ISSN 1478-7008

ENGLISH HERITAGE

THE QUEENBOROUGH LINES
Sheerness, kent,

A later 19th-century defence line

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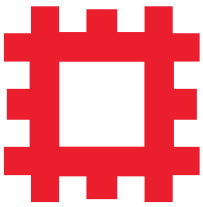
SURVEY REPORT

ARCHAEOLOGICAL INVESTIGATION SERIES
5/2001



THE QUEENBOROUGH LINES
SHEERNESS, SWALE
KENT

A SURVEY OF THE LATER 19TH-CENTURY DEFENCE LINE

NMR INDEX NO: 420376

NGR: TQ 9250 7415

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Sheerness from the air on 13th October 1961 (north is oriented to the top right corner). Its strategic location on the tip of a peninsula at the mouth of the River Medway is immediately apparent. The two wet ditches of the defensive cordons protecting the dockyard are visible as well-defined black lines; the irregular shape of the Sheerness Lines contrasts with the long straight course of the Queenborough Lines. Infilling of the ditch of the latter was well advanced (extract of NMR: 58/4739/1, Crown Copyright 1961/MOD. Reproduced with the permission of her Majesty's Stationery Office)

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ABBREVIATIONS USED IN THE TEXT

BL breech-loading gun

HP hydro-pnuematic

QF quick-firing gun

Pdr pounder (calibre of gun)

RML rifled muzzle-loading gun

1. INTRODUCTION

In May 2000 and January 2001, staff from English Heritage (Exeter and Cambridge offices) surveyed and investigated the Queenborough Lines at Sheerness, Kent, located at the mouth of the River Medway (Fig 1). *The survey was carried out following a request by Kent County Council and Groundwork Medway Swale, who also assisted with finance. The survey work, which is intended to contribute to management of the monument, consisted of a full survey of the earthworks and structures at 1:1250 scale.*

