

THE VICTORIAN AND SECOND WORLD WAR ARTILLERY BATTERIES ON BREAN DOWN

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SUMMARY

Brean Down is a limestone headland that juts some 2km into the Bristol Channel to the south of Weston-super-Mare. The battery (known locally as Brean Down Fort but officially as Breandown Battery) lies at the extreme western end of the Down and is of two main periods. The first defences were constructed in the late 1860s with seven guns supplied from underground magazines. To the east were two accommodation blocks that ran along the edge of a ditch cutting off the end of the headland. The southern end of the battery was badly damaged by an explosion in 1900 and was decommissioned although this was likely to have taken place in any event. The buildings were then used as a tearoom until taken into military hands during the Second World War. Two large concrete gun houses were built over some of the earlier positions and large numbers of ancillary buildings were constructed. Recently, the battery has been repaired with Heritage Lottery Funding, prior to being purchased by the National Trust.

HISTORICAL BACKGROUND

The earliest fortifications on the end of Brean Down are related to the intense armaments race of the second half of the 19th century. Tension between Britain and France following the Franco-Austrian war of 1859 led to fears of an invasion of Britain, which it was felt would require the capture of a naval base. A Royal Commission in 1859 was instructed to examine the defences of Portsmouth, Plymouth Portland, Pembroke, Dover Chatham and the Medway (Cork was later added). The report recommended a huge programme of fort construction to protect these places from bombardment from the sea and also from rear attack by land. Much of the work recommended by the Commission was already underway and a number of other areas were fortified in the 1860s, for example Harwich and the Bristol Channel (Saunders 1989). The proposal for the latter was a chain of four batteries at Lavernock on the Welsh coast, on the islands of Flat Holm and Steep Holm, and on the end of Brean Down. These would be able to deny access to Cardiff, Bristol and the smaller ports in the Severn (Fig. 1). According to the Westmacott Report of 1861 (WO 33/10) the line had been proposed three years earlier as a barrier to desultory attacks. Westmacott considered that the same positions should be used for the larger works now intended and in considering Brean Down stated 'As the principal point on the east side, the occupation of the summit of Breandown, with advanced batteries on the lower point, at a suitable level, would present great advantages; from the lower west point the approach from seaward would be covered, while a defensible work on the

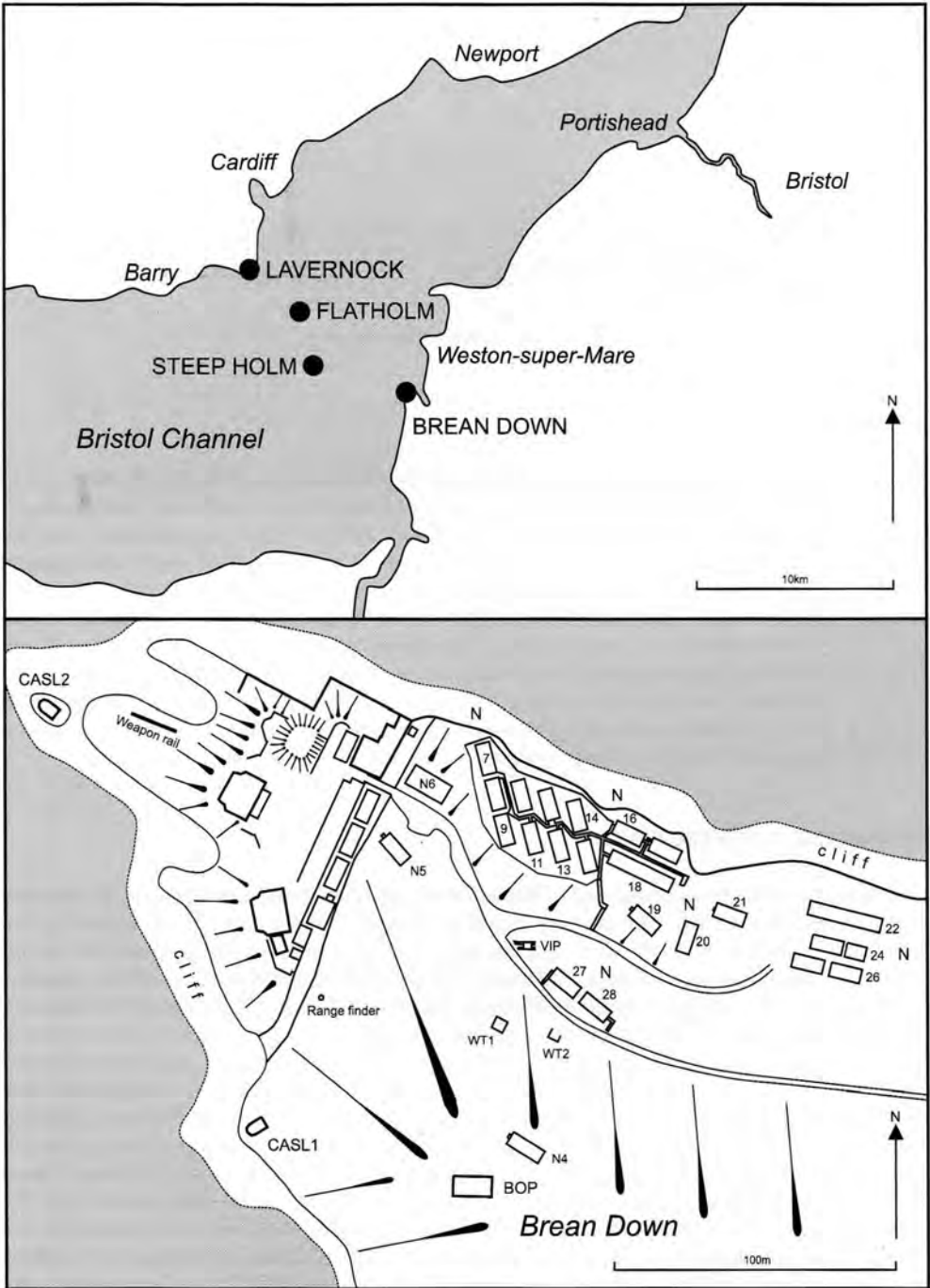


Fig. 1 Location of the Severn Defences (top) and overall plan of Brean Down Battery

summit, secured against a coup de main, would command the long sandy beach, extending towards the head of Bridgwater Bay, ... and also Uphill etc' (WO 33/10). From this it appears that a much larger fort was considered rather than the lightly defended battery which was constructed.

Detailed historical information about what was actually built at Brean Down is scanty, as it appears that the Fort Record Book, which would have provided much information, no longer survives. The original plans have, however, recently been discovered in the Public Record Office (WO 78/4938) and these provide an invaluable guide to the layout of the fort. Previous authors have accumulated various pieces of information, sometimes when working on the other forts in the area. John Barrett's work (1993) formed the basis for much of this but the latest book (van der Bijl 2000) has provided much new material. Unfortunately, much of Barrett's material was acquired piecemeal during his government service and likewise, van der Bijl's work, although detailed, is almost entirely unreferenced and thus the source and quality of much of his evidence is hard to assess.

The earliest references show that land was requisitioned from the owner, William Wyndham, early in 1862, the sum of 10 shillings being offered for the four acres required. This had been completed by June when Palmerston reported the fact to Parliament (van der Bijl 2000, 61). The defence works were under the command of Lt. Robert Vetch and construction had begun by late October 1864 under the principal contractor John Pollard of Bristol (Barrett 1993, 6). Much of the unskilled work appears to have been completed by the spring of 1866 as many of the navvies were transferred to Steep Holm but the building does not appear to have gone smoothly as on 15 September 1866 the builders stopped work, disgusted by the 'constant building up and pulling down' as plans were changed (Rendell and Rendell 1993, 117) – a fact which may explain the inconsistencies in the surviving buildings. No military personnel are listed in the 1871 census but in 1872 'records show' a garrison of 51 with 20 horses; the guns, however, were apparently not mounted until July 1877 (van der Bijl 2000, 63). The Victorian plans show that the total cost (excluding land) was £12,622.

The battery was equipped with seven Rifled Muzzle Loading guns (RMLs) of 7-inch bore (178mm) which, by the time the battery was complete, were practically obsolete and the rest of the century saw various plans to replace them. The history of these plans was reviewed in 1894 (WO 196/31) where it was noted that 'the armament of this work in 1882 consisted of 7-7inch RML guns' and that the Morley Report in the same year had recommended that three of these should be replaced with 10.4-inch BL (breach loading) guns. The plan had been rejected in 1884 but in 1888 a new proposal had been made to replace three of the 7-inch RMLs (those on 'C' pivots – *see below*) with 9-inch RMLs and to remove the other four. The General Officer Commanding the Western District, however, had regretted the reduced number of guns because of the 'extraordinary strong tide and frequent fogs in the Severn [which] render it particularly difficult to obtain hits'. This had led to a recommendation that two of the 7-inch RMLs should remain. The plan was provisionally approved in 1889. However, in 1894 the Royal Artillery and Royal Engineers Works Committee suggested that, instead of this, all the RMLs should be replaced by three 6-inch Quick Firing (QF) guns and three machine guns (WO 396/5).

