that they date to the Anglo- Boer- War and that all but one were British issued ammunition used by their troops. The single Mauser 7x57mm bullet was used with the Mauser rifle: one of the official Boer weapons.

During the later part of the 19th century, munitions manufacturers developed a composite bullet with a core of lead encased in a thin mantle of cupro-nickel (coated steel) (Bester and Associates 2003). The invention of cordite (a propellant comprising gun cotton 65%, nitro glycerine 30% and mineral jelly 5% which could be cut) meant that the British were able to manufacture ammunition quickly and in large quantities. During the Anglo- Boer- War, British troops used large quantities of .303 cartridges in a standard issue Lee-Enfield .303 inch calibre magazine rifle. These are regarded as the workhorses of the war, but were largely inadequate. It is estimated that it took 10 000 rounds to kill one Boer (66 million rounds to kill the 6-7000 Boers who were shot).

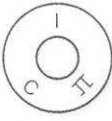
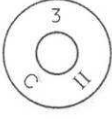
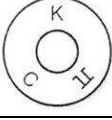
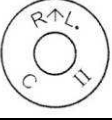
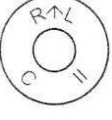
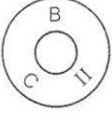
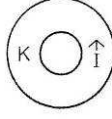
Headstamp	Bullet	Manufacturer	Ball Cartridge Models	Number Found
	Round-nose cupronickel jacket	Birmingham Metal and Munitions Co., Birmingham, U.K.	Mark II (introduced in 1896)	1
	Round-nose cupronickel jacket	Kings Norton Metal Co., Birmingham, U.K.	Mark II	1
	Round-nose cupronickel jacket	Kynoch Limited, Birmingham, U.K.	Mark II	6
	Round-nose cupronickel jacket	Royal Laboratories Woolich, U.K.	Mark II	3
	Round-nose cupronickel jacket	Royal Laboratories Woolich, U.K.	Mark II	9
	Round-nose cupronickel jacket	Birmingham Metal & Munitions Co., U.K.	Mark II	2
	Round-nose cupronickel jacket	Kirkee Arsenal, Poona, India	Mark II	1

Figure 29: Headstamp details of identified .303 bullets

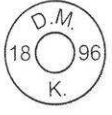
Headstamp	Bullet	Manufacturer	Ball Cartridge Models	Number
	Round-nose steel jacket, cupro-nickel plated	Deutsche Metallparonenfabrik, Karlsruhe, Germany	7x57 mm Mauser (standard)	1

Figure 30: Headstamp detail of Mauser 7x 57mm bullet

1.3.1 Animal Bone

Figure 31 shows a sample of the animal bone recovered. Most is unidentifiable, but does include domestic sheep, cattle, fish and bird.



Figures 31 and 32: Isolated faunal remains

4.4.2 Accidental Discovery of Human Skeletal Remains

No *in-situ* human burials were identified during the monitoring process. The two identified remains were from secondary depositional events and were analysed by Professor Alan Morris of the Department of Anatomy at the University of Cape Town (full report in Appendix 3). Ms Mary Leslie of SAHRA was informed of their discovery.

A single adult left tibial shaft was recovered from an exposed section in the south eastern quadrant. Both articular ends are missing which makes estimation of stature impossible.

On the 31st of July 2007 the Cape Archaeological Survey (CAS) was contacted by the contractor Murray and Roberts (Pty) Ltd, and the environmental consultant from Ecosense, to investigate and rescue the post cranial remains of a burial on Erf 1059 associated with the Green Point Stadium (Figure 34).

The accidental discovery of a human cranium occurred during the excavation of a water channel dug to help drain excess water in the vicinity of the Camp One Site Offices. The contractors followed the appropriate procedures, the details of which are documented in Appendix 2. A permit was requested from the South African Heritage Resources Agency (SAHRA) for the rescue excavation and investigation of the burial (SAHRA Permit No:80/07/08/003/51). The exhumed remains were repatriated to the Greenpoint ossery.

