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Broughty Castle, Broughty Ferry, Dundee
Documentary Research and Assessment of the
Standing Remains 1860-1945

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1. INTRODUCTION

This report outlines the results of documentary research and an assessment of the upstanding remains at Broughty Castle, Broughty Ferry, Dundee. The study was commissioned by Historic Scotland and comprises the next phase of work with a view to increasing the interpretative potential of the Castle for public display. The project incorporated the following aims:-

- To catalogue the location and summary content of all relevant documents, maps, plans, and designs relating to the Castle between 1860 and 1945
- To annotate existing plans with information regarding the nature and function of surviving spaces and features
- To provide a succinct research report summarising the military and human history of the Castle and inhabitants from 1860 to 1945
- To produce a technical report on the operation of the guns, gun emplacements and features associated with these in the magazine and ground floor rooms of the Castle.
- To undertake a scoping study of any sources not found or used

2. METHOD

2.1 *Documentary Research*

A documentary scoping study was undertaken to establish the extent of available sources relating to Broughty Castle between 1860 and 1945. The additional documents discovered during the research complement those already located at the Broughty Castle Museum and in the possession of Historic Scotland (Bell, 2003). During the course of the work several hitherto unknown archive collections were identified. These have not been studied in any detail but attempts were made to ascertain the survival and character of records that directly relate to Broughty Castle and that would be useful for further research (see Appendix A). Visits were made to the following archives:-

- *National Archive of Scotland (West Register House)*
- *National Library of Scotland – Map Library*
- *RCHMS*
- *Dundee Council District Archive*
- *Local Studies Dept., Central Library, Dundee*
- *National Archive (Kew)*

2.2 *Site Visit*

A site visit was made to provide an initial interpretation of the standing remains of the castle, battery and battery enclosure wall, and those remains still extant in the exterior of the castle including the previous enclosure, Castle Green Battery and the harbour. Any structures and features of interest highlighted during the site visit were marked on the plan and annotated with descriptions, measurements and basic analytical comments. An archive of colour slide and colour print photographs was also compiled. The visit was made by Dan Atkinson and John Guy on the 8th February 2005.

3. RESULTS

3.1 Documentary Research

The results of the documentary search are summarised in the Gazetteer of source material in Appendix A. Also included within the appendix are recommendations for further research giving the source location, contact address where applicable, and a brief description of the content.

A number of sources were identified in connection with Broughty Castle between 1860 and 1945. A selection of these offer a high degree of detail in helping to determine the nature of the development of the castle and ancillary structures in addition to those manuscript collections and photographs that help to inform upon the social history of the castle garrison and the relationship with the local community. Unfortunately it was not possible to source Andersons' designs for the 1860 restoration. Information concerning the symbiotic relationship between the castle and the harbour, especially when the Submarine Miners were garrisoned there, is also included within the results. There is potential for further information to be gained on this aspect of the history of the castle (see Appendix A).

Much of the data encountered is of a technical nature and does not address the social history angle. During the documentary search, however, it also became apparent that there is a bank of knowledge that resides with surviving members of the garrison regarding the later days at Broughty Castle. This has not been documented and will disappear with time.

3.1.1 *Published & un-published sources*

In addition to those publications already collected by Historic Scotland, a number of others were consulted. These sources refer to the general history of the Castle and the surviving structures and are therefore of limited value for the current project. Of note however are two short publications for the popular audience relating to the history of Broughty Ferry in which minor reference is made concerning the volunteers and social occasions on Castle Green; reviews, regattas, assemblies and bazaars (R McMillan (ND); Davey & Perkins, 1976). A number of interesting photographs accompany these references and the originals of some of these appear in the gazetteer below. Others such as those in Ronald McMillan's publication have not been located and are thought to be part of his personal collection. Further study of the publication by Yarrow & Co. (1880) concerning steam launches and the publication by Brown (1910) in relation to the Submarine Miners are likely to be illuminating. The publication by Mudie *et al* (1970) still remains the best source for a good general introduction to the Castle and its history and development. A run-down of the garrisons serving at the castle and Commanding Officers is also given.

Un-published sources include the M.Litt Dissertation by S E Nicoll (1993) on the Volunteers and Local [Dundee] Regiments between 1859 and 1908. Although un-available at the time of the visit to the Dundee Central Library this detailed study may well provide useful information concerning the early garrisons at Broughty Castle and relevant individuals and personnel.

3.1.2 *Manuscript Collections*

Surviving manuscripts relating to Broughty Castle are not numerous and most of those that have been identified are therefore worthy of further study. These include:-

Royal Engineers Museum Library, Chatham - Preliminary enquiries by phone indicate that this collection includes material on Submarine Miners in general, but also the Tay Division Submarine Miners in particular. Biographical material in connection with Officers serving at the castle may also be available through service records housed in the library.

The Lamb Collection at Dundee Central Library – A search of the catalogue indicates the presence of a variety of potentially interesting material that would repay further detailed study. They potentially add to the understanding of the history of the Castle and the garrisons stationed there. In addition, there are documents and advertisements that relate to the many events hosted by the Volunteers and others on Castle Green as well as general training activities. These would be of considerable interest regarding the social history of the garrison.

Dundee City Archive, Younger Hall, Dundee – A trawl through the catalogue revealed no additional material of relevance.

National Archives of Scotland - The War Office documents from this archive are already held by Historic Scotland and are highlighted in the Bibliography. These give an idea as to various works and developments within the castle and the surrounding enclosure and battery in the first half of the 20th century. No additional sources were identified on our visit to the National Archives.

Public Records Office, Kew – Further War Office documents are held at Kew. In particular the Fort Record Book dating to 1940 is likely to be of considerable value. This document gives general information concerning the day to day running of the castle and the batteries allowing insight into the activities of the garrison during the Second World War (a copy of this document is available from Headland Archaeology).

3.1.3 Plans, Drawings & Maps

The available plans, drawings and maps relating to Broughty Castle are relatively extensive with a good representation of material throughout the set time period (1860 – 1945). Of particular importance are several War Office plans from the late 19th and early 20th centuries that show proposed designs overlain over existing ones (WO/78/5194; see Plates 1 – 3). What is clearly illustrated in these and others is the development of the castle and ancillary buildings. Importantly they show the various uses of the spaces within the castle tower and grounds, particularly around the end of the 19th and the first half of the 20th century. The introduction of the new concrete battery and magazine in relation to the original battery, circa 1890 is shown in detail as are developments to the concrete battery and areas within the castle grounds (Plates 1 - 3); the development and purpose of the ancillary buildings in the exterior of the castle, shown in detail on the Office of Works Skeleton Record Plan dated 1931 (in MW1/641); the building and development of the battery on Castle Green, especially during both World Wars; the nature and development of the harbour and associated features.

3.1.4 Photographs

The photographic material is very informative and falls into three main categories, these being; the castle ruins before restoration in 1860; photographs of the castle and harbour, usually taken from the harbour looking north east; photographs of various volunteer activities on Castle Green, such as training and parades. The identified collections comprise a mixture of amateur prints and professional postcard material that are useful as an indication of the development of the castle and associated areas and as a socio-historical source.

Aerial photographs were also sourced, dating to 1941 and 1947. These oblique photographs give a very good indication of the nature of the Castle and environs both during and immediately after the Second World War.

3.1.5 Recommended archives for further research

During the documentary research undertaken as a part of this project, various archives were identified that, although offering considerable potential for adding to our present understanding, lay out-with the scope of the present project. These archives are outlined below:

Royal Engineers Museum Library in Chatham. The collection comprises primary source material on the Tay Division of the Submarine Miners together with biographical data on the units stationed there.

National Archive at Kew. This collection comprises War Office (WO) documents relating to the specified time period. The items seen to date, such as the log books are already known to be of extreme value but other potentially useful information probably lay within the less accessible Scottish Office collection which is also at Kew.

The Lamb Collection at Dundee Central Library. This is a varied collection of boxed documents, some of which concern the castle and battery, castle garrisons and associated activities such as volunteer assemblies, regattas and bazaars. It is recommended that the Lamb Collection will help to provide a fuller story of the social history of the castle.

Oral Testimony. A program of oral testimony with ex-servicemen who were based at Broughty Castle during the last war would also add greatly to the social aspects of the history of the castle and also the daily lives of the garrison. One such individual is Mr Doug Davies who served at the castle during the war. It may also be the case that personal mementos and memorabilia may be accessible for study, as part of the personal collections of these individuals. Mr Davies possesses a number of photographs in his personal collection.

3.2 History of Broughty Castle and Castle Green

3.2.1 Pre 1860

Until the restoration of the Castle in 1860, Broughty Castle remained a 'romantic' ruin, having fallen into disrepair sometime in the 18th century. The position of the castle meant that in previous centuries it had played a key role in guarding the entrance to the Tay Estuary, being subject to a number of sieges, including that by General Monck in the 17th century.

3.2.2 1860 restoration and the Royal Artillery Volunteers

The restoration of the castle was begun in 1860 in response to a number of war scares, firstly during the Crimean War and then later with the perceived threat from the French. The Castle was purchased by the Government to provide the location for a defence against Russian Cruisers, and it was a young Royal Engineer, Robert Rowand Anderson, who was responsible for the design of the current battery complex. Although what we see today has been altered in a number of ways, the main tower (largely rebuilt), tower extensions and perimeter wall, or barmkin wall all date to features introduced in Anderson's design. The main axis of the new battery faced the open sea and the mouth of the estuary to the southeast and south. The emplacements held two 68 pounder smooth bore and five 10 inch shell guns. The former were fired *en barbette* (a circular gun emplacement) an example of which survives

at the northeast corner of the present battery. The latter were fired through embrasures, and a surviving example was noted immediately to the south of the 'barbette' emplacement noted above. The magazine supplying the guns was situated in the vaulted basement of the Castle Tower and was modified for this purpose. The upper rooms of the Castle were used as Barrack rooms.

Adjoining the southwest corner of the gun emplacements was a polygonal enclosure, purported to house the hospital and mortuary, cookhouse, washhouse and latrines (see Plate 1). This enclosure was accessed via a tunnel from the castle courtyard (roughly in the area of the present entrance to the magazine) and steps from the upper battery. At this time, the Castle was garrisoned by the Royal Artillery Volunteers, who in addition to their castle duties often trained on Castle Green. It is also in this location that assemblies, bazaars and regattas were held during training camps and the local community also invited to join in with festivities (Mudie *et al*, 1970).

3.2.3 The Submarine Miners Royal Engineers (Volunteers)

In the latter stages of the 1880's, the inadequacy of the Castle as an effective coastal defence led to necessary changes. This comprised the introduction of the Tay Division Submarine Miners Royal Engineers (Volunteers) in 1888. The role of this unit was to carry out the rapid deployment of mines within the approaches to the Tay. This measure went some way to countering the concerns over the inadequacies of the battery at Broughty Castle, voiced by General Grant during a lecture entitled 'The Defence of the Tay' in the same year. It is also at this point that the ordnance was replaced with the more up-to date 40 pounder Armstrong breech loaded rifled guns. Changes were also instigated to the layout of the Castle, in particular the addition of an enclosure and buildings immediately adjacent to the castle to the northeast. These buildings were introduced to house the garrison and the ancillary buildings required for the storage and operation of the mines and ordnance. It is also at this point that the harbour facilities were utilised for the deployment of the mines in the Tay. This included a tramway for the conveyance of the mines to the quayside and the commissioning of two steam launch minelayers, the '*Sir William Reid*' and the '*Dundas*', used to deploy the mines. Further buildings between the west battery enclosure wall and the harbour were built to serve the mining operation such as the cable tank, sail store, oil store and test room. Further changes were also made to the battery with the building of two concrete barbettes and the remodelling of the parapet and earthwork defences. These changes were promulgated between 1889 and 1891, which also saw the infilling of the polygonal enclosure, the removal of the enclosure buildings and the construction of an underground magazine beneath the new west emplacement. In 1893, the 40 pounder cannon were removed and replaced with a mixture of quick firing guns and machine guns to offer protection for the minefield (Mudie *et al*, 1970).

