



ENGLISH HERITAGE

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battery and
Second World War training school
of naval anti-aircraft gunnery

Paul Pattison

SURVEY REPORT

ARCHAEOLOGICAL INVESTIGATION SERIES

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SECOND WORLD WAR TRAINING SCHOOL OF NAVAL ANTI-AIRCRAFT
GUNNERY**

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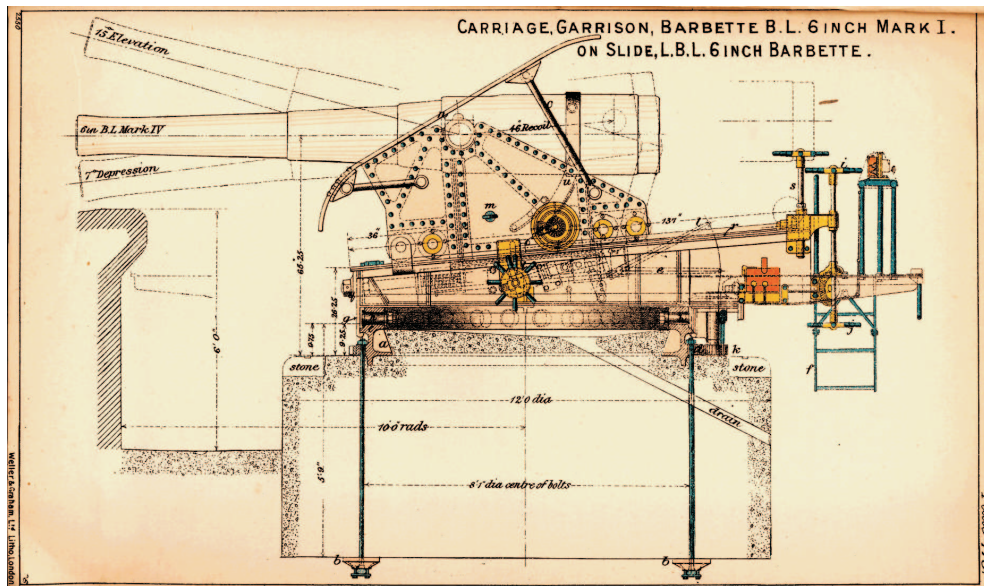
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Sectional drawing of a 6-inch BL Mk I gun on a barbette mounting, dated 1907, of the type installed in the Practice Battery at Barton's Point in 1906 (from Treatise on Military Carriages, War Office 1911)



CONTENTS

	List of figures	i
	Abbreviations used in the text	iii
	Glossary	iv
1	Introduction	1
2	The Coast Artillery Battery	3
	Historical Summary 1889-1913	3
	Remains of the Coast Artillery Battery	7
3	Military Use of the Battery Site 1914-1945	21
	Historical Summary:	
	The First World War 1914-19	21
	The Defence Electric Light Installation 1932-45	21
	Remains of the period 1914-45	23
4	The School of Naval Anti-Aircraft Gunnery	25
	Historical Summary 1937-61	25
	The Remains of the School of Naval Anti-Aircraft Gunnery	26
5	Discussion	37
6	Survey and Research Methods	39
7	Acknowledgements	39
8	Bibliography and Sources	40

LIST OF FIGURES

Frontispiece Sectional drawing of a 6-inch BL Mk I gun on a barbette mounting

1	Location map	1
2	The Sheerness Defences <i>c</i> 1900	2
3	Sectional drawing of a 6-inch BL gun on an HP mounting, dated 1911	3
4	Record Plan of Barton's Point Battery, dated 1907	4
5	Record drawings of PF cells, dated 1907	5
6	Record drawings of the 5-inch Practice Battery, dated 1907	6



7	Record drawings of the 6-inch Practice Battery, dated 1907	6
8	Barton's Point; plan showing the surviving features of the coast artillery battery	8
9	Barton's Point; plan of the surviving elements of the 6-inch gun pits and magazine	10
10	Barton's Point; plan of the surviving elements of the 9.2-inch gun pits and magazine	14
11	The entrance façade to the 9.2-inch magazine	15
12	Plan showing the surviving elements of the QF gun platforms	17
13	Sectional drawing of a 12-pdr QF gun, dated 1911	17
14	The 12-pdr QF gun platform	18
15	Plan showing magazine 3	19
16	The entrance façade of magazine 3	19
17	First World War field fortifications around Barton's Point, 1919	21
18	Proposal plan for a DEL installation at Barton's Point, dated 1932	22
19	Section of DEL No 2, dated 1932	22
20	Plan showing the remains of the two DELs	23
21	Plan showing re-use of the 6-inch magazine for the DEL installation	24
22	Plan showing the surviving structures of the naval AA training school	27
23	Plan showing the use of No IV 9.2-inch gun pit as an engine room for the naval AA training school	28
24	A naval building inserted to the rear of the old No II 6-inch gun pit	30
25	Plan of the naval alterations and additions to the old No II 6-inch gun pit and magazine	30
26	The naval AA range control tower	32
27	The naval offices	33
28	The naval mess hall	33
29	Plan showing positions of extant gun holdfasts	34



ABBREVIATIONS USED IN THE TEXT

AA	anti-aircraft
BL	breech-loading
DEL	defence electric light
ELDS	electric light directing station
HP	hydro-pneumatic
MGE	machine gun emplacement
QF	quick-firing
PF	position-finding
RA	Royal Artillery
RE	Royal Engineers
RGA	Royal Garrison Artillery
SLDS	search light directing station
WO	War Office



GLOSSARY

Apron

A sloping concrete surface, forming the front face of a gun emplacement, designed to deflect in-coming shells over the top of the position

Barbette

A protective breastwork or forward edge of an emplacement, over which the guns fire

Breech

The rear end of a gun barrel, from which the gun is loaded

Cartridge

A cylindrical bag or case containing the explosive propellant for the shell

Fire step

A step on the inner face of a rampart, with a breastwork or parapet over which infantry could fire

Fire trench

A small rectilinear trench, with spoil on the forward edge, forming a defensible infantry position

Fixed ammunition

A projectile in which the shell and cartridge are combined into a single unit

Glaçis

The external slope of a rampart or battery, carefully and gradually extended in a long slope to ground level, and designed to absorb in-coming shell fire

Holdfast

A metal plate fixed to the floor of an emplacement to firmly anchor a gun in position

Lamp recess

An alcove or small tunnel in a wall into which a lamp is placed. In magazines a pane of glass set into a brass frame prevents sparks from entering the chamber

Lamp room

A chamber where lamps were cleaned, refitted and maintained

Magazine

A place for the safe storage of gunpowder, usually kept loose in barrels or cases. Also generally applied to any chamber for ammunition storage, whether for cartridge, shell or fixed ammunition

Position finding cell

A room on the flanks of a battery for housing the position finding instruments

Rampart

The main earthwork defence of a fortification, on which the guns and garrison are positioned

Shell

The projectile fired from a gun, with explodes on impact or after a given period of time



GLOSSARY (Continued)

Shifting lobby

A room next to a magazine or cartridge store in which men change into and out of magazine working clothes. This was to prevent metal on their ordinary clothing from sparking and thus igniting the gunpowder. Access to the magazine was generally prevented by a waist-high barrier between it and the shifting lobby



1. INTRODUCTION

Between May and June 2000, archaeological staff from the Cambridge and Exeter Offices of English Heritage surveyed and investigated the remains of Barton's Point Battery, situated on the eastern edge of Sheerness in Kent. This work resulted from a request by Kent County Council, as an adjunct to a survey being conducted of the adjacent Queenborough Lines (Probert and Pattison, 2001).

The Queenborough Lines are a continuous earth rampart and a broad wet ditch extending for 3.5km (2.2 miles) across the Sheerness peninsula and built in the 1860s to defend the town and dockyard against attack from the land. Barton's Point Battery (TQ 9380 7480) was built at the eastern end of the Queenborough Lines between 1889 and 1891 as part of the fixed coast defences protecting the entrance to the River Medway, along which the naval dockyards of Sheerness and Chatham were situated (Figs 1-2). Its four heavy coast guns were operational until around 1906, shortly after which they were withdrawn and the battery placed in care-and-maintenance.

Small-scale infantry defences were established in and around the battery during the First World War, after which it lay dormant until the early 1930s, when two artillery

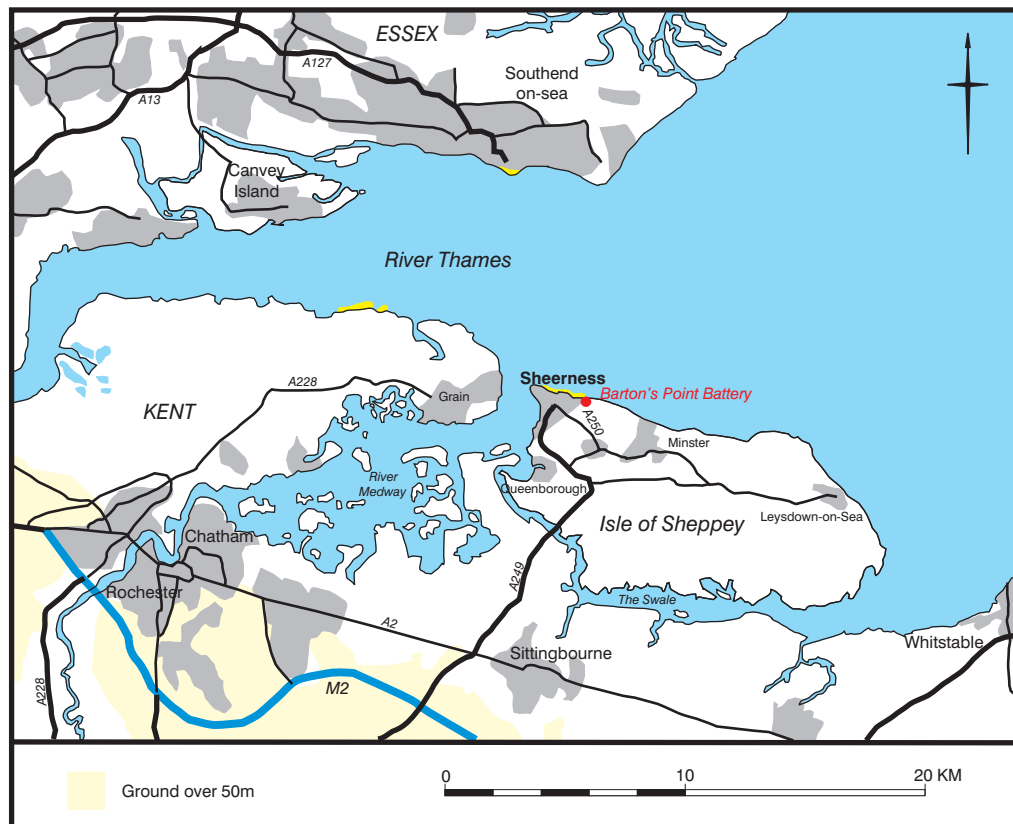


Figure 1
Barton's Point Battery, location map



searchlights (DELs) were installed in the eastern part of the battery, operating until the end of the Second World War in support of coast guns situated in the heart of Sheerness. However, from 1938, the larger part of the battery was taken over by the Admiralty and developed into a school for naval anti-aircraft (AA) gunnery, which provided training into the later 1950s.

By 1961, the site was in civilian control and large numbers of holiday chalets were constructed. It currently functions as the Catamaran Yatch Club and holiday centre.

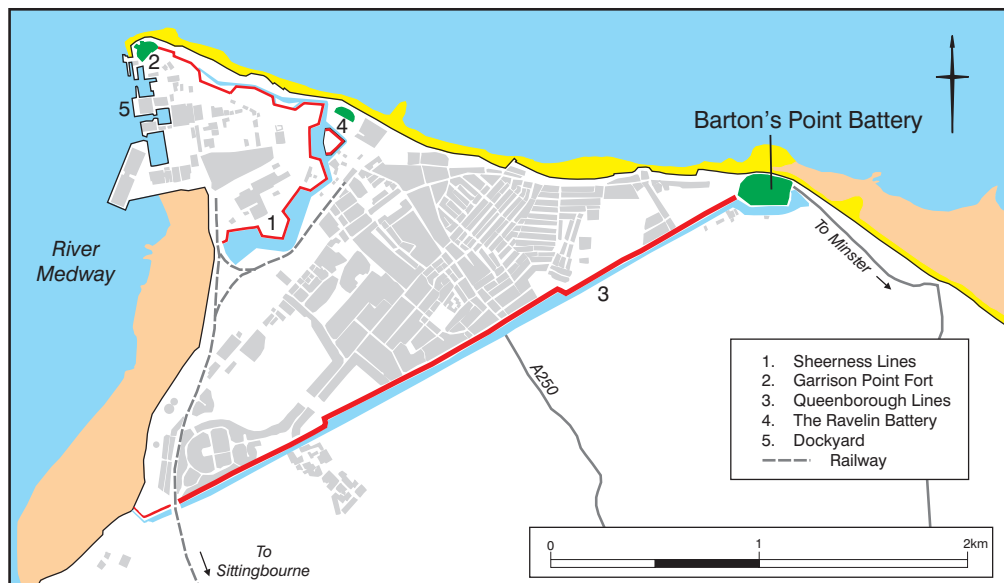


Figure 2
The Sheerness Defences c1900 and the location of Barton's Point Battery, imposed on the modern town plan



2. THE COAST ARTILLERY BATTERY

HISTORICAL SUMMARY 1889-1913

Barton's Point Battery was built between June 1889 and November 1891 for two 9.2-inch breech-loading (BL) and two 6-inch BL guns. These were the so-called 'disappearing guns' on hydro-pneumatic (HP) mountings, which fired over the *barbettes* of deep gun pits, the recoil harnessed by hydro-pneumatic power so that the gun retracted into the protection of the gun pit for loading (Fig 3). Barton's Point was one of the early deployments of this type of mounting for service use, forming part of the primary fixed defences for the Thames and Medway, giving long and medium range protection against bombardment from armoured warships at sea.