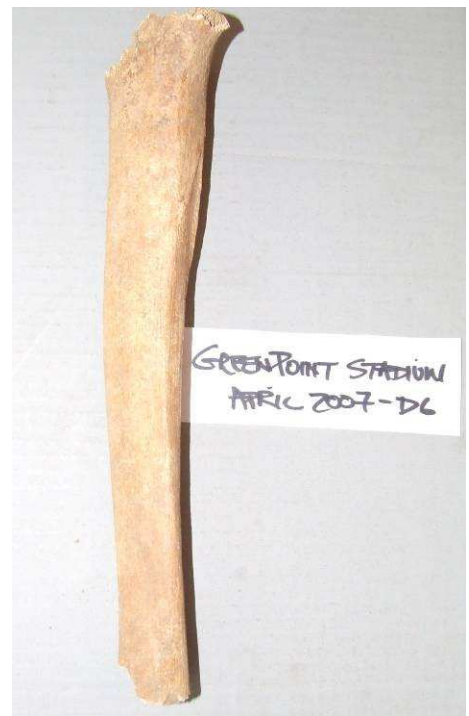


Figure 33: Tibial shaft

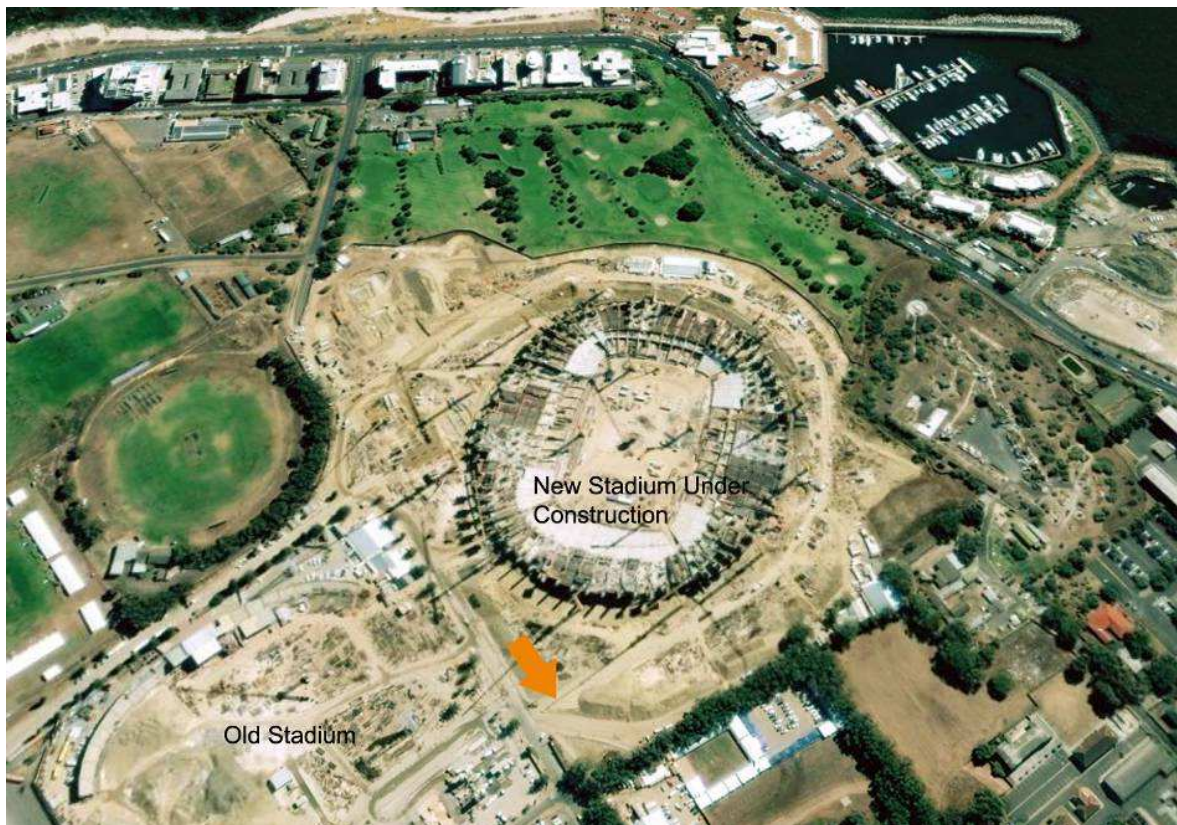


Figure 34: Approximate location of human skull (Map reference: Google Earth 2009)

Professor Alan Morris of the Anatomy Department at UCT identified the skull as that of a European female who was between twenty and forty years of age at death. There is evidence of *cribra orbitalia* in both eye sockets which is a common pathology in women of child bearing age: it is linked to iron deficiency anemia.

