

Fort Burgoyne, Dover

Watching-brief report

Project Code: FBD-WB-13

NGR: 63243 14272, centred

Report No: 2013/81

Archive No: 3170

July 2013

Document Record

This report has been issued and amended as follows:

Version	Prepared by	Position	Date	Approved by
01	K. Parfitt	Field Officer	July 2013	P. Bennett (Director)

Conditions of Release

This document has been prepared for the titled project, or named part thereof, and should not be relied on or used for any other project without an independent check being carried out as to its suitability and prior written authority of Canterbury Archaeological Trust Ltd being obtained. Canterbury Archaeological Trust Ltd accepts no responsibility or liability for this document to any party other than the person by whom it was commissioned. This document has been produced for the purpose of assessment and evaluation only. To the extent that this report is based on information supplied by other parties; Canterbury Archaeological Trust Ltd accepts no liability for any loss or damage suffered by the client, whether contractual or otherwise, stemming from any conclusions based on data supplied by parties other than Canterbury Archaeological Trust Ltd and used by Canterbury Archaeological Trust Ltd in preparing this report. This report must not be altered, truncated, précised or added to except by way of addendum and/or errata authorized and executed by Canterbury Archaeological Trust Ltd.

© All rights including translation, reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior written permission of Canterbury Archaeological Trust Limited.

© Canterbury Archaeological Trust Limited

92a Broad Street · Canterbury · Kent · CT1 2LU

Tel +44 (0)1227 462062 · Fax +44 (0)1227 784724 · email: admin@canterburytrust.co.uk

www.canterburytrust.co.uk





CONTENTS

List of figures

List of plates

1. Summary

2. Introduction

3. Historical background and topography

4. The archaeological watching-brief

Deep excavations on the terre-plein

Internal fixtures and fittings; collection and cataloguing of loose artefacts

Observation of new post-holes cut in the north ditch of the fort

Opening of the two sealed Haxo casemates

Observation of clearance work in the 'barbican' (Room 50)

Observation of other minor excavations and clearance work

5. General conclusions

6. Bibliography

List of figures

Fig. 1 Map of Dover showing relationship of Fort Burgoyne to the town and castle (*Based on the Ordnance Survey's 1:25000 map of 2004 with the permission of the Controller of Her Majesty's Stationery Office, ©Crown Copyright Licence No. AL100021009*)

Fig. 2 Plan showing position of excavated test pits with (inset) overall plan of Fort Burgoyne

Fig. 3 Test Pit 1: section illustrating deposits against casemate wall

Fig. 4 Test Pit 2: section illustrating deposits against casemate wall

Fig. 5 Sketch plan of ground floor showing room numbers allocated (not to scale)

List of plates

Plate I (Frontispiece) General view of casemated barracks showing Test Pit 1 under excavation on the *terre-plein*, looking N. (Film 16862/2629)

Plate II Trial Pit 1 under excavation, looking NW (Film 16862/2628)

Plate III Trial Pit 2 under excavation, looking E. (Film 16863/2667)

Plate IV Room 20, later fireplace over earlier one, looking SW. Scale 50cm (Film 16881/22)

Plate V Room 20, later fireplace over earlier one, looking NW (note vent pipe below earlier hearth). Scale 50cm (Film 16881/25)

Plate VI Base of probable water pump and drain outside Rooms 52/56, looking E. Scale 50cm (Film 16864/2759)

Plate VII Room 43, metalworking lathe *in situ*, looking S. Scale 1 metre (Film 16879/17)

Plate VIII Basement Room 23, shaft for 'dumb waiter' exposed, looking SE (Film 16880/2930)

Plate IX Basement Room 23, detail of 'dumb waiter' revealed, looking SE (Film 16880/2924)

Plate X Barbican structure (Room 50) before clearance, looking N. (Film 16893/3157)

Plate XI Barbican structure (Room 50) after clearance, looking N. (Film 16894/3208)

Watching-brief at Fort Burgoyne, 2013

1. Summary

A major programme of stabilisation and maintenance work was undertaken at the nineteenth century Fort Burgoyne, near Dover Castle, between February and June 2013 (NGR 63243 14272, centred; Scheduled Ancient Monument No. 467988). Canterbury Archaeological Trust was engaged to maintain a watching-brief during the course of the project. This allowed the recording of soil sequences and structural details exposed during the various excavations and clearance tasks being undertaken. It was possible to salvage a number of artefacts of historical interest and put them into safe storage on the site. The somewhat piecemeal nature of the fieldwork has highlighted the need for a complete, systematic survey of the entire fort, which remains remarkably well preserved.