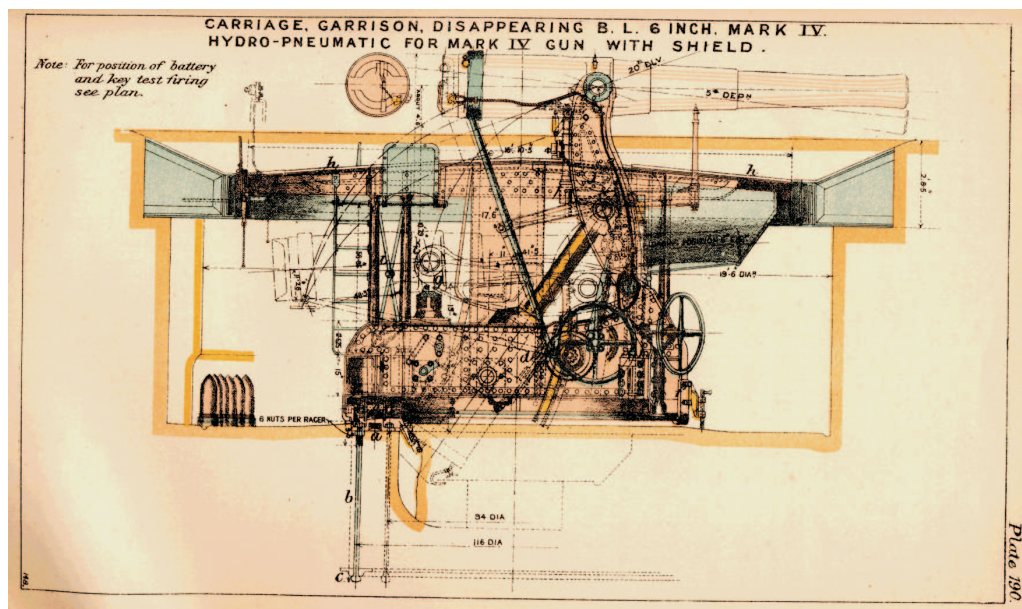


Figure 3
Sectional drawing of a gun pit and 6-inch BL gun on a Mk IV hydro-pneumatic disappearing carriage (from *Treatise on Military Carriages, War Office 1911*)

The earliest depictions of the battery appear on the War Department Record Plans of 1906-7, by which time several alterations and additions had been made (Fig 4; WO/78/5117/1-5). The 6-inch and 9.2-inch guns were served by bombproof magazines under the rampart between the two gun groups. On the *glacis*, two open concrete platforms supported four quick-firing (QF) guns, two 6-pdrs and two 12-pdrs. These were lighter weapons that used fixed ammunition at a quick rate of fire, for close defence of the estuary against fast torpedo boats attempting to run past. A large open camp area behind the guns provided both temporary accommodation and permanent free-standing ancillary buildings. The latter stood mainly in the lea of the rampart and comprised a Guardhouse, Latrines and a Master Gunner's Quarters at the western end, and a Master Gunner's Office, a Smithy and Fitter's Shop, a Gun and Tackle Store, an Artillery General Store, and a Maxim Gun Shed at the eastern end.

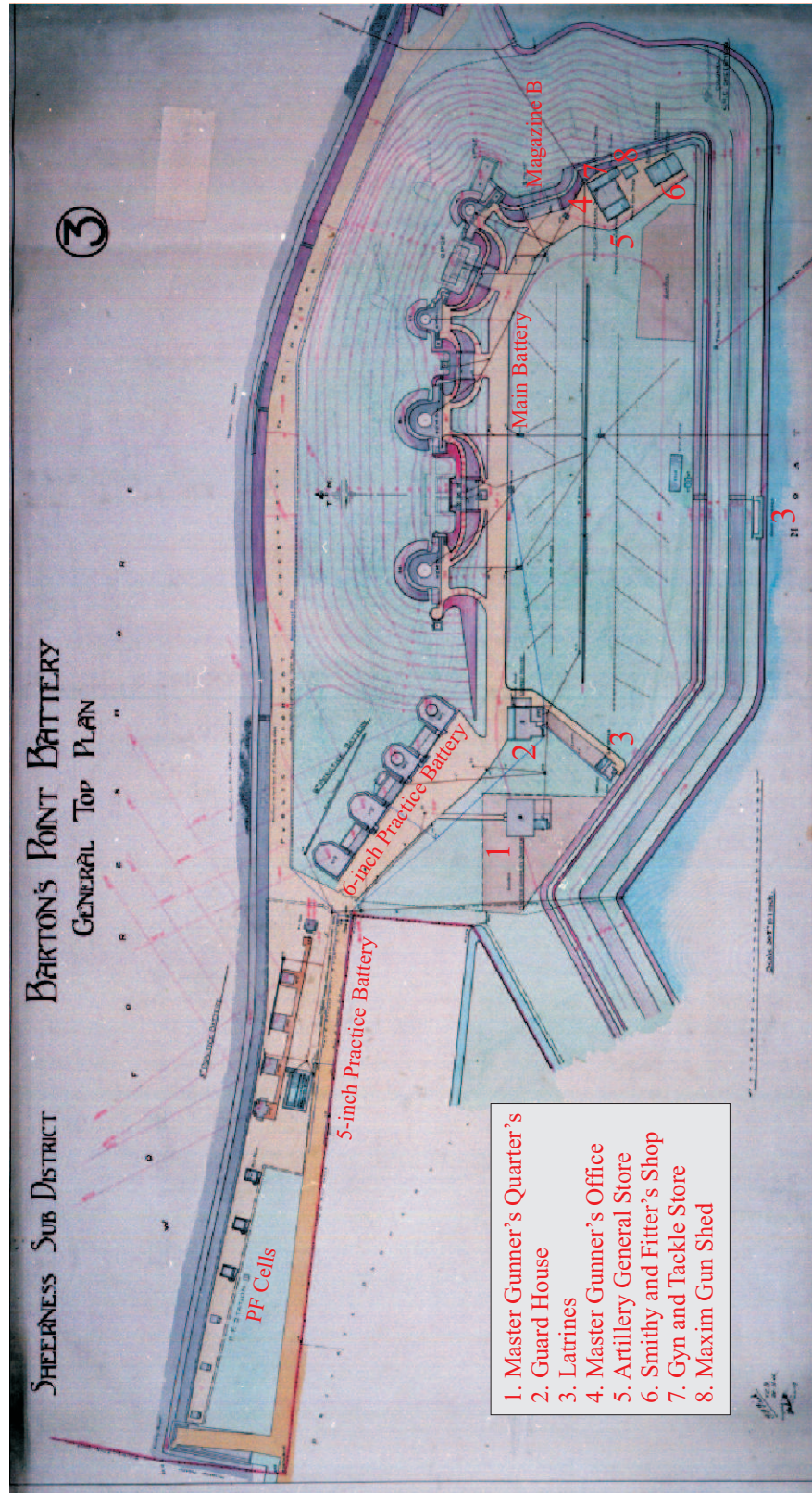


Figure 4 Record plan of Barton's Point Battery in 1907 (red text is added)(extract of PRO: WO/78/5117/3, by kind permission of the Public Record Office)



In January 1906, the heavy guns were on improved mountings (HP Mk VI), and two parapet-mounted Maxim machine guns provided close defence. The East Coast Defences Scheme of that time defined the role to be played by the battery: in a Precautionary Period (when an invasion was imminent) the battery was assigned a detachment of the 27th Company Royal Garrison Artillery (RGA). In the event of war they were to be replaced by the 2nd Middlesex RGA, with infantry defence provided by part of the 4th Volunteer Battalion of the Royal West Kent Regiment. To operate each 6-inch gun required an officer and 16 men, and each 9.2-inch gun an officer and 22 men; ready-use ammunition on each gun floor comprised two shells and two cartridges. The guns were laid onto their targets by information relayed by telephone from six position-finding (PF) cells, operated by three men each, situated in a strip-like extension to the battery on the west (Fig 5; PRO: WO/33/395/p 34, 37, 50).

In 1901-2 a Practice Battery of four 5-inch guns was built close to the PF cells (Fig 6). These guns, numbered I to IV from the east, were 5-inch Vavaseur BLs, two Mk I (Nos I and II) and two Mk II (Nos III and IV). They were mounted on square concrete platforms, built high to fire over the sea wall and linked by a freestanding companionway running along their rear faces. A single-storey brick building situated behind Nos III and IV guns served as a dual cartridge and Royal Artillery store; shell storage may have been in the main battery. A Battery Command (BC) Post stood at the eastern end, comprising a two-storey tower capped by an open observation platform (PRO: WO/78/5117/2-4).

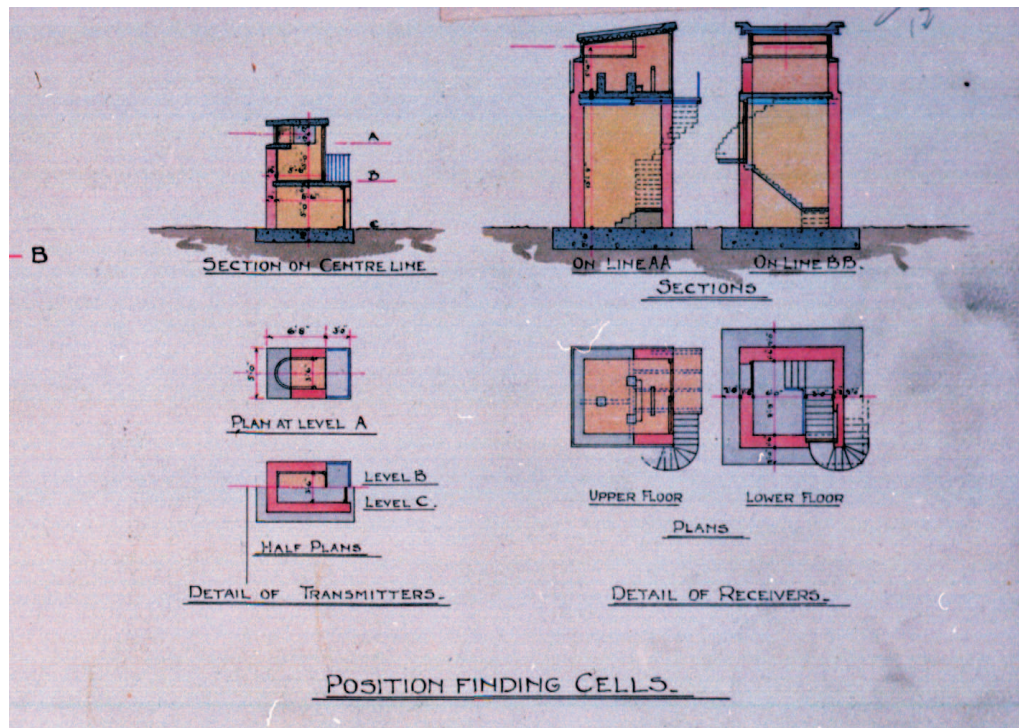


Figure 5
Record drawings, dated
1907, of the battery
position-finding cells
(extract of PRO:
WO/78/5117/4, by kind
permission of the Public
Record Office)

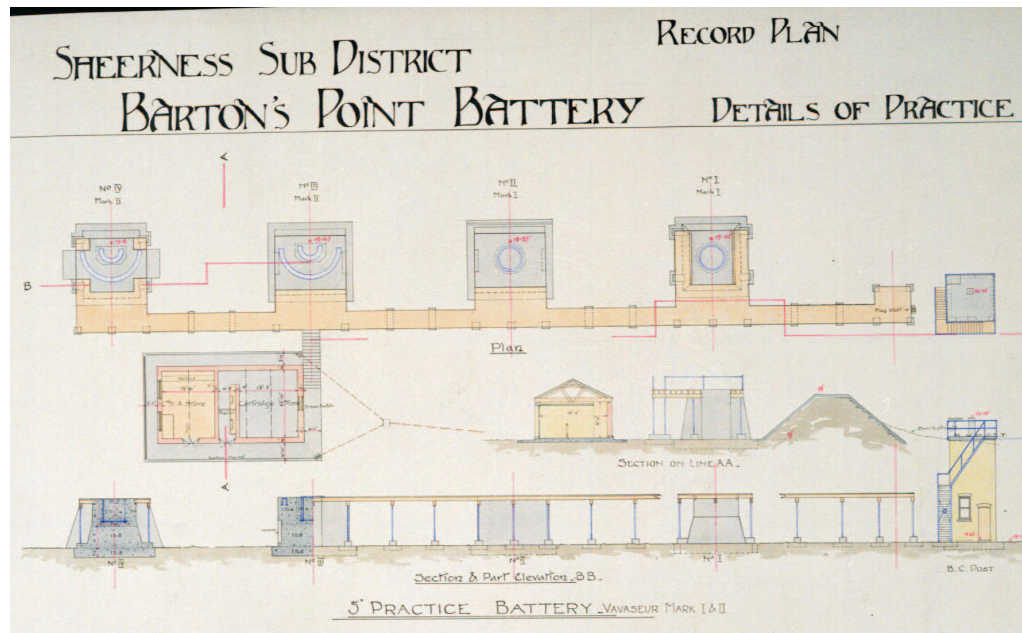


Figure 6
Record drawings of the 5-inch Practice Battery, dated 1907 (extract of PRO: WO/78/5117/4, by kind permission of the Public Record Office)

In 1904-6, another Practice Battery, for 6-inch guns, was built on the western fringe of the main one, north of the Guard House (Fig 7). Four guns stood on open concrete platforms, facing north-east and numbered I to IV from the south-east. The high platforms enabled the guns to fire over the seawall; Nos I and II were higher for guns *en barbette* (frontispiece), while Nos III and IV were lower for disappearing guns. Single-storey flat-roofed brick buildings between the platforms comprised a shell store (between I and II), a Royal Artillery/QF ammunition store (between II and III) and a cartridge store (between III and IV). A raised steel and timber companionway ran across the rear of the battery from platform to platform and across the roofs of the three stores (PRO: WO/78/5117/2-4).

In 1905, the Owen Committee on the Defences of the Home Ports resulted in major changes to coast defences, by the grading of ports according to their importance in an overall defence scheme: coast guns were allocated or removed accordingly and all of the

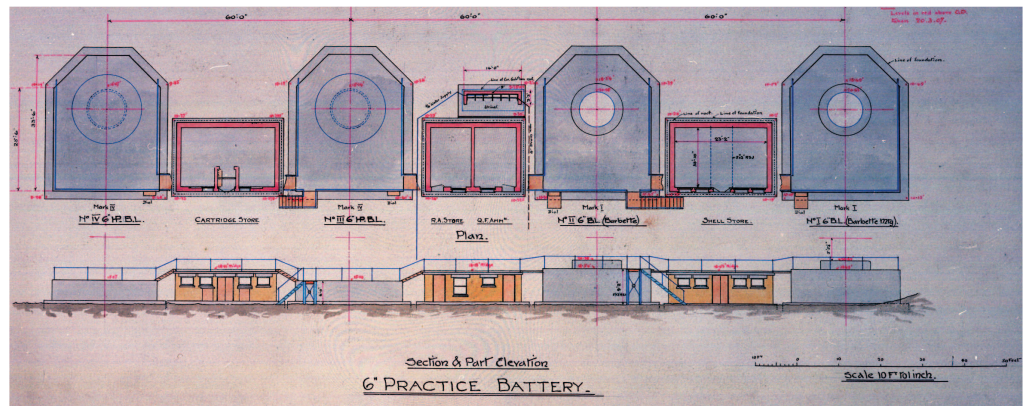


Figure 7
Record drawings of the 6-inch Practice Battery, dated 1907 (extract of PRO: WO/78/5117/4, by kind permission of the Public Record Office)



old disappearing guns were withdrawn from service. As a primary defence for two naval dockyards, Sheerness received the highest possible grading (Class A) and its defences were re-organised to take account of new weapons. This resulted in the decommissioning of Barton's Point as an operational battery and by 1907 the heavy guns were 'dismantled but not to be dismounted'. The Practice Batteries probably remained in place but the QF guns were withdrawn, as they do not figure on the armament table on the 1906-7 Record Plans (PRO: WO/78/5117/2). The role of the battery had been taken over by the Ravelin Battery, built closer to the centre of Sheerness by 1906 and armed with new 9.2-inch BL guns which used axial recoil and could be mounted in shallower gun pits *en barbette* (Fig 2). By 1909, Barton's Point Battery no longer appears in the official defence scheme nor in the approved armament table (PRO: WO/33/477; WO/78/5113/6). In 1913, the Guard House had been converted for a caretaker, revealing that the battery was in care-and-maintenance (PRO: WO/33/671).

