

**ARCHAEOLOGICAL RECORDING
AT BERRY HEAD, BRIXHAM, DEVON
MAY TO OCTOBER 2009**

prepared for the
Torbay Coast and Countryside Trust

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SUMMARY

Archaeological recording was undertaken by Exeter Archaeology between May and October 2009 during construction and conservation works as part of the Torbay Coast and Countryside Trust's 'On The Edge' project at Berry Head. The work was undertaken on structures within two Napoleonic-era forts (Fort 1 and Fort 3). The work followed on from archaeological assessment and survey undertaken in 1989 and 1990, and an evaluation of one element of the project in 2008.

In Fort 1 the causeway infill within the fort ditch was removed and replaced with a new bridge. This enabled the opportunity to further record the structural remains of the original drawbridge and allowed a reconstruction to be put forward. Within this fort a building recording exercise and excavation was undertaken on and within the guardhouse, magazine and kitchen revealing further details of the original layout, construction and development of these buildings. A toy cannon was recovered from within the magazine.

In Fort 3, through a combination of building recording and excavation, the development of the guardhouse and the Second World War/Cold War Royal Observer Corp building were further explored. Excavations to the rear of the guardhouse uncovered part of a timber-framed building, as well as part of another structure and rubbish pits dating to the mid 19th-century. A short length of a tunnel, forming part of a larger drainage system, was also uncovered.

1. INTRODUCTION (Figs 1 and 2)

This report has been prepared for the Torbay Coast and Countryside Trust (TCCT) and presents the results of archaeological recording undertaken by Exeter Archaeology (EA) between May and October 2009 during construction and conservation works as part of the Berry Head ‘On The Edge’ project. The works took place in Forts 1 and 3 on Berry Head. Both forts are Scheduled Monuments under statutory protection. Fort 1, also known as The Old Redoubt, is SM 29695 whilst Fort 3 is SM 29694/01). Two structures within the forts are, in addition, listed buildings: the guardhouse in Fort 3 (No. 1946 – 1/2/8) and the magazine in Fort 1 (No 1946 – 1/2/15). The archaeological works were required as a condition of the grant of planning permission, and as a condition of Scheduled Monument Consent granted by the Department of Culture, Media and Sport following recommendations made by English Heritage.

2. THE SITE (Fort 1: SX 94330 56490 and Fort 3: SX 94165 56122)

Berry Head is a limestone headland jutting out into the English Channel and defines the south edge of Torbay. Fort 3 is located on the headland, with Fort 1 situated to the south separated from Fort 3 by an area of managed pasture and scrub. Cannon and howitzer batteries were erected in 1779-80 to protect the anchorage of Torbay, and this defensive arrangement was followed by the construction of the two garrisoned redoubts (Forts 1 and 3) between 1795-1807, which were built in response to the outbreak of war with France in 1793. The forts are commonly referred to as ‘Napoleonic Forts.’

3. ARCHAEOLOGICAL BACKGROUND

The forts at Berry Head have been subject to sporadic archaeological investigations. Rubbish dumps inside both forts were excavated by the Brixham Museum and History Society in the 1970s, in 1998/99, 2003, 2005, and in 2006. An assessment of the fort was carried out by EA in 1989/90, consisting of a review of available document and cartographic sources, and a survey of the surviving structures (Pye and Slater 1990). The present recording has added to the record produced in 1990, with, in some instances, new interpretations formed.

In December 2008 and February 2009 an archaeological evaluation and excavation on the site of an extension to the guardhouse in Fort 3 was undertaken by EA (Farnell 2009). These investigations exposed parts of two buildings, including a probable hospital building. A small area between this excavation and the guardhouse was not excavated due to the presence of drains and the opportunity to examine this area was taken during the present works.

A finds report prepared by Dr Philip Armitage of Brixham Museum on the faunal remains and fish bone recovered from the evaluation and excavation is attached as an appendix to this report.

4. PROJECT SPECIFICATION

Schemes of [building] works for both forts were prepared by Stratton & Holborow (2008a and 2008b), which formed the basis of the application for Scheduled Monument Consent, and the archaeological recording. The archaeological recording was undertaken in accordance with a method statement prepared by EA (Passmore 2009) and approved by Torbay Council’s Senior Historic Environment Officer. The principal elements of the project were:

Fort 1

- Supervise and record the removal of the causeway outside the entrance to the fort;
- Supervise and record the removal of spoil within the guardhouse and store;
- Supervise and record the removal of spoil within the magazine;
- Supervise the removal of vegetation from the oven house and record the structure prior to infilling;
- Supervise and record the removal of vegetation from the musketry walls and kitchen;

Fort 3

- Monitor groundworks associated with the excavation to the guardhouse extension, in particular service trenches outside the limits of the February 2009 excavation;
- Monitor the conversion of the guardhouse and record structural fabric exposed during the works;
- Supervise and record the removal of the roof of the Second World War Royal Observers Corp post;
- Supervise and record the removal of vegetation of the musketry walls;

5. METHOD

Excavations and clearance within Fort 1 was undertaken by hand by EA staff, and volunteers from the TCCT and Brixham Museum, other works were undertaken by the TCCT contractor, Midas, using a tracked machine. Archaeological features and deposits were cleaned and excavated by hand and recorded using EA standard recording procedures:

- EA watching brief record sheets;
- Standardised single context sheets, drawings in plan, section and elevation and profile at 1:10, 1:20 and 1:50 as appropriate (including updating existing drawings prepared in 1990), and black-and-white print and colour digital photography;
- Survey and location of features;
- Labelling and bagging of finds on site from each excavated context, with on-site identification and quantification in co-operation with Dr Philip Armitage;
- The on-site assessment, as appropriate, of deposits containing environmental and microfaunal deposits.

6. RESULTS: FORT 1 (Figs 3-8; Pls 1-3)

6.1 **The entrance** (Figs 3-5a; Pl. 1)

The causeway providing access to the fort was fully removed down to the existing ground level close to the base of the ditch. The causeway comprised layers of modern (20th-century) quarry waste covered with topsoil and with a modern gravel track set along its top edge. In the centre of the ditch a vertical limestone pier bonded in pink lime mortar was exposed. The sides of this pier had been robbed, but limited deeper excavation on the west side exposed neatly-dressed masonry. It is clear from the profile of the masonry that similar dressed stone above and on the east side of the pier had been removed for reuse elsewhere. A second length of walling was exposed between the pier and the counterscarp wall. This was also constructed of limestone, but was laid drystone, and incorporated several dressed pieces. The function of this wall is unknown, but is it a secondary feature, and may have been added when the causeway was laid to provide stability to the pier after the removal of the bridge above.

The removal of the causeway exposed structural features relating to the entrance of the fort, some of which were previously visible and had been recorded in 1990. The curtain wall is constructed of limestone, is battered inwards towards the interior of the fort, and finishes at a round granite cordon. Above the cordon are the remains of a vertical parapet wall. There are no embrasures within the parapet wall on this side of the fort.

The entrance to the fort is defined by the remains of two retaining walls holding back the rampart. Both retaining walls have been disturbed, probably when the drawbridge was removed, and the western wall has been cut back to provide a wider, vehicular access into the fort. Consequently, some of the features described below do not survive on the west side of the entrance (see Fig. 3).

It is clear from the structural features within the curtain wall and the presence of the pier that access over the ditch was in two parts – a fixed bridge between the pier and the counterscarp wall, and a bascule drawbridge between the curtain wall and the pier. Although the bascule bridge has been removed the curtain walls retain chases and sockets for fixed timberwork supporting the drawbridge. The principle timbers would have been two vertical posts set into open sockets at the front of the wall. At their bases these posts would have been fixed into a horizontal timber embedded within the front of the wall. Further horizontal timbers, also embedded into the wall but at right angles to the horizontal timber, would have been attached to the base of the posts. The vertical posts would also have been supported, on their outside and rear faces by high-level diagonal braces which terminated at the end of the horizontal timbers. There is no surviving evidence for any mechanism for raising the bridge, although a bascule bridge does not require the complicated winding gear needed on a drawbridge, and may simply have been raised by pulling on chains. A suggested drawing of the arrangement likely to have been employed at the entrance to Fort 1 is shown in Fig.5a.

Two types of bridges were used on 18th- and 19th-century forts – simple drawbridges and bascule bridges. The former were generally constructed where the curtain wall incorporated some form of a gatehouse structure that could house the winding mechanism, whereas bascule bridges were utilised where the fort was of a much simpler design, and on larger bridges spanning long ditches. Fort George in Scotland is an example of the latter, and the design of its bridge supports closely matches that at Berry Head.

6.2 The guardhouse (Fig. 6; Pl. 2)

The guardhouse comprises two front rooms with two small toilets at the rear. The interior of the front rooms was excavated to the original floor level (although no floors actually survived), entailing the removal of turf (1114) and most of the collapsed rubble deposits (1115 and 1116 below). Limited removal of turf outside the building to expose the masonry and provide level access to the interior was also carried out.

Removal of turf exposed near-central entrances into both rooms and integral fireplaces in the central dividing wall, none of which was visible prior to the excavations. In the south room the remains of a hard slightly gravelly white lime mortar hearth, lined with limestone and brick survived (1123). To the south of the fireplace an area of light red-brown friable silty clay was exposed (1119), possibly representing a make-up layer for the former floor surface.

At the north end of the north room an area of mid-brown loose silt with abundant limestone fragments was exposed (1126). This was not excavated, but may represent weathering of the limestone bedrock into a subsoil, or a make-up layer laid down prior to the construction of

the guardhouse. In this northern room the make-up layer for the removed floor was partially exposed as area of orange-white hard lime mortar (1125). At the rear of the fireplace this was overlaid by a single row of brick fragments set into hard white lime mortar (1124), representing the remains of the hearth.

6.3 **The magazine** (Fig. 7; Pl. 3)

The debris (1117 and 1118) inside the magazine was cleared to the level of the original floor. Turf was removed along the pathway between the magazine and its outer enclosure wall, with further turf and vegetation cleared to expose the enclosure wall.

Inside the magazine two make-up layers were found. The lowest, a friable-soft mid-brown sandy silty clay with occasional blue slate fragments (1122), was only exposed where the upper layer (1120) had been previously removed. The upper make-up layer comprised a distinctive soft orange-red clayey-silty sand containing occasional limestone fragments and rare lime mortar fragments (1121). Into this deposit a series of eight east-west aligned joist sockets (1120) had been excavated, two of which still contained fragments of very-decayed wood. This must indicate that the building had wooden floorboards, probably laid at a slightly higher level than the entrance, which would be a sensible safety measure in a building containing explosives (i.e. the step up acted as a barrier to soldiers entering the magazine).

Outside the magazine the stone path to the building was uncovered, and this surface had been laid with two slabs of granite, each with sockets for removed door frames, separated by two rows of smaller slates. The presence of a door at the entrance to the building was already known from the evidence on the standing building, but the evidence for an outer door is a new discovery. This does however seem logical in that it presents an outer barrier to the magazine complex.

6.4 **The kitchen and oven house** (Fig. 8)

Following removal of vegetation limited conservation works were undertaken to the kitchen. The existing 1990 drawings were checked and minimal annotations made to the drawing of the eastern elevation. Vegetation and loose debris was removed from the walls and interior of the oven house prior to partial infilling.

Based on the limited clearance and new observations, the following development sequence for these buildings is put forward.

- Phase 1: construction of the southern curtain wall of the fort, and the construction of the kitchen within the fort's interior. The masonry of the curtain wall incorporates a primary drain, whose inside face was rebuilt in the 1980s.
- Phase 2: construction of the small oven house onto the curtain wall, with a flue in the west elevation, and a possible second flue in the south elevation. The building may have been two storied, with the first floor constructed on wooden joists, set into the void in the west elevation and on a ledge set within the north elevation. The entrance was probably located in the north wall adjacent to the west elevation.
- Phase 3: enlargement of the oven house with the construction of two new walls creating a second room on the building's eastern side. A granite stone to the west of the building may mark the position of the threshold of a new entrance.

6.5 **Consolidation works to the curtain wall**

Sporadic monitoring of repairs to the curtain wall was undertaken, and no new observations were made.