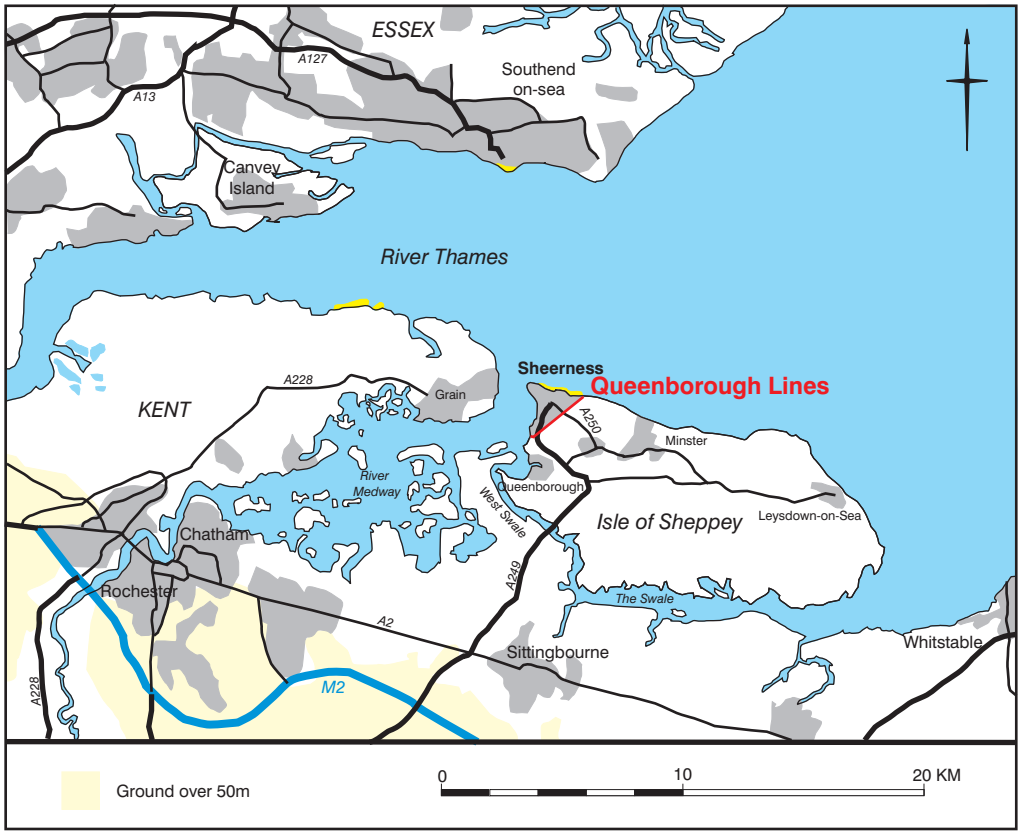

Figure 1
The Queenborough Lines, location map

The Queenborough Lines are a 19th-century defensive linear earthwork designed to run between Queenborough on the west and Barton's Point on the east, thus protecting the southern flank of the dockyard and town of Sheerness (Fig 2). Sheerness itself was heavily fortified to protect the entrance to the Medway and Chatham dockyard. The Lines still form a significant barrier and, with the exception of the Edenbridge Estate, still define the residential limits of Sheerness. Apart from four fenced enclosures of young trees the Lines are entirely under grass and meadow vegetation. They are regarded as an amenity and are used for a number of activities as well as serving as footpaths between different parts of the town.

2. AN OUTLINE HISTORY OF THE QUEENBOROUGH LINES

The construction of the Queenborough Lines resulted from the report of the Royal Commission on the Defences of the United Kingdom, published in 1860. Its principal conclusion, that the navy alone was insufficient for the defence of the kingdom, resulted in a colossal programme of fortress building and improvement. At Sheerness, this included both the building of a massive new casemated battery at Garrison Point to command the seaward approaches to the Medway, and also the closing of the landward approach to the dockyard. It was intended that the latter be acheived by three new redoubts situated on hills about two miles from the dockyard but this was dropped as an economy measure and replaced by a simple earthwork defensive line across the Sheerness peninsula (Hogg 1974, 95-7). This new line, which pushed the defensive

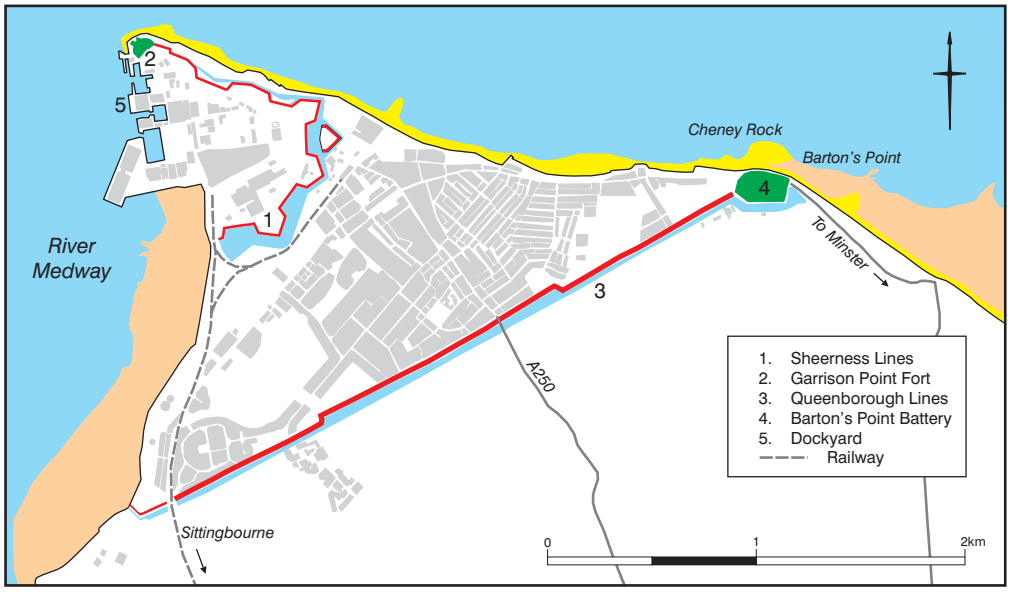

Figure 2
The Sheerness Defences c 1900, imposed on the modern town plan

cordon only 1000m (*c* 1110yds) south of the older defences defined by the Sheerness Lines, provided a measure of protection for the suburbs of Mile Town and Marine Town which had grown up south of the Sheerness Lines, but did little to counter the threat of long-range enemy artillery, as three redoubts two miles distant might have.