An archaeological excavation commenced on Friday the 10th of August 2007 to ascertain whether additional skeletal remains were still buried. Five squares were excavated (1mx1m) on both sides of the wall were excavated (Figures 36 and 37). No other skeletal remains were encountered during the excavations.



Figure 35: The position of the arrow marks the exposure of the human skull

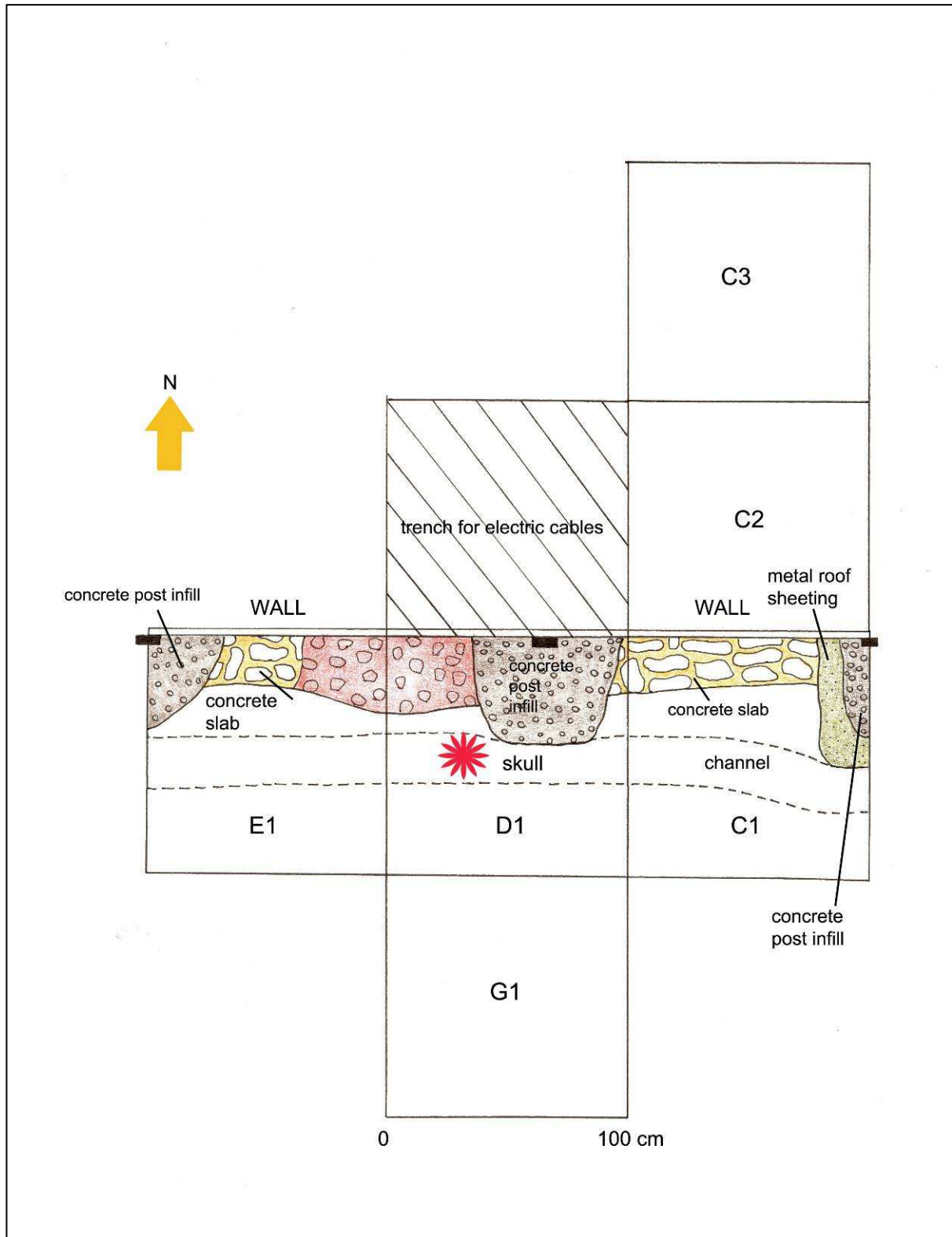


Figure 36: Plan of grid and excavated squares



The overburden contained a quite a lot of cultural and faunal material principally amongst the entangled roots of the trees (Figures 38 and 39). This included the remains of cattle (showing cut marks from an electric saw), sheep, chicken and fish bone as well as white and cream 20th century ceramic fragments, and pieces of iron and glass fragments (Table 1). No postcranial human skeletal remains were found suggesting either that the cranium had been redeposited after initial burial, or that the post cranial bones had been removed during earlier ground works either when the wall was erected or when the golf course was constructed. It would seem unlikely that the latter was the case as not a single human bone was recovered.