3.2.4 The early 20th century

Further changes occurred both to the nature of the castle defences and the garrison in the early 20th century. Further concerns over the vulnerability of the Tay and rising tension with Germany resulted in the construction of a further battery to the east of the castle on Castle Green. This emplacement was built in 1903-05 and comprised a substantial concrete structure with two 6 inch guns. The decision to disband all Submarine Mining Volunteer units in 1908 resulted in a new garrison comprising units from the Territorial Army (Mudie *et al*, 1970).

3.2.5 WWI

The outbreak of the First World War saw the arming of the castle batteries with 4.7 inch guns and machine guns, and the continued employment of the 6 inch guns on Castle Green Battery

(see Appendix B). It is also in this period that the first range-finding cell was built on the roof of the Castle (MW1 / 641). Minor changes were also made within the Castle Tower itself, for example the kitchen and wash up room were altered to become a bathroom and 'No. 2 Bunk' for non-commissioned officers. The abbreviated letters discovered over the door of this room clearly relate to this phase of usage dated to July 1913 (MW1 / 641).

3.2.6 Between Wars.

In the period between the First and Second World Wars, the Castle and surrounding buildings within the enclosure underwent a number of changes. On the whole these relate to the removal of a number of buildings within the enclosure to the northeast and also to the west of the tower house, adjacent to the harbour. The removal of these structures was necessitated by the requirement for remedial works to the historic fabric of the battery enclosure wall. The works were carried out between 1934 and 1936 and included the removal of the guardhouse and associated structures in the courtyard adjacent to the main gate. It is during this period that the Castle was handed over to the Office of Works (2nd October 1935), perhaps accounting for the implementation of the remedial works (MW1 / 992). Although the main Castle garrison was disbanded in 1934, the buildings in the exterior of the Castle, and parts of the castle itself continued to be used by the Territorial Army.

3.2.7 WW2 and the end of active service

The Second World War marks the final stages in the development of the Castle and its garrison. On the 15th March 1940 the Castle was re-occupied by the military (Home Guard) and was described as having three rooms, one kitchen, one storeroom, ablutions and five external WC's. Furthermore, a number of necessary changes were made to the Castle battery and defences, such as the building of a Battery Observation Post (BOP) on the tower house roof and the addition of two pillboxes on the castle ramparts. These additions were ordered in July 1940 (MW1 / 1131). After the war, the battery was removed from the Castle, and in 1956 all guns and equipment were removed from the Castle Green Battery. The Territorial Army continued to use the ground floor of the castle and the magazine below the battery as stores for clothing and equipment. In addition, the top barrack store on the upper floor of the tower house was moved to the drill hall (once situated on Castle Green to the northeast of the Castle). Castle Green battery was placed in 'care and maintenance' in 1945 and was finally demolished in 1967 to make way for a crazy golf course.

3.3 Site Visit (figures 1, 2, 3 and Table 1 in Appendix D)

This section is to be read in conjunction with the annotated plans, see Figure 1, 2 and 3, and Table 1. The notes in brackets in the text below refer to the relevant number on the accompanying Figures and the Table in Appendix D.

The site visit identified a large number of features of interest pertaining to the nature and development of the standing structures of the castle between 1860 and 1945. A plan of the Castle and environs has been annotated with remarks concerning these features especially within the castle grounds and the area of the battery and courtyard. Where necessary, features have been identified and a brief analytical note annotated on the plan. Features pertaining to the Magazines both in the Castle Tower and beneath the batteries are included in the technical report (see Appendix B). It must be noted that the harbour area was also included in the assessment, given the close connection with the Castle and its maritime setting and operation. This is particularly relevant when discussing the operations of the Submarine Miners Royal Engineers (Volunteers).

3.3.1 Castle Tower

The date and function of the main spaces within the castle tower are readily identified from existing plans and documents. Features such as the painted lettering and numbers on the doors have been identified and interpreted already and included in the Condition Report (Bell, 2003).

Highlighted features include the copper sheathed, hinged shutters on the lower level of the north exterior elevation of the main tower, and similar features on the east and west elevations. These cover the ventilation loops for the magazine, modified during the restoration work in the 1860's (Note 27). The ground floor rooms within the northwest tower were used as a magazine and battery stores, and the building in the West Court as a coal store and ablutions.

3.3.2 Castle Courtyard (Guardhouse,)

The courtyard area within the castle grounds comprises two levels; the lower and the upper. The upper level is associated with the batteries and is included in the relevant section below (Paragraph 3.3.3). The lower level is an open area, where features of interest were noted at the base of the turf bank and on the inner face of the north battery enclosure wall immediately to the east of the main gate. The former comprises the exposed northwest elevation of the brick wall and concrete roof of the magazine for the 6 pounder gun (now inaccessible and probably de-commissioned with the 6 pounder emplacement in the early 20th century) (Note 14). The latter incorporates a horizontal masonry scar revealing the location of the roofline of a now-demolished building in the upper face of the wall, three blocked fireplaces and the remains of a stone partition wall. All relate to the guardhouse building and associated rooms; used for purposes such as guardroom, officer's quarters, detention room, cook's store and WC. The guardhouse was still extant until at least the early 1930's (Notes 15, 16 & 17).

Immediately to the east of these features is a recessed area bounded by the battery enclosure wall to the north and west and the retaining wall of the northeast gun emplacement to the east. Features noted in this area include the remains of roofing identified as lines of pitch, mortar and rendering (Note 18), and the remains of a recess on the inner face of the north battery enclosure wall (Note 19). This was constructed with concrete and revealed extensive remains of plaster and rendering. The former rooflines identified all relate to washrooms and toilets, still evident during the Second World War. It is possible that the concrete recess is related to a pillbox installed above the roof of the WC in this location during the Second World War, to cover the approaches to the Castle gates (Note 19).

3.3.3 Battery (see also Appendix B)

The visible remains of the developmental history of the castle battery and associated features were also identified during the visit. What is evident is the distinction between the coursed masonry structures associated with the original battery of 1860 and the later, concrete battery (c.1890). Earlier structures were visible at the northeast end of the battery and comprised the retaining wall and steps between the upper and lower courtyard (Note 1), the circular northeast 'barbette' gun emplacement for a 68 pounder gun (Note 2), and the adjoining retaining walls and 10 inch gun embrasure to the south (Note 4). Within the retaining walls to the south of the northeast barbette was noted a blocked recess (Note 3) and a similar feature further south (Note 5). A long, narrow blocked recess was also noted within the original 10inch gun emplacement (Note 7). These recesses were used to store cartridges and/or shells.

Further to the south a visible change from the brick masonry structure to a concrete structure was noted, signifying the later addition of the concrete 'barbette' gun emplacements and retaining walls. Also evident at this point, however, was a noticeable difference in the types of concrete used, where a 5 m length of 'patching' was noted. This possibly represents the removal and infilling of the original 6 pounder gun emplacement located in this area (Note 6). Adjoining this section to the south is the remainder of the concrete retaining wall which shows further evidence of cartridge and shell recesses, shown as ghost outlines on the concrete facing (Note 8).

Abutting the retaining wall is the eastern concrete 'barbette' gun emplacement (marked as Barbette 2 on Figure 1), which, like its neighbour to the west (Barbette 1) shows a number of interesting features (Notes 9, 10, 11 & 12). The particular features for both emplacements will be highlighted in Appendix B. In addition to the remains of the original 1860's battery to the northeast, the survival of original 1860's construction was evident at the west battery in the form of the west battery enclosure wall immediately to the south of the ablution block. It is also possible that remains of the racers for the guns may still survive *in situ* beneath the present ground surface. This may also be true of the surviving embrasure to the northeast (Note 4).

3.3.4 Battery Enclosure Walls and Caponier

The battery enclosure wall has highlighted a number of features that relate to the developments of the castle and associated ancillary structures throughout its working life. The east and north walls that bound the area forming the old enclosure show evidence of abutting buildings in the form of lead and mortar jointing and the remains of paint and rendering once covering interior walls (Notes 20 & 21). These features would appear to relate to an ablution block, drill shed, coal store and dynamo/engine house. The remains of the roof of the engine house were also discernible on the eastern wall of the access ramp to the main gate.

The west battery enclosure wall, to the south of the toilet block, and the adjoining north battery enclosure wall also highlight a number of interesting features. These comprise two bricked up windows on the west wall, two bricked up doorways, and two masonry blocked gun loops on the adjoining north wall (Notes 22, 23 & 26). Ancillary buildings (Test Room, Cleaning Room) once abutted this section of the battery enclosure wall and the blocked doors and windows offered access and light between these structures and the magazine. The bricked up windows and doorway would appear to be linked to the phase associated with the Submarine Miners and the magazine, and blocked once the ancillary structures were demolished sometime in the 1930's. Also of particular note is evidence for the filling in of access steps from the upper battery to the lower ancillary buildings, noted more obviously on the interior face of the west battery enclosure wall (Note 13). This was probably filled in after the removal of the ancillary buildings.

The gun loops evident on the north wall became redundant once the magazine and ancillary buildings were built, being obscured by the brick skin of the magazine structures. This is also true of the gun loops evident on the adjoining seaward wall to the west (Note 25). The large concrete slit opening on the same wall is also of interest and seems to be related to an observation/machine gun post situated in a space added to the magazine, probably shortly before or during the First World War (Note 24). At the same time, a similar slit window was established on the east side of the caponier, and an access hatch placed into the top of the structure (Note 28). Also evident on the east and west elevations of the caponier are the original gun loops from the 1860's build.

3.3.5 Magazines (see appendix B)

An appraisal of pertinent features located in the magazine are discussed in Appendix B.

3.3.6 Enclosure & external buildings

The open area between the eastern battery enclosure wall and the Submarine Miners Barracks is void of any evidence regarding the northern section of the enclosure wall and internal buildings once located thereon (note 21). Evidence for buildings and the southern 'hog back' enclosure wall adjoining the east and north battery enclosure wall form the only visible remains of pre-existing structures (noted above, paragraph 3.3.4, notes 20 & 21). The plans show the location and function of these buildings, most of which were constructed in connection with the Submarine Miners and later, the Territorial Army and Home Guard (MW1/641, 1931). The Submarine Miners Barracks and part of the boundary wall comprise the only extant remains (Figure 1; Note 29).

3.3.7 Castle Green Battery

Evidence for the remains of the battery once located on Castle Green are slight, where the only visible structure is that of the forward embankment of the emplacement. It is likely that this was modified and landscaped somewhat when the crazy golf course was installed in the late 1960's.

3.3.8 Harbour

In addition to the features within the castle and castle grounds, the assessment recommends that the relationship between the castle and the harbour is an important one, and therefore merits inclusion within the assessment. The layout of the harbour has changed little since its original construction for the service of the Railway Ferry in 1849. Unfortunately the remains of much of the activities connected with the castle and garrison are now gone, although a section of the original tramway used to convey the mines from the stores to the harbour survives towards the end of the southern breakwater pier.

4. DISCUSSION

The program of research has enabled the identification of further documentary sources concerning the history and development of Broughty Castle and the castle garrison. In addition to those sources identified during visits to the archives noted above, a scoping survey was carried out to locate source material recommended for further research. It is recommended that further research of these sources will help provide a more comprehensive coverage of the history and development of the castle, adding further to the results outlined in this report. This is especially the case with the social history of the castle garrison and the local community. A fuller program of research would help to address this particular area of study.