From 1898 the armaments are documented annually (CAB 18/19) and show that on 1/1/1898 the seven 7-inch RMLs were still there and were proposed to be replaced by three 6-inch QF. The following year's return, however records 'nil' additions and seven 7-inch RMLs to be removed. Steep Holm and Flat Holm are recorded similarly indicating that the batteries were to be disarmed, with only Lavernock to be rearmed with modern BL guns. This decision to abandon the Severn Defence line appears to have been taken sometime in 1898 as in the following January the report on a conference on armaments, called principally to consider the replacement of all the obsolete RMLs stated:

Before dealing with Cardiff it may be mentioned that the original project of defences of the Bristol Channel below Cardiff was intended to be carried out by batteries at Lavernock Point on the north shore, Flatholme Island, Steepholme Island, and Brean Down on the south shore. These batteries were erected, and are in existence, armed with 7-inch ML guns. They are completely useless. It was intended to close the gap between them, 6000 yards, wide, by minefields. This is given up as impracticable. It has been decided to dismantle the batteries and withdraw the defences to the entrances to the ports. (CAB 7/6)

The 1900 armament returns show a return to the replacement of the RMLs at Brean with QF guns but it is noted that, of the three RMLs on the North West Face, '2 are dismounted'. The islands are still indicated for disarmament, as they are in the following year, when Brean does not appear in the returns. From 1902 only Lavernock appears (CAB 18/19).

The cause of the 'dismounting' of two RMLs in 1900 was the explosion in the early hours of 4th July in No. 3 magazine which killed one gunner and injured another. The inquest, as reported in the *Weston Mercury*, found that the explosion had been caused by the dead gunner who appeared to have fired a carbine into the magazine. The fort appears to have been abandoned shortly afterwards although, as seen above, this was likely to have occurred in any case. There is no indication in the records to show that any of the rearmament schemes was implemented but an early 20th-century photograph (Fig. 12) does show changes to the mountings of Gun 4 which were probably experimental (*see below*).

Following the departure of the military, the battery was used as a tearoom for several years with many visitors from Weston arriving by boat. Some of the buildings were adapted during this period and other parts of the battery cleared. Postcards and other photos dating from this period provided, until the discovery of the PRO plans, the best indication of the plan and structures on the site before the Second World War.

Brean Down and Steep Holm were re-armed during the Second World War as Coast Artillery batteries, which damaged parts of the Victorian structures. Large concrete gun houses were built, together with ancillary buildings for the garrison. Again, there appear to be few records of the works but it is clear that they were built in the summer/autumn of 1941. Nothing is visible on a military air photograph taken in May of that year ('M' series GHQ/105 73-74 14 May 1941, in National Monuments Record Centre, Swindon) and the similar structures on Steep Holm can be seen under construction in September (Legg 1991). Plans were already underway earlier in the year, when during a visit to Cardiff in April, it was noted, 'This fire command will grow ... Instead of three batteries the CFD will shortly have seven and later eight batteries ...' (WO 199/941). On 20th June 1941 930 Port Construction Company, Royal Engineers were given instructions for building three piers and moved to Cardiff a week later. It appears that Brean Down was to be treated as another off-shore island and supplied by sea from South Wales, hence the third pier. On 10th July Major Bertlin (of 930 Company) visited Brean Down by aircraft from Cardiff and on the 14th a party of 30 men was sent over by boat to commence construction. The order to cease work on the pier at Brean came on 5 August and arrangements were made to withdraw the men to Steep Holm although parts of the construction ('trestle units') were not returned until 23rd September. It is also clear that work on the batteries themselves was being carried out in parallel by another (un-named) unit as the guns and generators were delivered to Steep Holm on 29th September (WO 166/3937). Communications were established earlier by radio-telephone on the 29th July (WO 166/1733) and an undersea cable is recorded being landed on Steep Holm from Brean on 9th November (WO 166/3937). It seems likely that work continued, as in a letter of 12/12/1941 the priorities for military labour for coast artillery included the Severn defences in third place (WO 199/523). Records for the rest of the war appear scanty but there are records of a reordering of fire commands (Flat Holm,

Docks, and Brean Down) in December 1941 when Brean is recorded as being 356 and 366 Coast Batteries of 571 Coast Regiment. In March 1942 the Severn Defences are recorded in an addendum to a list of coast artillery in Southern Command (WO 199/1638):

Corps/Div	Works	Armament	Coords	Arc of fire	Range
(Western Command)	Brean Down	2-6" (Naval)	720805	036-N-180 deg	6000yds

In July 1942 Western Command nominated four batteries to be manned by (Southern Command) home guard together with Portishead, but Brean was to remain a Class A battery (WO 199/525). By January 1943 Brean was being considered for closure and, probably in February, is listed as '189 Brean Down. 2 x 6" N. Present 3 Off. 104 OR to home guard class F'. Steep Holm South is recommended for Care and Maintenance in the same list, although the North battery was to be retained. In March, the numbers at Brean were reduced from the three Officers and 104 Other Ranks to one Officer and 57 (WO 199/526). The Severn Defences were disbanded on 20/4/1944 (WO 166/14955).

In the early 1950s the Down was purchased by local authorities; the battery by Weston-super-Mare and the rest by Axbridge Borough Council who presented it to the National Trust. Sedgemoor District Council inherited the battery when local government was reorganised in 1974. Over this period the military structures have slowly decayed, punctuated by programmes of 'eyesore' clearance, safety works and demolition training (Figs 2 and 3).



Fig. 2 The landward appearance of Breandown Battery in 1996 with Steep Holm in the distance; photo Somerset County Council

BACKGROUND TO THE SURVEY

Proposals for the beneficial reuse of Breandown Battery have been considered for many years but the deteriorating condition of the buildings led to an urgent need for repair. In an effort to

provide the battery with a future a study was commissioned by Sedgemoor District Council, The National Trust and English Heritage, which suggested the refurbishment of the battery and its use as a visitor centre with limited holiday accommodation (CEI 1993). As a first stage towards the implementation of this strategy, Somerset County Council (SCC) undertook an archaeological survey of the battery and the Royal Commission on the Historical Monuments of England (RCHME, now part of English Heritage) surveyed the rest of the Down in 1995. The purpose of the SCC survey was to provide an accurate set of drawings that could be used for design work, and a detailed description and interpretation of the remains. In addition it was hoped to be able to reconstruct the plan of the Victorian battery, as no plans were then known to exist.



Fig. 3 Aerial view showing the Victorian fortifications (right), additional Second World War accommodation constructed in the quarry (centre), and the observation post (top left); photo Bill Horner, Devon County Council, copyright reserved

SURVEY METHODS

The locations of all the structures at the west end of the Down were surveyed electronically and these outlines were enhanced by detailed hand measurements. A photographic record was made of all elevations. The RCHME survey team tied this survey to the National Grid using a global positioning system (GPS) and also located some ancillary structures. Additional information on buildings that no longer survive was obtained from historical sources, particularly the early postcards in North Somerset Museum, lantern slides in the SANHS library and early OS mapping (which only showed the northern half of the fort). For comparison, visits were made to Steep Holm and the Needles Battery, Isle of Wight. Historical sources at the Public Record Office were consulted but proved remarkably sparse although more has recently been catalogued, including the Victorian plans. Publicity surrounding the renovation at the fort has also produced further photographs and information from Mrs Brenda Martin and Mr Brian Everett, descendants of the owners of the fort café in the early 20th century.

DESCRIPTION OF THE SURVIVING STRUCTURES

GENERAL

The following description is based on inspection of the structures in 1995 (Fig. 4) with additional information from documentary sources, including Victorian plans (Fig. 5), and more recent observations, where appropriate.

The battery occupied the extreme western end of Brean Down (Figs 1 and 3) and was separated from it by a rock-cut ditch varying from 6–10m wide at the top and about 3.5m deep. The Victorian plans show that much of the northern interior of the battery is constructed on made ground with the structures raised on arched foundations up to 5m deep. The inside edge of the ditch was surmounted by a curtain wall nearly 5m high, the middle section of which was set back by 4m to allow flanking fire along the ditch. The wall is pierced along its length by firing loops of two patterns; the type (referred to below as internal and external) appears to correlate with the presence or absence of a building behind the wall. Where the two principal buildings (A and B) stood behind the curtain wall it was pierced by 14 large windows. A gate 2.5m wide led, from a bridge across the ditch, between the two buildings into an open area behind. The further side of this was defined by a wall, which incorporated the emplacements for the seven RML guns. Beyond the wall was an earth bank that protected the gun positions and fronted some of the magazines. This was retained, where the ground behind was made up, by a high stone wall but elsewhere sloped down onto the rocks below. The southern end of the battery was severely damaged by the explosion of 1900 and this, and other areas, were substantially remodelled to incorporate the two Second World War gun houses.

BUILDING MATERIALS

Most of the buildings of the Victorian battery are constructed from a grey limestone, probably obtained from the quarry to the east of the battery. Several different materials are used for the details. The arches above some of the windows and the cills are formed from a white limestone, as is the roll moulding that indicates internal ground level on the ditch and retaining walls. Other aperture details are provided in red or green sandstone. It is likely that these details were provided ready prepared from quarries in Wales or further afield. The buildings on Steep Holm are similar but the white details are reported to be granite (Legg 1991, 40). White granite was noted in two places at Brean; the bearings for the 'drawbridge' and a small part of the repaired roll moulding to the north of building F.