2. Introduction

2.1 In connection with a major programme of stabilisation and maintenance work being undertaken at the nineteenth century Fort Burgoyne, near Dover Castle (Scheduled as an Ancient Monument No. 467988; Kent HER Ref. No. TR34 SW81), Canterbury Archaeological Trust was engaged to maintain a watching-brief during the course of the works. This followed a previous photographic survey, undertaken by the Trust prior to the commencement of the stabilisation programme.

2.2 Commissioned by John Daniel of Capita Symonds Ltd, the purpose of the watching-brief was to record anything of archaeological significance which might be exposed during the various excavations made and to salvage any artefacts of historical interest that might be discovered during the course of the clearance works. A complete, systematic survey of the structure of the fort, though urgently required, lay well beyond the resources available for the present project.

2.3 Observation and recording work on the site was undertaken by the writer during eighteen visits, made between 18 Feb and 17 June 2013. Colin Sullivan and the team from Walker Construction gave every assistance.

2.4 The archaeological fieldwork generated sixteen recorded soil contexts; three measured sections (see Figs 3 & 4); fifty-three historic artefact record sheets, several pages of hand-written notes and over 300 digital photographs. This archive is presently held by Canterbury Archaeological Trust (Dover office) and will be transferred to an appropriate repository in due course. Loose artefacts found on the site remain in safe storage at the fort.

3. Historical background and topography

3.1 Dominating the historic town and Cinque Port from its cliff-top position, the medieval castle at Dover constitutes a very impressive military structure, developed over many centuries. However, this great Royal castle has a fundamental weakness, for it is overlooked by higher ground to the north and north-east. As weapons of war evolved, most particularly with the rise and development of cannon and artillery pieces, this weakness came more and more to the fore. The problem was first exposed during the great siege of 1216 when the French attackers almost gained access into the castle from this higher ground (Coad 1995).

3.2 During the later eighteenth and nineteenth centuries massive programmes of new defence works were undertaken, particularly around the vulnerable northern side of the existing castle complex, in an effort to strengthen this side against landward attack (Coad and Lewis 1982). As fortifications, most other medieval castles had long since become obsolete by this time but due to its key location, Dover continued to be of strategic importance.

3.3 The problem of the high ground overlooking the castle site was finally resolved during the nineteenth century when a completely new, detached artillery fort was planned to occupy the highest ground immediately to the north of the castle. Originally, this was to be known as Castle Hill Fort but it was soon renamed Fort Burgoyne in honour of Field Marshall W.F.D. Burgoyne, Inspector General of Fortifications. Work started on the construction of the fort in 1861 and it was completed by the end of 1868. The site constitutes an important element in the long sequence of fortifications represented at Dover. It has additional importance in retaining defence works belonging to both world wars (Saunders 2007, 31).

3.4 In terms of layout, the fort is polygonal, enclosed by a 10 metre wide ditch. It is flanked on either side by wing redoubts, each with its own gun emplacements. At the centre of the main fort is a parade ground surrounded on three sides by casemated barracks protected by a covering of earth (Fig. 2). The main gun positions, mostly facing inland were set on a *terre-plein* above the casemates. Two earth ramps from the parade ground gave access. The bomb-proof casemates under the main rampart provided accommodation for seven officers and 270 men.

3.5 The main armament of the fort was initially planned to comprise twenty-nine guns placed on the ramparts, of which six were to be set in covered Haxo casemates (*i.e.* bomb proof vaulted gun emplacements designed by General Haxo). The armament of the fort was updated throughout the nineteenth century but by 1906 all the large guns had been removed and replaced by machine guns. During the First World War additional brick gun emplacements were constructed and during the Second World War, the fort was home to two batteries of 25 pounder field guns, set within new concrete emplacements (details based on Saunders 2007 and notes from Dover Museum).