REMAINS OF THE COAST ARTILLERY BATTERY (Fig 8)

In the following text, words and letters in **bold** appear on the figure given at the start of that section. Note that alterations made to original buildings of the coast artillery battery in the subsequent DEL and naval phases are described separately in their respective sections of this report.

The coast battery site lies close to the sea wall, with only a narrow gap for the Sheerness-Minster road. The remains are obscured by a multitude of semi-permanent holiday homes, set on concrete standings, which have accumulated on the site since 1961. However, originally the battery stood within a subrectangular defended compound of *c* 1.25 hectares (3.1 acres). The guns were ranged along the northern side, with a large flat area to the rear intended as a military camp, as shown on the Record Plan of 1907 (Fig 4). This camp may have been intended to accommodate troops defending the Queenborough Lines during an emergency and also for those using the military and naval rifle ranges, situated outside the battery on the marshes to the south-east. The camp was surrounded by an unclimbable fence and a **rampart**, supplemented on the south and south-east by a broad wet **moat**, which was formed by modification to the earthworks of the Queenborough Lines. Additional infantry defence was provided by fire steps on the sea wall. The four BL HP guns were placed in deep open gun pits protected by the rampart on the north and east, with its sloping *glacis* to absorb or deflect incoming shellfire. The rampart is now largely removed or damaged but a remnant on the east flank appears to be made of sand, shingle and earth. A small disturbed section of the *glacis* survives on the north-east. The ancillary buildings in the camp have been demolished and levelled but parts of all four BL HP gun pits, the QF positions, Nos III and IV gun platforms for the 6-inch Practice Battery and most of the magazines remain.

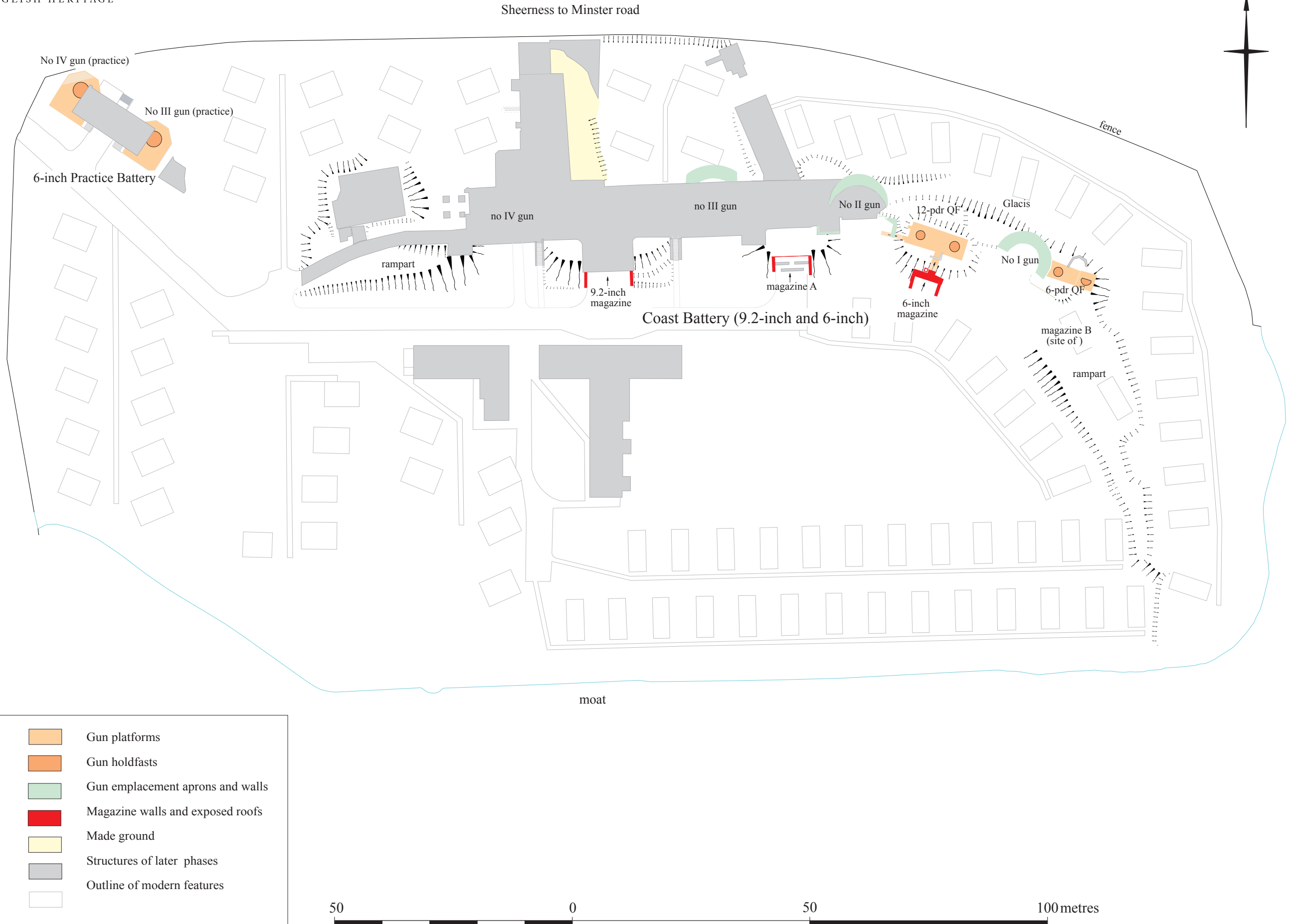


Figure 8
Barton's Point; plan showing the surviving features of the coast artillery battery



No I gun emplacement (6-inch BL HP) (Fig 9)

The emplacement is almost completely infilled with earth and debris, so that the only visible features are the concrete apron at the front and a fragment of the gun pit wall on the south-eastern flank. Presumably, the infilling has preserved the major part of the gun pit.

No II gun emplacement (6-inch BL HP) (Fig 9)

The emplacement is intact, incorporated into a brick and concrete naval building of Second World War date, which occupies most of the gun pit leaving only the wing walls outside (see below, p30-2). The depth of the gun pit is at least 2.35m (8ft 9in) - though the present floor level is higher than the original - its wall is vertical for 1.35m (4ft 5in), thereafter sloping outward at a steep angle to 1.7m (5ft 7in), before resuming the vertical. This profile was to accommodate the circular iron shield which covered the gun pit to protect the gun detachment (Fig 3). The later floor only partly obscures six recesses where shells were stored upright for ready-use: these are spaced evenly around the gun pit wall and measure a uniform 0.6m (2ft) wide and 0.2m (8in) deep; only 0.5m (1ft 8in) of their height can be seen. To the rear are two deeper cartridge recesses, each a cube of 0.91m (3ft), rebated for wooden doorframes. Higher in the wall and between the shell recesses, are five heavy-duty ferrous lifting rings which secured lifting tackle used during installation or removal of the guns and spares. Three smaller wall recesses were probably for storing fuses and tubes for firing the gun.

At the rear, the walls of the gun pit turn east and west to form short vertical flanks. The eastern flank is angled into three faces, the first supporting another lifting ring. The second has a blocked hatch, 0.91m (3ft) wide by 1.0m (3ft 3in) high, to an ammunition lift from the magazine, while the third has a T-shaped recess, rebated for a wooden frame, which probably held dials or a telephone for relaying range information to and from the gun. A flight of steps near the southern end of this face leads up to the QF emplacements.

The western flank wall is battered and contains another lifting ring. Alongside it, a flight of steps descends 1.3m (4ft 3in) to two sunken rooms. While the steps are original, the flat-roofed porch belongs to the naval phase, as does the larger southern room (see below, p30-2). The northern room is original and extends under the rampart, entered through a shallow segmental arched opening in the flank wall, blocked by later brickwork but accessible through a small breach. It is a simple rectangular space, 3.05m (10ft) by 2.38m (8ft 10in), with a shallow arched vault, 2.1m (7ft 11in) high, the whole rendered and whitewashed. Just below springing level, each side wall has five ferrous coat hooks and, 0.6m (2ft) above the floor, paired sockets which probably secured benches, both of which suggest the room served as a shelter - probably for the gun detachment - although it seems small for 16 men. In its north-eastern corner, a blocked doorway 1.6m (5ft 3in) high and 0.92m (3ft) wide, probably led to another room forming part of the shelter.

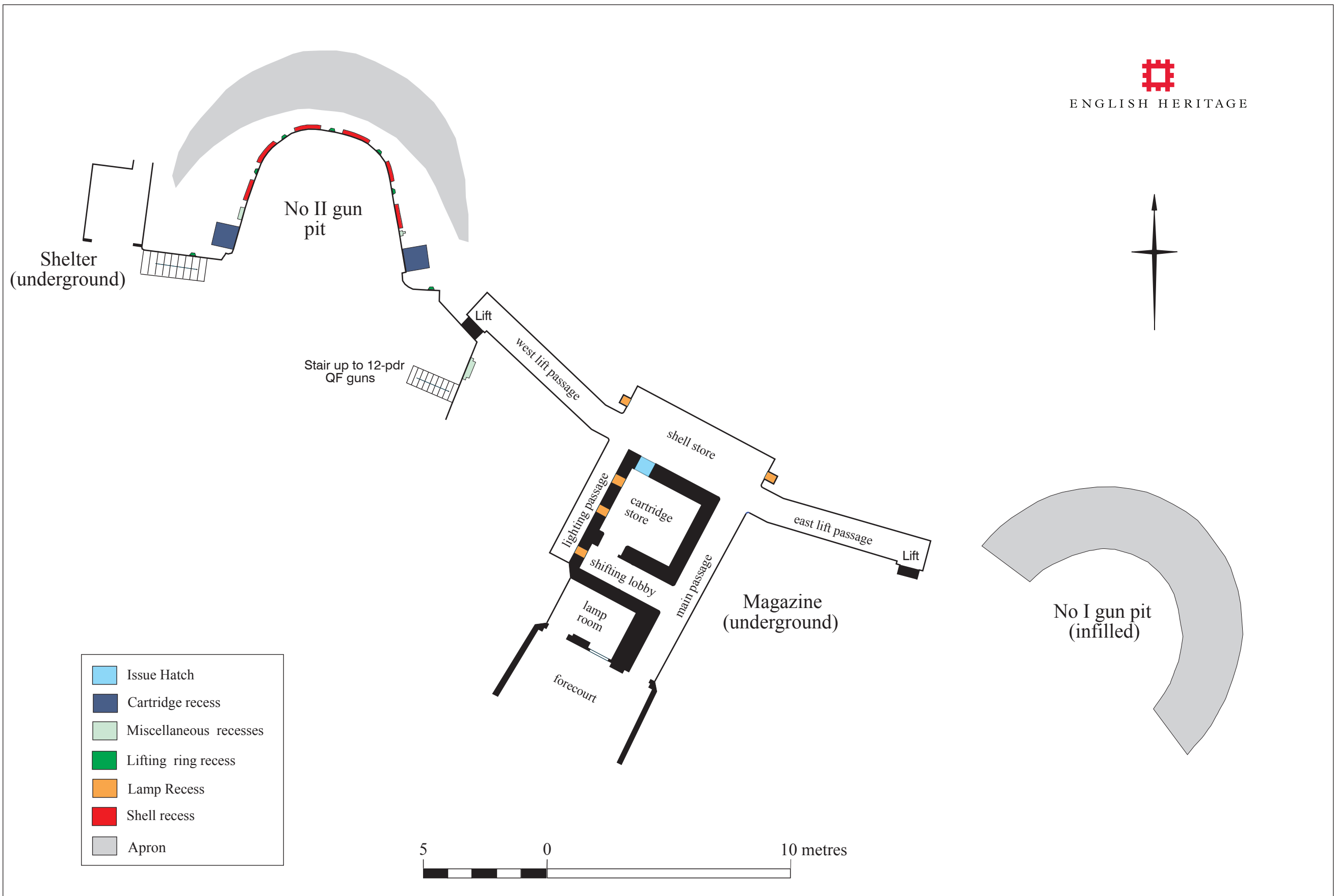


Figure 9
 Barton's Point Battery;
 plan of the surviving
 elements of the 6-inch
 gun pits and magazine
 (later alterations are
 not shown)



The 6-inch magazine (Fig 9)

The magazine served both 6-inch guns but the presence of many secondary features attests to its re-use in the period 1932-45 for the DEL installation (see below, p24). It is placed under the rampart between the 6-inch emplacements and is built in concrete with brick used for internal detail and for the vertical entrance façade. There are three rooms arranged in series; an outer **lamp room** with an independent entrance; an adjacent entrance onto a passage leads via a **shifting lobby** to the **cartridge store**, and also to a **shell store**, from which two **lift passages** lead independently to the **ammunition lifts**.

The yellow stock bricks are laid to English bond except in the shallow-arched vaults employed in all of the rooms and most of the passages, where stretchers are used throughout. There is extensive use of whitewash on the internal walls and dark green paint on doors, frames and other internal woodwork.

The entrance façade is set back into a cutting in the rampart, the sides of which are revetted by ramped concrete walls. The roof is asphalted and there is a slight overhang. The façade contains recessed detail around two doorways and a window, each finished with shallow segmental arches of two header courses and wooden frames. The western door and the window open into the rectangular **lamp room**, measuring 3.05m (10ft) by 2.20m (7ft 3in). Fittings in this room are probably secondary, comprising a dado rail on the north wall, ferrous loops at the same level on the east wall, while on the west wall there is a coat hook rail and a ferrous vent pipe.

The eastern doorway opens onto the **main passage**. The east wall is rendered and, just inside the entrance, supports paired iron brackets. Each pair is set 0.92m (3ft) apart horizontally and 0.31m (1ft) vertically, the upper of the pair placed just below springing level; their purpose is unclear. Leaving the west wall of the entrance passage at 90° is the shifting lobby, which is simply another short passage, 3.75m (12ft 4in) long and 1.21m (4ft) wide, leading to the cartridge store. A painted sign on the north wall of the lobby has three phases: the earliest is in red but illegible; the second has a black background with faint white lettering, the lower line reading '600' while an adjacent pencil *graffito* reads '9A 600'; the latest is in black and reads 'AMMUNITION ENTRANCE' with a hand pointing to the cartridge store. The end wall of the lobby contains a lamp recess, 0.40m (1ft 4in) wide by 0.54m (1ft 9in) high, with dressed sandstone lintel and sill and a rendered moulding for a glass front. The lintel has a circular hole for venting into the adjacent lighting passage (see below, p15); a red sign above it is illegible. However, the last few letters of a sign painted white on black across the sill reads '(ART)ILLERY.' The south wall of the lobby contains secondary metal fittings or their wooden plugs, probably for coat hooks, and both walls contain the sockets for a waist-high shifting barrier.