Figure 37: Test excavations in progress

Table 1: Faunal remains from the excavation

SPECIES & BODY PART	NISP (number of individual specimens)
Domestic cattle (<i>Bos Taurus</i>)	
Distal humerus	2
Astragalus	1
Vertebrae	2
Ribs	6
Domestic Sheep (<i>Ovis aries</i>)	
Cranial fragments	6
Left maxilla	3
Right maxilla	3
Radius	1
Pelvic arch	1
Tibia (left)	1
Distal humerus	1
Rib	1
Pre maxilla (right)	1
Chicken	
Right femur	1
Radius (?)	2
Fish (<i>Snoek -Thyresites alim</i>)	
Right maxilla	1

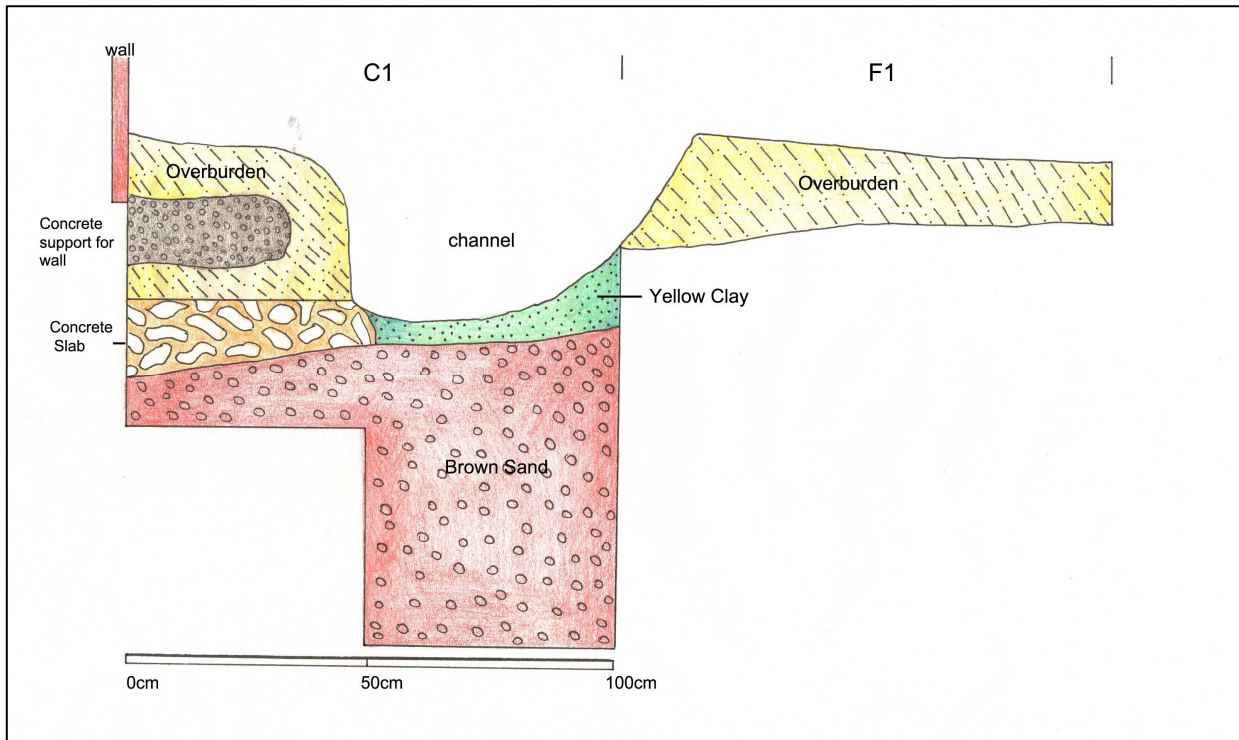


Figure 38: Section through squares C1 and F1

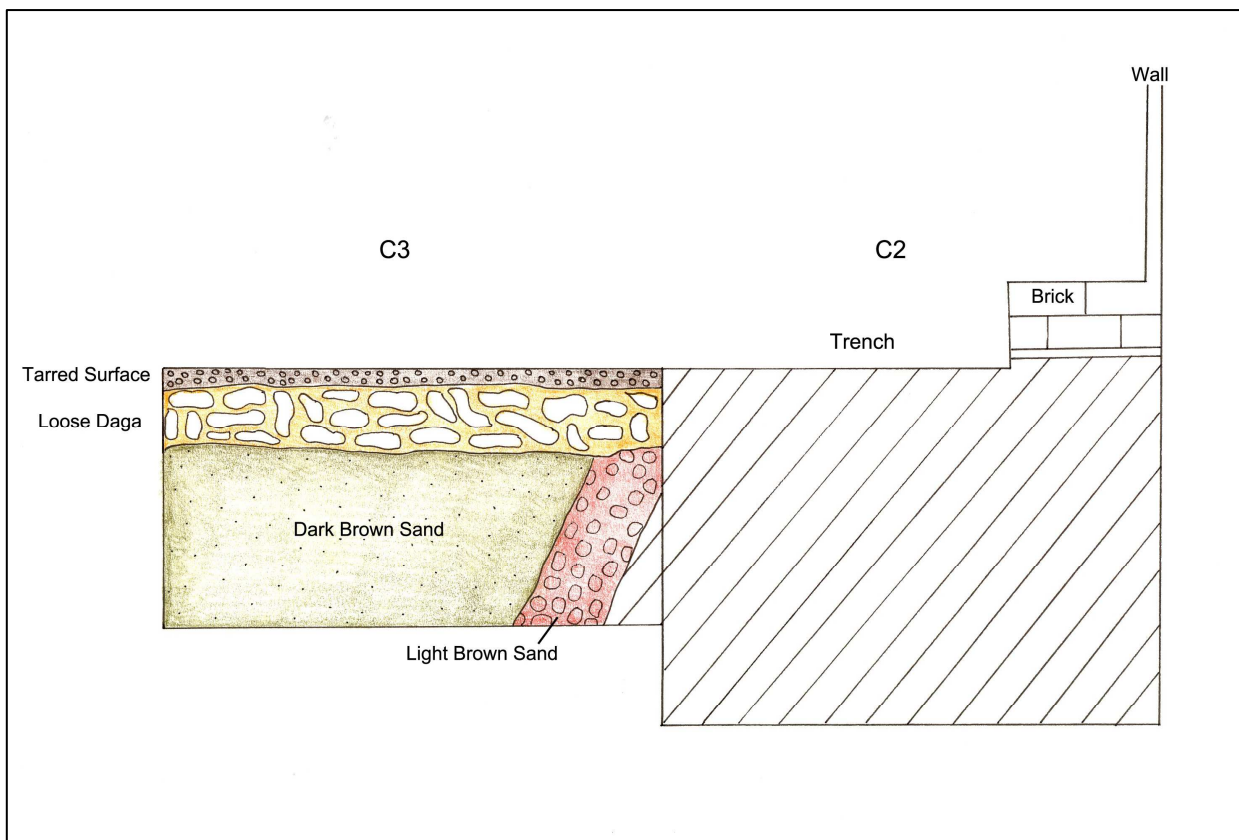


Figure 39: Section through squares C3 and C2

6. Discussion

Many historians believe that the type of military action seen in the Anglo-Boer War was probably unique in the history of warfare. Bester & Associates (203:349) describe 'modern arms' being used alongside the horse, with very few motor vehicles and no aircraft, other than observation balloons that were used throughout the war. Trenches were used extensively and running battles without a clear front were conducted for a major part of the war. This form of warfare was never seen prior to, or after, the Anglo-Boer-War.