3.6 Early map evidence suggests that Fort Burgoyne was built on the site of an earlier earthwork, now completely destroyed but perhaps originally connected with French siege-works thrown-up around the castle in 1216 (Parfitt 1995).

3.7 Situated within the historic parish of Guston, the Fort Burgoyne occupies a high level plateau to the north of Dover Castle, standing at an elevation of about 123 metres above OD (NGR 63243 14272, centred). The keep of Dover Castle lies some 800 metres to the south (Fig. 1) and the Citadel of the Western Heights fortress 2.75km to the south-west. The natural subsoil in the area of the Fort consists of Clay-with-Flints over Upper Chalk.

4. The archaeological watching-brief

4.1 The watching-brief undertaken at the fort comprised a variety of differing tasks related to a number of separate pieces of restoration/consolidation work. These may be listed as follows:

- a) Monitoring of two deep excavations made on the *terre-plein* to inspect the state of drainage works above the casemate roofs
- b) Collection and cataloguing of all loose artefacts found within the casemates
- c) Marking up other artefacts within the casemates not to be moved during the renovation works but left *in situ*
- d) Monitoring of excavations for a new security fence in the north ditch of the fort
- e) Monitoring of the opening up of the two sealed Haxo casemates on the *terre-plein*
- f) Monitoring of clearance work at the 'barbican', Room 50

- g) Monitoring of various other minor excavations and clearance jobs within the fort
- h) Offering on-site advice to the restoration team

No attempt could be made to fully analyse all the numerous historic features of the site, especially those which are to remain exposed and on view. Clearly, there is a fairly pressing need for a more thorough and detailed analysis of the complete fort by suitably qualified building historians.

4.2 *Deep excavations on the terre-plein*

4.2.1 Within the fort, the roof of the casemated rooms is protected by about 2 metres of chalk rubble and soil. In order to check the status of the sub-surface drainage, two test pits (Test Pits 1 & 2) were excavated on the *terre-plein* in February 2013 (Figs 2–4; Plates I–III). These were intended to expose the top of the casemate roof at two points and check on the status of the associated drainage works. The ground surface here is 7.45m above the level of the parade ground, standing at about 130 metres above OD.

4.2.2 The overall conclusion drawn from the evidence of the test pits was that the existing drainage arrangements were sound and no further excavations or repairs were required here. The pits were accordingly backfilled and re-turfed after recording. Details of the features and deposits exposed are set out below.

4.2.3 Test Pit 1 (Figs 2 & 3)

This was excavated towards the eastern end of the central row of casemates, over the wall dividing Rooms 63 and 65 (Fig. 2; Plates I & II). The machine dug pit was rectangular in shape and measured 3.50m (E–W) by 3.00m (N–S). It was taken to a maximum depth of 2.10m to expose the roof of the casemate structures below. Archaeological observation of the operation allowed the recording of the sequence of (mostly chalk rubble) deposits over the barrack rooms (Fig. 3).

Directly above the roof of the casemates was a thin layer of redeposited natural grey-green clay (Fig. 3, Context 7). This was about 0.10m thick but it was not clear if its occurrence here was fortuitous or represented an attempt to provide additional water proofing over the roof. Above the clay was a substantial dump of loosely compacted chalk rubble including a significant proportion of large lumps up to 0.30m across. It was apparent that this material was intended to readily allow ground-water to percolate through it and a thin grey silty coating noted on many of the chalk lumps was probably a reflection of this process.

Overlying the coarse chalk rubble, Context 6, was a second layer of chalk dump generally containing rubble of a smaller size (Context 5). This deposit was about 0.70m thick and incorporated a few patches and lenses of natural clay and occasional fragments of yellow stock brick. Resting on top of Context 5 was another, slightly more mixed, layer of chalk material (Context 2). This was just 0.15m thick and consisted of a grey-white chalky clay mixed with chalk rubble and occasional red and yellow brick fragments.