An assessment of the surviving spaces and features within the castle and castle grounds has also highlighted a number of interesting features. Of particular note are the features pertaining to buildings, structures and features located in the area of the old guardhouse, the adjoining buildings to the northeast of the castle and those structures and features noted along the western barmkin wall and adjoining enclosure. In addition, the attached technical report provides information concerning the nature of the castle battery, the armament employed and the relationship with additional features such as the magazines both in the ground floor of the tower house and below the current battery.

5. ACKNOWLEDGMENTS

Thanks are extended to Historic Scotland for providing supporting information and comments; to the RCAHMS, National Library, National Archives of Scotland and the National Archive at Kew for their help, and in providing copies of maps and plans of the Castle; the staff at Broughty Castle Museum, the Central Library and the District Archives in Dundee. Thanks are also extended to John Guy for his contributions in the compilation of the Report.

6. REFERENCES

Bell G, 2003 *Broughty Castle, Broughty Ferry, Tayside: Monument Condition Survey*. Historic Scotland

Mudie *et al*, 1970 *Broughty Castle and the Defence of the Tay*. Abertay Historical Society No.15

Owen O, 2001 *Broughty Castle Dundee City: An Interpretation Plan*. Historic Scotland

APPENDIX A: Gazetteer of Documentary Sources**Published** (in addition to those already sourced)

Author	Year of publication	Title	Notes	Publisher
Davey N, Perkins J	1976	<i>Broughty Ferry – Village to Suburbs</i>	General history of Broughty Ferry with mention of the battery, Volunteers, training and social gatherings on Castle Green – with limited photos – limited	Dundee Council
MacGibbon D, Ross T	1977	<i>The castellated & Domestic Architecture of Scotland. Vol IV.</i>	Brief mention of the history of the castle - limited	Edinburgh
McMillan R	undated	<i>Broughty Ferry in the days of sail</i>	General history of Broughty Ferry with mention of the battery, Volunteers, training and social gatherings on Castle Green – with limited photos – limited	unknown
Prescott RGW, Ed. By NJG Pounds	1991	<i>Broughty Castle, Angus (p.23) Chapter 3 Castles. In The St Andrews Area: Proceedings of the 137th Summer Meeting of the Royal Archaeological Institute</i>	Very short note on history of the castle	The Royal Archaeological Institute
Brown, W B.	1910	<i>History of Submarine Mining in the British Army (we know a copy is held at Caird Library – Greenwich)</i>	Complete history of Submarine Miners – recommended for study	Chatham
Yarrow & Co.	1880	<i>Steam Launches (we know a copy is held at Caird Library – Greenwich)</i>	History of steam launches – recommended for study	Glasgow

Unpublished

Author	Year of document	Title	Notes	Organisation
Nicoll S E	1993	The Volunteers, Local Regiments 1859-1908	May well provide useful information on the early garrisons and relevant individuals and personnel	Dissertation. Dundee University

Manuscripts (in addition to those already sourced)

Location	Source reference no.	Collection	Year	Description
Local Studies, Dundee Central Library	Catalogue title "Broughty Castle" Box 370/4	Lamb	1861-2	New fortifications completed June 1861 (what is this? Would it be useful to see more of)
	"Army" Box 314(1)		1873-89	Fuel & light issue and receipt Book. Broughty Castle & Dundee.
	"Volunteers"			Numerous manuscript references, some listed here; including poems, Rules & Regulations & Discipline 1860.
	Box 426(32)		1860-81	Medals presented at Reviews and issued to Volunteers
	Box 130(23)		1888	General Grant - 'The Defence of the Tay: a lecture delivered to the 42 nd Regimental District Tactical Society.
	Box 131(1)		1886, 1894, 1896	Bazaars, Assemblies - lines written on the occasion of the 3 rd Forfarshire Volunteers (Artillery (FVA) Bazaar - collection of tickets for the Volunteers Bazaar.
			1887-91	Collection of tickets for Volunteer Festivals & Assemblies
	Box 131(3)	Poster	25 th to 27 th Oct. 1894	Poster for Bazaar (in poster collection)
National Archive (Kew)	WO/192/249		1940	Castle Green Battery & Fort Record Book for the Battery - comprises details of all aspects of the battery during the War years. Also includes photographs of the mounting of the 6 inch guns on Castle Green Battery.
	WO/55/818		1807	Erection of a battery in the old castle approved - note in a general report.
	WO/30/10		1860	Sources relating to new fortifications and battery - short reference to Broughty Castle and the battery in a large report covering all fortifications and their armaments throughout Britain.
Royal Artillery Institute Library				Information concerning the armaments proposed and approved for service at Broughty Castle and general drill handbooks for the operation of the guns. Also more general information on the defence of British coasts

Maps

Location	County	Sheet	year	scale	Description
Map Library, National Library of Scotland	Forfarshire OS	LIV. 8	1902 2 nd Edition (surveyed in 1857-8, revised 1901)	1:2500	Broughty Castle and Harbour
	Forfarshire OS	LIV. 8	1922 (surveyed in 1857-8, revised 1922)	1:2500	Broughty Castle and Harbour
	Forfarshire OS	LIV. 8	1941 (surveyed in 1857-8, revised 1938)	1:2500	Broughty Castle and Harbour

Plans (further to those already housed in Historic Scotland's Drawings Archive)

Location	Source reference no.	collection	year	Description
West Register House, National Archives of Scotland	RHP 2368		1855	Plan of Broughty Castle and Grounds, pre-restoration – gives an idea of the nature of the castle ruins prior to restoration.
	RHP 86379		1869	Plan of ground near Broughty Castle. Feued to Police Commissioners – very basic detail of castle
National Archives (Kew)	BT 356/12683		1952	River Tay. Broughty Castle to Tayport: laying cables. Related to M(NA)11/23/02. Three maps. Not stored at Kew and must be ordered in advance – little detail of castle
	MT 6/9/123		1851	Dundee & Arbroath Railway: Broughty Castle Branch – very little detail of castle
	WO/78/5194		1885;1901	Broughty Castle: description of Barracks & Battery – excellent plans showing disposition of spaces and features within the castle; gives good idea of development of the battery
	WO/78/5195		1916	Broughty Castle: Castle Green Battery – good plan of Castle Green Battery
	WO/78/5196		1921	Broughty Castle: Castle Green & Torry Point Batteries, Admiralty Chart – very small scale, shows all batteries on east coast.
	WO/78/3337		1896	Broughty Castle Survey Map showing Castle and adjoining land – small scale map with little detail
	WO/78/5195		1916	Broughty Castle: Castle Green Battery – small scale plans with little detail
Royal Artillery Institute Library				Collections for technical drawings of armaments – drawings within government handbooks dating to the 19 th and 20 th centuries for all types of armaments.

Aerial Photographs

Sortie	Frames	Date	Scale	Description
S223.H53.1416	21	1941	14" oblique	Looking NNE. shows castle and castle green battery
(FFO)CPE/SCOT/UK/214	0290	19 th June 1947	14" oblique 1700' – 1000'	Looking NW. shows castle and castle green battery
(FFO)CPE/SCOT/UK/214	0291	19 th June 1947	14" oblique 1700' – 1000'	Looking NW. shows castle and castle green battery

Photographs

Location	Source reference no.	collection	year	description
Local Studies Dept. Dundee Central Library	-	Dundee Free Library Committee Vol. V	1916	-
-	5-61	-	Pre 1890	Castle looking east. Shows Armstrong gun in place on NE gun emplacement.
-	-	Dundee Free Library Committee Vol. VII	1916	-
-	7-51	-	Pre 1860	View of castle pre-restoration
-	7-52	-	Pre 1860	2 x photos. Shows castle and ice house looking south
-	7-53	-	1905	2 x photos. 1. view of castle looking NE. shows searchlight and buildings outside main castle compound. 2. view of castle looking south. Shows exterior buildings, guns and esplanade.
Local Studies Dept. Dundee Central Library	-	Alexander Wilson	-	-
-	1124	-	-	Harbour and castle looking NE.
-	1125	-	6 th July 1894	Detailed view of north side of castle taken from the harbour looking NE
-	1126	-	20 th C	View of castle looking SW. shows detail of guns in place and searchlight.
-	1127	-	19 th C	View of castle and buildings in adjacent compound with steam minelayers in harbour
-	1714	-	19 th C	Broughty Castle & Harbour looking NE. very good view of buildings in enclosure to north and east
-	1824	-	19 th C	Submarine Miners in camp
-	1843	-	19 th C	Broughty Castle & Harbour looking NE
-	1844	-	19 th C	Broughty Castle & Harbour looking NE
-	1845	-	19 th C	Broughty Castle & Harbour looking NE
-	1860	-	19 th C	Broughty Castle & Harbour looking NE
-	2605	-	Post 1870	Submariners on parade on Castle Green
-	2614	-	Pre 1860	Castle pre-restoration looking NE
-	2615	-	-	Postcard showing artists impressions of castle in 1547, 1647; and actual impressions in 1850 and 1870.
-	3253	-	Pre 1860	Castle pre-restoration looking S
-	4174	-	Pre 1860	Castle pre-restoration looking NE
-	4175	-	Pre 1860	Castle pre-restoration looking NE
RCHMS	AN 3990	-	20 th C	B10584 (copied 1990) postcard. View of castle from harbour looking E
-	-	-	19 th C	G 81243 PC. Postcard. Same as above.
-	AN/2344	-	1894	As above. From Valentine Collection at University of St Andrews Library (copied 1986).

Recommended sources for further research

Oral Testimony & local material in private collections

Contacts with an individual (Mr Davis) who served at the Castle during the Second World War should be followed up with a view to conducting an oral testimony interview and an appraisal of photographic collections with permission.

National Library of Scotland

Dundee Newspapers re. Reviews, regattas & bazaars

Dundee Museums & Galleries

re. Further photo and illustrative material

University of St Andrews Library

Valentine collection (photographic collection, same as NMRS photo)

National Archives (Kew)

Scottish Office Papers re. Broughty Castle

Admiralty Records concerning minelayers of this period in general and used at Broughty Castle and workings of harbour.

Caird Library, Greenwich Maritime Museum

re. Steam Launches and Submarine Miners (see gazetteer)

Contact Caird Library gen. enquiries:- Tel 020 8312 6516 e-mail: library@nmm.ac.uk

Royal Engineers Museum Library, Chatham, Kent.

Re. Submarine miners (volunteers)

They have documents and photographs of Submarine Mining and the 117 Company, Tay Division Submarine Miners Royal Engineers (Volunteers). Highly recommended for further research. Also short note on internet search for 'Submarine Miners'.

Contact Royal Engineers Library:- Tel 01634 822416

In addition, the Library has a contact for a researcher called Terry Powell who specialises in Submarine Mining.

Royal Artillery Institute Library

re. History of artillery regiments based at Broughty Castle and information on armaments

Houses information on individuals and Units. Highly recommended further research.

Enquiries in writing to:-
Historical Secretary
James Clavell Library
FIREPOWER
Royal Arsenal
Woolwich
London
SE18 6ST

APPENDIX B – Technical Report for the operation of the battery and magazine at Broughty Castle and Castle Green

By John Guy

Broughty Castle and the early Battery

A document dated September 22nd. 1855 “On the Defences of the Principal Ports of Great Britain.” By J. F. Burgoyne Inspector-General of Fortifications, describes Broughty Castle as “Broughty Castle, now in ruins, would afford an excellent site for a battery for seven guns, at an expense estimated at £1,075 exclusive of purchase of the premises”.

