

EFFORD EMPLACEMENT, NEAR EFFORD FORT, MILITARY ROAD, EFFORD, PLYMOUTH

(NGR SX 51374 56419)

Results of an archaeological watching brief

Scheduled Monument: Efford Fort and Efford
Emplacement (Scheduled Monument No. 33066;
National Heritage List for England No. 1021135)

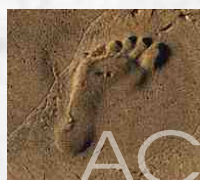
Historic England case reference S00213965

Prepared by:
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On behalf of:
Western Power Distribution Ltd

Document No: ACD2013/2/0

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archaeology

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The views and recommendations expressed in this report are those of AC archaeology and are presented in good faith, on the basis of professional judgement and on information currently available.

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Summary

An archaeological watching brief was carried out by AC archaeology between April and August 2019 at Efford Emplacement, near Efford Fort, Military Road, Plymouth. The work was commissioned by Western Power Distribution Ltd, and involved monitoring and recording of a new service trench through the Scheduled Monument at the 1860s Efford Emplacement, along the line of a sally port through a tunnel under the emplacement, in an embankment over the adjacent external ditch, and in a cutting on the inside of the defences.

Within the tunnel part of a 19th-century drain survives at surface level. No other archaeological deposits were present within the tunnel or in the embankment, although footings of the south wall of the tunnel were exposed in test pits. Make-up deposits of 19th-century date, associated with the path to and from the sally port, were exposed within the cutting (where they might have overlaid a natural deposit) and on the outside edge of the ditch.

1. INTRODUCTION

- 1.1 This document sets out the results of an archaeological watching brief undertaken by AC archaeology on behalf of Western Power Distribution Ltd between April and August 2019 during the replacement of an overhead electricity cable at Efford Emplacement, near Efford Fort, Military Road, Plymouth (NGR SX 51374 56419). Part of the scheme fell within the Scheduled Monument of Efford Fort and Efford Emplacement (Scheduled Monument No. 33066; National Heritage List for England no. 1021135; see Section 2 below), and the investigations were required under conditions (ii) and (vi) of the grant of Scheduled Monument Consent for the scheme (Historic England case reference S00213965).
- 1.2 Efford Fort is located on a hilltop to the north of the Embankment, and to the northwest of a bend in the River Plym, 3.5km to the northeast of the historic core of the town around Sutton Harbour. The entrance to the fort is at a height of approximately 66m above Ordnance Datum. Efford Emplacement is situated to the south of Efford Fort, in an east-facing valley with the top of the rampart at a height of 25m above Ordnance Datum. The underlying geology of the area is varied and consists of Devonian sandstone, siltstone and mudstone of the Wearde Sandstone Member, and Devonian slates and basaltic pyroclastic rock, both Upper Devonian Slates (British Geological Survey online viewer 2019).
- 1.3 The scheme comprised the replacement of an overhead cable between Willow Close and a field west of Efford Emplacement with a new route consisting of a length of overhead cable and a ducted cable with an existing path. This path crossed through the Scheduled Monument including through a tunnel beneath Efford Emplacement (see Section 2.3 below).

2. ARCHAEOLOGICAL BACKGROUND (Fig. 1; Plates 1-4; Appendix 1)

- 2.1 The history, and a description of the fort, are set out in the Scheduled Monument description (Appendix 1) and in *The Historic Defences of Plymouth* (Pye and Woodward 1996, 185-189). These are summarised below.
- 2.2 Efford Fort and the associated Efford Emplacement form part of the chain of inland defences surrounding Plymouth (and its naval dockyard) that were constructed in the 1860s and early 1870s following the recommendations (in 1860) of a Royal Commission set up by the Prime Minister Lord Palmerston in 1859. Efford Fort was constructed between c. 1865 and 1868, and on completion the adjacent Efford Emplacement was built (1868-9) in a valley between this fort and Laira Battery to the south. Both defensive works were intended to defend the approaches to

a crossing of the River Plym at Long Bridge. Efford Emplacement also provided cover for the adjacent Efford Fort and Laira Battery.