At the centre of the excavated pit, 1.75m north of the casemate wall, the surface of Context 2 was cut by a circular post-hole (F. 4). This was about 0.45m in diameter and 0.35m deep, with vertical sides and a flat base. The grey-brown clay filling contained some chalk rubble and occasional brick fragments which might have been packing stones. The precise purpose of the post-hole is unclear – it seemed to be positioned too far back from the wall to represent part of a protective fence along the top of the wall, elements of which still survived *in situ*.

The infilled post-hole and Context 2 through which it was cut, were sealed by a thin layer of dark grey loam representing modern topsoil supporting the present-day turf (Context 1). Occasional small flint pebbles contained within this layer may represent the disturbed remnants of casual metallurgy (see Test Pit 2, Context 12 for more on this).

4.2.4 Test Pit 2 (Figs 2 & 4)

This was excavated towards the western end of the central row of casemates, over the wall dividing Rooms 36 and 38 (Fig. 2). The machine dug pit was rectangular in shape and measured 3.75m (E–W) by 3.25m (N–S) at the top. It was taken to a maximum depth of 2.00m to expose the roof of the casemate structures below. The battered sides of the excavation meant that only an area of casemate roof about 1.50m square was exposed. Archaeological observation of the work again allowed details of the deposits sealing the casemates to be recorded (Fig. 4).

The casements were found to be sealed by a single deposit of clean chalk rubble (Fig. 4, Context 13). This was up to 1.75m thick and comprised a mixture of small, medium and large chalk lumps, up to 0.30m across, loosely set in crushed chalk. No lenses of natural clay or brick fragments were noted within this deposit.

Overlying the main chalk rubble layer was a thin deposit of light brown clay containing moderate quantities of small chalk rubble (Context 12). This may represent a bedding layer for the overlying deposit, which consisted of a 0.05m thick layer of grey loam containing frequent small flint pebbles, fairly certainly representing the original metalling to the surface of the *terre-plein*.

A layer of dark grey loam about 0.10m thick (Context 10) sealed this metallated surface and represented modern topsoil. This supported the present-day turf.

4.3 *Internal fixtures and fittings; collection and cataloguing of loose artefacts*

Internal fixtures and fittings

4.3.1 Little in the way of original fixtures and fittings remained in most of the standard casemate rooms, although original doors survived in a good number of cases and occasional cupboards and shelves survived in several rooms. A metalworking lathe remained in Room 43 (Fig. 5; Plate VII). These various fittings have been preserved wherever possible.

4.3.2 Most frequently surviving within the rooms were the remains of stoves and fireplaces (Plates IV & V). Almost every room originally seems to have been provided with a fireplace and it was clear that the bulk of these had been replaced on at least one occasion.

4.3.3 The site of the original fireplace within each casemate room was marked by a brick-lined recess positioned in the middle of one of the side walls. Where these remained open they could be seen to be about 1.07m wide and 0.48m deep but all but two or three had subsequently been bricked up. In each case they had originally been fronted by a hearth base made of pebble concrete and laid flush with main wooden floor of the room. These hearth bases were between 1.42 and 1.85m wide and extended into the room by between 0.73 and 0.79m. No indication of the original grate or stove associated with these earlier fireplaces remained.

4.3.4 Externally, a row of associated brick chimneys rose through the ramparts several metres north of the position of the corresponding fireplaces within the casemates.

4.3.5 Removal of the wooden floors in several room revealed substantial ceramic flue pipes laid from the original hearth to the outside wall of the casemate. In each case the exit had subsequently been blocked and none were visible from the outside. Pipes were noted in Rooms 20, 34, 36 and 65 (Fig. 5; Plates IV & V).

4.3.6 Subsequently, almost all the original fireplaces had been renewed. The early fittings were removed and the recesses were bricked-up. (A number showed evidence of two phases of blocking suggesting the presence of an intermediate phase of development). A new, raised concrete hearth base was laid over the original, projecting further into the room. The bases consisted of a pre-cast concrete slab between 1.06 and 1.08m square standing 0.08m above floor-level with an additional 0.05m high outer surround (Plates IV & V). Set on each of these bases had been a rectangular cast iron stove standing almost 1 metre high. A cast iron flue pipe led from the back of each of these

stoves through the brick blocking and into the pre-existing chimney. Most of the stoves had later been removed but amongst the examples remaining at least two slightly different types were present.