We conclude that we are able to add to the general body of knowledge regarding this particular war by recording our observations of military hardware recovered from the site. The most significant find associated with the monitoring brief at the Greenpoint Stadium was the recovery of Anglo-Boer military artefacts that significantly increased our understanding of military equipment used during this war. We note that the equipment used at the Cape was adapted to the South African context for transporting Prince Albert's Own Royal Artillery over rough terrain. Gun wheels and those of the limbers and ammunition wagons were made for the softer grounds of Europe. Nevertheless, the guns were manufactured and shipped to South Africa and suffered metal fatigue in the hard veld (Colonel LA Crook SA Artillery (Rtd) pers. comm). The presence of a smiddy/artillery workshop on the footprint of the golf course also supports the idea that gun carriages and wagons were being repaired at the Cape and that horses were being shod close to Fort Wynyard. This is an indication of how the Military were able to maintain their guns during the three year Anglo- Boer war at the Cape. The recovery of these artefacts is significant in that there are no known examples of Anglo-Boer War gun carriages in South African Museums (Colonel LA Crook SA Artillery (Rtd) pers.comm).

The archaeology of the site demonstrates that at approximately 24 meters from the South East Section, of Beach Road, and 40 meters West of Fort Wynyard, a substantial cache of metal artefacts was exposed. The artefacts were deposited in the only area that contains an *in situ* depth of soil across the entire footprint of the new 2010 stadium. The overall site stratigraphy is made up of a lense of imported rubble 20cms thick that sits on a layer of sterile yellow sand 20 cms)thick, iunderlain by a lense of darker sand (20 cms) that contained the Military artefacts. Underlying this is a layer of *in situ* sand and gravel underlain by a clay lens 3 meters deep on-top of bedrock. It is our opinion that the lighter sand is fill brought onto site to create the golf course. Unfired shell was noted in the lighter sand, just above the metal artefacts, and may be associated with the Fort as a food resource.

The golf course was created as a direct result of depositing secondary fill (rubble) imported onto the site from various locations around Cape Town to create the Fairways and an analysis of the fill suggests mid 19th early 20th century rubbish from the low to medium income group (Close pers comm.).

While an excellent photographic record exists that shows the layout of the Military Camp during the Anglo- Boer- War on the Greenpoint Common, and beyond, no such buildings were encountered during the monitoring brief, which suggests that they were destroyed by the manufacture of the Metropolitan Golf Course in the early 1900s.

The monitoring brief has also increased our understanding of why the City Fathers did not use what was ultimately to become the golf course to extend the Somerset Road burial grounds. Wilson's map c 1870 shows that a new graveyard was laid out in a grid format North of Fort Wynyard. We believe that the development of the new burial ground was never implemented as there is no depth of soil in which to sink a burial shaft. Bedrock, on average, across the stadium footprint is reached at 70 cm

The presence of human remains on the site is an important find which helps us understand the spatial distribution and deposition of secondary burials in the Cape Town Metropolitan area. The stadium is located on the boundary of the area designated by the Green Point Protocol as having a high risk of finding human burials. It is entirely possible that the human remains found on the stadium have a direct link to the mass exhumation that occurred at Somerset burial ground, or the near by BP site excavated by Halkett (2003-2005) from the Archaeological Contracts Office. The BP site is associated with the 'White Sands' pauper burial ground, while the Somerset Road burial ground would also have contained an element of pauper burials, which may have remain unclaimed when the inter- denominational grave yards were closed down in 1906.

The on going monitoring of bulk earthmoving over such an extensive area has demonstrated, as in the past (Patrick & Clift 2005), that trial excavations are one phase of a Archaeological Impact Assessment and that they should always be followed up by a watching brief.

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8. Project Team

Principal Investigator: Mary Patrick

Field Monitors: Mary Patrick, Charlie Arthur, Will Archer, John Lanham, Andrea Hickman, Derrick Hartnick and Cedric Poggenpoel

Report Preparation: Mary Patrick & Belinda Mutti

9. Appendices

Appendix 1: Description of Soil Samples from Geological Test Pits

Appendix 2: Letter to CAS from Murray and Roberts and WBHO Joint Venture regarding the accidental discovery of a human cranium at Camp One

Appendix 3: Report on human cranium found at Camp One by Professor Allan Morris, University of Cape Town

10. Acknowledgements

We are grateful to Colonel Lionel Crook, SA Artillery (Rtd) who provided field identification of Anglo-Boer Military equipment *in situ* and who ranked the significance of these finds in relation to the known history of the Anglo-Boer War. We also wish to thank Major Vidus Archer who agreed to store gun rims and live ammunition at Fort Wynyard. Our sincere thanks BKS Project Mangers, Martin & East Section Supervisors, Ninham Shand engineers, Mark Sasman and his staff at Ecosense Environmental Consultancy and Steve Horwood from WSP Environmental for there absolute co-operation while the CAS team undertook this monitoring brief. We thank Murray & Roberts and the WBHO Joint Venture team who responded to CAS staff for an independent risk assessment associated with the discovery and storage of live ammunition.