7. RESULTS: FORT 3 (Figs 9-11; Pl. 4)

7.1 **The guardhouse** (Figs 9-10)

Extensive works to the guardhouse were undertaken, including stripping of modern internal coverings and repairs to the ceiling and roof. Excavations were undertaken within the rear extensions of the building, and along the outside of the south elevation that was not excavated in February 2009 due to the presence of then live services. These works have provided new information on the development of the guardhouse, although the description provided by Pye and Slater in 1990 remains largely valid. The phased plan in Fig. 10 supersedes Pye's 1990 fig. 19.

The original guardhouse, constructed in 1798-1802, was a large rectangular structure with a veranda on its northern side (1100). Removal of modern concrete from within the veranda uncovered a well-preserved slate flagstone surface that has been left exposed for display in the new cafe. Internally, the building is currently divided into two rooms by a stone wall, previously thought to be original (Pye and Slater, 1990). This was however shown to be a later insertion, and dates to the early nineteenth century (the mortar being identical to that used in the extension constructed by 1811). No evidence for any original internal dividing walls was exposed (e.g. guard room, and mess room) although these may have been present in the form of partitions. Within the eastern third of the building a slate floor was exposed; elsewhere it had been removed and replaced with a concrete floor.

By 1811 the building had been extended to the rear, and the extension is depicted on the 1865 Ordnance Survey map. Though a combination of building recording and excavation, it can be shown that this extension comprised (at least) two rooms, and was smaller than previously thought. The building was 2.30m wide internally, some 1.30m narrower than the later alterations. Only the east wall survives above ground, the remainder surviving as footings (1101). The position of a door into the western room is defined by a granite threshold incorporating sockets for a wooden door frame. Remains of a limestone flag floor (1103) covered with a gravelly lime screed tainted with coal dust were exposed, possibly indicating this room was used for storage. The veranda at the front of the building was also probably infilled at this time.

At some point between 1865 and 1906 the rear extension was enlarged with new gable elevations erected flush with the original guardhouse walls and a new south elevation constructed to the south of the existing extension (1107). This extension is visible on an undated colour postcard. The west wall of the earlier extension was retained (as an internal partition) and it is possible that the east wall was also retained (but was later demolished); the south wall was removed. The new extension was divided into four rooms, three of which were heated by fireplaces. These three rooms had wooden floorboards laid on wooden joists. The eastern two rooms were divided by a corridor with a limestone flag floor 1111 (that survived under a modern concrete surface). The interior of the eastern room was occupied by a water tank (1110), the base of which survived later alterations. The tank was constructed of limestone with its eastern side forming part of the projecting footings of the east wall (1107) of the extension. The tank abutted the south wall of the original guardhouse and the west wall of the early 19th-century extension, possibly providing evidence for the retention of this wall when the extension was altered. The inside of the tank was lined with coat of render. The

tank measured 2.05m by 0.95m internally and would have stood 1.65m high as defined by projecting masonry on the east elevation). In the main part of the guardhouse a large fireplace was added into the south wall of the eastern room.

In the east room of the extension a series of nine high-level sockets were exposed at ceiling level, and were probably associated with the original flat roof of the late 19th-century extension (as shown on the undated postcard).

Later alterations in the main building involved the addition of partition walls within the guardhouse. In the extension the water tank and walls flanking the corridor were removed, and a new corridor and bathroom added (see Pye 1990, fig. 19 for the last known layout of this area). The flat roof of the extension was removed along with the chimney stacks, and a new hipped roof added.

7.2 Excavations in the vicinity of the guardhouse (Fig. 9 and 10)

Excavations in a number of locations in the vicinity of the guardhouse were monitored. Immediately south of this building a narrow excavation was undertaken in an area left untouched earlier in the year. Here modern surfaces and associated make-up layers were exposed overlying the 1790s levelling deposit (1007). The north end of the brick drain (1056) was also exposed. A 2m length of tunnel 1 was exposed (Fig.10). The capstones had been disturbed by the excavation for earlier services and had either been removed or dislodged. The surviving capstones were removed and safely replaced prior to the laying of the new café floor. The sidewalls of the tunnel were not disturbed by the present excavations. At this point the tunnel was 0.60m deep and aligned northeast-southwest. It passed under the late 19th-century south wall of the guardhouse where it then turned to a north-south orientation and passed under the wall of the earlier 19th-century extension. At this point the capstones dropped in level, and the tunnel narrowed slightly. The tunnel has been identified as part of the fort's sewage/drainage system, as discussed by Armitage and Masterson 2009.

No features were exposed in a soakaway pit located to the west of the guardhouse, where a post-fort demolition deposit (1112), perhaps even of 20th-century date, overlaid the 1790s levelling deposit 1113 (equivalent to 1027 and 1007 respectively in test pit 1).

Immediately north of this pit, topsoil was stripped to enable the concrete surface of a bin store to be laid. In the centre of this area part of a surface of small cobbles laid on edge and in rows (1128), was exposed. The surface was approximately 1.4m wide with a slight camber on its western side along which a possible few larger edging stones were exposed. The pathway probably ran from the entrance of the fort to the hospital building partially excavated in February 2009.

A service trench leading to a new septic tank was excavated adjacent to the existing service trench to east of the guardhouse. Topsoil was exposed throughout the trench. This topsoil overlying the 1790s levelling deposit (1007) was in places truncated by services (including the GPO, now BT, cable leading to the Royal Observers Corps post). Close to the curtain wall, part of a small pit was exposed (1129). The pit appeared to be oval in shape and contained a single fill of dark grey silt with abundant coal ash, occasional limestone fragments and small blue roof slate fragments (1130). A small quantity of early 19th-century pottery and clay tobacco pipes was recovered from this deposit. At a depth of 1m from its top edge, the curtain wall of the fort projected out 0.30m before continuing downwards (and below the base of the trench).

The western part of the former garden south of the curtain wall was reduced in ground level, to various heights, in advance of the excavation of a pit for the new septic tank. In general, natural undisturbed limestone bedrock was exposed at a depth of 0.70m from the surface. This was overlaid by a garden soil of mid-dark brown slightly clayey silt (1131) containing pottery, coal and clay tobacco pipes. This soil was up to 0.70m deep, but generally less towards the north end of the garden. The soil probably developed after the fort officially went out of use in the early 19th century, and was the area cultivated until the mid 20th century. Finds from this layer date to the early 19th century but it is unclear whether the area was cultivated whilst the fort was occupied or whether the finds were brought in during subsequent cultivation. Adjacent to the curtain wall a small trench (1134) had been cut into the bedrock, onto which a short stretch of unbonded limestone wall (1132), aligned north-south, had been constructed. The function of the wall is unclear. The wall was abutted and overlain by the curtain wall (1133), whose base was also constructed onto the bedrock at the bottom of the trench. The curtain wall survives on this elevation to a height of 2.70m and incorporates wider footings towards its base.

7.3 The Royal Observer Corps post (Fig. 11; Pl. 4)

Berry head is unusual in retaining a group of structures associated with the Royal Observer Corps (ROC), which are interpreted, partly on the basis of the present recording, as being associated with three phases of the Corps' history. According to Pye (1990, 19), the present above-ground, two-storey structure was constructed in 1943 or 1944 and replaced an earlier observation post located on the west rampart of Fort 3.

There is evidence to indicate that there are two phases to this building's construction, which may date to 1943/4 and the period 1950-55. The original structure was constructed against, and utilising, the southeast corner of the existing Napoleonic store building, using concrete blocks. Internally, the building was divided into a large west and a smaller east room, the former entered by a door in the west elevation, which was protected by an external blast wall. A small, internally-arched opening, with brick lining has been inserted into the stone masonry of the east elevation. This feature is probably part of the original ROC building, but may have been added at a later date. The east room has a concrete roof, displaying scars of the corrugated iron sheet shuttering used as a former on its underside. In the west room there are fixings in the north, east and west elevation for now-removed shelves and/or cupboards. Set into the concrete floor is a 2" diameter steel post, sawn-off at floor level that would have supported the surveying equipment.

The first floor of the building is constructed entirely of brick, on a slightly different footprint to the ground floor. On this basis, this storey is thought to be an addition, and probably relates to post-war reactivation of the ROC post. The same internal layout was used, i.e. a large room and a smaller room, the latter with a reinforced concrete roof. As part of the alterations the 20th-century masonry on the outside of the building was rendered but leaving the earlier stonework visible. A doorway was added to the first floor above, but not matching the position of the ground-floor entrance. This doorway has been blocked up, and the internal doorway between the two rooms also partially blocked. The first floor itself has been removed, although joist sockets survive in the west elevation. (Elsewhere these could have rested on the wider projecting masonry of the ground floor.) At roof level there are sockets in the north, south and east elevations, which may have held supports for a removable roof or a hipped glass observation structure and reused in a later fixed roof. The communications

(GPO, later BT) cable connecting this post (and the later bunker) has been located in several areas around the guardhouse.

From the late 1950s the role of the ROC changed from observing aircraft to monitoring the location of, and fallout from, nuclear blasts. Above-ground monitoring posts were abandoned and replaced by new underground bunkers intended to survive the effects of nuclear blast. At Berry head the new bunker was constructed just to the north of the existing above-ground post.

8. FINDS, by *A.J. Passmore and P.L. Armitage* (Pls 5 and 6)

Finds from the excavations in Fort 1 were catalogued on site by A.J. Passmore and P.L. Armitage using Brixham Heritage Museum Archaeological Field Team Find Recording Sheets. Details of material discarded on site are recorded on these sheets. Small finds were allocated to individual items or groups of similar items from the same context. Other finds were catalogued by A.J. Passmore and J.P. Allan (Exeter Archaeology). Descriptions of the military and some of the other artefacts have been provided by Philip Armitage. The general finds listing is presented in table 1, with details of the small finds listed in table 2.

The finds assemblage represents both domestic material and military artefacts, and contains material dating from the Napoleonic period through to the mid 20th-century. The majority of the ceramics can be dated to the early 19th century. Although small, there are some differences between the ceramic and clay pipe assemblages in Fort 1 and Fort 3, namely the lack of decorated (transfer-printed) pottery from Fort 3. However, little should be read into this since a far larger and varied assemblage was recovered from this fort during the earlier evaluation and excavation (Farnell 2009, 5-6).

Of particular interest is small find 12, a child's toy cannon (Pl. 5). In part due to the numerous worldwide conflicts throughout the 19th century toy cannons were particularly popular with children. The example from Berry Head is made from brass and measures 69mm long, being at the smaller end of the scale for such toys (finds of cannons in England seem to be smaller than those shown in historic pictures of those manufactured in the USA). The cannon is missing its carriage, which was probably made from wood. The type of cannon represented by the toy has not been identified, but the slender profile of the barrel and its relatively wide reinforcing rings and muzzle moulding may reflect an earlier (i.e. Napoleonic) date. The toy was cast and was designed to be fired, with a hollow barrel and a touch hole or vent on the upper surface. This is the second toy cannon to be found at Berry Head – a fragment from another cannon, of a slightly different design, was recovered from a Napoleonic context by Brixham Museum in 2001 during excavations for a new service trench adjacent to the Artillery Store in Fort 3. This cannon had exploded when fired. Small find 12 is almost identical in shape and size to an example found at Churston in 1960 (information provided by P.L. Armitage).

The military finds (Pl. 6), including ordnance, spans the period *c.* 1850-1945. Most of these finds were recovered from the guardhouse of Fort 1 and may have derived from the rifle range (*c.* 1860s-1908) located outside this fort; some finds had clearly been collected and were found together in small groups. The ordnance includes rifle bullets and revolver cartridge cases that probably represent both military issue, and commercially-bought items (identified by the lack of official markings) used in a privately-owned Adams revolver. The use of an Adams revolver fits well the discovery during excavations by the Brixham Heritage

Museum of bullets fired from an Adams revolver on the nearby rifle range. This practice firing range was used by both the Brixham Royal Naval Reserve and the Brixham Volunteer Artillery Company, from c. 1860s to 1908.

