Hatherwood Battery
Isle of Wight

NGR 430717 85796
CITiZAN region: South West

Report on a CITiZAN site survey

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MOLA, Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED tel 0207 410 2235
email citizan@mola.org.uk

Summary

This report presents the results of an archaeological survey and training session carried out by CITiZAN, the Coastal and Intertidal Zone Archaeological Network, at Hatherwood Battery on the Isle of Wight. The site is located on Headon Warren, north of the B3322 and east of the Needles theme park with a central National Grid Reference of 430717 85796.

The work was done in collaboration with the National Trust. The survey was completed as part of the national CITiZAN programme to prepare surveys of key zones, sites and features at risk. A site reconnaissance survey was carried out at Hatherwood Battery on the 5th of October 2015 by Lauren Tidbury and Alex Bellisario from CITiZAN and Paul Davies from the National Trust. The site was considered 'at risk' due to its position on top of a gradual sloping cliff off the north-west coast of the Isle of Wight. The cliff is being gradually destroyed by erosion and land slips. The initial survey identified that Hatherwood Battery would benefit from more detailed recording. A baseline survey was carried on the 23rd – 24th of November 2015 with help from both CITIZAN and National Trust Volunteers. Following on from this a GPS Survey of the Battery was undertaken in collaboration with Southampton University.

Hatherwood Battery was found to be of a poor condition, with considerable damage to the eastern flank of the battery. This damage has been caused by land slips which have taken much of 'A and B Group' down the cliff, C group remains in a stable condition.

The following report includes historical research which focuses its attention on the construction, additions and later use of the battery. The main bulk of the report includes a photographic survey, plan of the site and condition assessment.

Acknowledgements

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1 Introduction

1.1 Site background

An archaeological survey was carried out by CITiZAN and the National Trust at Hatherwood Battery, Isle of Wight, hereafter known as 'the site'. The survey was undertaken as a part of a CITiZAN training session between the 23rd and 24th November 2015. The site encompasses the remains of a Napoleonic Battery which was later reused in WWII as an indicator loop station before becoming rendered permanently out of action due to instability of the cliff.

The site is located on Headon Warren, north of the B3322 and east of the Needles theme park (see Figure 1). Access points were via a public footpath from the road to Headon Warren. The centre of the site lies at National Grid reference 430717 85796.

Initial site reconnaissance was carried out on the site by Alex Bellisario and Lauren Tidbury (CITiZAN) and Paul Davies (National Trust) on 5th October 2015.

A method statement was subsequently prepared by CITiZAN taking into account health and safety issues, staffing and methodologies. The fieldwork was carried out as part of a training event in collaboration with the National Trust in November 2015. The following document is a report on that work.

A Rapid Coastal Zone Assessment (RCZA) was previously prepared by the Isle of Wight County Archaeology and Historic Environment Record Service for Historic England (*nee. English Heritage*) which covers the area of the site. The area is referred to in 'Management Unit TOT 2' (Isle of Wight County Archaeology and Historic Environment Record Service 2000, 77). This document should be referred to for information on the natural geology of the site and the initial assessment of its archaeological potential.

Hatherwood battery is on National Trust land and the site itself sits within a designated Site of Specific Scientific Interest (SSSI).

The site has no other designation imposed upon it by Historic England and it not recorded on the Heritage at Risk Register.

1.2 Research frameworks

All work has been undertaken within the research priorities established in the Solent Thames Research Framework (Hey and Hind (eds.) 2014). The framework identified the need for greater understanding of the defences built during the time of threat of French invasion. It is noted that these defences and the surrounding infrastructure need to be investigated with a more holistic approach (Hind 2014, 278).

Additionally, it observed that the continuation and reuse of these Napoleonic structures during WWI and/or WWII needs to be investigated further:

'More work remains to be done on 17th to 19th century military sites and World War I defences, including upon the issues of continuity and re-use' (Hind 2014, 289).

The CITiZAN survey was undertaken within the research priorities identified above and was also carried out within the terms of one or more of the CITiZAN themes and research priorities developed for the project.

- Military defences
- Coastal Erosion

1.3 Aims and objectives

In accordance with the above research agenda, the following research aims, objectives and priorities were established prior to going on site:

1. To determine if Hatherwood Battery conforms to the known site plans of the monument.
2. Identify whether the features on site are at risk from natural or anthropogenic threats, and if so, determine the extent of this threat.
3. To establish a full photographic survey and condition assessment of the site.
4. To establish a baseline from which the current line of the cliff can be measured against to determine the rate of coastal erosion.
5. Create a site plan and elevation drawings of the site to add to the record.

1.4 Scope of the survey

A CITiZAN survey is not the same as full excavation. It is designed to locate and identify significant archaeological features currently exposed on the coast or foreshore and highlights those that are under threat from erosive forces. These surveys provide a baseline dataset so that their condition can be effectively monitored in the future.

1.5 Related outreach events

A public footpath runs along the north of the site and six members of the public were engaged during the training session. No further outreach sessions were undertaken or have been planned for the site.

2 Background research

Hatherwood Battery is one of many defensive structures known as the Victorian Palmerston Forts which were built to provide defence to the Solent during the 1860s. They had the primary objective of protecting England's largest naval base, Portsmouth. The defences were orientated facing both landward and seaward directions and represented an impenetrable barrier against attack from either direction. Forts which represented the landward defences included sites such as Fort Widely, Fort Nelson and Fort Purbrook and many of these continue to be used for military purposes to this day. The Solent approach was identified as a weak point in Portsmouth defences. To counteract this multiple forts were built in Gosport, the Solent itself (Horsesands and Spitbank Forts) and on the Isle of Wight. The Isle of Wight was viewed as a key element in the protection of Portsmouth and defensive Forts and Batteries were constructed on the east and west side of the Island. Hatherwood Battery is one of these Victorian defences positioned on the West side of the Isle of Wight. It was supported by nine other military installations on the Island and Hurst Castle Battery on the mainland (see Figure 1).

Information regarding the development of Hatherwood Battery is poor and there appears to have been little research on the site since its total abandonment after the end of the Second World War. However, its significance relating to our understanding of Portsmouth and how it was defended has been noted in the Isle of Wight Coastal Audit (Island Heritage Services 2000) and the Historic Environment Military Action Plan (Island Heritage Services 2010, 25). The most significant piece of work identified during the production of this report has been carried out by the Palmerston Fort Society (http://www.victorianforts.co.uk/pdf/datasheets/hatherwood.pdf) who have produced information regarding the construction and costs of the fort in addition to a brief description of the history of the fort.

2.1 Topography

A full description of the topography and underlying geology is detailed in The Rapid Coastal Zone Assessment for the Isle of Wight (2000, 77) and should be referred to for fullness.

In summary:

- The current level of the cliff lies at 84m OD (taken from Ordnance survey spot height information).
- The underlying subsoil observed in section was a made ground with large fragments of concrete and brick, this is assumed to be part of the levelling debris deposited prior to construction of the site.
- Underlying surviving chalk can be found between 1.50m and 2.50m below ground level (BGS Survey).

The site is under considerable threat from damage via cliff slumpage with the rate of erosion clearly mapped by Ordnance Survey data from as early as 1862 (oldmaps.co.uk).

2.2 Archaeology and documentary evidence

Prehistoric

The Isle of Wight was connected to the mainland by a chalk ridge known as the Wight-Purbeck ridge, the remains of which can still be seen today with the Needles on the Island and the Isle of Purbeck in Dorset. In the area now occupied by the Solent flowed the Solent River, which has its origins in the Pleistocene period some 600,000 years ago. The Solent was one of the biggest rivers in England during this time and was also the largest river system to have its basin completely beyond the reach of the ice sheets. Most of our current knowledge regarding the occupation of hominids in England comes from artefacts identified within river terraces (abandoned river beds). The earliest evidence for human occupation comes from isolated findspots of flint tools (IOW HER nos. 1425-MIW1528, 3917-MIW5431). The final separation of the Isle of Wight from the mainland is thought to have occurred during the Flandrian Transgression (11,300BP), the climatic event which saw the reduction of the Ice Sheets and the raising of global sea levels by 10s of meters in centuries (Velegrakis 1999, 74). During this time of significant climatic and environmental change we have evidence that the Isle of Wight was inhabited. The most significant areas of occupation are now submerged but are present at Bouldner Cliff where evidence of seasonal, but generational occupation has been identified.