On 18th. January 1860 a “List of the existing Defences of the East Coast between Berwick and Aldborough, with their Armaments, and of the West Coast between St.Ives and Carlisle, together with those of Scotland and Ireland.” does not list Broughty Castle with any armament.

In 1860 – 61 Broughty Castle was remodelled to accommodate five 10 inch guns and two 68 pounder guns, the ammunition for these guns being stored in a magazine constructed in the ground floor of the tower house. Part of this battery can still be seen remaining in the north east corner of the castle area. A document WO 30/10 in the National Archive records “1861 The rebuilding finished at a cost of £7,000 when the armament of 68 pounders was mounted.”. On the opposite shore a short distance from Port-an-Craig another site was selected for a small battery to co-operate with the main work”. The MOD Library, 1894 records, “1882 Open batteries were in existence mounting 2 x 68 pounders and 5 x 10 inch shell guns which commanded the navigable channel between the open sea and Abertay. The Committee on the Defence of the Mercantile Ports recommended that the works be remodelled to receive an armament of 3 x 9 inch Rifled Muzzle Loading guns and two medium rifled guns. In addition it was considered that the narrow channel opposite the castle should be closed with submarine mines. The Inspector General of Fortifications concurred.” Obviously all of this did not happen.

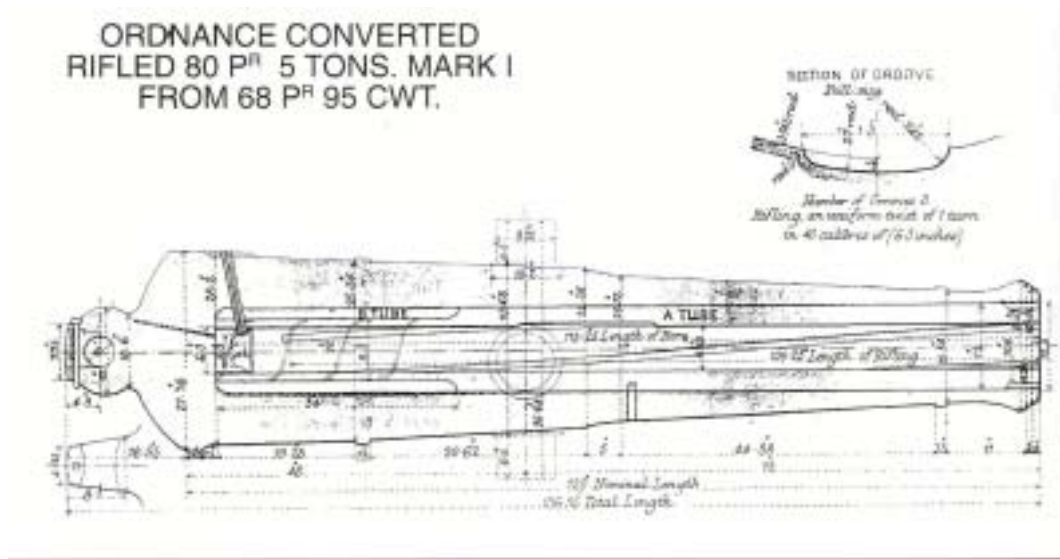


The northeast corner of the battery showing the 68 pounder 'Barbette' emplacement and the 10 inch gun emplacement

The circular emplacement (left of the centre on the photograph above) is one of the 68 pounder gun emplacements and to the right one of the 10 inch gun emplacements, traces of the ready use ammunition recess's can still be seen, the rest of the gun emplacements for this period have gone with the 1889 – 1891 remodelling of the battery which mounted two 4.7 inch Quick Fire (QF) Breech Loading (BL) guns and one 6 pounder Nordenfelt QF gun, plus one Gardner machine gun (mg). Magazines were built below these gun emplacements.

68 pounder gun.

The 68 pounder 95 cwt. gun was a smooth bore gun that fired a 68 pound ball. These guns were mounted on wooden traversing carriages that run on rails. This gun was introduced by William Millar.



The 68 pounder was called this because it fired a 68 pound shot and the diameter or calibre of 8.12 inches, where the 10 inch fired a shell which was 10 inches in diameter. The maximum range would have been about 3,200 yards. The gun detachment would have been about seven or eight men.

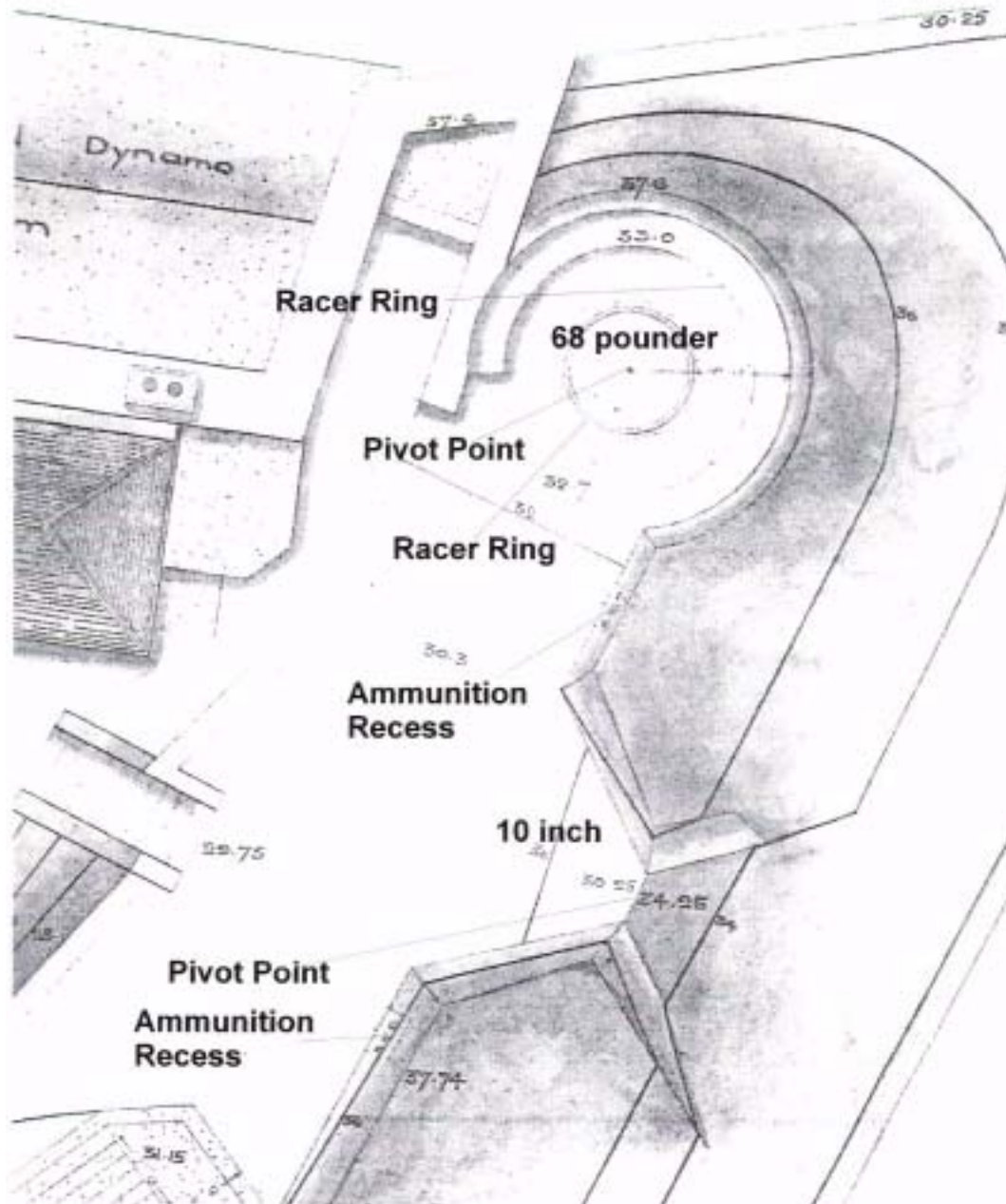
10 inch shell gun.

The 10 inch Shell gun was a smooth bore gun that fired a 10 inch shell. These guns were mounted on wooden traversing carriages that traversed on rails known as racers. This design of gun was introduced by William Millar and was very similar in appearance to the 68 pounder. The maximum range would have been about 3,250 yards and operated by a crew of between seven or eight men.

40 pounder RBL.

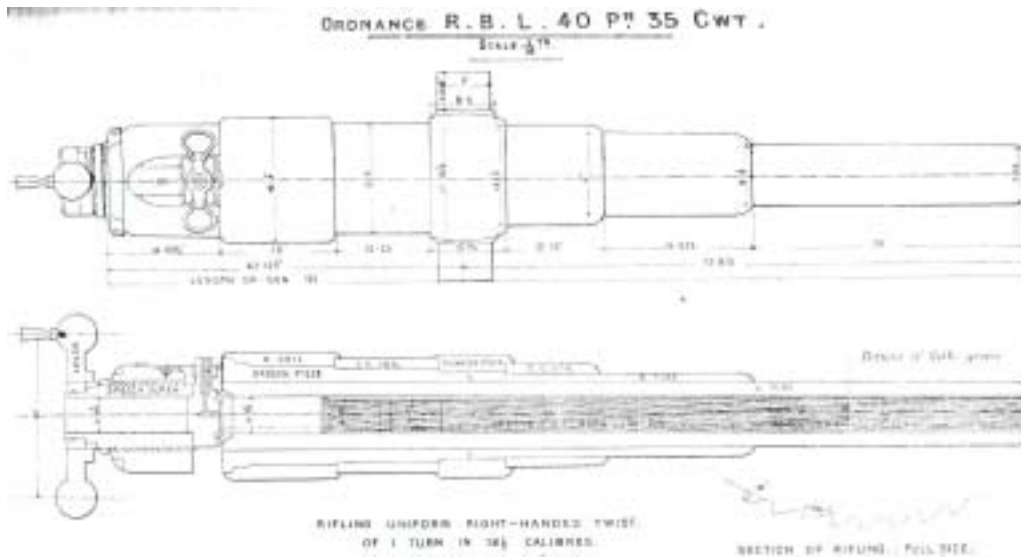
The 40 pounder Rifled Breech Loading (RBL) William Armstrong gun is dated from 1860's and six of these were used at the Castle for a period while the Battery was being remodelled around 1889 - 1891. There are three of these guns to be seen within the castle courtyard on wooden naval carriages. The guns were later used as bollards not far from the castle and remained in place until the recent excavation and re-instatement of the guns within the castle. the range table goes up to 4000 yards and was operated by eight enlisted men which and one Officer. These guns would most likely have been mounted on wooden field carriages.

Broughty Castle 68 pdr and 10 inch gun Emplacements



68 pounder and 10 inch gun emplacements

(source: N.A. WO/78/5194 1901)

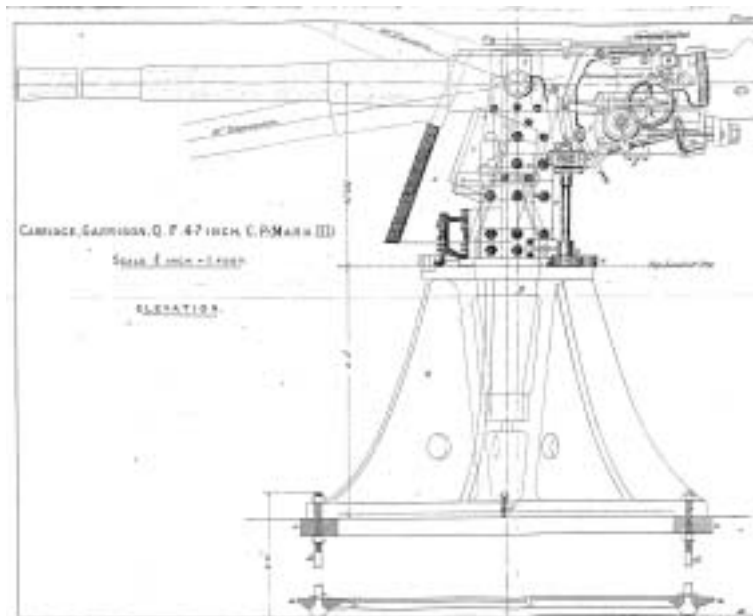


40 pounder 35 cwt Armstrong Rifled Breech Loading Gun.