BUILDING A

This building is shown on the Victorian plans (Fig. 5) as containing the officers' accommodation. It has been subdivided into nine rooms at a later date partly obscuring the original layout (Fig. 6). This is most likely to date to the Second World War but there is also evidence of alterations during the period of the tearooms (below). The building lies along the edge of the ditch and had six windows facing east across it. The cills and arches (which have an enlarged, vermiculated keystone) of the windows are in white limestone and the sides are formed from sandstone with a pecked decoration. Early photographs show two three-light hung sashes in each. There are also six carbine loops of internal type covering the ditch, two facing south covering the entrance and one in the north wall of room 9. The internal type is formed from three blocks of sandstone and the best preserved example is described in room B1 (below). The two loops on the south wall are angled internally to increase the field of fire eastwards. The southernmost loop overlooking the ditch is angled to fire south over the bridge and the two northern ones angled

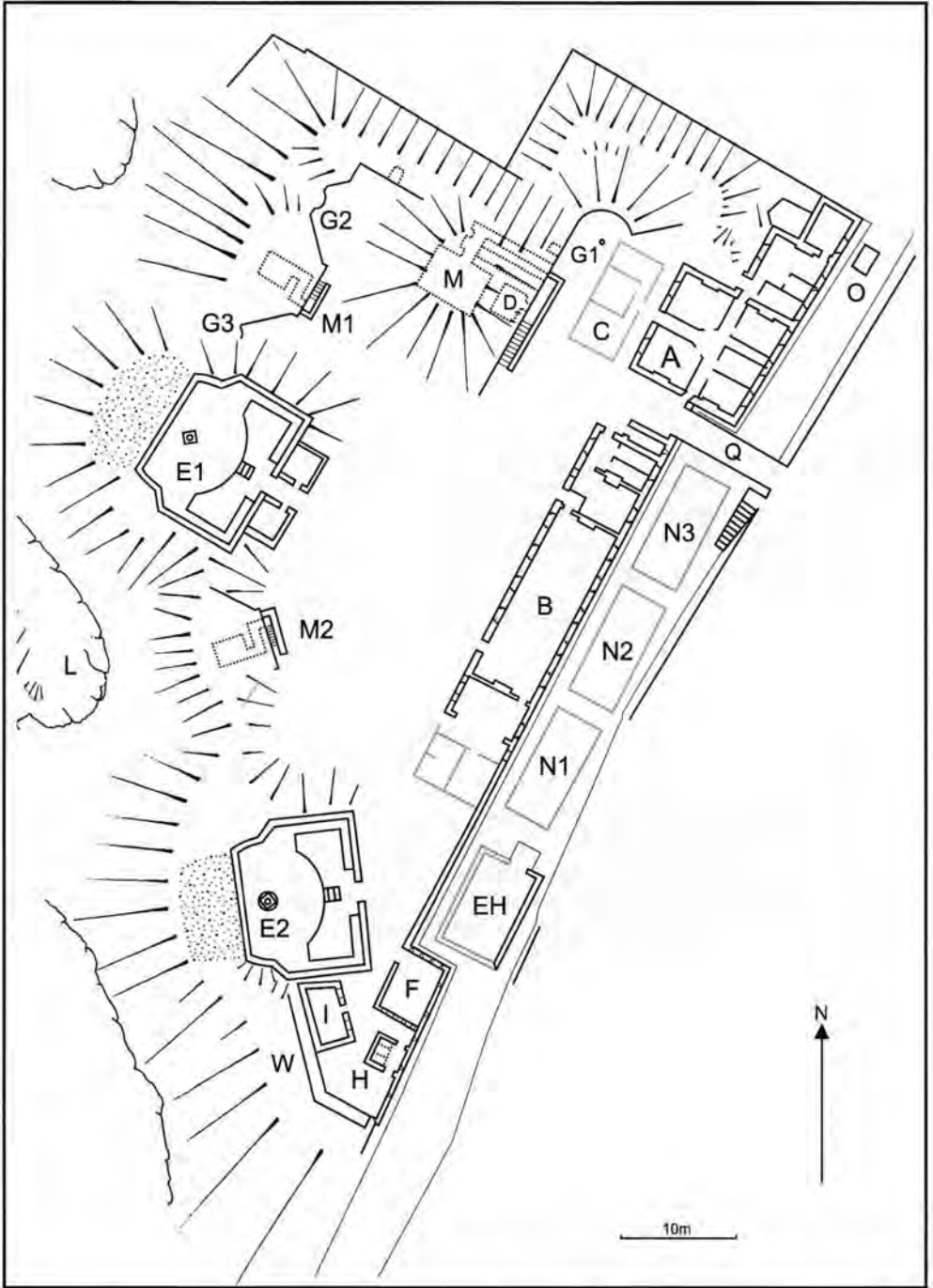


Fig. 4 Plan of the battery in 1995

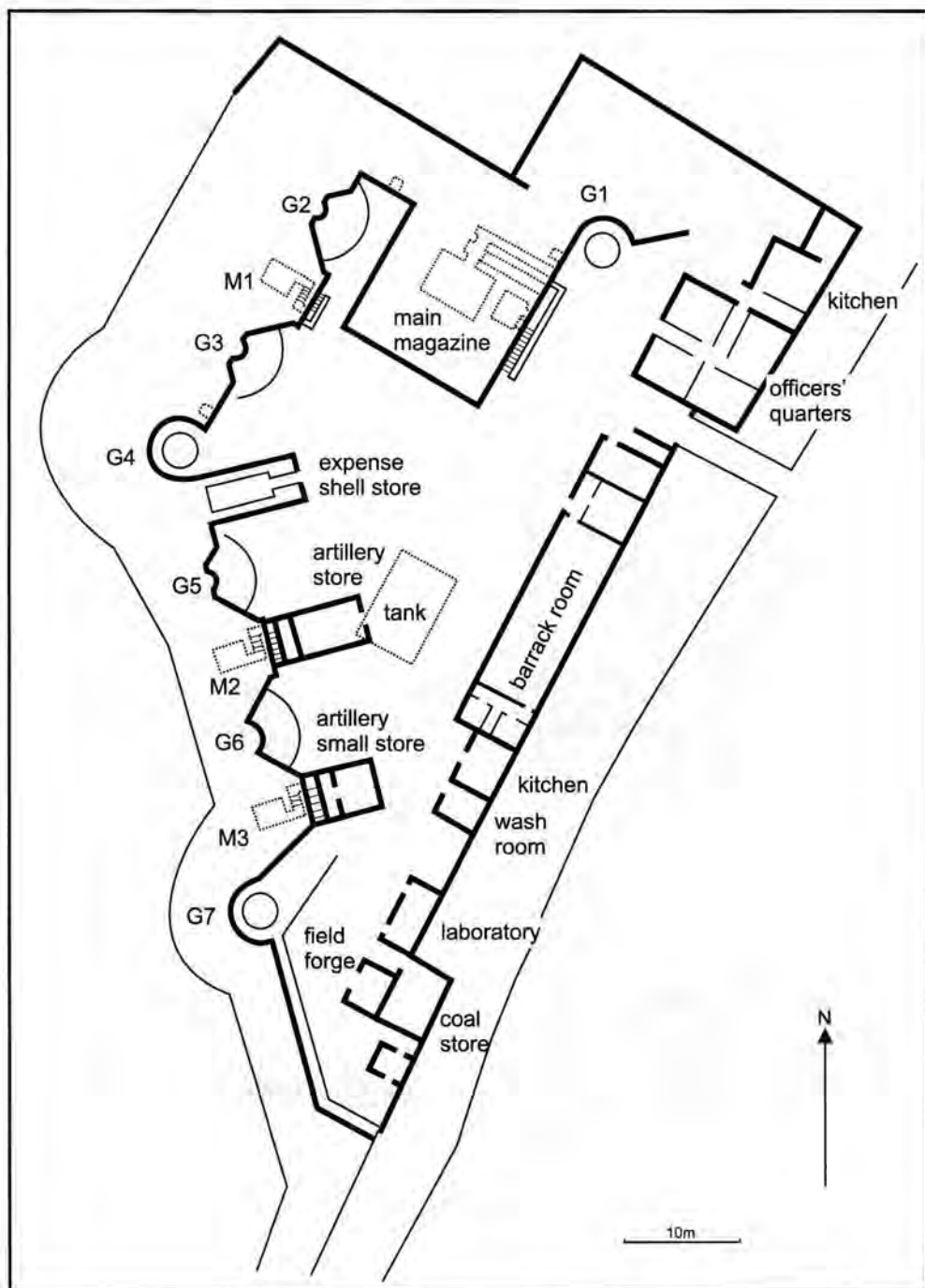


Fig. 5 Block plan of the battery from the Victorian plans

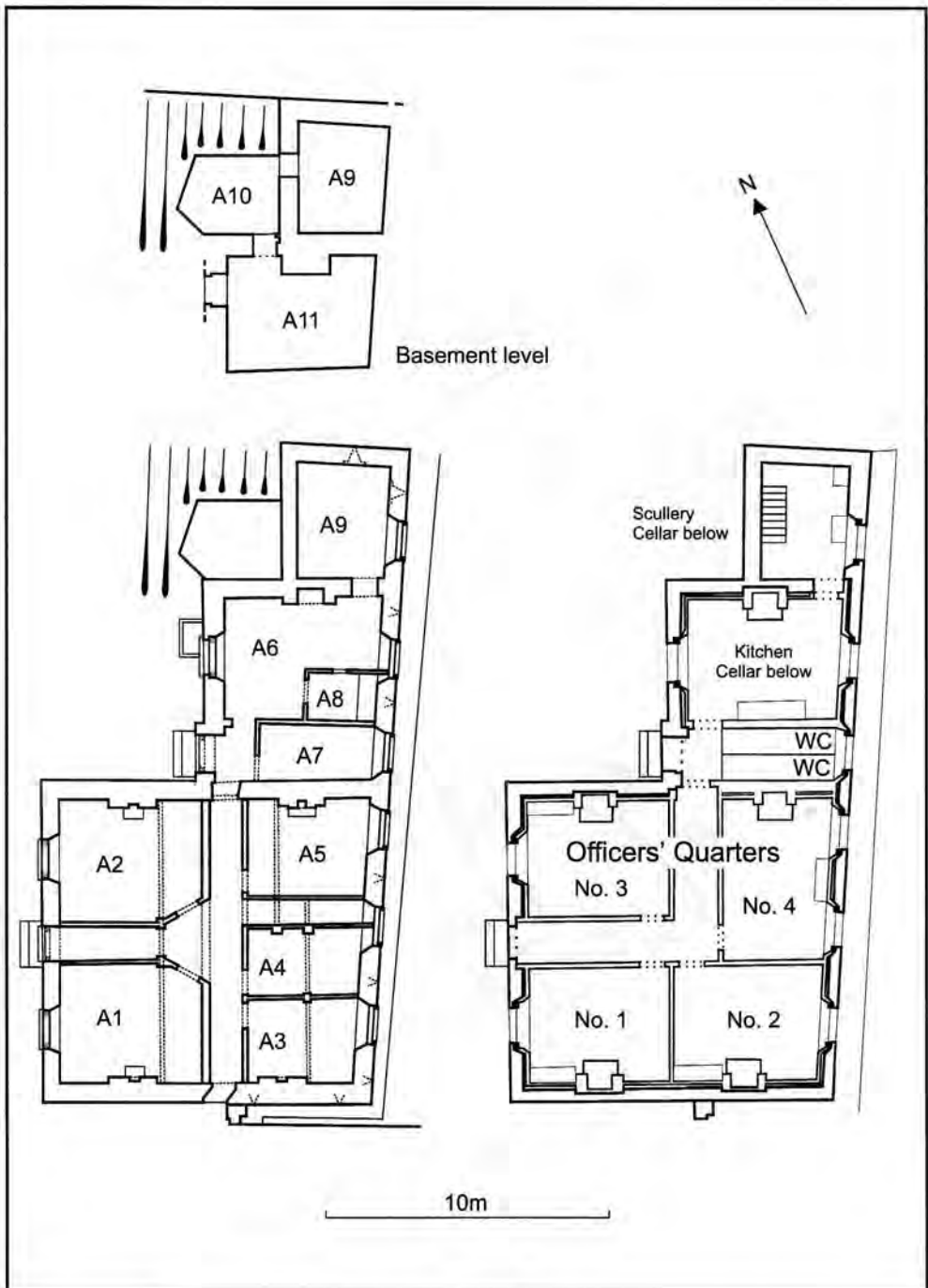


Fig. 6 Plan of Building A, from 1995 survey (left) and Victorian plans (right)

north. Only the loops in room 9 are currently visible on the inside, the others having been filled and covered by render. Ground floor level is marked on the ditch wall by a large roll moulding in white limestone and the quoins above this are similarly in pecked white limestone. An iron pipe of Second World War date collected waste water from several rooms along the wall and originally connected to building O (Fig. 4).

The roof structure was examined by Michael Heaton during its replacement in 2001–2 who recorded two phases of cast concrete roof. The lower was shuttered by close-set wooden battens supported on wrought-iron I-section girders. The upper layer contained steel mesh reinforcement and is presumably of Second World War date. The Portland stone copings had been resited to retain the upper layer except over room 9 where the coping had been cast in concrete. The first phase roof over this room was also at a different level to the rest of the building (Heaton 2002).

The southern block (rooms 1–5) has an original door to the west flanked by two large windows (Fig. 7). The doors and windows are of similar design to those overlooking the ditch with white limestone arches and window cills. The sides, however, are formed from rusticated blocks of sandstone with the exception of the window to room 2, which has sandstone blocks only at cill and arch level, with grey limestone between. There are some hints that the walling around this has been rebuilt. The edges of the limestone are finished with a distinctive combed tooling, visible in many places in the battery. Pre-war photographs show that the windows were originally glazed with two six-light hung sash frames. Both windows were reduced in size during the Second World War to accommodate 3ft square metal framed windows although the northern window has subsequently been broken out (probably vandalism). The window infilling is in brick with pebbledash exterior. The door has been similarly reduced in height and width and an area above the door has been replaced in modern split concrete blocks. Barrett (1993) states that there was a date-stone (which survive on the equivalent buildings on Steep and Flat Holm) here until replaced with a keystone to match the others but Mrs Martin's photographs do not appear to show this. They do show, however, that the door was converted to a window at this date (c. 1916), which is not the case in the (undated) SANHS photographs.

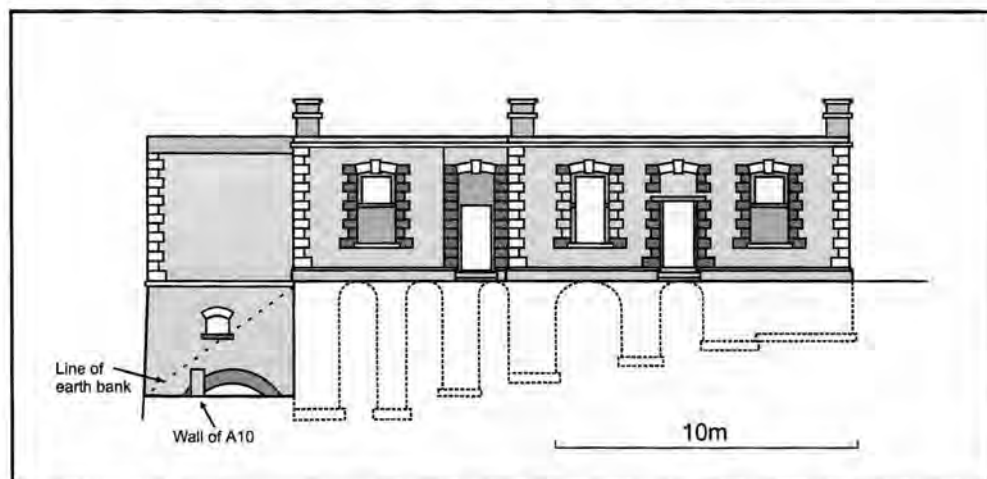


Fig. 7 West-facing elevation of Building A in 1995 with foundations from the Victorian plans

Another door has been cut through the southern wall, immediately behind the gate pillar, presumably in the Second World War period. The entrance is skewed to meet the internal corridor, which suggests that the eastern wall of rooms 1 and 2 existed when the door was cut. Also at this point externally there is a small offset in the southern wall of the block. The western

section butt joins the eastern section here but it is clear from the tooling on the rear of the gate pillar that the wall was expected to continue along the line of the eastern section. No explanation for the offset can be deduced and it does not appear on the Victorian plans.

Internally five rooms have been constructed in this part of building A. The two western rooms are substantially original but the eastern three are clearly rebuilt and do not respect the windows. There are four fireplaces, which have been reduced in size and small grates fitted, which heated the original four officers' rooms. These were arranged around an L-shaped passage linking the door with the northern part of the building.