It is during the Bronze Age period that the landscape of Headon Warren were impacted by anthropogenic influences. A number of barrows have been identified and recorded on the warren (IoW HER nos. 36 MIW35, 39-MIW38, 40-MIW39, 41-MIW40, 42-MIW41), however no settlement activity has been identified to date.

Medieval

There is evidence to suggest that the site was occupied to some extent during the Medieval period. Documentary evidence suggests that there was a 14th century manned beacon positioned on Headon Warren. The beacon site is currently recorded at SZ 311 858, however the record states that this is a suggested location based on topography (IoW HER 35 – MIW34: Ruston 2005).

Post Medieval

The threat of French invasion was prominent during 18th and 19th centuries. A report produced by the Royal Commission in 1860 identified that the current fortifications of the Naval bases were inadequate and the ability of England to command the English Channel during a time of conflict was imperative. It was estimated that an amount of £12 million would be required to provide adequate defence and of this £2.8 million was to be spent at Portsmouth on a suite of new forts (Cantwell and Sprack 2014, 4). Hatherwood Battery was one of the Palmerston Forts built during the period between 1865 – 1869, constructed to protect the Solent Approach to Portsmouth, covering the shipping channel in the western Solent (Murphy 2011, 188). Hatherwood was built as one of eight forts constructed in the western Solent at the end of the 19th and beginning of the 20th century. Other forts in this area included the refortification of Hurst Castle, Fort Victoria, Cliff End Fort, Golden Hill Fort, Warden Point Battery, Old and New Needles Battery and Freshwater Redoubt (see Figure 1 below).

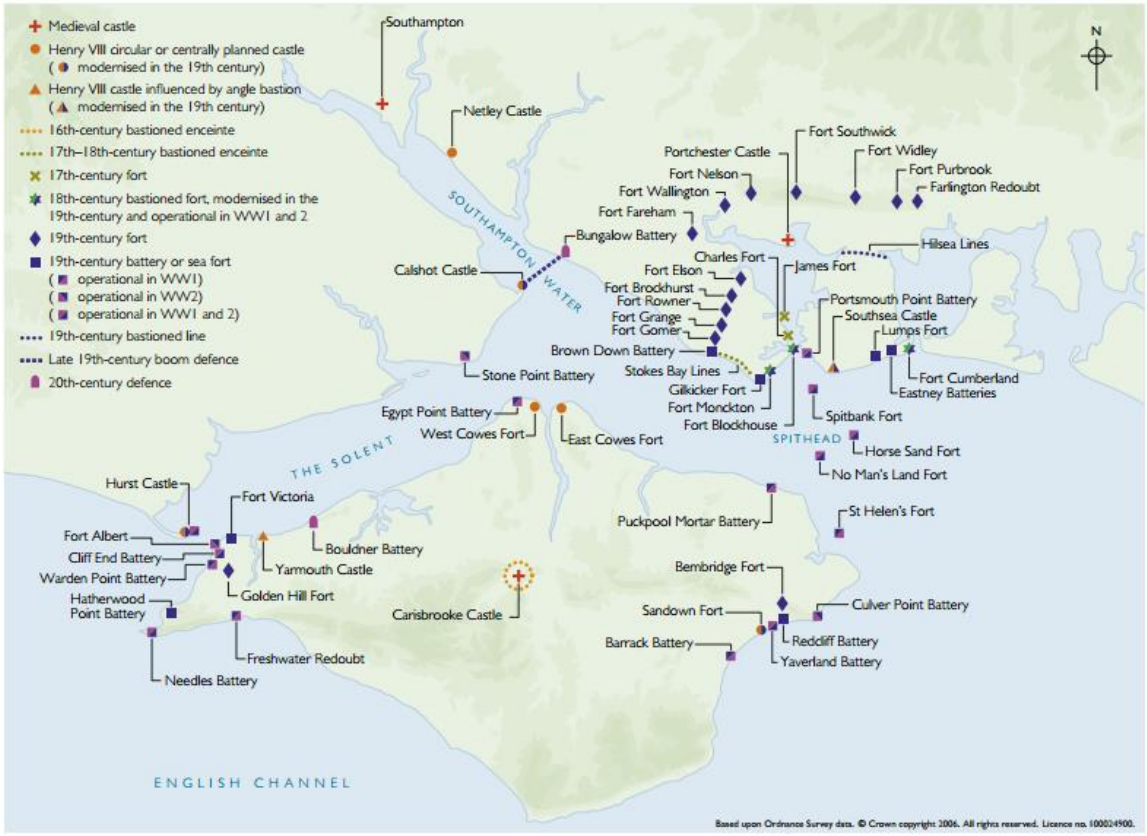

Figure 1 illustration of the artillery defences in the Solent ©Historic England.

The instability of the cliff was noted fairly soon after the construction of Hatherwood and by 1898 the site was already being affected by slippage and was finally disarmed in 1903 (Saunders 1998, 106).

Modern

Indicator Loop System

Its prominent position did not go unnoticed during WWII and Hatherwood Battery was bought back into commission between 1940 and 1943 by the Royal Navy as the location for the land base of an indicator Loop Station (Walding 2015; Island Heritage Service 2010, 14). Indicator Loops were part of the anti-submarine warfare system, they were a series of sea floor cables which were designed to identify an incoming submarine picking up its magnetic field. The cables for an indicator loop ran along the sea floor and culminated in manned land-based stations.

3 Survey Methodology

3.1 Training methodology

There were a number of surveys, involving various participants, to collate the information required to create the site plan, photographic survey and GPS survey. An initial survey was conducted as part of a 2-day CITiZAN training event in November 2015. The survey was proposed by Gary Marshall of the National Trust who identified an immediate threat to the site. The training event was carried out in collaboration with the National Trust. The National Trust on the Isle of Wight has been developing an archaeological monitoring group and the training was provided to aid in their development. The event was also open to CITiZAN volunteers and promoted via our Facebook page. It was noted in the initial site visit that the site needed a full photographic and condition survey in addition to plans and sections of the site. The training comprised of an evening briefing on the site background, health and safety and methodologies which we would be employing in the succeeding two days, and two full days on site.

All volunteers must adhere to Health and Safety assessments (CITiZAN, 2015c) and the CITiZAN code of conduct (CITiZAN, 2015a).

All learnt skills are recorded in the CITiZAN Archaeology Skills Passport.

3.2 Recovery and ownership of finds

CITiZAN is focused on recording and monitoring structures, landscapes and archaeological features and will not systematically collect finds. However, in certain circumstances finds of specific and unique intrinsic interest may be recovered. These finds will in general fall under the terms of the Treasure Act 1996.

In the event of 'Treasure' being recovered during a CITiZAN training or outreach event the artefacts in question will be reported to the local coroner and surrendered to the regional Portable Antiquities Scheme Finds Liaison Officer.

3.3 Field methodology

The survey was carried out in accordance with the aims and objectives discussed with Gary Marshall (National Trust) and CITiZAN staff. Areas/features were photographed and drawn by the CITiZAN volunteer team with support and guidance by CITiZAN staff.

Photographic Survey

Hatherwood battery was subject to a complete photographic survey, carried out by the volunteers. Sections and elevations were recorded using a Nikon Coolpix AW130 and 0.3m scale. The survey was carried out to satisfy a Historic England Level 3 photographic and building survey and the remainder of the report is to fulfil the requirements of a Level 3 survey.