Appendix 1: Description of Soil Samples from Geological Test Pits

**WORLD CUP 2010 MULTI-PURPOSE STADIUM
GREEN POINT COMMON**

**DESCRIPTIONS OF SOIL SAMPLES FROM PITS
EXCAVATED AT BOREHOLE AND DPSH POSITIONS
TO CHECK FOR SUBSURFACE SERVICES**

BH 1

0 – 0.3m Dark grey brown, silty sand with tar and brick fragments. Made ground. (**)
0.3 – 0.8m Cream, calcareous fine sand with scattered rounded gravel. Marine/pedogenic. (**)

BH 2

0 – 0.75m Grey brown, slightly organic and silty, fine to medium sand with sub angular greywacke gravel. Transported. (**)

BH 3

0 – 0.6m Grey brown, slightly organic, silty fine to medium sand with sub angular, medium gravel. Fine roots. Origin uncertain, possibly transported.

BH 4

0 – 0.5m Dark grey brown, slightly organic and silty, fine to medium sandy fill with medium gravel gravel, brick and ceramic fragments.

BH 8

0 – 0.4m Dark grey brown, slightly organic and clayey, silty fine to medium sand with minor fine to medium, sub angular gravel. Origin uncertain. Possibly transported. (**)
0.4 – 0.85m Dark grey brown, slightly organic, silty fine to medium sand with minor fine to medium, sub angular gravel. Origin uncertain. Possibly transported. (**)

BH 9

0 – 0.9m Grey brown, slightly organic, silty fine sand. Transported. Roots. (**)

DPSH 1

0 – 1.4m Dark greyish brown, slightly organic, silty, fine to medium sand with brick, concrete and glass fragments. Made ground. (*)

DPSH 2

0 – 0.6m Dark orange brown, slightly organic, silty fine to medium sand with sub angular, moderately weathered fragments of greywacke. Roots. Origin uncertain, possibly transported. (*)

DPSH 3

0 – 0.75m Dark orange brown, slightly organic, silty fine to medium sand with sub rounded, moderately weathered fragments of greywacke. Roots. Origin uncertain, possibly transported. (*)

DPSH 5

0 – 0.8m Grey brown, slightly silty fine sand with ferricrete gravel. Fine roots. Transported/pedogenic. (*)

DPSH 6

0 – 0.7m Grey brown, slightly silty and organic, fine to coarse sandy fill with brick and rock fragments and pieces of steel. Fine roots. Made ground. (*)

DPSH 8		
0 – 1.5m	Grey brown, slightly silty and organic, fine sand. Fine roots and scattered charcoal pieces. Transported. (*)	
DPSH 9		
0 – 0.7m	Grey brown, slightly organic, silty fine to medium sand with sub angular and sub rounded gravel fragments and scattered ferricrete. Roots. Transported. (*)	
DPSH 10		
0 – 0.7m	Greyish brown, medium to coarse, tabular greywacke gravel in a slightly organic silty fine to medium sandy matrix. Roots. Origin uncertain. Possibly transported. (*)	
DPSH 11		
0 – 1.4m	Grey brown, clayey silty sand with scattered gravel. Fine roots. Made ground. (*)	
DPSH 14		
0 – 0.8m	Grey brown, slightly organic, silty fine to medium sand with sub angular and sub rounded gravel fragments and scattered ferricrete. Roots. Transported. (*)	
DPSH 15		
0 – 0.6m	Khaki brown, clayey sandy silt with tabular, fine to medium gravel (Malmesbury rock fragments). Origin uncertain. Possibly colluvium. (*)	
DPSH 16		
0 – 1.5m	Dark grey brown, slightly organic, silty fine to medium sand with scattered fine to medium, tabular gravel. Possibly colluvium. (*)	
DPSH 17		
0 – 0.7m	Dark grey brown, slightly organic, silty fine to medium sand with fine to medium rock, quartz and ferruginised gravel. Origin uncertain. Possibly colluvium. (*)	

Note: (*) denotes sample selected for roads indicator test
 (**)denotes sample selected for roads indicator test and mod/CBR test.