The new lines essentially comprised a continuous rampart with a broad flooded outer ditch, constructed across the low-lying flat ground of the Minster Marshes and known initially as the Queenborough and Cheney Rock Line of Defences. Work was well advanced in June 1863, with only short end sections unfinished where small batteries were to be placed (Fig 3; Saunders 1999 unpub). In 1868, the work remained almost, but not quite complete. The intended batteries at Cheney Rock and Queenborough were still not underway in 1869 (Saunders 1999 unpub).

Figure 3
The Queenborough Lines in 1863, with the Barton's Point and Queenborough ends unfinished (extract of PRO: WO/78/596, courtesy of the Public Record Office)

The Lines allowed for the passage of two pre-existing roads and a railway line. These were the main road into Sheerness (now the A250) in a more-or-less central position, the lesser road from Sheerness to Minster along the coast to the east, and the Sittingbourne to Sheerness railway near the western end.

The line taken by the earthworks is not quite straight, comprising three longer and roughly equal stretches with short irregular sections at the ends. The ditch is broader in the central section of the three, the result of setting back the rampart to create short flanking positions, from which the approach along the A250 and the causeway across the ditch could be defended by enfilade fire. Moreover, the two lengths of rampart between these flanks and the A250 causeway were given slightly different angles to prevent each position accidentally firing on the other and to establish an effective crossfire. To the east and west of the central section, the ditch is narrower, the intention being to cover these stretches by enfilade fire from the batteries at the ends of the Lines.

The artillery defences of the Lines, as originally designed, were never installed. Two magazines *were* in existence by 1868 (Saunders 1999 unpub), built to supply ammunition to the flanking positions of the central section, but there are no traces of fixed artillery emplacements. One proposal, for a tower incorporating an iron turret for two guns, never materialised (Saunders 1989, 178). However, although the proposed battery at the Queenborough end came to nothing, a battery *was* built at the eastern end at Barton's Point, between 1889 and 1891. By this date, the defensive policy had changed and this battery was for heavy coast artillery ranged seaward – two 9.2-inch BL and two 6-inch BL on HP disappearing mountings – not for artillery covering the Lines as originally