- 2.3** Efford emplacement was described as a curtain with emplacement for four guns, although on completion six howitzers were installed. It consists of a rampart with infantry firing step (a banquette) with a terreplein behind. A 32m long tunnel or sally port passes through the rampart and onto an embankment within the external ditch (Plate 1). The embankment is not shown on the Military version of the 1896 Ordnance Survey 25-inch map (Pye and Woodward 1996, fig. 95), which simply shows a track (as a dashed line). As well as – in the usual style – an above-ground unfenced track this convention is also used to depict buried passageways (for example as in the tunnel at Efford Emplacement itself and the tunnel leading to the counterscarp gallery at Austin Fort; *ibid.*, fig. 94). There is no architectural evidence for a drawbridge, and the original form of access is currently unknown. To the west the path from the tunnel is set within a cutting where it passes through the sloping ground at the head of the valley. The tunnel also provided access to an underground expense magazine again below the rampart. The emplacement is stone-lined with rounded arches to the tunnel portals and a rear revetment wall (Plate 2). All the masonry is local limestone except for the arch of the tunnel where red brick was used (Plate 3). The path and tunnel have modern tarmac surfaces, but within the tunnel limestone setts define a drain and its kerb along its north side (Plates 3 and 4). The height of this drain indicates the historic surface to the tunnel was at the same level as the current tarmac surface.
- 2.4** Efford Fort appears to have been disarmed in the late 19th century, but was reactivated during the Second World War when the casements were used for ammunition storage. It was sold off by the MoD in 1961, and is currently used by the Showman's Guild.

3. AIMS

- 3.1** The excavations for the new service trench adjacent to and within the tunnel had the potential to expose buried remains associated with the former surface of sally port, as well as the foundations of the tunnel itself. The latter were exposed in previously-excavated test pits within the tunnel (information provided by Western Power Distribution). The project had three aims: firstly, to observe, investigate, excavate and record any surviving below-ground archaeological artefacts, features and deposits across the area affected by the scheme, with particular relevance in those associated with Efford Emplacement; secondly, to prepare a pre- and post-works photographic record of the scheme; and thirdly to prepare a report on the results of the monitoring and recording to include reference to the previously-excavated test pits.

4. METHODOLOGY

- 4.1** The main works, undertaken between 24 and 26 June 2019, comprised the machine excavation of a single trench measuring 0.6m wide, and up to 0.70m deep, which was monitored for a distance of 61.5m from the western edge of the Scheduled Monument at the western end of the cutting, to the eastern side of the embankment and ditch. The trench was located within the centre of the path and the tunnel. Beyond here, outside of the Scheduled Monument, the trench was excavated within the later 20th-century path that was laid within a contemporary landscape that involved the removal of 19th-century earthworks on the outside of the ditch.
- 4.2** Prior to, and following completion of, the excavations a photographic record of the area was prepared; this was made in April and August 2019 respectively.
- 4.3** The archaeological works were conducted in accordance with a Written Scheme of Investigation prepared by AC archaeology (Passmore 2019), and the Chartered Institute for Archaeologists'

Standard and Guidance for an archaeological watching brief (2014). All features and deposits revealed were recorded using the standard AC archaeology pro-forma recording system, comprising written, graphic and photographic records, and in accordance with AC archaeology's *General Site Recording Manual, Version 2* (revised August 2012). Detailed sections and plans were produced at a scale of 1:10, 1:20 or 1:50 as appropriate. The photographic record was prepared using high-quality digital cameras.

