

# CHAVONNES BATTERY

*A Conservation Plan  
Prepared for Syfrets  
August 2001*



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# 1 EXECUTIVE SUMMARY

*History.* The Chavonnes Battery was built between 1715 and 1726 to protect the entrance to Table Bay from hostile foreign shipping. Beside being a defensive facility built by the Dutch East India Company, it also served as a prison, garrison and later during the 19<sup>th</sup> century, as an isolation hospital for smallpox victims. The Battery was decommissioned in 1860 to make way for the construction of the Alfred Basin, Cape Towns first true Harbour. During this time it was partially demolished and filled over with rubble to claim land from Table Bay.

*Current status.* Archaeologists located the surviving remains of the Battery in 1999 during an archaeological assessment of the Clock Tower Precinct – a portion of waterfront land about to be redeveloped by the Victoria and Alfred Waterfront Company. Being directly on an area to be occupied by new offices for the Board of Executors, the Battery was subject to complete archaeological excavation. A decision was made to conserve the site *in situ* with an area under the building being conserved as an archaeological site, and portion outside the building reconstructed as a publicly accessible feature . About 30% of the Battery survived the 1860-1862 demolition. This consists of a large portion of the front wall, casemate rooms and parts of the courtyard. Apart from the heavily built front wall, the other aspects of the site were built with poor quality materials and as a result are sensitive to any form of physical impact.

*Significance.* The site is considered significant on account of its land mark status, association with historical events, social significance, archaeological research potential, educational and recreational value and rarity.

*Vulnerability.* The excavation of the site and accompanying exhibition is expected to create issues and vulnerabilities that need to be planned for and implemented by its future operators. These are maintaining the general condition of the Chavonnes Battery, controlling uses of the place, relevance of display material and changing perceptions of the past. Other areas of vulnerability are maintenance methods, identification and control of impacts with respect to security and visitor numbers.

*Policy.* The Chavonnes Battery will consist of two components. Firstly, an outside public area where a reconstructed portion of the Battery with three mounted cannon will be accessible to the public. Secondly, an inside area containing the archaeological site and an educational exhibition (Chavonnes Battery Exhibition) focusing on the Battery and its historical context.

- A policy of flexibility is advocated for use of the exhibition area with the proviso that no activities may take place under circumstances that permit people to impact the original fabric.
- The exhibition material in the Battery should be well designed and solidly researched. Themes of displays need to be balanced, acceptable to the majority of Capetonians, reflect the heritage interests of various communities' role in history of the site. There is a legal requirement that presentation of the site should meet any requirements that SAHRA may have. The exhibition should be updated with respect to new findings and interpretations as necessary.
- The policy towards the original fabric advocates minimal inference apart from routine maintenance, which should only involve occasional dust and litter removal. Any physical intervention will require the necessary SAHRA permits and reference group approval. It is expected that both accidental and natural impacts will occur in time. These will need to be monitored, recorded, and mitigated.
- The site has been designed in such as way that visitor access is controlled via a series of walkways that restrict visitor contact with original fabric and displays.

*Implementation.* In terms of legislation responsibility for the site ultimately lies with the owner. The Chavonnes Battery Exhibition area will be under the control of BOE and their appointed

operator who will be directly responsible for implementing the Conservation Plan on behalf of the owner. I

- Staff or volunteers who will be working at the site must undergo a training workshop to assist them to understand the site and implement the necessary conservation measures.
- It is recommended that a reference group be nominated to assist with resolution of any issues arising with respect to the well-being of the site.

*In conclusion.* The Chavonnes Battery is a unique archaeological-historical site in South Africa. It is not expected that any more sites of this kind or scale will be found in the country. Its is hoped that the measures that have be taken to preserve this exceptional resource will result in it continuing to be accessible to future generations.

## **2 INTRODUCTION**

In January 1999, archaeologists of the Archaeology Contracts Office (ACO) of the University of Cape Town were commissioned to undertake a Phase 1 archaeological assessment of land at the "Clock Tower Precinct" at the Victoria and Alfred Waterfront, Cape Town, South Africa. The Victoria and Alfred Waterfront Company was planning and negotiating a major redevelopment of the precinct. A previous conservation study had identified the possibility that an early Dutch East India Company fortification, the Chavonnes Battery had once stood on the site.

The ACO team began a program of trial excavations around the precinct, concentrating on an area occupied by the Concentra factory - a 20th century fishmeal manufacturing plant. The first discovery of early fabric was made after the team had broken through a reinforced concrete floor of a disused boiler room. Further excavation confirmed that these remains were indeed that of the Chavonnes Battery. This marked the start of an extensive phase of consultation, planning and archaeological excavation.

### ***1.1 Conservation of the Chavonnes Battery***

The excavation, conservation and presentation of the Chavonnes Battery within the confines of a significant redevelopment of the Clock Tower Precinct has been a complex process that has affected the working lives of a great many people. This ranges from primarily the client (who has funded the operation), a multitude of sub-contractors and workers who have had to develop and implement a high level of awareness and abide by new site rules on a daily basis. Architects, planners, archaeologists and compliance officers have had to cope with a variety of challenges brought about by the marriage of heritage conservation and development requirements. The project is now reaching completion and indications are that the procedures that have been put in place have been largely successful. The reason for this is that a conservation management plan, albeit an interim one, was in place on the very first day that development activities began. Central to the success of the program to date has been the willingness of the client, their consultants, project managers and contractors to act on the guidelines presented to them.

### ***1.2 Interim conservation management***

The Chavonnes Battery is a below surface archaeological site and as such, posed some specific conservation problems. When trial excavations were commenced in 1999, the existence of original fabric had not been verified despite the fact that plans for re-development of the Clock Tower Precinct were imminent. The first evidence of the find took the form of a few meters of walling buried under the reinforced concrete floors of the Concentra Factory (see Appendix A). It was apparent that parts of a highly significant heritage site lay out of view, the dimensions and condition of which were largely unknown. Since the majority of conservation plans are geared towards the management and protection of landscapes, collections of structures, objects,

buildings and streetscapes with visible fabric and definable parameters, it became immediately apparent that the Battery was going to require a conservation process that was not dependent on a full understanding of the site. This is because archaeological exposure of the site and construction related activities took place virtually simultaneously. The result of this was that several important decisions affecting the significance of the site had to be made during "work in progress" based on information that was available.

During the period of development activities a series of interim management plans drove the conservation process. Updated at regular intervals, these were implemented by the development team and their contractors. Each plan was borne out of the then current understanding of the site given the stage of the development process and the results of the archaeological excavations. The plans contained practical guidelines for the project staff to minimize the many physical impacts that could affect the fabric of the Chavonnes Battery during construction of the BOE building. In addition there were training sessions for key staff on the importance of the site and how to protect it during construction activities.

### **1.3 *The need for a conservation plan***

Now that the archaeological exposure of the Battery is virtually complete, we are in a position to develop a conservation plan in keeping with the guidelines that have been published by English Heritage Lottery Fund<sup>1</sup> and now being incorporated in conservation policy in South Africa. The comprehensive appendix includes the original "stage 1" report on the discovery of the Battery and the interim management plans which are in themselves a record of the decision making process through various stages of the project.

Although success has been achieved in limiting physical impacts to the site during the development phase, it is necessary to ensure sound management and sustainability of the site into the future. Impacts that may affect or diminish the significance of a place are not only physical, but may also result from the way an historic place is used and presented. The Conservation Plan presented in the following pages attempts to put in place the mechanisms that will guard the significance of the site from the point at which it is opened to the public onwards. The kinds of policy that will be presented in the plan are generated from the historical understanding of the site and the ways in which it is significant. The conservation plan will ultimately be implemented by the operators of the Chavonnes Battery Exhibition and will hopefully provide them with some of the tools required to address any practical problems that may arise or identify issues and resolve them.

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<sup>1</sup> Heritage Lottery Fund. 1998. Conservation Plans for Historic Places.

## **1.4 Key role players in the conservation process**

### 1.4.1 Client

The client is the *Victoria and Alfred Waterfront Company limited (Pty) Ltd* (hereafter referred to as V&AW) together with their co-developer, the *Board of Executors* (hereafter referred to as BOE). V&AW commissioned the first archaeological assessment of the Clock Tower Precinct and subsequent archaeological excavation. BOE will control the Chavonnes Battery Exhibition and has funded archaeological excavation within the area, curation of material from the excavations and writing of the Conservation Plan. BOE has also commissioned the Chavonnes Battery exhibition, the display material, and model construction through Gabriel Fagan architects.

### 1.4.2 Consultants

*Clock Tower Project Managers* have played the central role in ensuring that contractors have heeded the requirements of the interim conservation measures within the context managing the overall project.

*Louis Karol Architects* is the principal architectural firm appointed to the construction of the BOE building. Working together with Gabriel Fagan Architects they made the necessary design changes to the BOE building to accommodate the Chavonnes Battery Exhibition.

*MLH Architects and Planners* have been responsible for drawing up and implementing the precinct plan along with the incorporation of the Battery, historic Clock Tower, Cape Town Grain Elevator and other historic features.

*Gabriel Fagan Architects* has been appointed to design the Chavonnes Battery Exhibition area, provide historical interpretation, commission the displays, models and signage along with the necessary sub-contractors to build them, as well as design the reconstructed Battery wall in the public area.

*Archaeology Contracts Office (ACO)* was responsible for locating the Chavonnes Battery, initial archival research and conducting all subsequent excavation, archaeological interpretation and finds curation. ACO was appointed to write the interim conservation measures and recommendations, monitor the implementation thereof, as well as write the Chavonnes Battery Conservation Plan.

### 1.4.3 Main Contractor

The main contractor is *Murray and Roberts (Pty) Ltd* who have been responsible for the bulk of construction work on the precinct, construction of the BOE building, the Battery Exhibition area. They have put into effect the extensive measures for protection of the original fabric during construction activities (in compliance with ACO's recommendations).

### 1.4.4 Compliance Officers

*South African Heritage Resources Agency (SAHRA)*, as the legal authority has been responsible for overall approval of the measures to conserve the site, issuing of permits for archaeological excavation and alteration of fabric.



The *Cape Town City Council* is responsible for the approval of building and precinct plans. Acceptance of the Conservation Plan for the Chavonnes Battery by the *Urban Conservation Unit (UCU)* in the City Planners Department being a condition of granting of the occupancy permit for the BOE building.

### **1.5 Appendices**

The appendices attached to the report consist of:

- Appendix A, the first archaeological assessment, location of the archaeological site and first recommendations.
- Appendix B is the last interim management plan detailing the measures to conserve the site during the construction process.
- Appendix C is a document discussing the implications of reconstructing a portion of the Battery along with recommendations and a retrospective commentary.
- Appendix D contains the recommendations written by ACO with respect to display and interpretation of the Chavonnes Battery with a retrospective commentary.
- Appendix E is a record of impacts.

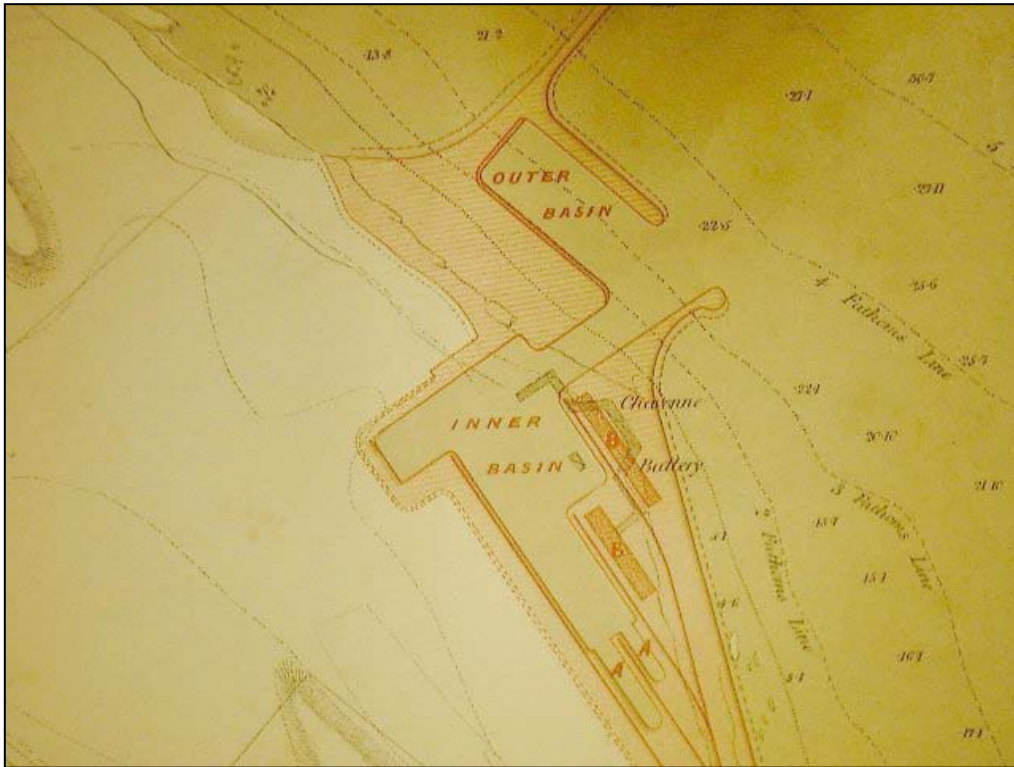


Figure 1 The Chavonnes Battery depicted on an 1859 diagram of the proposed Alfred Basin (after Coode courtesy V&AW)

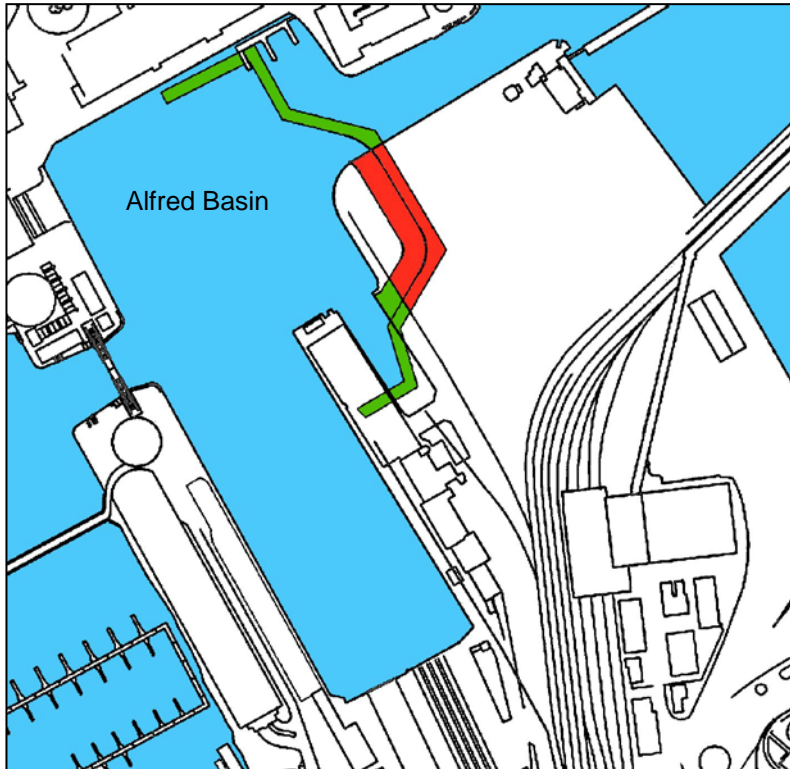


Figure 2

The location of the surviving remains of the Chavonnes Battery on the edge of the Alfred Basin as revealed by archaeological excavations in 1999 (after precinct plan MLH Architects and Planners)

### 3 HISTORICAL BACKGROUND

#### 1.6 Availability of documentation

There are no written sources that reflect a full description of the Chavonnes Battery. Those available, consist of short statements by early visitors to the Cape. These occasional observations, descriptions and depictions in early paintings of Table Bay account for the bulk of the written history of the site. A number of elevations and plans are housed in the Cape Archives, copies of which are in the possession of Mrs G. Fagan of Gabriel Fagan Architects and have been used to inform their reconstruction of the exterior portion of the site. The day-to-day history of the Chavonnes Battery remains largely unknown. A deeper study of primary sources within and outside of the country may produce more evidence, however it is unlikely that much of what ever happened at the Battery was ever committed to paper. The following pages reflect the known history of the site.

#### 1.7 History of the Chavonnes Battery

Bickford Smith and Van Heyningen in their history of the Waterfront<sup>2</sup> wrote "*The Chavonnes Battery, on the margins of the town, was a gloomy place, in appearance and function. Built by slaves, it was used mainly as a prison. Outside were the slave burial grounds. Three Indonesians, sentenced to hard labour at the Battery for resisting the Dutch, complained that they had a miserable existence in poverty, sorrow and discomfort. Sometimes, victims of epidemic diseases, such as smallpox, were kept in isolation here.*"

Originally known as the *Waterkasteel*, *Waterpas*, *Groote Battery* or *Mauritius Battery*, construction took place between 1715 and 1726 at the instigation of Mauritz De Chavonnes<sup>3</sup>, a professional soldier who was at that time Governor of the Cape. He was concerned that the Castle did not provide adequate protection of the west side of Table Bay and ordered the construction of the *Waterkasteel*.<sup>4</sup> General Chavonnes himself, laid down the first foundation stones of this structure on a small rocky promontory overlooking the bay on the 20th of February 1715.

Escalating political tension in Europe resulted in the building of more defenses in later years. By the mid-18th century a sea wall, five batteries and a fort defended Woodstock beach while the massive Imhoff battery strengthened the Castle defenses. The Roggebaai battery, Chavonnes Battery and Amsterdam battery protected the west side of the bay, while other smaller gun emplacements were built at Muizenberg, Hout Bay and Simonstown. By the time that the British took over the Cape in 1795 after the Battle of Muizenberg,

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<sup>2</sup> Bickford-Smith, V. & Van Heyningen, E. 1994. The waterfront. Oxford University Press, Cape Town.

<sup>3</sup> Leibrandt, H.C.V. (Keeper of the Archives), 1896. *Precis of the archives of the Cape of Good Hope*. Journal, 1699 – 1732. W.A. Richards & Sons, Government Printers, Castle Street, Cape Town.

<sup>4</sup> Zeeman, U. *Forts and Fortifications of the Cape Peninsula*. Unpublished MSC Thesis, Department of Archaeology, U.C.T.

Cape Town was a heavily fortified city.<sup>5</sup> Before the excavation of the Chavonnes Battery, and apart from the Castle, a fragment of the Amsterdam Battery and portion of the French Lines in Woodstock comprised the only visible remains of the city's early defenses.

Eyewitness accounts described the Chavonnes Battery as being the most formidable of the Table Bay fortifications. Mentzel<sup>6</sup> wrote, "*Close to the shore there is an elevation of about 50 feet above sea level where a house has been built that has been portioned into three sections. The first is occupied by the post holder, a sergeant in uniform, the second by a corporal and nine men from the castle, who are daily posted on duty at the battery: the last is a lock-up for the hard labour prisoners who have been sentenced to be flogged and branded; they are chained in couples and work all day in the Company Garden... Upon the reef of rocks in front of the house but below the rise, a battery of 15-16 guns has been planted. Under the gun platforms are several vaulted casements. The guns of the battery are trained horizontally upon the sea, hence they are very dangerous to enemy ships*".

Robert Percival<sup>7</sup> who stood guard at the Chavonnes Battery in 1795 after the first British occupation writes "*It has level with the sea one great tier of guns, and further back, but more elevated another range with a flanking redoubt at either end to enfilade both edges of the shore...the Battery is good for greatly annoying ships.*" Percival also describes a range of "houses" for accommodating the guards, troops as well as some small arsenals, He comments that that unlike the Amsterdam, the Chavonnes Battery was not defended from the land and was thus vulnerable, However any shipping intent on making a hostile entry into Table Bay would have to neutralize the Chavonnes Battery first.

Robert Semple describes what he saw in 1805. "*On the edge of the town and on the otherside of the Amsterdam Battery, lies the Chavonnes Battery, the walls of which are built on a rock and washed up by the waves...close under it is a round hole, pretty steep and still frequented by English Gentlemen for bathing.*" Semple also includes a very interesting account of seeing a slave woman weeping for the loss of a loved one at a nearby paupers' cemetery situated between the Battery and the outside of the town.

A report on the state of forts and batteries<sup>8</sup> prepared by the British authorities in 1809 describe the Chavonnes Battery as a "*formidable sea battery in good order, in which are stationed one Captain of Artillery and 40 Rank and File. In this work is a magazine containing 1592 rounds of ammunition for service of the battery, besides a quantity of powder in the charge of the ordinance stock keeper. There are two furnaces for heating shot. The mounted guns are on*

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<sup>5</sup> Hart, T.J.G. 1998. Initial Heritage Impact Assessment of Culemborg. Unpublished report prepared for Crowther Campbell and associates cc.

<sup>6</sup> Mentzel, O.F. 1784. A Geographical and Topographical description of the Cape of Good Hope. Cape Town: The Van Riebeeck Society.

<sup>7</sup> Robert Percival, 1804. An account of the Cape of Good Hope. London: Baldwin.

<sup>8</sup> VC 214. Report on the state of forts and batteries and field ordinance...composing the ordinance establishment of the Cape Colony.

*wooden platforms out of repair, and it is the opinion of the commanding engineer that it would be useful to go to the expense of laying new platforms."* The armaments installed at the battery consisted of 12, 36-pounder cannons, 16, 18-pounder cannons, 2, 18 inch and 1, 10 inch English mortars. By 1812 some of the gun platforms had been repaired and new wood was ordered from Plettenberg Bay for the repair of others.

By mid-19th century the Chavonnes Battery had been put to a number of uses. Besides serving a military role, it was used as an isolation and convalescent wing of the old Somerset Hospital. Crews and passengers of ships stricken with contagious illness (such as smallpox) were confined to the Battery until they were considered fit.<sup>9</sup> In his description of the 1834 smallpox epidemic Mamagh<sup>10</sup> writes *"A Lazaretto was prepared at the Chavonnes Battery which was surrounded by a military cordon sanit'aire and presided over by an officer and an orderly. Both had either had smallpox, or had been vaccinated. Food deliveries were made twice a day to a specified spot within the cordon. No-one inside was allowed to communicate with the people of Cape Town"*.

Initially prisoners who were put to work on the breakwater and harbour were incarcerated at the Battery until the breakwater prison was complete.<sup>11</sup> When the Chavonnes Battery was handed over to the Government for harbour building activities in 1861 it was still operational. A royal salute was fired from its ramparts as Prince Alfred tipped the first load of rubble into the sea for the construction of the breakwater. Petersen<sup>12</sup> describes how the Battery was partially dismantled in 1862 and the stone was pushed into the sea to form the basis of the south Pier on which the Clock Tower now stands. Existing maps of the Alfred Basin indicate that the barrack building and southerly parts of the Battery would have been destroyed during the excavation of the Basin, while the northern section, which contains the Battery itself was covered with fill. Thereafter a complex of cargo stores and early railway lines was built on the newly reclaimed land.

The Chavonnes Battery was the first major defensive facility other than the Castle built by the Dutch East India Company. It was maintained throughout the period of the Dutch occupation of the Cape. The British appreciated its strategic importance after their take-over and went to some lengths to maintain the Battery in working order until it was decommissioned in 1861. Its final operational act was to fire the Royal Salute heralding the construction of the harbour complex now known as the Victoria & Alfred Waterfront.

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<sup>9</sup> Laidler, P.W and Gelfand, M. 1971. South Africa. Its Medical History. Cape Town: Struik.

<sup>10</sup> Macmagh, P. 1992. The Three Lieschings. Their times and contribution to Cape medicine, 1800 – 1843. Society for the history of pharmacy in South Africa.

<sup>11</sup> Petersen, S.T. 1978. The development of Table Bay Harbour 1860 -1870. A study of the breakwater and the inner and outer Basins of the Alfred Docks. Unpublished Honours thesis. Dept of History UCT.

<sup>12</sup> Petersen, S.T. 1978. The development of Table Bay Harbour 1860 -1870. A study of the breakwater and the inner and outer Basins of the Alfred Docks. Unpublished History Honours thesis. UCT.