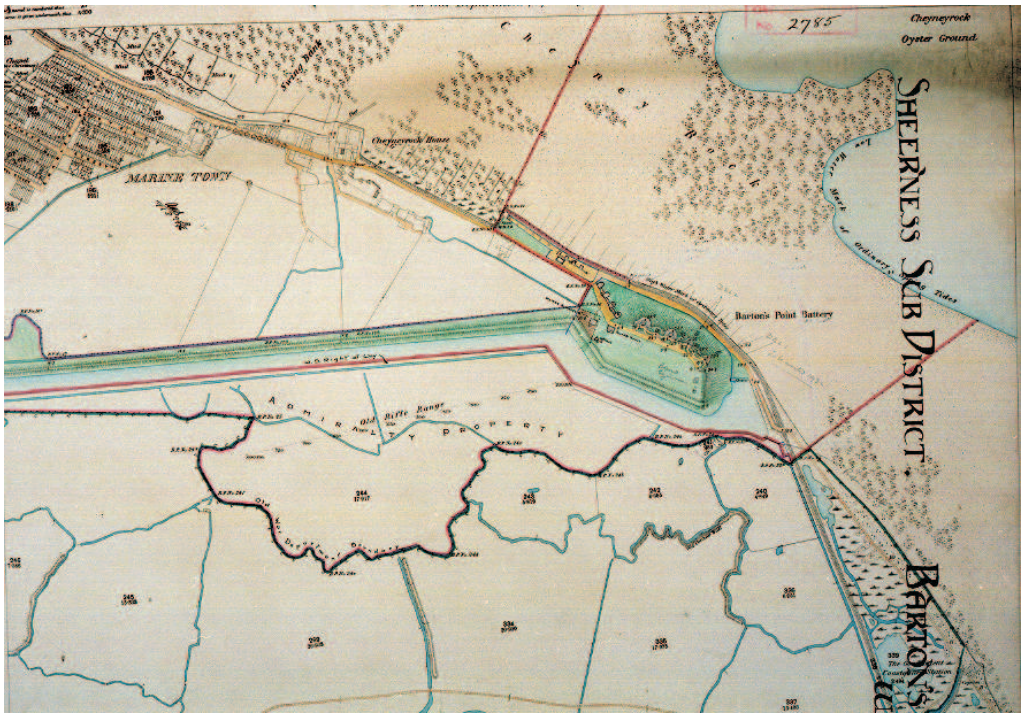

Figure 4
Barton's Point Battery in 1905, showing its continuity with the Queenborough Lines (extract of PRO: WO/78/5117/2, courtesy of the Public Record Office)

intended (Fig 4). Nevertheless, the southern side of the battery was protected by a new section of the Lines, from which small arms and machine guns could enfilade the ditch (Pattison 2001).

The mobilisation policy of the 1890s meant that the Lines were to be utilised for emergency defence by regular and volunteer forces based in Sheerness and elsewhere. In the event of attack from the land, infantry and *mobile* artillery could be deployed rapidly to positions on the Lines, along a covered way running behind the rampart. Between 1895 and the 1920s, the mobile artillery between Queenborough and Minster comprised twelve 9-pdr RMLs, reduced to two more modern 4.7-inch QF guns by 1927 (Saunders 1999 unpub). It is not clear whether or not the two magazines in the flanking positions were utilised initially in this scheme to provide a small reserve of ammunition but by 1906, the eastern of the two was disused (PRO: WO/78/4427/6).

There is some evidence that parts of the Lines were to be manned during the First World War, as part of a complex system of field defences comprising fire trenches, barbed wire entanglements, pillboxes and earthen redoubts, which was established along the entire east and south-east coast of England. As a dockyard and naval base, Sheerness was heavily defended by such works. In 1914, defences were proposed at Barton's Point, for a small detached post capable of localised infantry defence of the foreshore and the road between Sheerness and Minster (PRO: WO/33/671/p162). These defences were modified in 1916 and 1919 (PRO: WO/78/4427/7; WO/78/4431/9). At the