5. RESULTS (Fig. 1; Plates 5-8)

5.1 The deposit sequence varied across the site, with a number of buried deposits exposed sealed beneath the modern tarmac surface (100) and associated bedding material (101/110). This surface varied in depth up to 0.30m deep. Most of the deposits were of modern (i.e. later 20th-century) date, and no earlier surfaces or features, or clearly datable earlier deposits, were exposed. These deposits are summarised in Table 1 below.

Context	Description	Interpretation
102	Light grey-yellow firm silty-clay with common small slate inclusions	Make-up layer within the cutting west of the tunnel, probably of mid 19th-century date
103	Mid grey soft silty-loam with frequent gravel, glass, plastic wrappers and ceramic pipe fragments	Later 20th-century make-up layer under surface 100 within the tunnel; overlies 104
104	Gravel	Backfill of a modern service trench containing ceramic sewer and plastic water pipes in the tunnel
105	Mid yellow firm clay with frequent small slate inclusions	Probably natural weathered bedrock, partially exposed within the cutting west of the tunnel under 102
106	Mid grey soft sandy-clay-loam with abundant slate inclusions of varying dimensions	Backfill of a modern service trench containing ceramic sewer and plastic water pipes in the tunnel
107	Concrete	Concrete laid around pipe/s within the modern service trench in the tunnel
108	Mid grey soft sandy-silty-loam with abundant small slate inclusions	Backfill of a modern service trench containing ceramic sewer and plastic water pipes in the tunnel; overlies 109
109	Gravel	Backfill of a modern service trench containing ceramic sewer and plastic water pipes in the tunnel
111	Mid yellow firm silty-clay with rare small slate inclusions, and modern ceramics and crisp packets and sweet wrappers	Modern make-up within the path over the embankment
112	Light brownish-grey compact silty-clay with abundant slate inclusions of varying dimensions	Make-up within the path beyond the east end of the embankment; underlies 111, and possibly of mid 19th-century date

Table 1: Summary of contexts

The test pits

5.2 Prior to the main works commencing a pair of test pits measuring 0.75m long by 0.45m wide and 0.70m deep were excavated. They were located adjacent to the south wall of the tunnel, just inside the east and west portals. These were excavated without archaeological monitoring and the following description is based on photographs provided by Western Power Distribution Ltd.

5.3 In the north test pit, at a depth of approximately 0.25m below the surface a projecting limestone footing for the tunnel wall was exposed. This was aligned at a slight angle to the masonry of the

wall above. The footing was not present at this level in the south test pit, but more irregular slightly projecting masonry was visible at a lower level. Visible in both pits there was an electricity cable that had been laid in a trench close to the wall (and adjacent to the footing in the north test pit). The cable was present at a depth of approximately 0.40m below the surface.

6. CONCLUSIONS

- 6.1** The initial recording identified the presence of an historic drain alongside the north wall of the tunnel; this is not mentioned in Pye and Woodward's description nor the Schedule description. This is at the level of the west doorway in the north wall (into the north magazine) and (as respected by the current surface) is likely to be at the original level of the floor to the tunnel. This is confirmed by the observations within the test pits that identified a projecting footing on the south wall located at a shallow depth below the make-up for the current surface.
- 6.2** All the excavations exposed evidence for existing services passing through the tunnel; these comprise an electric cable located against the south wall, a central sewer (with associated manholes present within the tunnel and in the cutting to the west), and a water pipe located within the northern side of the tunnel immediately north of the sewer. Other than the extant 19th-century surface drain, which was not disturbed by the excavations, no archaeological deposits were exposed within the tunnel or within the embankment over the ditch.
- 6.3** In the cutting west of the tunnel a possible 19th-century levelling layer (102), perhaps associated with the access path to the tunnel, was exposed overlying a possible natural deposit (105). On the east side of the embankment part of a make-up layer (112), or landscaping deposit, probably associated with the 19th-century path leading east from the fortifications, was partially exposed.

