



RSPB Shorne Marshes Habitat Enhancement

Archaeological Gazetteer PP-12831173



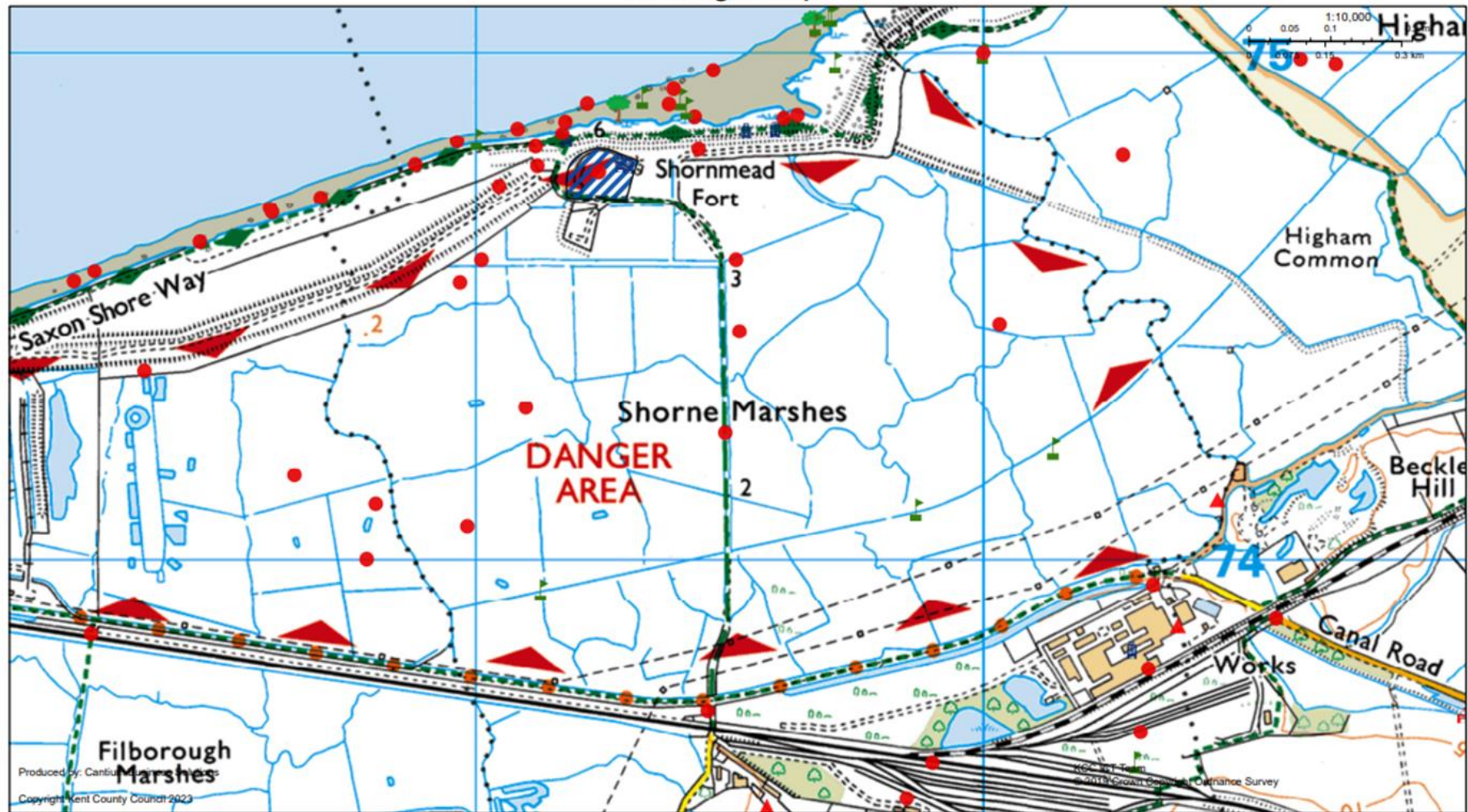
RSPB Shorne Marshes (RSPB,2015)