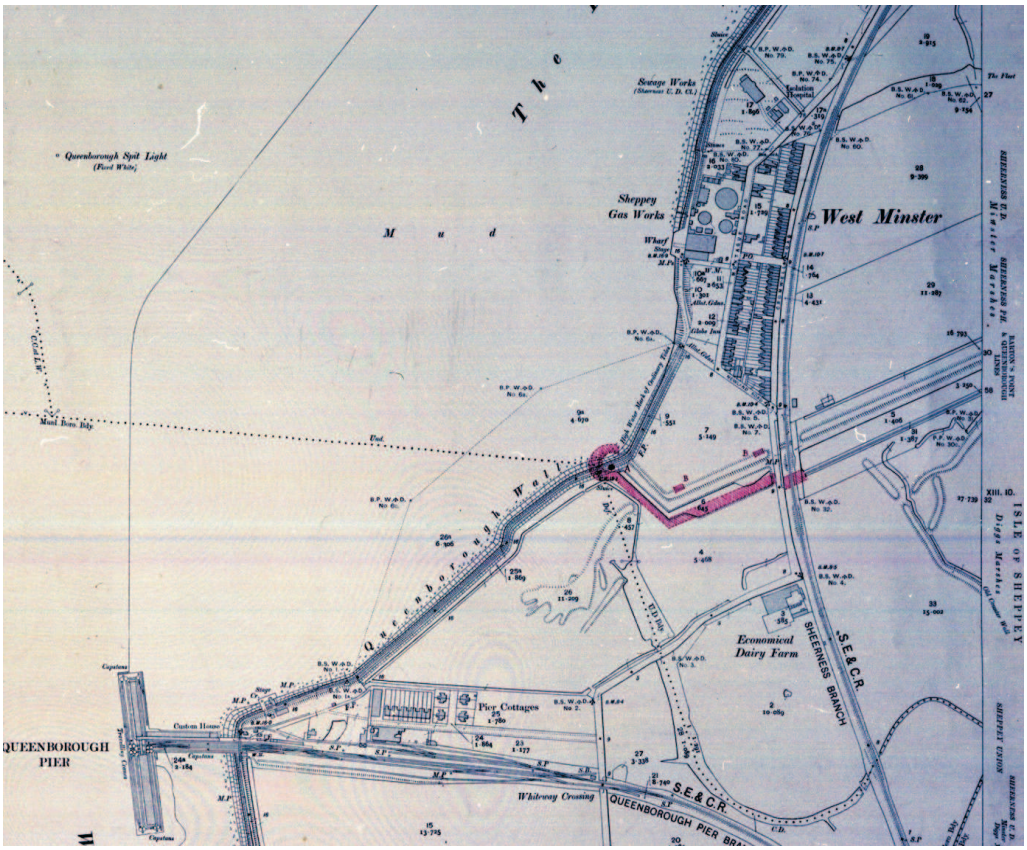

Figure 5
The Queenborough end of the Lines in 1919, showing the field defences (in red) comprising a barbed wire entanglement around a pillbox and two fire trenches (extract of PRO: WO/78/4427/8, courtesy of the Public Record Office)

Queenborough end, a barbed wire entanglement, two fire trenches and a blockhouse (or pillbox) protected the entrance to the West Swale and the passage of the railway (Fig 5).

The final stage in the military life of the Queenborough Lines came during the Second World War when the A250 causeway was made into a defended position to control traffic entering and leaving the town. These measures included a roadblock with barrier and anti-tank pimples and, on the rampart, small arms positions. Several concrete air-raid shelters were built into the rampart, especially in the central section, probably for small sentry detachments patrolling the Lines as well as for the local civilian population.

3. ARCHAEOLOGICAL DESCRIPTION AND INTERPRETATION

In the following description, words in **bold** relate to features shown on the main survey plan and on extracts of it which are given a Figure number at the beginning of that particular section. The Lines are aligned across the Sheerness peninsula from north-east to south-west but directions in the text are simplified to read north, south, east and west; north being the Sheerness side.

The surviving earthworks of the Queenborough Lines lie between TQ 9075 7328, on the edge of the Sittingbourne to Sheerness railway, and TQ 9400 7485, the boundary fence of the former Barton's Point Battery, now the Catamaran Sailing Club. When complete the earthworks were formed into five sections; the three main ones survive, each approximately 1km in length and adopting an overall alignment that is not quite a straight line. A smaller fourth section, which survives in part, formed the eastern end by curving around the southern side of Barton's Point Battery, while a short fifth section returned north-west to the Medway at the Queenborough *terminus*.

The Queenborough Lines are made up of five earthwork features:

- a rampart
- a broad wet ditch or moat
- two catchwater ditches (inner and outer)
- a covered way (or military road)

The rampart (Fig 8)

The rampart appears to be constructed from earth and shingle and measures 15.5m to 17m (*c* 51ft to 56ft) wide and between 1.9m and 2.5m (*c* 6ft to 8ft) high. The scarp face slopes at a shallower angle to the rear face while the top, between 4.3m and 5.2m (14ft to 17ft) wide, slopes very gently towards the scarp face (Fig 6).

Cut into the rear face of the rampart is a well-defined **fire step** for infantry, up to 0.7m (2ft 3in) wide, and 1.4m to 1.6m (4ft 6in to 5ft 3in) below the crest of the rampart (Fig 6). It seems to have been present along the entire rear face though it has, in places, been effaced. The absence of the fire step is a good indicator of later alteration, an observation which is particularly apparent adjacent to the A250, while immediately north of the Edenbridge estate, it is obscured by recent dumping.