Context	Post-medieval pottery		Clay pipe	Glass	Faunal bone	Metal	Tile	Other	Small find nos
	Qty	Wgt							
Unstrat.					1 (cow)	1 iron nail		1 piece of plaster	27-29
1006									10
1115	6	74g	7	54 white, 83 green, 15 brown			9	1 ceramic transmission insulator. GPO or railways before 1943	11, 15-19, 21-23
1116	8 (inc early C19 tea cup)	129g	2 (early C19)	347 white, 79 green, 14 brown (inc bottle top and necklace)	29 (single sheep)	4 iron nails, 2 bottle tops	5		24-25
1117	8	172g	1	54 green, 26 white, 5 brown, 2 pieces of white tube (includes a bottle with Bakelite top, embossed WAR GRADE)	1 (sheep)	3 iron nails, 1 iron wire	1		12
1119	7 (early C19)	9g							13-14
1127	1								26
1130	6 (early C19, all plain sherds including creamware plate and white salt-glazed stoneware)	122	9 (two types of fluted bowl, c. 1800-1825 and 1800-1840)						
1131	8 (early C19, all plain sherds including Staffordshire pearlware and Staffordshire creamware bedpan)	398		2 green bottles (one inscribed Not To Be Taken), 2 white bottles		1 iron bracket			

Table 1. Finds Listing

Several small finds clearly dating from the Second World War were also found. The base-closing plug from a No. 36 Mills hand grenade probably derives from Home Guard use and is the fourth such object to have been found on the headland; the others were discovered during a metal-detector survey of Berry Head Common by Brixham Heritage Museum

(Armitage 2008). Taken with the other Second World War artefacts found by Brixham Heritage Museum it is clear that the area was more extensively used for (Home Guard) training than has previously been recognised.

Small find no.	Context	Description
10	1106	Flattened lead bullet, probably Victorian
11	1115	Base closing plug from no. 36 Mills hand grenade
12	1117	firing miniature child's cannon
13	1119	CuA chain
14	1119	Pewter button of the 3rd Royal Lancashire Militia
15	1115	1 x .476 Enfield revolver bullet; 3 x .577 Snider rifle bullets, c. 1870-1880s; 5 x .450 Martini-Henry rifle bullets, c. 1879-1885; 2 x .303 Lee-Metford/Enfield rifle bullets, after c. 1895, probably up to c. 1908
16	1115	8 lead discs
17	1115	3 brass light fittings
18	1115	metal bottle top
19	1115	4 x 450 cartridges used with an Adams Revolver, c. 1868 to well before WW1
21	1115	lead object with Fe nail fixture
22	1115	Aluminium powder canister
23	1115	12 gauge shotgun cartridge 1850s-1880s
24	1116	4 x unidentified bullets
25	1116	1 x 450 cartridge used with an Adams Revolver, c. 1868 to well before WW1
26	1127	Fork, military issue, 1943.
27	Unstrat, Fort 1	1 x .577 Snider rifle bullet; 1x .450 Martini-Henry rifle bullet; 1 x .303 Lee-Metford/Enfield rifle bullet with a copper jacket; 3 unidentified bullets
28	Unstrat, Fort 3	1926 Penny (George V), dented – possibly from a shot
29	Unstrat, Fort 3	leather belt and brass buckle

Table 2. The small finds

9. CONCLUSIONS

The excavations and recording at Berry Head during the summer and autumn of 2009 were diverse and undertaken across Forts 1 and 3, and have resulted in much useful information on the initial construction of the Forts during the late 18th and early 19th century, along with evidence for later occupation and use of the site.

9.1 The Napoleonic forts (1795-1817)

In Fort 3, the southern curtain wall was shown to have been constructed within a levelled terrace into the natural bedrock. Behind the curtain wall the excavations of 2008 and 2009 exposed a significant levelling deposit of quarried stone (1007), and the inference from the present observations is that in the general area between the curtain wall and the guardhouse this part of the site was a natural hollow in the late 18th century and has been raised by up to 2m to form the present ground surface. To the north of the guardhouse, the ground still dips away between the rampart and the boundary wall defining the extent of the later quarry, possibly reflecting the natural hollow. As this observation lies to the east of a 'Roman Wall' depicted on a plan of c. 1780 (Pye and Slater 1990, fig. 3, with the interpretation on page 2 that this represents remains of an Iron Age promontory fort) it is not considered to be part of the earlier Iron Age defences. However, it remains possible that the hollow represents an as yet unrecognised internal defensive element of that date.

The works to the guardhouse have reinstated the veranda along the front of the building, and original slate floor surfaces have been exposed within this veranda, and within parts of the

guardhouse itself. To the rear of the building a stretch of tunnel 1 was uncovered, although its relationship with the building was not exposed.

In Fort 1 the removal of the causeway over the ditch uncovered a central pier and exposed further structural features associated with a removed bascule bridge spanning the ditch. Such a bridge is typical of the type used at this period throughout Britain and can be found at other fortifications and on the canal network of England.

Inside Fort 1, clearance of the interior of the guardhouse uncovered two previously-hidden fireplaces. Although the building is documented as a guardhouse and storehouse it is clear from the presence of fireplaces in both main rooms that the building was designed solely for accommodation, and it is not difficult to conceive one room being used as a guardroom, with the other as (sleeping) accommodation for off-duty guards, perhaps also doubling up as a store. Removal of debris from within the adjacent magazine exposed make-up layers and joist sockets. The building would have had a wooden floor, a safety measure necessitated by the volatile contents of the buildings.

The artefact assemblage from both forts includes some material from this period including pottery, clay tobacco pipes and glass, some of which may provide more evidence for the building behind the guardhouse in Fort 3 (partially excavated in February 2009) as being a hospital. (It should be noted that the recognised hospital, now the Berry Head Hotel, was not constructed until 1810, some 14 years after the barrack blocks had been completed, so the building could have originally served the soldiers garrisoned within the forts.)

9.2 Later 19th-century and early 20th-century occupation (1817-c1908)

After the forts were decommissioned the area was retained for military use and some of the buildings were occupied (see also appendix 1). In Fort 3 the guardhouse was still used, later to become a café. The building was however, altered and extended, and a phased plan of this building was put forward by Pye and Slater in 1990 (fig.19). The recent observations resulting from the excavations within the building and study of its fabric have modified this phasing, but essentially the building was expanded through the enclosing of the veranda and the construction of a rear extension, the latter being further extended in the early 20th century.

The excavations to the south of the guardhouse earlier in 2009 exposed several rubbish pits associated with this later occupation. Analysis of the faunal and fish bones by Philip Armitage, included as appendix 1 in this report, has concluded that the diets of the occupants were based on beef and mutton, along with a wide range of fish procured from the flourishing Brixham fish market.

The later use of Fort 1 is less clear. All the stone buildings survive in relatively good state of preservation, which may imply that they were maintained for a period after 1817. There is however, no documentary or, with the exception of the oven house, archaeological evidence to confirm their continuing use. The oven house is something of an enigma, in both its function and date. The structure abuts the curtain wall, implying it is a secondary feature, but this could reflect the construction technique, whereby the initial emphasis was the construction of the defensive curtain wall (enabling defence of the fort) and the oven house was added soon after the curtain wall was completed. The building is not depicted on a plan of 1811, whereas the adjacent kitchen is shown (Pye and Slater 1990, fig. 6). The building,

along with a later extension connecting the oven house with the kitchen, is depicted on the 1865 ordnance survey map (Pye and Slater 1990, fig. 9).

Between the 1860s and 1908 a firing range was located outside the entrance to Fort 1, and a number of spent bullets and cartridges were excavated from within the guardhouse of this fort, probably having been fired on the range. Some had clearly been collected and brought to the building.

9.3 The Second World War and the Cold war (1939-1991)

A couple of artefacts were recovered from Fort 1 providing further evidence for military activity during the Second World War, including a closing plug from a hand grenade probably used by the Home Guard. Throughout the Second World War and the Cold War a Royal Observers Corps observation post was situated within Fort 1. The post occupied three different sites (see above), one of which was a purpose-built structure added onto a Napoleonic store. Refurbishment of this structure has enabled a record to be prepared, and the building was shown to have been constructed in two phases: a single-storey concrete block observation post dating to the Second World War, which was raised to include a first floor using bricks during the early Cold War period. The latter utilised an unusual design similar in plan to, but not identical to the usual prefabricated Orlit post. The covering of the open section is particularly unusual, although a similar roof can be seen on a reconstructed post at Newhaven (www.cyclops-tv.co.uk/orlit_observation_post.html).

10. PROJECT ARCHIVE AND ‘OASIS’ REPORT

A fully integrated project archive has been compiled and will be deposited at the Brixham Museum. A report of the evaluation (including a pdf version of this document) will be submitted to the on-line database OASIS (On-line AccesS to the Index of archaeological investigationS), under OASIS ID: exeterar1-79438.

ACKNOWLEDGEMENTS

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The excavations within Fort 1 were undertaken as a joint project using staff and volunteers from the TCCT and volunteers from Brixham Museum, which was co-ordinated by G. Parsons and P.L. Armitage for the respective organisations. The team comprised Jane Hirst, Gemma Parsons, Emma Reece (TCCT Staff), Beth Hamblin, Devon Mahon, Fred Howis, Sam Adams (TCCT Trainees), Keith Franks, Peter Broadbent, John Galliers, Helen Boyles, Jamie Leigh, Andy Florey, Dan Nuttall (TCCT volunteers), Phillip Armitage, Kate Armitage, Alan Masterson, Gerry Perkins, Heather Perkins, Doug Oseland, Otto Schneider, Dianna Jenkins, Jane Hewitt, Elizabeth Wilkins, John Britten, John Rodgers, Poppy Brooks, and Charlotte Wells (Brixham Museum Volunteers).

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Appendix 1: Report on the Mammal, Fish and Bird Bones, by P. L. Armitage

Numbers of bone elements and species represented (Table 1)

A total of 354 animal bone elements submitted for analysis were identified for the purposes of taxonomy and anatomy (skeletal part). The largest portion of this faunal material (87.8% of the total number of identified bones), comprising skeletal elements of small mammals, birds and fish, was extracted from the processed residues of bulk environmental samples taken from the upper layer (1039) of a rubbish pit [1041]. The bulk samples had been processed using 1mm, 500 μ and 300 μ sieves but with virtually all of the bone deriving from the 1mm sieved residue. Other, larger bone elements (cattle, sheep & pig) from the same context and other features had been hand-collected during excavation.

Species/Context	1012	1022	1023	1036	1039	1039	Totals
	H	H	H	H	H	S	
Mammals:							
cattle	3	3		1	3		10
sheep	2	25	1	1	4		33
pig						1	1
hare						1	1
rabbit						1	1
brown rat						9	9
house mouse						2	2
Birds:							
small wild birds (indet.)						12	12
Fish:							
hake						26	26
whiting						105	105
cod						3	3
small gadid						30	30
herring						55	55
mackerel						1	1
scad						8	8
pilchard						1	1
plaice						12	12
plaice/flounder						7	7
John Dory						5	5
conger eel						1	1
red sea bream						5	5
tub gurnard						4	4
red gurnard						3	3
gurnard (indet.)						17	17
elasmobranch (rays & skates)						2	2
TOTALS	5	28	1	2	7	311	354
Key to the contexts:							
1012 Levelling layer associated with demolition of adjacent structures							
1022 Fill of rubbish pit 1048. Probably dating from 1800 to 1830.							
1023 Demolition deposits associated with demolition of adjacent structures.							
1036 Demolition deposit within structure 1037.							
1039 Fill of rubbish pit 1041. Provisionally dated to mid-late 19th century.							

Table 1: Summary counts of the identified mammal, bird, and fish bone specimens by context. H = hand collected; S = sieved sample

Table 1 gives a summary of the quantities of bone elements from each species and context. Details of the anatomical distributions of each species by context, compiled in a spreadsheet format, are held in the site archive. Overall, 7 mammalian and 14 fish species were positively identified. The small bird bones proved to be indeterminate. There were no reptile or amphibian species represented in the submitted samples.

Preservation & condition of the bones

Overall, the preservation of the bone was good, with limited evidence of sub-aerial weathering or erosion; indicating, in the case of the food bones (kitchen/table waste), rapid disposal or burial. Evidence of rat gnawing on two of the cattle ribs from context 1039 however suggested these may have been left lying exposed for a period before burial in the rubbish pit [1041]. A single bone element, a sheep tibia, from demolition deposit 1036 exhibited evidence of having been gnawed by a small dog. Several of the cattle and sheep bones had been sawn and/or chopped; indicative of the method of butchery typical of the late 18th and early 19th century. Evidence of burning was noted in two sheep bone elements – a rib and an innominate bone – both from context (1022) the fill of rubbish pit [1048].