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Heritage Maps

September 20, 2023



Legend

Archaeological Sites and Buildings

Building

Farmstead

Findspot

Hedgerow

Landscape

Listed Building

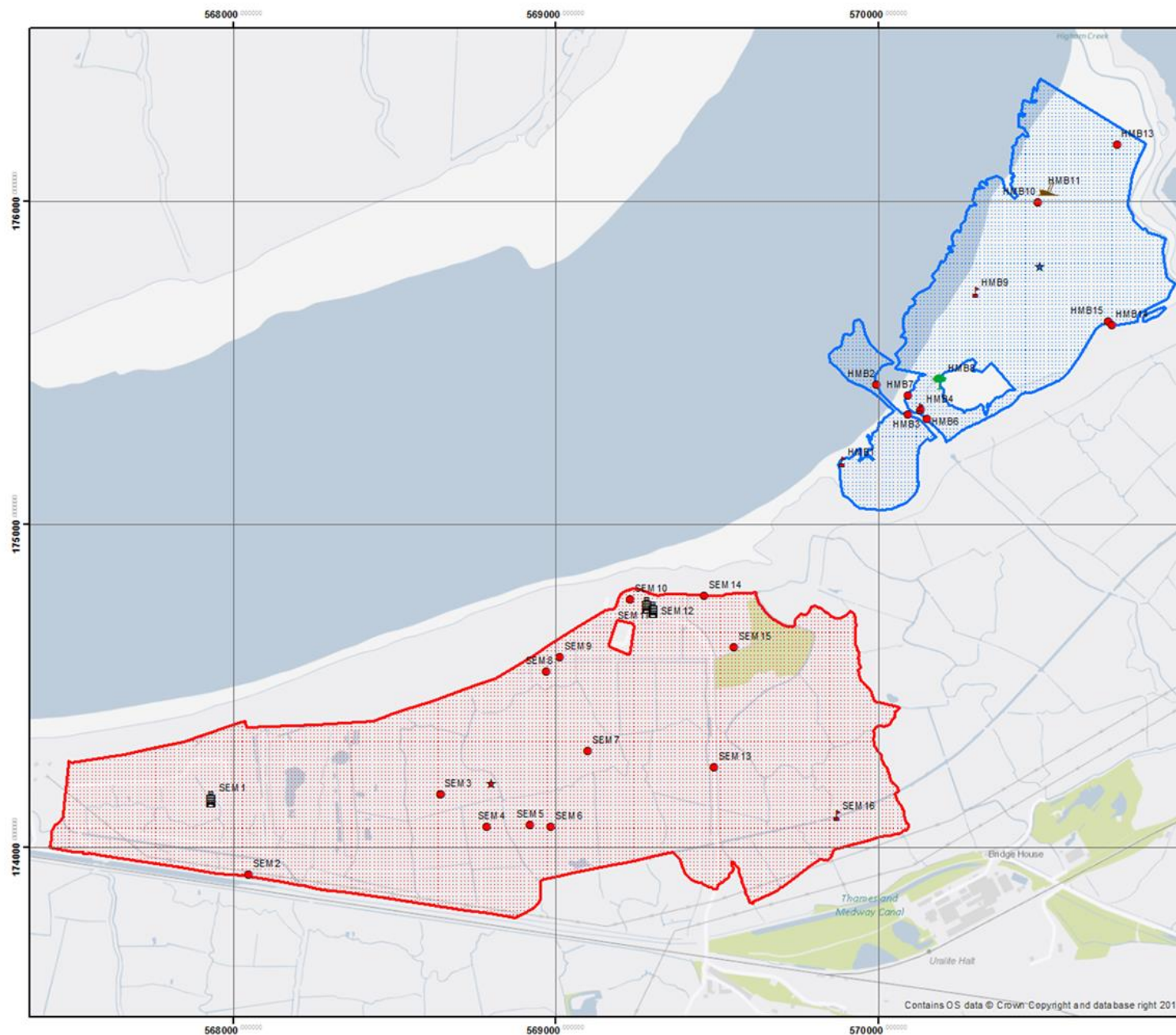
Maritime

Monument

Place

Scheduled Monuments

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RSPB Shorne Marshes & Higham Bight, Kent

Map 9b: Archaeological and historic assets

- Wreck
- Landscape
- Findspot
- Monument (Site)
- Building
- Shorne Marshes central grid ref. TQ68807420
- Shorne Marshes site boundary
- Higham Bight central grid ref. TQ70507580
- Higham Bight site boundary

Date: 14/08/2017

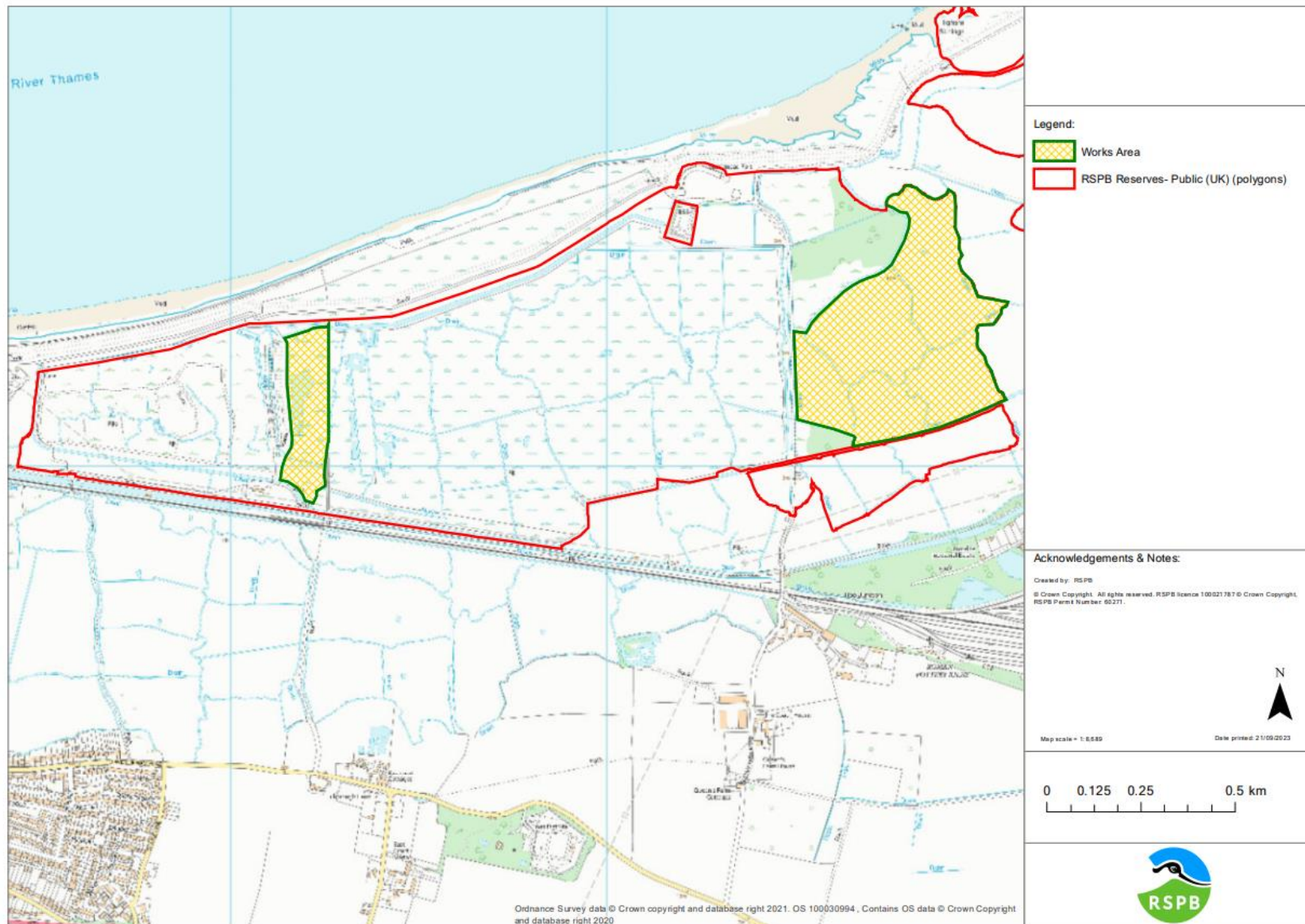


0.35 0.175 0 0.35
Kilometers

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Assets within the working area.

The Kent Historic Records show no assets within the areas of work for this project, or within the routes that will be used by machinery (See document RSPB_Shorne_Marshes_CEMP).

Shornemead fort site to the north of the working area, and in 2022 was give Scheduled Ancient Monument status. The building is owned by the RSPB. Details of the scheduling of the monument can be found in Appendix 1.

Assets adjacent to work area						
Gaz No.	HER no.	Name	Grid (TQ)	Period	Description	Comments
1	TQ 67 SE 63	Shornemead Fort	TQ 6924 7476	FORT (Post Medieval to Modern - 1860 AD? to 1950 AD) GRAFFITI (Post Medieval to Modern - 1890 AD to 1959 AD)	Shornemead Fort was built in the 1860s as part of a scheme to remodel the forward defences of the Thames to protect the river route to London. It crossed the fire of its guns with those of Coalhouse Fort on the north bank and with Cliffe Fort further downstream on the south bank. Now in a poor condition having been used by for demolition practise during army training operations.	Scheduled Ancient Monument
1	TQ 67 SE 1233	Second World War Operation Overlord concrete road, Shorne Marshes, Shorne, near	TQ 6949 7425	Modern - 1943 AD? to 1943 AD	Second World War concrete road on a north-south axis across Shorne Marshes connecting the Operation Overlord embarkation hard on the riverbank in front of Shornemead Fort with the road network of the hinterland. Laid probably in late 1943 and continues in use as a footpath.	