There is no visible evidence for original and permanent artillery emplacements built into or behind the rampart. However, two *intended* positions are located behind the short

Figure 6
The rampart, central section, looking south-west from near the A250 crossing. The fire step is visible as a break in the shadow (middle distance) to the rear face

Figure 7
The eastern flanking position, with a magazineof the 1860s set back into the rampart. Note the severe erosion at the interface of rampart and ditch

flanking positions which enfilade the Lines back to the causeway carrying the A250 across the wet ditch. Parts of two **magazines** survive in these flanking positions. The eastern magazine is well preserved although it is now sealed and forms the southern side of a small fenced play area (Fig 7). It is a brick and concrete structure with twin barrel vaults and an entrance façade to the north, the whole contained in a profiled bomb-proofed concrete and earth covering partially set back partly into the rampart. The entrance elevation, 3.55m (11ft 7in) high, is built to a slight batter in yellow stock brick laid to English bond, the ends ramped steeply downwards (Fig 9). The capping course projects slightly and incorporates a moulded drainage groove. Two large round arches of seven concentric header courses take up much of the elevation and originally surmounted entrances to adjacent magazine chambers that were separated by a spine wall. The entrances are blocked and rendered , while some of the earth has been removed from the roof, exposing the mass concrete bomb-proofing over the vaults, its asphalt waterproofing layer and part of a ceramic vent pipe leading from one of the chambers below.

Figure 9
The blocked entrance façade of the eastern magazine, built in the mid 1860s. Note the erosion of the profiled earth covering at top right (NMR: AA008692)

The western magazine was destroyed between 1953 and 1963 (NMR: 58/1026/76 and 90; OS/63073/53-4) but much of its ground plan can be traced as a wall foundation or an earthwork (Fig 10). The walls survive to a maximum height of 1.85m (6ft) on the southern side, including the springing of the vault. It appears to have been identical to its eastern counterpart.

During the Second World War, the rampart was utilised for the construction of several concrete **air-raid shelters**, built underground with roofs flush with the rampart top. These have all been sealed but originally had entrances from the rear and hatches on top,

Figure 11
Second World War holding block, with a socket for a road barrier, at the crossing of the A250, looking north-west into Sheerness

which are clearly visible on aerial photographs. There was a group of four near the A250 causeway and several more spaced along the entire length of the rampart (Fig 8; NMR: 106G/UK/1444/3060-1). These shelters were both for troops patrolling the Lines and guarding the A250 causeway as well as for civilians living locally.

Other Second World War additions include defensive measures around the A250 causeway. A concrete holding block, complete with its socket for securing the barrier for a **roadblock**, survives on the western side of the road while opposite, on the eastern verge, are three **anti-tank pimples** (Figs 8 and 11). Mounted on the rampart nearby is a flat-topped concrete cylinder 1.78m (5ft 10in) across and 0.75m (2ft 6in) high, with a central ferrous bolt 0.1m (4in) high, and a small recess for a telephone or power sitch in the side (Figs 8 and 12). This cylinder, probably the **mounting** for a light weapon or perhaps a small searchlight for illumination of the causeway and roadblock area at night, may have been contained in a sandbag or brick emplacement, which has subsequently been removed (an identical position may have stood on the other side of the road (NMR: 106G/UK/1444/3060-1)). A little further east on the rampart top at ground level, are two small ferrous plates, each 0.81m square and fitted with a complex arrangement of nuts and bolts (Fig 8). What they secured is not clear.

There have been several encroachments and breaches to the Lines since the end of the Second World War. The lorry park immediately west of the Sittingbourne to Sheerness

Figure 12
Second World War concrete cylinder, possibly for a searchlight or light weapon, on the rampart east of the A250 crossing

railway has effaced almost all surface remains of the Lines in this area, except a short section of rampart close to the railway line itself. Edenbridge Drive, towards the south-western end of the Lines, was cut through the earthworks to serve a housing estate before 1973, at some time after the ditch had been infilled (see below) (NMR: MAL/73047/36-7). South View Gardens and two sets of garages also encroach onto the rampart. South-west of Edenbridge Drive nearly 100m of rampart has been removed to create a fenced playground, approached by a path along the Lines and also via a footbridge over the inner catchwater ditch. There are many other small-scale disturbances.