4.3.7 Many of the added concrete bases remained but only in eleven rooms did actual stoves survive *in situ* (Catalogue nos FB/4, 5, 10, 17–20, 22, 31–33). Four stoves occurred in the west range (officers' quarters; Fig. 5, Rooms 11, 13, 15 & 20; Plates IV & V), three in the central range (Fig. 5, Rooms 38, 40 & 52) and four in the east range (officers' quarters; Fig. 5, Rooms 87, 89, 91 & 93). Only the stove in Room 52 did not correspond to the standard arrangement, resting on a smaller, purpose-made concrete base. This room, however, is anyway not a standard one, being smaller than most. There were no incidences of more than one stove occurring within a room.

Loose finds

4.3.8 A total of fifty-three items from within the casemates and the flanking gallery (Room 50) were catalogued. Although all the loose items were removed to a safe store-room on the site, no attempt to stabilise or conserve them was made. Each item was photographed, *in situ* where possible. The catalogued finds included eleven iron stoves still in place, the large metalworking lathe (Cat. FB/7; Plate VII) set in Room 43 and eleven detached wooden doors.

4.3.9 Individual loose items salvaged included: a fire alarm triangle (FB/1); three steel light shades (FB/15, 37 & 38); a steel tent peg (FB/26); several brackets and hinges (FB/27, 40, 41 & 47); a corroded steel sign painted with the letters OB (FB/30); a china tea cup/mug marked NAAFI (FB/29); an enamel dinner plate (FB/39); a fired mortar shell case (FB/49) and several later twentieth-century radio units (FB/50 – F/53), together with a number of other miscellaneous fittings and pieces of military equipment. Potentially of most interest was an iron tube provisionally identified as the barrel of a nineteenth-century pistol (FB/45). This came from the tail of the earthen access ramp south of the East Range.

4.3.10 All the loose finds were collected together and placed in safe storage within the old Coal Store, located towards the south-west corner of the fort. It is to be hoped that a more permanent site museum/heritage room can be established at the fort in due course so that such material can be provided with long term storage there, if not replaceable at their original locations within the fort structure. Any loose items removed from the site previously might similarly be returned and placed in such a site facility.

4.3.11 Channel Tunnel core samples

The basement rooms of the east range had, during the 1970s, been used to store core samples taken from the bed of the English Channel in connection with the then proposed Channel Tunnel project. Most of these samples were retrieved by the British Geological Survey in 2007 but a few somewhat disturbed storage boxes still remained in 2013. The samples remaining were:-

Basement Room 34 – a wooden box *c.* 1.70 x 30cm, marked 'Core 17', containing most of its samples

Basement Room 46 – two wooden boxes *c.* 1.00 x 50cm. Most of the contents tipped out on the floor adjacent but still in plastic bags.

Basement Room 48 – a smashed wooden box, *c.* 1.70 x 30cm with some context marking but contents strewn all over floor (collected up by KP). Also, a *c.* 1.70 x 30cm wooden box marked 'Core 23', containing most of its samples.

East basement Rooms 43, 45, 47 and 49 still contained the steel tube shelving racks that had been erected to store the sample boxes. This shelving was removed as part of the present clearance work.

Correspondence with Dr Michael Howe, Chief Curator at the British Geological Survey, established that these remaining samples were of no geological value, being too disturbed and lacking any documentation. Accordingly, a tolerably well-preserved case of samples was saved for the collection of Dover Museum and the remainder of the material was discarded.

4.4 *Observation of new post-holes cut in the north ditch of the fort*

4.4.1 On the northern side of the defensive circuit, about 40 metres east of the point of the Left Caponier, a 20 metre length of the scarp wall of the ditch has collapsed, with the resultant slope of scree and debris allowing ready access into the fort for vandals (see Fig. 2 inset, for general location). Accordingly, on 15 April 2013 a new security fence was erected in the base of the ditch, around this area of collapse.