		Gravesend, Kent				
2	TQ 67 SE 1256	A line of Second World War anti-tank pimples, almost certainly ex- situ possibly from a nearby roadblock	TQ 6952 7445	Modern - 1939 AD to 1945 AD	A line of Second World War anti-tank pimples, almost certainly ex-situ possibly from a nearby roadblock.	
3	TQ 67 SE 1010	Many circular part water filled holes	TQ 69513 74592	SITE (Unknown date) SITE (earlier than 1950, Modern - 1939 AD to 1945 AD)	Many circular part water filled holes, similar to shell holes. Firing range. (1-7) Unable to gain access to these features in the 2005 survey. (8) Possible explosion craters associated with firing range?	
4	TQ 67 SE 1255	Probable saltern	TQ 7003 7446	MOUND (Unknown date) SALTERN? (Unknown date)	A mound, probably a saltmound, and associated banks, possibly evaporation channels	Not on RSPB Landholding
5	TQ 67 SE 60	Kiln wasters	TQ 6986 7409	FINDSPOT (date unknown, Roman - 43	Roman Kiln wasters findspot	Findspot

				AD to 409 AD) WASTER (Roman - 43 AD to 409 AD)		
6	TQ 77 SW 20	Poss Roman kiln site	TQ 7013 7422	FINDSPOT (brick and pottery, Roman - 43 AD to 199 AD) BRICK (Roman - 43 AD to 199 AD) SHERD (Roman - 43 AD to 199 AD)	1st to 2nd cent Roman pottery and brick (poss kiln site)	
7	TQ 67 SE 1252	Shooting Butts at former Milton Rifle Ranges, Shorne Marshes	TQ 6834 7437	SHOOTING STAND (Post Medieval - 1540 AD to 1900 AD) Associated Finds BRICK (Post Medieval - 1540 AD to 1900 AD) BULLET (Post	In advance of a new 950m security trench, in April 2013 fieldwork was done along the proposed ditch by Archaeology South-East particularly at the intersection between the security trench and the old shooting butts at the end of Milton Rifle Ranges. The proximity to Shornemead Fort and the old rifle range (built 1859/60) led to predominat finds of bullets of a range of calibres of British Army issue. The work also uncovered some post-medieval pottery and brick fragments (both post-Medieval) (1).	

				Medieval to Modern - 1540 AD to 2050 AD) BULLET (Post Medieval to Modern - 1540 AD to 2050 AD) SHERD (Post Medieval - 1540 AD to 1900 AD)		
8	TQ 67 SE 342	Site of Milton Range halt	TQ 68 73	RAILWAY STATION (RAILWAY STATION, Post Medieval to Modern - 1882 AD to 1932 AD)	Concrete platform visible from the road unable to get closer for more detailed observations	
9	TQ 67 SE 345	Bridge no. 5, Thames and Medway canal	TQ 6824 7385	SWING BRIDGE (SWING BRIDGE, Post Medieval - 1800 AD to 1900 AD)	Site of swing bridge no. 5 on the Thames and Medway Canal carrying a footpath over the canal to the Lower Higham Rd. to the South. The bridge house formerly stood on the North side of the canal and the foundations can be seen (1995). A new bridge may be constructed on the site, site photographs (1-6). A modern wooden bridge. No more house remains are visible. (7)	

Appendix 1. Shornemead Fort Scheduled Ancient Monument Designation

Historic England

Consultation Report

28 October 2022

Case Name: Shornemead Fort

Case Number: 1479293

Background

Historic England has been asked to consider Shornemead Fort, Shorne, Gravesham, Kent for scheduling. The site is managed by the Royal Society for the Protection of Birds (RSPB) as part of the Shorne Marshes reserve. The site is publicly accessible and subject to vandalism. The RSPB are in discussion with relevant stakeholders over the future management of the site.

The site is not within a conservation area.

Asset(s) under Assessment

Facts about the asset(s) can be found in the Annex(es) to this report.

Annex	Name	Heritage Category
1	Shornemead Fort	Scheduling

Visits

None: Data from other sources.

Annex 1

The Draft List Entry are being assessed as the basis for a proposed addition to The National Heritage List for England.

Draft List Entry**Name: Shornemead Fort****Location**

Located just south of the River Thames between Gravesend & Higham in Kent, directly behind the seawall on the Saxon Shoreway long distance footpath at NGR TQ6924474757.

County	District	District Type	Parish
Kent	Gravesend	District Authority	Shorne

History

The Royal Commission fortifications are a group of related sites established in response to the 1859 Royal Commission report on the defence of the United Kingdom. There were eventually some 70 forts and batteries in England which were due wholly or in part to the Royal Commission. These constitute a well-defined group with common design characteristics, armament and defensive provisions. Whether reused or not during the C20, they are the most visible core of Britain's coastal defence systems and are known colloquially as 'Palmerston's follies' after Lord Palmerston (1784-1865) who was Prime Minister at the time.

A battery on the site of the current Shornemead Fort was first constructed in 1795, following the outbreak of war with Revolutionary France, as one of three batteries to better defend the Thames Estuary from attack (the others were at Coalhouse on the Essex side and Lower Hope, 5km downstream from Shornemead). The batteries were all semi-circular in plan with a revetted earthen rampart for 24-pounder guns on traversing platforms (four at Shornemead) with magazines and barracks at the rear enclosed within a triangular rear wall. The battery was surrounded by a waterfilled defensive ditch. Following the long peace after Waterloo the battery was not maintained but remained extant until renewed fears of a potential French invasion led to the construction of a new battery between 1847 and 1853. Based on the latest German fortification designs, this was the first 'polygonal' fort to be built in Britain. Pentagonal in plan, it consisted of three sides with open gun positions for thirteen smooth-bore 32-pounder guns mounted on traversing platforms, with defensible barracks and service buildings forming the rear two sides. A pair of brick musketry caponiers in the ditch provided close protection from infantry attack and the corners of the barrack range projected as demi-bastions to protect the entrance to the fort. A bomb-proof magazine and artillery store were placed behind the ramparts. The new battery, which had suffered from serious foundation problems, was to have a short life. In 1859, as a result of renewed fears of a French invasion caused by the enlargement of the French Navy and improvements in artillery, the Royal Commission on the Defences of the United Kingdom under Lord Palmerston, recommended the strengthening of Britain's coastal fortifications, particularly those protecting the naval dockyards. The Commission recommended that the Thames Estuary be defended by a triangle of forts by rebuilding the existing forts at Coalhouse, East Tilbury in Essex and Shornemead and adding a new fort at Cliffe in Kent. Tilbury Fort and New Tavern Fort at Gravesend were re-armed and later remodelled (from 1868) to provide an inner defence