The Ordnance Survey depicts the rampart swinging around the southern side of Barton's Point Battery: all traces have now been removed (OS 1:2500, 1964).

The Wet Ditch (or moat)

A slight berm, averaging 4.2m (13ft 9in) wide, separates the rampart from the wet ditch. Approximately 75% of the ditch survives and is described on the current Ordnance Survey map as a "Boating Lake" (Fig 8). The inner face of the wet ditch follows the course of the rampart so that it is broadest in the central section, between 32m to 61m (105 to 200ft), and thereafter conforming to the original specification of 75ft (23m) width. The stretch around Barton's Point Battery is 43m (140ft) wide. The original and current depth of the ditch is unknown.

Between 1973 and 1978, the wet ditch was breached at a point 100m south-west of the Sea Scout headquarters to enlarge a boating lake created as one of the focal points of the Barton's Point Coastal Park (NMR: MAL/73047/18; OS/78122/56-7).

The extreme western end of the ditch - beyond the railway line - had been infilled by 1942 (NMR: 26/UK920/24). The remainder of the ditch remained open until 1951 when infilling began and progressed westwards for some 960m from the western magazine, reaching almost its present extent by 1954 (NMR: 540/458/3070-1; 82/1006/57-8). This material was probably from an adjacent construction site north of the Lines, and the visible fill includes concrete, brick and soil. Parts of the infilled area have subsequently been levelled to provide play areas.

The ditch is crossed by the A250 on an impermeable causeway, with freshwater to the west and saltwater to the east. The latter, now constituting the larger part of open water, is linked to the sea by a weir. It is not clear whether this differentiation is original.

Fragments of a modern causeway, composed of deposited concrete rubble, stretches across the wet ditch 370m west of the A250 causeway. Just west of Barton's Point Battery, the ditch contains the remains of an abutment for a footbridge, composed of soil and shingle, which formerly led to what is now the Sea Scout headquarters but which re-uses a complex of buildings which were associated with the naval and military rifle ranges on the marshes from the late 19th century until the 1950s.

The outer face of the ditch east of the A250 has a faced revetment created from a variety of non-local stone types and some concrete blocks, trimmed to a standard size. The stones and blocks are of a uniform size ie 0.2m (8in) square. The revetment is suffering severe erosion but there has been some maintenance. There are no other traces of revetments to the edges of the ditch and its seems likely that it is not an original feature but was constructed to prevent erosion. This work may be due in part to a group of buildings which stood in a strip along the bank north of Monkey Farm from at least 1946 but which have now been cleared (NMR: 106G/UK/1444/3060-1).

The inner face of the ditch at the Barton's Point Battery is partially obscured by domestic rubbish and gardening waste.

The catchwater ditches

The original function of these two ditches was both to define the military area and to help regulate the water level in the main wet ditch. In their original form they were linked by a number of sluices or weirs; brick manhole chambers with dressed stone cappings lie between them at several points along the Lines. The regulatory system has been altered

and the water in the north-eastern section of the outer catchwater ditch appears to be at a higher level than that in the main ditch and the freshwater section.

The outer catchwater ditch is a sharply defined feature, lying roughly parallel to the wet ditch and between 2.0m and 3.5m (6ft 6in to 11ft 6in) beyond its outer face. It survives for most of its original length and measures on average 5.0m (16ft 5in) wide and 1.4m to 1.7m (4ft 6in to 5ft 6in) deep. Like the wet ditch, it is bisected by the causeway of the A250, which separates salt and freshwater sections.

The inner catchwater ditch is situated between 9m and 14m (29ft 6in to 46ft) behind the Lines and reflects the course of the rampart. Its dimensions are similar to the outer catchwater ditch. The north-western side forms the boundary between the Lines and residential areas of Sheerness and consequently has suffered extensive disturbance; most of the central portion is culverted and several sections are now choked with domestic rubbish and fly-tipped material. It would appear that the remaining sections contain fresh water.