The entrance to the **cartridge store**, off the north wall of the shifting lobby, has a heavy wooden frame with an illegible black-painted sign on the lintel, and double inward-opening doors. The doors are supported on triple brass hinges but a ferrous handle, latch lifter and bolt probably relate to the DEL phase, replacing an original non-ferrous (and non-sparking!) mortice lock. Internally, the rectangular store measures 3.24m (10ft 8in) by 2.85m (9ft 4in) and 2.45m (8ft) to the top of the arched vault. The walls are painted dark green to 1.0m (3ft 3in) above which, along with the vault, they are white. The original issue hatch is in the north wall at floor level, with a flush wooden casement for a sliding door, while there are two lamp recesses of standard pattern in the west wall. The vault contains a central large ceramic ventilator.

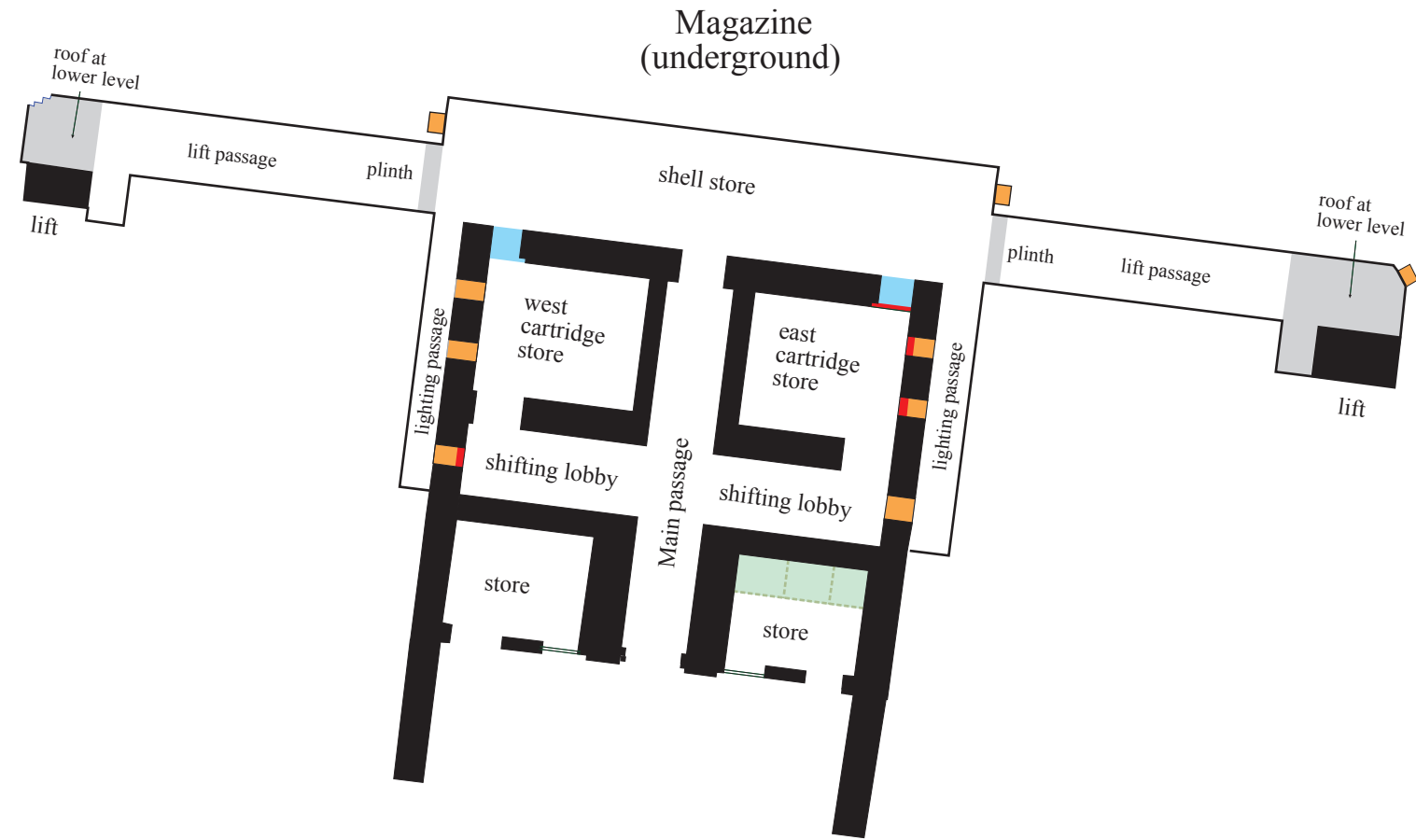
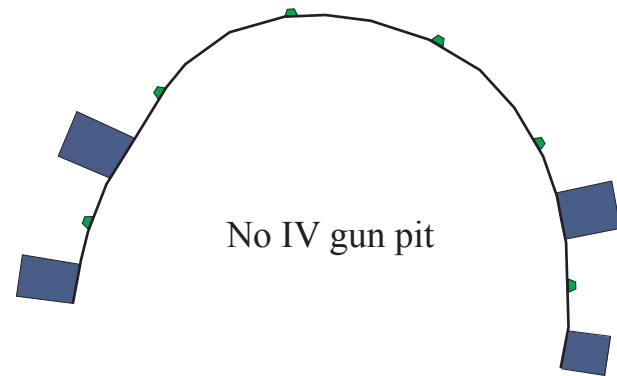
The entrance passage also leads directly to the **shell store**, a long rectangular room measuring 6.38m (20ft 11in) by 2.45m (8ft). Both end walls have a lamp recess, of the standard pattern except for deeper sills and lintels, vented through an adjacent cream-glazed airbrick. Here, however, the rendered moulding for the glass frame incorporates a recess for the securing latch. A horizontal cast iron support under each lamp recess formerly held the end of a rack for supporting the shells. The rack extended along the north wall, where the infilled sockets for the supports are visible. On this wall also, facing the entrance passage, a well-preserved black-painted sign of four lines reads:

‘FILLED SHELL STORE
SHELL.....
.....I.....N
M.....’

The south wall has an illegible black painted sign, and a series of blocked sockets from another shell rack, six in all, 1.1m (3ft 7in) from floor level and spaced at 0.62m (2ft) centres, except the middle two, which are 0.52m (1ft 8in) apart. These, however, are clearly secondary as the rack they supported would have prevented access to the cartridge store issue hatch. The issue hatch is 0.62m (2ft) wide and 0.47m (1ft 6in) deep to the casement in the cartridge store; its sandstone sill is partly cut away, while above the lintel an illegible red-painted sign, possibly has an ‘A’ at top centre and a ‘10’ underneath.

The centre of the room contains three raised rectangular concrete beds, relating to its use for the DELs between 1932 and 1945 (see below, p23-4).

The **lighting passage**, which provided access to the three lamp recesses in the cartridge store and shifting lobby, opens off the shell store through a round arch. The arch, however, gives onto a half-vault in the passage itself. The west wall has a black-painted sign on white, reading ‘LIGHTING PASSAGE’ while the lamp recesses in the east wall are vented through cream-glazed airbricks above the lintels.



- Issue hatch
- Cartridge recess
- Lifting ring recess
- Lamp recess
- Storage cupboard
- Blocking



Figure 10
 Barton's Point Battery;
 plan of the surviving
 elements of the 9.2-inch
 gun pits and magazine
 (later alterations are not shown)



Figure 11
*The entrance
façade of the
9.2-inch magazine,
showing the central
entrance and
identical storage
rooms on each side*

The entrance façade has a central door to the **main passage**, flanked by single doors and windows serving identical **store rooms**, one of which was probably for lamps. The main passage leads ultimately to a **shell store**, off which are **lift passages** and **lighting passages**, but intersects with a cross passage occupied by the **shifting lobbies** leading to the twin **cartridge stores**.

The door to the **west store** is sealed and its window is a replacement. The **east store** retains its inward-opening door but the frame is partly replaced, while part of the window casement and its sliding sash are original. Inside, an original dark green cupboard runs the length of the north wall, standing 0.86m (2ft 10in) high and 0.8m (3ft 5in) deep, with drawers and compartments of varying sizes. The walls have secondary dry-lining.

Although the doorway and frame to the **main passage** is original, the double outward-opening doors have been reset. At the crossing of the passages, the wall corners are finished in rounded brickwork and there is a ceramic ventilation pipe in the vault.

The **east shifting lobby** has a stencilled black-on-white sign on the south wall, reading 'CARTRIDGE STORE'; the sockets for a shifting barrier are blocked; the end wall contains a lamp recess of standard pattern. The doorway to the **east cartridge store** has a shallow segmental arch of two header courses and over it, a black sign reads 'No 2': the navy blue frame formerly supported double doors. The store itself is rectangular and measures 3.6m (11ft 10in) by 3.0m (9ft 10in), with a shallow arched vault pierced by a single ceramic ventilation pipe; two lamp recesses in the west wall are blocked, as is the issue hatch in the north wall, which also lacks its casement and sliding door.



The **west shifting lobby** is similar, including the stencilled sign, but the lamp recess is blocked and covered by a fuse box; a red-painted sign above it has only a '2' legible. The **west cartridge store** is a mirror image of its neighbour and also has a navy blue doorframe. The lamp recesses are open but one has a single vertical ferrous bar (from three originally) morticed into the lintel and sill to protect the glass - and therefore could not be opened from this side. The navy blue issue hatch casement and sliding door are intact. The central ceramic vent in the vault is blocked and replaced by a metal one off-centre and there are supports for a wooden rack along the east wall, painted navy blue, 1.04m (3ft 5in) high and 0.62m (2ft) wide.

Beyond the crossing, the main passage walls have six ferrous brackets for shelving and two steel rails, inserted as crude tie beams, cross the passage at springing level. It ends at the entrance to the **shell store**, the doorway retaining its frame for double outward opening doors, painted dark red over yellow. The lintel has a yellow painted sign 'SHELL STORE.....S.B. 1·2'. The shell store is a broad vaulted passage, 12.42 m (40ft 9in) long and 2.52m (8ft 3in) wide. Three metal supports for a shell rack survive on the north wall opposite the entrance, while the south wall contains the issue hatches from the cartridge stores, with the usual stone lintels and neatly rounded side walls.

The end walls contain the usual lamp recesses, but vented through airbricks *both* above the lintel *and* to one side. **Lighting passages** leave the shifting lobby to serve both cartridge stores; these have half vaults and three lamp recesses each. The west lighting passage has a black painted sign on its west wall, reading 'LIGHTING PASSAGE'.

Both end walls of the shell store also give onto flat-roofed rendered **lift passages**. Although they occupy original positions, both are replacements for brick vaults and are in poor condition. They are badly cracked, patched and propped up by timber shoring, probably due to the weight of structures overhead, and crossed in several places by metal service pipes. However, a remarkable survival are the original ferrous ammunition lifts, contained in recesses in the south wall at the end of each passage, complete with vertical trays and winding mechanisms. There are lamp recesses in the angles opposite the lifts, though the western example was broken out during the naval phase (see below, p29-30).

The 12-pdr QF gun emplacement (Fig 12)

This gun position, built on the *glacis* over the 6-inch magazine, was approached up flights of steps both from the pit of No II gun and also from the magazine. The guns were mounted on a flat open concrete platform, 6.1m (20ft) long and 2.2m (7ft 2½in) wide, which required the creation of a slight terrace in the *glacis*. The northern side of the terrace remains as a slight scarp, 0.6m (2ft) high. The gun positions are clear, the eastern example the better preserved and comprising a concrete circle of 2.14m (7ft) in diameter into which is set the annular ferrous holdfast, 1.22m (4ft) in diameter, with its six securing

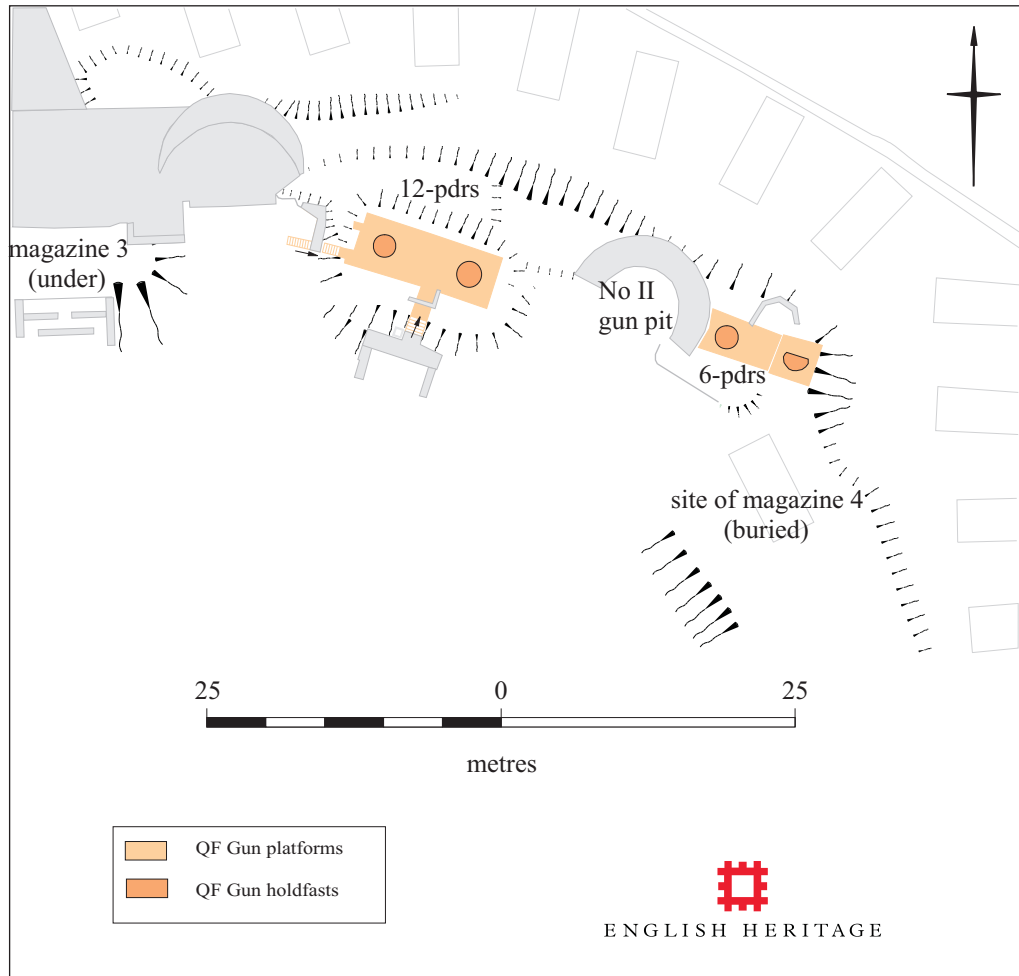


Figure 12
Plan showing the surviving elements of the QF gun positions

bolts. Within the holdfast is a moulded concrete setting, 0.78m (2ft 7in) in diameter, with a ring of 18 smaller bolts, 0.72m (2ft 4½in) across (Fig 14).