At Shornemead, new land had to be purchased for the larger new fort and work began in 1861 with the demolition of the existing fort. The trace (outline) of the fort was a curved face with, as before, the rear two sides formed by defensible barracks, faced in Kentish ragstone, either side of the entrance to the fort. A granite-clad exterior wall protected the concrete-roofed brick

casemates with gun embrasures protected by iron armoured shields. The arc of casemates was armed with eleven 11-inch RMLS (rifled muzzle-loading guns) with an open battery of three 9-inch RMLS adjoining the casemated battery at the up-river end. Arched brick magazines, with storage chambers alternately for shells and cartridges, were provided in a basement under the casemates and open battery with lift shafts to raise the ammunition to the guns. The magazines were protected on the parade ground elevation by an earthen bank against the rear wall of the casemates. Because of the unstable nature of the ground a thick raft of concrete, with associated deep piling, was laid beneath the casemates, open battery and the magazines. The casemates and open battery were fronted by a deep ditch into which projected three infantry caponiers, reached from the ammunition passage of the magazines. Beyond the counterscarp the ground was sloped into a glacis terminating near the river's edge.

The barracks were partly built on the foundations of the 1852 fort, with the outer windows mounted with steel shutters with musketry loops. The enclosed parade ground contained several structures including two brick gyn (lifting tripods) and tackle stores with tiled roofs.

A mine depot for mining the river during wartime was established in 1878 immediately to the west of the fort with various storage buildings. Supplies for the fort were mainly brought by river and a timber jetty with a stone causeway was built in front of the fort in 1877.

The construction of the new fort was completed around 1870-71 and was supervised between 1865 and 1871 by Lt Colonel Charles Gordon (later famous as Gordon of Khartoum).

By the 1880s advances in naval artillery technology, particularly the development of more destructive high explosive shells, meant that the fort was modified around the end of the 1880s or early-1890s to provide greater protection. The ditch was infilled to provide a thicker barrier to enemy fire and a sloping thick concrete apron was laid in front of the sill of each gunport. However, despite these modifications, by the turn of the C20 the range of the fort's armament of RML guns was outstripped by that of more powerful rapid-firing, breech-loading naval guns. Shornemead's armament was removed in favour of sites for breech-loaded guns at the other Thames forts as Shornemead no longer had sufficient command of the river to justify its rearmament. A small battery of two 6pdr quick-firing (QF) guns for local defence was built on a mound 100m east of the fort by 1895 and by 1901-2 a supporting pair of searchlights in concrete emplacements were installed at the river's edge some 80m to the north-west of the fort. A submarine mining establishment was constructed immediately west of the fort to operate a minefield in the river. This was completed in 1878 and eventually included mine and equipment stores, lecture rooms and tramways and turntables connecting with a pier provided with cranes for lifting mines onto minelayers.

During the First World War the fort was used for submarine mine warfare courses but was not rearmed. After the war the fort was mainly used as accommodation for musketry courses on the nearby Milton range. During the Second World War, a brick and concrete casemated gun house was built over the detached QF battery. This anti-invasion battery housed two ex-naval 5.5 inch breech-loading guns and was protected by two pillboxes let into the river wall. In 1944, for Operation Overlord, a concrete landing craft hard was built on the river's edge in front of the fort, largely destroying the Victorian causeway.

At the end of the Second World War, the fort was allowed to fall into decay. Starting from around 1960, much of the fort was destroyed by a programme of explosive demolitions undertaken by the army for training purposes. The barracks and the inner face of the casemates and open battery were destroyed. The Second World War anti-invasion battery was demolished during the 1970s but the two pillboxes and the landing craft hard survived. An

earthen flood defence wall was built in front of the fort. In 2000 the fort passed into the ownership of the Royal Society for the Protection of Birds (RSPB).

Details

PRINCIPAL ELEMENTS: the site comprises the surviving above-ground casemates and the open battery at their south-west end, forming a curve about 158.5m on the seaward face and protected by a (now infilled) ditch, along with their below-ground magazines. To the south of the casemates, and north of the access road, is an open area comprising the parade ground and the potential below-ground remains of the demolished fortified barracks that formed the southern boundary of the fort.

DESCRIPTION: the casemates and open battery have a curved plan, facing north and west with a short straight return to the east. The casemated gun emplacements are of stock brick with a topping of thick mass concrete and faced on the seaward side with granite blocks, except at the western end where it is clad in concrete cast to resemble granite blocks. The eastern return wall is of rusticated ragstone blocks and has a window with a brick segment arch. Adjoining it to the east is a concrete base with a southern brick retaining wall. This was a later coal yard present by 1926. The south return of the casemates has an infantry loophole with a York stone sill and lintel. The interior face of the casemate range and the rear part of the vaults of the eleven casemates have been demolished leaving the surviving remains of the vaults exposed. The three easternmost and two westernmost casemates retain part of the brick vaulting but the rest have only the thick stone blocks to the arch over the embrasures surviving. The arched iron blast shields to the embrasures of all the casemates survive, as do the stone blocks of the canted front walls. These are largely covered with modern graffiti. The blast shields all retain the pair of vertical iron columns, with revolving metal reels, for attaching the rope mantlets that protected the interior of the emplacement from debris if the shields were hit by enemy fire (the easternmost casemate has only one of the pair). The iron racer tracks for traversing the guns survive to most of the casemates along with the remains of other iron fittings such as overhead loops for raising the guns off their carriages.

On the seaward side the embrasures, topped by segmental relieving arches of large rounded granite blocks, are separated from each other by curved projecting piers. In front of the embrasures are sloping semi-circular concrete aprons, added in the late-C19 after the ditch was infilled. Flanking each gun embrasure are steel grills set vertically, possibly smoke vent outlets. The roof has a slight overhang. On top of the casements, at either end, are the remains of two observation posts. At the western end, this is a roofless brick structure in a semi-circular pit sunk into the concrete roof of the casemates. It possibly relates to the submarine mining establishment but its date is unclear. At the eastern end, the observation post is a rectangular building with a reinforced concrete base and brick walls which have mostly been lost to army demolition. The damaged concrete roof survives but now rests forward of its original position. This observation post probably relates to the Second World War 5.5inch gun position to the east of the fort. On the north eastern end of the roof is a hexagonal concrete platform with bolts for a light gun mounting.