7. ARCHIVE AND OASIS

- 7.1** The digital archive generated during the project will be deposited with Historic England.
- 7.2** An online OASIS entry has been completed, using the unique identifier 367546, which includes a digital copy of this report.

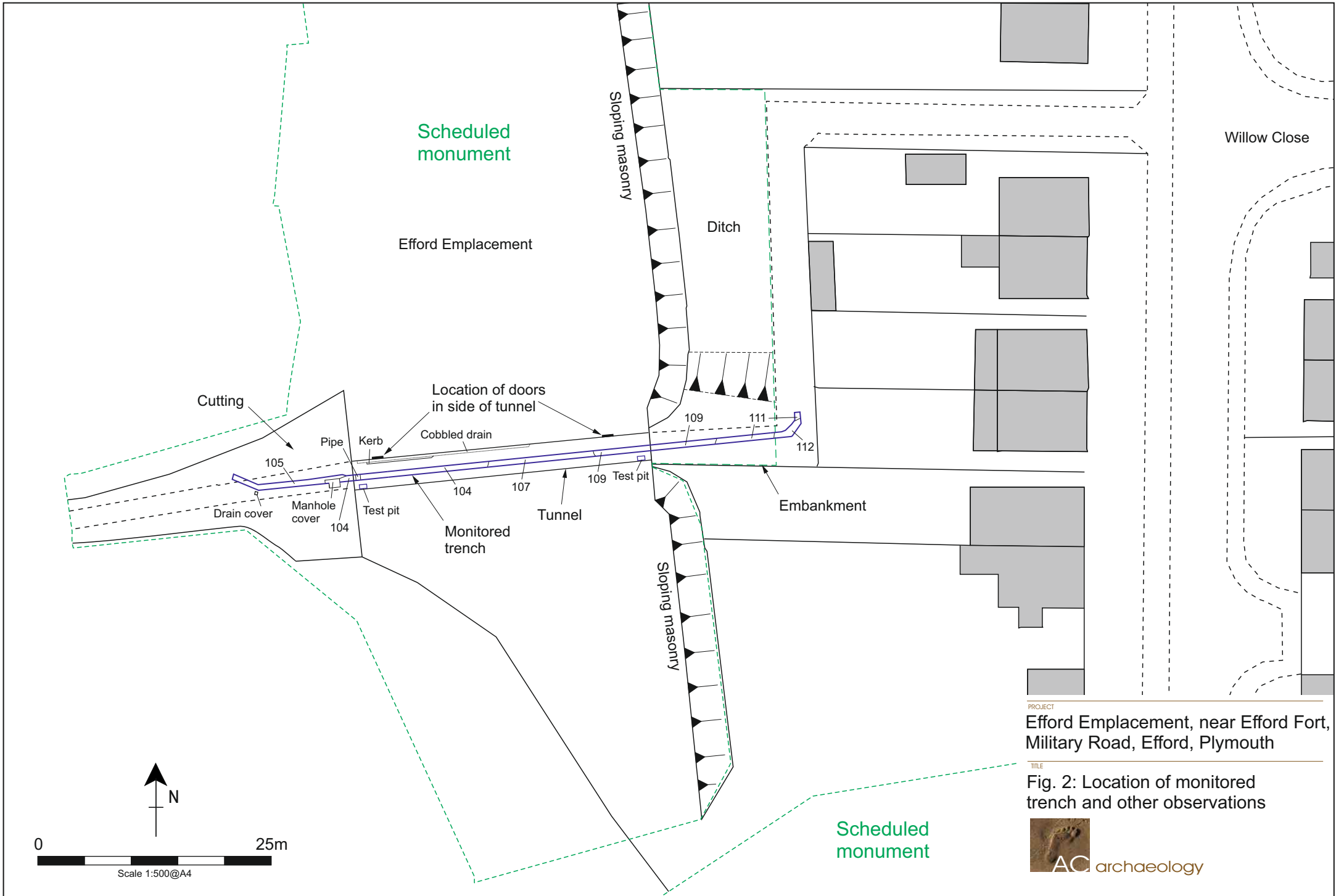
8. SOURCES CONSULTED

British Geological Survey Online Viewer, 2019, www.bgs.ac.uk

National Heritage List for England: <http://www.historicengland.org.uk/listing/the-list>