To the north, building A narrows to allow an increased field of fire from gun G1. A skewed doorway links the corridor to room 6 but the high arch above it and the plans show that it is original, although later reduced in height. There is also an external door at this point and the junction of the walls is complicated. Externally, the rusticated sandstone surround for the doorway projects slightly and the southern side of the door is squeezed against the wall of the building producing an asymmetrical effect. The window to the north has rusticated sandstone sides with the exception of the top blocks, supporting the arch, which are pecked. Both door and window have been reduced in size during the Second World War. Internally, room 6 has been subdivided with brick walls to form room 7 and a small cubicle (8) with a lower roof within the building. There is an altered fireplace in the north wall. On the Victorian plans two WCs, with large cisterns above, occupy the position of room 7. Room 6 is shown as a kitchen with cellar below. No access to the cellar is shown and it must have been entered from the adjacent one below room 9.

The building again narrows to form room 9, which is entered only by a door from room 6. This part of the building was cellared, with a wooden floor. Two different positions for a stair are visible against the west and south walls together with a stone slab to support a fireplace. The Victorian plans show this room as a scullery with the stair to the cellar against the west wall and no fireplace. The upper room is lit only by a large window on the east and is provided with two carbine loops. The cellar has a small window to the west. This can be seen to be a later insertion, as it cuts the staircase scar (Heaton 2002), and this may be the reason for moving the position of the staircase. Neither room has been rendered internally and it seems likely that this area was not occupied during the Second World War, perhaps because the wooden floor was missing. The walls show a complex history of rebuilding and painting with, for example, a flat arch built into the top of the interior west wall with no apparent purpose. A large (*c.* 300mm diameter) iron pipe leaves the lower room and can be seen externally where it turns and runs vertically downwards. It is shown in the scullery on the Victorian plans as 'Ash Shoot'.

Externally the small window to the lower room is formed from grey limestone with combed edges. It has a red sandstone cill and one stone from the arch has been replaced with bricks. Internally it has a brick arch and splayed rubble sides. Above it, on the outside, the white limestone roll moulding starts and runs round the end of the building to the ditch elevation. Below this the rustication stops along a diagonal line indicating that the lower half of the building was originally intended to be concealed behind a continuation of the earth bank in front of gun G1 and this is the situation shown on the Victorian plans. The area is now heavily eroded but an area (Fig. 6, 10) is surrounded by a retaining wall which is butt jointed to the walls of building A. This would have held back the bank and allowed access to a door into a cellar below room 6. Above this, on the wall, is a hoist. The door has been much altered in red brick but is arched above in yellow brick similar to a large arch, formed from four courses, low in the external west wall of room 9. Both these arches appear to be shown as part of the foundations on the Victorian plans. The door gives access to a windowless cellar (A11) with, however, a hatch in the west wall, which is reached, externally, from a brick-lined shaft. The hatch has a relieving arch in yellow brick and a cast concrete lintel inside and out. The bricks forming the sides of the shaft appear to be more recent. None of these features giving external access to the

cellars are shown on the Victorian plans but there is a note dated 9/10/1896 which reads 'old test room in the basement to be R E Store' which may provide a context for some of the changes, others may relate to Second World War use. The hoist is visible on photographs taken before the First World War which indicates that the access from area A10 was present then. There is now no access to this cellar from that below room 9, although before the construction of the external door this would have been the only entrance. Externally, several holes have been dug in the area around the door to room 6 which have linked (?caused) the eroded areas and in which various concrete and stone plinths can be seen together with drainage pipes.

BUILDING B

The Victorian plans show that this building contained the barrack room, NCOs' quarters, kitchens and ablutions (Fig. 8). A sentry box is shown against the west wall at the north end. The eastern elevation over the ditch matches that of building A with eight large windows and, at the northern end, two carbine loops of internal type. The southern end of the building was damaged in the explosion of 1900, rebuilt in the Second World War and demolished, together with the entire roof in about 1985.