## **1.8 Some events associated with the Chavonnes Battery**

### 1.8.1 Estienne Barbier

Estienne Barbier, a French soldier in the employ of the DEIC, arrived in the Cape in 1735. After promotion to sergeant, his Principle task was guarding the convicts imprisoned at the Chavonnes Battery. Barbier, who was considered to be a man of tempestuous personality, uncovered what he perceived to be petty corruption among certain officials and eventually laid formal charges. The result of this was his imprisonment in the *Donker Gatt* of the Castle until he eventually managed to escape into the country. During this time he brought further grievous accusations against the government involving mismanagement, fraud and corruption of justice. After sowing insurrection among the peasant farmers of the colony he was declared an outlaw by the government. Barbier continued to be a major headache for the DEIC at the Cape until he was captured in 1738 and incarcerated at the Castle. He was tried and found guilty of treason, after which he was put to death by mutilation and disembowelment. Portions of his body were displayed on stakes set up along the most public roads of the colony. A detailed account of the events that surround the Barbier Rebellion, has been recently published by Nigel Penn.<sup>13</sup>

### 1.8.2 The Battery in Action

It appears that the Battery saw action at least once during its existence. Jose Burman describes an unverified incident that took place in 1781 that involved an unidentified ship coming into Table Bay.<sup>14</sup> "*The British began preparing an expedition to conquer the Cape. In 1781 the Chavonnes Battery was able to prove its worth. A Danish ship was anchored in the bay. It was suspected of being a spy ship for the English. Port Captain Storing was rowed out to the ship to make enquiries (76). The ship made ready to sail with the port captain. He gave a pre-arranged signal for the Chavonnes Battery to open fire. Trapped by the fire of the Battery the Danish ship had to surrender (78)*".

### 1.8.3 James Barry

In 1836 the ship *Lord William Betinck* destined for Cape Town and Calcutta arrived at the Cape. Five passengers died of small pox *en route* so passengers destined for Cape Town were quarantined at the Chavonnes Battery behind a military cordon. These passengers were the Lieutenant Governor of the of the Eastern Cape, Captain Stockenstrom and his wife, children and servants as well as Dr James Barry, his servant and dog (which was disinfected and chained up after it was permitted to swim ashore). Bedding, books and supplies were provided for the people in quarantine for the duration of their isolation. All mail for the Cape was fumigated with sulphur and passenger's clothes were disinfected with chloride of lime. Even some donkeys that had to be landed at the Cape were washed with vinegar then dunked in the sea prior to being brought ashore.

After 1836 the Chavonnes Battery was routinely used as a smallpox isolation hospital. The first recorded use of chlorine gas in South Africa for sterilisation purposes took place at the Chavonnes Battery.<sup>15</sup>

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<sup>13</sup> Penn, N. 1999. Rogues, Rebels and Runaways. David Phillip Publishers.

<sup>14</sup> Burman, J. 1976. Bay of Storms. Pretoria: Human and Rousseau.

<sup>15</sup> Laidler, PW & Gelfand, M. 1971. South Africa, Its medical history. Cape Town: Struik.



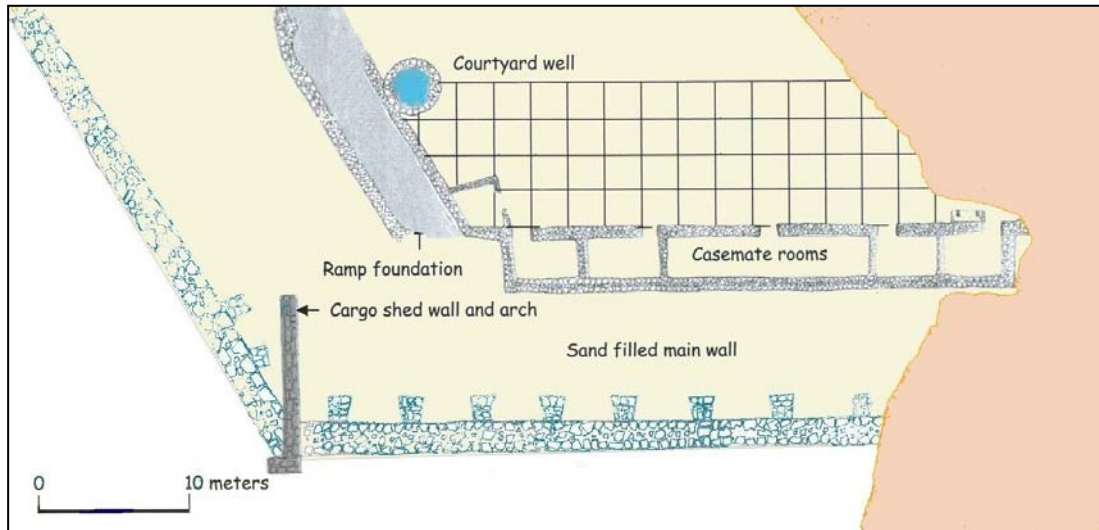


Figure 5 Diagram of the surviving remains of the Chavonnes Battery as revealed after the archaeological excavation.





*Figure 6 View of the remains of the Chavonnes Battery. In the background is the front wall, in the foreground is the courtyard and well (left) and remains of the ramp (center).*



*Figure 7 View of the Battery courtyard with archaeologists working on the courtyard deposit. Partially excavated casemate rooms are to the left.*



*Figure 8 The Concentra Factory over the site of the Chavonnes Battery in January 1999 prior to demolition.*



*Figure 9 The site of the Chavonnes Battery (left of crane) is encased by a retaining wall and protected by orange plastic covers and sand bags. Excavation of the underground parking level is in progress.*



*Figure 10 Original fabric has been protected with sand bags prior to construction of the BOE building. Columns are being cast well clear of the Battery walls.*



*Figure 11  
Workers  
prepare to  
remove the  
protective  
plastic  
covering  
before  
cleaning the  
south wall  
and rocky  
seabed.*

## 4 UNDERSTANDING THE CHAVONNES BATTERY

### 1.9 *Changes over time*

There is little doubt that the Battery has seen a number of physical alterations since its completion in 1726. The main wall was extended laterally during the time of Governor Van der Graaf<sup>16</sup> in 1785, while Thibault proposed changes to the Battery in the late 18th century. The archaeological evidence does indicate that there is a building sequence involving the filling of two rooms and the construction of a ramp room. During the 19th century the barracks were altered to accommodate the Somerset smallpox hospital. Since so much of the Battery was demolished in 1860, it is not possible to document the changes using existing fabric, however, it must be understood that the site has been subject to changes over time. The portions that remain are probably the oldest - construction methods and archaeological finds are consistent with the 18th and early 19th century.

### 1.10 *History of development*

In summary, five separate phases of development have taken place in the area, all of which have affected the site of the Chavonnes Battery and contribute to its current status. Figures 1 & 2 show the location of the site relative to the Alfred Basin.

These are:

- a) The Chavonnes Battery was built on a headland (the most seaward extent of the Signal Hill ridge) in the early 18th century.
- b) The construction of the Alfred Basin and Cut from 1860 onwards. This involved excavating a deep basin and channel into the Malmsbury shale and using the resulting rubble to reclaim land from the sea. During this time the Battery was filled in with rubble and partially demolished. The Clock Tower jetty was built and the coastline was advanced by depositing rubble fill into the sea.
- c) Railways and cargo sheds were built on the reclaimed land, which formed the northeast wharf of the Alfred Basin.
- d) The cargo sheds were largely demolished or adapted to suit the needs of the Concentra factory. Construction of the factory involved sinking columns to support the brick and steel framed structure. A thick concrete floor was thrown over the coarse rubble fill to support machine and boiler mountings.
- e) In 1999 the Concentra Factory was demolished and the surviving elements of the Chavonnes Battery were revealed after extensive archaeological excavation. By the end of 2001, conservation of the find within the BOE building on the Clock Tower Precinct, will reach completion.

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<sup>16</sup> Warden, N. van Heyningen, E. Bickford-Smith V. 1998. *The Making of a City*. Cape Town David Phillip Publishers.

## **1.11 The Chavonnes Battery in 1807**

Than plan of the Chavonnes Battery produced by the Royal Engineers in 1807 best represents the site as it was after the Cape was taken over by the British. The layout and dimensions are commensurate with recent surveys of the existing finds.

### 1.11.1 Strategic positioning

The Battery was built in such a way as to make use of the topography of the area. Built on a projection of shale, which was essentially the most seaward extreme of Signal Hill, the site commanded a view of the interior of Table Bay to the south east, the channel between Robben island and the mainland to the north and the open Atlantic and Granger Bay to the West. Its artillery was therefore able to cover a 180° arc of the ocean making it almost impossible for any ship to enter Table Bay without coming within range of its cannons. Any ship intent on getting within gunfire range of the Castle and the fledgling city of Cape Town would first have to contend with destructive force of the Chavonnes Battery 36 pounders. Any ship failing to show its colours upon entering the bay would be subject to a warning shot.

### 1.11.2 The main wall

The most prominent feature of the Battery was the seaward front wall or *hoofdwal*<sup>17</sup>, almost 200 yards in length and built on the bed rock so close to the high tide mark that the bottom of the walls and rock surface have been smoothed by wave action. The wall (see Figure 3) consisted of a prominent front rampart with returning sidewalls and a pair of lateral wings to protect the sides of the Battery. The front and side return walls are the oldest part of the Battery while the side wings were added during the leadership of Governor Van der Graaf.

The archaeological excavations have revealed that the walls were massively built consisting of stone skins and an interior fill of sand and clay. The outer wall (built of stone and lime plaster) was between 2-3 m thick, 5-6 m high and strengthened with regularly spaced stone buttresses along the interior. Sea sand was packed behind this forming a 9m thick sandwich, which in turn was retained by a more lightly built inner wall 900 mm thick (stone and clay). This was designed to absorb the impact of bombardment from enemy shipping. The wall served as a gun platform, the cannons being placed on wooden platforms behind a clay and brick parapet on the seawards side. The diagram of 1807 shows a total of 39 gun platforms, the heavy pieces were placed along the front wall (east) while lighter cannon were trained in a southerly and northerly direction.

### 1.11.3 Casemate rooms Casement

The casemate rooms are not shown on any plan views of the Battery but are indicated as being present on a cross-section diagram dating to the late 18th

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<sup>17</sup> Hall, M.J., Halkett, D.J., Huigen van Beek, P. and Kloose J. 1990. "A stone wall out of earth that thundering cannon cannot destroy" Bastion and Moat at the Castle, Cape Town. *Social Dynamics* 16(1) 22-37.

century.<sup>18</sup> Furthermore, the aforementioned historic texts refer to the presence of vaulted casement rooms. The archaeological evidence has verified the presence of 5 casemate rooms constructed within the front wall of the Battery, and opening into the courtyard. These were laid out in a symmetrical fashion (Figure 5), each with its own doorway onto the courtyard. The second room (north side) had a window facing into the yard. Each room was paved with slate, and the interiors walls were plastered and white washed. Steel bolts and fixtures appear to have been driven into the walls at regular intervals.

As yet, the uses of the rooms are not clear apart from being referred to as "arsenals" on the early diagram. Given the complex history and multiple uses that the Battery was subject to, these spaces were probably used for a variety of uses ranging from storage, to internment and hospital wards.

#### 1.11.4 Ramps

The 1807 diagram (Figure 3) shows that the gun platforms were accessed by two earth ramps on either side of the courtyard. These were used to haul heavy items/cannons from the courtyard onto the wall.

#### 1.11.5 The courtyard

This was a sunken area situated between the main wall and the slope of Signal Hill. It contained two vaulted magazines for shot and powder, hot shot ovens and a well. Archaeological excavations have revealed the presence of a collapsed vaulted brick chicken coup affixed to the inside of the front wall. The floor of the courtyard consisted of stamped earth.

#### 1.11.6 Barracks and flagpole

Not much is known about the barrack building that was built on the slope of Signal Hill just above the Battery. It is described on the historic records, features in several contemporary sketches. A plan of 1790<sup>19</sup> depicts the barrack floor plan - a comparatively large rectangular building divided into 8 rooms, one of which was very large and probably large enough to draw wagons into. By 1807 the structure had been extended towards Signal Hill with the addition with a further large room, smaller room and an *afdak*, while other older rooms within the complex appear to have been divided and internal corridors introduced.

According to historic observations, the building housed members of the Battery Garrison, prisoners and possibly slaves. In the 19th century the building was adapted to house 84 beds of the Somerset Hospital smallpox ward.<sup>20</sup>

The 1807 plan shows that the flagpole was situated behind the barracks higher up the slope of Signal Hill. From this position passing ships could be signaled.

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<sup>18</sup> Cape Archives M1/1090.

<sup>19</sup> Cape Archives M1/1099

<sup>20</sup> Laidler, P.W. and Gelfand, M. 1971. South Africa Its Medical History. Cape Town: Struik.

### **1.12 19th century demolitions**

The Chavonnes Battery became redundant in the mid-19th century and was lost under landfill when the Alfred Basin was excavated after 1860. The process of construction of the basin involved a large excavation directly behind the Battery achieved with the assistance of convict labour, steam shovels, steam pumps, nitro-glycerine and black powder blasting. Once the basin had been excavated the division of stone between the basin and the sea was breached, and the basin was allowed to fill.<sup>21</sup> The archaeological excavations on the site have shown that the Battery played an expedient role in the construction of the basin as the front wall was used as a starting point to build the rough stone breakwater that headed out into the bay. During this time certain aspect of the Chavonnes Battery were completely demolished. These are indicated on the overlay diagram (Figure 4) and described below.

- The barrack building and signal mast situated behind the gun emplacements on the Signal Hill promontory (now occupied by Alfred Basin).
- The flight of stairs from the rear of the Battery courtyard, which led up to the barrack building.
- The two shot and powder magazines in the rear of the Battery courtyard (roughly situated where the quay is).
- Two side wings together with gun emplacements (now occupied by Alfred Basin).
- The north west return of the front wall of the Battery (this area is now occupied by the cut into the Alfred Basin).

Construction of the Alfred Basin caused the loss of about 70% of the area of the site and the associated structures. The tailings from the excavation of the Alfred Basin were then dumped over the surviving parts of the front wall of the Battery to reclaim land from the sea. What remained of the courtyard and the casemate rooms was filled in with rubble while the front wall was leveled to create a flat platform for new wharf side buildings.

After 1870, several large stone warehouses (Figure 2) were built on the landfill. Two of these lay directly over the Chavonnes Battery. Their stone foundations cut across the length of the casemate rooms and the return of the eastern side of the front wall. Despite the direct placing of these heavy footings on the site of the Battery, the damaged they caused was relatively insignificant.

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<sup>21</sup> Petersen, S.T. 1978 "the development of Table Bay Harbour 1860 -1870. A study of the breakwater and the inner and outer basins of the Alfred Docks. Unpublished History Honours thesis. UCT.

Oral history indicates that the Concentra Fish Meal plant was established in the 1930's incorporating one of the early warehouses. Plans exist indicating that the plant was significantly expanded in 1949 with the result that the bulk of the existing factory dates from this period. The engineers who erected the Concentra Fish Factory caused further damage by positioning heavy concrete bases to support the five-story structure. A number of bases were positioned directly on top of the surviving portion of the Battery causing further impacts in the form of depressions in the front wall. Believing that they were building on unstable reclaimed land, engineers cast a 2m thick concrete raft to support a pair of large boilers. This, which lay directly over the courtyard and eastern casemate rooms, may have impacted structures such as hot shot ovens that stood in the courtyard. The Concentra Fish Factory was demolished in 1999 when development of the Clock Tower precinct commenced.

### **1.13 Surviving aspects of the Chavonnes Battery**

Archaeological excavations commenced in detail once the Concentra Factory had been demolished. Excavations down to a depth of 2-4m below ground surface relied heavily on use of heavy machinery (earthmovers and breakers) as well as explosives to shift the heavy bases and concrete slabs that covered the site. Below this was a fill, which consisted of stone rubble and clay which had been dumped over the Battery in 1860-1862. The excavations eventually revealed a large area of the site (Figure 5) consisting of:

- The front wall (east) and side wall (south) of the Battery extending in total length of some 100m.
- The inner wall of the courtyard, and the sand fill between the inner and outer walls.
- The signature of an earth ramp extending towards the front wall from the south side of the inner courtyard (Figure 6).
- The footing and top 100 -150 mm of walls of 5 casemate rooms situated within the front wall of the Battery and a further room under the juncture of the ramp (Figure 5). These were built from stone and clay mortar and plastered with shell-lime plaster. Floors were made from shale slabs.
- Excavation of 19th century fill revealed a partial expanse of the courtyard of the Chavonnes Battery (Figure 7). This consisted of some 3 layers of compacted earth floor very rich in 18th century artefacts and bone. The lowest floor level together with artefactual material is being left *in-situ* for display purposes. Artefactual material is the subject of ongoing analysis at UCT.
- A shallow well situated on the southern side of the courtyard adjacent to the ramp. The well, which had been dug into bedrock to a depth of 2.5 meters was partially dressed with stone. It contained an English assemblage (1800-1860) of artefacts including refined earthenwares,



bone, metal items and a range of cannon balls. This material is being subject to ongoing analysis at UCT.

- Layered over the fabric of the Battery and running through the casemate rooms were the arched foundations of the 19th century cargo sheds. These have been demolished, however an area of wall together with two arches has been preserved to demonstrate the layering of the site.

The archaeological remains, which represent about 30% of the total extent of the Battery, have proved to be extremely important in terms of providing information about the construction method and layout of the site. The information, together with historic plans has informed the reconstruction work done by Gabriel Fagan Architects. The artefacts and bone found in the courtyard and well has good context and has permitted archaeological reconstruction of aspects of the life style of persons residing at the Chavonnes Battery.

#### ***1.14 Redevelopment of the Clock Tower Precinct***

Victoria and Alfred Waterfront (Pty) Ltd. have expanded their development activities onto the Clock Tower Precinct - a portion of land that incorporated a fish market, the Concentra Fishmeal Plant, the Cape Town Grain Elevator and several smaller maritime related industries. Development activities have necessitated demolition of a number of these structures (excluding the grain elevator) and excavation of 3 levels of parking space extending into the underlying shales. Features of the new development are a new Robben Island departure point, a new building to house the head offices of the Board of Executors (BOE) as well a retail and tourist center. Conservation of the Chavonnes Battery within this complex has been a significant investment for the developers who have carried the financial expense of incorporating the site within part of the BOE building.

When existence of the Battery was verified in 1999, the BOE building was redesigned to include a large area of the Battery site in a subsurface space below its ground floor (Figures 8-9). This involved:

- Blasting the surrounding bedrock to the requisite depth for the underground parking but leaving the Chavonnes Battery "pedestalled" on the original wave washed land surface.
- Casting a waterproof retaining wall round the pedestal of rock on which the site is situated, the floor of the lower underground parking being below mean sea level.
- The positioning of columns and bases within the Chavonnes Battery area in such a way as to avoid impacting original fabric (Figure 10).
- Suspension of the BOE auditorium over the Chavonnes Battery Exhibition area.

- The creation of an exhibition area with walkways and viewing platforms.
- Protection of the fabric of the Battery with plastic covers and sandbags for the duration of the construction process, then "unpacking it" before preparing the exhibition area (Figures 10-11).
- Reconstruction of a portion of the Battery wall and casemate rooms in the public space outside the BOE building.

## **5 ASSESSMENT OF SIGNIFICANCE**

The full range of significance and meaning attached to an asset such as the Chavonnes Battery will never be fully understood until there is a solid knowledge of its history. At present there are still significant gaps in the archival history of the site as the written records consist of a handful of observations by early writers. Furthermore, perceptions of significance vary from person to person according to their backgrounds. This is particularly the case in South Africa where the political history of the country strongly influences the values that people put on aspects of the National Heritage. Notwithstanding these factors, enough is known about the Chavonnes Battery to identify a number of significant elements.

### ***1.15 Landmark status***

- For many years the Battery existed on the foremost promontory of Signal Hill where its guns could be trained over Table Bay. As the Guard Battery for Table Bay it was necessary for passing ships to identify themselves or risk being open fired on. The Battery was the gateway to the Cape of Good Hope - the first view of civilization after many months of hardship on the high seas. For many sailors, first sight of the Chavonnes Battery meant the imminent relief from the misery of poor food, illness and bad water. For others who traveled by sea it heralded the beginning of a life of slavery in the service of officials of the Dutch East India Company.
- Depictions of the Battery on a large number 18th and 19th century paintings and sketches of Table Bay attest to the physical prominence of the site in Table Bay and its role in guarding the fleets of ships that anchored there. The Battery ceased to be a landmark after it was filled over with the reclamation of land for the Alfred Basin, however its rediscovery in 1999 and subsequent conservation has given it status as a landmark indicating the historic form of Table Bay and a measure of the development of the city over the last 300 years.

### ***1.16 Association with historical events***

- The cannons of the Chavonnes Battery were trained out to sea signifying where the greatest strategic threat was perceived to originate - an attack on the Cape Colony by enemy shipping. The Battery was built as a response to European power struggles and reflects the international repercussions of European politics in the context of the strategic importance of the Cape.
- Estienne Barbier, a notorious Cape rebel, commanded the Chavonnes Battery prison before he was arrested for treason, escaped and was re-arrested and put to death, possibly at the execution ground behind the Battery where he once served.

- Dr James Barry was interned at the Chavonnes Battery upon his/her arrival in the Cape. Members of his ships company were exposed to smallpox and required isolating.
- The last military act performed at the Battery was the firing of the royal salute when Prince Alfred inaugurated the building of Cape Town's first harbour.

### **1.17 Social significance**

- According to historians the Chavonnes Battery was built by slaves, and as such may have been one the earliest government works to employ slave labour on a large scale. By the mid-18th century slaves accounted for more than half the population of Cape Town and are ancestral to many Capetonians. The Battery is therefore testament to their endeavours.
- Besides playing a role as a defensive facility against European aggression, the Battery served as a prison where wrongdoers were housed before taken to the nearby place of torture and execution for punishment. Three Indonesian exiles were detained on the site.
- The Chavonnes Battery served as a compulsory internment facility (under military control) for the isolation and treatment of passengers and crews of ships afflicted by smallpox, and therefore has a significant place in the medical history of the Cape.

### **1.18 Archaeological research potential**

- The site has revealed substantial information about construction and design of the Battery.
- The archaeological material found in the well and courtyard areas is providing evidence about subsistence patterns of low ranking Dutch East India Company staff employed at the Battery - In particular their diet and their use of indigenous as opposed to imported species of sheep and cattle.
- The large oriental ceramics collection from the Battery courtyard has potential to provide new insights into 18th century local use and trade of imported oriental ceramics.
- Excavations have provided an excellent sample of locally produced earthenware's, which will complement previous research on collections obtained from the Castle.
- The collection of military artifacts excavated from the well will enable determination of the different kinds of muzzle loading ordnance installed at the Battery.

### **1.19 Educational and recreational value**

- The site will inform the public about the construction method, context and extent of the early fortifications and the art of gunnery of the 18th and 19th centuries.
- The site has the potential to educate the public about the social conditions of Cape Town, the way in which the Dutch East India Company employees worked and lived.
- The site has played a pivotal role in the development of the Waterfront and marks the point at which work on the country's first harbour began.
- The conservation of the Battery within a new building will demonstrate what can be achieved through archaeological investigation and informed heritage conservation, and will hopefully provide further impetus for a culture of heritage conservation and stimulate debate and expansion of the field.

### **1.20 Rarity**

- The Chavonnes Battery is presently the largest and earliest surviving heavy gun emplacement in South Africa. Furthermore it may be the earliest surviving DEIC battery within the historic DEIC hegemony.<sup>22</sup> It is not expected that further finds of this type are likely to be found in South Africa.

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<sup>22</sup> Prof. Fritz van Voorden. T.U. Leiden. Personal Communication.