Offset and section recording

Detailed planning and section planning of the part of the site was carried out by volunteers with CITiZAN staff assistance. The CITiZAN and National Trust training session prioritised the recording of

the footings of the buildings to the immediate south the battery, which are considered to be dated to the reuse of the Battery in WWII. A section drawing of the eroding face of gun Group A was also done. Drawing boards, 6H pencils and waterproof drawing film were used to create the plans. The north-east facing section, which includes A Group, was planned at a scale of 1:20 by CITiZAN and National Trust volunteers. All plans were then digitised in Adobe Illustrator by CITiZAN. The foundations relating to the use of the site during WWII as an indicator loop station were planned at 1:50 scale by CITiZAN and National Trust volunteers. All plans were then digitised in Adobe Illustrator by CITiZAN.

All drawings used to illustrate the report conform to the conventions and procedures laid out in the Museum of London Archaeology's Archaeological Site Manual (*MOLAS* 1994).

GPS Survey

The Global Positioning Survey (GPS) was undertaken using an RTK GPS. The equipment was operated by a member of staff and volunteers from Southampton Universities' archaeology department as well as CITiZAN staff. The raw data is held by CITiZAN.

3.4 Recording methodology

A written and drawn record of features was carried out using CITiZAN proformas. Plans of features were drawn at 1:50 scale. Sections were drawn at 1:20 scale.

4 Results

4.1 Phasing of Hatherwood Battery

Phase 1: 1864

Original construction plans were drawn up by the Deputy Director of Works in December 1864. Figures 2 - 7 outline the construction of A Group containing two 9” guns, B Group containing three 7” Barbettes and C Group having a further two 9” guns. A magazine cellar, located immediately to the south of the Battery, was also depicted in the original construction drawings. Whilst the original drawings for Hatherwood illustrate that the battery was to be constructed in brick, in line with contemporary forts built as part of the Solent defences, there is no physical evidence of this. It would appear that many of the batterys and forts on the Isle of Wight were constructed using concrete containing aggregate mix, most likely from the resources available on the Island.

During this early phase of Hatherwood Battery the ancillary buildings, such as living quarters and additional storage rooms, were located to the south of the battery (as illustrated in Figure 9). The Barrack blocks were constructed for the occupation of one officer, one sergeant and 10 men.

Comparison of the original construction plans for Hatherwood Battery and present remains appears to show that Group A and C retain the original design of the earliest phase.

Phase 2: 1891

It is not clear how quickly the Battery was altered. B Group, containing 3 smaller 7” guns, was remodelled and two larger guns with a store in-between were constructed but the alteration appears on the plans by 1891. The size of the Battery increased, though its firing power remained largely unchanged. The following additional buildings required for the running of the fort were constructed and incorporated into the redesign of Hatherwood:

- Gym and tackle store
- Field force store
- Magazine
- P.F. Store
- Lamp Store
- Artillery Store
- Smith’s Shop
- Shell filling room
- Laboratory

Whilst there is limited evidence regarding alterations in design and the date of the reinvigoration of Hatherwood Battery, the substantial increase in ancillary buildings relating to be stationed at the fort by 1891 suggests that the numbers of men stationed at Hatherwood had also increased.

Phase 3: 1898 – 1903

The instability of the cliff required the Battery to be disarmed, the positive relations with neighbouring foreign powers meant that an alternative defence at this location was not required.

Phase 4: 1939-1945

During the Second World War the requirement to defend the coastal approaches meant that many of the earlier coastal defences were re-armed. Additional functions such as Anti Air Craft guns, searchlight batteries and long ranged fire arms were put in place in almost all of the Palmerston Forts built in the 1800s. The instability of the cliff to the south of Hatherwood continued to be a threat to the Battery and consequently there is no evidence for the rearmament of the Battery as was. Instead Hatherwood was to become an indicator loop station. Whilst there is limited documentary evidence in regards to the layout and form of the station at Hatherwood there are remains, in the form of the parch marks, of buildings. Whilst it is clear from various plans that there were numerous layouts of Hatherwood throughout its short life none of the mapped ancillary buildings correspond to the remains which are visible on the ground. It is considered that the building foundations, most recognisable as parch marks, relate to this phase of occupation at Hatherwood, these were planned at a 1:50 scale during the November CITiZAN training session (see Figure 46).

4.2 Condition Survey

Hatherwood Battery consists of three gun groups, constructed exclusively from concrete. Positioned on Headon Warren The Battery is aligned north-east – south-west. Parchmarks to the south of the Battery are also clearly visible

A Group

The condition of Hatherwood Battery overall is Poor (as defined by the Historic England guidance). There is clear and demonstrable evidence of cliff collapse and slumping. This has caused structural instability resulting in the loss of A Group. On inspection one of the emplacements of A Group was identified within a landslip deposit and the other was identified in woodland further down the cliff. There are no upstanding structural remains of this group or the magazine (as per the 1891 plan) but remains of the foundations were visible within the cliff section. This was drawn at a 1:20 scale and photographed during the assessment in November 2015 (Figures 14 - 20).

B Group

Group B is currently being most affected by the cliff collapse and slumping. The eastern most emplacement of B Group is under severe threat of collapse and this is likely to occur during the next land slip event. The overall condition of this Group is poor with badly eroded concrete and no clear features of the emplacement or magazine identifiable.

During assessment of the condition of the heritage asset it was noted that the integrity of Group B had been significantly compromised by vegetation growth. On inspection of the concrete it would appear that the mix of bonding material to aggregate was different to that observed in the materials and section of A and C Groups. It is considered that material used to alter the form of B Group between 1864 and 1891 was of a poorer quality to those materials used to construct the Battery during the 1860s therefore leading to more rapid erosion and deterioration.

C Group

The condition of C Group is fair, with this group being the best preserved. The eastern section is suffering from a moderate amount of vegetation encroachment which is leading to root damage of the monument. This is particularly apparent in the stairs to the east emplacement which are in a

very poor condition. The western emplacement has a large crack running across concrete which can be seen in section. However, these are the only visible structural deformities of the Group.

The metal fixings for the two 9-inch guns are still in place although there are some fixings which have rusted through leaving only stains on the concrete.

The gun positions are accessed via stairs on each emplacement, whilst the stairs to the eastern emplacement are damaged those on the west are of good condition. Three stores are visible in the south-eastern elevation of the battery and there are metal fixings sunk into the concrete around this area. The north-western elevation was not observed due to inaccessibility.

The current condition of Hatherwood is documented in the photographic survey (see below in Section 8).

Hatherwood Battery 2016

The southern section of the battery (C Group) is relatively stable. The central emplacements have been heavily eroded and the northern section (A Group) has been almost completely destroyed as a result of the slumping (see figure 1 above). The headland was bought by the National Trust in the 1970's, management recommendations for the site included a metric survey as well as a geophysical survey to elucidate the earthworks and foundations on the site of the battery (Wessex Archaeology, 2005).

4.3 Training results

A total of 10 volunteers signed up to be a part of the Hatherwood Battery session, three CITiZAN volunteers and seven National Trust volunteers attended, with two members of National Trust Staff Present.

All participants were asked to complete an evaluation form and return it to a CITiZAN member of staff, this data is being evaluated by an external body as a condition of the projects Heritage Lottery Fund Grant. Full details of this information can be found in the Year 1, HLF Q3 report.

5 Conclusions and recommendations

5.1 General discussion of the survey

The survey had two principle objectives. The first objective was to work with the volunteers of the National Trust on the Isle of Wight to develop their skills in recording archaeological sites and monuments which are considered to be 'at risk' on the Island. The second objective was to make a detailed photographic record and measured survey of the current condition of Hatherwood Battery in order to create a baseline record on which later surveys can be compared against to monitor the rate of erosion. Both of these objectives were achieved in three separate visits from November 2015 to May 2017 and results of the individual site visits have been presented above.