Room B1 is set back from the main building line and entered, from the west, by a tall door with rusticated sandstone sides and a white limestone arch. The interior walls are of rendered rubble and the east wall contains a loop of internal type. Internally this loop type comprises a sandstone-lined aperture 28" (711 mm) square which tapers to a vertical rectangular slot on the outside wall 12" x 4" (305 x 102mm). The surviving example in room A9 has a wooden surround that presumably held a door. Externally the loops appear within three sandstone blocks, two large at top and bottom and one narrower (which is in fact two blocks either side of the loop). The room is shown as 'pump room' on the Victorian plans and pipes are shown connecting to the underground reservoir (*see below*).

Adjacent to the entrance to room 1 there is another door with red sandstone sides leading to a passage. It has a low concrete lintel but there is no sign of the Victorian arched door above this, nor any obvious sign that this area has been rebuilt. A door is shown in this position on the Victorian plans. Inside, rooms B2 and B3 open off the passage and are separated by a brick partition that does not respect the east window. The Victorian plans show one large room ('guard room') here running the full width of the building. The room was lit by one window over the ditch and a large window with red pecked sandstone edges to the west, which has been reduced in size during the Second World War. This window matches those in building A rather than the rest of those on this side of building B, which are not so tall. Internally the walls are lined in brick, which was originally lime-washed, but has subsequently been rendered. Between the door and the window this is in poor condition with many bricks missing.

Room B4 lies beyond, through a doorway in a Second World War partition which replaced a Victorian wall. It has been altered to provide a kitchen for the canteen beyond but is shown on the Victorian plans as the NCOs' room entered from a passage along the west wall. There is a window overlooking the ditch and a small window with grey limestone comb-edge surround, and white limestone cill, to the west (originally in the passage). Despite the small size of this window, it was reduced in the Second World War. There is a large fireplace in the north wall and a large serving hatch, with the remains of a steel roller shutter, at the east end of the south wall. Examination of the brickwork in room B5 suggests that this hatch replaced a narrower doorway (although one is not shown on the Victorian plan). The walls are rendered over lime-washed brick lining and the render painted white above and deep red below. The render has fallen in several places and, by the east window, concrete blocks have replaced the brickwork. The south-west corner is occupied by the vestibule to room B5 but only the east wall of this is Victorian.

There is now no access from room B4 to room B5, which is entered from the outside. The doorway has grey limestone comb-edge sides and a white limestone arch with the same details and at the same height as the windows to the south. Room B5 is entered by turning right through a door with a shallow brick arch that has later been reduced in width and height. The room is lit by five windows overlooking the ditch and four (originally five) facing west which have white limestone cills and arches but comb-edge limestone sides. The walls are brick-lined and lime-washed with no sign of render, nor of the pecking that others have received to provide a key. In the centre of the north and south walls are fireplaces with semi-circular bases, Second World War adaptations of the original. At the southern end there is an original doorway to the east of the fireplace, which has been reduced in width and height. The brickwork on the other side of the fireplace shows evidence of a matching door (which is not, however, shown on the Victorian plans). At the southern end of the western wall is an external door that has been adapted from an original window. Evidence for this can be seen where the door cuts the plinth of the building which has been repaired in concrete although, curiously, the comb-edge detail of the window has been carefully reproduced lower on the door edge. The Victorian plans show this room as 'BARRACK ROOM For 20 Men' and the positions of the soldiers' folding beds are shown, two between each pair of windows.

Room B6 is entered from room B5 and lit by one window overlooking the ditch and two small windows to the west. These match that in room B4 and have been reduced in size. The walls are rendered and painted as room B4 but where the render has fallen it can be seen that the north wall is brick and the west wall stone rubble. Both were originally lime-washed. The south wall is missing and a concrete beam crosses the building at this point supported on brick-built piers. Early photographs show that the building narrowed at this point with a window, matching the other large ones on the west side of building B, at the west end of the south wall. The Victorian plans show the northern half of this room as a passage giving access to three rooms. The western is shown as a 'lavatory', the small central room as 'night urinal' and the eastern room as 'bath room'.

Beyond room B6 the narrower part of the building was destroyed by the explosion but during the Second World War a building (B7) was built on a concrete plinth to the full width of the building to the north. The Victorian plans show the barrack kitchen entered by a door on the west with a window to the north and another centrally in the south wall. At some date subsequent to the original drawing of the Victorian plan an extension was added southwards, blocking the window, with a door to the west and a window to the south. It is described as 'washroom' and a large boiler shown in the north-east corner.

Nothing remains of the Second World War building but photographs in the Somerset SMR, taken at the end of 1975, and examination of the scars on the plinth show that it was constructed of concrete rendered brick and had a door to the west immediately south of room B6. To the south of this were two small windows and the southern end incorporated a veranda. Internally the building comprised three rooms and an additional window survives, cut through the wall overlooking the ditch. A plan in van der Bijl (2000, map 9), presumably based on interviews with surviving soldiers, shows this as two rooms; a bar and store room attached to the NAAFI in room B6. Rooms B2 and B3 are described as pantries.

The curtain wall along the edge of the ditch has been rebuilt for most of its length south of building B7 but the slight remains of two carbine loops of external type (*see below*) can be observed towards the northern end, one of which survives on the outside. The wall would originally have stood to the same height as that of buildings B and F, in the early photographs it is shown at about three-quarters of that and it is currently only about 1.2m high. The Victorian plans (Fig. 9) show a building here in the same style as that used for the washroom indicating a later addition. This was the laboratory where batches of gunpowder were tested for strength

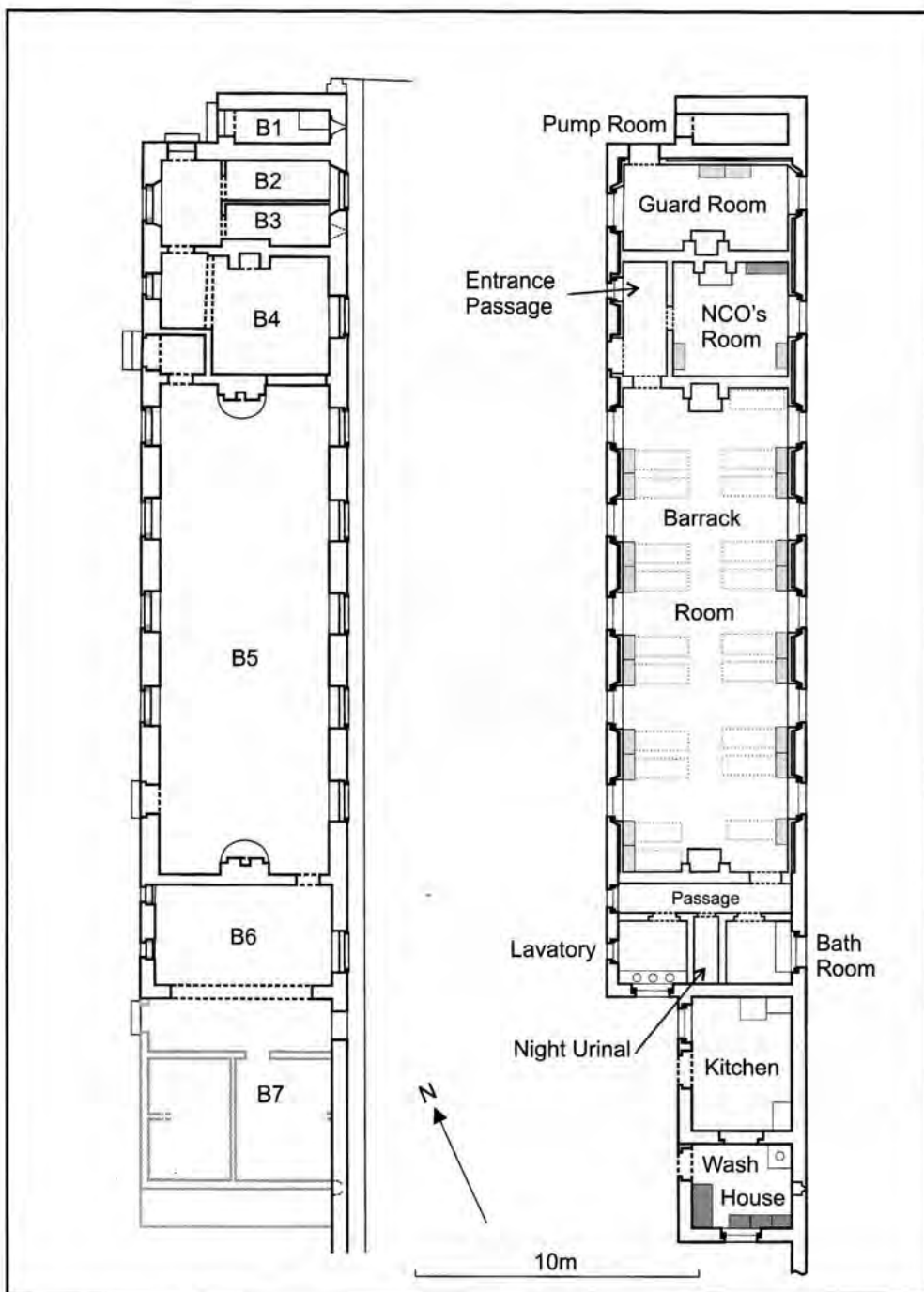


Fig. 8 Plan of Building B, from 1995 survey (left) and Victorian plans (right)

and also, in small batteries, transferred into the shells from storage barrels. The complex safety arrangements required are shown in the plan, with doors at either end of the western wall opening into lobbies where clothes would be changed before passing a barrier into the main rooms.