## **6 VULNERABILITY**

### **1.21 General condition of the Chavonnes Battery**

Despite the heavy construction of the Battery, it is a fragile site, which has required extensive protection measures to conserve it through the construction process. The front wall of the Battery is robustly constructed, the builders utilizing the best quality bricks, mortar and stone to create a structure that would stand up to wave action and cannon fire. The top surface of the main wall is somewhat cracked and fragmentary due to mainly damage incurred during construction of the Alfred Basin and the later Concentra Factory. Despite this the remains of the front wall are sound and are expected to withstand further weathering for many years to come (with periodic maintenance).

The walls of the casemate rooms are more vulnerable in that they are built of stone and soluble clay-mud mortar that is easily eroded by water and wind, and worn away by any activity. The bricks of the casemate room doors are probably local and of very poor quality. We have witnessed them deteriorate with rain and wind erosion while the effect of peoples clothing brushing against them causes visible wear. Plaster on the outside and interior of the casemate rooms is very soft and liable to crumble at the slightest touch. Likewise the archaeological deposits of the courtyard are relatively unconsolidated and fragile.

While in operation, structures such as the Battery required regular maintenance involving plastering and whitewashing to protect the soft clay-mud mortar from the elements. Once the inner fabric is exposed to rain and wind, deterioration is rapid. The fact that the Battery has been buried below surface has effectively protected the fabric. The process of excavation of the site has resulted in it being vulnerable to new impacts, which will have to be monitored and controlled.

Now that the Chavonnes Battery has been conserved under the BOE building and in part reconstructed, issues relating to maintenance of significance and physical conservation of fabric needs to be identified and planned for. Issues that we have defined are:

### **1.22 Uses - The exhibition area**

While this document does not prescribe the kinds of activities that may take place within the exhibition area, the client may wish to use or out hire out the premises for special events, functions or for internal use. These kinds of activities are acceptable within reason, and enhance the sustainable use of the site.

The Battery will be vulnerable if:

- Inappropriate use results in circumstances where the control of visitors is compromised could result in damage to fabric and displays.

### **1.23 Relevance of display material and changing perceptions of the past**

Perceptions of the history and the significance of heritage sites are subject to change depending on prevailing politics, discovery of new information and the background of any historians involved. This is particularly so in the Western Cape where new First Nation interest groups and descendents of slaves are actively exploring their roles in local history and adopting, in many instances alternative interpretations of the past. Any colonial period heritage site may become subject to contestation and re-interpretation by various interest groups. Persons with slave or exile ancestry may perceive the site to be a place with special significance in terms of their particular history. Others will interpret the site as a place of colonial suppression and will contest the emphasis of the exhibition material.

The significance and fabric of the site may be compromised if exhibition material:

- Unjustifiably excludes the heritage concerns of local communities.
- Does not reflect solid historical research and well-argued interpretation.
- Reflects poor layout and workmanship.

### **1.24 Maintenance and impact control**

The opening of the Chavonnes Battery to the public will inevitably carry some degree of risk of damage to fabric of the site. While most visitors will be respectful of the site, there will be those that wander from authorised areas, remove material for souvenirs and cause other unanticipated impacts. Natural weathering will have a gradual effect. It is important the Chavonnes Battery receives basic maintenance and that the operators are aware of the need to monitor and act on patterns of impact which cause long term cumulative damage. Areas of potential vulnerability are indicated below.

#### 1.24.1 The public area

##### **1.24.1.1 Exterior main wall**

It is hoped that the reconstruction over the finds outside the BOE building will go much of the way towards limiting physical impacts to the original fabric. Old brick and stonework will remain exposed on the outside of the wall and in time this may deteriorate due to:

- Exposure to the elements – ie wind and rain erosion.
- Deterioration of mortar causing brickwork patching to break loose.
- Criminal acts such as souvenir hunting (theft of bricks), vandalism and graffiti.

#### **1.24.1.2 Parapet and guns and gun platforms**

This is a reconstructed area, the only original material being the gun barrels themselves. Nevertheless unsightly damage or treatment of the area will contribute to a negative image, which diminishes the significance of the site. Impacts will result from:

- Exposure to the elements.
- Use wear.
- Litter.
- Criminal acts such as vandalism, theft and graffiti.

#### **1.24.1.3 Casemate rooms and courtyard**

These may be affected by:

- Exposure to elements.
- Litter thrown in from above.
- Flooding and poor drainage.
- Vandalism.

#### **1.24.1.4 Area within the BOE building**

The remains of the Battery within the BOE building have been subject to minimal intervention, the intention being to present the finds as they were originally found juxtaposed to the reconstructed area. The stable environment within the BOE is advantageous to the preservation of the fragile walls and plaster. Impacts are anticipated to result from:

- Behaviour of visitors.
- Inappropriate maintenance techniques.
- Inappropriate use of the area.
- Accidental damage.
- Use of consolidants and sealants

### ***1.25 Visitor control***

Visitors to the site will be guided through via a system of walkways and formal exhibition areas, clearly defined and equipped with railings. Visitors will enter the site at a formal entry area and follow a self-guided circular route round the exhibition before leaving via a formal exit. Again, the purpose is to limit visitors from having immediate contact with original fabric. Threat to the fabric and exhibition material will be caused by:

- Visitors who leave the demarcated areas and walk on the walls (which are fragile and subject to wear and erosion) or across the courtyard archaeological deposit displacing artifacts and creating dust.
- Excessive crowding in exhibition area and walkways, which may result in accidents and damage.
- Theft of artifacts and souvenir collecting.



## 7 CONSERVATION POLICY

### *1.26 A vision for the site*

The vision for the future use of the Chavonnes Battery has evolved from humble beginnings when the presence of the remains was first verified. The client acknowledged that there was a potential opportunity to "add value" to the Clock Tower Precinct by incorporating the fabric as a feature of interest. The BOE building was moved some 20m to the south to create an open area so that those aspects of the Battery that had been identified by April 1999 could be conserved in a public space. Louis Karol Architects first conceived of the idea of some limited reconstruction, with aspects of original fabric being made visible through glass panels in the BOE building with the bulk of the site remaining buried under the BOE building. It was only after the demolition of the Concentra Factory and during the subsequent archaeological excavations that the full extent of the site was understood. It became clear that there was useable space between the walls of the Battery and within the courtyard area that would create an interesting opportunity for some form of adaptive reuse. A number of options were informally considered ranging from a novel setting for a restaurant to a museum display area. The balance of agreement was that the Chavonnes Battery should become an educational and recreational resource that would enrich the precinct. The Battery should perform as a tool to portray aspects of the city's past contrasting and complimenting the view of modern Cape Town as seen from the BOE observation deck on the top of the building.

The decision to reconstruct the public area of the Battery wall was based on two factors - the need to conserve the underlying original fabric in an outdoor environment while creating a device to explain how the Battery was built and functioned. The intention is to create a robust public area requiring minimal maintenance, yet recreating a sensation of the past that could be experienced by child and adult alike. The reconstructed area was brought into being by Gabriel Fagan Architects, who referred to the historic record and archaeology of the site in achieving what is an accurate representation of the Battery in scale and form.

In contrast the Chavonnes Battery Exhibition presents the site as an archaeological exhibit with minimal intervention in the original fabric. In this way visitors will be able to view the "anatomy" of the site, observe how the Battery was built, and view the exhibition material depicting its historical context and purpose.

In essence the following represents the current vision for the Chavonnes Battery.

- The Chavonnes Battery is a heritage site, a unique surviving example of an early fortification that played both a defensive and social role in early Cape Town.

- The spatial opportunities created by the *place* are to be used for the creation of an innovative and exciting educational experience, showcasing the Battery as an archaeological site and focussing in part on the social and military history of Cape Town. This can take the form of permanent or temporary exhibitions. The site is geographically situated within the Waterfront close to a tourism facility and the Gateway to Robben Island - it is ideally suited to portraying aspects of Cape history to not only Capetonians but to many international tourists who know little about the origins of the city.
- The physical fabric of the Battery is protected by law and must be respected and protected at all times.

### **1.27 Appropriate uses**

The site, once established should be financially self -sustaining. Although the Battery is a place of great interest and significance, it is not sacred and can be used for many different purposes provided that the significance and fabric of the site is not damaged. The reconstructed area outside the BOE building is designed as public open space during daylight hours, which means that it is subject to the same conditions as the open areas of the Victoria and Alfred Waterfront. The reconstructed small casemate rooms will also be visible to the public but closed off by glass screen inner doors.

The most sensitive area is the Chavonnes Battery Exhibition within the BOE building. It is here that original fabric is exposed, the history of the site is showcased and a policy towards appropriate uses is relevant. Besides the Chavonnes Battery displays, the Exhibition area and surrounds can be used for a variety of purposes. While it is not the intention of this document to be prescriptive, activities that have the potential to be un-manageable in terms of restricting damage to the fabric must be avoided.

#### 1.27.1 Inappropriate uses

- Crowded parties with excessive consumption of alcohol.
- Any event, which involves putting heavy equipment on the walls or courtyard deposit.
- Any event, which involves people going into the foundations of the casemate rooms or walking on the walls.
- Significance of the site will also be diminished by the erection of inappropriate displays that may be offensive in subject matter, or of poor visual quality or conception.

#### 1.27.2 Appropriate uses

- Temporary exhibitions of art, photography, heritage, architecture.
- Topical temporary displays.
- Small music concerts.

- Cocktail parties.
- Fashion shows.
- Tours for special guests or persons with specialist interests.
- Education.

### 1.27.3 Useable areas

- The use of the Chavonnes Battery Exhibition area must involve strict measures to ensure that activities are confined to the walkways and designated surfaces.
- The sandy fill between the inner and outer walls can also be put to use if necessary but will have to be made good thereafter.

### **1.28 Attitude to original fabric**

A key Principle of the Burra Charter<sup>23</sup> should guide the conservation of original fabric. This is "do as much as is necessary and as little as possible." Other than cleaning and maintenance it is best that original fabric is left alone. In the event of necessary alterations to original fabric, the South African Heritage Resources Agency provides a mechanism for obtaining permits to make alterations, however it is both unlikely and not desirable that fabric is subject to any further impacts unless issues relating to safety are involved.

#### 1.28.1 Use of consolidator

It has been proposed that a consolidating preparation be applied to walls within the exhibition area to strengthen the brickwork, clay plaster and the earth floor. Advice on the matter was sought from English Heritage who are ambivalent about the use of such, commenting that some preparations have been known to cause plaster to spall. At the same time such preparations have proved to stabilize and waterproof soft brickwork and other fabric. A test area has been established at the Chavonnes Battery where monitoring of a preparation is in progress.

It is expected that the application of a consolidator will protect certain areas such as the soft brickwork edges to the casemate room doors and will harden and waterproof the clay plaster. A real concern is the triggering of the automatic fire control sprinkler system, which will impact the softer archaeological deposits and the clay mortar in the casemate room walls. Here the application of a consolidator may be an advantage.

### **1.29 Maintenance**

#### 1.29.1 The public area

##### **1.29.1.1 Main wall**

This area is fully reconstructed and may therefore be maintained without particular concern for impacting original material. The cannons are very robust

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<sup>23</sup> Australia ICOMOS.

and difficult to damage, however corrosion will have to be removed from time to time and the metal and woodwork kept painted and in repair.

Requirements are:

- Periodic maintenance of cannon barrels and carriages.
- Cleaning and litter removal.
- Litter removal from sunken seabed area.
- Maintenance of parapet, gun platforms and safety railings.
- Repairs to original fabric of the lower wall to involve specialist consultation.

#### **1.29.1.2 Reconstructed Casemate Rooms**

The casemate rooms are mostly reconstructed, off limits and should not require anything other than monitoring and maintenance.

#### **1.29.1.3 Exterior courtyard surface**

The stamped earth floor of the courtyard area may erode if affected by heavy rain. This will have to be monitored and the material removed and replaced with a hard surface or paving if necessary. A sump pump installed under the stairway will control water drainage. Litter and cigarette butts will have to be removed on a daily basis, however sweeping of the surface should be done as seldom as possible and only with a soft brush.

#### **1.29.2 Chavonnes Battery Exhibition Area**

Hopefully very little maintenance will be required within the Exhibition area apart from cleaning of the displays and walkways. Ideally the ruins should not require any work and are best left untouched. From time to time the exhibition area will require maintenance - changing of light bulbs, painting and cleaning. It is probable that some visitors will throw objects/litter into the sensitive areas. This will need to be removed. Below are some simple guidelines.

#### **1.29.2.1 Archaeological deposit**

- Staff needing to gain access the rooms for cleaning must wear soft shoes when crossing the inner courtyard area.
- Persons doing overhead maintenance on fire control systems and lighting should erect their ladder on some layers of old carpet or similar material to prevent erosion of the deposit.

#### **1.29.2.2 Casemate room foundations and walls**

- Periodic dust removal from the casemate room foundations can be done with a vacuum cleaner or light pan and broom.

#### **1.29.2.3 Well**

- The well will need to be checked, litter and other foreign objects removed.

#### **1.29.2.4 General**

- The exhibition operator should consider restricting casual consumption of food and beverages in the exhibition area (unless for special events) as this will help cut down on litter and the number of times that staff will need to go into sensitive areas to "clean up".

### ***1.30 Identification and monitoring of impacts***

It is difficult to predict or anticipate all the affects that people and the environment will have on the Battery. This means that continuous vigilance will be needed to identify problems before they begin to impact the fabric of the site. Re-occurring problems will require alterations in management of the site, or physical mitigation. In terms of policy, records of situations involving impacts should be kept.

#### **1.30.1 Main wall**

Some degree of change in the original fabric of the main wall can be expected in time. It is difficult to predict the extent and rate of change, however systematic periodic monitoring will be necessary to determine if the fabric is spalling or eroding. Any acceleration in weathering may be an indicator that conservation work/stabilisation of fabric is necessary.

- A three monthly Inspection of the seabed area should give a measure of the amounts of accumulated eroded material and the most vulnerable parts of the wall.
- Sweeping and collection of the eroded material for periodic comparison would be an ideal deal way to judge if accelerated erosion is taking place.

#### **1.30.2 Casemate Rooms**

The reconstructed casemate rooms will be opened on a daily basis. Since the rooms are enclosed spaces, there is always a danger that people will go inside and indulge in impact creating activities - eg graffiti, urination and litter.

- Glass inner doors will prohibit public entry into the rooms.
- Entry to the rooms by staff or guided specialist tours.

#### **1.30.3 Exterior courtyard**

The courtyard surface wear will have to be monitored, and if the status quo proves impracticable, the surface will have to be hardened.

### ***1.31 Visitor control***

#### **1.31.1 Public Area**

This area will be open to the public during daylight hours and access will be free of charge. The public will be permitted onto the main wall and gun

platforms. They will be able to enter the sunken courtyard and view the interior of the casemate rooms through closed glass inner doors. The visible original fabric of the main wall lies within a sunken area and will be not be accessible to the public.

### 1.31.2 Exhibition Area

The exhibition area will be open to the public at times to be determined by the operator and at a fee yet to be set. Entry to the site will be via a ticket office, after which visitors will follow a self-conducted tour through the Battery via walkways on ground level as well as bridges and platforms suspended above the casemate rooms. During the course of the tour the visitor will be able to view the static displays on the Battery and its historical setting, the exhibition on 18th century gunnery, models of the site and Table Bay defenses, signaling systems and shipping. A 3-minute video will illustrate the archaeological excavation of the site. The system of walkways is designed to encourage visitors to follow a circular route through the site without bringing them in direct contact with original fabric. Despite these measures the operators of the site will have to:

- Erect signage to ensure that visitors do not leave the demarcated walkways.
- Limit access if excessive crowding threatens safety or the exhibition.

### 1.31.3 Security

Security issues are paramount with respect to protection of fabric and exhibition material.

#### **1.31.3.1 Public area**

No easily transportable artifacts of any value will be on display in the public area. Threats take the form of vandalism.

- Standard Victoria and Alfred security measures should apply.
- The area should be closed to the public should after hours or whenever normal security measures are not in place.
- Good lighting of the public area will be an advantage.

#### **1.31.3.2 Exhibition area**

Vulnerability in the exhibition area relates to potential theft of artifacts and display material, as well as deliberate damage to fabric.

- Personnel must be present and visible during hours that the Exhibition is open.
- Closed circuit television monitoring would be an advantage (as well as signage to indicate that monitoring is taking place).

- All artifacts must be behind glass, firmly attached to an immovable surface or well out of reach.
- Any person found in possession of artefactual material from the site may not only be prosecuted for theft but also for contravention of the SAHRA act 25 of 1999.

### **1.31.3.3 Vandalism**

In light of the high degree of lawlessness in the country and the fact that some aspects of the National Heritage have the potential to become contested, it is not impossible that some vandalism may occur, in particular in the public area of the site. This being the case, the full weight of the South African Heritage Resources Act and other relevant legislation should be brought to bear on any apprehended culprits. Graffiti is a particular concern as it is very difficult to remove, and will require specialist intervention to remove it from original fabric.

### **1.32 Presentation and interpretation**

The challenge is to present the site in such a way that its significance is brought to the fore along with its potential to contribute to the South African historical identity. Like many other historic sites, the Chavonnes Battery is not only about the people who designed it and commanded it, but it is also about the people who quarried the stones, burned the lime cement and laid the stones and bricks and from time to time, were imprisoned there. For this reason it is important that any display material be in keeping with the notion that the site is part of the "National Estate" and not the heritage of any one group of the population over another. In essence, themes of displays need to be well balanced and acceptable to the majority of Capetonians.

- While this document acknowledges that the fabric of the Chavonnes Battery should be the permanent conserved element of the site, a more flexible attitude must be adopted to display material.
- Historical interpretations of the past change over time as a result of ongoing research, which means that from time to time new information relevant to the Battery should be presented.
- Comments from the public must be reviewed and where valid, considered and acted on.
- Any new displays must be of a reasonable standard of content and should involve input from a consultant and ratification by the Chavonnes Battery Reference Group.
- In terms of the SAHRA act there is a legal obligation to consult with SAHRA with respect to the erection of signage and setting up of exhibitions.

### **1.33 Impact assessment**

The operators of the Chavonnes Battery Exhibition may, in the future wish to make alterations to the layout of concrete walkways, or even change the use of the Battery.

- Any such changes will need to be ratified by SAHRA and discussed by the Chavonnes Battery reference group.
- A statement of impact (positive or negative) that indicates how any proposed changes will affect the significance of the site must accompany any application to SAHRA.
- The statement of impact must detail any changes envisaged, who will do the work, and include photographs.
- The statement of impact will be a partial record of decision that must be archived for future reference.

### **1.34 Record keeping**

Throughout the process of excavation and conservation of the Chavonnes Battery, a record has been maintained in mainly digital, conventional and video photography. This is an archive of events that have taken place and like the site itself, is a heritage resource for use in the future. It is desirable that this process be continued, in particular with respect to documenting any physical changes that has taken place on the site. In this way the history of the site can continue to be documented and serve to inform decisions made by future generations.

- The operators need to keep a file of Chavonnes Battery events, issues impacts and changes.
- Existing photographic material (video and stills) must be archived on compact disc and DVD.

### **1.35 On going research**

While much archival research into the site has been completed, the chronological history of the site continues to be punctuated by large gaps in the record. It is very likely that further research into primary sources will produce more evidence.

- The archaeological collection from the site will be the subject on ongoing research at the University of Cape Town. Resulting information will be forwarded to Chavonnes Battery operators for inclusion in displays or site files.
- It would be desirable that the Chavonnes Battery operators maintain an interest in ongoing research and that they encourage persons within their



group to keep records of any historical material (written or graphic) that they may encounter.

### **1.36 Archaeological collections**

The Chavonnes Battery was excavated by ACO under the provisions of a permit awarded to them by SAHRA in terms of the provisions of the SAHRA act 25 of 1999. This means that the collection of archaeological material is part of the "National Estate" under the guardianship of the University of Cape Town. The collection may be moved in future to a National Museum for permanent storage. Parts of the collection may be loaned out to the Chavonnes Battery Exhibition free of charge in terms of a letter of agreement lodged with both parties and SAHRA.

The operator does have certain responsibilities in terms of the collection of artefacts that will be on permanent loan to the Exhibition. These are:

- Ensuring that material is secure and reporting any losses to UCT.
- Granting access to the material to *bona fide* researchers whom may wish to examine the material.
- Notifying UCT of any persons applying for access to such material.
- Reporting to U.C.T deterioration of artefactual material, particularly metal artefacts, which may become unstable because of absorbed chlorides and oxidation.

### **1.37 Legal context**

The South African Heritage Resources Act 25 of 1999 gives the South African Heritage Resources Agency and their appointed heritages authorities certain powers and responsibilities in respect of the wide range of heritage resources that make up the South African National Estate. Similarly the legislation imparts responsibilities to the "owners" of heritage sites. In this section of the conservation plan the legal status of the Chavonnes Battery is explored in terms of the Act with a view to defining some of the areas of jurisdiction of the parties involved.

#### **1.37.1 Definition of the Chavonnes Battery**

The Chavonnes Battery is an *archaeological site* according to definitions contained in the act (extracts are included below).

- It fulfils criteria (a) in that it is both a structure and a place where the remains of human activity are manifested, it is also more than 100 years of age.
- It fulfills criteria (d) as It is a military site more than 75 years of age, and contains artifacts, features and structures.

The South African Heritage Resources Act 25 of 1999 states:

(ii) "archaeological" means—

(a) material 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;

(b) rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;

(c) wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation; and

(d) features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found; (ii)

### 1.37.2 SAHRA or nominated heritage authority jurisdiction

The Chavonnes Battery is protected as both as an archaeological site and as a structure that is over 60 years of age. This means that SAHRA or a nominated heritage authority has certain powers in terms of ensuring that the site is adequately cared for and not illegally changed in any way.

- SAHRA or a heritage authority has the power to enforce a compulsory repair order in the event of the site being damaged or willfully neglected (Section 45). The legislation indicates that it is the responsibility of the owner to ensure that the site is adequately cared for.
- SAHRA or a heritage authority has the power to prosecute offenders who alter the site illegally without being in possession of a SAHRA permit (Section 34). "Alter" refers to any action that will affect the quality or properties of a site.
- SAHRA has the legal right to involvement in the co-ordination of signage and exhibition material (Section 44)

The South African Heritage Resources Act 25 of 1999 states:

#### **Compulsary repair order**

**45.** (1) When the heritage resources authority responsible for the protection of a heritage site considers that such site—

(a) has been allowed to fall into disrepair for the purpose of—

- (i) effecting or enabling its destruction or demolition;
- (ii) enabling the development of the designated land; or
- (iii) enabling the development of any land adjoining the designated land; or

(b) is neglected to such an extent that it will lose its potential for conservation, the heritage resources authority may serve on the owner an order to repair or maintain such site, to the satisfaction of the heritage resources authority, within a reasonable period of time as specified in the order: Provided that the heritage resources authority must specify only such work as, in its opinion, is necessary to prevent any further deterioration in the condition of the place.

(2) Subject to subsection (3), upon failure of the owner to comply with the terms of an order under subsection (1) within the specified time, the authority which served the order may itself take such steps as may be necessary for the repair or maintenance thereof and recover the costs from the owner.

#### **Alteration of structures**

**34.** (1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

#### **Archaeology**

(4) No person may, without a permit issued by the responsible heritage resources authority—

(a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;

(b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;

(c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or

(d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

#### **Signage and exhibitions**

**44.** (1) Heritage resources authorities and local authorities must, wherever appropriate, co-ordinate and promote the presentation and use of places of cultural significance and heritage resources which form part of the national estate and for which they are responsible in terms of section 5 for public enjoyment, education, research and tourism, including—

(a) the erection of explanatory plaques and interpretive facilities, including interpretive centres and visitor facilities;

(b) the training and provision of guides;

(c) the mounting of exhibitions;

(d) the erection of memorials; and (e) any other means necessary for the effective presentation of the national estate.

(2) Where a heritage resource which is formally protected in terms of Part 1 of this Chapter is to be presented, the person wishing to undertake such presentation must, at least 60 days prior to the institution of interpretive measures or manufacture of associated material, consult with the heritage resources authority which is responsible for the protection of such heritage resource regarding the contents of interpretive material or programmes.

(3) A person may only erect a plaque or other permanent display or structure associated with such presentation in the vicinity of a place protected in terms of this Act in consultation with the heritage resources authority responsible for the protection of the place.