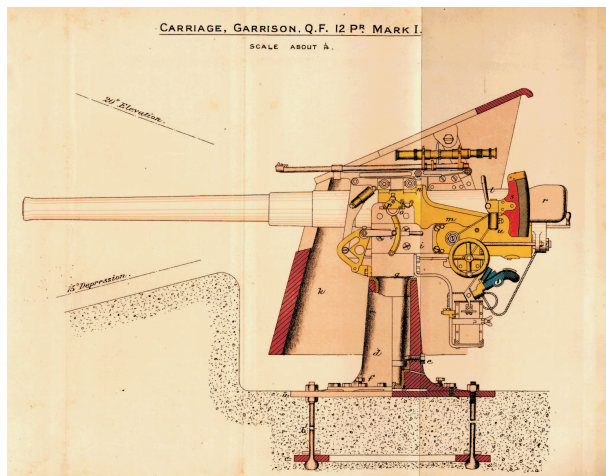


Figure 13
Sectional drawing of a 12-pdr QF gun Mk 1, showing the steel shield and holdfast (from *Treatise on Military Carriages, War Office 1911*)

The 6-pdr QF gun emplacement (Fig 12)

These lighter guns were placed on the *glacis* east of the apron of 6-inch gun No II, also on an open concrete platform, 4.9m (16ft) long by 1.7m (5ft 6in) wide. The western holdfast is marked by a concrete patch but the eastern one is *in situ* and well-preserved; a D-shaped ferrous plate 1.54m (5ft) on the straight side and 1.25m (4ft 1in) across the D.



Figure 14
The 12-pdr QF gun platform, with the holdfast of the eastern gun in the foreground (NMR: AA008680)

Magazine A (Fig 15)

This magazine comprises two identical adjacent rooms built under the rampart, the entrance façade set back in a cutting forming a **forecourt** whose sides are revetted with ramped flanking walls. The original façade was in brick and was similar to its 6-inch and 9.2-inch counterparts but it was rendered during the Second World War when the entrances and interiors were also modified (see below, page 31). Each room, with a single entrance and no window, is a simple rectangle of 4.60m (15ft 1in) by 3.1m (10ft 2in) with a round arched vault 2.35m (7ft 9in) high. The interior surfaces are rendered and whitewashed, though the north wall of the eastern room has been painted above 1.0m (3ft 3in) in red lead (probably in modern times). On the side walls at springing level are sawn-off ferrous pins at 0.65m (2ft 2in) centres and at knee level are similar pins more closely set: both presumably supported shelving. The western room has subsided considerably such that the floor slopes markedly down to the north.

Magazine B (Fig 8)

This structure, shown on the 1907 Record Plan, was beneath the rampart south of the 6-pdr QF positions (Fig 4). There were three adjacent rooms, similar to those of magazine A. Although the area has been infilled and nothing is visible above ground, the rooms probably survive under the rampart in a good state of preservation.

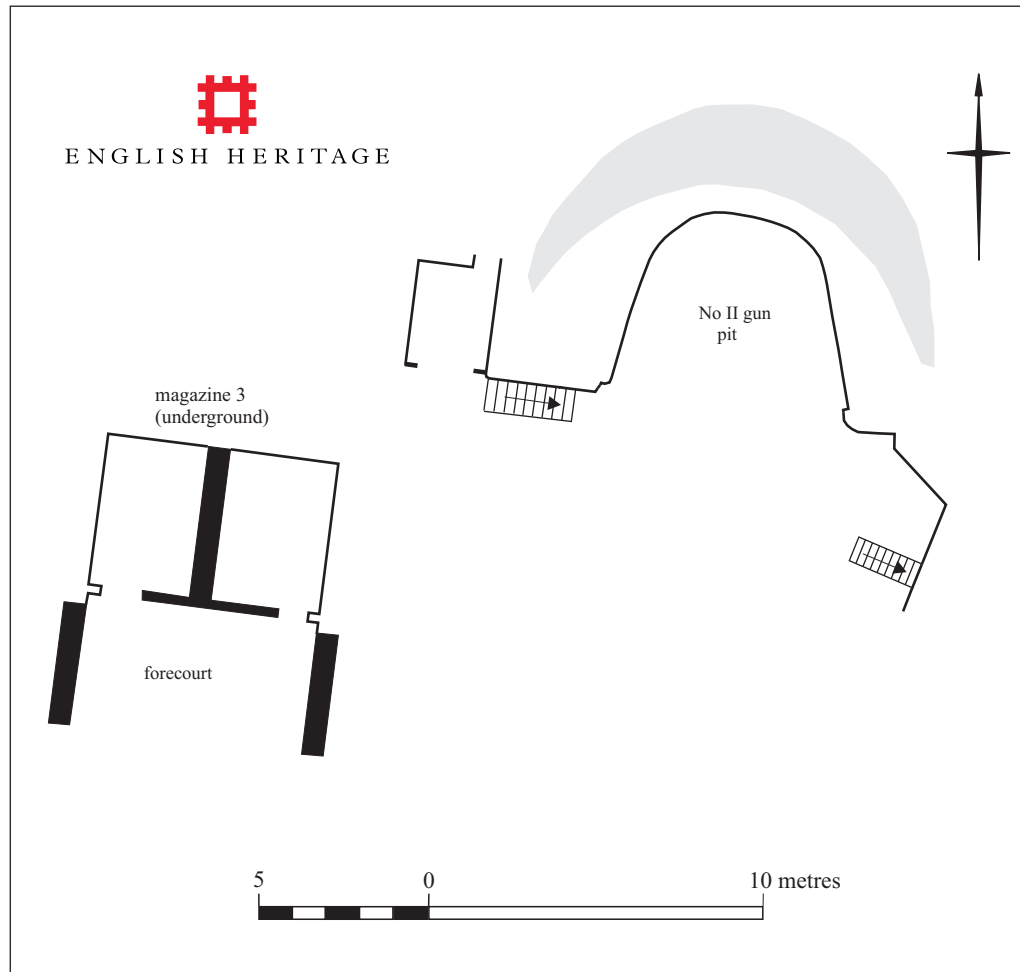


Figure 15
Plan showing magazine A in relation to no II 6-inch gun pit



Figure 16
The entrance facade of magazine A, partially concealed by the Second World War blast walls



The 6-inch BL practice battery (Fig 8)

The platforms for Nos I and II guns, as well as the ammunition stores, were removed by the Admiralty at some time between March 1942 and July 1945 (NMR: HLA/414/67-8; 3G/MEW/T/3/5053-4). However, the platforms for Nos III and IV guns survive, the north face of No IV partly cut away, forming the base for the range control tower of the naval AA range (see below, p28). Each platform is 1.45m (4ft 9in) high, with sawn-off bolts at the rear and sides from the companion way and handrails. Both platforms retain part of the circular gun holdfast, each comprising a double ring of steel bolts for *barbette* mountings; an outer ring of 32 with a diameter of 2.7m (8ft 10in) and an inner ring, probably of 14 bolts.

The 5-inch BL practice battery

There are no remains of the 5-inch battery above ground.



3. MILITARY USE OF THE BATTERY SITE 1914-45

HISTORICAL SUMMARY

The First World War 1914-19

In 1914, minor works were proposed on and around the disused battery, forming a small detached infantry post capable of local defence (PRO: WO/33/671/p162). This was part of a complex system of fire trenches, barbed wire entanglements, pillboxes and earthen redoubts along the east and south-east coast, especially around naval establishments and major ports. By May 1916, the rampart and *glacis* at Barton's Point Battery had been provided with three fire trenches, with a barbed wire entanglement on the sea wall to the north (PRO: WO/78/4427/7). These defences had been modified by 1919, comprising three concrete machine gun emplacements (MGE) in the immediate vicinity, a fire step on the sea wall to the north-east and two AA guns within the battery (Fig 17). It is likely that some of the battery buildings were re-used and occupied during the war.

The Defence Electric Light Installation 1932-45

After 1919, the battery reverted to care-and-maintenance until 1932, when it was proposed to mount two moveable Defence Electric Lights (DELs) (Fig 18). The lights were in use by 1934 and formed part of the defence scheme in 1936, manned by an officer and eleven other ranks of the Royal Engineers (RE) and serving coast artillery in

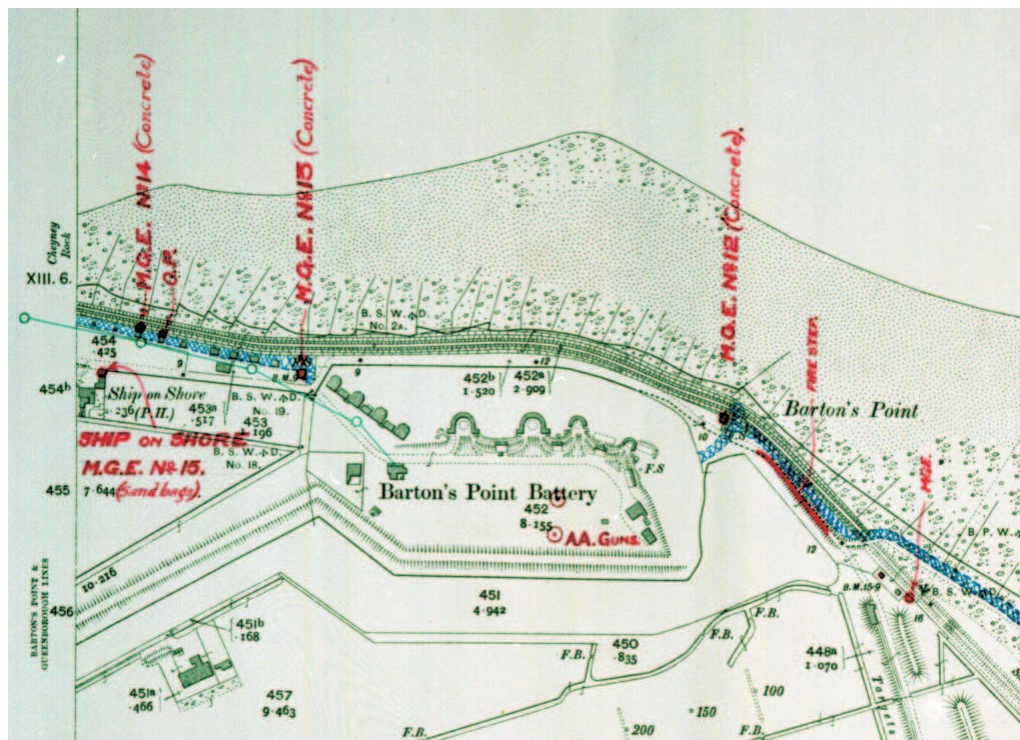


Figure 17
First World War field
fortifications around
Barton's Point, 1919
(extract of PRO:
WO/78/4431/9, by
kind permission of the
Public Record Office)

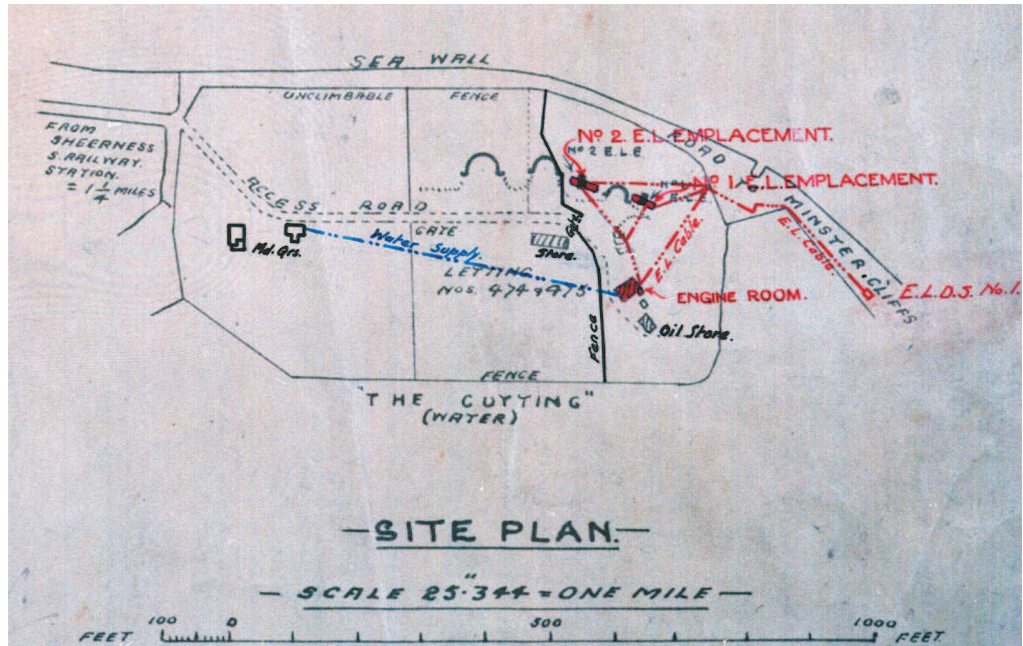


Figure 18
 Proposal plan,
 dated 1932, for a
 Defence Electric
 Light installation at
 Barton's Point
 (extract of PRO:
 WO/78/5114/1, by
 kind permission of
 the Public Record
 Office)

Sheerness (PRO: WO/33/1349; WO/78/5114/1; WO/78/5134/2). The DELs occupied a fenced compound in the eastern quarter of the battery, with the lights placed on the old QF platforms, an Engine Room established in the old Artillery General Store and an Oil Store for the engine made in the old Smithy and Fitters Shop. The lights were controlled from a Directing Station (ELDS) built outside the battery on the sea wall to the north-east.

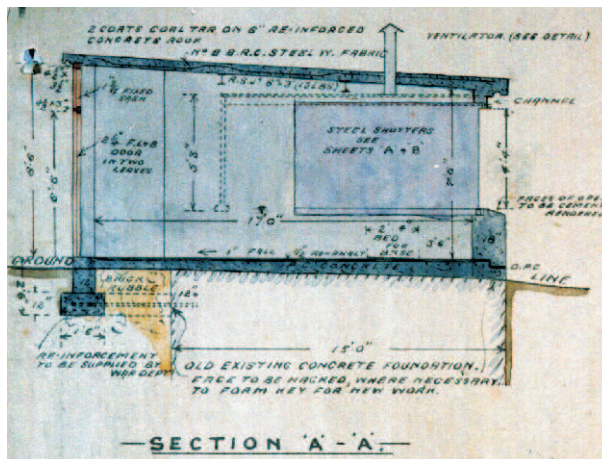


Figure 19
 Section of DEL No
 2, as proposed in
 1932 (extract of
 PRO:
 WO/78/5114/1, by
 kind permission of
 the Public Record
 Office)

Late in 1939, the lights came under control of the Royal Artillery (RA) but the engines continued to be operated and maintained by the RE. Plans were made to replace the ELDS with a new Searchlight Directing Station (SLDS). This was probably contained in the small tower, visible on aerial photographs taken in 1947, built into the gun pit of the former No I disappearing gun (PRO:

WO/166/2056; NMR: CPE/UK/2007/4007-9). By 1944 the lights were primarily for observation not fighting, with No 1 serving as a sentry beam and No 2 as a searchlight (Fig 19; PRO: WO/199/14954).