BUILDING F

This building, although walled on three sides by Victorian masonry, was built as a latrine block in the Second World War (Figs 4 and 9). Two sides of the building (the north and east) are formed from the curtain wall of the battery and these are pierced by carbine loops of external type. The inside shows the heavy rustication typical of external elevations. The external type loops are entirely constructed from grey limestone with none of the sandstone detailing seen on the internal type. From the inside they appear as an aperture 18" (457mm) wide by 27" (686mm) high to about half wall depth. The loop itself is 16" (406mm) tall by 3" (76mm) wide and chamfered internally on each side. Four of these occupy the north wall providing enfilading fire along the ditch. Two others look across the ditch. The area is shown, with walls to west and south and a door in the current position, on the Victorian plan as 'coal store'. It is not clear if it was originally roofed but some early photographs show the top of a pitched roof here.

The current south wall of the building is built of salvaged limestone blocks with four small windows with concrete lintels and cills. A urinal is situated in the south-west corner, along the west wall; the other three windows originally lit cubicles. The west wall is Victorian but the roof is formed from a concrete slab. On the exterior of the west wall the scars of another building are evident in the absence of rustication (which appears to have been cut back from the relevant area) and the presence of two corbels, which supported the roof. This building is shown as an addition to the original plans (Fig. 9), with a wide door to the west and windows to the north and south. It is annotated 'Artillery Store' which has been crossed out and replaced by 'Field Forge'. The forge itself is shown in the south-east corner and is known from documents to have been present in 1891 (David Moore, pers comm., quoting 'Details of equipment of Her Majesty's army; part 2; section XI; B-garrison artillery. War Office 1891').

BUILDING H

This building was one of the original latrines for the battery. It is butt jointed to the curtain wall (although shown as an original feature on the Victorian plans) and contained a urinal against this wall and three cubicles (Figs 4 and 9). The building is currently unroofed but the west part appears to have originally been roofed with a slatted arrangement to aid ventilation. Cast iron supports for this survive in the wall. It is likely that the rest of the building was open to the sky. There is a loop of external type in the curtain wall; the slate back of the urinal was in two parts to accommodate this. The other walls are in typical heavily rusticated grey limestone with comb-edge details. On the Victorian plan the northern two cubicles are annotated 'men' and shown separated from the southern, annotated 'women'.

WALL W

The curtain wall continues with another loop until an offset allows the provision of a loop to provide enfilading fire down the ditch to the south. At this point the curtain is joined by a wall retaining an earth bank which formed the seaward protection of the battery (Figs 4 and 9). Parts of this bank follow the original contour of the Down and living rock can be seen in places. The wall has a parapet walk, 1.2m wide, 1m below the top and 1.5m above ground level inside the battery.

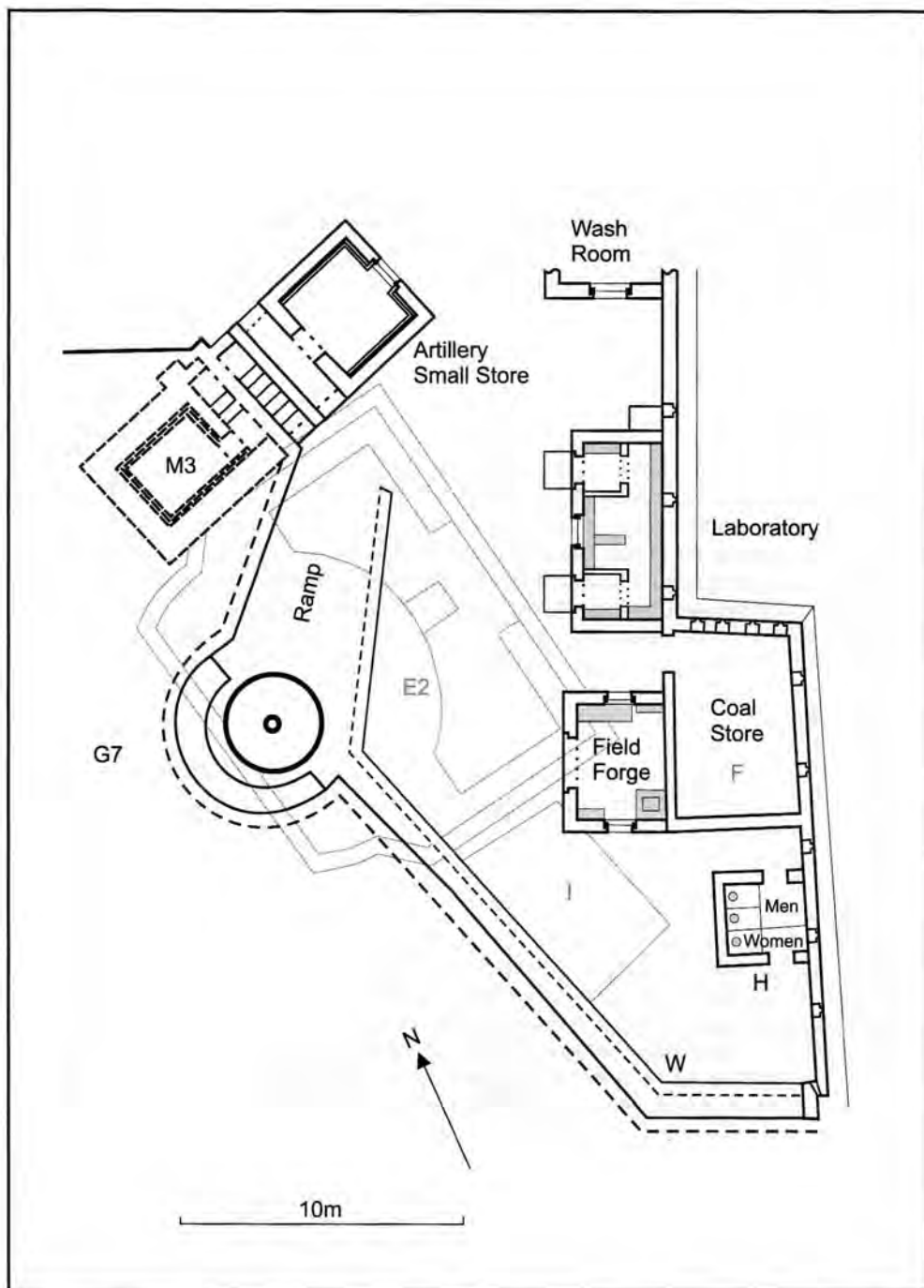


Fig. 9 Plan of the southern end of the battery from Victorian plans showing buildings destroyed in the explosion of 1900 and by the construction of Second World War gun house E2 (grey)

GUN POSITION G1

Returning to the northern end of the battery, one RML was mounted outside building A on a dwarf-traversing platform with 'C' pivot; more details of the armament can be found in Barrett (1993). The platform pivoted on an obsolete cannon (mounted vertically) and at each end racer wheels ran around a circular rail. The gun fired over a low curved parapet and would have covered most of Weston Bay. There is a locker for ready-use ammunition to the south ('Shell Recess No. 1' on the Victorian plans) and beyond that the retaining wall rises over a round-headed doorway leading to passage P1. Three iron rings are set into the parapet wall to which ropes would have been attached for mounting the gun (it would have been traversed by levering under the racer wheels).

PASSAGE P1

Beyond the doorway a passage, with a vaulted brick roof and stone walls, descends by seven steps and then runs level for nearly 7m. At the far end a low arch in the south side leads to a slate floor set in the upper part of passage P2. There was originally a cast iron grille along the east edge of the floor but this has been broken out at some time and a concrete block wall inserted for safety. To the south a window leads into the upper part of magazine M. The purpose of this passage was to provide access to a light placed in the window, illuminating, but completely separate from, the magazine. The end of the main passage is blocked by a stone wall which is not keyed into the side walls and it is possible that the passage continued, although there does not seem to be room for a further magazine at the end, nor any sign that it could have emerged at position G2. The passage is shown terminating here on the Victorian plans.

PASSAGE P2, MAGAZINE M AND ROOM D

To the south of the door to passage P1 a stair descends surrounded by a low protective wall. At the foot of the stair are the entrances to room D and passage P2 and in the wall above is a corbel to support a hoist (Fig. 4). Passage P2 is similar in construction to P1 and runs for about 7m, gradually increasing in height. At the far end the slate floor, described above, crosses it and below this a door leads south into magazine M, which measures 4.6 x 5.5m. It is brick-lined and vaulted with several vents. The Victorian plans show this as 'Main Magazine' with a capacity of 114 barrels of powder or 866 of the aluminium cylinders that held filled canvas cartridges. Externally the magazine is earth covered which was originally retained by a continuation of the wall along the east side. This wall was removed in the Second World War as it is shown on earlier photographs and a small exploratory excavation showed that the coal which was stored here ran over the foundations (Webster 2000). The photographs also show a short stretch of low wall in front of the west end of the south wall and another was located along the south side of the west wall during recent renovation works. These walls are not shown on the Victorian plans and their function is unclear. The retaining wall was rebuilt to stabilise the mound in 2001.

Room D is entered by a door, at the foot of the stairs, with a shallow arch and is lit by a window to the south of the door. The detailing of these openings, and of the round-headed entrance to passage P2, is in grey limestone with a comb-edge. Both door and window have been reduced in size during the Second World War. Inside the room is barrel-vaulted in brick and provided with several vents. The room is annotated 'Shifting Room' on the Victorian plan. This should be where men changed into magazine clothing and materials crossed from magazine conditions to outside but it is not clear how this operated at Brea as there is only one entrance to the room.

The historic graffiti, found mainly in room D and the passages, was recorded by Heaton during the renovation works (Heaton 2002).

BUILDING C

This Second World War building survives as a concrete foundation platform but photographs and the wall scars indicate its form (Fig. 4). It was single storey with brick-walls rendered in concrete and a flat roof. There was a single door facing the door to building A. This led to a passage and thence to three rooms each with a fireplace. There were three windows in the west wall but none in the south. The building survived until at least the mid 1970s.