### **1.37.3 Responsibility of the owner**

The spirit of the South African Heritage Resources Act places the onus of responsibility on the "owner" to comply with the provisions of the act. In terms of the Chavonnes Battery, the owner of the land is the Victoria and Alfred Waterfront Company. While the public area of the site clearly falls within the area of responsibility of V&AW, the Exhibition Area is in the hands of BOE and their nominated operators who, in practical terms will be running the site. They will be responsible to V&AW, who as the landowners are ultimately responsible for care of the Battery in terms of the act.

The owner is required by law to ensure:

- The proper maintenance and care of the Chavonnes Battery directly or indirectly through their tenants.

- Any alterations to fabric or changes in use of the site are carried out in terms of a SAHRA permit.
- Consult with SAHRA on the setting up of exhibitions, signage and display material.

### **1.38 Photography**

The Chavonnes Battery will attract photography by visitors, people with specialist interests, and researchers. The following points need to be taken into consideration by the operators should they wish to develop a policy in this regard.

- There are no materials on display in the exhibition area that are sensitive to light so photography within the exhibition area need not be restricted.
- The client has a right to restrict photography within the display area if publication of images of the site for postcards or other purposes is envisaged.
- Rights to publication of research material or findings lies with University of Cape Town and Victoria & Alfred Waterfront as per their contractual agreement.

## **8 IMPLEMENTATION AND REVIEW**

Through historical circumstances, the developers, the archaeologists and the compliance agencies (South African Heritage Resources Agency and the Urban Conservation unit) find themselves the guardians of this resource. Now that the Chavonnes Battery has been rediscovered after 140 years under landfill, we need to ensure that its significance is maintained in the national interest for future generations. Although the site is ultimately protected by SAHRA, its day-to-day care will rest with its guardians - BOE, V&AW and the operators of the Chavonnes Battery Exhibition. It is these organisations who will be implementing the conservation policies that have been presented in this document.

It is expected that when the site is opened to the public all parties involved will be subject to a significant period of learning in dealing with the multitude of small tasks, issues and management adjustments that will be required. It is also anticipated that changes to basic Principles of the Conservation Plan will be necessary in the future.

### ***1.39 Staff training***

It would be naïve to assume that this document contains all that is necessary to guide the conservation of the site and impart the necessary skills to its new operators who will in all likelihood not be professionals in the field and will run the site as volunteers. These people will need to be equipped with some of the basic skills to ensure adequate conservation of the fabric. Since they will need to be working with members of the public they will need a sound understanding of the site and its history, as well as the relevant people skills.

- To start this process it is strongly recommended that the Chavonnes Battery staff/volunteers undergo a short training workshop presented by ACO. ACO will draw up a short curriculum of lectures and slides to illustrate the history of the site and implementation of the conservation plan.

### ***1.40 Review***

The running of the Battery and the effectiveness of the conservation measures in place will need periodic review, and furthermore the operators will need a body that they can refer to for advice on issues arising.

- It is suggested that a Chavonnes Battery Reference group be established representing BOE, V&AW, Heritage Authorities and consultants. This group should meet periodically to review any issues with respect to the conservation and operation of the site.
- The purpose of the group would be to review the operation of the Chavonnes Battery, resolve problems, provide expert advice and review impacts, proposed alterations or new displays.

- The group may need to meet relatively frequently in the first year of opening of the Battery to the public, and thereafter on a biannual basis or as required.
- The owner in consultation with SAHRA should nominate members of the Reference Group.

## 9 CONCLUSION

This Conservation Plan is the final stage of a three-year project that has seen the discovery of the Chavonnes Battery, its excavation, conservation and revelation after being buried for 140 years under reclaimed land. The willingness of the client, the commitment of the many consultants, contractors and workers to the preservation of the site within the development of the Clock Tower Precinct is borne out of their realisation that the site is a unique place and the only one of its kind. It has a particular contribution to make to the character of the Waterfront and the heritage of Cape Town at large. It is no doubt a shared ambition of all persons involved in this project that the *place* will inspire future generations with a sense of the past and reinforce their own roles and identities in the Nation.

Now that the site has been conserved, we enter into the next phase of the task – to keep it safe. We cannot anticipate the all eventualities that lie ahead so the learning process must continue by those persons who are charged with the care of the Chavonnes Battery. In these terms the Conservation Plan is nothing more than the beginning of a task that has be carried forward into the future.

## **APPENDIX A**

*Initial Archaeological investigation of the Clock Tower Precinct*



# ARCHAEOLOGICAL INVESTIGATIONS AT THE CLOCK TOWER PRECINCT VICTORIA AND ALFRED WATERFRONT

Prepared for  
V&A Waterfront (PTY) Ltd

May 1999



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## 1. INTRODUCTION

The Archaeology Contracts Office (ACO) of the University of Cape Town was commissioned by the Victoria & Alfred Waterfront Company to conduct an archaeological investigation of aspects of the Clock Tower precinct, Victoria & Alfred Waterfront, Cape Town. A previous conservation study completed by Revel Fox and Partners<sup>24</sup> evaluated the site for its conservation-worthy structures and identified an area of potential archaeological significance. This is the site of the Chavonnes Battery, an early military structure built by the Dutch East India Company (DEIC) in 1714-1725. The Victoria and Alfred Waterfront Company commissioned the ACO to conduct an exploratory phase of excavations (Stage 1) to determine whether any physical remains still existed. Once we had established that remains of the battery did exist, a second stage of excavations was immediately embarked on.

This report is a compilation of our progress reports, observations and experiences to date on the site. While relevant illustrations are included in the text, appendix A contains diagrams 1-3. Appendix B is an archival study by Harriet Clift evaluating the shipwreck potential of the Clock Tower precinct.

### 1.1 Site Description

The projected location of the historical site lay in a portion of land to the south east of the Alfred Basin Cut. The Concentra Fish Meal Factory presently occupies the site. The Chavonnes Battery became redundant in the mid-19th century and was lost under landfill when the Alfred Basin was excavated after 1860. After 1870, several warehouses were built on the landfill. Oral history indicates that the fish meal plant was established in the 1930's incorporating one of the early warehouses. Plans exist indicating that the plant was significantly expanded in 1949 with the result that the bulk of the existing factory dates from this period. In summary, four separate phases of development have taken place in the area. These are:



- a) The Chavonnes Battery was built on a promontory of land (the most seaward extent of the Signal Hill ridge) in the early 18th century.
- b) The construction of the Alfred Basin and Cut from 1860 onwards. This involved excavating a deep basin and channel into the Malmsbury shale and using the resulting rubble to reclaim land from the sea. During this time the battery was filled in with rubble and partially demolished. The Clock Tower jetty was built and the coastline was advanced by pouring rubble fill into the sea.
- c) Railways and cargo sheds were built on the reclaimed land, which formed the north east wharf of the Alfred Basin.

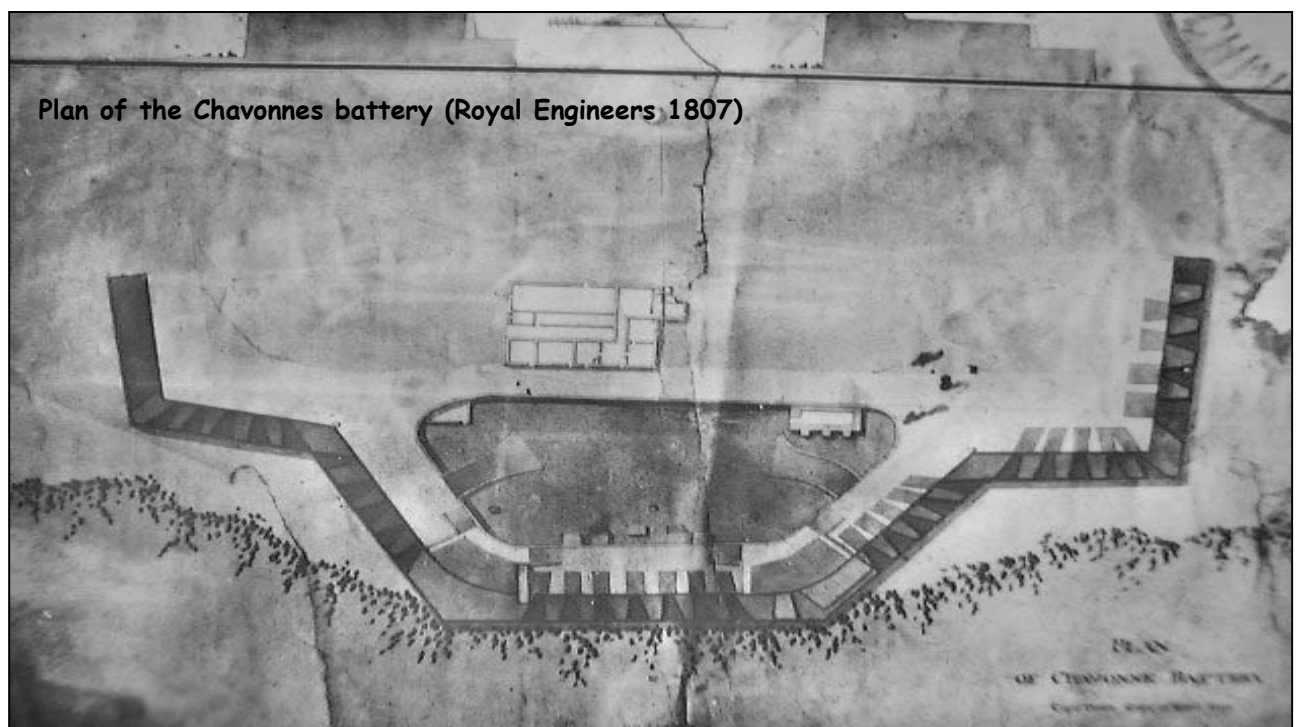
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<sup>24</sup> Revel Fox and Partners 1995. Unpublished conservation study of the Clock Tower Precinct, V&A Waterfront.

d) The cargo sheds were largely demolished or adapted to suit the needs of the Concentra factory. Construction of the factory involved sinking columns to support the brick and steel framed structure. A thick concrete floor was thrown over the coarse rubble fill to support machine and boiler mountings. Although plans are in progress to demolish the factory and develop the site, the factory was largely operational at the time of the archaeological investigation.

## 1.2 Historical Background

The Chavonnes Battery, originally known as the *Waterkasteel*, *Waterpas* or *Mauritius Battery* was built between 1714 and 1725 at the instigation of Mauritz De Chavonnes, a professional soldier who was at that time Governor of the Cape. He was concerned that the Castle did not provide adequate protection of the west side of Table Bay and ordered the construction of the *Waterkasteel* on a small rocky promontory overlooking the bay.<sup>25</sup> Escalating political tension in Europe resulted in the building of more defenses in later years. By the mid-18th century a sea wall, five batteries and a fort defended Woodstock beach while the massive Imhoff Battery strengthened the Castle defenses. The Roggebaai Battery, Chavonnes Battery and Amsterdam Battery protected the west side of the bay, while other smaller gun emplacements were built at Muizenberg, Hout Bay and Simonstown. By the time that the British took over the Cape in 1795 after the Battle of Muizenberg, Cape Town was a

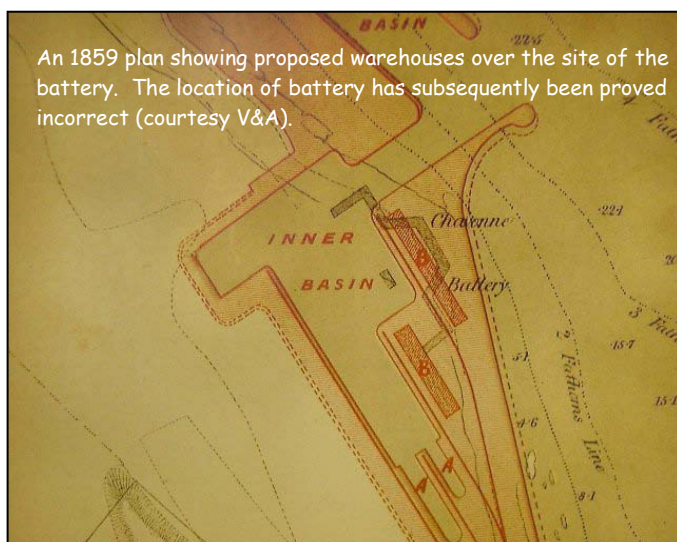


<sup>25</sup> Zeeman, U. Forts and Fortifications of the Cape Peninsula. Unpublished MSC Thesis, Department of Archaeology, U.C.T.

heavily fortified city.<sup>26</sup> Apart from the Castle, a fragment of the Amsterdam Battery and portion of the French Lines in Woodstock comprise the only visible remains of the city's early defenses.

Eye witness accounts described the Chavonnes Battery as being the most formidable of the Table Bay fortifications. Mentzel<sup>27</sup> wrote " Close to the shore there is an elevation of about 50 feet above sea level where a house has been built that has been portioned into three sections. The first is occupied by the post holder, a sergeant in uniform, the second by a corporal and nine men from the castle, who are daily posted on duty at the battery: the last is a lock-up for the hard labour prisoners who have been sentenced to be flogged and branded; they are chained in couples and work all day in the Company Garden... Upon the reef of rocks in front of the house but below the rise, a battery of 15-16 guns has been planted. Under the gun platforms are several vaulted casements. The guns of the battery are trained horizontally upon the sea, hence they are very dangerous to enemy ships".

A report on the state of forts and batteries<sup>28</sup> prepared by the British authorities in 1809 describe the Chavonnes Battery as a "formidable sea battery in good order, in which are stationed one Captain of Artillery and 40 Rank and File. In this work is a magazine containing 1592 rounds of ammunition for service of the battery, besides a quantity of powder in the charge of the ordinance stock keeper. There are two furnaces for heating shot. The mounted guns are on wooden platforms out of repair, and it is the opinion of the commanding engineer that it would be useful to go to the expense of laying new platforms." The armaments installed at the battery consisted of 12, 36-pounder cannons, 16, 18-pounder cannons, 2, 18 inch and 1, 10 inch English mortars. By 1812 some of the gun platforms had been repaired and new wood was ordered from Plettenberg Bay for the repair of others.



By mid-19th century the Chavonnes Battery had been put to a number of uses. Besides serving a military role, it was used as an isolation and convalescent wing of the old Somerset Hospital. Crews and passengers of ships stricken with contagious illness (such as small pox) were confined to the battery until they were considered fit.<sup>29</sup> Initially prisoners who were put to work on the breakwater and harbour were incarcerated at the battery until the breakwater prison was complete.<sup>30</sup> When the Chavonnes Battery was handed over to the Government for harbour building activities in 1861 it

<sup>26</sup> Hart, T.J.G. 1998. Initial Heritage Impact Assessment of Culemborg. Unpublished report prepared for Crowther Campbell and associates cc.

<sup>27</sup> Mentzel, O.F. 1784. A Geographical and Topographical description of the Cape of Good Hope. Cape Town: The Van Riebeeck Society.

<sup>28</sup> VC 214. Report on the state of forts and batteries and field ordinance...composing the ordinance establishment of the Cape Colony.

<sup>29</sup> Laidler, P.W and Gelfand, M. 1971. South Africa. Its Medical History. Cape Town: Struik.

<sup>30</sup> Petersen, S.T. 1978 "the development of Table Bay Harbour 1860 -1870. A study of the breakwater and the inner and outer basins of the Alfred Docks. Unpublished Honours thesis. Dept of History UCT.

was still operational. A royal salute was fired from its ramparts as Prince Alfred tipped the first load of rubble into the sea for the construction of the breakwater. Petersen<sup>31</sup> describes how the battery was partially dismantled in 1862 and the stone was pushed into the sea to form the basis of the south pier on which the clock tower now stands. Existing maps of the Alfred Basin indicate that the barrack building and southerly parts of the battery would have been destroyed during the excavation of the basin, while the northern section which contains the battery itself was covered with fill. Thereafter a complex of cargo stores and early railway lines was built on the newly reclaimed land.

The Chavonnes Battery was the first major defensive facility other than the Castle built by the Dutch East India Company. It was maintained throughout the period of the Dutch occupation of the Cape. The British appreciated its strategic importance after their take over and went to some lengths to maintain the battery in working order until it was decommissioned in 1861. Its final operational act was to fire the Royal Salute heralding the construction of the harbour complex now known as the Victoria & Alfred Waterfront.

### **1.3 Some events associated with the Chavonnes Battery**

Etienne Barbier, a French soldier in the employ of the DEIC, arrived in the Cape in 1735. After promotion to sergeant, his principal task was guarding the convicts imprisoned at the Chavonnes Battery. Barbier, who was considered to be a man of tempestuous personality, uncovered what he perceived to be petty corruption among certain officials and eventually laid formal charges. The result of this was his imprisonment in the *Donker Gatt* of the Castle until he eventually managed to escape into the country. During this time he brought further grievous accusations against the government involving mismanagement, fraud and corruption of justice. After sowing insurrection among the peasant farmers of the colony he was declared an outlaw by the government. Barbier continued to be a major headache for the DEIC at the Cape until he was captured in 1738 and incarcerated at the Castle. He was tried and found guilty of treason, after which he was put to death by mutilation and disembowelment. Portions of his body were displayed on stakes set up along the most public roads of the colony. A detailed account of the events that surround the Barbier Rebellion, has been recently published by Nigel Penn.<sup>32</sup>

It appears that the battery saw action at least once during its existence. Jose Burman describes an incident that took place in 1781 that involved an unidentified ship coming into Table Bay.<sup>33</sup> On the suspicion that this was a British spy ship, the cannon at the Chavonnes Battery were readied for action and the Port Captain of the time went out to investigate. When it became apparent that the ship was not prepared to co-operate, a pre-arranged signal was sent and the battery opened fire. The Port Captain was held captive by the foreign ship in the hopes that this would dissuade the Chavonnes Battery gunners from continuing the bombardment. Despite this, the engagement was successful and the foreign ship (identified as a Danish vessel spying for the British) was captured.

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<sup>31</sup> Petersen, S.T. 1978. The development of Table Bay Harbour 1860 -1870. A study of the breakwater and the inner and outer basins of the Alfred Docks. Unpublished History Honours thesis. UCT.

<sup>32</sup> Penn, N. 1999. Rogues, Rebels and Runaways. David Phillip Publishers.

<sup>33</sup> Burman, J. Bay of Storms. Pretoria: Human and Rousseau.

## 2. STAGE 1

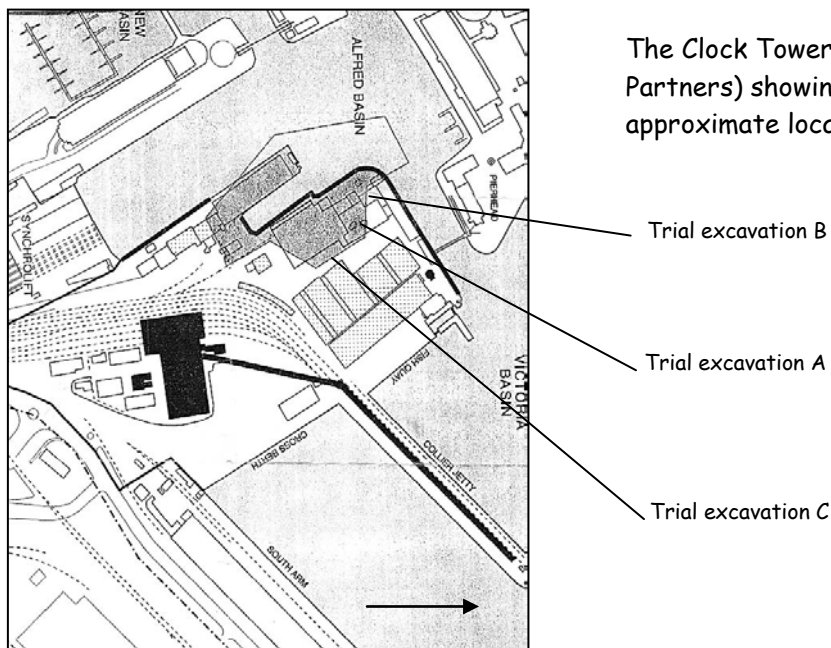
### 2.1 Method

The excavation program was carried out in conjunction with archival research to obtain contemporary plans of the structure, illustrative material and an indication of its historical significance. In addition to this, we examined standing structures on the site for evidence of early fabric or other features of potential historical significance.

The positions of the three trial excavations were based on an overlay plan of the Chavonnes Battery prepared for V & A Waterfront by Revel Fox and Partners.

Excavation A was positioned in the interior of the Concentra factory in the lobster trap Room. Our objective was to test the depth of the fill in what we assumed to be the courtyard area of the battery.

Excavation B was positioned in a disused room of the boiler house complex towards the north west side of the factory. The overlay plan indicated that one of the side walls of the battery lay under this area. Our objective was to intercept the wall to confirm its presence, condition and orientation.



Excavation C was located outside the North East side of the factory. The overlay plan indicated that the front wall of the main rampart stood in this area. Our aim was to establish if any part of this remained.

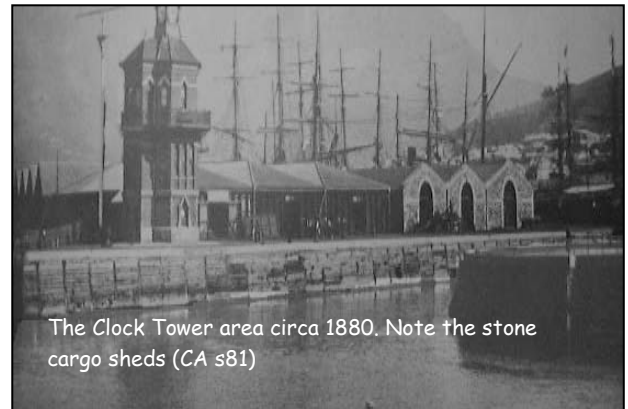
## 2.2. Findings

### 2.2.1 Standing structures

While the main focus of this assessment has been the Chavonnes Battery, our observations on the site, supplemented by historical texts, has revealed that there are a number of features that are of historical significance.

### 2.2.1.1 Concentra Factory

After the construction of the Alfred Basin, a number of large cargo stores were built in the area. These consisted of single story structures made from blue shale with arched openings. Many of these have since been demolished. An inspection of standing structures on the site has shown that most of the ground floor of the east side of the Concentra factory is made up of a large cargo store (Queens Cargo store) built circa 1880. The arched openings are still visible, as are the thick shale walls and granite moldings. In later years the roof of the cargo store was removed and two steel and concrete floors added to house parts of the factory. The western half of the plant containing the boiler rooms, coal bunker and the fishmeal plant (adjacent to the entrance to the basin) were built in 1949.



### 2.2.1.2 Railway tracks

The alignment of the railway tracks in the Concentra precinct is particularly significant. The Cape Town Harbour and Dock Company appointed its first railway engineer in 1855 (William George Brounger). A plan of 1859 shows the alignment of rails along the Alfred Basin which are shown to join with the Salt River - Wellington line. This line, which was completed in 1864 and eventually reached Victoria Falls shortly after the turn of the century, was the single most powerful device facilitating the economic and political development of South Africa and her neighbours.<sup>34</sup> Although the permanent way material is not original (the early gauge of 4' 8.5" was changed to 3' 6" after 1878), the alignments of the tracks in the Clock Tower Precinct essentially marks the starting point of Southern African railway history.

### 2.2.1.3 Cannons

Cannons (5) of varying caliber have been positioned for use as bollards in the clock tower precinct. It is likely that these were salvaged from the Chavonnes Battery. More cannons may be buried in the rubble fill within the courtyard and outside the battery.

## 2.2.2 Buried Structures

### 2.2.2.1 Excavation A

Excavation A penetrated the concrete floor of the lobster room, continued through a modern coarse rubble fill and reached a second concrete skin at 700 mm. Thereafter the excavation was continued to a total depth of 3700 mm (water table). The bulk of the deposit consisted of a soil and rubble fill which, judging by the few artefacts it contained, dates to the mid-19th century and earlier. At a depth of 3500 mm we found fragments of rubble (lime plaster and shale) consistent with VOC period structures.