4.7 inch Mk.IV on QF. Mk.III.

The 4.7 inch gun was originally designed as a Naval gun which was later adopted for coast defence. The Mk.IV gun came into service in 1892 with the earlier models in 1888 and 1891 and was declared obsolete in 1956. The Broughty Castle guns were on the Central Pivot Mk.III mounting which was a 5 foot high pedestal so the original 4.7 inch gun emplacements had a deep gun pit in the centre of the emplacement. This gun pit has been filled in with concrete to take the holdfast for the later 4.7 inch guns. You can see on the emplacements where the edge of the gun pit was and the doorway into it (see Note 10 & 12 above). The maximum range of this gun would have been about 11,800 yards.

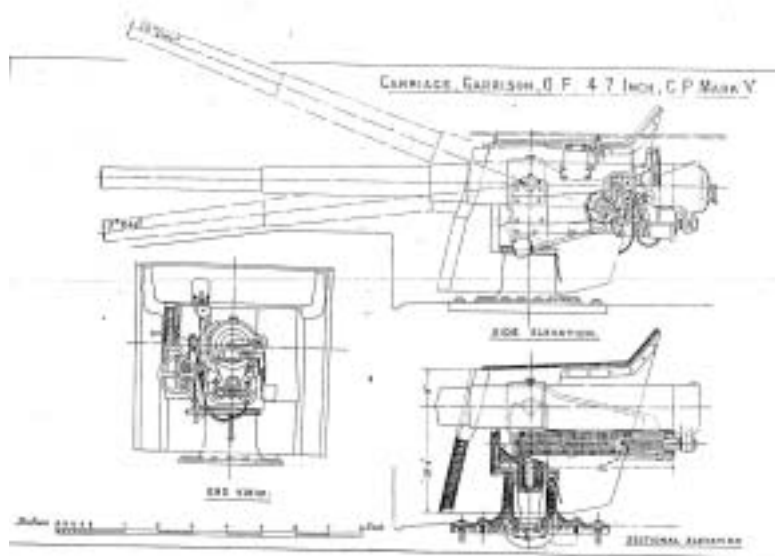
With all guns the range can vary with the different types of shell and different charges used.



4.7 inch Quick Fire Coast Defence gun Mk.IV mounted upon a Central Pivot Mk.III mounting.

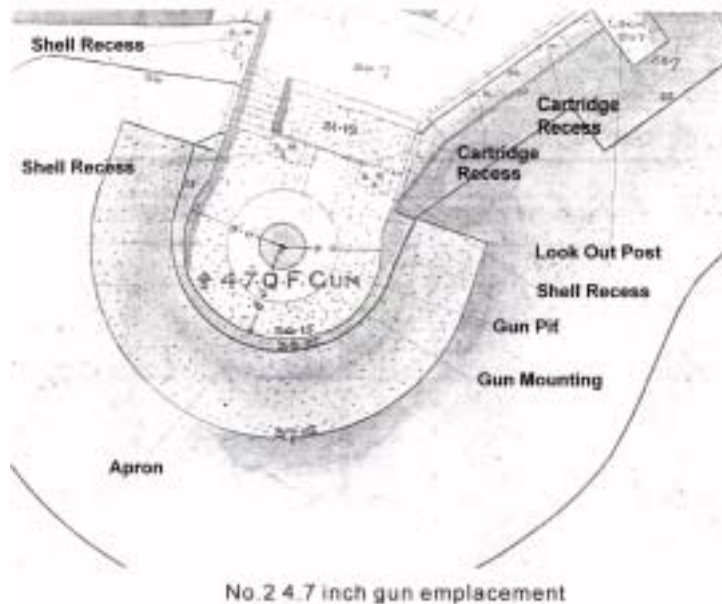
4.7 inch Mk.V on QF. Mk.V.

The 4.7 inch Coast Defence gun Mk.V came into service in 1900. The two guns mounted at the castle were mounted on the Central Pivot Mk.V mounting which was a low pedestal so required the filling in of the gun pits the previous guns had required (see Note 10 & 12 above).



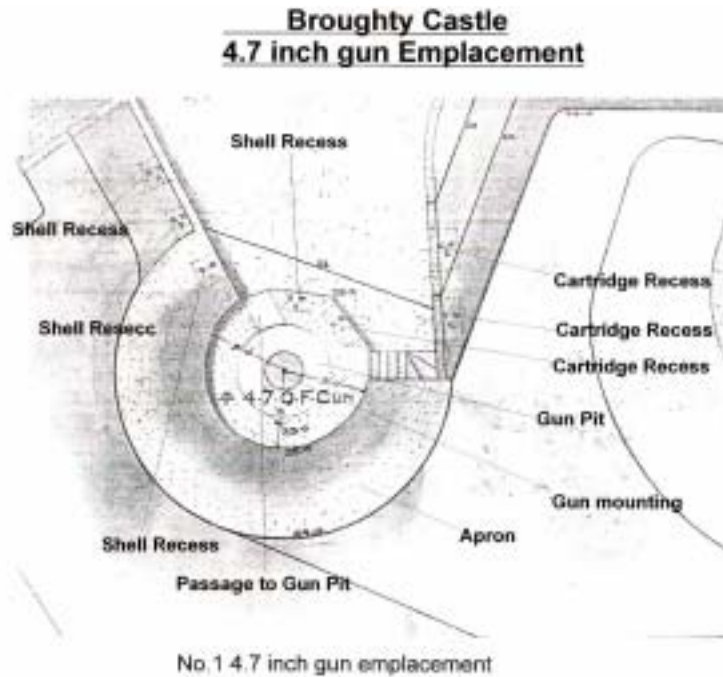
4.7 inch Quick Fire Coast Defence gun Mk.V on a Central Pivot Mk.II mounting.

**Broughty Castle
4.7 inch gun Emplacement**



(source: N.A. WO/78/5194 1901)

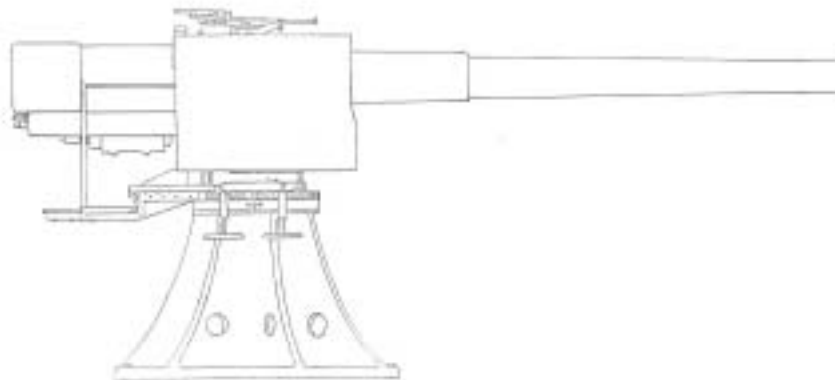
The maximum range of this gun would be about 16,500 yards and the gun detachment would have been 4 men. There would have been additional men involved in bringing up more ammunition when in action. Initially the ammunition supply would have come from the ready use lockers around the location of the gun, cartridges from the cartridge recesses and shells from the shell recesses.



(source: N.A. WO/78/5194 1901)

6 inch Mk.VII on CPII.

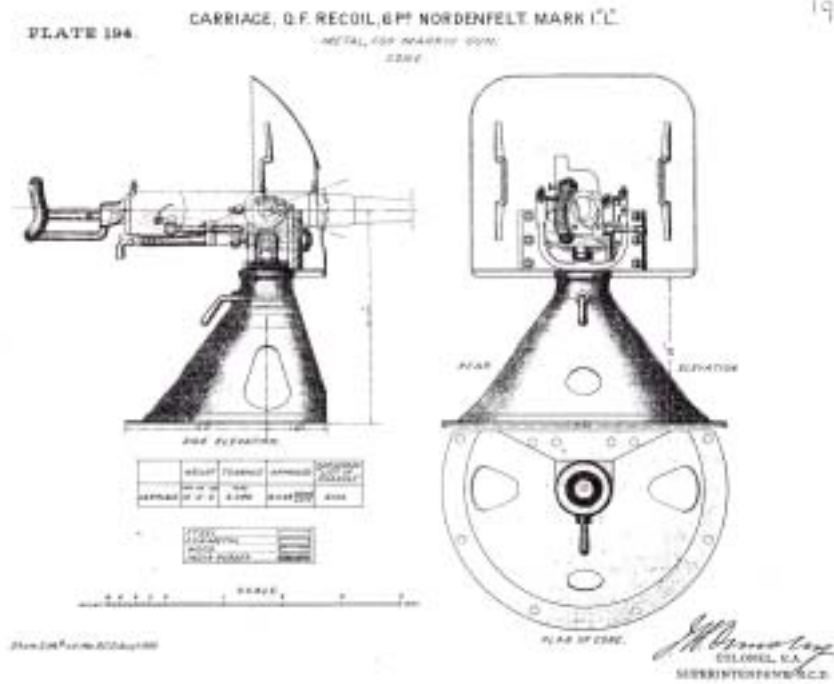
The 6 inch Mk.VII Coast Defence gun came into service in 1898 and remained in service until 1956 when Coast Artillery was disbanded. The guns at Castle Green Battery were mounted on Central Pivot Mk.II mountings which like the 4.7 inch required a deep gun pit for the high pedestal. The maximum range of this gun would have been around 12,000 yards.



6 inch Breech Loading Coast Defence gun Mk.VII on a Central Pivot Mk.II mounting.