Appendix 2: Letter to CAS from Murray and Roberts and WBHO Joint Venture regarding the accidental discovery of a human cranium



Murray & Roberts / WBHO Joint Venture
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Fax: +27 21 430 0301

Green Point Stadium Joint Venture

Our ref.: L_882030807.250_RN_RA

Mary Patrick
Cape Archeological Survey
Block A
12 Techno Square
42 Morningside Rd
Pinelands
7450

For Attention: Mary Patrick

RE: GREEN POINT STADIUM 2010 – DISCOVERY OF SKULL

Dear Mary,

During a shallow excavation of a drainage trench we unearthed what appeared to be a human skull. The skull was discovered at approximately 16h30pm on Thursday, 02 August 2007.

The following actions were taken.

1. The work in the area was stopped immediately.
2. All staff were instructed to vacate the vicinity.
3. The area was declared a "no go area".
4. Mary Patrick and the environmental control officer were contacted.
5. The area was covered with a large plastic sheet and a shutter board.
6. Mary Patrick arrived on site at approximately 18h00 and examined the skull.
7. A site drawing was issued to Mary Patrick to enable her to plot the position of the find.
8. Mary Patrick undertook to report the matter to the appropriate organization.
9. No further work will be undertaken in the area until a proper assessment and investigation has been concluded.

Should there be any queries regarding the above please contact the writer.

Yours faithfully,

R.E. Nicolson
HSE Manager
Murray & Roberts/WBHO Joint Venture

**A Joint Venture between
Murray & Roberts Construction (Pty) Limited and WBHO Construction (Pty) Ltd**

Appendix 3: Report on Analysis of Human Skeletal Remains



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Fax: + 27 21 448 7226

Ms. Mary Patrick
Contract Archaeologist
19 Dawlish St
Plumstead
Fax: 021-425-3375

21 January, 2008

Green Point Stadium (SAHRA Permit 13/1293/7).

Dear Mary,

I have examined the human remains from the Green Point Stadium site collected by you in April and August 2007 and the following is my report.

1. April 2007: This the major portion of a human left tibial shaft. Both ends have been lost so it is not possible to give a length of the bone and therefore an estimate of the stature of the person in life. The bone appears to have been that of an adult. Sex is not identifiable.

2. August 2007:

Preservation: The remains consist of six fragments from a single human skull. The largest single fragment is of the frontal bone including the attached nasal bones, orbital plates along with most of the greater wings and base of the sphenoid. The left parietal is also nearly complete and articulates well with the frontal portion along the coronal suture. The right parietal is very fragmentary consisting of three relatively poorly preserved parts that articulate with each other to form the medial portion of the parietal adjacent but not firmly attaching to the sagittal suture. The last fragment is of the left temporal bone and includes the mastoid process, the condylar articular, the external auditory meatus and most of the petrous temporal.

There are several fresh breaks that suggest the skull was broken apart at recovery and that other fragments may still be on site.

Demographic Analysis: As stated above, the remains are consistent with a single human skull. The sex is most likely to be female based on the very sharp suborbital border. The mastoid is fairly large, but the muscle markings are not very rugged and the tympanic plate is not particularly massive. Given the population origin of the person, this does not negate a finding that the person was female. Age at death is not possible to accurately access from the fragments recovered, but the cranial vault sutures are still patent indicating that the person was probably under 40 years at death and the fusion of the sphenoid to the basi-occipital suggests at least 20 years of age. Therefore the age estimate at death was between 20 and 40 years. The anterior portion of the vault is quite narrow suggesting that the face itself was narrow. The nasal bones are very projecting with a deep nasal root. This is consistent with a European genetic origin for this individual.

Biographic Analysis: There are few features of note on the skull. Most important is the sign of cribra orbitalia in both eye sockets. This is not excessive and the lesions appear to have been healing at the time of death. The presence of this pathology is consistent with the age and sex of the individual because this feature is linked with iron deficiency anaemia in women of child-bearing age.

Best wishes,



Alan G. Morris
Professor
21 January, 2008



Figure 1: Left lateral view of anatomically articulated major fragments of the specimens discovered in August 2007.