5.2 Answering original research aims

1. To determine if Hatherwood Battery conforms to the known site plans of the monument.

The appearance of Hatherwood Battery differs significantly from the 1864 original plan but bears a strong resemblance to the 1891 plan.

2. Identify whether the features on site are at risk from natural or anthropogenic threats, and if so determine the extent of this threat.

The battery is under considerable threat from slumpage, A Group has already been significantly impaired. B Group is also under severe threat of erosion and has also been subject to vegetation damage.

3. To establish a full photographic survey and condition assessment of the site.

A full photographic survey of the site was achieved at all locations where access was possible. The front of the battery (north-west) was largely unreachable due to the instability of the cliff.

4. To establish a baseline from which the current line of the cliff can be measured against to determine the rate of coastal erosion.

Integrated into the plan of the site plan of the exposed concrete building platforms, the line of the current cliff has been recorded. Due to the position of the site being on a public footpath, placing a series of stakes in the ground to establish a baseline was considered impossible. The concrete platforms can be used as a baseline to monitor the rate of cliff erosion.

5. Create a site plan and elevation drawings of the site to add to the record.

The site plan was created during an RTK GPS survey.

5.3 New research aims

1. Continued photographic monitoring of the site should be completed on a twice annual basis in April and again in December. These photographs should then be compared with those contained within this report.

2. Further research into identifying whether further plans of Hatherwood exist, particularly in relation to the development of the Battery between 1864-1891 and during 1940-1943.

3. Should funds be available it is also recommended that a laser scan of Hatherwood battery be carried out to provide detailed dimensions of the fort.

4. Should funds be made available, the site would benefit from a geophysical survey to identify the extent of any below ground archaeological remains which may provide more detail to assist the understanding of the various forms of Hatherwood Battery.

6 Dissemination

The results of the survey will be made publicly available on the CITiZAN website: http://www.citizan.org.uk/. The feature data will be uploaded to the CITiZAN interactive database, to allow ease of future long-term monitoring of the site via the CITiZAN online interactive map and smart phone app and to permit inclusion of the data in any future academic researches into coastal and intertidal archaeology. This can be found at http://www.citizan.org.uk/interactive-coastal-map/.

Records created by this survey will be deposited with the Archaeology Data Service (ADS) where it will make up a part of the archive of all data and materials created by CITiZAN. It will be deposited with appropriate local repositories via the ADS.

A short note on the results of the survey will be submitted to the appropriate journals to be included in annual county and period fieldwork round-ups.

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8 Figures

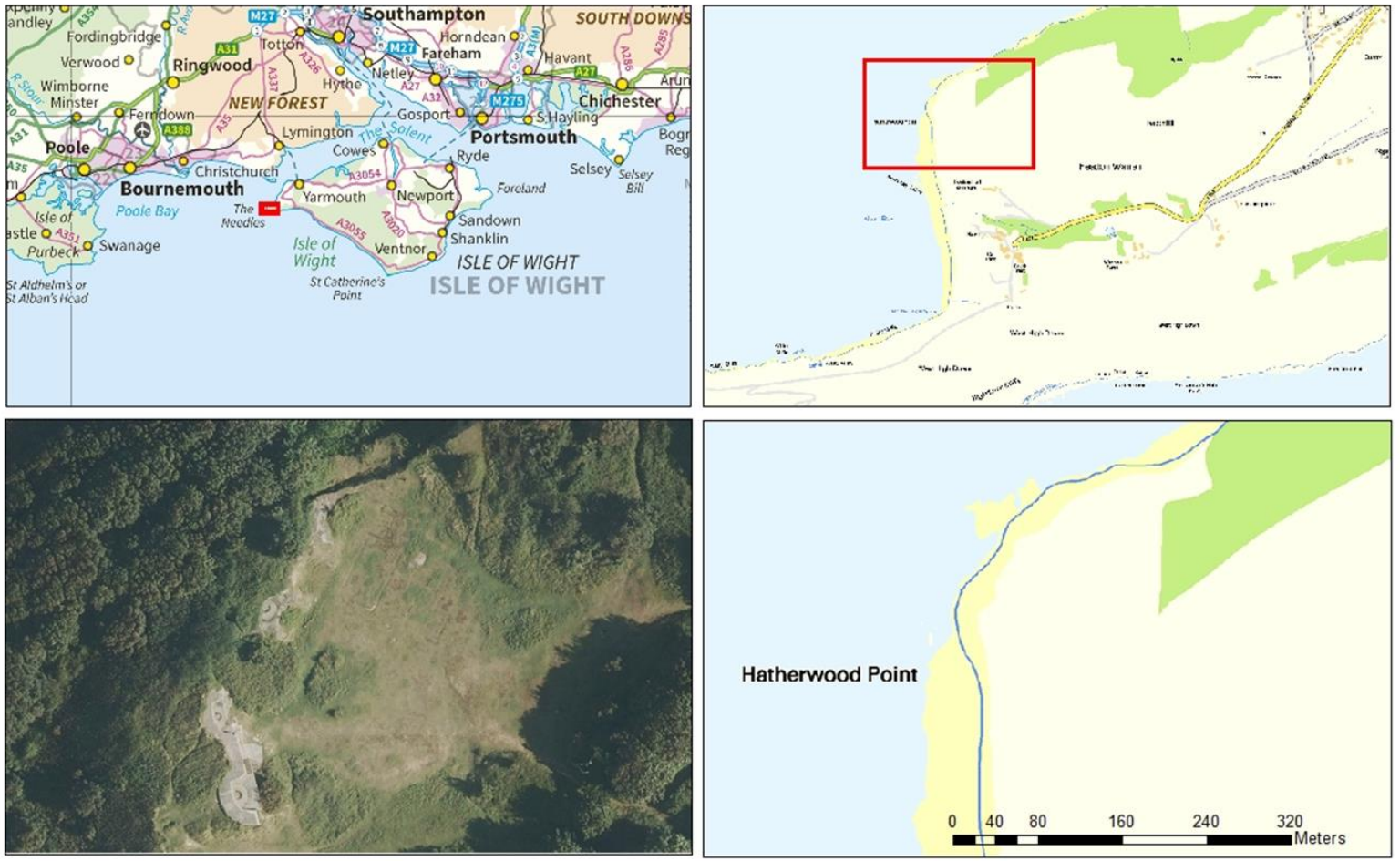

Figure 1

Location of Hatherwood Battery. Top Left: OS Open Data. Right: CCO Aerial photography. 2017. Bottom: OS Open Data. Contains OS data © Crown copyright and database right (2014)

CITIZAN Hatherwood Battery Project © MOLA 2017

Figure 2: Site Location.