REMAINS OF THE PERIOD 1914-45

There are no visible remains of the temporary field defences installed during the First World War.

However, there are some traces of the DEL installation built in the mid 1930s. Of the lights themselves, only two small sections of concrete wall are extant. These comprise the canted front wall of DEL No 1, 0.20m (8in) thick and 0.5m (1ft 8in) high, built over the 6-pdr QF position, and the south-east angle of DEL No 2, behind the 12-pdr QF platform (Fig 20). Nothing now remains of the internal features associated with the lights and their operation.

Several buildings from the old coast artillery battery were re-used as part of the DEL installation. Most of these were in the camp area and have been levelled. However, the former 6-inch magazine was refitted, possibly for storage of spares for the lights and small arms and ammunition for the detachment, and all rooms contain wiring, mesh covers, conduit, switches and lamp housings from electric lighting. Additionally, on the floor of the shell store, three raised rectangular concrete beds, each 0.9m (3ft) long and 0.3m (1ft) or 0.38m (1ft 3in) wide, probably supported an oil tank - perhaps providing fuel for the electric light engine (Fig 21).

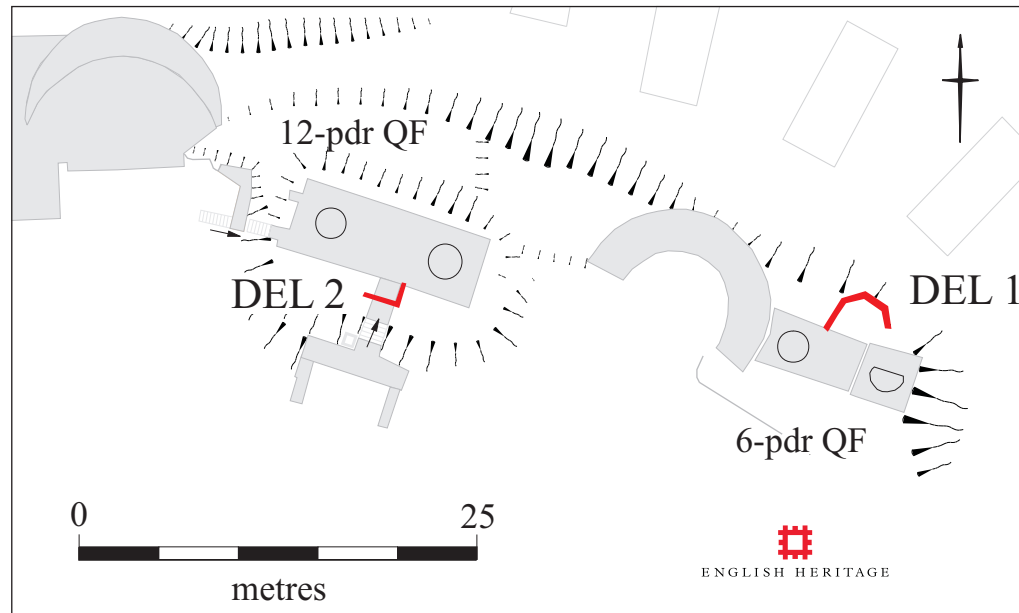


Figure 20
Plan showing the remains of the two DELs on the old QF gun platforms

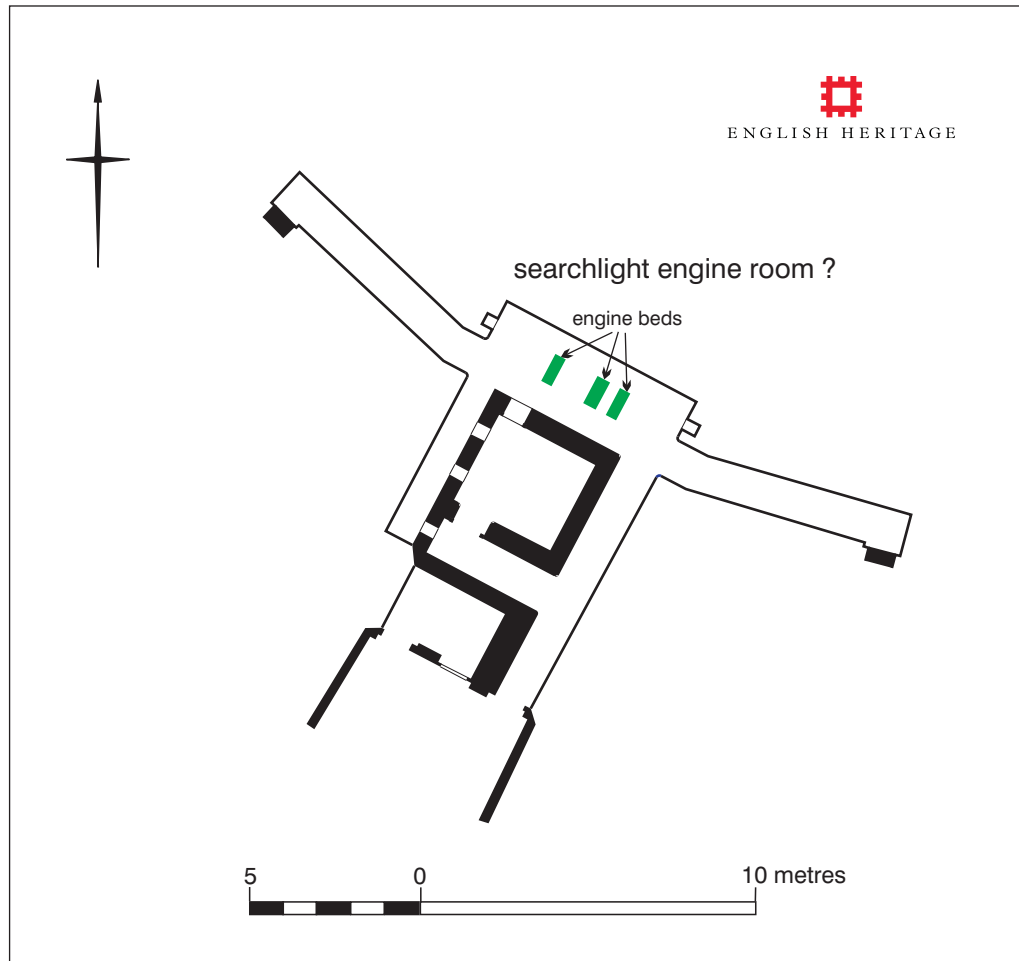


Figure 21
Plan showing re-use of the 6-inch magazine, during the DEL phase



4. THE SCHOOL OF NAVAL ANTI-AIRCRAFT GUNNERY

HISTORICAL SUMMARY 1937-c1961

In 1938, the western three-quarters of the former battery compound was taken over by the Admiralty, separated from the Army's DEL installation by a high fence. Their initial proposals for an AA gunnery school, shown on a blueprint drawing of June 1937, were concerned with training in close-range naval AA defence using the 0.5-inch machine gun and the Mk 'M' 2-pdr Pom-pom, the standard guns used on Royal Navy shipping at that time. The drawing - which was only an initial proposal - shows an administrative block (comprising offices, mess and lecture rooms) in the camp behind the old 9.2-inch gun pits, and the former *glacis* occupied by both dummy equipment and real AA guns for live-firing on a defined range out at sea. A later plan, of April 1938, shows the agreed boundary of the naval school and *two* new buildings behind the old 9.2-inch gun emplacements; an office block and a separate mess room (PRO: ADM/1/9709). These two buildings *were* constructed and are visible today (see below, p33-4).

By March 1941 the school was well established. Concrete platforms had been built over the empty gunpits of Nos II, III and IV HP BL guns, and onto the *glacis*. These platforms supported equipment and buildings for delivering training while office and mess buildings were in the camp behind. Only a few gun positions can be seen on the aerial photographs (NMR: 26/UK1455/2034-6). However, by July 1945, a large-scale expansion had taken place, with a host of guns and more training buildings established on the older platforms and on a new one built north-westward across the *glacis*. Additionally, a large group of Nissen huts almost completely filled the camp, presumably providing extended accommodation and facilities for trainees, and a tall range control building had been constructed over part of the old 6-inch practice battery (NMR: 3G/MEW/T/3/5053-4).

Training continued after the war and from 1946, the firing range was extended further out to sea to accommodate the more powerful 40mm Bofors gun. In 1948 the temporary Nissen huts were replaced by semi-permanent structures (PRO: ADM/1/21147). This may have included taking over part of the remaining army land, where new buildings were established by 1953 (NMR: 58/1016/73; 540/1068/36-8). The Admiralty were discussing the possibility of closing the school in 1953 but it remained intact between 1955 and 1958 (NMR: 58/1779/240-1; 58/2426/9). By 1961, however, dismantling had begun and the first holiday chalets had appeared (NMR: 58/4739/1).



THE REMAINS OF THE SCHOOL OF NAVAL ANTI-AIRCRAFT GUNNERY

In the following text, words and letters in **bold** appear on the figure given at the start of that section.

Summary (Fig 22)

The training buildings and equipment were placed principally on concrete platforms built over the old Nos II, III and IV gunpits, reached via a single-track concrete road leading up the western slope of the rampart. The main platform is aligned east to west (called hereafter 'the **central platform**'), while two more run north across the *glacis* (called hereafter the '**east platform**' and the '**west platform**'). Today, there are only minor traces and footings of the numerous training buildings and gun emplacements which stood on these platforms. However, preservation is better in some of the former battery buildings, which were re-used during the naval phase.

Most of the temporary accommodation and facilities buildings which stood in the camp have been demolished, and their sites are occupied by modern semi-permanent chalets. Nevertheless, the three permanent naval structures have been re-used and survive in good condition - the **range control tower**, the **offices** and the **mess**.

The training buildings on the central platform and approach road (Fig 22)

Just east of the range control building, are the partial remains of a building, **A**, in the form of a concrete standing with the impression of brick walls for two rooms and a sill for two doors facing south. Its purpose is not known.

More substantial is a concrete floor from a much larger building, **B**, cut into the base of the old *glacis* and measuring 7.4m (24ft 3in) by 5.5m (18ft 1in). There are sawn-off I-section girders around the perimeter from its steel frame. It was approached down a short ramp from the south, where a gulley in the concrete indicates the former position of sliding doors. Inside, there are multiple sawn-off square-section metal rods of 2.5cm (1in) section, forming a large D-shape that almost fills the floor area. Traces of mortar between these rods indicates the footings of a semi-circular wall, about 0.18m (7in) wide, probably the footings of a projection screen from a **dome trainer** where AA gunnery was simulated.

On the central platform itself are the footings of another large building, **C**, measuring 5.03m (16ft 6in) by 3.52m (11ft 7in). The floor edge is rebated for a brick wall, 0.35m (1ft 2in) wide except on the north where it is only 0.23m (9in). A gap, 1.8m (6ft) wide, in the centre of the east wall indicates an entrance. Inside is a single vertical I-section steel beam, sawn off to floor level, and a ceramic drain in the north wall, now infilled with concrete. Outside to the west but associated with this building are four concrete **plinths**,