Size estimates in the whiting and scad

Whiting

Estimates of total length (TL) in six of the whiting (all from context 1039) were calculated (see Table 2, below) using the regression formulae [TL = (“A” x 8.93) + 2.49] of Jones and Scott (1985), based on measurement of the depth (“A”) in the recovered dentaries. Three of these fish fall within the size-range of line-caught whiting 25 to 30.5 cm (10 to 12 inches) referenced by Mrs. Beeton (1869, 173). The smaller-sized fish probably had been caught in trawls. Compared with the calculated TL values for five whiting dentaries recovered during excavation of a Napoleonic-period midden in Fort 3 (Armitage 2007), all of the café specimens appear to have been of much smaller size than those consumed at an earlier period (1795 – 1817) by the fort’s garrison (see Table 3, below). Whiting can grow to a maximum length of 70cm (28 inches) but usually are about 40cm (16 inches) (Wheeler 1997, 48).

Specimen	depth “A”	est. Total Length
1	3.04mm	29.6cm
2	2.20mm	22.1cm
3	2.56mm	25.3cm
4	2.76mm	27.1cm
5	2.4mm	23.9cm
6	2.16mm	21.8cm

Table 2. Sizes in the whiting dentaries.

Specimens	NISP	Range	Mean
Berry Head café	6	21.8 to 29.6	24.97
Fort No. 3 midden	5	30.2 to 42.1	36.2

Table 3. Size range (TL values) in the Berry Head café whiting in comparison with whiting from a Napoleonic midden excavated in Fort 3. Values are in cm.

Scad (horse mackerel)

Based on the length (25.06mm) in the scad articular from context 1039, the standard length (Ls) of the fish represented was calculated at 29.67cm (using the regression formulae of Rosello and Sancho 1994). Again using the formulae/graphs given in Rosello and Sancho (1994) the Ls value was then converted to a Total Length value (TL = 34.4cm), which falls within the upper size-range for this fish species; as referenced by Wheeler (1997, 98). Wheeler records that scad can grow to a maximum length of 50cm (19 ½ inches) but usually are about 25cm (10 inches). The size of the café scad may also be compared against one specimen from the Napoleonic midden in Fort 3, which had an estimated TL of 38.5cm (Armitage 2007).

Interpretation and discussion

Provisional dating (*c.* 1830 to late 19th century) of the deposits yielding animal bone corresponds to the period following decommission of the forts (*c.* 1817) when the former guard house is occupied by successive Chelsea Pensioners (invalided/retired soldiers) acting as caretakers of the site on behalf of the Ordnance Board (later War Department). Among these caretakers was Corporal Sutton, “an old veteran” mentioned by Blewitt (1832) in his book on Torquay. Research carried out by Brixham Heritage Museum (based largely on census returns) has revealed others: Thomas Stevens (aged 60 yrs) with his wife and daughter, lived there as the fort guardian in 1841; replaced around 1851 by George Davidson (42 yrs) who had a wife and three children with him; and later the role of guardian passed to George Frederick Williams (34 yrs) who by 1861 had married Priscilla Shrives (whose family had once lived in one of the two cottages built at the edge of the Berry Head Common). George and Priscilla lived in the former guardhouse (with their two sons) probably until the sale of Berry Head by the War Department to Mrs. A. M. Hogg, in 1886 [research into the history of Priscilla & George continues].

Given the dating of the deposits, the food waste probably derived from one or more of these occupants/families. Analysis of the assemblage from context 1039 (fill of rubbish pit 1041) proved of special interest as it revealed the diet of the inhabitants of the old guardhouse included a wide range of fish, probably obtained fresh from the flourishing local fish market at Brixham Quay. The fish market had benefited from improvements made to the inner harbour in 1799 – 1804 and by 1850 Brixham had become the “Largest fishery in England... with more than 270 sail of vessels” catching turbot, soles, whiting, plaice, mullet, mackerel, gurnards, flounders, herring, etc. – and sending prime lots to Exeter, Bath, Bristol, and even as far as London (according to White 1850, 425). The importance of the Brixham fishery is again highlighted in Billings 1857 Devon Directory & Gazetteer, which records that it is “one of the most extensive in England” (Billings 1857, 500).

From the archaeological evidence it appears whiting (probably mostly line-caught by the Brixham hookers) was abundantly available at the fish market and was eaten in quantity by the guardhouse inhabitants. This apparent preference for whiting is perhaps not unexpected given that these fish in Torbay were considered “very fine” eating (Bellamy 1843, 12) and that Mrs. Beeton recommended whiting as a “light, tender and delicate food, easy of digestion” (Beeton 1869, 172-173). The cost of small whiting in the Victorian period (4d to 8d each) was within the means of households such as that at Berry Head – likewise for the majority of the other fish represented in the excavated assemblage. Mackerel would have cost 4d each for small fish, while the average cost of plaice was 3d each, and herrings were an especially cheap meal at 1d each (*ibid.*, 139- 152). The presence of John Dory in the diet however seems at variance with the socio-economic status of the inhabitants living in the old

guardhouse. Mrs Beeton observed that this fish was “taken in abundance on the Devon and Cornish coasts” and was “highly esteemed for the table”. Its cost however was significantly greater than the other fish – averaging 3s to 5s (ibid., 130 – 131).

Summary

The animal bone samples provided insight into the diet of the inhabitants of the former guardhouse during the Victorian period, with beef and mutton the principal meats consumed, supplemented by pork and the occasional hare or rabbit. A wide range of fish also featured in the diet. Notably absent in the submitted samples was any evidence for the consumption of poultry. The discarded kitchen/table waste attracted scavenging rodent vermin, as evidenced by the presence of the skeletal remains of mice and rats.

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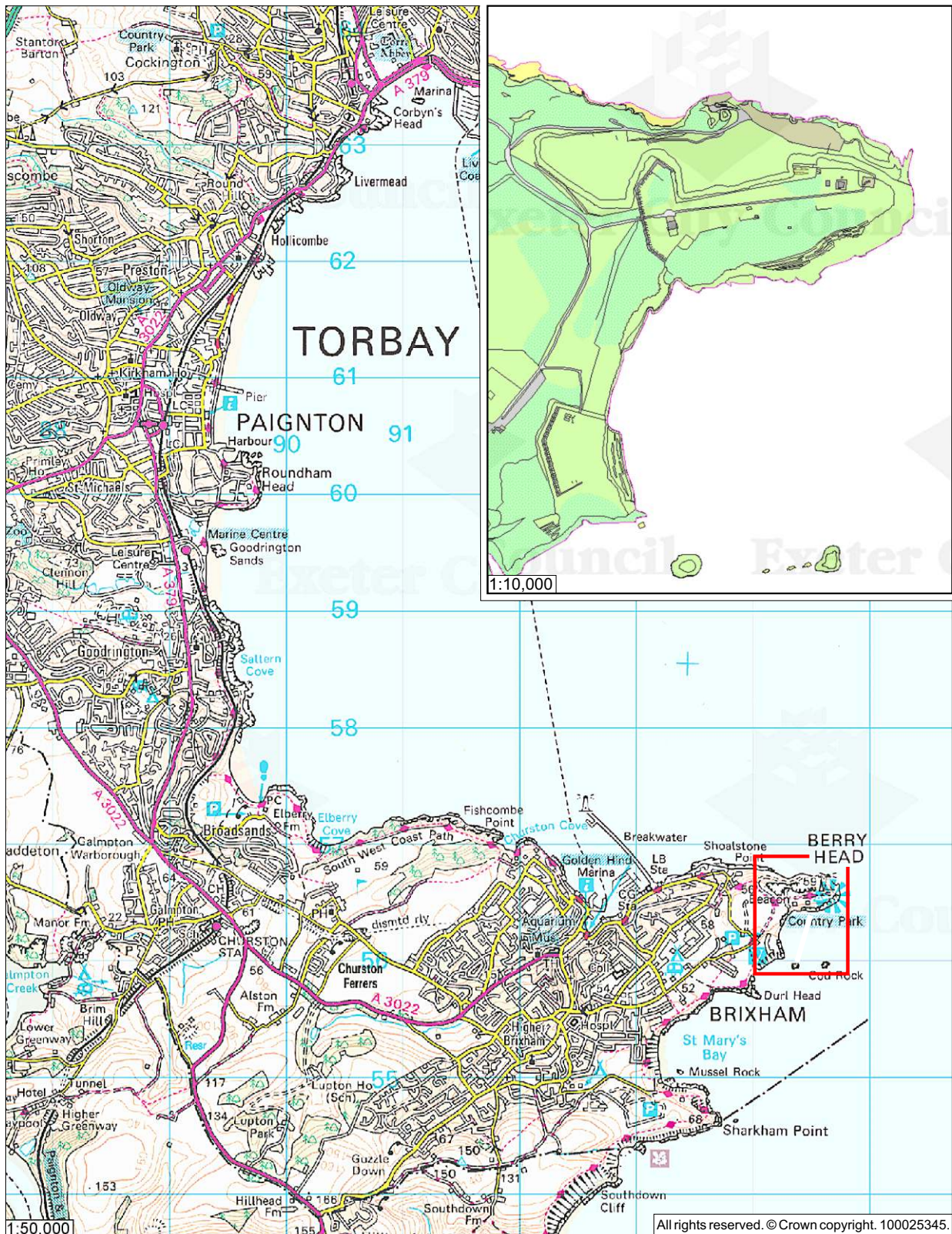


Fig. 1 Location of site.