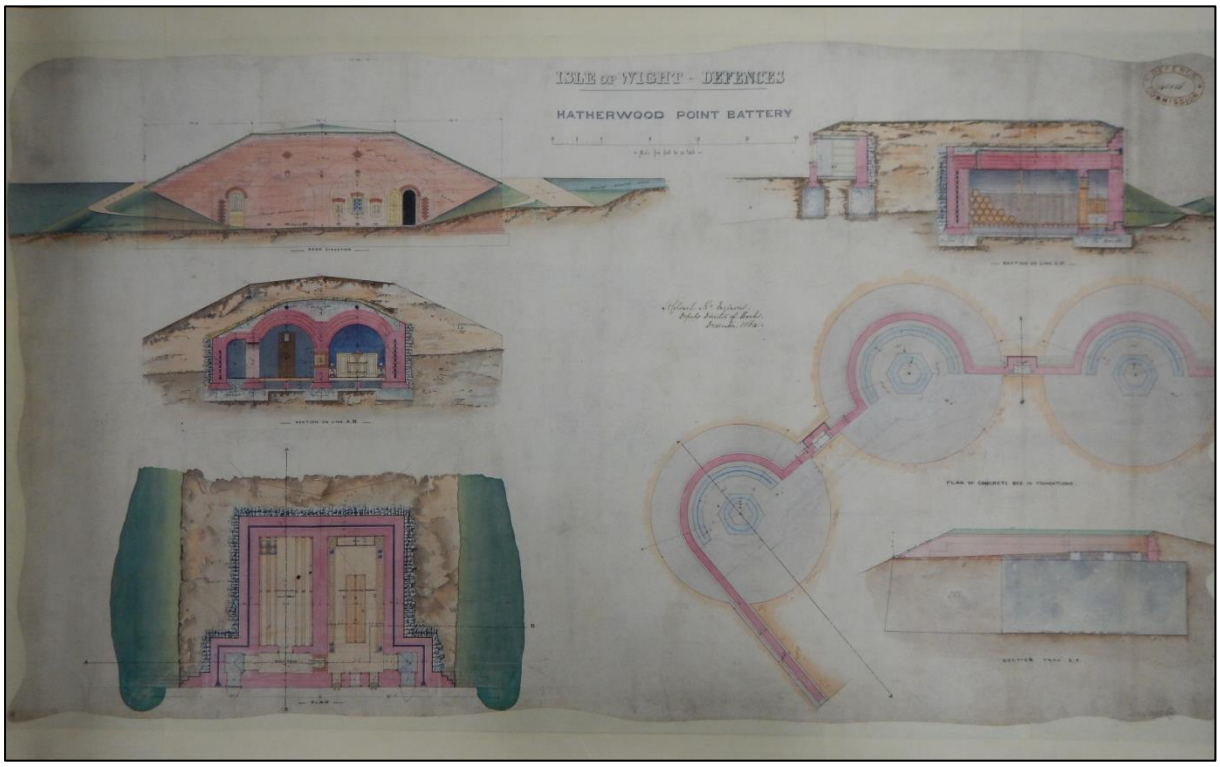

Figure 3: Construction plans of Hatherwood Battery.

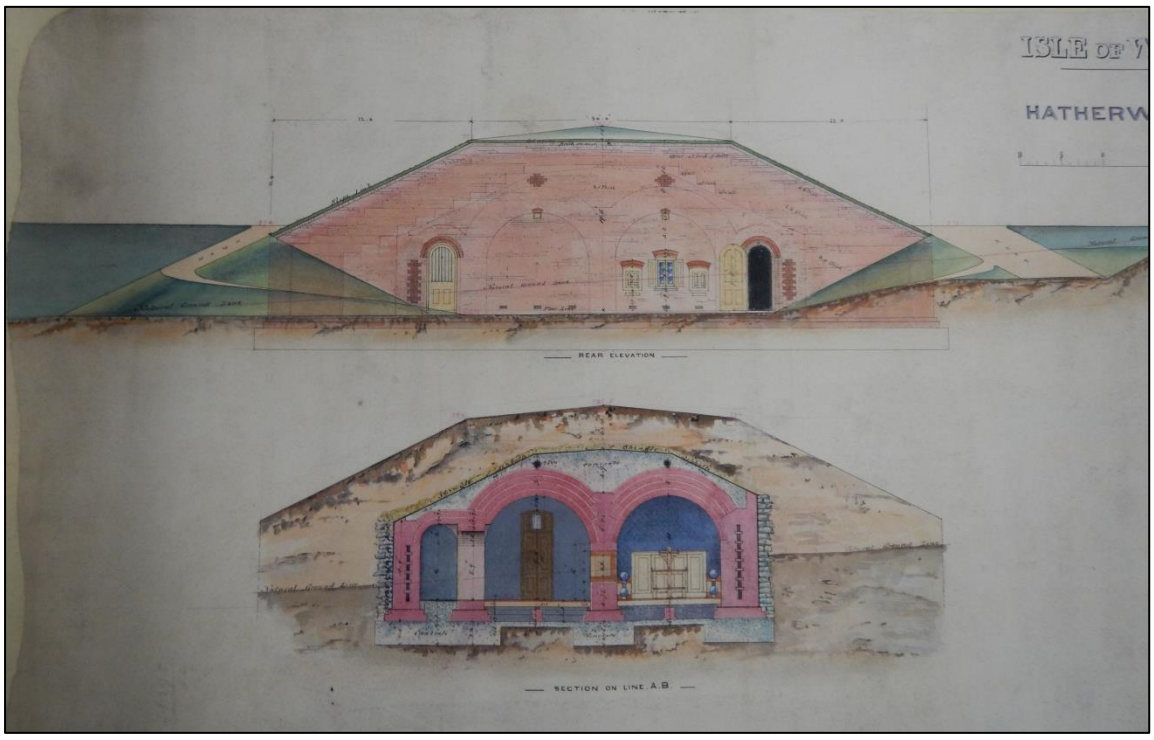

Figure 4: Construction plans of Hatherwood Battery.

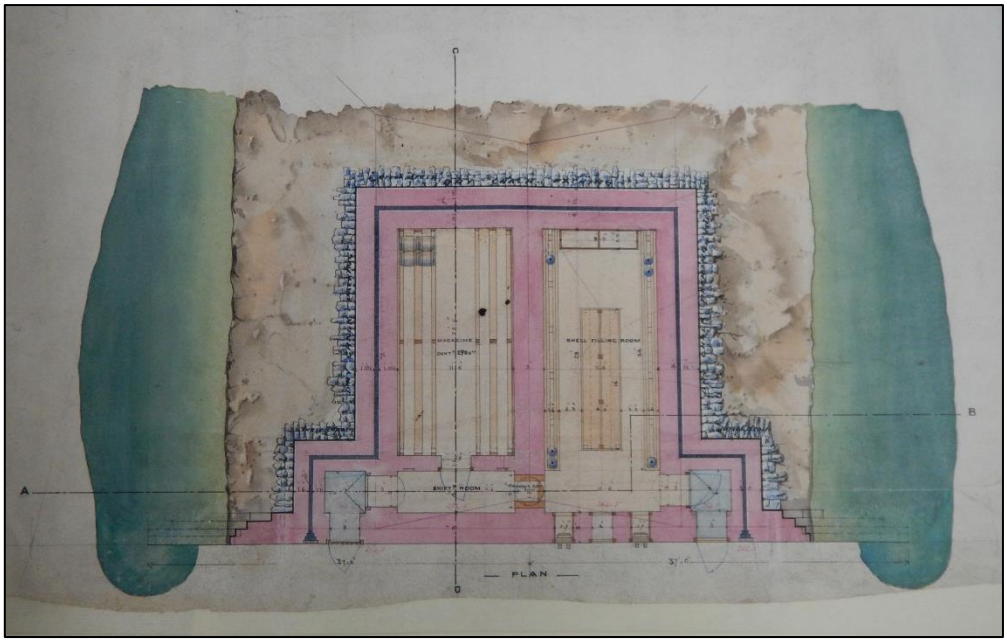

Figure 5: Construction plans of Hatherwood Battery.