Passmore, A., 2019. *Efford Fort, Military Road, Efford, Plymouth, (NGR SX 51374 56419), Written scheme of investigation for an archaeological watching brief, Scheduled Monument: Efford Fort and Efford Emplacement (Scheduled Monument No. 33066; National Heritage List for England No. 1021135), Historic England case reference S00213965, AC archaeology doc. no. ACD2013/1/0.*

Pye, A., and Woodward, F., 2006, *The Historic Defences of Plymouth*. Cornwall County Council.



PROJECT
Efford Emplacement, near Efford Fort, Military Road, Efford, Plymouth

TITLE
Fig. 2: Location of monitored trench and other observations





Plate 1: Pre-works view looking west across the embankment towards the east portal of the tunnel (1m scale)



Plate 2: Pre-works view looking east down the cutting into the west portal of the tunnel (1m scale)



Plate 3: Pre-works view looking east through the tunnel showing the brick arch, the modern surface with earlier drain to the right, and the western blocked doorway (1m scale)



Plate 4: Close-up view of the historic drain in front of the western blocked doorway, looking north (1m scale)



Plate 5: View of the west end of the trench, within the cutting (1m scale)



Plate 6: View of the trench within the tunnel, looking east (1m scale)



Plate 7: View of the east end of the trench in the embankment, looking west (1m scale)



Plate 8: View of the east end of the trench, looking northwest (1m scale)

Appendix 1

Scheduled Monument Description

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. This had been set up following an invasion scare caused by the strengthening of the French Navy. These fortifications represented the largest maritime defence programme since the initiative of Henry VIII in 1539-40. The programme built upon the defensive works already begun at Plymouth and elsewhere and recommended the improvement of existing fortifications as well as the construction of new ones. 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 20th century, they are the most visible core of Britain's coastal defence systems and are known colloquially as 'Palmerston's follies'. All examples are considered of national importance.

The monument survives as a carefully constructed fort and earthwork battery of 1860s Royal Commission date which retains many features in a high state of preservation. Efford Fort held the key site within the integrated, planned, and coherent defensive complex known as the Efford-Laira position. This position in turn formed a key part of the wider defensive system for the naval dockyard at Plymouth, a system which, by virtue of its grand scale and sheer strength, indicated the extent to which Britain would go to protect its naval interests from the threat of French invasion. The setting and defences of Efford Fort are visible to the public by way of the nature reserves which surround it and the sally-port tunnel of Efford Emplacement is used as a public thoroughfare and has an impressive stone facade on its western side. The monument survives therefore as a visual reminder of Victorian military power and thinking which led to the construction of a massive defensive system around the city of Plymouth.