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<sup>34</sup> Hart, T.J.G. 1998. Heritage resources assessment of the Hex River Pass railway. Unpublished report prepared for Ninham Shand Consulting Engineers.



### 2.2.2.2 Excavation B

Removal of between 400-600 mm of concrete in the disused annex to the boiler house revealed two stone walls covered with fill material immediately under the concrete. One of these walls (the southern) is considered to be a footing of one of the 19th century cargo sheds. The other is carefully constructed and plastered with lime mortar. The remains of iron eye bolts are still set into the fabric. At the base of the wall is a shale floor (1200 mm below top of wall) which has suffered some disturbance as a result of the positioning of the later cargo store footing. It too, has iron fixtures set into its base.

We interpreted the find as the top of one of the ramparts of the battery. The wall, which we have located, is probably the inside skin of one of the ramparts. This was separated from the outside wall by a sand-clay fill. It is expected that further investigations will show that the outer rampart wall continues downwards to a depth of 3000 mm or more.

The location of the walling has shown that the overlay map is correct in broad terms but not precise enough to act as a guide for accurate positioning of trial excavations.



### 2.2.2.3 Excavation C

Excavation C on the outside of the Concentra factory produced no evidence of the front wall of the battery apart from a small amount of fabric included in the rubble that was consistent with the 18th century. What was very noticeable was that the fill in what we assume to be the courtyard of the battery was very different to that on the outside. The exterior excavation had to be limited in depth to 1700 mm as the fill consisted of coarse un-compacted rubble, this collapsed frequently posing a danger to members of the team. We think that the coarse rubble fill was dumped on the on the seaward side of the battery. A sandy fill like that found in the interior would have been washed away by wave action.

As yet the location and condition of the front wall is not known as excavation C was inconclusive. We were unable to dig deeply or widely enough and the presence of numerous services precluded mechanical excavation. It is possible that upper portions of the wall may have been demolished, or the data indicated on the overlay plan are inaccurate.

## 2.3 Conclusion of Stage I

The study has demonstrated that portions of the Chavonnes Battery still exist, buried in 19th century fill around and under the Concentra factory. The rear portions of the battery were destroyed by excavation of the Alfred Basin. It is expected that aspects of the side ramparts, the central courtyard and its interior features, may remain. The status of the front rampart is as yet unclear. This site represents the remains of South Africa's largest and earliest gun emplacement and as such, is of high historical value. After firing the salute heralding the first steps towards construction of the harbour, the remaining parts of the battery appear to have been included into the fill which now makes up part of the reclaimed land of the Clock Tower precinct.

Besides the Chavonnes Battery, there are other aspects of the site that are of interest. These include the first rail alignments in the country and the remnants of a 19th century cargo store that make up the ground floor of the eastern half of the Concentra factory.

## **2.4. Recommendations**

### **2.4.1 Cargo Store in Concentra factory**

Removal of plaster and examination of fabric of the eastern side of the factory will give some idea as to the extent and quality of preservation of this feature. Some or all of this fabric (cleaned up and restored) could be incorporated into a new development. This would enhance the historic character of the area.

### **2.4.2. Railway track**

Some railway track should be retained as this is of genuine historical significance. Some form of signage to indicate the importance and meaning of the rail alignments would further create a focus on interest in the precinct.

### **2.4.3 The Chavonnes Battery**

The most critical issue to be faced by interested and affected parties, is the future of the remains of the Chavonnes Battery. It is most desirable that surviving aspects of this structure should be retained and conserved within the future development. In order to achieve this:

- a) We need to determine as accurately as possible the extent of the battery. This will help us narrow down the areas for investigation and facilitate the general planning process. It is suggested that Ground Penetrating Radar (GPR) may be able to assist us in this process.
- b) A large scale Phase 2 archaeological investigation is warranted. We need to expose the entire remains of the battery. This can be speeded up by judicious use of mechanical excavators where appropriate. Once this is done we can make decisions as to what aspects of the battery can be conserved. It will be necessary to make a good plan and photographic record of the remains before/if any decisions are made to demolish any part.
- c) An immediate problem is access to critical parts of the Concentra factory that are still in use. This will need to be addressed. Ideally, excavation of the site will be much easier once the factory has been vacated and/or demolished. Excavation can begin immediately in the open area to the east of the building, within the boiler house annex, the west fishmeal plant and alley, and potentially in parts of the lobster room, adjoining garage and workshop (if Concentra are amenable).
- d) Excavation of the site through the floors of the Concentra prior to demolition will result in exposure of features that will have to be protected once demolition begins. Exposed material and walls will have to be sand-bagged or backfilled to protect them from falling debris. A further phase of work will probably be necessary after demolition to open areas that were previously inaccessible.

e) A final aim should be to incorporate as much of the historical site as is reasonably possible within any new development. It is hoped that this will satisfy all parties involved and add further focus and interest to the Waterfront.

### **3. STAGE 2**

#### **3.1 INTRODUCTION**

Having established that remains of the Chavonnes Battery were buried under the Concentra Factory, it became critical to be able to provide the client with knowledge of the extent of the archaeological site. Plans for the re-development had to be adjusted to mitigate against potential damage to the underground remains. Furthermore the client had expressed interest in incorporating a suitable portion of the battery into an open display that would add texture to the development precinct. The ACO was immediately commissioned to undertake a Phase 2 archaeological investigation to explore the extent of the battery as far as was possible within the inactive areas of the factory. Despite the physical constraints on the study, this operation has been extremely successful with the result that we now understand the layout of the site and have produced enough information to inform the development process.

When we started Stage 2 we had no idea of the condition or extent of the remains but hypothesised that the section of wall found in Excavation B was the rear inner “skin” of a large earth-filled wall consistent with workmanship associated with military structures. We did not know of the extent of the battery, or what aspect of the battery we had located in the boiler room annex. We were still guided by the overlay plan produced by Revel Fox and Partners that predicted that the front rampart lay on the exterior of the seaward side of the Concentra Factory.

#### **3.2 Method**

##### **3.2.1 Ground Penetrating Radar**

Since time constraints were a critical factor in terms of the planning process, we took a decision to try remote sensing methods as guide to locating trial excavations. Consultants were brought in to conduct a ground penetrating radar survey of the site. This involved sweeping a series of transects within the factory (where possible) and outside to the north east and south east. Poor results were obtained from within the factory due to interference from steel components in the fabric of the building, which confused the signals. Indications of sub-surface features were obtained from the alley between the red brick building and the factory while the scans outside produced mixed results. An anomalous reading was obtained some 12-14m off the north east side of the factory, while only services were identified on the south east side.

On completion of the GPR survey, a digger-loader was brought onto site to test the area where we thought that the GPR survey had produced reliable results. Features that were thought to be walls proved to be service trenches. Although the hardware was able to distinguish features below the surface, there was no way that these could be positively identified.

### 3.2.2 Excavation

The GPR survey of the site proved to be unreliable, which meant that laborious physical excavation was necessary to establish the layout of the battery. All the excavations within the factory buildings involved removal of thick layers of concrete and old machine mountings. Extensive use was made of hydraulic jackhammers, diamond concrete cutters and mechanical excavators to remove the overburden. In order to obtain the kind of broad layout information about the battery that was needed, we opened large excavations in as many areas as we could within the factory precinct. New excavations were opened in the red-brick factory, the alley between the red-brick factory and Concentra, as well as in the railway access area. Excavation B was expanded and a new excavation was opened adjacent to the lobster room within the factory. Diagram 1 (Appendix A) indicates the location of the relevant excavations in and around Concentra.

### 3.3 Results

#### 3.3.1 North east exterior (Stage 1 excavation C)

A series of four large trenches were excavated from the north east wall of the Concentra Factory out across the road into the open area. These were positioned to check anomalous readings obtained from radar survey and test the projected position of the front wall of the Chavonnes Battery. All four trenches contained coarse un-compacted rubble fill, which extended to below the depth of the watertable. Included within the fill were a number of large slabs of shale with plaster adhering, fragments of plaster and the occasional old brick. Besides these fragments of building rubble from the 1860 fill, no evidence of any intact structures were found. The most telling feature of these excavations is that the fill extended below sea level. Historic records indicate that the front wall of the Chavonnes Battery was built just above sea level. This implied that the location of the wall was further to the south west, on what would have been higher ground before the reclamation.

#### 3.3.2 Excavation D (Red brick building)

An extensive area of concrete floor within the disused red brick fishmeal factory was lifted so that we could check whether the inner skin wall (previously located in excavation B), extended across the alley into this area. The deposit here consisted of a coarse shale rubble fill characterised by numerous voids and very little soil matrix. The stones were



“unpacked” by hand until a beach deposit and bedrock was reached at a depth of 3m. A short length of carefully constructed stone wall was found at the south end of the trench while several slabs of dressed shale were found on wave worn bedrock on roughly the same alignment of the inner wall located in excavation B.

The standing section of wall was later identified as part of the inner courtyard wall of the battery (Diagram 2). Initial indications are that considerable damage was done to aspects of the battery during the excavation of the nearby Alfred Basin shortly after 1860. The sandy fill of the front wall was removed along the edge of the cut and replaced with a coarse rubble fill.

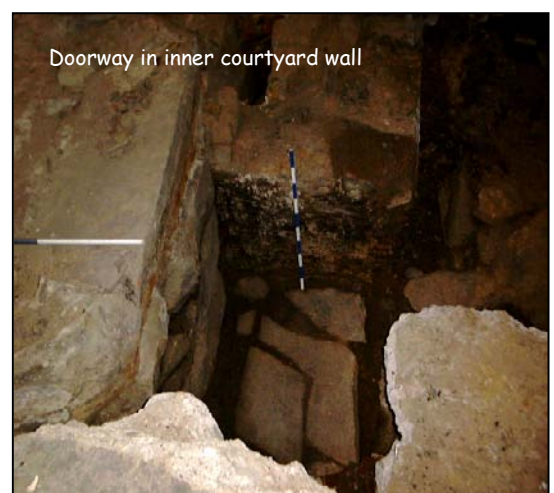
### 3.3.3 Excavation B continuation (Boiler room annex)

We extended excavation B hoping to reveal more of the inner skin and any features associated with it. Our reasoning behind this was to attempt to relate features with those indicated on historical documents, thereby providing a point from which we could establish our location in terms of the remaining portions of the battery. We needed to follow the walling which we had found during stage 1 and extend the excavation into the alley. This meant that we had to demolish the wall and coal bunker that separated the boiler room and annex. Reinforced concrete bases in both the floor and coal bunker caused considerable difficulties. A large hydraulic jackhammer was eventually brought onto site to solve these problems.

Extending the excavation into the alley allowed us to make several critical observations, which when combined with other evidence played a key role in interpreting the layout of the site. Our excavations revealed that:

a) Substantial remains exist which relate to the cargo sheds that were built after 1870. The construction style of these walls is very different to those of the battery in that they are crude and massive. The foundations are not plumbed and lack any plaster. In contrast, the walls of the battery are very carefully finished and plastered. The shale blocks used are smaller for handling by one or two individuals during construction. Despite the robust character of the cargo shed wall footings, their impact on the older remains of the Chavonnes Battery was minimal. The cargo shed walls had been carefully built over and around the battery walls in what may have been a conscious attempt to conserve the remains. Some damage had been done to the flagstone floors where cargo shed foundations penetrated deeper into the substrate.

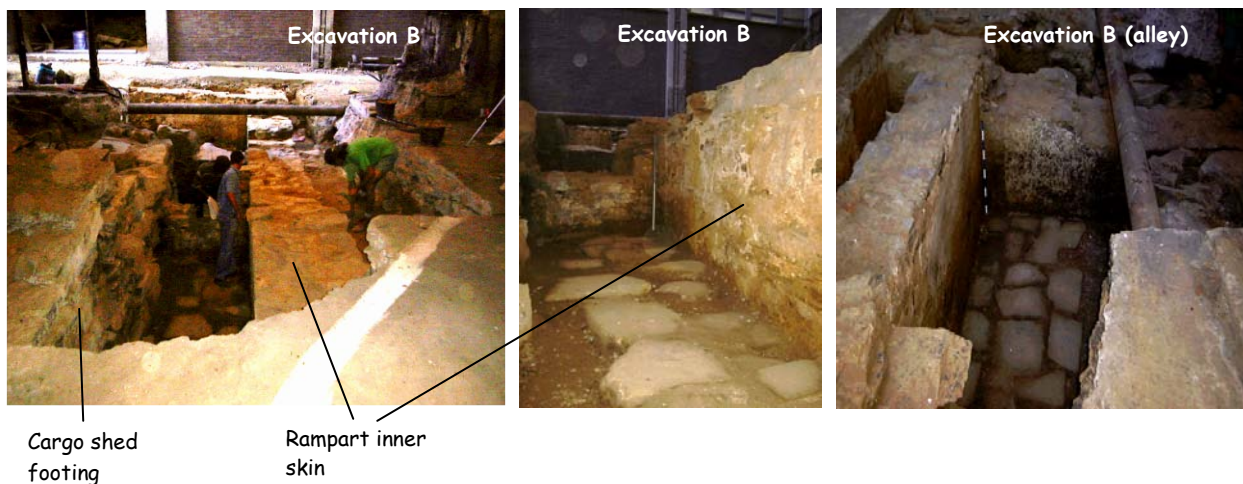
b) The excavation revealed that there is wall running parallel to what we have described as the rear skin wall. This has been termed the inner courtyard wall. Furthermore, there is a small dividing wall separating the area between the two walls into "rooms". The inner courtyard wall has been punctuated by an opening, which we suspect was a doorway into one of the rooms. In the alley, the inner courtyard wall contains yet another opening, which may have been the base of a large window or arch. We hypothesise that the "rooms" that we have located between the interior skin wall and the courtyard interior wall are the remains of the vaulted casements that are mentioned in the



historical records. These rooms would have been vaulted structures that were included within the main front wall of the battery.

c) A heavy dividing wall was found at the north west end of the excavation in the alley. This has the effect of being the "end wall" of one of the rooms. The interior side of the wall was plastered while the exterior acted as containment for a clay fill, which we believe marks the north west interior corner of the front rampart. This observation later proved to be an important benchmark that helped us determine the approximate location of the south east rampart.

d) There is evidence that iron or steel fittings were set into the walls and shale floors of the battery at regular intervals. As yet the purpose of these is unknown. The fittings themselves are highly oxidized, and in many instances are beyond conservation.



### 3.3 4 Excavation E (Green floor workshop behind lobster room)

A large excavation was positioned within the Concentra factory in the workshop room behind the lobster trap room. Our objective was to test whether the wall alignments located in excavation B in the boiler room annex continued in a south easterly direction under the factory. Considerable difficulty was experienced in removing a double thickness of concrete floor as well as several reinforced concrete machine mountings attached to a second concrete floor about 1m below surface. Removal of the second concrete floor produced immediate evidence that the inner skin wall continued from the Boiler room annex under the floor of the factory. Further excavation showed that it was in good condition with the plasterwork intact. Furthermore it shared the same characteristics as that in excavation B, with iron fittings in the plasterwork and a flagstone floor at its base.

Excavation E provided us with a greater opportunity to extend our observations in a north easterly direction. As in excavation B, the seaward side of the inner skin wall contained a fill. This consisted of a clay capping under which lay beach sand and pebbles brought in by the builders of the Chavonnes Battery to make up the thickness of the wall. We followed the fill as far as we could in a northerly direction but were unable to locate the outside skin of the wall as this would have involved breaking more concrete and potentially demolishing the wall that separated the workshop from the lobster trap room. What was becoming evident at this point was that the full thickness of the wall exceeded 8m.

### 3.3.5 Excavation F (North east end of alley)

The next plan of attack to locate the elusive front skin of the wall involved concentrating our efforts in the alley - the only area of the site where we could open a full southwest-northeast section. Continuation of excavation B in the boiler room annex had already demonstrated that the inner skin of the wall continued across into the alley so we were hopeful that the outer wall would continue across as well. The tarmac in the alley was removed. Underlying this was 150mm of concrete reinforced with wire and lengths of railway line. Underneath this lay a thin rubble layer followed by the clay and sea sand fill with which we had become familiar with in excavations B and F. We located the top of the front skin immediately as it consisted of a solid mass of shale and lime plaster just below the rubble layer. Once the outer edge was located, we used the mechanical excavator to dig a ramped trench down to bedrock and revealed the full remaining extent of the outer wall of the front rampart.

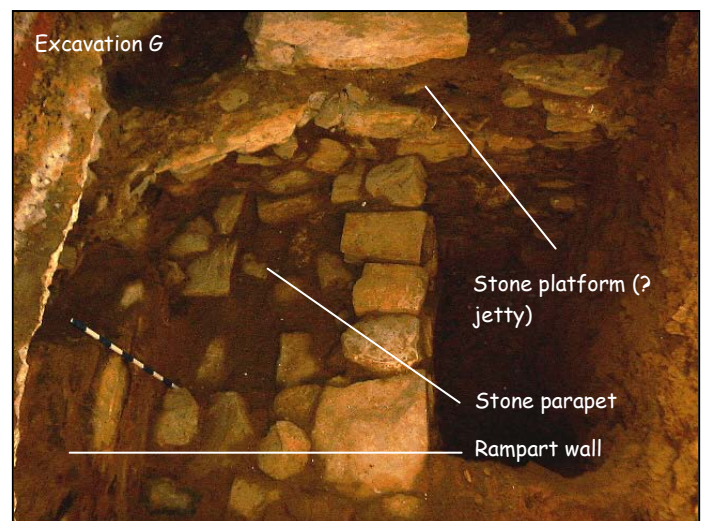


The outer skin is no less than 4m thick and appears to be solid. It was built directly onto bedrock. The front face is somewhat angled and massively constructed. Numerous repairs have been made to its face with Dutch and British brickwork. Although it would appear that some of the top portions of the wall have been demolished in the past, the remaining structure is in excellent condition and represents the most visibly spectacular aspect of the site to date. In total the rampart together with the earth fill is 12.5m thick at this point.

### 3.3.6 Excavation G (Red brick building)

A second excavation was opened in the red brick building to check whether the front wall had been preserved in this area. Location of the target area in the red brick building was a straightforward matter as we had already located the front wall in the adjacent alley.

A large slab of concrete was removed in the redbrick building to allow for an investigation of the presence/absence of the front wall. The fill area contained a number of very large stones (up to 500 kg) which had to be broken into manageable fragments to be removed. The top of the main front wall was found immediately under the two layers of concrete under the factory floor. It soon became apparent that it had undergone some partial demolition and modification to accommodate some very heavy stone structures, which we believe relate to the building of the Clock Tower jetty (South pier) circa 1862. A crudely constructed stone parapet had been built



against the outer wall of the battery. A further massive built wall had been carefully bonded into the fabric of the battery wall projecting towards the Clock Tower. This has its foundations on bedrock, which is about 4000mm below the surface at this point.

Not only have the excavations in the redbrick room produced evidence of the front battery wall, but there is also strong evidence of a second layer of history - the use of the battery wall by early engineers to facilitate the construction of the Alfred Basin. Historical records have provided evidence that stone from the battery wall was used to build the south pier. We are certain that excavation G has intersected the point at which the South pier joined the front wall of the battery.

### **3.3.6 Excavation H (Railway line)**

We had successfully established the north east-south west dimension of the battery with the discovery of the front rampart wall, inner skin and rear courtyard walls. We still did not have any information that would inform us of the south east-north west dimension (the remaining length of the battery under the Concentra factory). Dimensions of old British Royal Engineers Plans (1806-1807) were overlaid on up-to-date plans of the precinct and the archaeological material that had been located to date. This enabled us to determine a potential target area in the railway line area where we could sink some trial excavations.

Excavation in this area posed a number of difficulties as the identified target area lay directly in a portion of the alley used by Concentra for bringing in bunker coal and loading and unloading fish meals products. This meant that we had to do the work in such a way as to keep disruptions to Concentra's operation to a minimum. Our initial strategy was to dig a series of small trial excavations in between the railway sleepers to check for the presence of the wall and the character of the sub-surface fills. The restricted space and day time interruptions due to Concentra activities prompted a change of plans and a digger-loader was brought in after hours to assist with an evening excavation. The target area we had identified proved to be accurate, with the wall being located within a few minutes of beginning the work. It is well preserved, about 2.5m thick, and appears to be very similar to that in the alley. The top of the wall is about 300mm below the road surface.

The alignment of the wall was recorded on the adjacent road surface after which the excavation was filled and compacted. A 100mm concrete skin was thrown over the excavation the following day. The project surveyors plotted the alignment so that the real dimensions of the remains could be accurately calculated. This excavation marks the culmination of Stage 2 of the project as it enabled us to make what we believe is a firm prediction of the sub-surface extent of the battery which can now be used to further the planning process.

### **3.4 Description of the existing remains**

The historical records have shown that the Chavonnes Battery was a large fortification. The front and side ramparts were some 190m in length while the rear perimeter wall incorporated virtually the full extent of the area of the Alfred Basin. About 70% of the battery was demolished after 1860 with the construction of the harbour, nevertheless the surviving remains constitute one of the largest portions of DEIC fabric remaining in Cape Town. In addition, the find represents the earliest known still existing DEIC battery in the world. The site is therefore of international significance and can be awarded a "grade1"



rating in terms of the heritage grading significance criteria of the National Heritage Act of 1999.

As far as we have established, the surviving remains of the battery consist of a substantial length of the main rampart wall and a portion of the eastern side rampart. The full thickness of the wall is preserved as are remains of chambers within the walls and aspects of the central courtyard. The barracks and magazines were destroyed after 1860. Diagramme 3 shows those portions of the Chavonnes Battery identified during the excavation programme.

### **3.4.1 Rampart wall**

The rampart wall consisted of a front and rear stone "skin". The front skin is a massive structure of solid Malmsbury shale and lime plaster. The base, which is well over 5m thick, has its foundations on bedrock just above sea level. As yet we do not know the full height of the front as a portion of it has been "skimmed off". We anticipate that some 2m of stonework including the embrasures have been lost. The area between the front and rear skins was filled with beach sand and cobbles, then covered with a red clay capping. This area formed the platform on which the wooden gun platforms and cannons were positioned. As yet, it is not clear what type of surfacing was used on the parapet and platform as this was also lost. The inner skin wall is a carefully built shale wall 1.10m thick. Mud mortar was used for binding the shale stonework, while shell lime plaster was used on the exteriors. The archaeological excavations showed that rooms had been built along the interior length of the front rampart. These are probably the vaulted casement rooms mentioned in the historical texts.

### **3.4.2 Vaulted casement rooms**

The single room which we have exposed (excavation B) was one of several vaulted casement rooms. The room was paved with a shale floor, plastered and whitewashed on the interior. Access to the room was from a doorway in the rear courtyard wall, which appears to have been punctuated with doors and windows to the casement rooms. The roofs of the rooms are missing. We suspect that these took the form of brick or stone vaults that were covered with a fill that had the effect of including the rooms within the front rampart.

### **3.4.3 Courtyard**

The rear courtyard was a sunken open feature. The rampart was accessed via two flights of stairs, the remains of which will hopefully be exposed in the future Stage 3 excavation. Most of the courtyard has been demolished, but we anticipate that further flooring will be revealed once we are able to open up more of excavation B. Initial indications are that the floor of the courtyard was stepped down from the floor level within the casement rooms.

### **3.4.4 Artefactual material**

Although we have found artefacts on the site, we are confident that very few of these actually relate to the Chavonnes Battery itself. Virtually all the deposit we have excavated to date consists of a secondary fill which was piled over the remains of the battery after 1860. This does contain some artefactual material in the form of bottle fragments, pipe stems and bowls as well as fragments of Oriental and European ceramics. Since this

material could have come from any part of Cape Town, we consider it to be a secondary deposition of un-provenienced origin.

## **4. RECOMMENDATIONS**

### **4.1 Current status**

#### **4.1.1 Exposed material**

The possibility of adding a focus of interest and further texture to the precinct plan has been appreciated by the client who has not only agreed to conserve the remains in-situ, but is enthusiastic about displaying the find to the public. This has involved substantial discussion and revision of building plans to this end. As yet the extent and layout of the display area is not yet finalised, however it is envisaged that it will incorporate the whole of excavation B, most of the alley and parts of the red brick building. This amounts to a section of the battery incorporating a length of the rampart and fill as well as parts of the inner courtyard area. The proposed plan also involves full exposure of the remaining front wall within the underground levels of the new development.