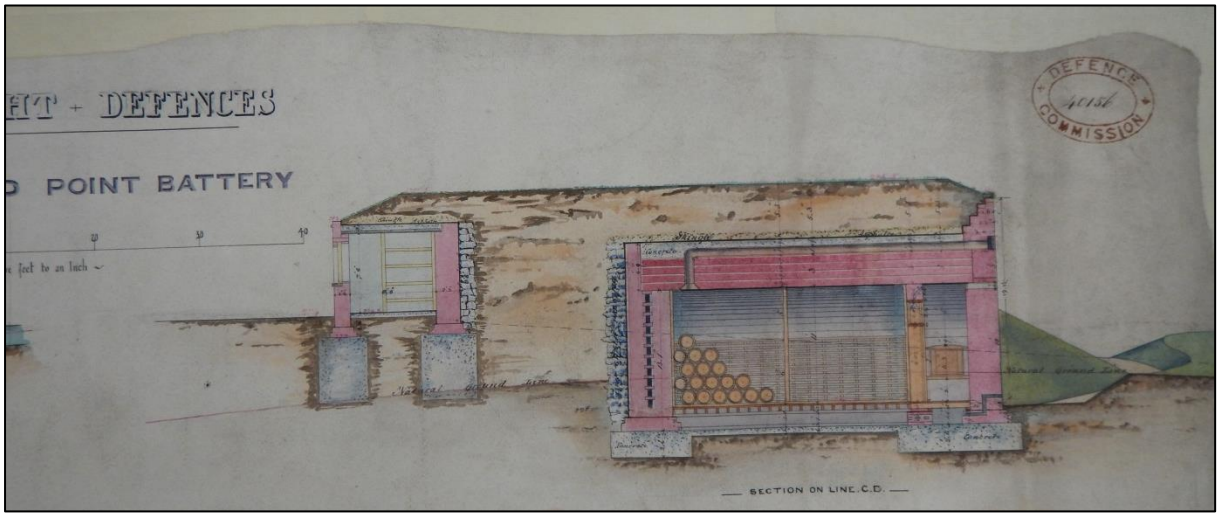

Figure 6: Construction plan of Hatherwood Battery.

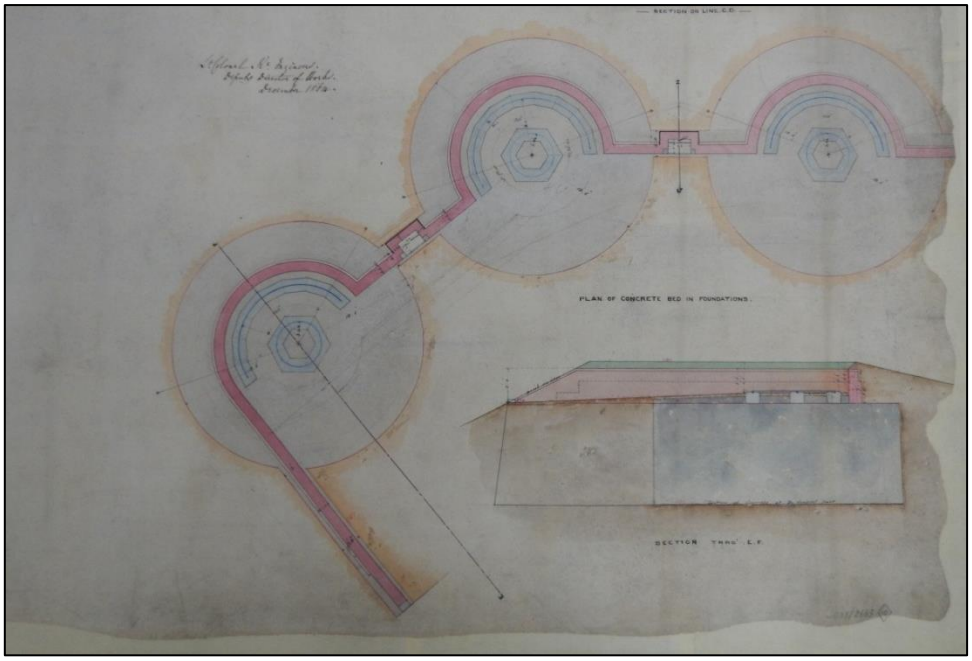

Figure 7: Construction plans of Hatherwood Battery.

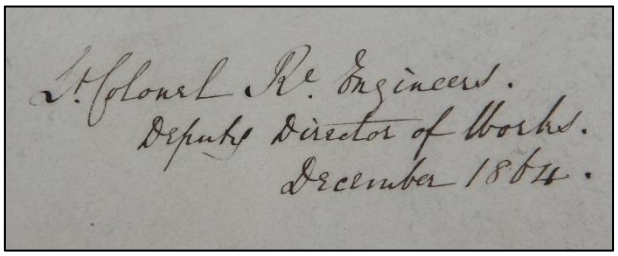

Figure 8; Insert of detail of designer and date of construction plans at Hatherwood Battery.

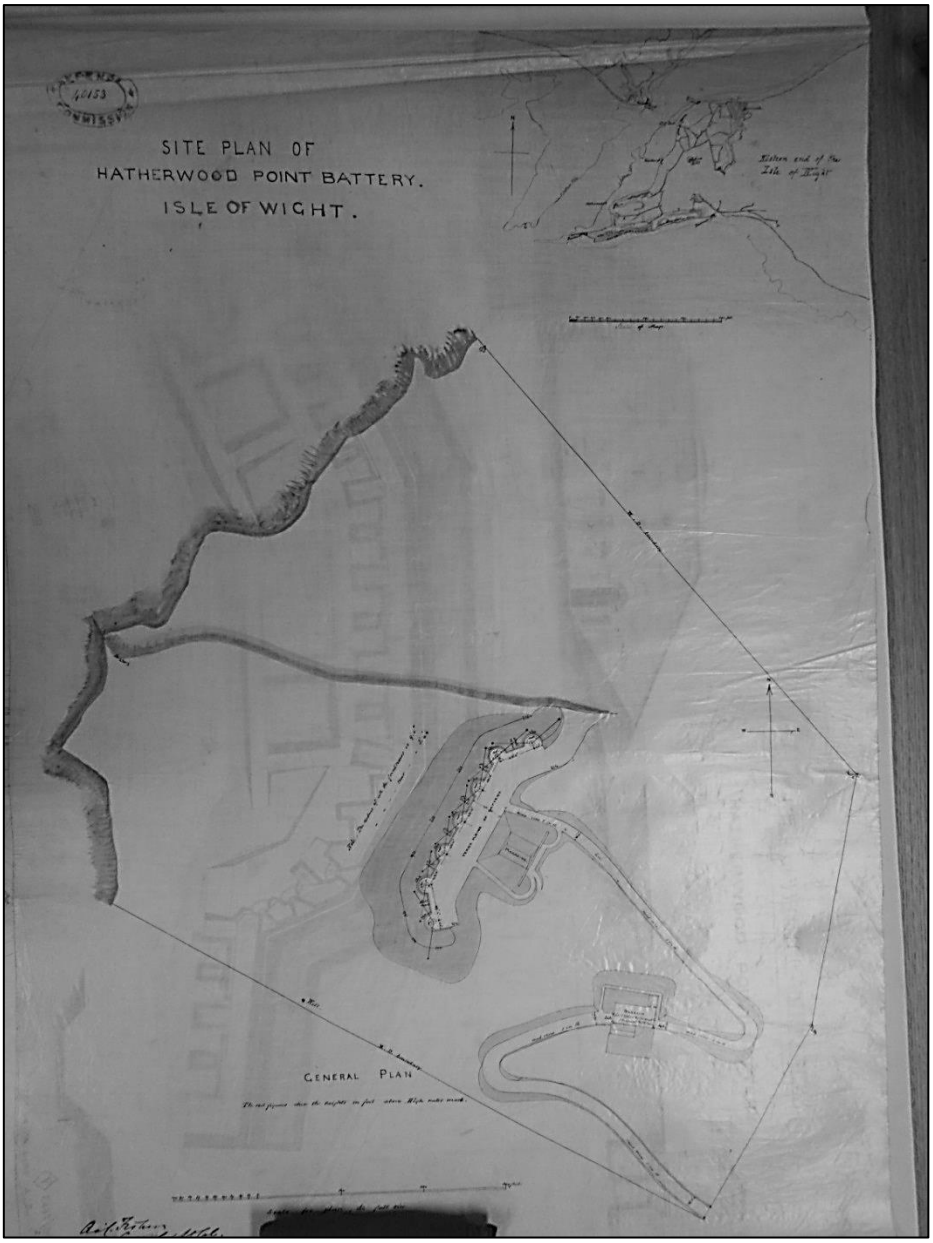

Figure 9: The original constructions plans of Hatherwood Battery, National Archived WO 78/2663/4.