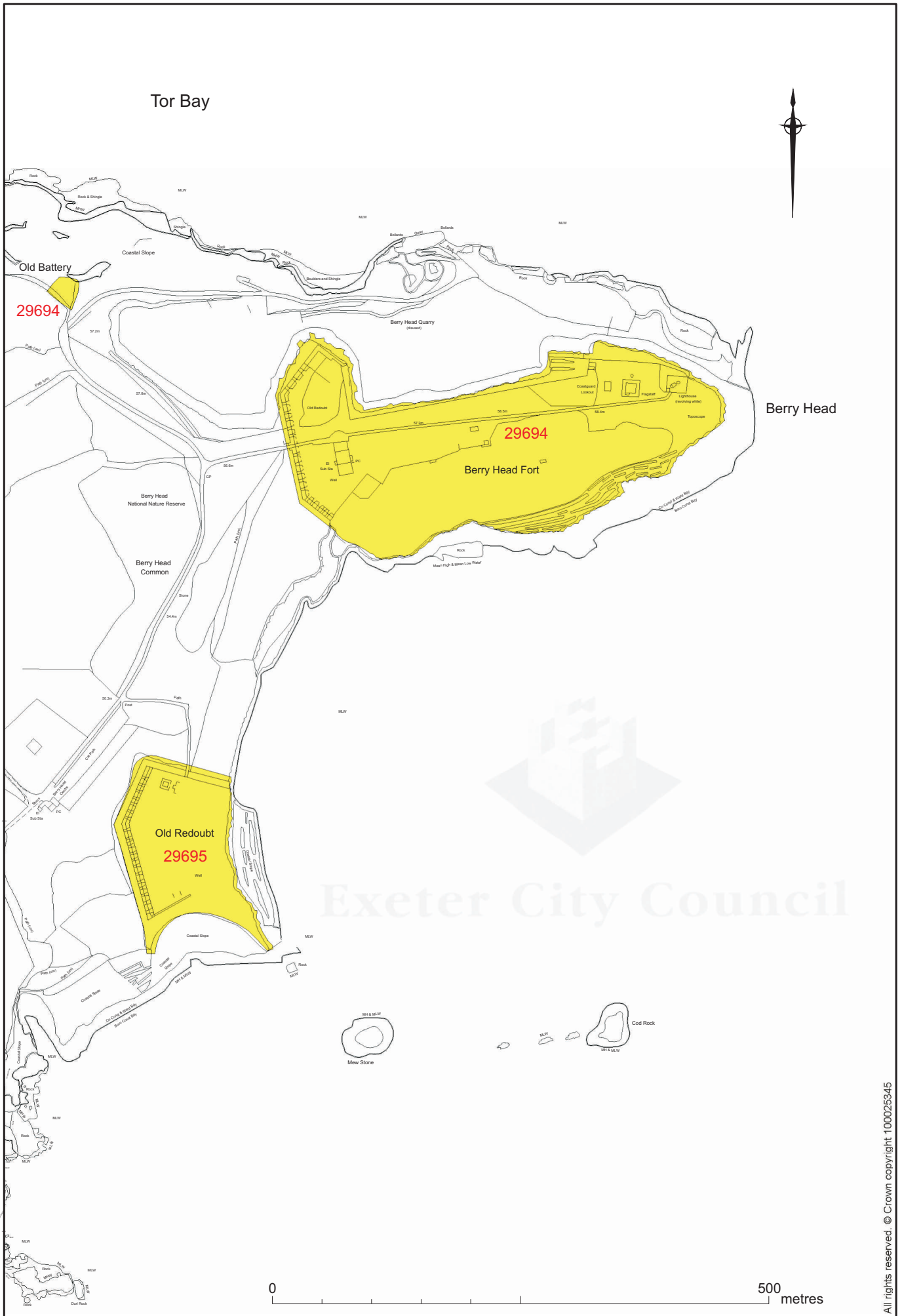


Fig. 1a Scheduled Areas

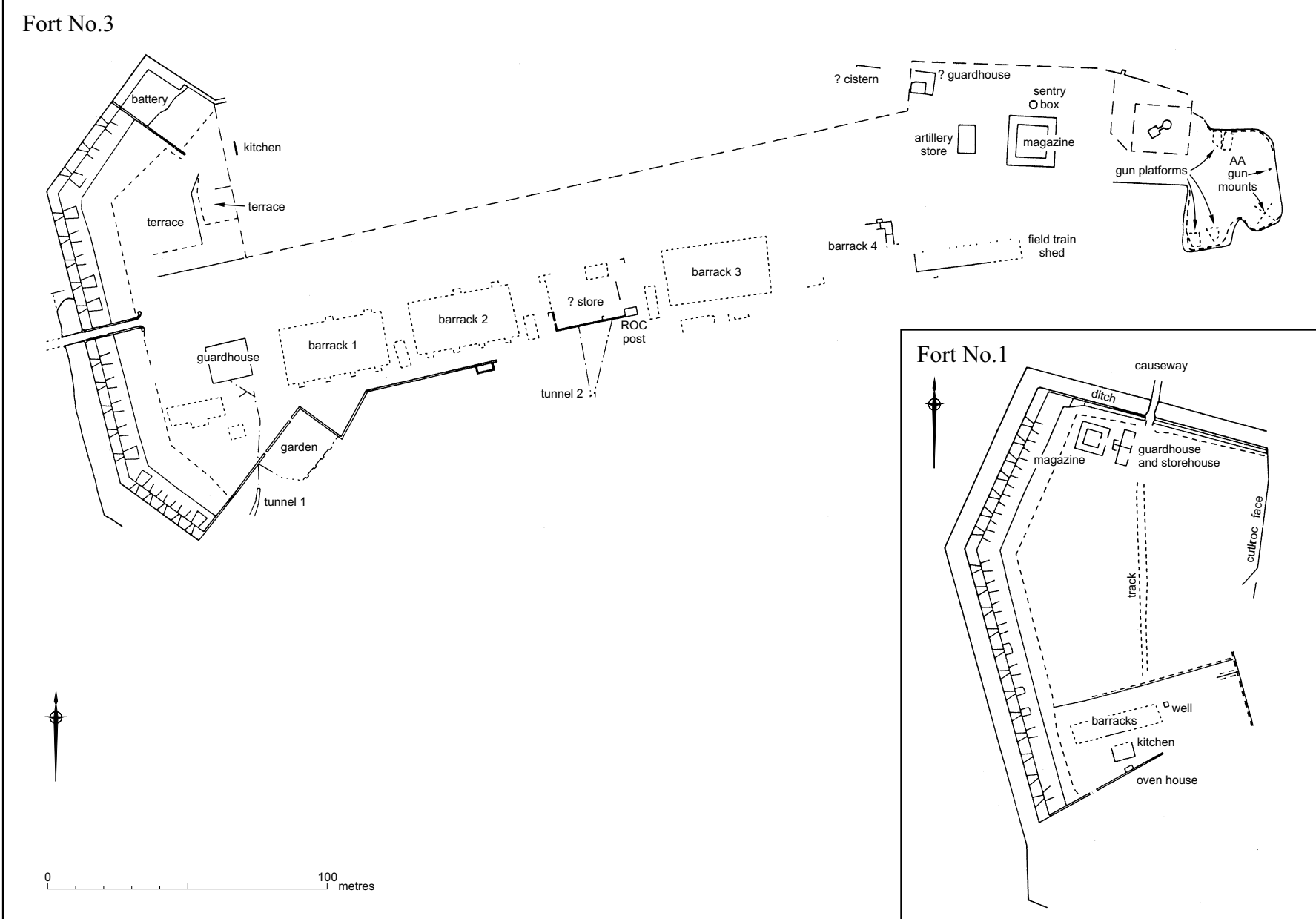
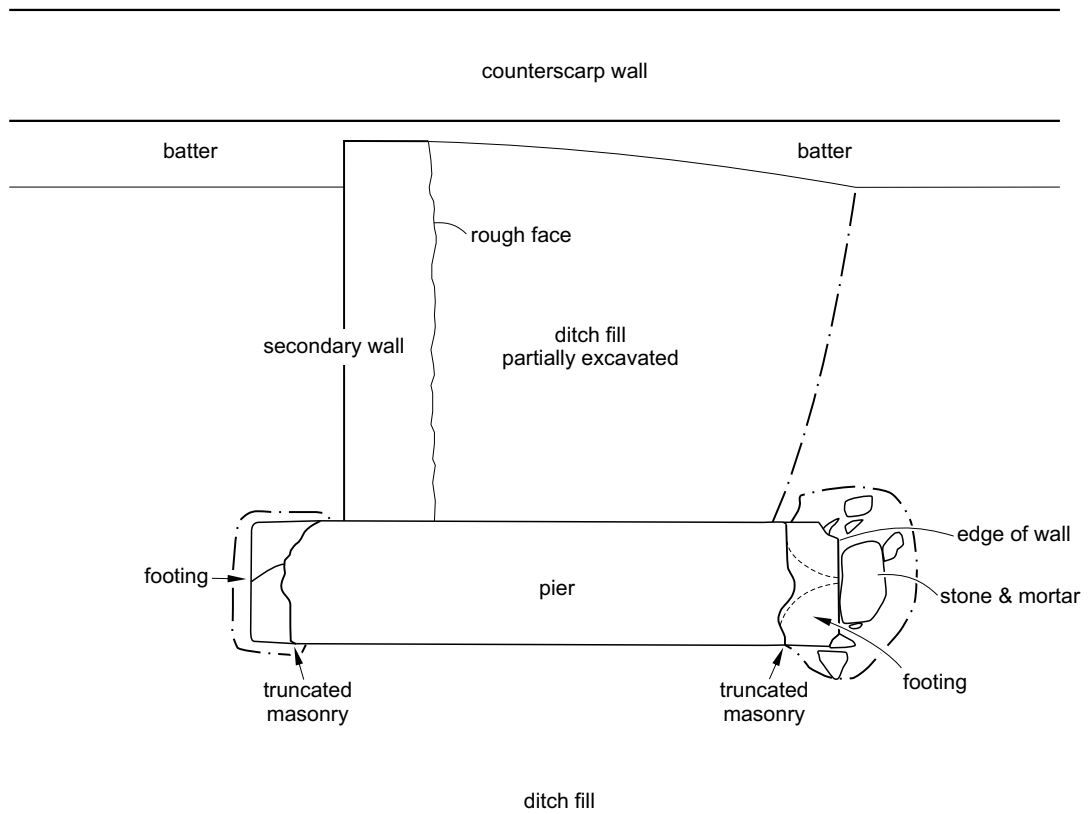


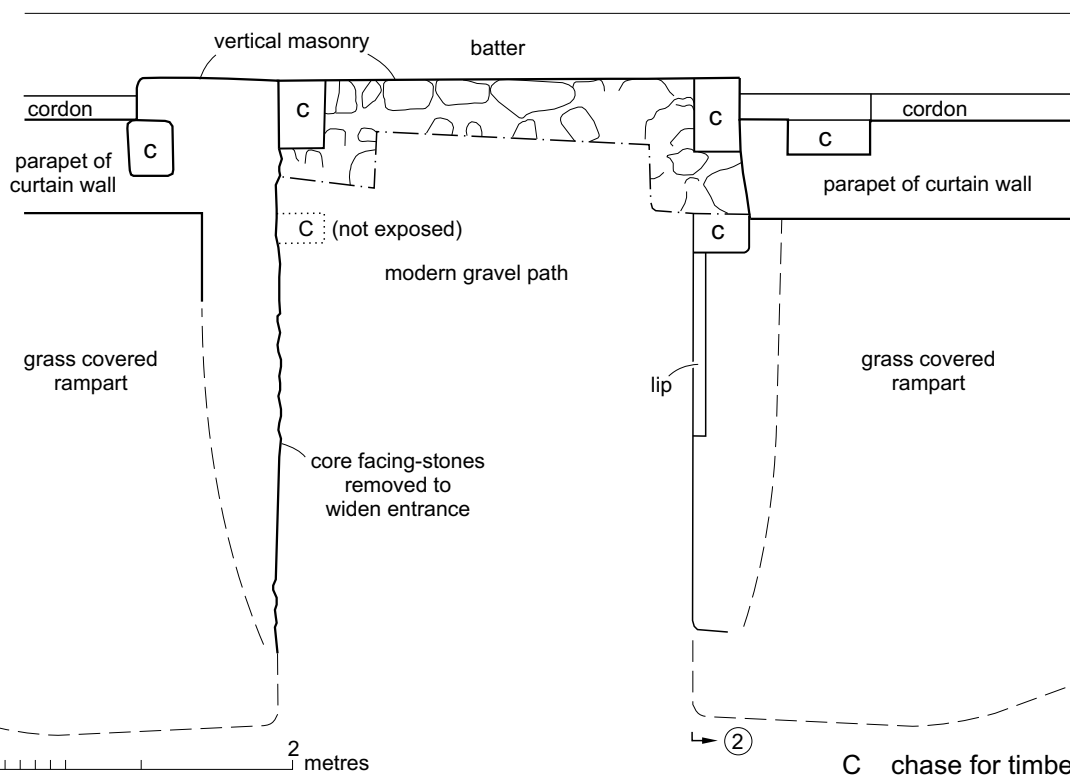
Fig. 2 Plan of the forts. Scale 1:2000.

Fort 1: entrance Plan

→ ②



↓ ①



↓ ①

0 2 metres

→ ②

Fig. 3 Fort 1: plan of the entrance.