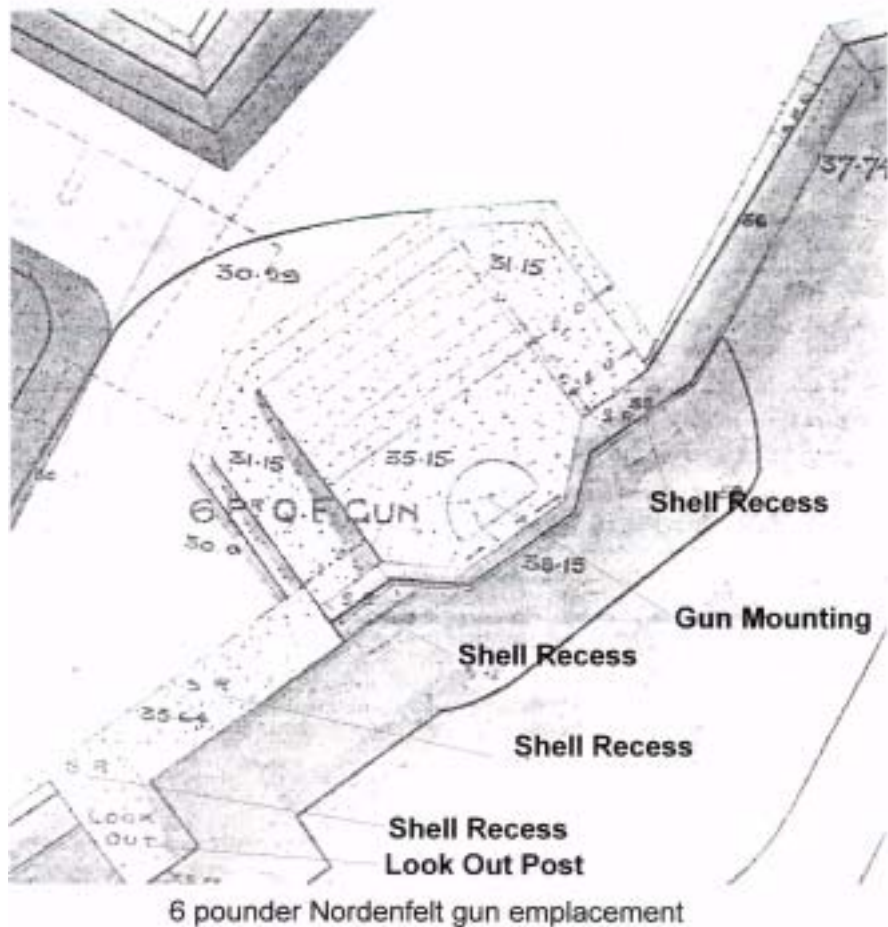
6 pounder Nordenfelt.

This gun was introduced in 1885. The ammunition for this gun was all in one piece with a Calibre of 2.244 inch. The gun would have been mounted on a pedestal. The emplacement for this gun has been completely removed (Note 6). The holding down bolt ring for this gun was in a "D" shape. The maximum range would have been about 7,500 yards. The gun detachment for this gun was six men.



6 pounder Nordenfelt Mark 1 'L'

Broughty Castle **6 pounder gun Emplacement**



(source: N.A. WO/78/5194 1901)

Magazines.

The battery of the 1860 – 61 period used the ground floor of the tower house as its magazine. Copper was used for magazine fittings and doors and ventilator shutters were lined with copper to reduce any risk of a spark being caused, some of this copper can still be seen. A plan of the castle dated 1901 shows the ground floor of the tower house still being used as a magazine, a magazine for the QF gun through the Battery Store in the northwest tower, and then separately No.1 magazine and No.2 magazine accessed from a passage, also used as a lamp passage. From the passage, a door leads into two Shifting rooms before entering No.2 magazine and through to No.1 Magazine. The Magazines were illuminated by oil lamps that were kept in separate areas and the light was projected through a glass window. For obvious reasons a naked flame had to be kept away from explosives.

A new magazine was built beneath No.1 4.7 inch gun emplacement, the plan shows the separate Cartridge and Shell stores, Test Room, Small Arms Ammunition Store and Shelter. With many Coast Defence guns the ammunition was in two parts, shell and cartridge, kept separate until put into the breech of the gun. The 1901 plan also shows another magazine built below and behind the 6 pounder Nordenfelt gun emplacement. The access to this magazine now appears to be closed off.

The plan shows a magazine for 4.7 inch Quick Fire and 6 pounder Quick Fire guns. Opposite this magazine is a store for dry gun cotton. All that can be seen of this is some brickwork around the top of the magazine. Shifting rooms were used for moving the powder or cartridges round so that new powder or cartridges went to the back of the magazine. Special clothing had to be worn when entering a magazine, no metal parts, no grit on boots or any other material parts that might cause a spark (WO/78/5194).

Castle Green Battery.

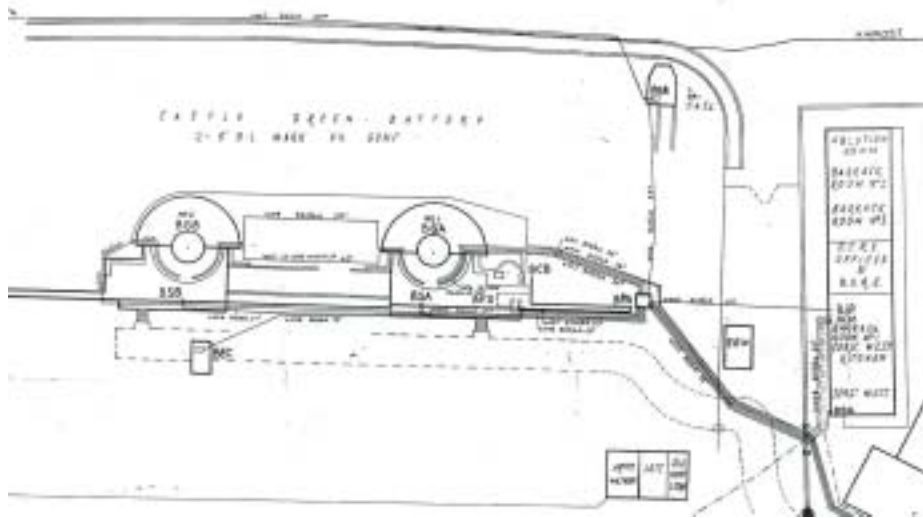
The construction of Castle Green Battery started in May 1903 and was completed in April 1905. Two 6 inch BL. Mk. VII guns mounted on Mk. CP II mountings, this was done in 1905 by a detachment from Leith Fort, Edinburgh.



The site of Castle Green Battery is to the east of the castle and now forms a park and crazy golf course.

To obtain additional height for the Battery an earthwork was created 24 feet high, on top of which the guns were mounted. The Battery was mobilised in August 1914 and remained there until the end of the war. The guns were dismantled in 1932.

In 1940 the Battery again became part of the Coast Defence of the British Isles. The guns were delivered to Broughty Ferry and Dundee West Railway Station and brought to Castle Green where they were raised up the earthwork bank by means of a ramp. The guns were in position by 14th. April and Proof of Mountings rounds were fired satisfactorily, the guns were calibrated on 26th. June 1940. One searchlight was ready for the 15th. April with the engine room, the second searchlight was completed shortly after. Number 1 searchlight was on the right flank of the Battery while Number 2 was on 200 yards on the left flank. The lights were 90cm Projectors, Fortress Mk.5 lights with concentrated beams, housed in enclosed emplacements. The gun emplacements were originally open emplacements with the magazines below. Overhead cover was added during World War Two, helping to protect the gun crews from attack from aircraft.



Castle Green Battery (c.1916)

The Battery was the Head Quarters of the Dundee Fire Command and a new Fire Command Post was completed on Broughty Castle by 1st. November 1940. The Tay Defences were augmented by the construction of another two 6 inch Mk.XI naval guns being mounted at Stannergate by 17th. June 1940.

The role of the guns was to engage the enemy transports at point blank range. Later in the war the guns were placed in care and maintenance and they remained like this until October 1956. At the end of October the guns, searchlights and generators were sold off to contractors as scrap and all other stores and equipment were returned to ordnance. (Most of the above information comes from the Fort Record Book for the Battery which is kept in the National Archive. Ref: WO/192/249)

There is very little left to see of this Battery now, only part of the earth embankment remains as part of Castle Green park and crazy golf course. The Fire Command Post still remains on the top of Broughty Castle. The 6 inch Mk.VII. Breech Loading Gun (BL) was introduced in 1898 and remained in service until 1956 when Coast Artillery was disbanded.

The magazine would have been split into two main rooms, one cartridge stores and one shell stores. The shell and cartridge never came together until they were loaded into the breech of the gun. The range of the guns would vary with the type of shell and cartridge being used but 12,000 yards was used as a maximum range.



*This 6 inch Mk.VII gun on a CII mounting
is an example to be found at Newhaven Fort.*

References.

- | | |
|---|------------------------------------|
| Castle Green Battery Fort Record Book. | N.A. WO/192/249. |
| Gun drawings. | Royal Artillery Institute Library. |
| Armaments Proposed and Approved.
1889 – 1922. | Royal Artillery Institute Library. |
| Broughty Castle. By Sir Francis Mudie, David Walker and Iain MacIvor. Abertay Historical Society Publication No. 15 1970. | |
| Broughty Castle: Description of Barracks and Battery. 1901. | N.A. WO/78/5194 |
| Broughty Castle: Castle Green Battery. 1916. | N.A. WO/78/5195 |
| 1807. It was proposed to erect a battery Within the old castle. | N.A. WO/55/818 |
| 1860. New fortifications designed by Robert Rowand Anderson. | N.A. WO/30/10 |
| 1861. The rebuilding and armament | N.A. WO/30/10 |
| 1882. Open batteries of 2 x 68 pr and 5 x 10 inch. Committee on the Defence Of the Mercantile Ports. Submarine Mines. | M.O.D. Library. 1894. |

1886. The Submarine Mining Depot was built.	M.O.D. Library. 1894.
1887. RA/RE Works Committee, battery Obsolete. Replace with 4.7 inch.	M.O.D. Library. 1894.
1890. The Inspector General of Fortification. 1 x 4.7 inch.	M.O.D. Library. 1894.
1893. 6 x 40 pdrs. Replaced by a 4.7 inch and 6 pdr.	M.O.D. Library. 1894.
1904 – 5. 2 x 4.7 in. 2 x Gardner mg's.	N.A. WO/33/381 CAB 16/1
1913. 2 x 4.7 mounted for practice.	N.A. CAB 17/33
1855. On the Defences of the Principal Commercial Ports of Great Britain.	Royal Artillery Institute Library.
1860. List of existing Defences.	Royal Artillery Institute Library.
Various Gun Handbooks and Drill Books.	Royal Artillery Institute Library.

APPENDIX C - Summary of the Armament at Broughty Castle Battery 1860 - 1945

1860 – 61	Castle	5 x 10 inch Shell guns. 2 x 68 Pounder smooth bore guns.
1886		The submarine mining depot was built.
1889	Castle	4 x 16 pr. RML field guns.
1893	Castle.	6 x 40 pr. RBL guns. Replaced by: 1 x Gardner's double barrelled m.g. 1 x 6 pr. Nordenfelt QF gun. 1 x 4.7 inch QF gun.
1898	Castle.	Mounted 1 x 4.7 in QF. 1 x 6pr QF. 1 x machine gun. Approved or proposed additions 1 x 4.7 in QF.
1899	Castle.	Nordenfelt QF gun replaced by a second Gardner m.g and another 4.7 inch QF gun.
1900	Castle.	Mounted 2 x 4.7 in QF. 1 x machine gun. Approved or proposed additions/reductions nil.
1902	1/12 Castle. Castle Green.	Mounted 2 x 4.7 in QF. 1 x machine gun. Approved or proposed additions/reductions nil. Mounted 1 x machine gun. Approved or proposed additions 2 x 6 in BL.VII.
1903	Castle Green.	Work commenced on Battery.
1904	1/4 Castle. Castle Green.	Mounted 2 x 4.7 in QF. 1 x machine gun. Approved or proposed additions/reductions nil. Mounted 1 x machine gun. Approved or proposed additions 2 x 6 in BL.VII on CP II.
1904	Sept. Castle.	Substitute 2 x 4.7 in QF. Mk.V guns and Mk. V central pivot mountings. mountings for 2 x 4.7 in QF. Mk. VI guns on Mk. III CP mountings.
1904	1/11 Castle.	Approved 2 x 4.7 in QF. Mk.IV. replaced by 2 x 4.7 in QF. Mk.V guns.
1905	1/4 Castle.	Mounted 2 x 4.7 in QF IV _B on QF III. 2 x machine guns. Approved or proposed reductions 2 x 4.7 in QF IV _B on QF III Approved or proposed additions 2 x 4.7 in QF V _B on QF V.