West of the casemates, the three open gun emplacements are of brick topped with mass concrete, with granite sills to the widely-splayed embrasures. The seaward face is largely obscured by a later earth mound but consists of granite blocks. The gun positions retain their racer tracks. At the north end of the battery is a brick-vaulted ammunition passage. At the end of the passage is a recess with a stone lintel containing a ringbolt for an ammunition lift. The southern side wall of the battery survives but the massive rear wall with a concrete core and brick facing has been partly demolished. Abutting the southern end of the rear wall and facing

east are the vestigial remains of the defensive barrack block with an arched entrance to a passage into the battery on its upper floor.

The brick-vaulted basement which extends continuously below both the casemates and the open battery casemates, is sealed off and partially flooded but a survey in 2022 showed that it survives in good condition. It consists of alternating shell and cartridge stores for each gun position, accessed from an ammunition passage running along the seaward side of the fort with a lighting passage running along the parade ground side with hatches to light the ammunition stores. These have stone lintels and sills. Vertical circular shafts for the shell hoists survive as do some of the metal winches. There are blocked passages which gave access to the three infantry caponiers in the ditch and blocked entrances to the basement rooms under the demolished eastern barracks. Some iron fittings and timber door frames survive in the magazines and passages. The whitewashed brick surfaces contain a good deal of historical graffiti dating from all periods of the fort's occupation and there is stencilled signage indicating the numbers of the magazines.

The rear of the casemates and open battery are abutted by an earthen ramp, partly containing rubble from the demolished inner face of the casemates but originally added in the late 1880s, sloping down to the parade ground and site of the demolished fortified barracks which formed the rear of the fort. Little remains above ground but remains of the fortified barracks and structures on the parade ground relating to the 1840s battery may survive below ground. This area is bounded by the C20 concrete access road.

The ditch in front of the fort has been infilled but buried evidence of the three infantry caponiers may still survive.

Selected Sources

Websites

Victorian Forts and Artillery, accessed 24 October 2022 from
<https://www.victorianforts.co.uk/info.htm>

Other

Nathalie Barrett, Shornemead Fort, Shorne Marshes, Kent: an Archaeological Survey (2008)
The Morton Partnership, Condition Survey Report of Shornemead Fort, Shorne, Gravesend (May 2022)

Victor Smith, Shornemead Fort, Shorne Marshes, near Gravesend, Kent: an Archaeological Desk Study (August 2007)

Map

National Grid Reference: TQ6924974761



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The above map is for quick reference purposes only and may not be to scale. For a copy of the full scale map, please see the attached PDF – 1484434_1.pdf.

Case Name: Shornemead Fort

Case Number: 1479293

Background

Historic England has been asked to consider Shornemead Fort, Shorne, Gravesham, Kent for scheduling. The site is managed by the Royal Society for the Protection of Birds (RSPB) as part of the Shorne Marshes reserve. The site is publicly accessible and subject to vandalism. The RSPB are in discussion with relevant stakeholders over the future management of the site.

Asset(s) under Assessment

Facts about the asset(s) can be found in the Annex(es) to this report.

Annex	List Entry Number	Name	Heritage Category	HE Recommendation
1	1484434	Shornemead Fort	Scheduling	Add to Schedule

Visits

Date	Visit Type
28 January 2022	Partial inspection

Context

The site is not within a conservation area.

Assessment

CONSULTATION

The applicant, Royal Society for the Protection of Birds (RSPB), the local planning authority, Kent Historic Environment Record, the Victorian Society and Mr Victor Smith were all consulted.

Victor Smith responded in support of the proposed scheduling but made no substantive comments.

The RSPB noted the poor condition of some localised features of the structure including parts of the casemate arches and the Second World War concrete observation post but made no other substantive comments.

No other responses were received.

DISCUSSION

Under the 1979 Ancient Monuments and Archaeological Areas Act, monuments are scheduled by reason of their archaeological, historic, architectural, artistic or traditional national importance. The DCMS policy statement 'Scheduled Monuments' (October 2013) sets out the non-statutory criteria which provide further guidance on assessing national importance. The key considerations are period, rarity, documentation/finds, group value, survival/condition, fragility/vulnerability, diversity and potential.

Historic England's Scheduling Selection Guide on 'Post-1500 Military Sites' (November 2012) provides additional guidance on artillery forts.

Military sites, and especially defensive ones, have always played an important role in our nation's cultural history. The period from 1700 to 1860 saw the growth of the British Empire and the considerable expansion of Britain's armed forces and naval dockyards such as those at Portsmouth, Plymouth and Chatham. The

defence of the River Thames was also regarded as a priority. Shornemead Fort played an important role in these defences from the late C18 with three successive forts or batteries built between 1793 and 1871. The existing fort forms part of the major review of coastal defences carried out under the Royal Commission on the Defence of the United Kingdom of 1860, which saw the construction or rebuilding of a large number of coastal fortifications at vast expense. The Commission stated that 'The defence of the Thames involves interests of vast magnitude; it includes the security of the great powder magazine establishment at Purfleet; the important arsenal at Woolwich and the adjoining dockyard, the Government victualling stores and ship-building yard at Deptford, the large amount of valuable property extending for many miles on either bank of the river, the fleet of merchant shipping moored in the port of London, and, lastly, the metropolis itself'. As a result, in addition to the rebuilding of Shornemead, Coalhouse Fort on the Essex side was also rebuilt and a new fort at Cliffe in Kent was added. The importance of Shornemead had been recognised in the late-1840s, when it was rebuilt in the latest German fortification style, being the first 'polygonal' fort to be built in Britain.

Compared to other examples of Royal Commission fortifications, nearly all of which are either scheduled or listed including Cliffe and Coalhouse forts, the structural integrity of Shornemead Fort was diminished when it was partly demolished by the army during training exercises from the 1960s. It has also been the subject of ongoing vandalism and graffiti. However, a significant amount of the fabric of the fort survives and it still presents a readable, visually interesting and impressive structure. The external faces of the casemated and open batteries with their granite facing blocks survive largely intact with the partial survival of the internal casemate vaulting. The gun emplacements in the casemates retain their armoured shields and most retain other features such as the iron racer tracks for traversing the guns. The partly demolished vaulting also provides an opportunity to study the new construction methods and materials involved in the Royal Commission forts of the 1860s and early 1870s. These include the use of massive granite, thick iron armour plate and the more confident employment of mass structural concrete, the result of recent advances in industrial processes and building science. These materials were incorporated for protection against the threat of a naval attack by an enemy with the new steam-powered ironclads armed with powerful, also recently evolved, rifled guns. Later additions on top of the casemates, including an observation post of probable Second World War date, illustrate the continued use of the fort up to the end of the 1940s.