Figure 10: 1864 plan- original constructions plans of Hatherwood Battery, National Archived WO 78/2663/4.

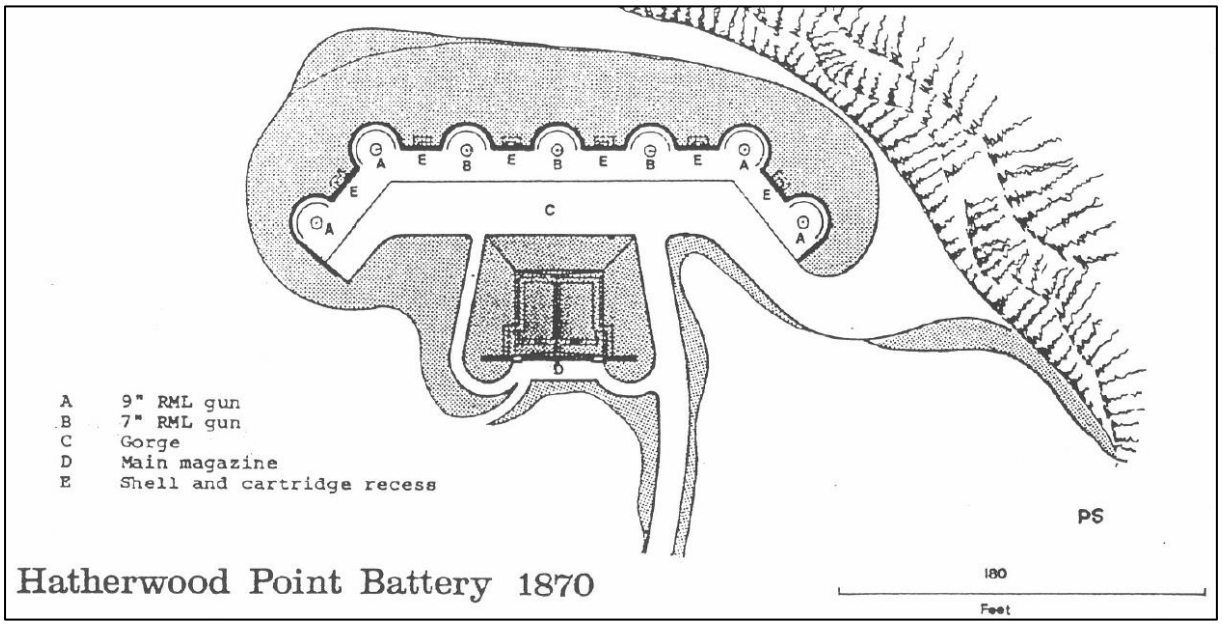

Figure 11: Taken from Saunders (1998).

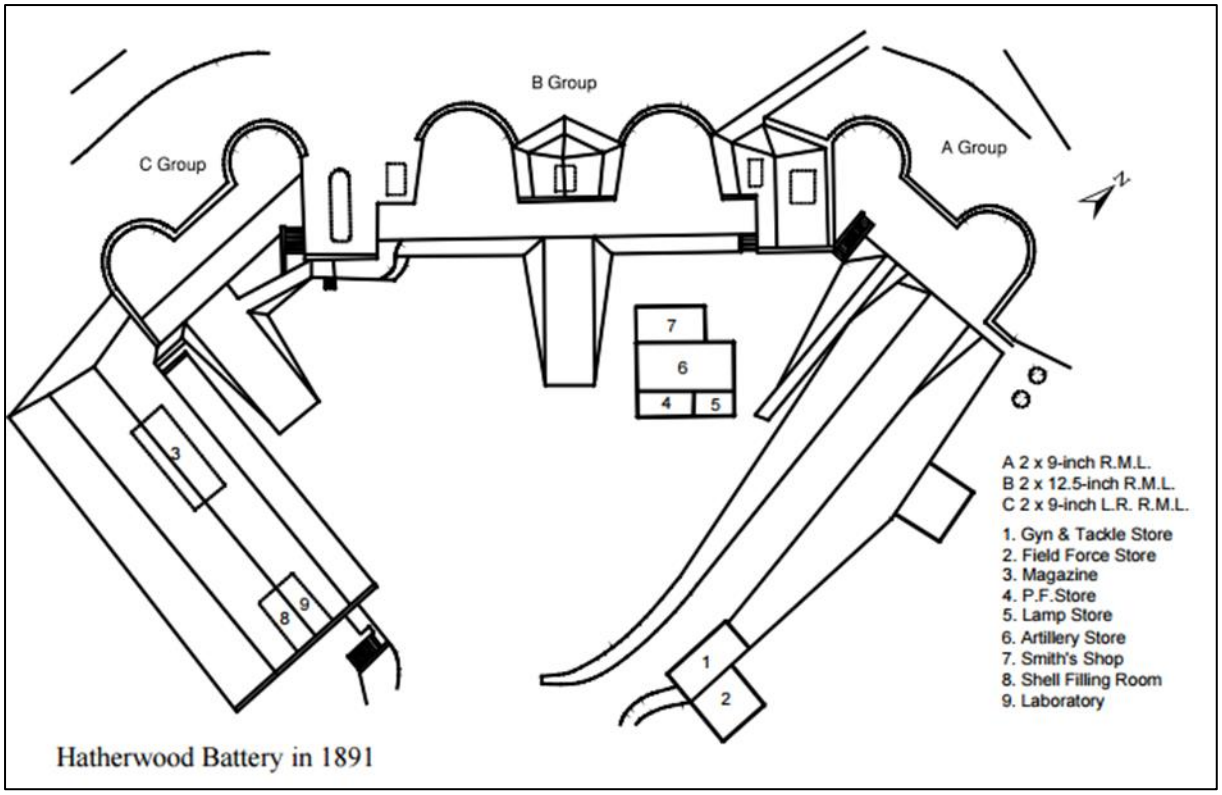

Figure 12: Illustrating the layout of Hatherwood Battery in 1891 (Palmerston fort society).

Figure 13: Google Earth © image overlain by the 'Victorian Forts' plan of Hatherwood. Note how A group (north) has been severely damaged by slippage.

Figure 14: Looking west/south west along area of slumpage affecting A Group, the concrete structure on the top of the 'cliff' at the rear of the image is the remains of Gun 1 of B Group.

Figure 15: Looking north over some masonry remains of A Group which has slumped down, in the top right of the picture remains of Gun 2 of A Group are visible.

Figure 16: Looking north/north-east over the concrete remains of Gun 2 of A Group.

Figure 17:Llooking east, remains of Gun 2 of A Group in the foreground and further masonry and pipe work eroding out of the cliff in the background.