The covered way (or military road)

The area between the rampart and the inner catchwater ditch formed an access route behind the Lines. Although remains of true metalling are not evident, there are intermittent sections of a low, flat-topped bank or causeway 2.5m to 5.5m (8ft 2in to 18ft) wide with an average height of 0.2m (8in). It runs parallel to the rampart at a distance of about 2.5m to 3.0m (8ft 2in to 9ft 10in) and there are traces of a slight gully between the two features where it is best preserved, immediately west of Barton's Point Battery. It is not clear whether or not this causeway existed along the full length of the Lines but further traces are apparent behind the central section opposite South View Gardens.

No evidence of any metalling has emerged at the south-western end of the Lines where the projected course of the covered way has recently been deep ploughed following the clearance of fly-tipped rubbish.

Several partially infilled service channels are apparent in the area between the rampart and the inner catchwater ditch, along the course of the covered way. There are also inspection covers which mark the line of a telecommunications cable.

4. CONCLUSIONS and MANAGEMENT ISSUES

As an archaeological and historical monument, the Queenborough Lines is of national importance. It is a well-preserved and striking physical barrier cutting across the Sheerness peninsula and it largely defines the limits of the town. Moreover, it is an unusual result of the 1859-60 Royal Commission which originally proposed the siting of powerful detached forts further away from the dockyard. It is an unlikely construction for a time when defensive lines were very largely obsolete and is best explained as a poor compromise, the result of cost-cutting in a wider defence programme. As completed, its local strategic value was to cut off access to the dockyard and town in a bold but simple stroke and in concept, with its flanking positions for enfilade fire, it harks back to the Royal Military Canal (Sussex) of the Napoleonic period, while the only contemporaneous example is the Hilsea Lines at Portsmouth. Such rarity serves to increase its significance.

The field evidence suggests that most of the original specifications for the Lines were met though the proposed fixed armament was never installed. Subsequently, it was maintained as a defensive line through the mobilisation period from the 1890s through to the end of the First World War. In the Second World War it served as a security cordon and a convenient location for several air-raid shelters.

Despite some damage and levelling since the Second World War, the Lines remain a striking and prominent local feature, largely defining the built-up area of Sheerness. In recent times the Local Authority has installed several benches, waste bins and steps as well as consolidating footpaths which are well-used by the local community. Despite this, the monument has lost some of its original historical definition and some re-focussing is desirable. In accordance with this aim, the entire area between and including the catchwater ditches is of considerable archaeological importance and should be treated sensitively in any future management proposals. The use of the rampart as a pathway has caused no significant damage but items of current concern include:

- The planting of trees on the rear face of the rampart may have disturbed archaeological detail and should not be continued.

- The saltwater section of the wet ditch appears to be suffering from a relatively high degree of active erosion, probably as a result of its incorporation into the Barton's Point boating lake.

- In general the wet ditch serves as a repository for rubbish as do several sections of the inner catchwater ditch.

- Parts of the earth covering and waterproof asphalting of the eastern magazine has been removed and should be repaired.

- There is little or no information describing the significance of the monument to the public. In fact, the present invented name "Canal Bank" belies the origin of the Lines. Consideration should be given to changing the name back to the Queenborough Lines and providing some historical information at points of access.

5. SURVEY AND RESEARCH METHODS

The Queenborough Lines were surveyed using Leica Differential GPS and all features were coded at the point of survey. The resulting data were processed in AutoCAD R14 and returned to the field for annotation. The finished earthwork survey exists as a georeferenced AutoCAD drawing file and can be supplied (without accompanying Ordnance Survey map tile extracts) in .DWG or .DXF formats.

Outline documentary research was undertaken in the Public Record Office at Kew.

6. ACKNOWLEDGEMENTS

The authors are grateful to John Williams and Lis Dyson of Kent County Council for their assistance in this project, and to Groundwork Medway-Swale for part funding.

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WO/78/4427/7: War Department 25-inch map sheet Kent 13.7 showing field defences around Barton's Point Battery, dated 9th May 1916

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