		Castle Green.	Mounted 2 x 6 in BL. VII on CP II.
1906	1/4	Castle.	Mounted 2 x machine guns. Approved or proposed additions 2 x 4.7 in QF V _B on QF V.
		Castle Green.	Mounted 2 x 6 in BL. VII on CP II.
1906			2 x Gardner m.g. withdrawn.
1906	Oct.	Castle.	Mounted nil.
		Castle Green.	Mounted 2 x 6 in BL. VII on CP II.
1907			The submarine depot was closed down.
1908	1/4	Castle.	Mounted nil.
		Castle Green.	Mounted 2 x 6 in BL. VII on CP II.
1910	1/4	Castle.	Mounted nil.
		Castle Green.	Mounted 2 x 6 in BL. VII on CP II.
1912	1/4	Castle.	Mounted nil.
		Castle Green.	Mounted 2 x 6 in BL. VII on CP II.
1914	1/4	Castle.	Mounted nil.
		Castle Green.	Mounted 2 x 6 in BL. VII on CP II.
1915	28/1	Castle.	Mounted 2 x 4.7 in V on V.
		Castle Green.	Mounted 2 x 6 in BL VII on CP II.
1916	1/2	Castle.	Mounted 2 x 4.7 in V on V.
		Castle Green.	Mounted 2 x 6 in BL VII on CP II.
1917	1/6	Castle.	Mounted 2 x 4.7 in V on CP V.
		Castle Green.	Mounted 2 x 6 in BL VII on CP II.
1918	1/4	Castle.	Mounted 2 x 4.7 in QF.
		Castle Green.	Mounted 2 x 6 in BL VII.
1918		Castle.	2 x 4.7 inch guns withdrawn. ?
1922		Castle.	Mounted 2 x 4.7 in QF V on CP V. Care and Maintenance.
		Castle Green.	Mounted 2 x 6 in BL VII on CP II. Training and Practice.
1932		Castle Green.	2 x 6 inch guns dismantled.
1940		Castle.	Mounted 2 x 4.7 inch guns.
		Castle Green.	Mounted 2 x 6 inch guns.

- | | | |
|------|---------------|--|
| 1945 | Castle Green. | Battery placed in "Care and Maintenance". |
| 1956 | Castle. | All guns and equipment removed from Broughty Castle. |

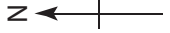
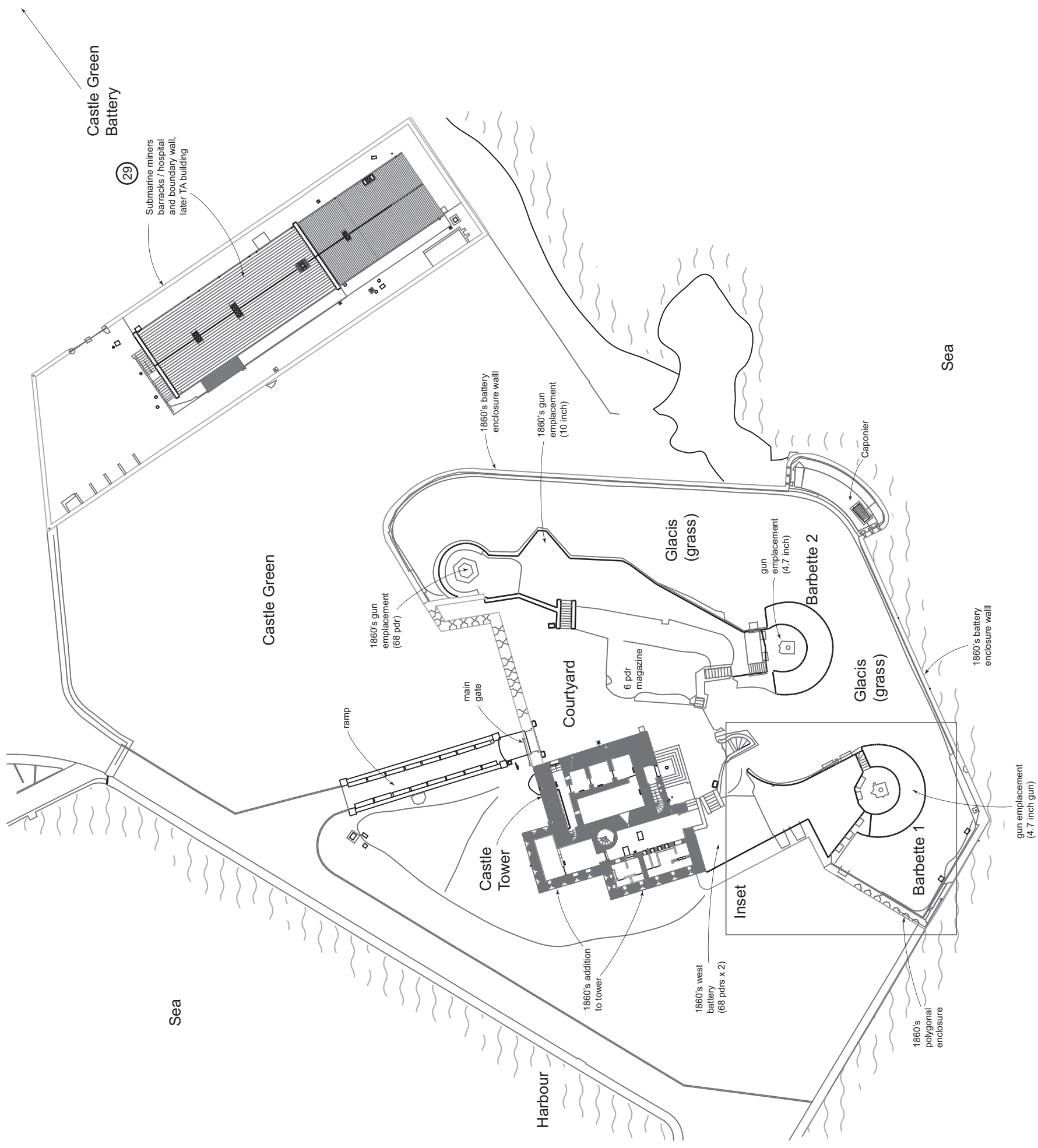
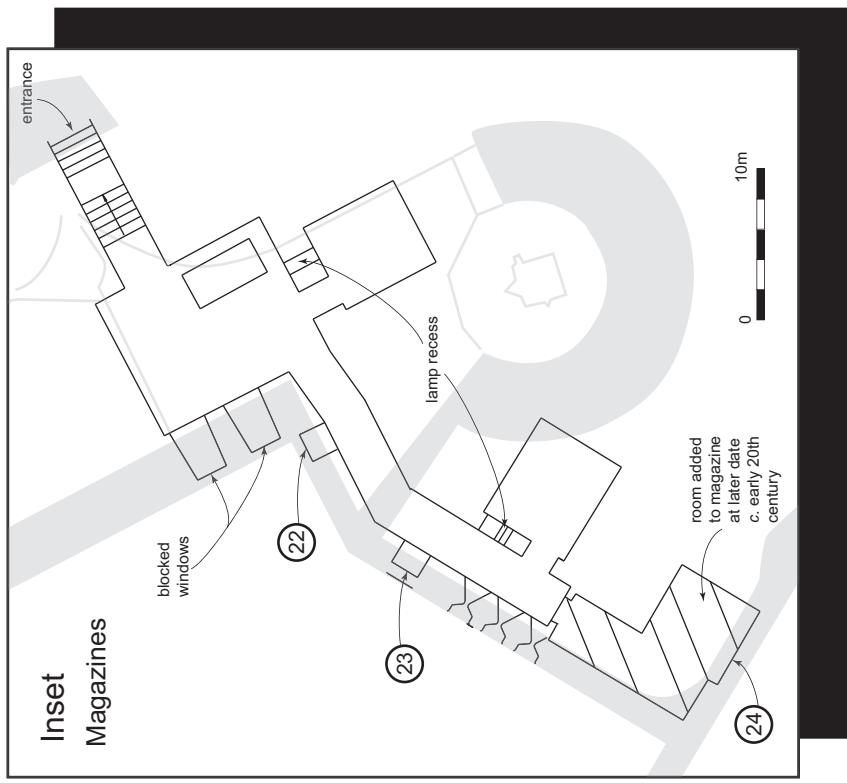


Figure 1: Plan of Castle showing identified areas.

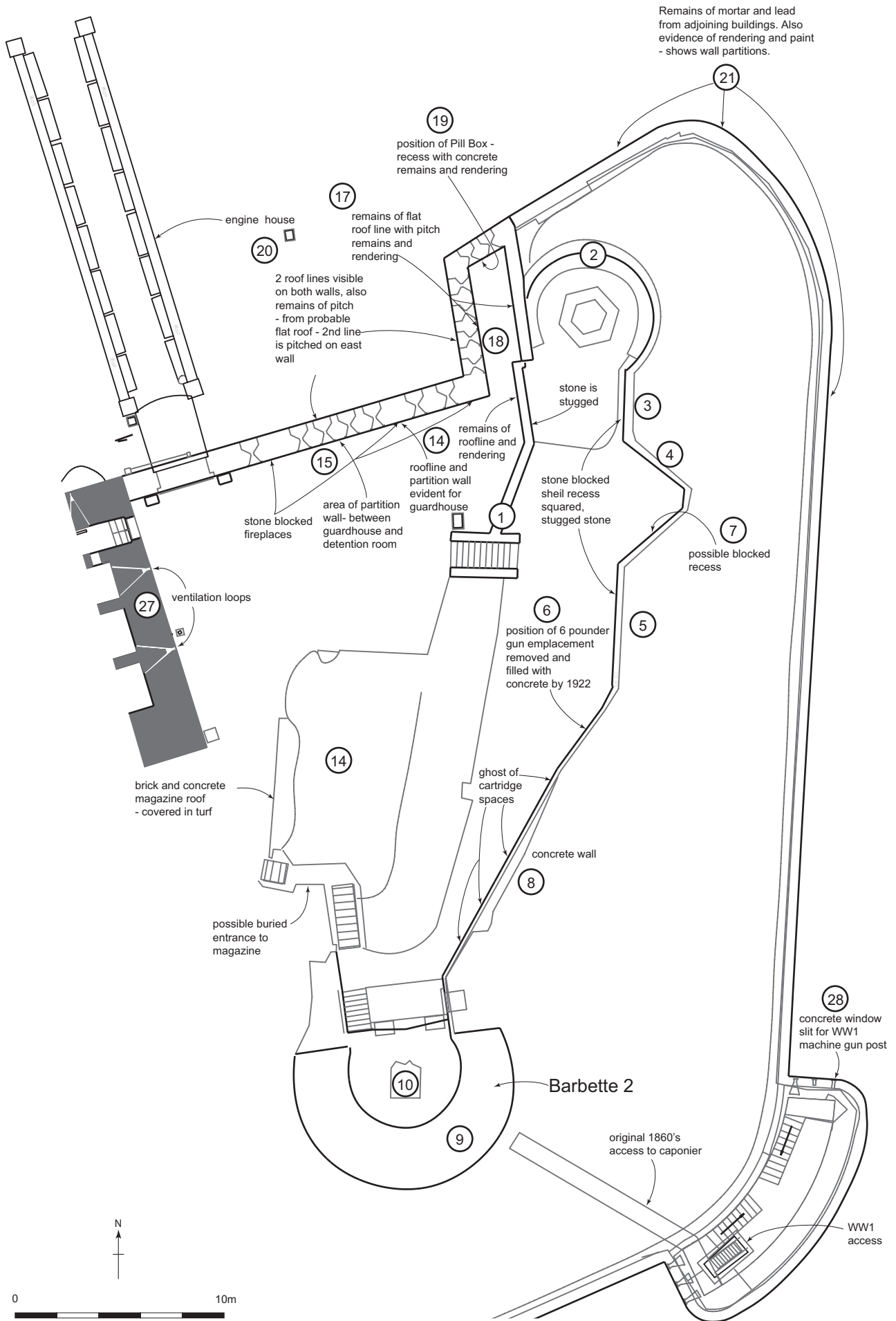


Figure 3: Details of annotated features.