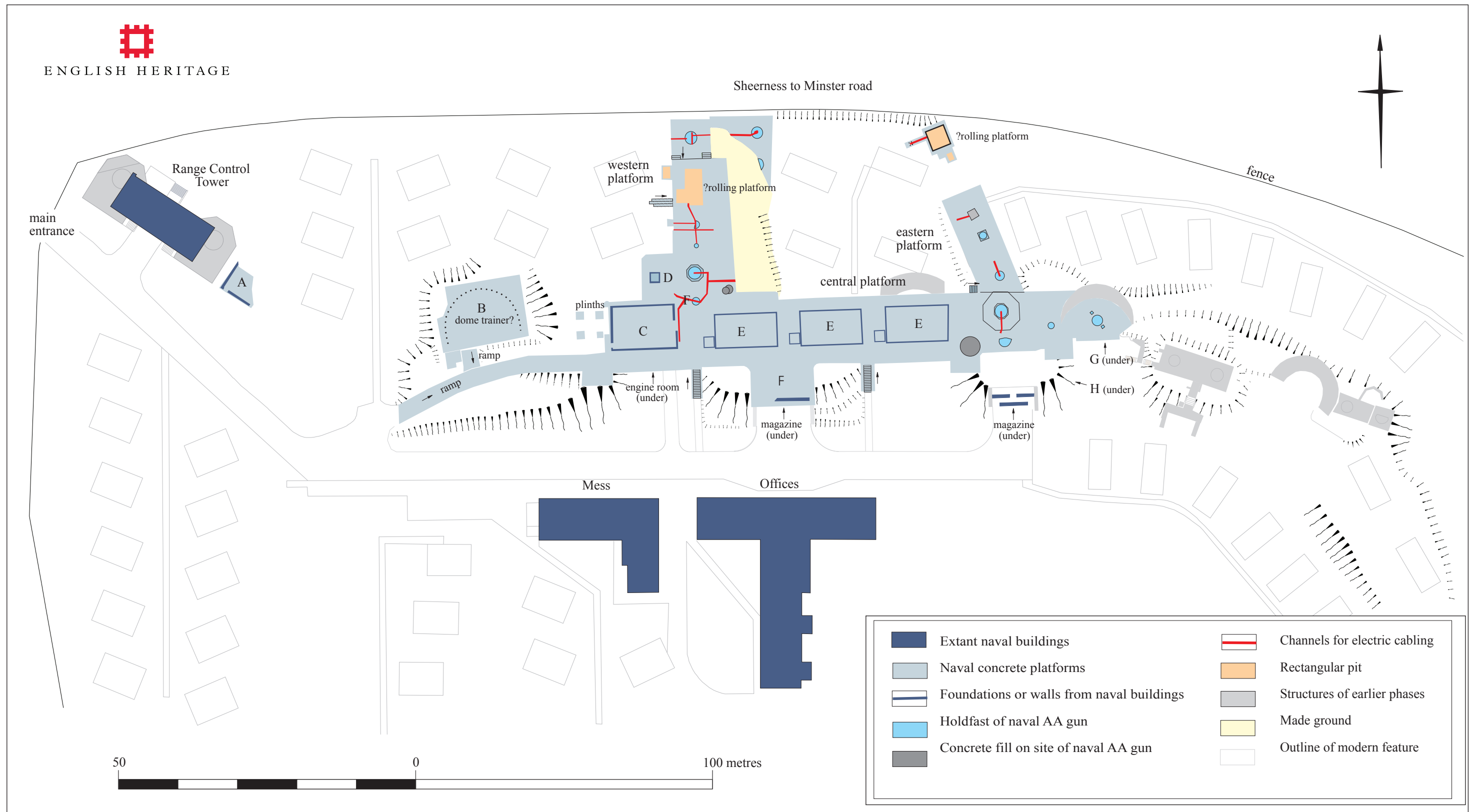


Figure 22
Plan of the surviving structures of the naval AA training school

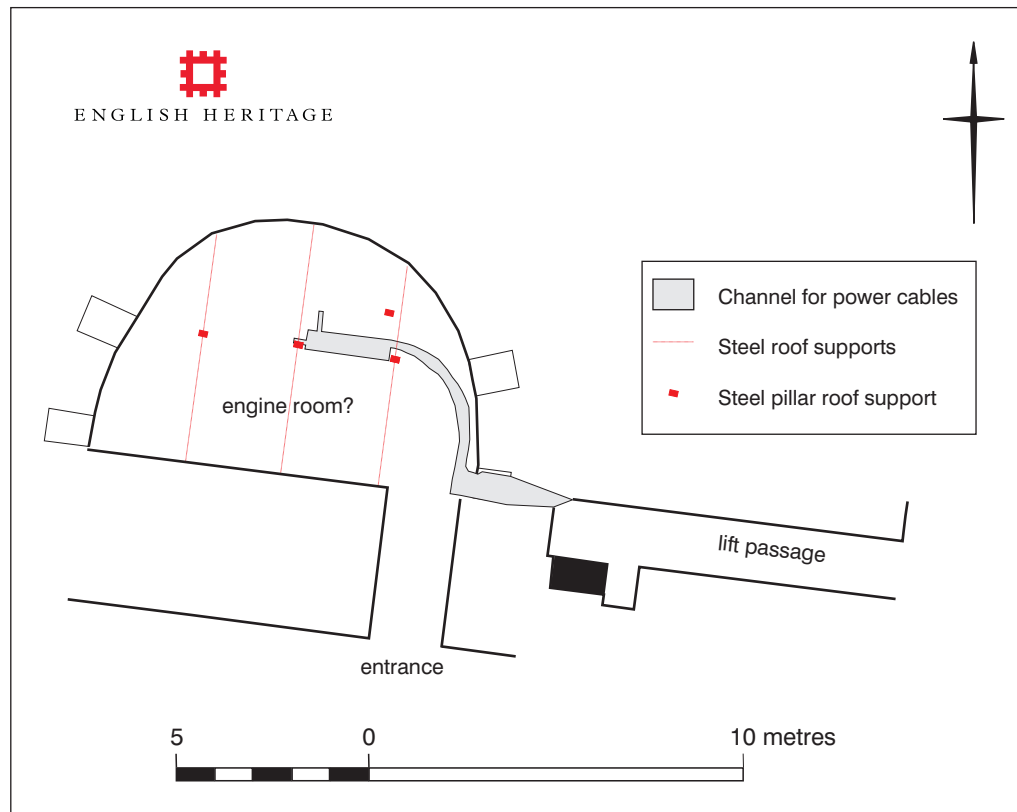


Figure 23
Plan showing the use of No IV 9.2-inch gun pit as an engine room for the naval AA training school

three of which are each 1.35m (4ft 5in) square and 0.35m (1ft 2in) high, with identical rebated settings for a triangular steel plate mounting, formerly secured by bolts. The fourth is slightly offset from a square with the other three and all probably supported a radio or radar mast. Channels for electric wiring lead from this building to structures and gun emplacements on the western platform. It is likely, therefore, that the building was for both communications and for the remote control, operation and monitoring of the training weapons and equipment.

This role tallies with the re-use of the pit of gun No IV, directly underneath, as an **engine room** supplying power to the whole naval site. It is currently a cluttered boat store, which prevented thorough investigation of the floor for any engine mountings. However, the old gun pit is truncated by a concrete wall, 3.9m (12ft 10in) thick, running across the rear third, and a concrete roof supported on three large RSJs and steel I-section columns (Fig 23). The resulting closed chamber is 2.15m (7ft) high; it lacks windows but has five air vents at roof level in the rear wall where there is also a single entrance, presently served by double steel doors of unknown date. The interior walls contain abundant evidence of electrical equipment; junction boxes, switches, wiring and mesh protective covers etc. Additionally, a channel in the floor, 0.4 to 0.55m (1ft 4in to 1ft 9in) wide and 0.25m (10in) deep, leads from the centre eastwards into a former ammunition recess, from where it is hacked down through the concrete into the west lift passage of the



9.2-inch magazine. This channel probably carried electric wiring from a generator in the old gun pit into the lift passage and through the various rooms of the magazine. Mesh screens which protected the wiring can be seen on many of the magazine walls but the use of navy blue paint on woodwork of the cartridge stores confirms they still had a storage function – probably for AA ammunition.

Another small rectangular building, **D**, on the central platform, shows only traces of a single-skin brick wall and an internal partition wall. Inside is a rectangular brick setting, 1.15m (3ft 8in) by 1.05m (3ft 5in), rendered internally.

The remains of three identical single-storey buildings, **E**, arranged in a row, are marked by modern concrete plinths on the sites of original footings; the interiors are now utilised as flowerbeds. Outside the western end of each structure is a concrete setting, 1.6m (5ft 3in) square internally, defined by low walls 0.15m (6in) wide and 0.21m (8in) high. These buildings possibly functioned as lecture and training rooms. Nearby, a small structure, **F**, stood on the roof of the 9.2-inch magazine; there are brick foundation walls 0.23m (9in) wide, and 6.9m (22ft 8in) long by at least 6.0m (19ft 8in) wide internally.

The eastern end of the platform contains the sites of five AA guns of different types (see Table 1, p37). Of these, particularly interesting is the one in the old No II gunpit, where a brick building, **G**, was inserted into the emplacement, its concrete roof flush with the lip of the old barbette (Fig 24). The AA gun holdfast is placed centrally on the roof, the weight of the gun supported down through the building to floor level on a brick cylinder, 1.21m (4ft) in diameter. The external elevation of the building is in English bond and whitewashed, with a single pilaster and ventilators at roof level. There is a window, 1.1m (3ft 7in) wide by 0.7m (2ft 4in) high and an entrance, 0.8m (3ft 7in) wide and 2m (6ft 7in) high, both with concrete sills and lintels (Fig 25).

Inside, walls of single brick thickness abut the east and west sides of the cylinder, dividing the space into **rooms 1** and **2**, with a doorway in the western wall (Fig 25). In room 1, the floor contains a narrow channel running from the door to the cylinder and two rebates for 0.3m-square (1ft) metal plates formerly bolted to the floor, corresponding to patched holes in the roof. The roof is supported by an axial RSJ, while the cylinder contains a blocked opening with a concrete lintel, 0.9m (3ft) wide and 1.5m (5ft 11in) high. While the function of this building is uncertain, it was probably directly related to training on the gun above it.

Of similar date to building **G** and immediately west of it, a porch was constructed to cover the old stair which descends to the former shelter for No II gun. Moreover, the stairs gave access to a new rectangular room, **H**, under the rampart. Access to this room and



Figure 24
A naval building inserted to the rear of the old no II 6-inch gun pit, from the south-east (NMR: AA020005)

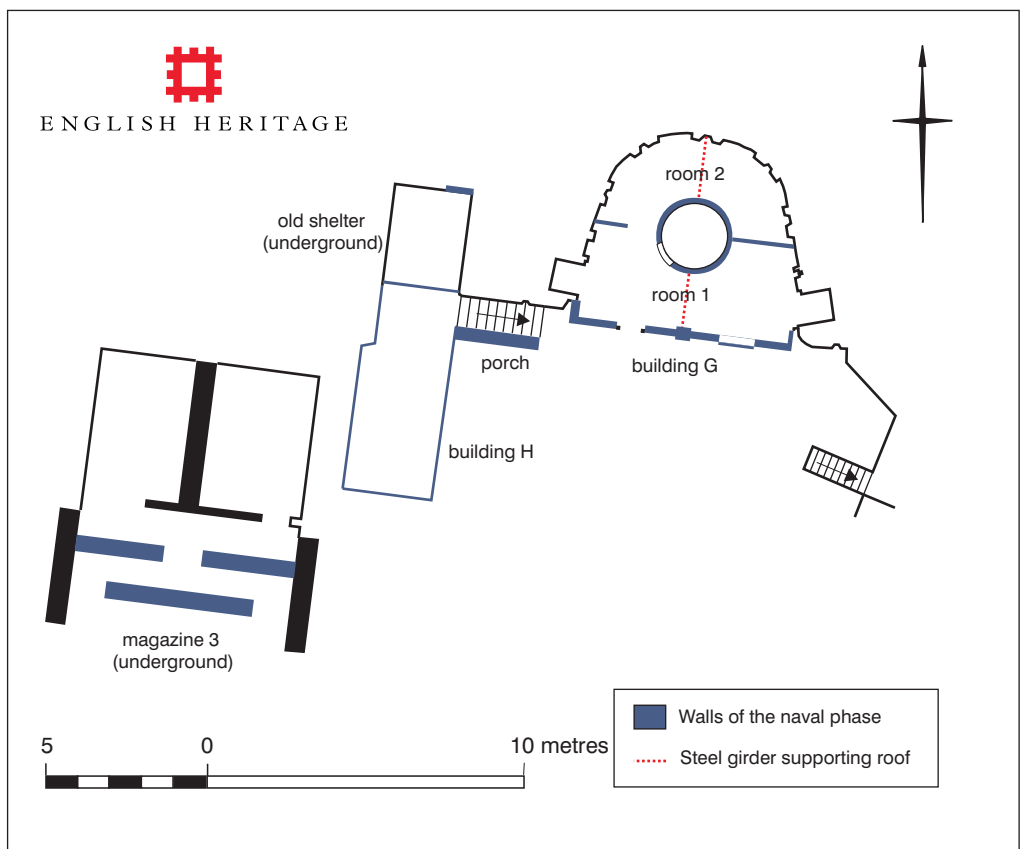


Figure 25
Plan of the naval alterations and additions to the old No II 6-inch gun pit and magazine A



the old shelter was controlled by a heavy steel door at the base of the stair, with strong hinges, a mortice lock and a strap handle, suggesting that security was important. The room is built in yellow stock brick laid to English bond, with a flat concrete roof 2.4m (8ft 10in) high. The room measures 6.60m (21ft 8in) by 2.80m (9ft 2in) with provision for electric lighting and a single vent pipe high up in the south wall. A narrow gully runs alongside the east wall.

Close by, the former magazine A was also altered. The alterations comprise the provision of free-standing blast walls to protect the entrances and heavy steel doors and doorframes (Figs 16, 25). The eastern door is *in situ* and retains its mortice lock and strap handle. It is painted dark green on the interior face but is covered by red lead on the outside. These modifications suggest use either as a magazine or an artillery store.

Training equipment on the western platform

This is perpendicular to the central platform and comprises two concrete standings on different levels. The eastern standing is on one level but now largely obscured by made-up ground. The western standing is on two levels, higher than its partner except over the northern third, where it is at the same level; the higher part had been established by 1941 whereas the northern third and the whole eastern standing is later (NMR: 26/UK/1455/2034-6). Both standings were given over entirely to training guns and equipment: eight gun holdfasts are visible (four of similar type), linked by channels for cables to enable automated control and firing (Table 1, p37). There is also an unusual L-shaped pit, measuring a maximum of 2.81m (9ft 2in) by 2.0m (6ft 7in), rebated for a metal edge. This may have held a powered **rolling platform** to simulate firing conditions at sea. The lower level of the western standing lies over a void, accessible via an opening in the west wall, and probably a service access for machinery and electrics.

Training equipment on the the eastern platform

At a lower level than the central platform, the eastern platform is built out at an angle of 70°. It contains three gun holdfasts, two of similar type. On the same alignment is a detached concrete structure, 0.35m (1ft 2in) high, the main feature of which is a rectangular pit, measuring 1.62m (5ft 4in) by 1.52m (5ft), edged by an inverted L-sectioned metal band and with three-bolt settings in each corner. A long concrete channel, recessed for a metal cover, leaves the western side and terminates at a rebated setting for a metal plate on a raised concrete pad. Against the southern side is a smaller pit with a modern cover. It seems likely that this supported another **rolling platform**, the long channel carrying power from a switch at the end. On the blueprint drawing of 1937, a 'peaty platform' for an 0.5-inch machine gun is shown on this exact alignment and in this position. Indeed something resembling a gun pit *was* built here but the surviving structure is a replacement (NMR: 26/UK1455/2034-6; 3G/MEW/T/3/5053-4).



The administrative and support buildings in the camp

Nothing survives from the host of temporary and semi-permanent accommodation huts which filled the camp area. However, four more substantial buildings are extant.

The first of these is the present clubhouse, situated adjacent to the entrance gates at the western end of the complex. It is a two-storey brick structure constructed over two of the old 6-inch practice emplacements, with a small lightweight building on the flat roof (Fig 26). The roof is in concrete, as are the sills and lintels to doors and windows and the external stair. The latter, leading to the roof, incorporates a sentry box overlooking the gates. The building faces north-east over the firing range and this fact, together with its height and appearance, suggest that it was the **range control tower**. It was probably constructed when aerial target tugs were brought into use and has similarities with airfield control towers. It may also have served naval regattas.

The second surviving naval building is the former **offices**, formed of three single-storey ranges arranged in a T-shape with a central two-storey squat tower, in brick with gabled slate roofs and a flat concrete roof over the tower, which formed an observation platform (Fig 27). Two horizontal concrete bands form sills and lintels for the windows, while the main entrance at the base of the tower has a brick door case in the International style. The windows are replacements but, like the adjacent mess building, were originally of the



Figure 26
The naval AA range control tower, from the north. Note its position over two of the disused concrete emplacements of the 6-inch practice battery (NMR: AA008684)



steel-framed ‘Crittal’ type.

The **mess** is a single-storey L-shaped brick building with similar detailing to the offices, notably the concrete bands and door case (Fig 28). Additionally, several of the ‘Crittal’ type windows are extant in the end and rear elevations. However, the slate roof is hipped.