Fort 1: entrance Section

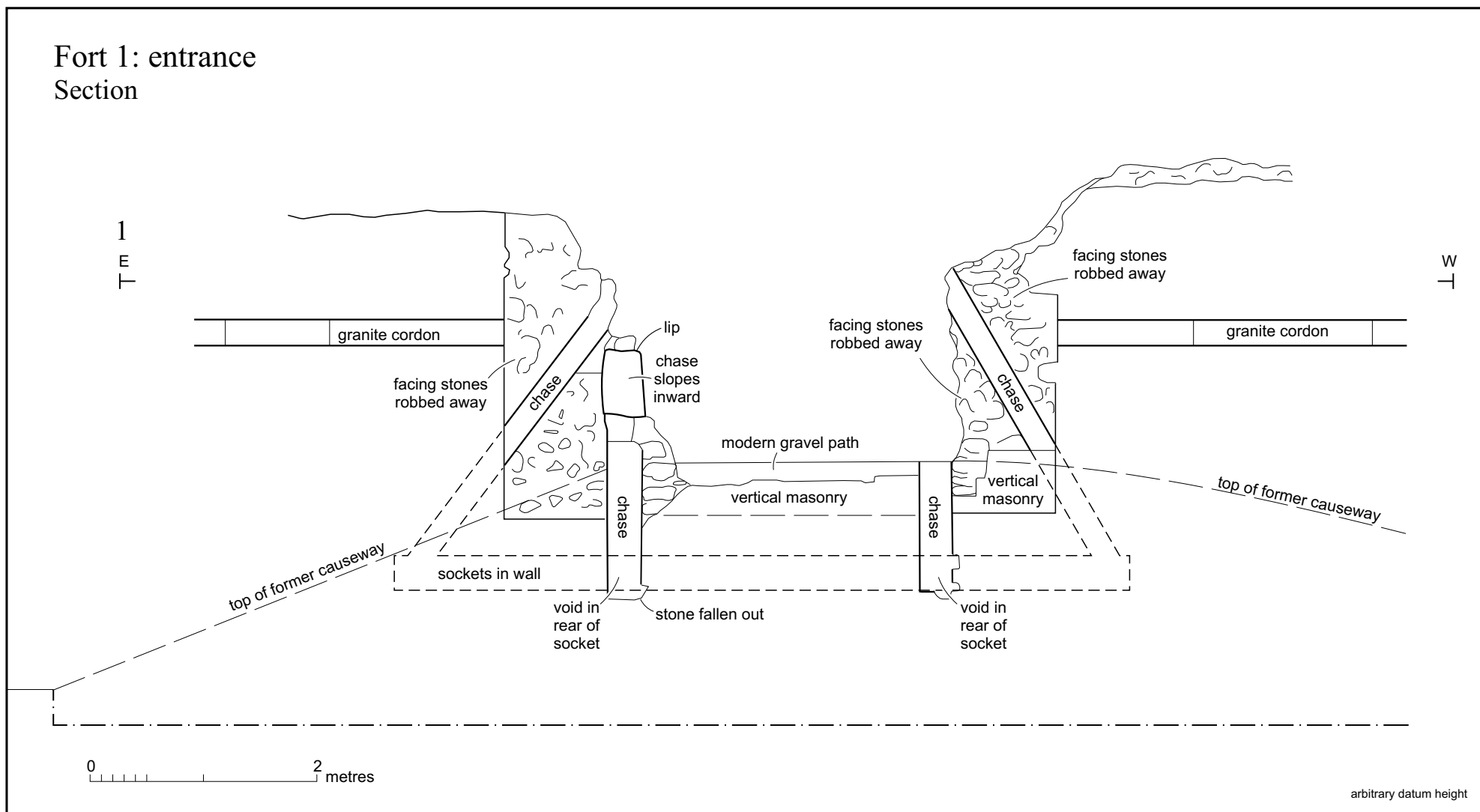


Fig. 4 Fort 1: section of the curtain wall at the entrance.

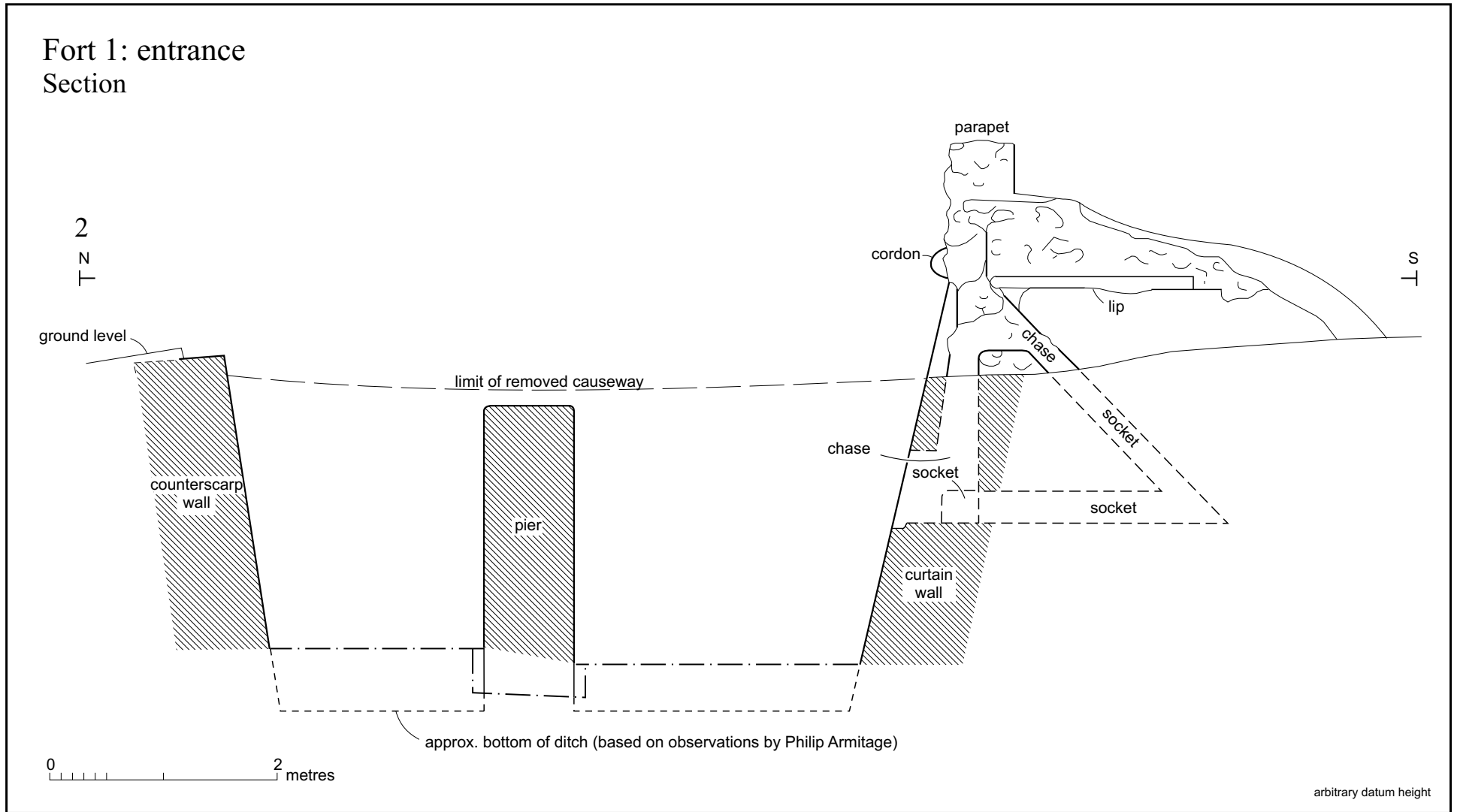


Fig. 5 Fort 1: section through the entrance and ditch.

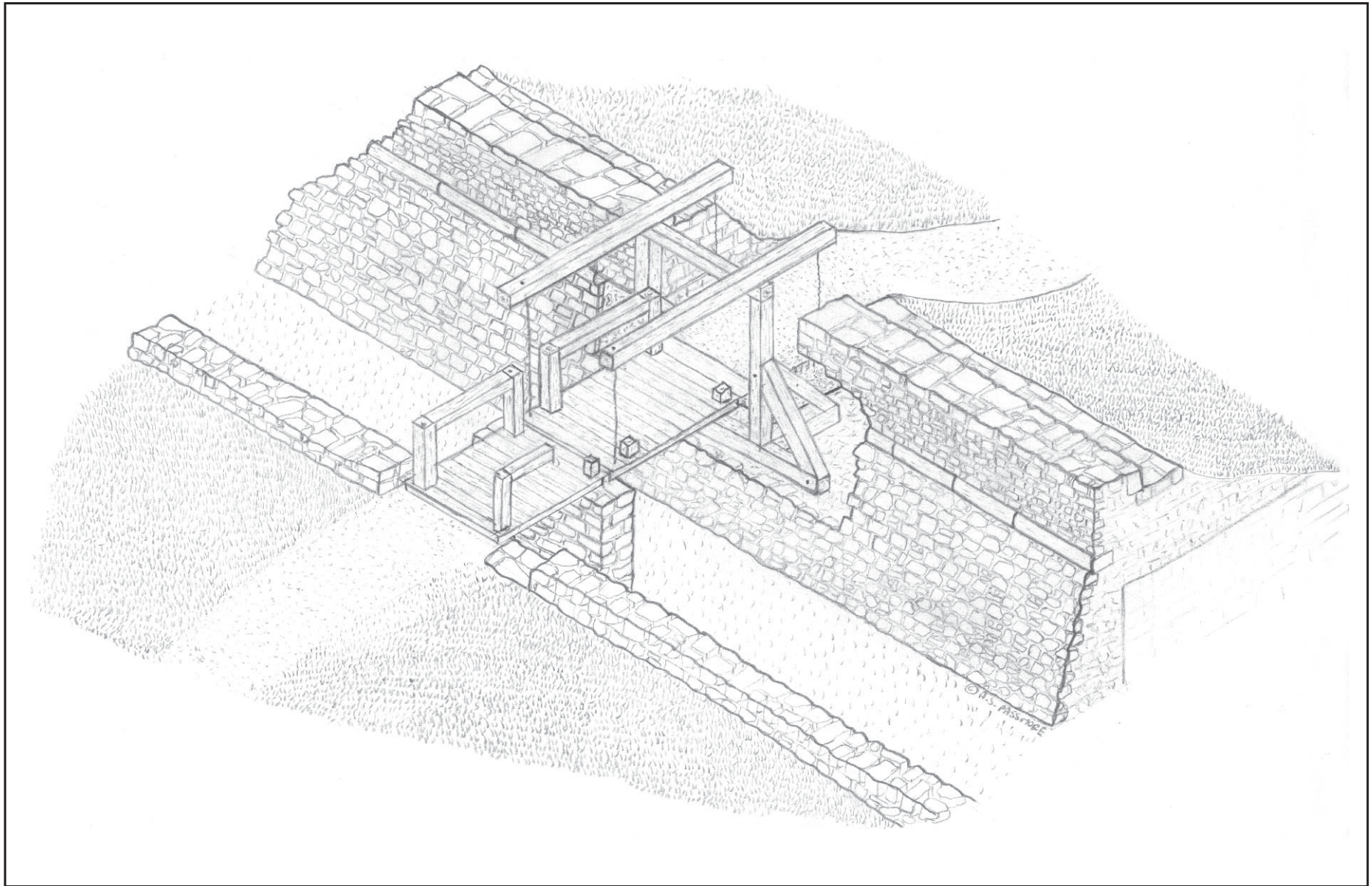


Fig. 5a Suggested arrangement for the Bascule bridge.