RML GUN POSITION G2

One RML was mounted here on an 'A' pivot (Fig. 4). This mounting was based around two semi-circular racers and allowed the gun to pivot around the muzzle, which therefore required only a small opening through the parapet. A stone half-drum 1.3m high, over which the gun fired, forms the centre of the position. From this retaining walls rise to a height of 1.85m supporting a protective bank of earth. There is a shell locker (No. 2) in the north wall and two iron rings for mounting the gun. During the Second World War the area was used as a coal store and remains of this can be seen where the grass has eroded.

EXPENSE MAGAZINE M1

A short flight of stairs leads to the entrance of this magazine and a further flight to the magazine itself (Fig. 4). One of the upper stairs is cut away to allow the provision of a window to light the lower stairs. The magazine is similar to M, although smaller (3 x 2.4m). The Victorian plans show this as 'Expense Magazine' and state that it could hold 32 barrels or 152 cylinders. The expense magazines would be under magazine conditions (only entered wearing special clothing etc.) and it is likely that the space at the bottom of the steps acted as the shifting lobby.

RML GUN POSITION G3

This was a mirror image of G2 but was partly buried by the construction of Second World War gun house E1 (Fig. 4). Construction of a viewing platform in 2001 showed that the whole of the central drum survives.

SIX INCH GUN HOUSE E1

This is a large concrete structure of a type similar to that known from other Second World War coast artillery positions (Fig. 4). A wall 0.6m thick and 3.4m high surrounds three sides. At the front a lower wall encloses a platform on which the gun was mounted. In front of this is a concrete apron studded with stones and also iron rings to facilitate mounting of the guns. The gun was an ex-naval 6" weapon, which was fixed to the platform using a ring of bolts. The rear of the platform is curved and steps run down into a well at the back of the emplacement. The curving rear wall of the platform contains six lockers and another eight are located around the well, each originally with two steel doors. At the rear a wide door leads to a passage through a single storey building. To either side of the passage is a small room entered through a door with an adjacent window into the passage. Each room was provided with a stove and provided accommodation for the gun crew. A thick cast-concrete flat roof covers both rooms and passage.

A roof constructed of so-called 'plastic armour', a mixture of tar and stones, originally covered the whole structure. The roof seems not to be part of the original design and was supported on a series of vertically set H-section girders with a gap of about 0.25m from the wall top. It is clear that the supports were concreted into holes cut in the main structure with the exception of the two adjacent to the top of the steps, which appear to be set in the main mass of concrete. This is also the case where the girders penetrate the crew rooms, indicating that these were constructed after the roof was in place. The roof was taken off in about 1976 as a safety measure.

EXPENSE MAGAZINE M2

This appears at first sight to be a mirror image of M1 and it is identical in dimensions (Fig. 4). However it is clear from early photographs, and from an examination of the structure, that the steps down were originally roofed over. The springing for a round-headed arch remains at the north end and a low, round-topped wall below this. The early photographs show that this structure continued to the east with further passages, rooms and magazines. The Victorian plans show a cross passage next to the magazine steps and the rest of the building as 'Artillery Store'. The cross passage is annotated 'Shell Recess - 5 - 6' showing that it took the place of the lockers provided for other guns. The plans show that the artillery store was entered by a square-headed door at the east end and it appears to have a door to the shell recess that is shown as subsequently blocked. Two small windows are shown in the north side, as is a flat earth roof. A photograph in Weston Museum (reproduced in van der Bijl 2000, 79) shows the north side of the building with the windows and with a short stretch of low wall, identical to those known from around the main magazine. Like those, this one is not shown on the Victorian plan and its function is unknown. One of the SANHS slides (Fig. 10) shows the building from the south and appears to show details contradictory to those on the plans. The East end is shown unroofed and the south-east corner is missing and replaced by a flowerbed incorporating a chimney pot. The south wall, however, ends vertically with combed-edge detail indicating that this is an external corner or door edge. The remains of the east wall show a rebate, probably for the door shown on the plans, although measurements from the photographs show a different length for the building. No explanation for this can be offered.



Fig. 10 The south side of the artillery store. The racer rail for the 'A' pivot G6 can be seen on the left; photo SANHS collection lantern slide

The building was presumably removed in the Second World War. On the top of the surviving magazine are the remains of a square vent of a type known on Steep Holm. To the north a diagonal wall survives, although partly buried, which formed part of an 'A'-pivot gun position (G6). To the south the equivalent wall is missing but the rubble core is visible protruding from the earth.

CAVE L

In the side of the natural gully is a small cave or tunnel (Fig. 4). Within this is a small stone-lined drain, leading from magazine M2. This leaves the cave, crosses the end of the gully, where it has been lost to erosion and then discharges through a low wall which crosses the promontory between this gully and the next. It is not clear why this drain was carried for such a distance rather than discharging directly into the gully. No other such drains have been located. The Victorian plans show drains from the magazines but in an apparently schematic way.

WALL K

A low masonry wall revets the side of the gully at this point supporting the path down to the end of the headland.

SIX INCH GUN HOUSE E2

This is almost identical to E1 but the mounting for the gun is slightly different suggesting a different model of gun (Figs 4, 9 and 11). There was no room for the crew room at the rear and it was provided to one side (building I).



Fig. 11 Interior of Second World War gun house E2 showing the attachment for the naval 6-inch gun and ammunition lockers. The other gun house (E1) can be seen beyond with its crew rooms to the rear and the remains of the supports for the plastic armour roof; photo Somerset County Council

BUILDING I

This was the crew room for emplacement E2 (Figs 4 and 9). It is entered by a door in the east wall, with a window to either side. The walls and roof are of cast concrete and there was a single stove.

THE GATE AND BRIDGE Q

The battery is entered across a Second World War concrete bridge some 10m long and 2.8m wide (Fig. 4). The bridge is supported on concrete pillars which are concealed, as much of the area under the bridge has been walled in leaving only a passage 2m wide at the eastern end. There are two doors in the south wall with concrete lintels and a window in the north. The interior is partly filled with rubble. To the south of the bridge a flight of Second World War concrete steps, supported on a brick wall, gives access into the ditch. There is a door in the north wall giving access to the space under the steps.

Where the bridge joins the battery there are two white limestone gate piers and at the base of these are two iron pivots that suggest an original drawbridge, although there is no other evidence to suggest this. The Victorian plans and early photographs show an iron bridge with wooden decking, the plans annotated 'Bridge to carry 2 tons'. No indication is given of any access to the ditch.

STRUCTURES IN THE DITCH

To the south of the bridge lie the bases of three Nissen huts (N1-3) and the remains of a concrete engine house (EH1). This contains evidence of the bases of four generators for providing electric power to the guns and searchlights (Fig. 4). Only the east wall survives to roof height, the rest having been demolished sometime after 1981. This wall retains a window and there was a door at the north end. At the northern end of the ditch is a sewage interceptor tank (building O).

OTHER STRUCTURES

The battery was provided with two Coast Artillery Search-Lights, which provided sea-level illumination of targets (Fig. 1). One (CASL1) lies near the southern end of the ditch and is the better preserved. It consists of a rear room and a front area covered by a cantilevered concrete roof. This contained the lamp, which was enclosed by a system of shutters that could be opened in the appropriate direction. The other CASL lies on the extreme end of the headland and was connected by a concrete path and bridge. These have been broken, probably by wave action. The cantilevered roof has also been flipped back to lie on the rear part of the structure.

Above CASL1 lay the battery observation post (BOP) with a good view over the Bristol Channel, unobstructed by the structures lower down. This was formed of two floors of similar layout; each had two rest rooms at the back with a larger observation room at the front. These had a large unglazed window running the whole width of the building and round the side. Originally this could be closed by hinged iron shutters which, when open, rested on a series of angle irons projecting from the building. One floor held the range finder for this battery and the other housed the Fire Commander who also controlled Steep Holm South.

Adjacent to the BOP, and also on either side of the bridge across the ditch are the concrete bases of Nissen huts (N4-6). N6 is probably the Commanding Officer's office and pay office (Stevens, pers comm). A further twelve (N7-18) lie in the base of the quarry and eight (N19-26) to the south. These formed the sleeping accommodation and ablutions for the men and sergeants. They have obscured a limekiln shown on the OS map of 1903, which is likely to have

been built to provide lime for the battery or harbour scheme. Two more Nissen hut bases (N27, 28) survive by the junction of the track to the quarry, adjacent to a vehicle inspection pit (VIP). These were the Quartermaster's and Master Gunner's Offices (Stevens, pers comm). To the south of these lie two brick-lined structures (WT1, 2), half buried and embanked around. The upper (WT1) contains the remains of a steel tank and both are likely to have stored water or fuel for the generators. WT2 is missing the wall adjacent to the track.

On the edge of the ditch, opposite the south end of the battery is a concrete pillar, originally with a brick surrounding wall. This mounted the Depression Range Finder known in 1891 when it is recorded as a Mark 1a instrument (David Moore, pers comm, quoting 'Details of Equipment of Her Majesty's Army; part 2; section XI; B-Garrison Artillery', War Office 1891).

The survey by RCHME also identified the remains of cottages, probably built for those in charge of the Victorian construction.

On the headland below the guns lie the remains of an iron rail. This was constructed by the Admiralty Department of Miscellaneous Weapons to test a rocket-launched weapon. The rockets for launching the weapon proved very unstable and testing was transferred to Middle Hope Cove, to the north of Weston, where the launch trolley could be stopped in a bank of sand (Hawkins 1996, 112).

Newspaper reports suggest that another engine house was demolished in 1958, supposedly at the head of the steps into the quarry (press cutting in Weston super Mare Museum 25/2177). However, there is no sign of such a structure on aerial photographs dating to 1946 (3G/TUD/UK15/21 5235, in NMR).