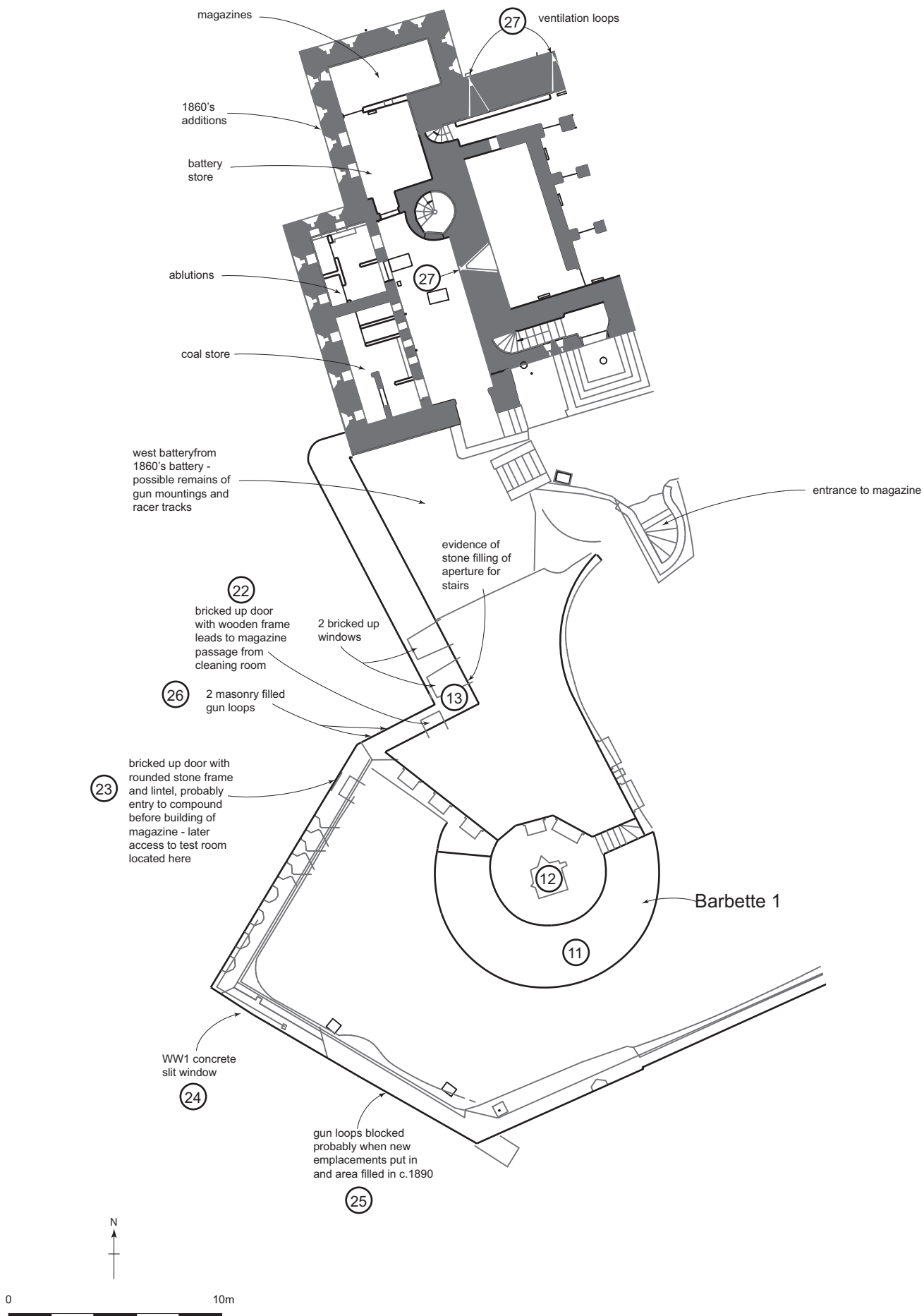


Figure 2: Details of annotated features.

No. 5

PRESS-NO. 13.
TRAY-NO. 8.
TO BE RETURNED TO
FORTIFICATION DESIGN BRANCH

NOT TO BE ROLLED

79/9

RECORD PLAN
OF
BROUGHTY CASTLE
GROUND PLAN



J. B. Beck
Capt.
Commanding Royal Engineers
Perth
26 July 1901

NO 76/5194

SCALE 10 FEET TO AN INCH

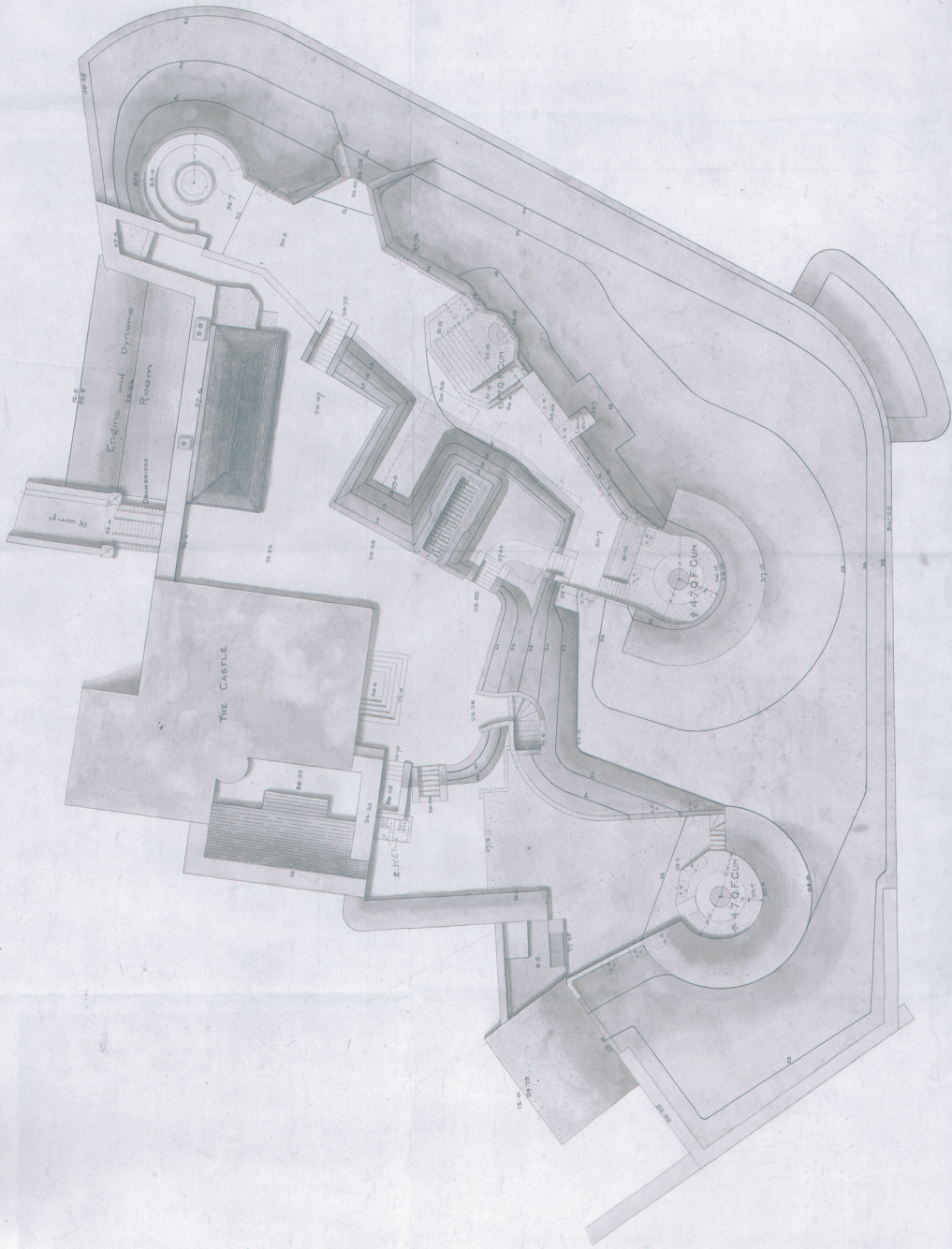
Plate 2 - Ground plan of Broughty Castle, 1901

No 4

79/9

PRESS NO 13
TRAY NO 8
TO BE RETURNED TO
FORTIFICATION DESIGN BRANCH
NOT TO BE ROLLED

RECORD PLAN
OF
BROUGHTY CASTLE
TOP PLAN



W.S. Baird
Major
Commanding Royal Engineer
Perth
18-6-01
W0795194

Approved and drawn by
W.S. Baird
18-6-01

SCALE 10 FEET TO AN INCH. 0 10 20 30 40 50 60 70 80 90 100 FEET

Plate 3 - Top Plan of Broughty Castle, 1901

No.	Paragraph in text	Notes	Date
1	3.3.3	Retaining wall & steps to rear of battery	1861
2	3.3.3	68pdr gun emplacement – barbette	1861
3	3.3.3	Retaining wall of earth glacis with filled in recess	1861
4	3.3.3	Retaining wall of 10 inch gun embrasure	1861
5	3.3.3	Same as 3	1861
6	3.3.3	Concrete patching of retaining wall – filled in 6pdr emplacement	Post 1901
7	3.3.3	Blocked recess of south wall of 10inch embrasure	1861
8	3.3.3	Concrete retaining wall of new gun emplacement (barbette 2)	c. 1890
9	3.3.3	Concrete glacis of barbette 2	c. 1890
10	3.3.3	4.7 inch gun mounting and concrete platform	c. 1890
11	3.3.3	Same as 9	
12	3.3.3	Same as 10	
13	3.3.4	Blocked access to stairs to external buildings (cleaning & test room)	1890 - Post 1931
14	3.3.2	6 pounder magazine	1890 – E 20 th century
15	3.3.2	Old guardhouse – features on inside elevation of barmkin wall	1861 – c. 1930s
16	3.3.2	Remains of roofline and rendering of ablutions	L 19 th - mid 20 th century
17	3.3.2	Roofline of engine house	1860 – mid 20 th century
18	3.3.2	Flat roofline with pitch and rendering (ablutions)	L 19 th – mid 20 th century
19	3.3.2	Position of probable WW2 pill-box	WW2
20	3.3.4	Rooflines of successive dynamo and engine house	L19 th – 1930s
21	3.3.4 & 3.3.6	Evidence of adjoining buildings – coal store, drill shed & ablutions	L19 th – 1930s
22	3.3.4	Bricked up door & 2 bricked up windows to magazine	L19 th – 1930's
23	3.3.4	Bricked up door to magazine from test room to hospital enclosure and later magazine	1860s – E 20 th century
24	3.3.4	WW1 concrete slit window	WW1
25	3.3.4	Blocked gun loops	1861 – 1890
26	3.3.4	2 blocked gun loops	1861 – 1890
27	3.3.1	WW1 concrete slit window in caponier	WW1
28	3.3.4	WW1 access hatch into caponier	WW1
29	3.3.6	Submarine Miners Barracks / Hospital	1886 - present

Table 1 – List of notes from figures 2 & 3 with reference to the relevant paragraph number from the main text