Fort 1: guardhouse
Plan

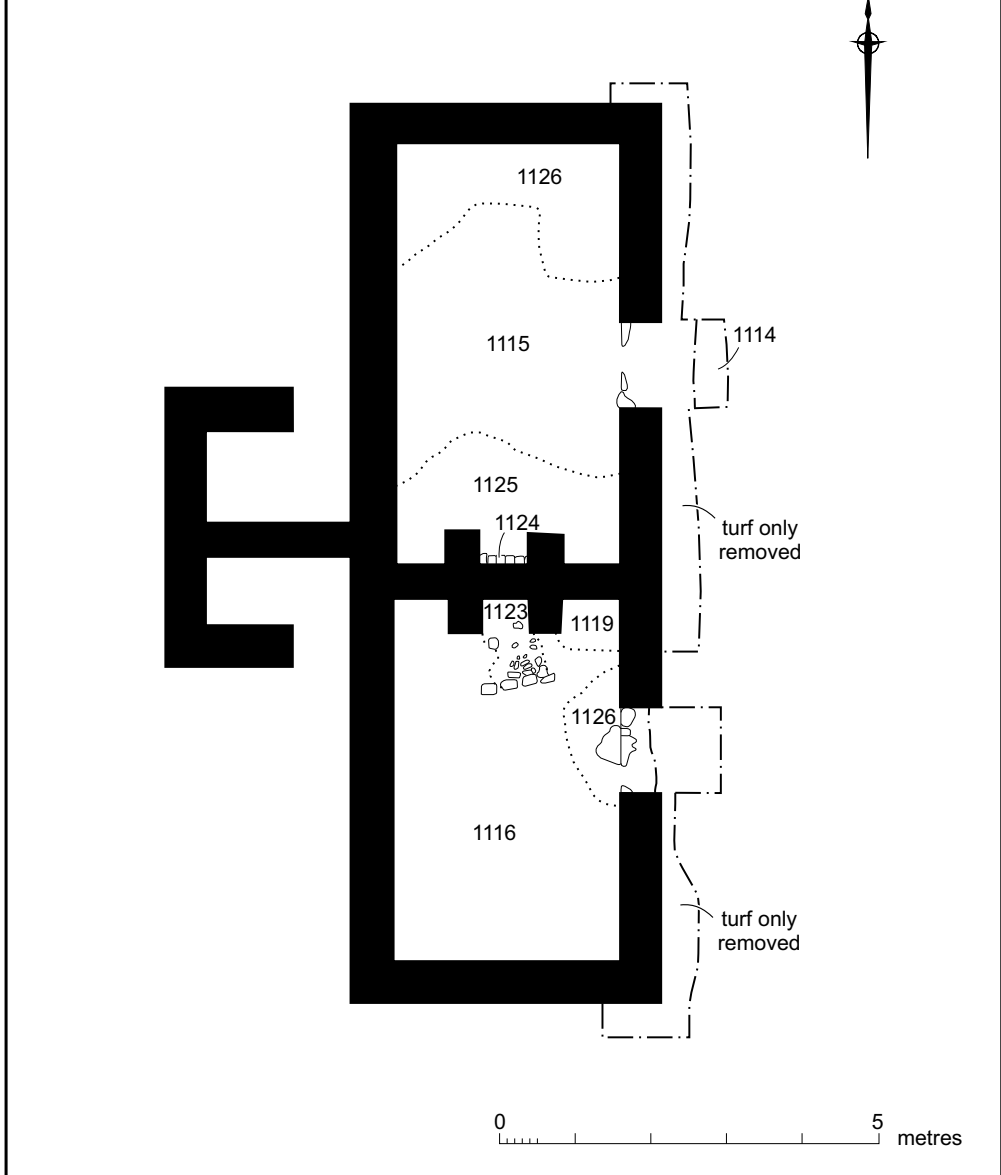
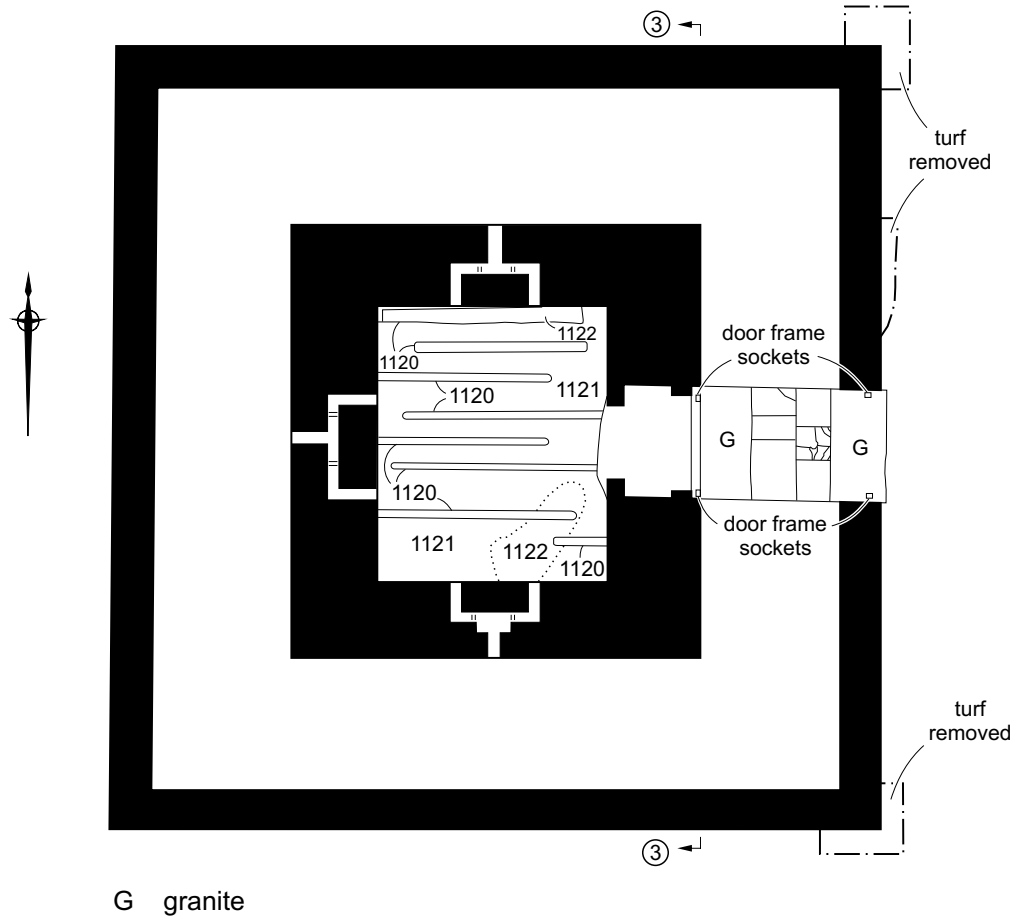


Fig. 6 Fort 1: the guardhouse.

Fort 1: magazine
Plan



Section 3

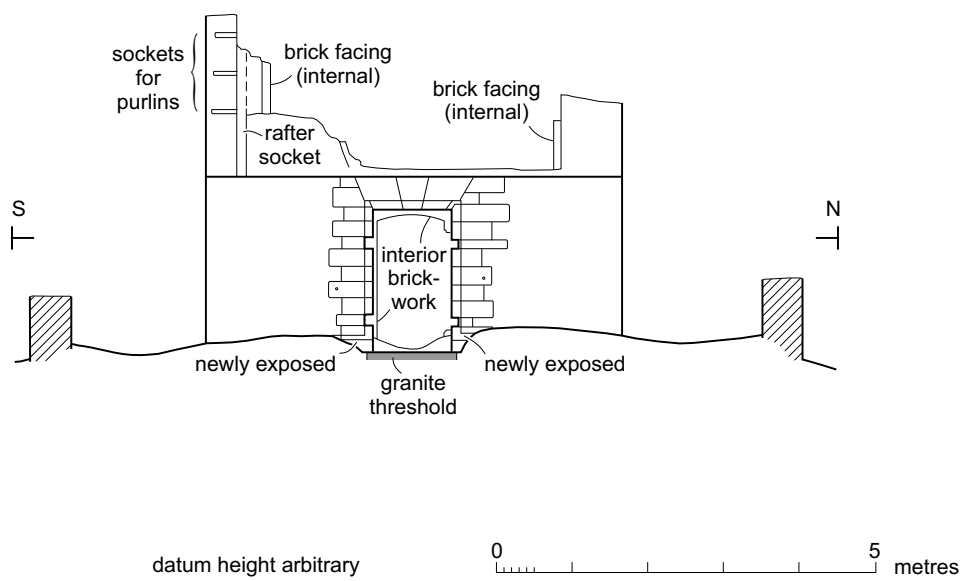


Fig. 7 Fort 1: the magazine.

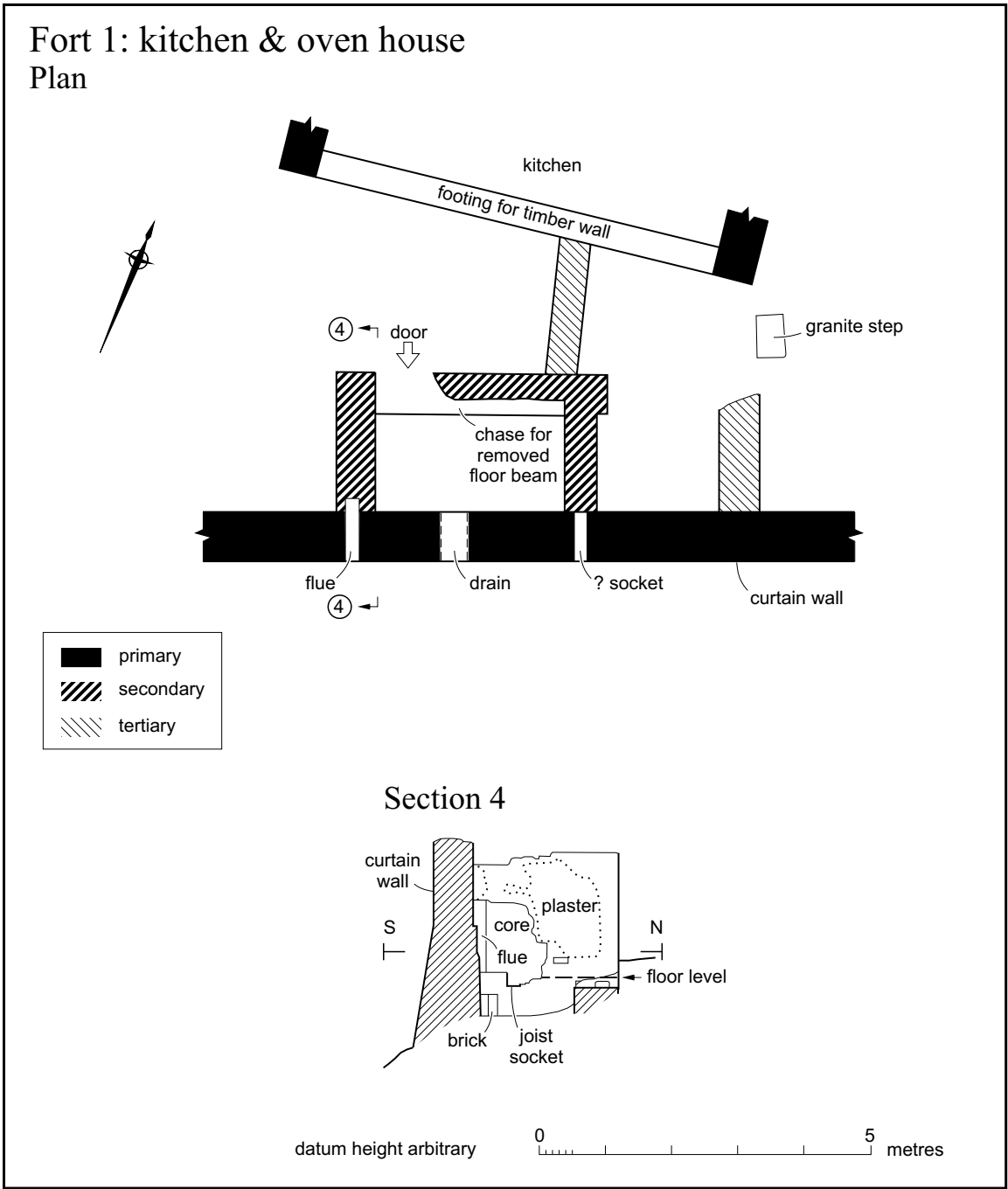


Fig. 8 Fort 1: kitchen and oven house.