Beneath the batteries, the sealed-off, below-ground magazines and shell stores illustrate a new and protective approach to ammunition storage and handling. These survive in good condition with the remains of some of the hoist machinery and a good deal of historic graffiti. There is the possibility that other below-ground structures, relating to the demolished defensive barracks and the infantry caponiers that protected the ditch, still survive, along with other potential archaeological remains in the infilled ditch and under the parade ground. There is also some possibility that archaeological evidence of the 1840s fort may survive. There is also, although perhaps more unlikely, the possibility that evidence of the earlier, late-C18 battery, may survive.

Shornemead Fort is well documented with committee reports, historic plans, maps and photographs, as well as recent archaeological assessments (2007) and (2008) and a photographic survey of the below-ground magazines (2022) (see Sources).

Overall, although not complete, Shornemead Fort constitutes an important component in the countrywide Royal Commission coastal defences of the mid-C19 and retains a significant amount of above and below ground historic fabric, such that its form and function are easily readable. It is well documented and has strong archaeological potential and fully meets the criteria for national importance.

The seaward boundary of the proposed scheduling has been drawn 10m out from the face of the fort to include the infilled ditch and the infantry caponiers or their remains.

CONCLUSION

After examining all the available records and other relevant information and having carefully considered the claims to significance of Shornemead Fort, the criteria for scheduling are fulfilled.

REASONS FOR DESIGNATION DECISION

Shornemead Fort, rebuilt between 1861 and 1871 as part of the Royal Commission coastal fortifications, is recommended for scheduling for the following principal reasons:

* Historic importance: as part of the massive programme of defensive works stemming from the 1860 Royal Commission prompted by fears of a French invasion; built on the site of two previous batteries/forts forming part of the defences of the Thames Estuary;

- * Architectural importance: it provides a good example of the construction and form of a mid-C19 casemated fort;
- * Documentation: the site is well documented including committee reports, historic plans, maps and photographs, as well as recent archaeological assessments;
- * Potential: for archaeological deposits associated with the construction and use of the fort and possibly its predecessors. Additional, below-ground structures, apart from the well-surviving magazines and shell stores, may survive below the demolished fortified barracks and the infantry caponiers in the infilled ditch;
- * Group value: with the other designated fortifications associated with the defence of the River Thames including Coalhouse, Cliffe, Tilbury and New Tavern Forts.

Countersigning comments:

Agreed. Shornemead Fort has clear national importance as part of a major programme of defensive works of the mid-C19 and earlier; for the architectural interest of its standing fabric, the archaeological potential of the site and its group value with the associated forts defending the River Thames. PM 20.01.23

Second Countersigning comments:

Agreed. SG 30/1/23

Annex 1**List Entry****List Entry Summary**

This monument is scheduled under the Ancient Monuments and Archaeological Areas Act 1979 as amended as it appears to the Secretary of State to be of national importance.

Name: Shornemead Fort

List Entry Number: 1484434

Location

Located just south of the River Thames between Gravesend & Higham in Kent, directly behind the seawall on the Saxon Shoreway long distance footpath at NGR TQ6924474757.

The monument may lie within the boundary of more than one authority.

County	District	District Type	Parish
Kent	Gravesend	District Authority	Shorne

National Park: Not applicable to this List entry.

Grade: Not Applicable to this List Entry

Date first scheduled:

Date of most recent amendment:

Legacy System Information

This section only relates to older records, created before the introduction of the National Heritage List for England in 2011.

Legacy System: Not applicable to this List entry.

Legacy Number: Not applicable to this List entry.

Asset Groupings

This List entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List Entry Description**Summary of Monument**

Shornemead Fort, a coastal defence constructed under the Royal Commission between 1861 and 1871 to defend the Thames Estuary. It is built on the site of a battery of 1795 and a polygonal fort built between 1847 and 1853. The fort was partially demolished in the 1960s.

Reasons for Designation

Shornemead Fort, rebuilt between 1861 and 1871 as part of the Royal Commission coastal fortifications, is scheduled for the following principal reasons:

- * Historic importance: as part of the massive programme of defensive works stemming from the 1860 Royal Commission prompted by fears of a French invasion; built on the site of two previous batteries/forts forming part of the defences of the Thames Estuary;
- * Architectural importance: it provides a good example of the construction and form of a mid-C19 casemated fort;
- * Documentation: the site is well documented including committee reports, historic plans, maps and photographs, as well as recent archaeological assessments;
- * Potential: for archaeological deposits associated with the construction and use of the fort and possibly its predecessors. Additional, below-ground structures, apart from the well-surviving magazines and shell stores, may survive below the demolished fortified barracks and the infantry caponiers in the infilled ditch;
- * Group value: with the other designated fortifications associated with the defence of the River Thames including Coalhouse, Cliffe, Tilbury and New Tavern Forts.

History

The Royal Commission fortifications are a group of related sites established in response to the 1859 Royal Commission report on the defence of the United Kingdom. There were eventually some 70 forts and batteries in England which were due wholly or in part to the Royal Commission. These constitute a well-defined group with common design characteristics, armament and defensive provisions. Whether reused or not during the C20, they are the most visible core of Britain's coastal defence systems and are known colloquially as 'Palmerston's follies' after Lord Palmerston (1784-1865) who was Prime Minister at the time.

A battery on the site of the current Shornemead Fort was first constructed in 1795, following the outbreak of war with Revolutionary France, as one of three batteries to better defend the Thames Estuary from attack (the others were at Coalhouse on the Essex side and Lower Hope, 5km downstream from Shornemead). The batteries were all semi-circular in plan with a revetted earthen rampart for 24-pounder guns on traversing platforms (four at Shornemead) with magazines and barracks at the rear enclosed within a triangular rear wall. The battery was surrounded by a waterfilled defensive ditch. Following the long peace after Waterloo the battery was not maintained but remained extant until renewed fears of a potential French invasion led to the construction of a new battery between 1847 and 1853. Based on the latest German fortification designs, this was the first 'polygonal' fort to be built in Britain. Pentagonal in plan, it consisted of three sides with open gun positions for thirteen smooth-bore 32-pounder guns mounted on traversing platforms, with defensible barracks and service buildings forming the rear two sides. A pair of brick musketry caponiers in the ditch provided close protection from infantry attack and the corners of the barrack range projected as demi-bastions to protect the entrance to the fort. A bomb-proof magazine and artillery store were placed behind the ramparts. The new battery, which had suffered from serious foundation problems, was to have a short life. In 1859, as a result of renewed fears of a French invasion caused by the enlargement of the French Navy and improvements in artillery, the Royal Commission on the Defences of the United Kingdom under Lord Palmerston, recommended the strengthening of Britain's coastal fortifications, particularly those protecting the naval dockyards. The Commission recommended that the Thames Estuary be defended by a triangle of forts by rebuilding the existing forts at Coalhouse, East Tilbury in Essex and Shornemead and adding a new fort at Cliffe in Kent. Tilbury Fort and New Tavern Fort at Gravesend were re-armed and later remodelled (from 1868) to provide an inner defence.