#### **4.1.2 Demolition of Concentra**

Demolition of the Concentra Fish Factory will commence at the beginning of June. In preparation for this, the finds were covered with black plastic underlay and the excavations were filled in with sand and compacted. The fill material will remain in place to protect the finds from falling rubble during demolition and construction. After demolition of Concentra, a third stage (Stage 3) of archaeological work will commence. This will involve monitoring and guiding of bulk earthworks where necessary, and re-excavation and preparation of the display area.

#### **4.1.3 Surveying and recording**

A firm of professional surveyors have recorded the spatial layout of the finds using conventional methods and digital photogrammetry. Their work has played a major role in predicting the below surface extent of the Chavonnes Battery. We have taken video footage of the entire excavation procedure, while still photographs were taken using both digital and conventional means.

### **4.2 The way forward**

Once demolition of the Concentra Factory is complete, stage 3 of the archaeological investigation will begin. Aspects of this will have to be done in conjunction with bulk earthmoving and other development activities which means that scheduling of tasks is going to be critical for smooth operation. A possible way forward is indicated below.

#### **4.2.1 Demolition**

Monitoring of the demolition of Concentra will not be necessary until such time that the demolition contractors are required to remove any existing foundations. In areas where the battery lies, it is possible that impacts may occur when foundations and floor slabs from the factory are removed. This will have to be carefully monitored to minimise damage. A preferable option would be to leave these intact in the effected areas.

#### **4.2.2 Bulk earth moving**

In terms of the proposed precinct plans, the front wall of the battery will be exposed in its entirety. Exposure of the front wall will have to be done under direction of an archaeologist. Similarly bulk excavation of nearby areas should be monitored for artefactual material that occupants of the battery may have disposed of over the front wall. Shipwreck material may also be encountered (see appendix B) and this will have to be documented and rescued.

#### **4.2.3 Exploratory excavation**

While we do not advocate excavation of the entire area of the battery that will remain conserved under the new development, it would be important to open some exploratory excavations to check and record the eastern side of the structure and inner yard areas. Since ground levels are higher towards Alfred Basin, we would expect better preservation of a greater height of the side rampart and its associated features. This would be important in terms of understanding the site, and informing the display and any restoration that may take place.

#### **4.2.4 Protection of display area**

The identified display area should remain backfilled to protect it until such time it is to be opened for purposes of construction of the display. Although the front wall of the battery is very robust, the courtyard and inner walls are not. The plasterwork is easily damaged while the short period of rain already experienced this winter has had an eroding effect on the mud mortar. It is for the same reason that consideration should be given to displaying the finds under cover. The display area should only be opened up once a secure plan is in place with construction of the display area to take place immediately afterwards or concurrently.

#### **4.2.5 Display**

While the ACO does not wish to be prescriptive in terms of the architecture or style of the display that is proposed, there are some principles that need to be followed:

a) In any attempt at restoration or conservation that may be envisaged, restored areas must be truthfully distinguished from original fabric. Furthermore, any decision to restore must be based on sound historical or archaeological evidence.

b) The presentation of material within the display must be imaginative yet well researched and of good quality. It is important that it focuses not only on the battery itself, but also on other thematic linkages within Cape history such as *Cape Town defenses*, the *slave route project*, *prisoners* and *linkages with Robben Island*, and *Cape Medical History*. The opportunity could be used to illustrate the development of the docks as well as personalities and events that took place on the site. Even the Concentra factory is one of the layers of history of the site and deserves some form of representation - possibly a section of old concrete floor within the display (?).

c) Links with other institutions that may be spatially and historically relevant should be identified and explored. These could include institutions such as the William Fehr Collection (Castle), Robben Island Museum, Military Museum and Breakwater Museum.

#### **4.2.6 Archival work**

Final year students of archaeology at the University of Cape Town will commence a project to source as much visual and archival material as possible on the Chavonnes Battery. This will do a lot to minimise the "leg work" involved, however an experienced researcher will need to fill any gaps in the study and select those sources of information that are of will be suitable for display purposes. Some information may exist in the Netherlands so approaches will have to be made to contacts in that country to assist further work.

#### **5. PROFESSIONAL TEAM**

##### **Principal investigator**

Tim Hart  
David Hakett

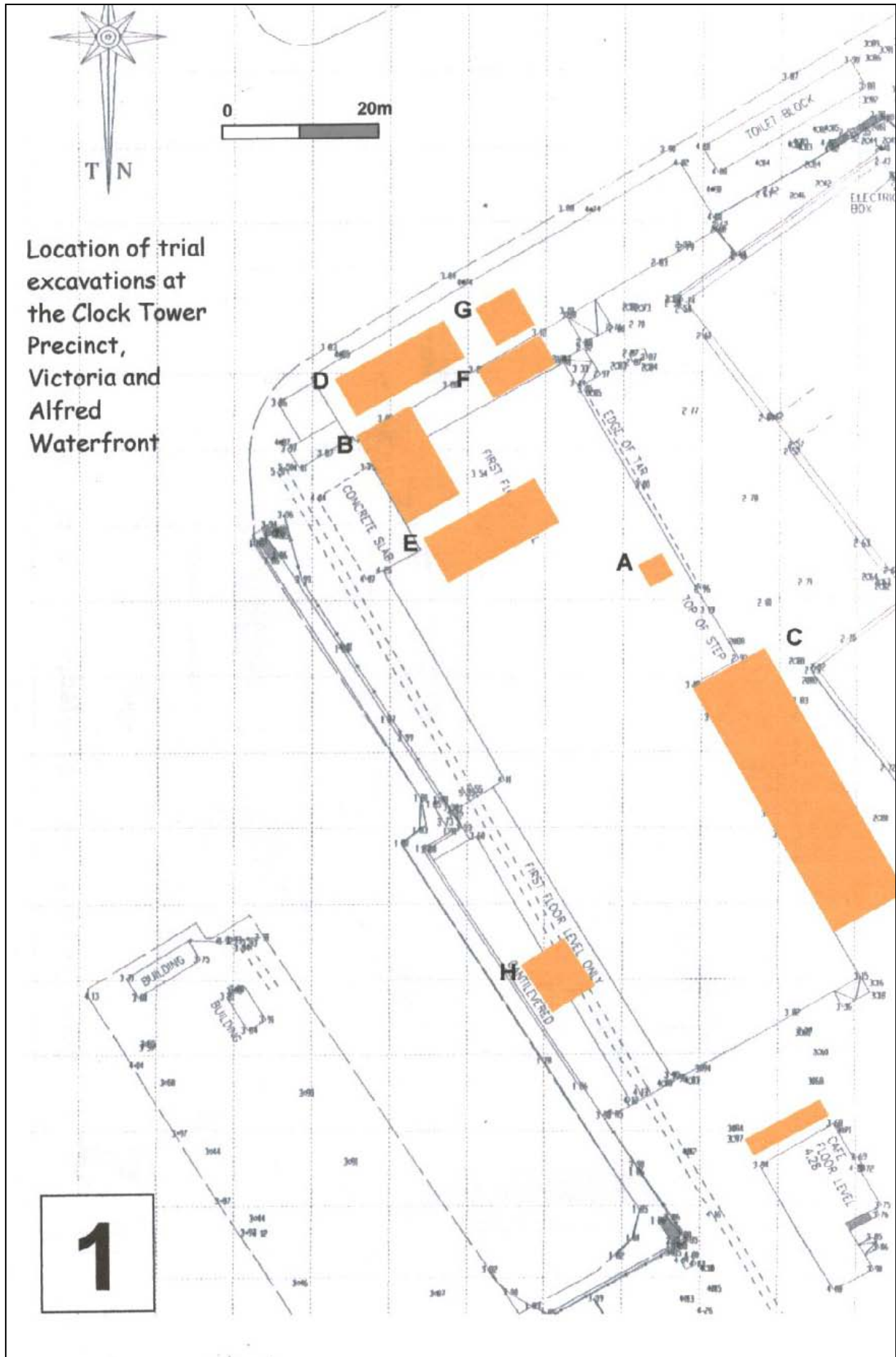
##### **Excavation**

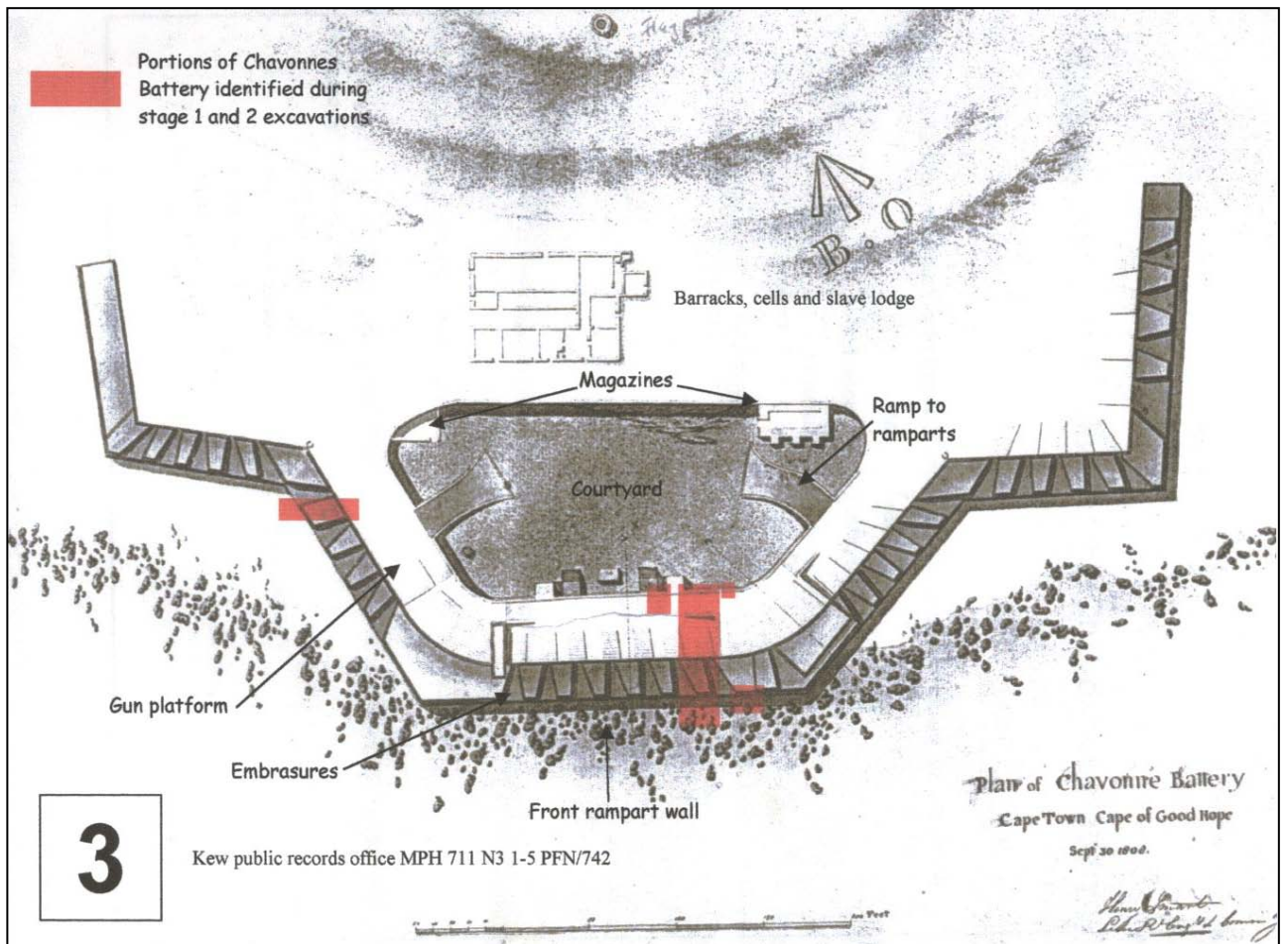
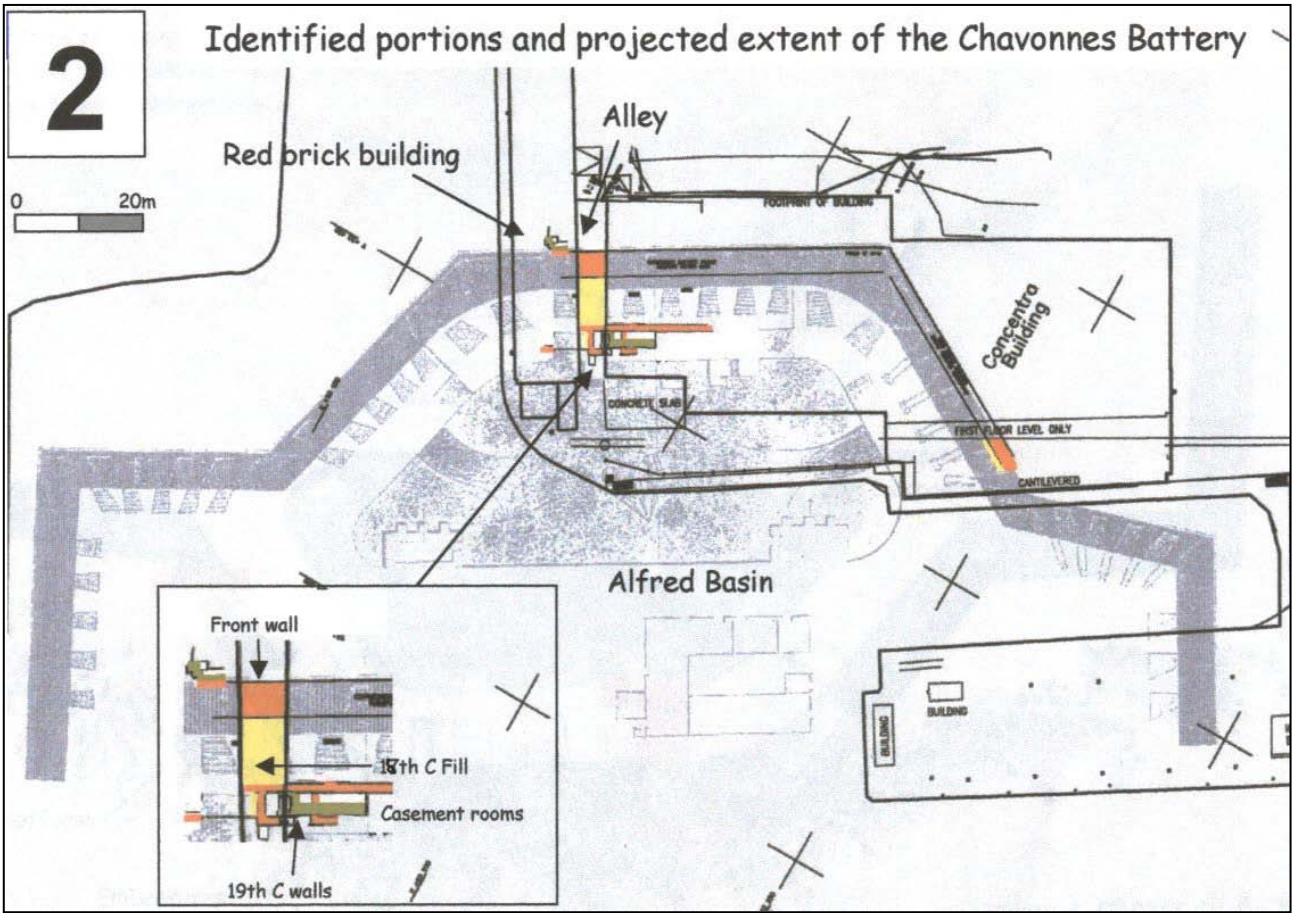
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##### **Archival research**

Harriet Clift

# APPENDIX A





## **APPENDIX B**

Ships wrecked in the vicinity of the Chavonnes Battery

To be added as an appendix to the final report on Chavonnes Battery as prepared by

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16 April 1999

## Shipwrecks in Table Bay

Gale force north westerly winds in winter and the accompanying storms are estimated to have caused at least 50% of the total recorded shipwrecks in Table Bay. Despite this statistic, little was done until the mid 19<sup>th</sup> century to safeguard ships in the harbour during the winter months. In the 19<sup>th</sup> century the situation was such that Lloyds would not give insurance to ships scheduled to dock at the Cape in winter (Newal 1993).

During the VOC period (1652 – 1795) hardly any improvements were made to the harbour. Ships were requested to use False Bay as an alternate harbour during winter. After a particularly severe storm in May 1737, in which the VOC lost 9 ships and their cargoes, a half-hearted attempt was made to build a breakwater at Mouille Point (Newal 1993; Veitch 1994). The breakwater was totally destroyed by 1748.

In 1860 the construction of the breakwater at the site of the Chavonnes Battery was started. The breakwater was not yet completed when the worst storm in history hit Cape Town. The Great Gale of May 1865 probably caused the largest shipping disaster in the history of Table Bay. A large number of these wrecked ships were driven onto Woodstock Beach (Knox-Johnston 1989, Veitch 1994).

Alfred Basin was officially opened in July 1866. The construction and completion of Victoria Basin at the end of the 19<sup>th</sup> century effectively isolated the research area from the greater Table Bay harbour. Ships wrecking in Table Bay after 1899 would therefore have no impact on the research area.

The dredging of Alfred Basin in the 1930's did produce a significant amount of 17<sup>th</sup> and 18<sup>th</sup> century bottles and porcelain, some of which were still intact. This material has apparently been housed in the South African Cultural History Museum (Durden 1992b).

The Shipwreck Database housed at the National Monuments Council (NMC) formed the main source of information regarding ships wrecked in Table Bay. This list was checked against the work done by Durden (1992 a, b) and Turner (1997). A list of ships wrecked in Table Bay where no specific location was given, has been included in this report.



## **Ships wrecked in the vicinity of the Chavonnes Battery - detail**

Although there are no recorded shipwrecks in the vicinity of the Chavonnes Battery, a small fire lit by the soldiers at the Battery certainly caused one ship to wreck. During the 18<sup>th</sup> century, ships were forbidden to enter Table Bay at night. On the evening of 6 May 1740, the captain of the ship *De Visch* saw the guard fire of the soldiers at the Chavonnes Battery and thought it was the Robben Island Beacon. He took his chances and entered the Bay, running aground just off Mouille Point (Burman 1968; Veitch 1994).

The following ships are recorded in the NMC database as having wrecked in the harbour near either the Amsterdam Battery, the Breakwater or the Alfred Dock.

### ***Conde de Souza* (1842)**

This Portuguese ship is recorded as having wrecked on rocks near the Amsterdam Battery in 1842 (NMC shipwreck database). However, no mention is made of this ship in either Durden (1992a, 1992b) or Turner 1997).

### ***Industrie* (1818)**

The *Industrie* was a Dutch ship on route from Batavia. It had a cargo of sugar and coffee. A severe North Westerly gale caused the ship to founder while still in anchorage with the cargo still on board. (NMC Shipwreck database; PC 3/1)

### ***Stag* (17 May 1865)**

The *Stag* was a British ship belonging to Anderson, Saxon and Company. It sunk during the Great Gale of 1865, while helping other distressed ships in anchorage. Of the 14 crewmen on board, only 2 survived (NMC Shipwreck database; CC 3/7/2/1, Veitch 1994)

### ***Shepherd* (9 August 1874)**

The *Shepherd* was a British barque, commanded by a Captain Armstrong. She was on route from London and carried general cargo. On entering Table Bay at about 5 pm, the vessel ran ashore on the north side of the Breakwater. Although little of the cargo was saved, none of the crewmen lost their lives (NMC Shipwreck database; PC 3/8; Turner 1997).

### ***Wasp* (25 March 1863)**

The *Wasp*, a British schooner capsized outside the Breakwater on 25 March 1863, after having turned back in rough weather (NMC Shipwreck database).

**China** (29 July 1874)

The *China* was an American barque whaler. She heeled on the patent slip, Alfred Dock and wrecked and broke up (NMC Shipwreck database).

**Ships wrecked in the greater Table Bay area - list**

This list contains ships that are described in the records as having wrecked in Table Bay, with no specific location given.

17<sup>th</sup> century

Name of ship	Nationality	Date wrecked	Event
Oliphant	Dutch	1656 April 17	
Hogergeest	Dutch	1692 Oct 6	Wrecked

18<sup>th</sup> century

Name of ship	Nationality	Date wrecked	Event
Namen	Dutch	1722 June 17	Wrecked
Rotterdam	Dutch	1722 June 17	
Standvastigheid	Dutch	1722 June 17	
Saxenburg	Dutch	1729 Sept 1	
Fijenoord	Dutch	1736 July 1	Wrecked
De Buys	Dutch	1737 May 20	
Guardian	British	1789 Dec 24	Abandoned
Erfprins van Augustenburg	Danish	1790 April 12	Wrecked
Helena Louisa		1790 April 12	
Maria	Italian	1790 April 12	
Zeeland	Dutch	1792 May 22	Wrecked
Jefferson	American	1798 May 9	
Oldenburg	Danish	1799 Jan 15	Wrecked
Prize		1799 Nov 5	

Sierra Leone	British	1799 Nov 5	Wrecked
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19<sup>th</sup> century

Name of ship	Nationality	Date wrecked	Event
Hunter	American	1805 March 11	
Charles		1805 Nov 4	
Atlantic	American	1806 Jan 28	Broken up
Abby & Sally	American	1807 Dec 6	
Twee Gysbert	Danish	1808 Dec 18	Condemned
Reliance	American	1809 Dec 16	Broke up
Creole	French	1809 Jan 31	Broken up
Valentine	American	1812 Nov	Broke up
Elizabeth	British	1818	Grounded
William	American	1818	
Peniscowles		1819	
Triangle	British	1822 Aug 11	Broke up
Antelope	British	1822 July 10	Grounded
Good Intent	South African	1822 July 21	
Olive Branch		1822 July 21	
Sun	British	1822 July 21	
Lady East		1824	
Antonio		1824 Aug 4	
Nautilus	British	1826 March 31	
Bride		1828 Aug 20	Grounded
Ada		1828 Jun 14	Grounded
Orange grove		1828 June 15	Grounded
Ellen	British	1830 June 3	Grounded
Pine		1831 July 19	
Cendieu		1831 July 20	Grounded
Emperor Alexander		1835 May 25	Condemned
Falcon		1836 Dec 31	Grounded
Roxburgh Castle	British	1838 July 1	Wrecked
Le Jeune	French	1839 March 1	Abandoned

Edward			
Anna	Portuguese	1841 Nov 1	Broken up
Hamilton Ross	South Africa	1842 Aug 28	
L'Adolphe Fanny	French	1842 March 11	Condemned
Ann & Mary	British	1843 Aug 23	Grounded
Commandant		1843 Aug 23	
Regular		1843 May 13	
Soudade	Portuguese	1843 Oct 30	Broken up
Josephine		1844 Jan 29	Broken up
Henrequetta		1844 May 2	Broken up
Bella Angela	Portuguese	1844 Sept 10	Broken up
Blackstone	American	1846 Jan 4	Broken up
Aberfoyle		1847 Aug 18	Floundered
Mary	British	1848 Oct 1	
Clarinda		1851 Aug 28	Grounded
Morayshire		1851 Oct 12	Grounded
Bosphorous		1853 Jan 27	Grounded
Canopus		1854	
Australian		1854 April 7	
Dordrecht		1856 Dec 1	
Ellen Rawson	British	1857 June 14	
Fox		1857 June 20	
Fanny & Leoncine		1860	
Deutan	Spanish	1863 Feb 20	Broken up
Libra		1865	
Benjamin Miller		1865 May 17	Grounded
Briton		1865 May 17	Grounded
Frederick Bassil		1865 May 17	Wrecked
Jane		1865 May 17	Wrecked
Maria Johanna		1865 May 17	Grounded
Star of the west		1865 May 17	Grounded
Otago		1867 June 1	
Madagascar		1868 July 1	

Duke of Buccleugh		1870 Aug 10	
Susan Parden		1871	
Founding Oni		1874 Nov 22	Exploded
Poonah	British	1882 Feb 17	Wrecked
Panmure		1891 Aug 11	
Broderick Castle		1896	

## Conclusion

It must be stressed that while there are no reported shipwrecks in the vicinity of the Chavonnes Battery, the area is archaeologically extremely sensitive. For the duration of the 17<sup>th</sup> century and most of the 18<sup>th</sup> and early 19<sup>th</sup> century the Table Bay harbour consisted of a little more than a few jetties. Ships reported wrecked and sunk in Table Bay could therefore be lying anywhere. According to Dr Bruno Werz, the wave and current action in the Table Bay could also have moved the wrecks from their original wrecking location. Furthermore, ships lying at anchor in the bay would have been throwing their garbage overboard contributing to the archaeological potential of the area.