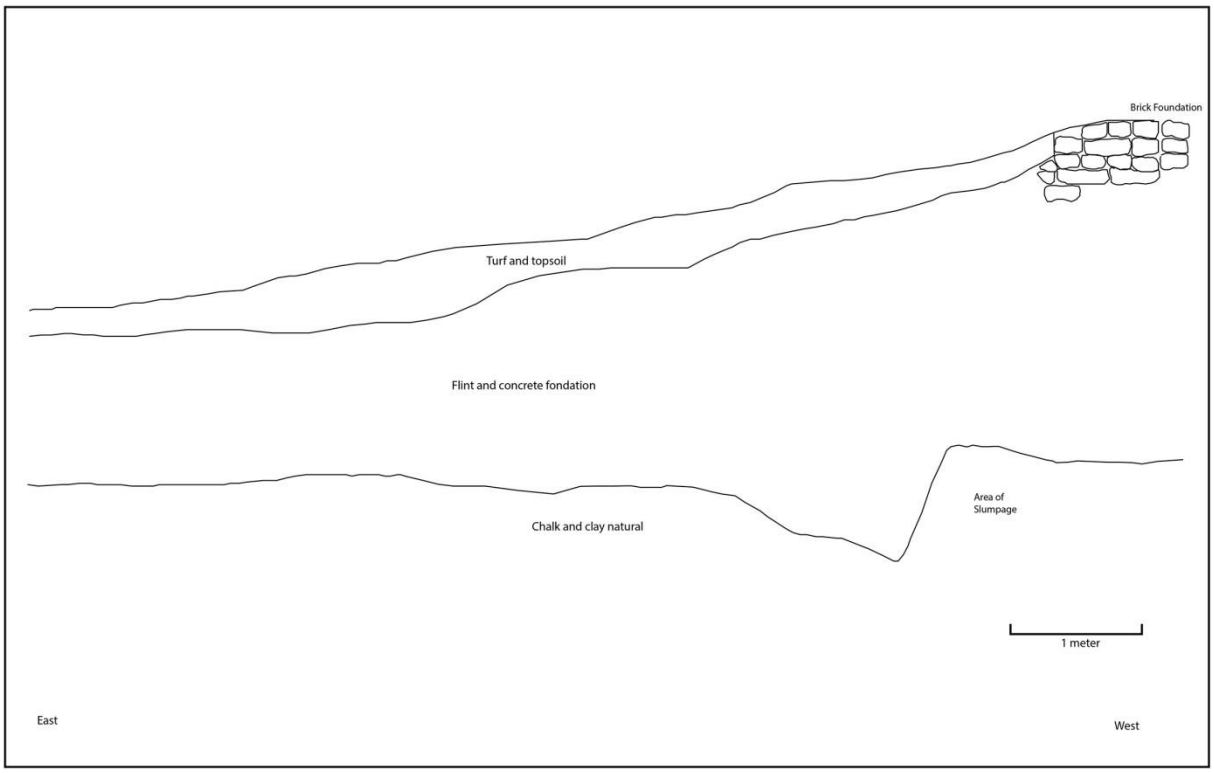

Figure 18: Section Drawing of west facing cliff around A Group drawn by CITiZAN volunteers and staff.

Figure 19: Masonry structures eroding out of cliff, camera facing south-east.

Figure 20: Masonry and pipework eroding out of the cliff. Camera facing south-east.

Figure 21: Looking northwest of remains of Gun 1 B Group.

Figure 22: Looking north-east over Gun 1 B Group.

Figure 23: Looking south Gun 1 B Group.

Figure 24 illustrating the fittings of where Gun 1 of B Group would have been held in place.

Figure 25: Looking west Gun 1 B Group

Figure 26: Looking north-west over Gun 1 B Group.

Figure 27: Looking north-east over remains of Gun 1 B group.

Figure 28: Looking west over Gun 2 of B Group.

Figure 29: Looking west over Gun 2 of B Group.

Figure 30: Looking south-west over Gun 2 B Group.

Figure 31: Fitting for Gun 2 in Group B.

Figure 32: Looking north over Gun 2 B Group.

Figure 33: looking west/south-west over C Group.

Figure 34: Close up of C group, looking west/south-west.

Figure 35: Looking south over west stairs in C Group.

Figure 36: Looking north over east stairs. Note the difference in deterioration of the west and east stairs in C Group.

Figure 37: Looking south-west towards one of the inlays in C Group.

Figure 38: Looking south over two inlays of C Group.

Figure 39: Looking west, pipework under C Group.

Figure 40: Looking west over Gun 1 in C Group.

Figure 41: Looking north over Gun 1 in C Group.

Figure 42: Looking south over Gun 1 in C Group.

Figure 43: Looking east/north-east over the base which would have been gun 2 of C Group.

Figure 44: Looking south over Gun 2 of C Group.

Figure 45: Looking north over Gun 2 of C Group.

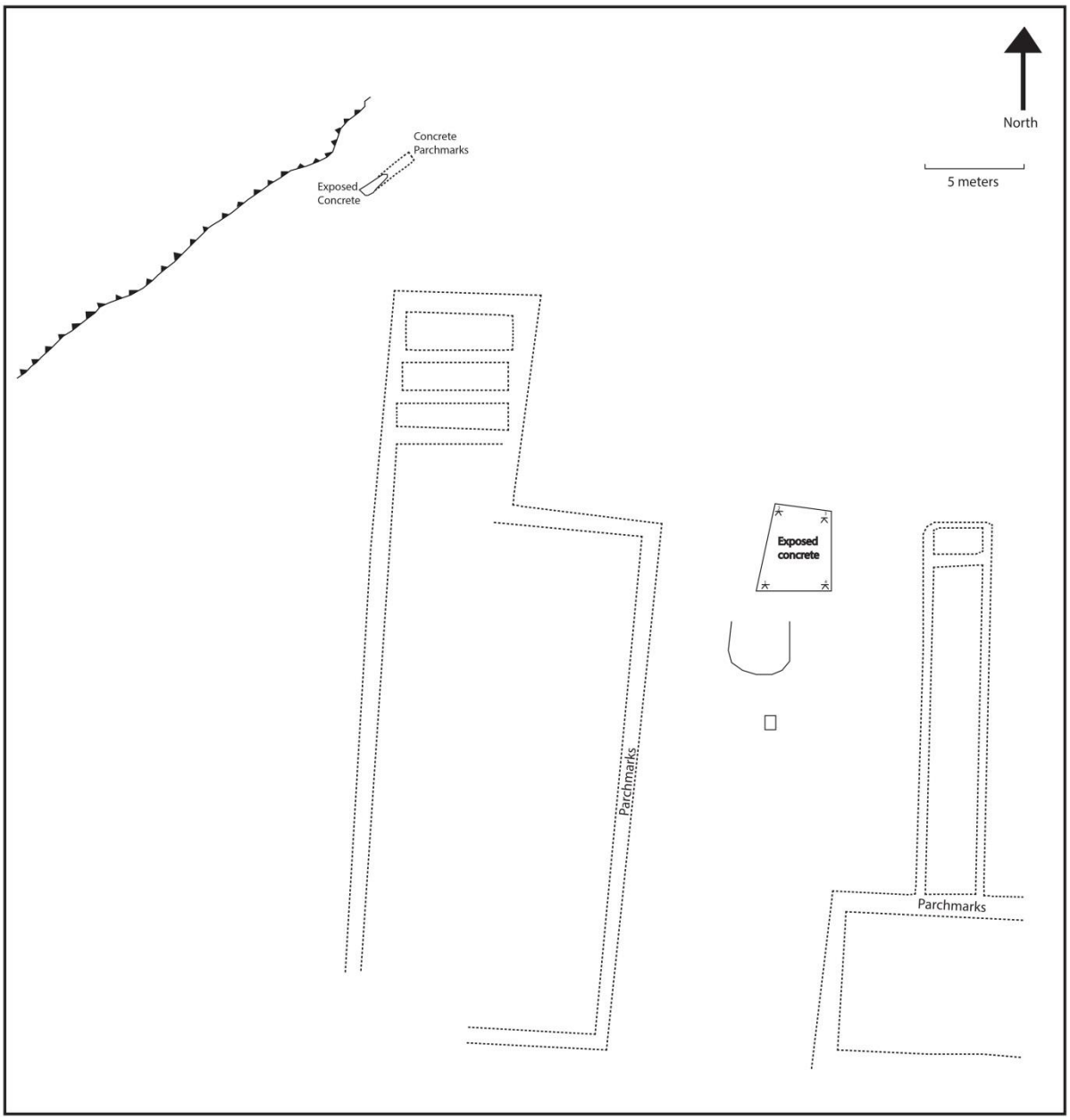

Figure 46: Plan drawn by CITiZAN and National Trust volunteers (1:50) of the foundations visible in the turf of the indicator loop station.

Figure 47: Looking south-west towards C Group illustrating the foundations visible from the buildings at the indicator loop station.