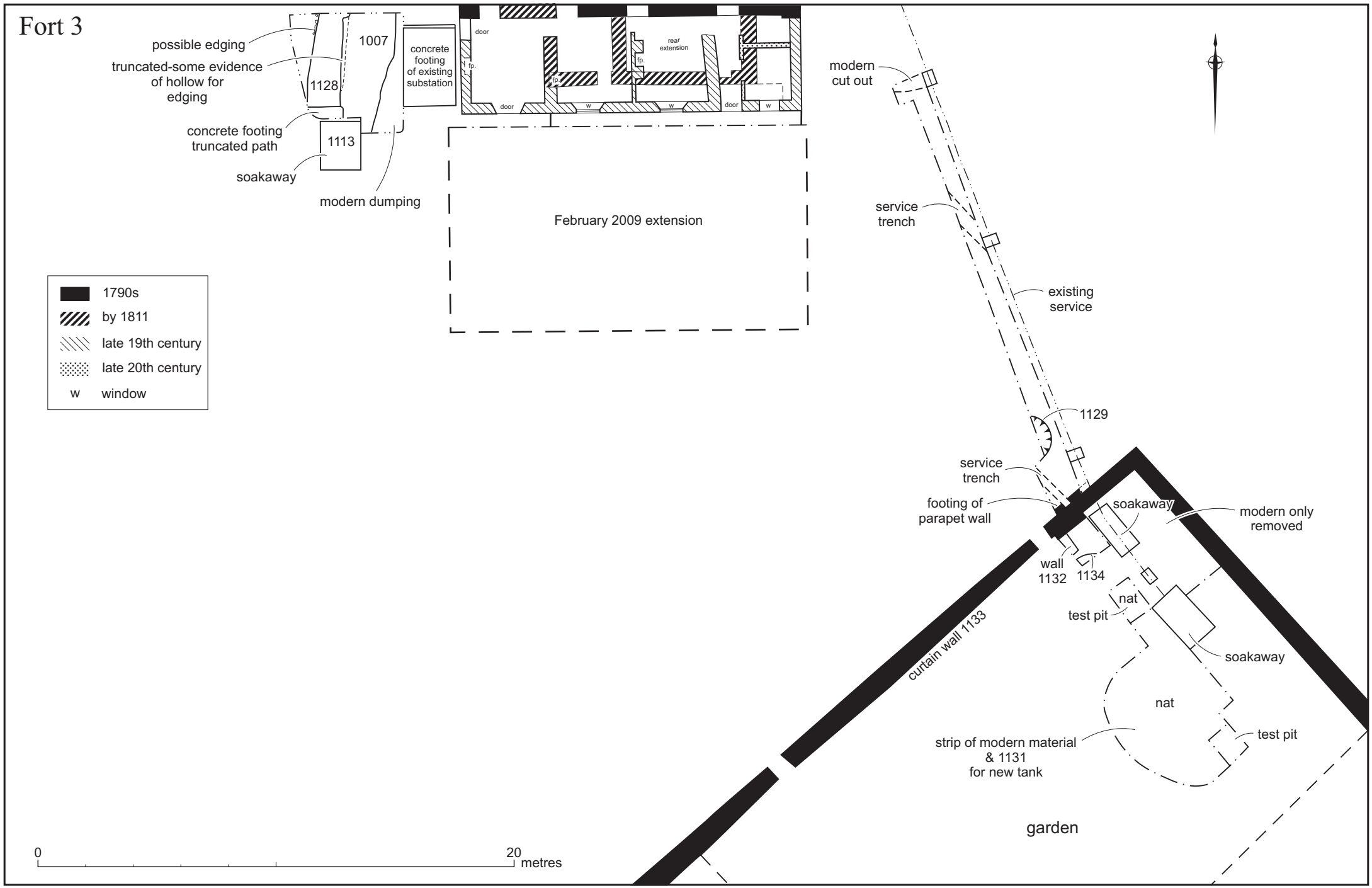
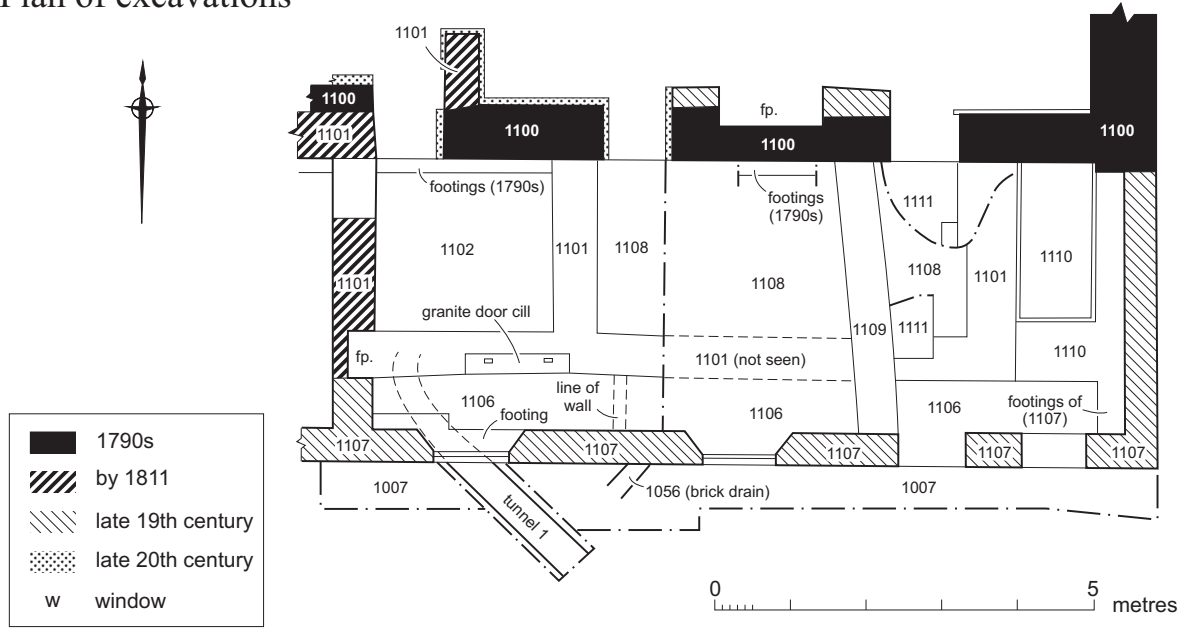


Fig. 9 Fort 3: plan of excavations near the guardhouse.

Fort 3: guardhouse

Plan of excavations



Phased plan

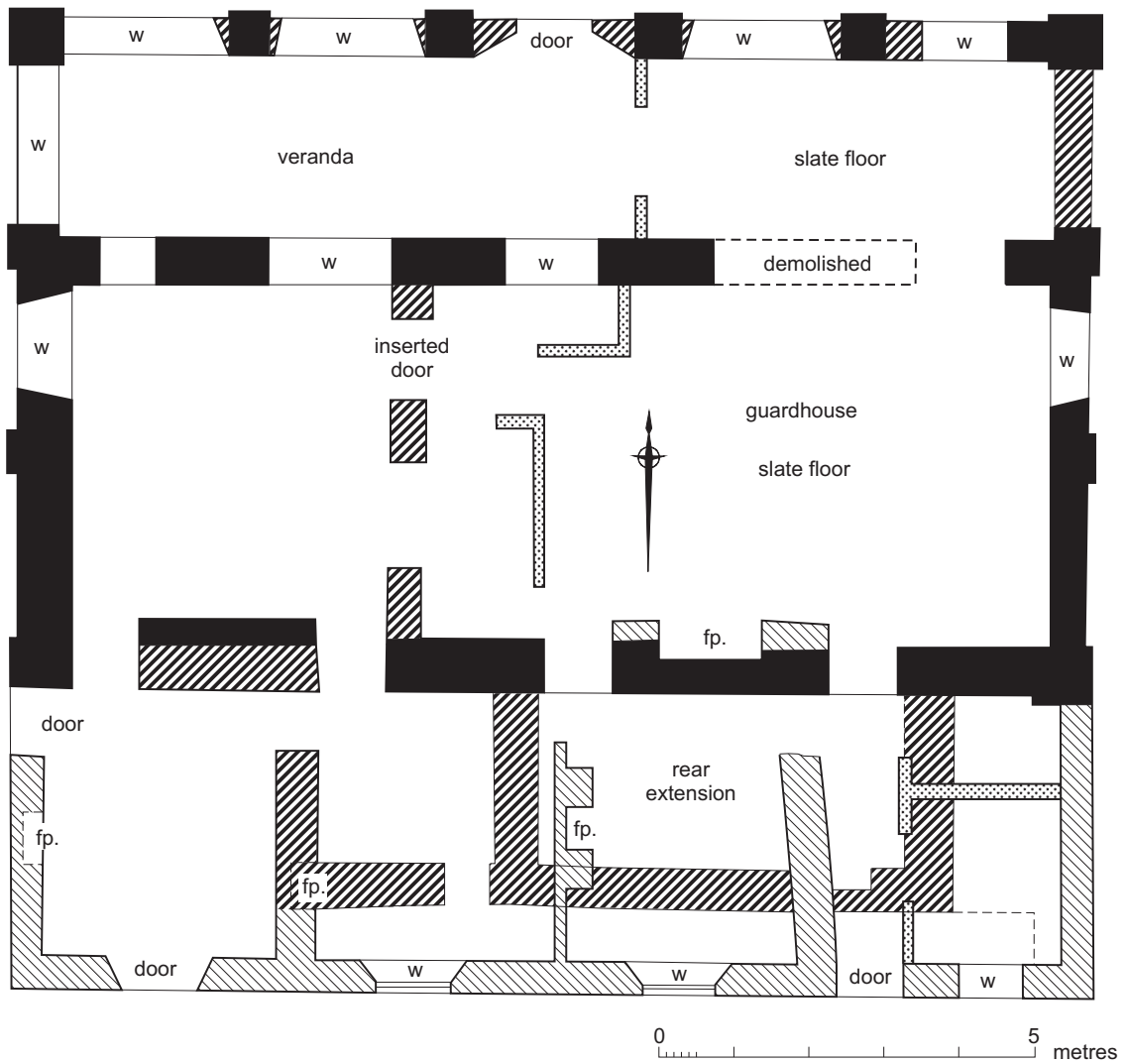


Fig. 10 Fort 3: the guardhouse.

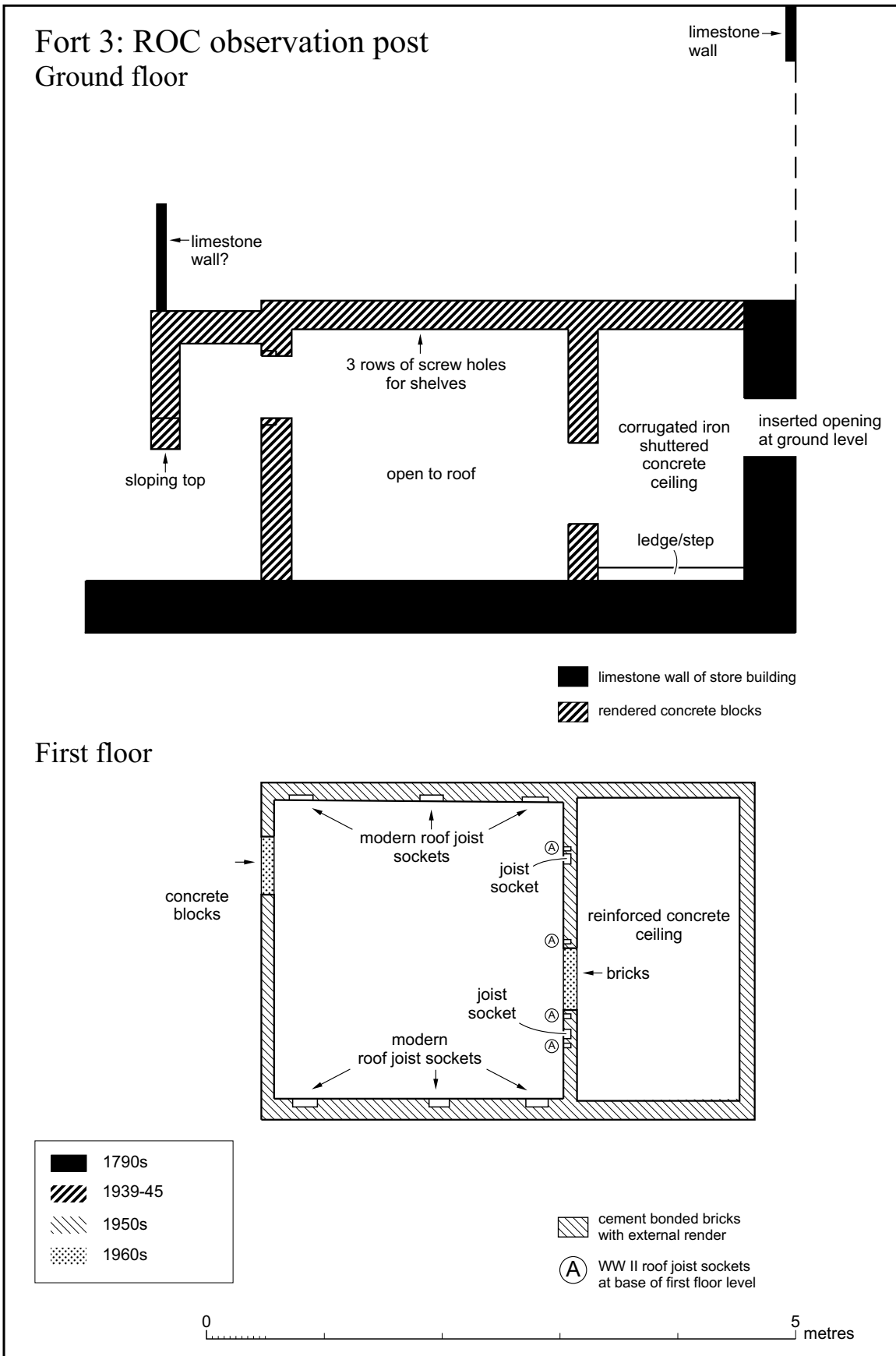


Fig. 11 ROC observation post.



Pl. 1 Fort 1: entrance showing pier, and chases for timbers on the curtain wall, looking south-east.



Pl. 2 Fort 1: the guardhouse after excavation, looking north-west. 2m scale.



Pl. 3 Fort 1: the interior of the magazine, showing joist sockets, looking north-west. 1m scale.



Pl. 4 Fort 3: The Royal Observers Corp post, looking south-east. 1m scale.



Pl. 5 The toy cannon. 20mm scale.



Pl. 6 The bullets and cannon. 50mm scale.