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## **APPENDIX B**

Site establishment phase interim conservation plan

**CHAVONNES BATTERY INTERIM CONSERVATION PLAN AND REPORT UPDATE**  
**Document 4**  
**Site establishment phase**  
**March-April 2000**

Prepared by Tim Hart  
Archaeology Contracts Office  
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## **1. INTRODUCTION**

The main purpose of compiling a conservation plan is to ensure that the significance of any given historical site (asset) is maintained in perpetuity. An essential component of this process is a thorough understanding of the asset, its significance and its sensitivity, and the ways that it can be presented. The Chavonnes Battery was discovered during a heritage sensitivity investigation of the Clock Tower Precinct, Victoria and Alfred Waterfront, Cape Town. The somewhat unexpected extent of the remains as revealed by an extensive program of exploratory archaeological investigations has necessitated revision of development plans to include the find as a heritage feature within the new development.

To date our knowledge of the Chavonnes Battery is extensive but not yet complete. The conservation plan for the site will be developed over a period of time as more knowledge is gained about the site and more issues come to light. We envisage three or more stages in the development of the plan. The first of these (as reflected in this document) contains guidelines and conservation concerns relevant to the site during the bulk excavation and construction phase of the development, which is about to begin. Further revisions of the plan will address the guidelines for conservation and reconstruction, maintenance and establishment of interpretative materials. It is envisaged that the final result will be an extensive report (hopefully a publishable document) which integrates the exploratory excavation reports, interim conservation plans and archival research into a comprehensive document.

## **2. PRINCIPLES OF THE CONSERVATION PLAN**

### **2.1 Background**

In January of 1999 a phase 1 archaeological investigation conducted in the area where the Chavonnes Battery was thought to be, established the presence of old walling and fills. Further phases of work have verified that the finds are part of the Battery. This resulted in significant re-adjustment of development plans to incorporate the site partially within a theme area (The Cape Experience).

Although the excavations have allowed us to achieve a good understanding of the broad context of the site, the details of its interior are not completely understood. In the meantime, construction work on redevelopment of the Clock Tower Precinct has begun, which means that an interim conservation plan is required to protect the site during the site development phase. The primary purpose of this plan is to maintain the significance of the site by identifying and eliminating potential impacts, and provide methods for managing the asset in the short term.

### **2.2 *Understanding the asset***

The historical context of the site is fairly well understood as a result of local archival research. This, together, with the broad archaeological context has been reported on by Hart (1999). In summary, the existing archaeological material consists of the south and east facing ramparts of the Chavonnes Battery, as well as parts of the central courtyard. Within the east (front rampart) are the partial remains of casement rooms with shell plaster work and shale flagstone floors. Excavations in the inner courtyard of the battery have revealed the presence of a well, and at least three identifiable floor levels including an artefact rich horizon. Much of the structure was destroyed in 1860 when an area of land

that included the west and rear portions of the Battery was excavated to a depth of 8m below sea level in preparation for the Alfred Basin - Cape Town's first true harbour.

Besides being a fortification, the Battery was subject to secondary use as a prison, a slave lodge, and after 1806, a quarantine facility for the old Somerset Hospital.

At present our physical knowledge of the site is limited to exposed faces of the rampart, and portions of the interior of the Battery where the remains of the casement rooms exist. Excavation of the courtyard area is presently ongoing. Some of the interior excavations have been back-filled to protect the sensitive brick and plasterwork from damage that could occur during the demolition phase of the overlying Concentra fish factory and the site development activities that follow. The exterior display area of the site will not be excavated until the bulk of construction activities are complete. In the mean time an interim conservation plan is needed to manage the site during the construction phase.

### 2.3 *The significance of the site*

The historical records have shown that the Chavonnes Battery was a large fortification. The front and side ramparts were some 190m in length while the rear perimeter wall incorporated virtually the full extent of the area of the Alfred basin. About 70% of the Battery was demolished after 1860 with the construction of the harbour, nevertheless the surviving remains constitute one of the largest portions of DEIC fabric remaining in Cape Town and exceed in size and complexity any other existing 18<sup>th</sup> century Battery on the coast of South Africa. Associated with the Battery are scatters of artefacts and food remains, which can tell the story of the daily lives of persons who were stationed or imprisoned at the Battery during the 18<sup>th</sup> century. Initially we believed that the site's major significance lay in the heritage value of the structure itself, however recent developments have revealed that it is of unsurpassed scientific potential in terms of the archaeological material that is now known to exist in the inner courtyard. This represents a rare opportunity to study the material culture and every day life of the persons stationed at the Battery – low ranking DEIC soldiers. In addition to the site's architectural and scientific merit, the find, according to informed sources (Van Voorden (TU Delft) pers comm) represents the earliest known existing DEIC Battery in the world. The site is therefore of international significance and can be awarded a "grade1" rating in terms of the heritage grading significance criteria of the National Heritage Act of 1999. Besides the site's national importance, its location at the Victoria and Alfred Waterfront, provides an educational and tourism opportunity unsurpassed by most other heritage sites in South Africa

### 2.4 *Maintaining the significance of the site*

In view of the status of the site and the opportunities that it offers, and the impacts that could potentially threaten it, we suggest that the following conservation principles (adapted from the BURRA charter) apply throughout the development process and into the future.

The acknowledgement and protection of the original fabric of the Battery, no matter what its current condition is. A commitment to the protection of the fabric throughout any future periods of re-adaptation of its setting or the building which overlies it.

Preservation of the original fabric must be done in such a way that involves minimal intervention. Where intervention is required this must be done with a view to stabilising the fabric without altering its cultural significance or the evidence that it represents.

Informed reconstruction is allowable where portions of the site have been clearly damaged or altered, especially if the act of reconstruction is going to contribute to the recovery of the cultural significance of the site.

Reconstructed fabric must be distinguishable from the original.

Recognition of the scientific and historical importance of middens or any other archaeological deposits that may contribute to knowledge about the site and persons who were stationed there.

A commitment to appropriate re-adaptation of the site and the spaces contained therein that will provide visitors to the site with a pleasurable and informative experience.

Reference should be made to the BURRA charter in terms of any decision making process that will affect the future of the Chavonnes Battery. The BURRA charter is an internationally accepted set of principles, which are extremely helpful (and necessary) in guiding decisions on how to approach the conservation of historic places.

### **3. Conservation and impact mitigation - short and medium term priorities.**

In the following months the south wall, east wall and top of the Battery and courtyard area will be vulnerable to potential impacts that may result from construction activities and bulk earth moving. The current and pressing priorities are to address possible impacts that may occur to the Battery during construction work, and ensure that adequate protection is in place. These potential impacts need to be identified and planned for.

#### **3.1 Legislation**

The Chavonnes Battery is currently protected by the National Monument Act of 1969 (as amended) as well as the recently promulgated South African Heritage Resources Act of 1999. It is an offence to damage the structure in any way without a permit issued for this purpose. At present the ACO holds the legal permit to excavate the site (but not to damage it). Future contractors who work on the site will be made aware through contract clauses that the original fabric is protected and that charges will be laid at a police station for violation of the legislation. It is also suggested that the client consider instituting penalty clauses to encourage adequate conservation of the finds.

#### **3.2 Intentional impacts**

Limited intentional impacts will be necessitated by development activities on the site.

##### *3.2.1 The BOE Building, location of lift shafts and piles.*

Supporting structures and lift shafts for The Cape Experience portion of the BOE building will have to be sunk through the site of the Chavonnes Battery. It has been agreed that every effort must be made to ensure that these are located in the least sensitive areas of the site - namely avoiding any of the brick or stone fabric of the Battery. In these terms, the most sensitive areas are the outer walls, the inner skin and courtyard walls, which make up the rooms within the rampart. Areas that may be used for positioning of structures are:

The sandy fill, which is between the inner and outer skins of the rampart, is least sensitive and may be used for positioning supports for the building, provided that these are kept well clear of original fabric. The sandy fill between the skins does not contain any archaeological material and may be excavated to the depths required for piling. The resulting space could be adaptively reused.

The casement rooms, ramp area, and ramp room may not be used for positioning piles or lift shafts. These contain a lot of original fabric in the form of walls, plaster, flagstone floors and old window and door openings.

We have established that the inner courtyard area never had a formal floor. Instead there were three living surfaces of compacted deposit strewn with artefacts. Apart from the side ramp, and the newly discovered well, there is no evidence of any remaining stairs onto the rampart or hot-shot ovens in the courtyard. Much of the courtyard area may be used for piling provided that:

The locations of the piles and shaft must not impact original fabric. A minimum distance of 1000mm from original fabric is suggested. For aesthetic reasons, the piles need to be positioned away from the immediate vicinity of the casement room openings as it is likely the courtyard will be readapted as part of a display and exhibition area.

**Action:** Plans for the BOE building, have been adjusted to ensure that all columns within the battery are situated at least 100 mm away from any of the standing walls. The lift shaft, which was originally planned to be situated within the courtyard of the Battery has been moved to the sandy fill between the inner and outer skins of the south side wall where its physical and visual impact will be less. All concrete bases are to be sunk into bedrock to ensure that their bulk does not create a visual impact.

A mechanical excavator can be used to remove the remaining rubble down to the level of the windblown sands, which lie just above the old floor levels. Archaeologists must then excavate and record the old floor levels in the part of the courtyard that is to lie under the BOE building. All artefactual material will need to be removed and suitably curated for future analysis. Once this is accomplished, excavation down to bedrock can continue using mechanical means, provided that the project archaeologists are at hand to monitor the situation.

**Action:** The two upper original floor levels have been excavated and removed by the archaeological team. The archaeological material is undergoing post excavation processing in the Historical Archaeology laboratory at UCT. The 1730-1760 floor level of the courtyard has been left in tact as we wish to try to conserve this for display purposes (see general protection). The four column bases within the courtyard were excavated by archaeologists to bedrock, after which the construction team used jackhammers to reach the necessary depth. Archaeological material from the location of the columns has been bagged and stored on site.

The well that has been found in the southern corner of the courtyard is of exceptional importance. Apart from its value as a heritage feature, it contains a rich archaeological deposit. The sequential information contained in this deposit will enable us to date and described events in the history of the battery as reflected in the material culture. The well may not be impacted under any circumstances.

**Action:** The well was excavated in December of 1999 to a depth of 80 cm, at which point work was terminated before the builders' holidays. After discussion with the project team, and in consideration of the requirements of erection of formwork within the courtyard area, we have decided to postpone excavation until the first floor of the BOE building is in place. In the interim, the well will be lined with plastic sheeting and then filled with white sand.

### 3.2.2 *Blasting and excavation of the shales close to the Battery*

***Blasting of the bedrock will probably be necessary in fairly close proximity to the rampart wall to make a trench into the shales in which to build the retaining wall around the battery. Shale debris could score the original fabric and damage old brickwork. Adequate provision must be made to ensure that this does not happen.***

**Action:** Blasting in the vicinity of the Chavonnes Battery has been a major concern. Neither the blasting expert, project archaeologist, engineers or compliance officers had any experience in the use of explosives on an archaeological site and were not in a position to make any accurate predictions of what the effect of the blasting would be. The team was thus dependent on the experience of the blasting expert who has worked on a number of confined and sensitive urban sites. In general, a conservative approach was used. The method used consisted of a series of small covered blasts, so that the progressive effects of each blast could be monitored. The principles that were put into operation are indicated below.

The blasting pattern is determined as work proceeds by the blaster (who is the blasting expert) and primarily takes the nature of the rock underpinning the battery into account.

Mitigatory measures include reducing the size of the blast areas. The blaster then peels off layers of rock within each of the blasting areas utilising minuscule time delays (20 milliseconds). The rock is then peeled off towards the open side of the excavations. Reduced charges are used in those areas closest to the battery wall.

A maximum of approximately 5 metres along the face of the wall will be blasted in any single stage. This then gives the blaster the opportunity to inspect the rock face following each blast to ensure that the support has not been moved from the battery wall.

In addition to the blaster's inspections, the project archaeologist will monitor and take video footage of blasting activities.

Seismic monitoring of every blast takes place (measurement of peak particle velocity to ensure that PPV does not exceed 12).

The blaster utilises all observations on an ongoing basis to assess the impacts of blasting, and if necessary adjust the quantity of explosives used for subsequent blasts.

On the completion of the blasting, the structural integrity of the underlying rock will be evaluated by a geotechnical engineer; such an evaluation will include any remedial measures that may be necessary to ensure the structural integrity of the underlying shale supporting the battery wall.

***A shelf of the original wave washed bedrock must be left in place on the side and front of the wall. This is not only to protect the foundations of the Battery, but also reveal to visitors that way in which the walls were founded on the bedrock.***

**Action:** A 600 mm shelf of rock has been left adjacent to the wall of the battery after excavation of the trench for the spread footing of the retaining wall in the area under the BOE building. The shelf has been interrupted in places to accommodate bases for columns as well as the lower structures of the fire service lift on the south side of the Battery. Removal of stone in these areas was done through non-explosive methods

(Jackhammers, picks and bars) after which the faces were checked by a geotechnical engineer. A recommendation was made that the exposed rock surfaces resulting from these actions be gunited to prevent weathering of the newly exposed shales. This has been carried out as required.

***The archaeological team should be present when final bulk earthworks commence. Any artefactual material that lies on the seabed in front of the Battery will need to be collected.***

**Action:** The project archaeologist is visiting the site on a daily basis.

***A representative collection of artefactual material must be made once the excavations begin to encroach on the Victorian rubbish tip that is situated in the fill on the south side of the precinct. Some material has already been obtained, however when the area is excavated for piling, further specimens should be collected.***

**Action:** The site was opened by mechanical excavators and inspected by the NMC maritime archaeologist (John Gribble) and the project archaeologist. An arrangement was made with the main contractor to put aside a truck load on the dump material in a safe place where it could be examined by archaeologists in detail. The 19th century midden site is hazardous as it is full of broken glass, decomposed organic material, sulfur (boiler slag) and also below the water table. For safety reasons, conventional archaeological excavation is not an option.

***Material from shipwrecks may be encountered when bulk excavations begin to reach below sea level. This situation will have to be monitored and the Maritime Museum contacted in event of material being identified.***

**Action:** The project archaeologist is visiting the site on a daily basis.

### 3.2.3 Accidental impacts

Accidental impacts are going to be a continuous hazard during the construction period. The sources of such possible impacts can be extremely variable, however, a few are detailed below.

Mishandling of vehicles, excavators or equipment in the vicinity of the rampart may cause damage to original fabric.

Careless depositing of steel beams, pipes or any other heavy components on the Battery.

Expedient pouring of construction waste over the edges of the Battery

Frequent use of the damaged corner of the Battery as a convenient pedestrian access route into the historic site.

Accidental concrete or brick spillage on/ down the exposed original fabric.

Use of the rampart wall by workers for Friday braais, (blackening of stonework).

Old plasterwork of the wall may not hold up well to use of the wall as a urinal.

Ignorance of the significance and purpose of preservation of the historic site will accelerate impacts. It is important that construction foremen are briefed, contractors are informed.

Contractors and their foremen will need to exercise the necessary discipline over their staff to insure that accidental impacts are kept to a minimum, or preferably not at all.

The project archaeologist will visit the site regularly and keep a register of any accidental or other impacts and the circumstances that may occur. This will be included as an appendix to the final conservation plan.

**Action:** The project archaeologist will brief construction staff on the importance of the battery, its legal protection and measures that are required to protect it. To date three staff training sessions have been held. During these sessions, the project archaeologist briefs the staff on the history of the site, the significance of the Battery, and appropriate behaviour on the historic site. The site has been enclosed with a barbed wire fence and gates to prevent casual or illegal access.

#### *3.2.4 General protection*

The historical site will need to be protected for the duration of the construction period.

The exposed surfaces, inner walls and sides of the historical site should be covered with black plastic underlay held firmly in position by sandbags to protect the fabric from erosion and concrete spillage.

Damaged areas of the walls, or any brickwork that may be unstable should be packed with sandbags until such time that they are repaired or conserved.

The damaged corner of the Battery must not be used as an access route onto the site. This section of the wall should be covered with underlay and sandbagged.

A formally designated route onto the top of the Battery must be established. It would probably expedient to use the area adjacent to the cut for this purpose. A temporary staircase or walkway (using scaffold) for the convenience of workers could also be considered.

**Action:** The main contractor, after consideration of the above guidelines indicated they believed that further measures were necessary to ensure protection of the Battery. All the exposed walls of the battery have been covered with heavy plastic underlay held down by sand bags and stitched to steel bars to minimize wind disruption. In addition to this, sandbag walls are to be constructed adjacent to all standing walls and then filled in with sand to protect the fabric from formwork erection, construction activities as well as water and concrete spillage. Similarly, the interior of the courtyard, and sand fill between the inner and other walls is to be covered with underlay followed by a 300mm thick sand buffer. A barbed wire fence with gates at the north and south ends of the historical site has been established to control access.

## **4. RECONSTRUCTION AND CONSERVATION - PLANNING AHEAD**

### **4.1 Casemate rooms and courtyard area**

Following discussions with the project architects, we would like to suggest to the client that consideration be made to opening the entire courtyard and rooms that will lie underneath the BOE building. This area could become part of the exhibition area while a route through to the front wall could be established via a passage between the inner and outer skins, leading through or near the cargo shed arch. This would add significantly to the quality of the experience of tourists and visitors.

## 4.2 Outside display area

### 4.2.1 Reconstruction

The designated display area outside of The Cape Experience was packed with filling sand and covered over prior to demolition of the Concentra Factory. It is best that it remain this way until such time that it is no longer under threat from construction activities. Provided that original un-reconstructed fabric is visible under the BOE building, reconstruction of Battery outside the BOE building is feasible and would significantly enhance both the visual and educational aspects of the precinct, and reconstitute the significance of the site. Contrasted with the expanse of unreconstructed portions of the site, the reconstructed area will provide an immediately accessible point of reference in terms of people understanding the meaning of the original fabric. Recent acquisition of useful archival material should enable a fairly accurate reconstruction of the full wall height, embrasures, scarp as well as details of the courtyard walls. The material used for reconstruction should be clearly contemporary, allowing the visitor to the site to distinguish easily between reconstructed and original aspects. Furthermore, the reconstruction needs to be accomplished in such a way that it enhances, rather than dominates the original fabric. Option scenarios concerning the extent of the reconstruction, and the choice of materials to be used, should be presented to a meeting of interested and effected parties for comment and input. The decision making process and conclusions reached should then be built into the conservation plan.

**Action:** The appointment of a restoration architect to look after the treatment of the Chavonnes Battery within the Clock Tower Precinct has focussed current thinking towards making a decision as to whether partial reconstruction of the Battery wall should be undertaken. As yet, the decision has not been made, but the matter has been debated at SAHRA (National Monuments Council) as well as the Heritage committee of the Institute of Architects. The matter has also been debated internally within the Department of Archaeology at University of Cape Town. A number of concerns have been expressed, especially by the UCU (Urban Conservation Unit of the Cape Metropolitan Council) who are of the opinion that reconstruction may not be appropriate. In general, opinion solicited to date is that limited reconstruction is desirable as a means of conserving exposed sensitive elements and enhancing the legibility and user-friendliness of the site. There is however, wide concern as how reconstruction is achieved, and in particular the kinds of materials that are to be used. To date, the option scenarios as requested above have not been submitted or formally debated. A motivation in support of reconstruction has been submitted by the project archaeologist, to the Clock Tower Precinct management team.

### 4.2.2 Further excavation

Parts of the Battery exposed during the Phase 1 assessment at the beginning of 1999 have been backfilled to protect the finds during implosion of the red brick building. These will have to be opened again in the future to inform any reconstruction and building of the outside display area. The timing of this will have to be slotted into the construction program.

The excavations that are presently taking place are devoted to the study of the courtyard area, and the removal of deposits that would otherwise be impacted by piling. These deposits are extremely valuable for research purposes. It is suggested that any deposit



that may be impacted is removed and the decision to excavate any other material be informed by the results of the preliminary analysis of that which has been found to date.

A start will be made to excavation of the well in December 1999. At this stage we don't know how deep it is, or the precise time implications that are involved. The developers have indicated that provision can be made to excavate the well during and after construction of the BOE building, should more time be required.

**Action:** Since December 1999 archaeological excavation in the Battery has been discontinued, apart from excavation of 4 bases within the courtyard area. The current plan is to allow construction work to commence until it is convenient and safe for the ACO team to continue work. By this time, the Battery will be covered by the first floor levels of the BOE building. In the mean time regular site visits will continue so that impacts can be noted and monitored, and where necessary corrective action implemented.

### 4.3 Repairs and Conservation

#### 4.3.1 *Rampart wall*

The seaward side of the wall shows evidence of numerous repairs where wave action has dislodged stonework. The various different kinds of brickwork show that the process of repair has been ongoing since DEIC times until de-commissioning of the Battery in 1860. More recent damage has occurred in the last 50 years with mounting of concrete factory bases in the original fabric of the wall. Removal of these has left some noticeable gaps, which for both aesthetic and practical reasons will need stabilizing, if not repair.

The nature of repairs and material used must be discussed with the conservation architect and approved by the NMC.

We believe that modern materials should be used so that any repairs that are done reflect the end of the 20<sup>th</sup> century. It must be borne in mind that "history" is an ongoing process and it is important to ensure that the layering of ages is reflected in any restoration or conservation work.

**Action:** No formal decisions have been taken apart from the fact that a concrete base and warehouse foundation which stands on, and against the front wall of the Battery just to the north of the arches will not be removed until construction of the retaining wall is complete. A portion of the base will have to remain *in situ* permanently, as its removal will cause undesirable impacts to top of the wall.

#### 4.3.2 *Rampart corner damage and cargo shed arches*

Damage to the southeast corner of the Battery occurred before foundations of the cargo shed were laid. Although a permit has been issued for the demolition of the fish factory (cargo shed), we have taken care to ensure that the portion of the arched cargo shed foundation that cut across the corner of the Battery is not demolished. This is an opportunity to reflect the layering of history characteristic of the precinct.

The cargo-shed foundation should be left in place and the damaged edge of the Battery conserved. This would have the effect of creating a visually pleasing narrative that would not only reflect the historic layering but also provide an exciting access route from the interior of the Battery to the front wall.

**Action:** The above recommendation is in place and enforced. The arches have been jacked and sandbagged and the wall covered with plastic underlay. A section of underlying bedrock has been cut flush with the exterior end of the arch wall to facilitate positioning for a base (BOE building). The cut shale was gunited immediately to ensure that it did not weather and compromise its ability to support the built fabric.

## **5. IMPLEMENTATION**

Development of this Conservation Plan is going to be an ongoing process, which will reach a culmination point when the final excavations and treatment of the site are completed. In the mean time, copies of this plan must be circulated to interested and effected parties. This document is a reflection of our current status of thought and discussion in terms of the conservation of the Battery. Additions, comments and ideas from all interested and affected parties throughout the stages of the project will considered for inclusion in future revisions. The collection of interim documents will stand in part as a record in itself that reflects the decision making process that took place from the point of discovery of the Battery to its ultimate conservation and inclusion within the new development. The entire process in itself is a milestone in heritage conservation in South Africa. The lessons and learning process experienced by both the developers and project archaeologist will be of benefit of to persons involved or working in the heritage conservation field.