At Shornemead, new land had to be purchased for the larger new fort and work began in 1861 with the demolition of the existing fort. The trace (outline) of the fort was a curved face with, as before, the rear two sides formed by defensible barracks, faced in Kentish ragstone, either side of the entrance to the fort. A granite-clad exterior wall protected the concrete-roofed brick casemates with gun embrasures protected by iron armoured shields. The arc of casemates was armed with eleven 11-inch RMLS (rifled muzzle-loading guns) with an open battery of three 9-inch RMLS adjoining the casemated battery at the up-river end. Arched brick magazines, with storage chambers alternately for shells and cartridges, were provided in a basement under the casemates and open battery with lift shafts to raise the ammunition to the guns. The magazines were protected on the parade ground elevation by an earthen bank against the rear wall of the casemates. Because of the unstable nature of the ground a thick raft of concrete, with associated deep piling, was laid beneath the casemates, open battery and the magazines. The casemates and open battery were fronted by a deep ditch into which projected three infantry caponiers, reached from the ammunition passage of the magazines. Beyond the counterscarp the ground was sloped into a glacis terminating near the river's edge.

The barracks were partly built on the foundations of the 1852 fort, with the outer windows mounted with steel shutters with musketry loops. The enclosed parade ground contained several structures including two brick gyn (lifting tripods) and tackle stores with tiled roofs.

A mine depot for mining the river during wartime was established in 1878 immediately to the west of the fort with various storage buildings. Supplies for the fort were mainly brought by river and a timber jetty with a stone causeway was built in front of the fort in 1877.

The construction of the new fort was completed around 1870-1871 and was supervised between 1865 and 1871 by Lt Colonel Charles Gordon (later famous as Gordon of Khartoum).

By the 1880s advances in naval artillery technology, particularly the development of more destructive high explosive shells, meant that the fort was modified around the end of the 1880s or early-1890s to provide greater protection. The ditch was infilled to provide a thicker barrier to enemy fire and a sloping thick concrete apron was laid in front of the sill of each gunport. However, despite these modifications, by the turn of the C20 the range of the fort's armament of RML guns was outstripped by that of more powerful rapid-firing, breech-loading naval guns. Shornemead's armament was removed in favour of sites for breech-loaded guns at the other Thames forts as Shornemead no longer had sufficient command of the river to justify its rearmament. A small battery of two 6pdr quick-firing (QF) guns for local defence was built on a mound 100m east of the fort by 1895 and by 1901-2 a supporting pair of searchlights in concrete emplacements were installed at the river's edge some 80m to the north-west of the fort. A submarine mining establishment was constructed immediately west of the fort to operate a minefield in the river. This was completed in 1878 and eventually included mine and equipment stores, lecture rooms and tramways and turntables connecting with a pier provided with cranes for lifting mines onto minelayers.

During the First World War the fort was used for submarine mine warfare courses but was not rearmed. After the war the fort was mainly used as accommodation for musketry courses on the nearby Milton range. During the Second World War, a brick and concrete casemated gun house was built over the detached QF battery. This anti-invasion battery housed two ex-naval 5.5 inch breech-loading guns and was protected by two pillboxes let into the river wall. In 1944, for Operation Overlord, a concrete landing craft hard was built on the river's edge in front of the fort, largely destroying the Victorian causeway.

At the end of the Second World War, the fort was allowed to fall into decay. Starting from around 1960, much of the fort was destroyed by a programme of explosive demolitions undertaken by the army for training purposes. The barracks and the inner face of the casemates and open battery were destroyed. The Second World War anti-invasion battery was demolished during the 1970s but the two pillboxes and the landing craft hard survived. An earthen flood defence wall was built in front of the fort. In 2000 the fort passed into the ownership of the Royal Society for the Protection of Birds (RSPB).

Details

PRINCIPAL ELEMENTS: the site comprises the surviving above-ground casemates and the open battery at their south-west end, forming a curve about 158.5m on the seaward face and protected by a (now infilled) ditch, along with their below-ground magazines. To the south of the casemates, and north of the access road, is an open area comprising the parade ground and the potential below-ground remains of the demolished fortified barracks that formed the southern boundary of the fort.

DESCRIPTION: the casemates and open battery have a curved plan, facing north and west with a short straight return to the east. The casemated gun emplacements are of stock brick with a topping of thick mass concrete and faced on the seaward side with granite blocks, except at the western end where it is clad in concrete cast to resemble granite blocks. The eastern return wall is of rusticated ragstone blocks and has a window with a brick segment arch. Adjoining it to the east is a concrete base with a southern brick retaining wall. This was a later coal yard present by 1926. The south return of the casemates has an infantry loophole with a York stone sill and lintel. The interior face of the casemate range and the rear part of the vaults of the eleven casemates have been demolished leaving the surviving remains of the vaults exposed. The three easternmost and two westernmost casemates retain part of the brick vaulting but the rest have only the thick stone blocks to the arch over the embrasures surviving. The arched iron blast shields to the embrasures of all the casemates survive, as do the stone blocks of the canted front walls. These are largely covered with modern graffiti. The blast shields all retain the pair of vertical iron columns, with revolving metal reels, for attaching the rope mantlets that protected the interior of the emplacement from debris if the shields were hit by enemy fire (the easternmost casemate has only one of the pair). The iron racer tracks for traversing the guns survive to most of the casemates along with the remains of other iron fittings such as overhead loops for raising the guns off their carriages.

On the seaward side the embrasures, topped by segmental relieving arches of large rounded granite blocks, are separated from each other by curved projecting piers. In front of the embrasures are sloping semi-circular concrete aprons, added in the late-C19 after the ditch was infilled. Flanking each gun embrasure are steel grills set vertically, possibly smoke vent outlets. The roof has a slight overhang. On top of the casemates, at either end, are the remains of two observation posts. At the western end, this is a roofless brick structure in a semi-circular pit sunk into the concrete roof of the casemates. It possibly relates to the submarine mining establishment but its date is unclear. At the eastern end, the observation post is a rectangular building with a reinforced concrete base and brick walls which have mostly been lost to army demolition. The damaged concrete roof survives but now rests forward of its original position. This observation post probably relates to the Second World War 5.5inch gun position to the east of the fort. On the north eastern end of the roof is a hexagonal concrete platform with bolts for a light gun mounting.