Details

The monument includes both Efford Fort and Efford Emplacement. These works represent a mid to late 19th century fort and earthwork gun battery. Efford Fort survives as a polygonal work defended by a combination of rock cut ditches and a glacis whilst Efford Emplacement survives in the form of an earthwork rampart topped by three earthen traverses each of which held two guns, the whole being defended on its outer side by a rock-cut ditch. Efford Fort dominates the hill upon which it is sited and commands extensive views over the River Plym and the city of Plymouth to its rear. Both Efford Fort and Emplacement formed part of the north east land defences of Plymouth which encircled the Plymouth Harbourage and which were intended to protect it from land attack in the event of invasion. Fears of a French invasion of Britain in the middle years of the 19th century led to the formation of a Royal Commission in 1859 to consider the defences of the United Kingdom. The Royal Commission's recommendations for Plymouth were acted upon by Major W F D Jervis and resulted in the completion, by 1872, of six new coast batteries and a ring of eighteen land forts and batteries based on three principal forts at Staddon and Crownhill on the Devon side of the harbour, and Tregantle on the Cornish side. The land forts and batteries were linked by a system of military roads protected from the likely direction of attack by earth traverses and cuttings. Construction of Efford Fort began in about 1865 and it was completed shortly after 1868 when work commenced on Efford Emplacement. Efford Fort was designed by Captain Du Cane to mount 21 guns on the terreplein (the level area of the rampart), with three Haxo gun casemates (vaulted chambers within the rampart or part buried structures). It contained casemated barracks for five officers and 108 men. Access to the fort was via a purpose-built and defended military spur road. Efford Emplacement was described as a curtain with emplacements for four guns and the proposed armament was four 64-pounder Rifled Muzzle-Loading (RML) guns. In the event, six 8-inch RML howitzers were installed. The emplacement faces east and is sited across the valley which lies between the contemporary fortifications of Efford Fort and Laira Battery; it was intended to protect both of these associated positions, their approaches and the approaches to the crossing of the River Plym at Long Bridge. Little demolition of Efford Fort has been undertaken so that all of its

casemated barracks survive. Those to the north were for the soldiery and they comprise two facing blocks separated by a metalled street; the outer block includes two magazines and a store; at the eastern head of the barracks is a separate casemated magazine. The barracks to the south are marked as officers' quarters on contemporary mapping. Also surviving within the interior of the fort is the gun shed (marked on plans as a Moveable Armaments Shed). This building is 40m long and, apart from a later frontage having been put in place, it retains its original walls and is the only non-casemated building. The Fort is well defended by earthworks including ditches and a steep glacis on all sides except the gorge (the rear of the fort) which was defended by a fortified guardhouse mounting 32-pounder guns; the gate arch into the fort was demolished in the late 20th century. As part of the integrated defences, Efford Fort was itself defended by the neighbouring Deer Park Emplacement to the north and by Laira Battery to the south whilst it could in turn offer covering fire in these two directions. On its south flank is a battery of five gun casemates separated by expense magazines which were sited to cover the front of Efford Emplacement and Laira Battery. The ditch at the south west angle of the fort is defended by a caponier, a loopholed casemate allowing flanking fire along the ditch should enemy incursion have taken place. Another caponier allowed fire to be directed down the ditch which fronted Efford Emplacement. All of these positions were reached by way of a long stairway leading from the interior of Efford Fort, parts of which survive. Efford Emplacement consists of a rampart with a banquette (an infantry firing step) and a terreplein or level surface running behind the gun positions. Access to the terreplein from Efford Fort and Laira Battery was via a ramp. The six gun positions, in three pairs, are protected by three earthen traverses. The guns were served by an expense magazine sited off the tunnel which runs beneath the emplacement. This 32m long tunnel, which is connected to the main military road to the rear by a spur road, was intended to offer a 'sally-port' for troops issuing to defend any attempted crossing of the River Plym at Long Bridge. It is stone-lined with a rounded arch and rear revetment wall all in the local limestone. The magazine, which lies just inside the western and inner end of the tunnel, has a bomb-proof door which is kept permanently closed. A bridge would have allowed access from the tunnel across the 9m wide ditch which fronted the rampart of the emplacement. The eastern approach to the tunnel was in the form of a chicane so that any enemy would be exposed to fire from the emplacement. Efford Fort was employed as an ammunition store in World War II and a light-gauge railway was inserted to link the soldiers' casemates (used for ammunition storage) to other parts of the fort. Some of the officers' casemates were converted internally at the same time.

A number of features are excluded from the scheduling. These are: all fencing, railings, fixed signposts, modern surfaces and hard standings, all modern prefabricated structures, all semi-permanent caravans, mobile homes and vehicles whether wheeled or on blocks. The ground beneath all of these features is, however, included.

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