Figure 27
*The naval offices,
from the north
(NMR: AA008694)*



Figure 28
*The naval mess
building, from the
north-east (NMR:
AA008700)*

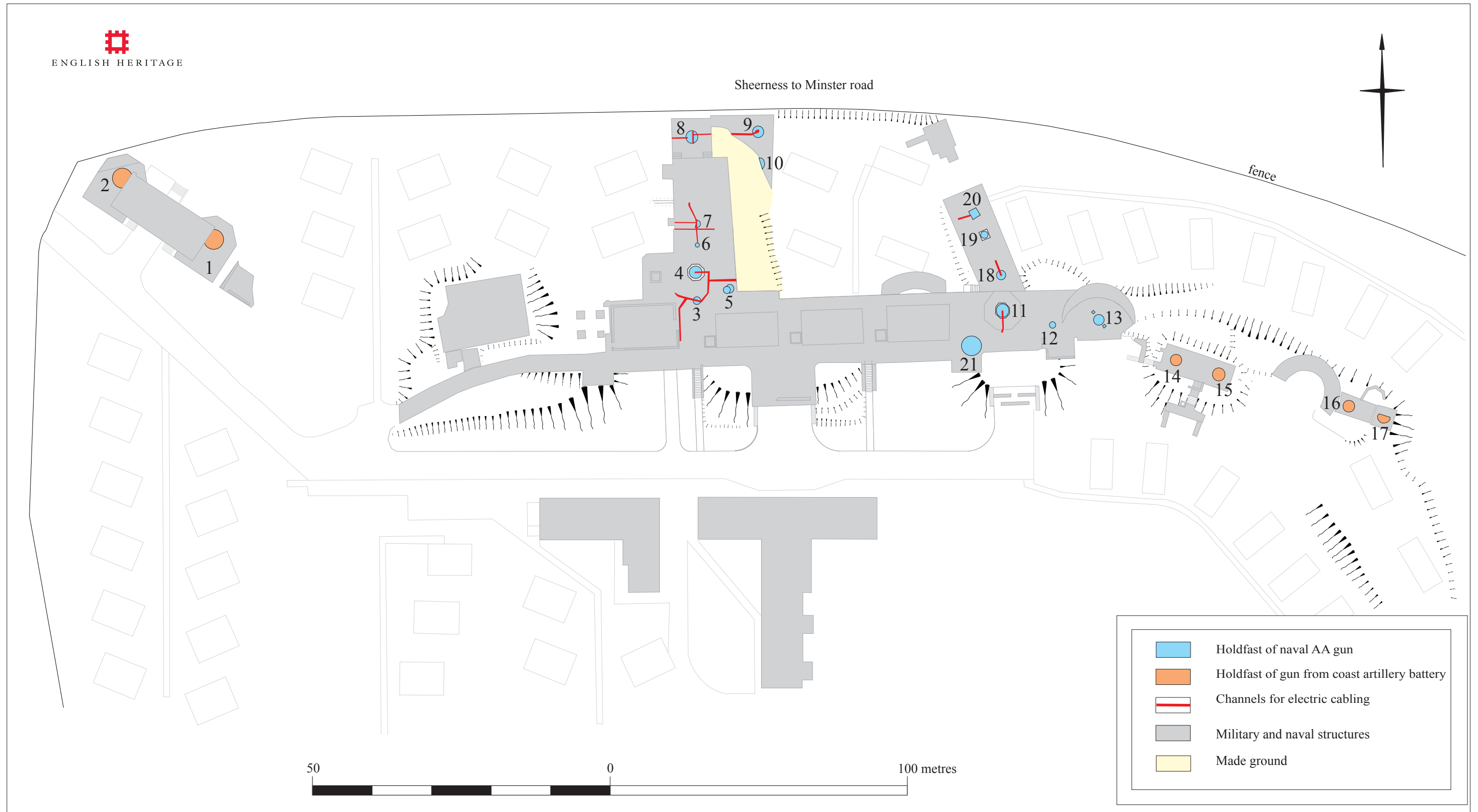


Figure 29
Plan showing the positions of extant gun holdfasts (see Table 1)



TABLE 1
*Surviving gun
 mountings at
 Barton's Point*

No	Type	Mounting diameter (bolt to bolt)	Service	Notes	Date
1	6-inch BL		Army	Part of annular concrete scar with two rings of bolts (outer <i>c</i> 32 , inner <i>c</i> 14)	1904-5
2	6-inch BL		Army	As 1	1904-5
3		1.3m	Navy	Circular concrete patch with ring of 8 bolts	1938-60
4		Outer 2.0m Inner 0.8m	Navy	Octagonal concrete patch with two rings of bolts, outer 28, inner 8	1938-60
5			Navy	Circular concrete patch, 1.3m across, replaced by a steel plate, 0.9m diameter, and slightly offset	1938-60
6		Outer 0.84m Inner 0.70m	Navy	Two concentric rings of 10 bolts each	1938-60
7			Navy	Part of circular concrete patch, 1.35m diameter	1938-60
8		2.1m	Navy-	Circular concrete patch, 2.2m diameter, with a ring of 32 bolts	1938-60
9		2.05m	Navy	Circular impression in concrete, 2.15m across, with ring of 30 bolts	1938-60
10			Navy	Circular concrete patch, mostly hidden by made ground. Type similar to 9	1938-60
11		2.2m	Navy	Circular concrete patch with ring of 28 bolts. Replaces earlier mounting with an octagonal form	1938-60



TABLE 1
(Continued)
Surviving gun mountings at Barton's Point

12		1.25m	Navy	Six pairs of bolts defining a circle	1938-60
13		1.75m	Navy	Circular concrete patch, 1.9m across, containing a ring of 30 bolts	1938-60
14	12-pdr QF		Army	Scar from steel plate, as 15	c 1890s
15	12-pdr QF	Outer 0.95m Inner 0.78m	Army	A circular steel plate, 2.15m across, secured by a ring of 6 bolts. Plate contains a flange, inside which are another 18 bolts for securing the gun pedestal	c 1890s
16	6-pdr QF	N/A	Army	D-shaped steel plate, 1.54m on the straight side and 1.25m across the D, secured by 10 bolts	c 1890s
17	6-pdr QF	N/A	Army	Originally as 16, now a hexagonal concrete patch on the site of the mounting	c 1890s
18		1.65m	Navy	Circular concrete patch, 2m across, containing a ring of 14 bolts	
19		1.26m	Navy	Square concrete patch 1.5m on a side, within which is a circular rebate of 1.35m diameter, containing a ring of 12 bolts	
20			Navy	Square concrete patch 1.5m on a side, infilling site of mounting	
21			Navy	Circular concrete patch, 3.25m across	



5. DISCUSSION

The coast artillery battery

The significance of the remains of the coast battery at Barton's Point lies in its rare type - for HP 'disappearing guns' - which was operational in a small number of locations in the United Kingdom for the short period between 1889 and c1906. By the early years of the 20th century, gun carriage designers returned to and solved the problem of harnessing axial recoil, which resulted in a new generation of BL guns which were to endure until the end of coast artillery in the 1950s. Moreover, the fate of Barton's Point as an operational battery was sealed by 1906, when changing military strategy resulted locally in the concentration of guns in Sheerness itself, on the older defensive lines around the dockyard, and on the north side of the estuary at Grain.

Although largely obscured or sealed by the naval structures from the Second World War, three of the disappearing gun pits are virtually complete (Nos I to III), while No IV is partially so. Three original magazines also survive in a reasonable state of preservation, while a fourth lies buried but presumed intact. Nationally, these early purpose-built BL batteries for disappearing guns are rare, although individual emplacements often survive where they were emplaced in existing fortifications, notably nearby at No 1 Bastion on the Sheerness Lines, where a 6-inch BL HP gun pit survives. Purpose built examples in a good state of preservation exist at Landguar Left Battery (Felixstowe), Beacon Hill Fort in Harwich and at East Tilbury Battery on the Thames.

The two positions for QF guns appear to have been installed some time after completion of the main battery, placed as they are on the top of the rampart in an open situation protected only by the steel shields of the guns themselves. This probably occurred probably in the mid-late 1890s when fast torpedo craft were perceived as a real threat requiring the response of smaller calibre weapons which could be brought rapidly onto their targets at quite close range. Moreover, the close co-location of both 6-pdr and 12-pdr emplacements is unusual, as is their placement on open platforms, without the aprons, barbettes or ready-use ammunition lockers of developed QF batteries. One possibility is that the QF guns were a temporary measure to meet a perceived threat but, and perhaps more plausibly, they might also have been for training. Indeed it is made more likely by the concentration of training guns here in the period 1901-6, with the building of practice batteries for 5-inch and 6-inch guns and the existence of a small arms range on the marshes to the east. The planned demise of the battery as an operational one may have been phased in with its emergence as a local training centre.

A further item of interest concerns the working practice in each magazine of the original battery, though because of later alterations it is difficult to reach firm conclusions.



Firstly, the 9.2 inch magazines lacked separate provision for the lifting of shells and cartridges to the emplacements: this is not unusual because the tray lifts separately took shell and cartridge to the gun floors. It was not common practice for the 6-inch guns, where dedicated lifts were normal, but the radical modifications made to the lift passages in the 6-inch magazine have concealed the original arrangements. However, the sign in the western lift passage for a CARTRIDGE LIFT suggests it was dedicated and that there would have been a separate shell lift.

The addition of an extra shell rack in the 6-inch magazine, effectively blocking the issue hatch from the cartridge store, possibly relates to an adaptation made for fixed *ammunition*. This could have occurred in several contexts: for the QF guns, for the AA guns during the First World War, or for naval AA guns in the Second World War. In either case such conversion may have two further reflections; firstly in the modified lift passages where, with the introduction of inclines leading directly to hatches in the 6-inch emplacements, the lifts were abandoned in favour of manual handling of the lighter projectiles; secondly, in new signage where, for instance, 'AMMUNITION LIFT' superseded 'CARTRIDGE LIFT'.

The functions of the structures referred to here as magazines A and B remains unresolved. They appear to be original, situated as they are in protected positions under the rampart, and their simplicity implies storage. One possibility is that they are connected with the filling of shells on site. By the late 1880s, the filling of shells on site was being phased out but this may be a late example, a possibility given some support by the sign 'FILLED SHELL STORE' in the 6-inch magazine. Another is that they were storing fixed ammunition for the QF guns.

The DEL Installation

The remains of the DEL installation are of only minor significance, as many more complete examples survive nationwide.

The naval AA training school

Although the naval AA school has been largely stripped out, the imprint of the training facilities can still be detected. It has not proved possible during the current survey to determine the full details of the layout of buildings and which weapons were being used. For this, further documentary research is required. Nevertheless, it is of particular importance to have identified the survival and continuing use of three significant buildings from the period 1938-44 - the range control tower, the offices and the mess.



6. SURVEY AND RESEARCH METHODS

Barton's Point Battery was surveyed using Leica Differential GPS, with the majority of features coded at the point of survey. The resulting data were processed in AutoCAD R14 and returned to the field for annotation and supplementary survey. Underground features were surveyed with tapes using normal graphical methods and processed using Autocad 2000 and CorelDraw software. This report has been prepared using Corel Ventura v8 DTP software.

Documentary research was undertaken in the Public Record Office at Kew.

7. ACKNOWLEDGEMENTS

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8. BIBLIOGRAPHY AND SOURCES

Published works

Saunders A, 1989 *Fortress Britain* Beaufort, Liphook

War Office, 1911 *Treatise on Military Carriages* 7th edition

Unpublished sources

A) National Monuments Record (NMR)

Probert S and Pattison P (2001) *The Queenborough Lines, Sheerness, Medway, Kent: A later 19th-century defence line* (unpublished survey report)

Aerial photographs:

26UK/1455/2034-6, 14th March 1941

HLA/414/67-8, 3rd March 1942

3G/MEW/T/3/5053-4, 8th July 1945

CPE/UK/2007/4007-9, 16th April 1947

58/1016/73, 6th February 1953

540/1068/36-8, 8th February 1953

58/1779/240-1, 6th June 1955

58/2426/9, 23rd April 1958

58/4739/1, 13th October 1961

B) Public Record Office, Kew (PRO)

ADM/1/9709 *Anti-aircraft Gunnery School, Sheerness*. A bundle of papers relating to establishment of the school. It includes letter No 547/02881 from the C-in-C of Nore Command (dated 7-4-1938) regarding AA Range Barton's Point Sheerness, with plan no 0776/38 showing revised boundaries of the proposed site. Also in the file is a blueprint drawing (dated 16/6/1937) with Nore Command letter no 1272/0288L (dated 14/7/37) and also marked CE-in-C no 0242/37. It shows the proposed layout of the school overlaid on the old battery.



ADM/1/21147 *Barton's Point RNAA Range (Isle of Sheppey, Kent)*. A bundle of papers dated 1946-53. It includes a letter (dated 27/6/1946) relating to the extension of the range area necessitated by the use of 40mm Bofors guns, Minute Sheet no M/3326/53 (dated 1948) recording that Nissen huts had been replaced by semi-permanent huts and Minute Sheet no M/3326/53 (dated 4th Sept 1953), raising the possibility of closing the school.

WO/33/395 *Thames and Medway Defence Scheme* revised to January 1st 1906

WO/33/477 *East Coast Defence Scheme, Thames and Medway* revised to February 1909

WO/33/671 *Eastern Coast Defences Scheme Thames and Medway pt 1 HQ* (revised to 1914). It includes a proposal (p 162) for field defences at Barton's Point in the Precautionary Period and a fold-out diagram at the back of the document (by the War Office, Jan 1913) shows the Sheerness Command Communications, on which the Bartons Point Guard House had been designated a Caretaker's Quarters and had a telephone connexion to a Military exchange.

WO/33/1349 *Thames and Medway (Interim) Defence Scheme 1934*. Pages 17 and 72 give details of the Barton's point DELs and manning details respectively

WO/78/4427/7 War Department 25-inch map, Kent sheet 13.7, revision of 1906, annotated with field defence positions dated 9th May 1916. A separate traced drawing gives large-scale details of fire trenches

WO/78/4431/9 War Department 25-inch map, Kent sheet 13.7, edition of 1908, annotated with field defence positions dated 22nd April 1919.

WO/78/5113/6 *Harwich and Sheerness Defences Index Plan*, on an Admiralty Chart complete with Armament Table dated 10th June 1909

WO/78/5114/1 *Sheerness, Barton's Point, Proposed (crossed out) DEL Installation, dated 20th April 1932 (proposal) and 10th January 1934 (checked)*

WO/78/5117/1 *Record Plan, Sheerness Sub District, Barton's Point Battery with Practice Battery and PF's*: an Admiralty Chart of the River Medway showing general location of the battery

WO/78/5117/2 *Record Plan, Sheerness Sub District, Barton's Point Battery with Practice Battery and PF's*

WO/78/5117/3 *Record Plan, Sheerness Sub District, Barton's Point Battery, General Top Plan*

WO/78/5117/4 *Record Plan, Sheerness Sub District, Barton's Point Battery, Details of Practice Battery, PF's etc*



WO/78/5117/5 *Record Plan, Sheerness Sub District, Barton's Point Battery, Details of Non-Confidential Buildings*

WO/78/5134/2 *Thames Defences Index Plan*, dated 2nd July 1936, on Admiralty Chart

WO/166/2056 *War Diary*. A bundle of monthly diaries

WO/199/14954 *War Diary*. It includes the Thames and Medway Fire Command's Standing Orders, dated June 1944, when at Barton's Point no1 DEL was primarily a sentry beam and no 2 was a searchlight, but that both were working as observation lights