OTHER DOCUMENTED FEATURES

SOURCES

The discovery of the Victorian plans has greatly simplified the reconstruction of structures which were either destroyed by the explosion or during the Second World War. These are complemented by early photographs. Three sources were consulted; the Somerset Archaeological and Natural History Society Library (SANHS), Weston super Mare Museum (WM) and the National Monuments Record (NMR). The SANHS Library contains six lantern slides which are undated but by comparison to other dated photographs would appear to have been taken before the First World War. It is clear that two, at least, were taken on different occasions. Weston Museum contains 22 postcards (some duplicates) and a photograph of unknown origin. Some of the postcards have been franked and all appear to date to before the First World War. The family photographs supplied by Mrs Martin and Mr Everett provided much detail in the background. The NMR was able to provide aerial photographs of Second World War date.

BUILDING F

A building is shown on the 1903 OS map in the position of the Field Forge although it appears to run east-west. There is an open yard to the east (where building F now lies), which runs up part of the north side of the structure. The area is locally known as the stables and it may be that this was its post-military use, the Field Forge building having been replaced, perhaps because of damage in the explosion. The photographs are unclear in this area with one (WM 1983/594) appearing to show the slated roof of a small structure in this area whilst another (WM 1988/914) shows the roof of larger building in the location shown on the map. This may indicate another change in the area as a copy of the first postcard was posted in 1910 and the second in 1933.

WALL

The 1903 map appears to show another short length of wall further down the cliff from Wall W but this is not visible today.

RML GUN POSITION G4

The Victorian plans show an emplacement for a 'C' pivot RML approached by a ramp from the rear (Fig. 5). Between this and the wall next to G3 there appears to be an addition to the plan showing an earth-covered stone structure containing 'Shell Recess No. 3'. Number 4 is shown in the wall behind it. From the configuration this must be the position shown in the SANHS lantern slide (Fig. 12). The slide shows a 'C' pivot with an internal geared track for traversing the gun – which was not used for 7-inch RMLs. The explanation for this appears to lie in experiments reported to have taken place on 14/8/1886 with a gun carriage arranged for depression under-cover loading. One of the points noted from this was that the use of iron-shod levers for traversing was clumsy and a gear would be better (WO 33/47). In reply to this point it was noted: 'Traversing gear would be desirable but up to the present it has never been fitted to 7-inch guns except experimentally' (WO 33/48) This suggests that the gearing may have been added for further experiments.



Fig. 12 Gun position G4 in the early 20th century showing the experimental alterations to the 'C' pivot. The ground has been lowered outside the racer rail, revealing the foundations of the parapet wall, and a toothed ring added for traversing the gun; photo SANHS collection

EXPENSE SHELL STORE

Between G4 and G5 lay the expense shell store containing filled shells (Fig. 5). This was a magazine-like structure with a barrel-vaulted roof with a thick earth covering. It was entered from the rear by an arched doorway with keystone similar to those in the accommodation

buildings, inside which was a flight of steps down to the store. Shell stores were not operated under magazine conditions and there was therefore no need for a shifting lobby (David Moore, pers comm.)

RML GUN POSITIONS G5 AND G6

These were a pair of guns mounted on 'A' pivots on either side of magazine M2 (Fig. 5). They shared the cross passage next to the artillery store (see M2 above) for their shell storage and were not provided with lockers.

EXPENSE MAGAZINE M3 AND ARTILLERY SMALL STORE

This magazine was the one destroyed in the explosion and is shown on the Victorian plans as identical to M2 (Fig. 9). To the rear the plan shows a passage, entered from the south and the 'Artillery Small Store'. This was entered from the passage and had a four-light window in the opposite wall.

RML GUN POSITION G7

The Victorian plan shows the final 'C' pivot at this location approached up a ramp from next to the artillery small store (Fig. 9). The top of the ramp joined the step behind wall W where there was a locker (not numbered on the plan). It is interesting to note that the Second World War guns were mounted almost directly above this position and G4 suggesting that both were clearly visible at the time.

WATER TANK

It has long been known that there was an underground water store at Brean, Barrett (1993, 6) describing it as collecting water from the barracks roof and indicating (*ibid.*, 48, sketch plan) that it held 42,000 gallons. The Victorian plans agree with this figure and show it located to the west of the barrack room with its south-west corner under the Artillery Store (Fig. 5). At the south end is shown a filter with three chambers, the bottom of each connected to the top of the next. At the north end is a shaft, annotated 'Pump Hole' connected by a pipe to the 'Pump Room' at the north end of building B. There are no pipes shown connecting to the filter and the drains for the barracks roof are shown leading to the main drain in the ditch. It remains unclear how water was collected.

CONCLUSION

The survey of Breandown Battery has provided new information on the site and indicated that archaeological survey has a part to play in interpreting such modern structures. When this report was first drafted (Webster 1996) the Victorian plans had not been catalogued in the PRO and a large part of the report was taken up with reconstructing an original plan. The report concluded, 'interpretation is hampered by the lack of documentary evidence but it is always possible that this may be discovered which will provide an interesting test of the interpretations advanced here'. It is gratifying to record that this was proved to be remarkably accurate as to the arrangement of the guns and the internal layout of the main buildings. The process of the survey and the initial interpretations have been published to illustrate the methodology employed (Webster and Woodhall forthcoming).

ACKNOWLEDGEMENTS

The survey was carried out as part of a joint project between Somerset County Council (SCC), English Heritage (EH), The Royal Commission on the Historical Monuments of England (RCHME), The National Trust (NT) and the owners of the battery, Sedgemoor District Council (SDC). Somerset Land Survey (part of SCC) carried out the initial survey of the battery with archaeological detail and interpretation added by the author, assisted by David Faulkner, a student at Bournemouth University, and Richard Brunning (SCC). Buildings A and B were recorded architecturally by Roger Hagley (SCC) whose drawings provide the basis for the plans and elevations reproduced here. Hazel Riley and Phil Newman of RCHME tied in the battery survey to their overall plan of the Down and the National Grid. They also provided the co-ordinates of two stretches of wall missed by the initial survey.

David Bromwich of SANHS and Sharon Poole of Woodspring Museum provided the early photographic evidence from their collections. John Barrett provided prompt and helpful advice, both by post and during a fortuitous meeting on a boat journey to Steep Holm.

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Steven Membery assisted with the excavation in 2000 under extremely wet conditions.

Michael Heaton carried out extensive monitoring of the recent stabilisation and building works which resulted in much new information, particularly on the roof structure and changes of build evident in room A9.

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REFERENCES

PRIMARY SOURCES (all in the Public Record Office, Kew)

- CAB 7/6 Report on a Conference on Armaments. War Office, Jan 1899.
 CAB 18/19 Armaments Approved or Proposed. War Office, 1898 onwards.
 WO 33/10 Revised report on the Coast and Coast Defences of the United Kingdom by Lt Col Spencer Westmacott RE, 1861.
 WO 33/47 Abstracts of proceedings of department of Director of Artillery for quarter ending 30th Sept 1886. Minute 43,341. Carriage, Garrison, Iron Sliding and Platform Iron with Projectile Lift 5ft. Muzzle Loading 7-inch 7-tons 6ft. Parapet C experimental allowing loading and elevating under cover.
 WO 33/48 Abstracts of Public Record Proceedings of the Department of the Director of Artillery for the Quarter Ending 30th September 1887. Minute 43,941. Carriage, Garrison, Iron with Public Record Projectile Lift 5ft. Muzzle Loading 7-inch 7-tons 6ft. Parapet C experimental allowing loading and elevating under cover.
 WO 78/4938 Severn Defences: fourteen plans, sections, elevations, sectional elevations, charts, isometrical projections, etc. of the batteries in the Severn defence system; Lavernock Bty., Steep Holme Bty., Flat Holme Bty., Well Bty., Breandown Bty., Laboratory Bty. 1883–1941.
 WO 166/3937 930 Port Construction Coy, RE. War Diary July–December 1941.
 WO 166/14955 Fixed Defences Severn. War Diary Jan–April 1944.
 WO 196/31 Ports and harbours of the Western District. Revision of coast defence armaments prior to June 1894.

- WO 199/523 Coast Batteries RA, formation of.
 WO 199/525 Use of Home Guard in Coast Artillery.
 WO 199/526 Reductions in Coast Artillery pt 2.
 WO 199/941 Tours and visits to coastal defences. 1941 Mar, Apr.
 WO 199/1638 Coastal defence 1940–.
 WO 396/5 Royal Artillery and Royal Engineers Works Committee Reports No 136.

SECONDARY SOURCES

- Barrett, J. H., 1993. *A History of Maritime Forts in the Bristol Channel 1866-1900*, 2nd edn., privately published.
- CEI, 1993. Brean Down Fort: feasibility study, unpub report Centre for Environmental Interpretation, Manchester Metropolitan University.
- Hawkins, M., 1996. *Somerset at War*, Bridgwater.
- Heaton, M., 2002. Brean Fort: archaeological observations during consolidation works, June 2000–November 2001, unpub report in Somerset SMR.
- Legg, R., 1991. *Steep Holm at War*, Wincanton.
- Rendell S. and Rendell, J., 1993. *Steep Holm*. Stroud.
- Saunders, A., 1989. *Fortress Britain*, Liphook.
- van der Bijl, N., 2000. *Brean Down Fort*, Bridgwater.
- Webster, C.J., 1996. An Initial Archaeological Survey of Breandown Battery, unpub Somerset County Council report.
- Webster, C. J., 2000. Brean Down excavation 2000, unpub Somerset County Council report in Somerset SMR.
- Webster, C. J. and Woodhall, A., forthcoming. 'Breandown Battery, Somerset – survey, interpretation and presentation to the public', *Fort*.