## SECTION 2 – PROGRESS REPORT ON ARCHAEOLOGICAL INVESTIGATIONS

### **INTRODUCTION**

A general principal that has been agreed to by interested and affected parties is that the surviving portion of the Chavonnes Battery will be preserved. This means that the entire site will be “pedestalled” on its shale base while the surrounding area to the north and east will be lowered for underground parking. This will require bulk earthworks, the construction of a retaining wall (to control water level) and ultimately excavation of the shales which will involve blasting. Piles will be keyed into the shales to support the three levels of parking as well as the BOE building containing “The Cape Experience”. This will necessitate putting a number of supports through the Chavonnes Battery in those areas covered by the building.

Since the first conservation document was released in August 1999, and subsequent to the demolition of the above ground portions of the Concentra Factory, the ACO has directed the removal of concrete floors and machine bases that lay above the rampart wall and other parts of the historical site. Thereafter, the tops of historic walls, courtyard area and rampart rooms were opened so that the project surveyors could complete an accurate map of any features found. This is so that design of the BOE building and location of piles, columns and lift shafts could be positioned to cause minimal impact. The team is currently doing mitigatory work involving removal of archaeological deposits from the inner courtyard before columns are built. The process and findings are summarized below.

### 2. CURRENT STATUS

#### 2.1 Exposure of outside wall

This work was carried out in conjunction with the earthmoving contractors. The earthmoving contractors provided the ACO with the necessary plant and operators, while at the same time, the contractors excavated the rest of the Clock Tower Precinct down to the piling level. As part of this process, three trial excavations were dug to locate the exterior walls of the Battery, after which the entire extent was exposed under the supervision of the project archaeologists to piling level depth.

##### 2.1.1 Removal of concrete

The top of the Battery was covered in a layer of concrete of varying quality and thickness. This posed great problems as its removal proved to be extremely difficult. Concrete bases and floors had to be peeled off the top of the original fabric in such a way as to cause a minimum of damage. A number of these bases were nearly 1000 mm thick and weighed several tons. These were carefully worked loose and lifted off the top of the rampart wall with a large mechanical excavator. Concrete floors were removed with a hydraulic jackhammer and a mechanical excavator. The greatest problems were encountered in the central courtyard area where massive concrete bases had been placed to support boilers and coal bunkers. These were heavily reinforced with steel and were nearly 2000 mm thick in places. The hydraulic jackhammer was unable to break these at an economical speed so the bases were drilled and blasted. This was only partially successful as two sets of charges were required before the concrete had cracked enough to allow it to be broken into manageable sized portions and carted away.

Concrete bases had impacted the main rampart wall in places, however these were mostly removed with very little further damage. A single base is still in place on a critical part of the front wall. Its removal will cause damage so it is best that this is left in place for the moment. Much of the central courtyard area of the Battery was badly damaged when the bases for the boilers and bunkers were laid. Impacts resulting from this included partial or complete destruction of some of the inner courtyard features including stairs, hot-shot ovens and ramps. Portions of the 4 rampart rooms were damaged but footprints remain intact, as do aspects of the paved floors and various door and window openings. Initially, it was envisaged that parts of the inner courtyard should remain undisturbed and for future generations. Unfortunately, the amount of excavation that was required to remove the remains of the concrete boiler bases involved having to dig a large volume of material out of the inner courtyard area. The result of this is that the courtyard is now largely exposed and should be fully excavated with a view to conserving or re-using the space in a suitable manner.

### 3 Archaeological finds

#### 3.1 *18<sup>th</sup> century artefactual material*

##### 3.1.1 South wall exterior

A large quantity of 18<sup>th</sup> century (1750-1800) ceramics and animal bone was recovered from secondary context fills on the south exterior of the rampart wall. The finds were collected while mechanical excavators excavated the material down to piling level. The material is currently being analysed by Dr Jane Klose of the Historical Archaeology Research Group. A 4 pounder muzzle loading iron cannon was excavated from the fill close to the south side of the precinct. Commander Gerrie De Vries (SA Navy Rtrd) concluded that it is an 18<sup>th</sup> century cannon of Dutch origin. The British had modified it to act as a pivot for a much larger traversing cannon, several of which seem to have been mounted at the Battery by 1858. The cannon is currently being stored at the Lion Battery on signal hill.

##### 3.1.2 Courtyard interior

**Floor levels.** Information to date indicates that the courtyard of the Chavonnes Battery was not formally paved but consisted of compacted sand and clay surfaces overlain by a thin layer of aeolian sands. So far, a sequence of three separate living surfaces has been identified. The most recent flooring layer (probably laid down during the British occupation) was made up of layer of compacted latterite close to the casemate rooms but sterile clay in other areas. The most prominent surface (covered with 18<sup>th</sup> artefacts of Dutch origin) is characterised by sand consolidated with rust (from cannons on the rampart above) and metal fragments. The surface contains many Dutch pipes stems, fragments of oriental ceramics, animal bones (mostly domestic sheep), as well as fragments of shellfish which formed part of the diet of the (?) DEIC soldiers. The main floor levels within the courtyard of the Chavonnes Battery are strewn with corroded and encrusted iron artefacts, most of which are unidentifiable (until subject to chemical treatment). The artefacts recovered to date represent an extremely valuable and well contextualised research assemblage.

**Well.** A well measuring some 2m in diameter has been found in the southern courtyard of the Battery. Some 30cm of deposit has been excavated to date. This contains a dense deposit of artefacts and bone. The ceramics found relate to the British period predating

1860. Indications are that the well was used as a dump area and promises to be one of the most significant aspects of the site. Similar wells excavated at the Castle and in other parts of the city have contained exceptional archaeological finds.

### 3.1.3 Precinct seabed

There is a strong likelihood that artefactual material lies on silts and undulations in the bedrock in front of the Chavonnes Battery. The sea was often used as a convenient place to dump domestic waste and redundant hardware. This sort of material is most useful for archaeological interpretation as it can show how people who were stationed at the Battery lived their daily lives.

## 3.2 19<sup>th</sup> Century artefacts

Although many artefacts dating to this period were found in the fills surrounding the Battery, we are certain that most of this is in a secondary context and does not relate to the Chavonnes Battery, having been transported onto the site from unknown parts of the city bowl.

An interesting find on the Clock Tower Precinct is a late Victorian dump that was used as part of the fill. It lies close to the southern boundary of the precinct adjacent to the coaling jetty railway lines. Although we would not assign the find a high conservation status, the material in the dump is significant in that it contains many complete items, in particular bottles and crockery relating to the Castle Packets Company and the Union Steamship Line - precursors to the Union Castle Line. The material has a high curiosity value and is relevant to the history of the Waterfront. We believe that a sample of the material should be collected with a view to its eventual display in the exhibition area or at the Maritime Museum.

### ***Analysis of archaeological material to date***

The Historical Archaeology Research group is currently conducting post-excavation processing of the material in collaboration with the ACO. Early results have shown that the finds that have been found in the inner courtyard are very interesting and somewhat unique. Pipe bowl and stem analysis indicates that the material in the inner courtyard accumulated sometime between 1730-1760. The deposit appears to be the result of a period of time in which it was acceptable for people to toss and distribute domestic and other waste around the inner yard of the Battery. This was trodden into the clay floors and windblown sands, which accumulated from time to time in the yard.

### 4.1 Bone

A large quantity of bone has been recovered, but has not yet been analysed in detail. Initial observations indicate that most of the bone is that of domestic sheep. In all likelihood, this was the African fat-tailed variety traded by the Dutch from Khoe Khoe herders. Purebred African fat-tailed sheep are very scarce today, most of those that have survived are interbred with European domesticates. A number of other animals were also noted in the collection, in particular pig/warthog as well as several larger ungulates, probably African domestic cattle. Fish were also a component of the diet as represented by bones of a number of bones of small species - *Haarders*. Unlike other suburban archaeological sites remains of *Snoek* have not been found indicating that the occupants of the Battery did not have access to any form of boat fishing.

## 4.2 Shellfish

Shellfish are consistently manifested across the site and were without doubt, part of the regular diet of the Battery compliment. Two particular species were highly favoured. These are black mussels (*C. Meridionalis*) and periwinkels (*Oxystele* sp). This contrasts markedly with the shellfish normally selected as food by the Khoe Khoe who favoured, besides black mussel, a large variety of limpets as well as rock lobsters. The shellfish indicate a definite non-african taste in that the species that were selected for eating were probably as close as possible to those that were favoured in Europe (mussels and winkels). Another interesting shell that has been found on the site is the East Coast Cowrie species commonly know as the "money cowrie". This species (*Cypraea monetis*) is not native to southern oceans, but common along the Mozambiquan coast northwards into the tropics. The money cowrie was used as currency by central Africans, especially in the context of the African slave trade. Clearly, cowries shells, which have been found at other archaeological sites in Cape Town were an (as yet not understood) aspect of the material culture of the time - perhaps a form of currency still in used within the slave community in Cape Town.

## 4.3 Ceramics

The ceramics that have been found within the courtyard of the Battery are proving to be extremely interesting. They consist of mainly oriental porcelains, rare European tin-glazed ceramics and a large quantity of fairly crude locally made earthenware vessels. A distinguishing feature of the oriental material is the high frequency of "coarse porcelain" - a ceramic made by the Chinese for domestic trade around the China seas and Asia. Very little of this material ever reached Europe, however, it would appear that quantities of it were being imported to South Africa to be sold or issued to rank and file VOC soldiers. The locally made ceramics consist of earthenware 3 legged pots and bowls of various forms. The undersides of some of these still show traces of carbon, while remains of burned food stuffs have been noted in others. It would appear that cooking may have been conducted on open fires or hearths.

## 4.4 Glass

No glass from the site has analysed in detail. The bulk of the glass is heavily oxidised and mainly fragments of 18th century Onion bottles (wine and other liquids) and Case bottles (Brandy and other hard liquor). Clear glass, mainly from tumblers (very few wine glasses) has also been found.

## 4.5 Pipes

Fragments of Dutch clay smoking pipe stems and bowls are one of the most common artefacts on the site. These were imported from Gouda (Holland) in large quantities. Being fragile they frequently broke and may be considered to be the cigarette butts of the past. The makers marks on the pipe bowls are most useful as they provide archaeologists with a convenient means of dating the deposits in which they area found. The dates for the courtyard deposit range from early - mid - late 18th century.

## 4.6 Military hardware

The most common artefact on the site is iron. All of this is highly oxidised and in most instances, unconservable, even using electrolysis treatment. Metal artefacts that have

survived tend to be those made from copper, bronze or lead. The presence of several bronze cannon priming pins shows that some of the ammunition used at the battery was prepared into cartridges. Such cartridges consisted of a canvas package containing a weighed quantity of gun powder, wadding and shot. The bronze pin was used to puncture the powder bag to allow the priming charge to ignite the bulk of the propellant. Other military artefacts include European flints for flintlock muskets as well as lead shot for both pistol and musket. A single corroded explosive shell (hollow round shot) was found close to the ramp area. Also found within the courtyard was a range of bone and brass buttons, pins and belt buckles.

## ***CONCLUSION***

The Chavonne Battery is not only an important heritage site in terms of the quantity and quality of original fabric that has survived, but in last the last two weeks has revealed itself to be an historical archaeological site of unsurpassed scientific quality. The artefacts and bone that have been found have the potential to revealed a great amount of detail about the daily lives of DEIC soldiers stationed at the Cape.

## APPENDIX C

### ***Reconstruction of the Public area of the Chavonnes Battery***

*Retrospective comment August 2001*

*Gabriel Fagan Architects was appointed by the Client to reconstruct the public area of the Chavonnes Battery after extensive debate on the issue with interested and affected parties. The document presented in this Appendix was presented as ACO's contribution (interim conservation plan 4) to the debate at the time, and reflects the attitude of the writer, T.J.G Hart and colleagues in the Department of Archaeology, UCT.*

*The reconstruction of the area in question is nearing completion. Below is a brief description of the methods used.*

*Material used for reconstruction is Local shale and contemporary brick. Stone has been used for reconstruction of the front wall - the overall effect contrasting in terms of style and fabric with the original material below which consists of a "patchwork" of stone and Dutch and British brick repairs.*

*An orange plastic separator has been used throughout to distinguish new from original material.*

*Contemporary bricks and concrete have been used behind and above the vaults of the casemate rooms.*

*Whereas ACO would have accepted a contrasting modern interpretation of the reconstructed area, Gabriel Fagan Architects have taken a more conservative approach achieving a good balance in recreating the wall and casemate rooms, yet allowing legibility of new and original fabric.*



## **SOME THOUGHTS WITH RESPECT TO RECONSTRUCTION OF THE CHAVONNES BATTERY**

**Scenario:** Interested and affected parties are aware of the current debate surrounding the proposal to reconstruct a portion of the Chavonnes Battery that will exist outside of the BOE building.

The current plan is that a large portion of the Chavonnes Battery will be housed within the BOE building and be presented as an archaeological site along with the associated deposits and floor levels. Visitors will be channelled round the site in a controlled manner via safe areas and walkways. In this way they will be able to view the original fabric of the structure without being permitted to impact the original fabric. The portion of the Battery that protrudes outside the BOE building will be treated differently. This will be a public access area potentially exposed to a number of impacts. The feeling of the client and the client's consultants is that this portion of the wall should be reconstructed to its full dimensions to protect the original fabric underneath and create a people friendly facility that is robust and easily maintained. In so doing, it will provide the site in general with immediate legibility.

This proposal has provoked some lively debate and differences of opinion, which in many ways is a healthy situation as it provokes careful thought about the reasons for the way in which we plan any future direction. The document I present below tries to explore some of the arguments and articulate my own thoughts in my capacity as the project archaeologist. I am well aware that whatever the outcome of the debate, the decision to reconstruct or not to reconstruct will be controversial, opposed by some supported by others and something we will have to live with.

### **IMPACTS OF RECONSTRUCTION**

**Destruction of historical layering.** This involves making a decision to decide on a "period" to reconstruct to. A decision such as this can result in sanitising the site, and destroying layers of younger fabric to achieve the desired result. The historical sequence of fabric is irrevocably impacted, and the archaeology of the site is compromised.

**Comment:** *There is no way in which the loss of layering of fabric can be fully mitigated. Good recording and photography can go some way towards this, however, the end result is that fabric will be lost and will no longer be available for appreciation and study by future generations. Furthermore, the notion of significance can change over time, and what may not be significant today or in the recent past, may become significant in the future, depending on the events of history. Any decision to destroy fabric to "restore or reconstruct" a building to a given period in time, is something which would need to involve careful assessment of vulnerability and significance, before a decision is made. In the instance of the Chavonnes Battery, there is no archaeological evidence of substantial layers of fabric, and the existing walls in the reconstruction area appear to be contemporary with each other, dating to the DEIC period. We do not believe that destruction of later layers of fabric will be necessary. The site was buried shortly after 1860 and does not reflect any changes that may otherwise have been made to it during*

*the Victorian period. We believe that a sensitive reconstruction will not impact original fabric.*

**Obscuring of original material from public view.** The act of reconstruction can have the effect of hiding original fabric from public view. Entrenched in this are debates concerning the rights of public access to historic sites. In the case of the Chavonnes Battery, the original material will be viewed in a private as opposed to public area.

**Comment:** *Monitoring of a number of sites over the past 10 years has revealed the cumulative impacts of both people and the natural elements.*

*The Millers cottage in Plattekloof Gorge has been severely impacted by natural elements, while in Muizenberg the cumulative impact of vagrants on the fortifications of the "Battle of Muizenberg" are severe. At Vergelegen the remains of the slave lodge and other significant heritage sites have been completely reburied to protect them from the elements - a factor that has been seen as more important than exposing fabric to public view. While impacts on exposed original fabric at the waterfront are unlikely to be as acute, one has to consider the cumulative impacts of constant human pressure, the elements, and cleansing. The fabric of the casemate rooms is too delicate to be exposed to the rain and will not stand long term handling by people. The result of this will be the progressive rebuilding of the wall, relocation of fallen bricks and stones, which over the years will amount to a partial rebuild in itself. To minimise this, people will not be permitted to walk on, or impact the walls. The site will have to be enclosed by a structure to exclude the public and minimise wind and rain erosion.*

**Presentation of a "fake":** Depending on how the reconstruction is done, the effect can result in presentation to the public of a faked product, or worse still, a construct of an architect or an archaeologist who's perceptions of what the site may have looked like are not necessarily well informed or true. The concept may then be accepted as truth by learners, or unsuspecting members of the public.

**Comment:** *Reconstruction should not be attempted unless there is sound documentary or archaeological evidence for the form and extent of the original. Furthermore, any intervention that leads to the destruction of layering of fabric should be avoided.*

*Presentation of "fake" artefacts or even archaeological sites are regularly, and justifiably used by archaeologists as tools to conserve original fabric or artefacts and enhance the legibility of a find. The entire Palaeolithic cave site of Lascaux in France has been recreated for tourist use at massive expense by the French Government. Access to the original site is limited entirely to specialists (only 5 per day) to protect the original material. Original South African Hominid specimens are never put on public display but housed in secure areas for their protection. Display and teaching specimens are virtually always casts of the originals. Both palaeontologists and archaeologists regularly use reconstruction techniques to aid research and bring out meaning and significance to everything from ceramic vessels to the crania of homonids and skeletons of dinosaurs. Common to virtually all archaeological and palaeontological reconstruction world wide, is that the reconstructed areas of an artefact are visible at a glance through the use of dissimilar, but sympathetic materials in the reconstructed areas. This is so that the observer is able to see how the reconstruction has been accomplished as well as the condition and extent of preservation of the original artefact. This has the effect of making an honest statement to the observer about those areas of the artefact that have required intervention and may not necessarily be true to original form, but based on the perception of a*

*knowledgeable expert. Any reconstruction, like an hypothesis in science must be open to debate and improvement.*

**Blending of fabric.** A comment on reconstruction of the Messada 'the workmanship was so good that it was impossible to determine where the original stone work stopped and the reconstructed stonework began'. This is a highly undesirable situation as original fabric becomes inextricably combined with the reconstruction. In archaeological terms this constitutes an unmitigateable contamination of the archaeological material, destroys the discernible originality of the old fabric and creates an "untruth" out of both the reconstruction and original.

**Comment:** *There is no escaping the fact that a reconstruction is based on a perception of at best, a person with expert knowledge and may not be accurate. It is most important this fact is acknowledged and made visible to the public who may wish to make their own judgement. Furthermore, a good reconstruction will show up the original material and by way of contrast, enhance its status. From this point of view, choosing reconstruction material that blends so well with original fabric so as to make it indistinguishable, is very undesirable. A principal that needs to be applied is that the reconstruction should be clearly visible, and reversible without impacting any associated original fabric.*

**Manipulation of original fabric.** Potential for "new" material to impact on original fabric, and result in destruction/erosion, pollution through spillage/concrete adhesion.

**Comment:** *In the case of the Chavonnes Battery, the reconstruction will fulfil two requirements. Its first role will be to enhance the legibility of the site for the public. The meaning of the arrangement of wall is not obvious without some in depth study. Furthermore the scale and form of the structure is difficult to perceive from what currently exists. The reconstruction will introduce the form and scale of the Battery thereby giving the site instant meaning. The second role of the reconstruction will be to cover and conserve those parts of the Battery exposed outside the BOE building. The reconstruction needs to be done as lightly as possible making maximum use of clay and sand fills and taking measures such as use of plastic underlay separators to stop modern concrete from adhering to the original fabric.*

## IN FAVOUR OF RECONSTRUCTION

The reason why I favour reconstruction is because it is a means of maintaining sustainable use and ensuring conservation of the site. The non-reconstruction option would require us to surround the fabric of the battery outside the BOE building in a glass enclosure or equivalent to ensure that it is not impacted by people and the environment, and easy to maintain and clean. This would be akin to the Golden Acre site where portions of Wagenaar's dam have been successfully conserved behind glass within a building. The difficulty with this is, is that the find is not accessible and also difficult to interpret for anyone who is not conversant with "reading" or interpreting structures. The find takes on the form of little more than an inexplicable curiosity with some obscure historical significance housed in a museum style glass box, or in the case of the Battery, fragmented walling in a sunken pit. In reality, the legibility of the area that is to be covered by the BOE building, is critically dependent on reconstruction of the outside remains. In terms of achieving sustainable conservation value, it is important that an historical asset is usable and appreciated by the public. In order to achieve this, they need to be able to understand what it is that they are looking at and be able to relate to it on their own terms. For this

reason my own vision as to the way that the Chavonnes Battery is treated, is somewhat different to the Golden Acre experience.

I would like to see a reconstruction on the outside of the BOE building that is true to form and scale (as best as we know) but built with different, yet sympathetic fabric to the original. The old klompje bricks and lime and stone fabric (the toughest of the original fabric) will be immediately visible in the front face of the rampart wall, not separated by a glass partition. The sand and clay fill of the reconstruction will protect the inner skin walls, which are made of stone and mud. The top of the wall needs to be an area where people can stand, sit, eat fish and chips and take photographs without any fear that they are going to impact original fabric. Children need to play around the cannons and imagine what life was like in the past. They need to be able to appreciate the size of the battery and understand what it means without having to look at explanatory brochures or complicated storey boards. In this way the site will become a place of significance entrenched in peoples memory - the best way to ensure that the Chavonnes Battery will still be significant in 50 years time and beyond.

## **APPENDIX E**

### ***Record of Impacts***

Date	IMPACT	AGENT	CAUSE	INTENSITY	COMMENT
Aug-99	Peripheral damage to walls, minor cracking, loosening of plaster	ACO & RRS	Removal of building and machine bases placed on top and in wall during fish factory phase	Low	An inevitable and unmitigatable impact relating to previous construction work
Aug-99	Damage to brickwork on exterior of wall, localised area, display zone	RRS	Careless behaviour, operator "Jackals" sorting scrap metal	High	An unfortunate impact by careless operator - reported to RRS foreman, operator removed
Nov-99	Hairline cracking, wall bottom, south corner	RRS	Vibration caused by blasting	Low	Unforeseen impact despite careful efforts by RRS blaster
Dec-99	Damage to plaster and loosening of stonework, top of front wall close to arches	Unknown	Unknown, (?) Trespassers over new year period	High	Unexplained impact that appears to have taken place during builders holidays
Jan-00	Damage to stone and mud-plasterwork on top of inner wall turnback close to "blueboat" key	RRS	Damage caused by mechanical excavator while demolishing key edge concrete wall	High	Unforeseen impact caused by movement of a concrete base buried deep within the Battery structure
Feb-00	Removal of small quantity of foundation stone of arch wall to make way for a column	M&R	Stone systematically removed by workers with jackhammers	Low	An approved purposeful impact to 1870 wall carried out in consultation with project archaeologist
Mar-00	Excavation of lift shaft into sand fill between inner and outer south walls - will result in high visual impact, minimal archaeological impact	ACO & RRS	Sand fill excavated by hand, bedrock blasted	Low	An approved impact, no damage caused by monitored blasting
Mar-01	Demolition of collapsed chicken coup on exterior casemate room 6 wall	ACO	Requirement of construction of radius wall - outside exhibition area	Medium	A necessary but regrettable impact - feature recorded by ACO in video and still photography
June-01	Unauthorized excavation thru, and destruction of shale paved floor of casemate room 6	M&R	Circumstances of impact are unclear - M&R indicate that miscommunication was involved	High	A regrettable impact to casemate room 6. Room is to be conserved <i>in situ</i> and backfilled. Impact is intense but fortunately, localised
June-01	Removal of a small shale drainage feature in courtyard area	M&R	Requirement of construction of sidewall of BOE building	Low	The presence of feature was unanticipated, being exposed during foundation digging by ACO - measured drawing and photography
August-01	Trimming of buttress and portion of south main wall, and front wall	M&R GFA	Requirement of walkway construction	Medium	An approved impact necessitated by creating easy public access to the site.

August-01	Creation of an opening in the ramp wall	M&R GFA	Opening to facilitate visitor movement round Exhibition area.	Medium	An approved impact necessitated by visitor requirements
August-01	Damage to plaster and cracking of casemate room wall	Kilpin Eng	Careless delivery of steel walkways unsupervised and after hours	Medium	Accidental impact caused by careless workers. Kilpin "educated" by archaeologist J. Orton