West of the casemates, the three open gun emplacements are of brick topped with mass concrete, with granite sills to the widely-splayed embrasures. The seaward face is largely obscured by a later earth mound but consists of granite blocks. The gun positions retain their racer tracks. At the north end of the battery is a brick-vaulted ammunition passage. At the end of the passage is a recess with a stone lintel containing a ringbolt for an ammunition lift. The southern side wall of the battery survives but the massive rear wall with a concrete core and brick facing has been partly demolished. Abutting the southern end of the rear wall and facing east are the vestigial remains of the defensive barrack block with an arched entrance to a passage into the battery on its upper floor.

The brick-vaulted basement which extends continuously below both the casemates and the open battery casemates, is sealed off and partially flooded but a survey in 2022 showed that it survives in good condition. It consists of alternating shell and cartridge stores for each gun position, accessed from an ammunition passage running along the seaward side of the fort with a lighting passage running along the parade ground side with hatches to light the ammunition stores. These have stone lintels and sills. Vertical circular shafts for the shell hoists survive as do some of the metal winches. There are blocked passages which gave access to the three infantry caponiers in the ditch and blocked entrances to the basement rooms under the demolished eastern barracks. Some iron fittings and timber door frames survive in the magazines and passages. The whitewashed brick surfaces contain a good deal of historical graffiti dating from all periods of the fort's occupation and there is stencilled signage indicating the numbers of the magazines.

The rear of the casemates and open battery are abutted by an earthen ramp, partly containing rubble from the demolished inner face of the casemates but originally added in the late 1880s, sloping down to the parade ground and site of the demolished fortified barracks which formed the rear of the fort. Little remains above ground but remains of the fortified barracks and structures on the parade ground relating to the 1840s battery may survive below ground. This area is bounded by the C20 concrete access road.

The ditch in front of the fort has been infilled but buried evidence of the three infantry caponiers may still survive.

EXTENT OF SCHEDULING: The scheduling aims to protect the trace of the above and below ground structures of the casemates and open battery, the area of the demolished fortified barracks and the parade ground (as far as the access road to the south of the site) and the infilled ditch on the seaward side of the fort (to a depth of 10m from the face of the structure).

EXCLUSIONS: The large concrete 'Lego' blocks, which have been positioned to prevent access to the basements, are excluded from the scheduling, although the ground beneath them is included.

Selected Sources

Websites

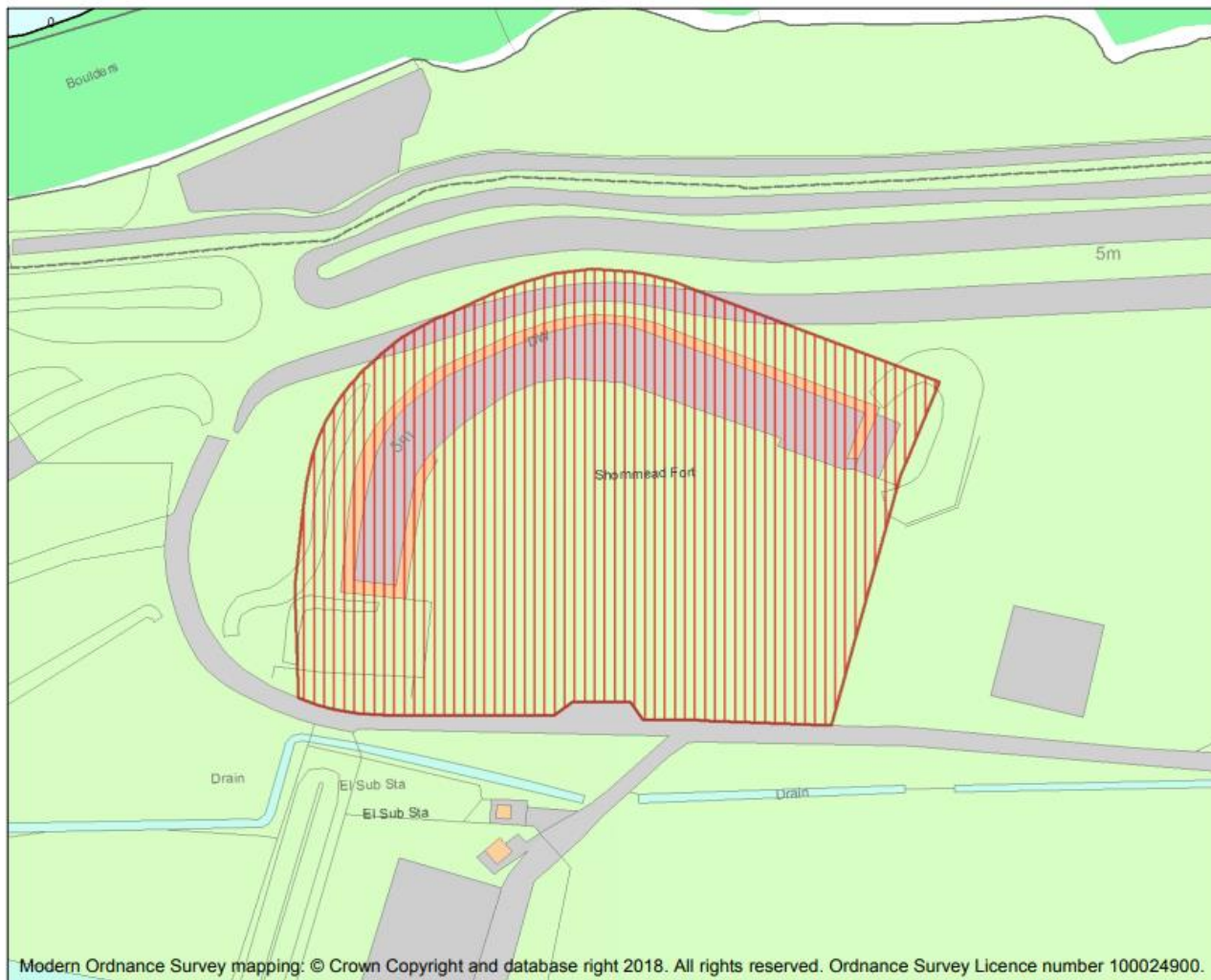
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Other

Nathalie Barrett, Shornemead Fort, Shorne Marshes, Kent: an Archaeological Survey (2008)

The Morton Partnership, Condition Survey Report of Shornemead Fort, Shorne, Gravesend (May 2022)

Victor Smith, Shornemead Fort, Shorne Marshes, near Gravesend, Kent: an Archaeological Desk Study (August 2007)



Heritage Category: Scheduling

County: Kent

District: Gravesham

Parish: Shorne

Each official record of a scheduled monument contains a map. New entries on the schedule from 1988 onwards include a digitally created map which forms part of the official record. For entries created in the years up to and including 1987 a hand-drawn map forms part of the official record. The map here has been translated from the official map and that process may have introduced inaccuracies. Copies of maps that form part of the official record can be obtained from Historic England.

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Grid Reference: TQ6924974761

Map Scale: 1:1250

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