4.4.2 Judging by earlier iron girders placed across the top of the affected area and some quite mature trees growing on the scree slope, this collapse would seem to have occurred some significant time ago, with earlier attempts at stabilisation and repair evident.

4.4.3 The base of fort ditch at this point is about 10 metres wide but its base is not flat, with the retaining side walls each rising from 1.50m wide 'berms' which flank a deeper, central unlined section of ditch, some 7 metres across and 1.80m deep. It was not clear if this was the original configuration of the ditch or whether it represented a subsequent phase of deepening along the central sector, leaving the moat walls resting on the higher strips of unexcavated ground so negating any need to lower their bases. Similar ditch configurations occur on comparable defences of the Western Heights at Dover. In the area of the collapse, scree and slumped material half filled the deep central sector the ditch.

4.4.4 A total of thirteen post-holes (Nos 1–13) was dug to support the new fence. These were set in an arc around the base of the collapsed area, spaced at intervals of 2.75m. The individual post-holes were generally oval in shape, between 0.25 and 0.60m across. They were each excavated to a depth of between 0.65 and 0.70m. Solid chalk was exposed in the lower half of Post-holes 1, 2, 12 and 13.

4.4.5 The two post-holes cut adjacent to the ditch retaining wall (Nos 1 & 13) – here built entirely of mortared yellow stock brick – showed that the footings for this wall extended between 0.40 and 0.45m below present berm level, with no footing apparent nor special arrangements for the lower courses.

4.4.6 Post holes 4–11, positioned further out, failed to penetrate through the collapsed debris to reach the solid chalk bedrock. Amongst the material brought out from Post-holes 6 and 7 were deposits of heavy orange-brown clay, derived from the Clay-with-Flints deposits which cap the natural chalk in this area. No finds of archaeological interest were recovered from any of these excavations.

4.5 *Opening of the two sealed Haxo casemates*

4.5.1 On the roof of the barracks, the main armament of the fort included guns protected in three pairs of earth covered Haxo casemates. The open rear of the central pair of these Haxos had subsequently been fully walled in. In order to determine the state of these sealed emplacements a small hole was initially cut through each of the blocking walls to allow access. Subsequently, it was determined to open up these two casemates and the blocking walls were fully removed in June 2013.

4.5.2 The pebble dashed concrete block construction of the blocking walls, together with a dated drink can found inside the eastern structure, suggested that the walling-up work had been done sometime during the 1980s, perhaps as nothing more than a cosmetic exercise but conceivably to help with weatherproofing and preventing water seepage into the lower casemates.

4.5.3 Nothing of special interest was noted within either of the sealed structures. In the eastern casemate the main racer rail for the gun had been pulled out of its bedding in the floor but lay adjacent. Both Haxos contained an added blast wall within the structure (probably dating to the Second World War), as noted in two of the other, open casemates at this level. Both of the sealed casemates contained a number of dumped radio units, most probably of later twentieth-century date. Several of the better preserved examples of these from the western casemate were collected and placed in store (FB/50 – F/53).

4.6 Observation of clearance work in the ‘barbican’ (Room 50)

4.6.1 On the north side of the fort, protecting the entrance to a passage that provides access into the interior of the site, is an open, rectangular brick-built flanking gallery or ‘barbican’ (Fig. 5, Room 50). In June 2013 clearance work was undertaken within this structure, when between 0.10 and 0.50m of leaf mould, accumulated soil and vegetation was removed (Plates X & XI). This work was monitored and revealed a number of loose artefacts derived from the occupation of the fort. Finds recovered included two iron brackets (FB/40 & 41), a light fitting (FB/42), an iron coat hook (FB/46), a metal filter unit (FB/48) and part of a mortar bomb (FB/49).

4.6.2 Below the debris it was discovered that there was a concrete floor within the walled area (Plate XI). This was set at several different levels and appeared to be of at least two periods, both later than the gallery walls. An original ramp leading up directly from the passage into the fort had subsequently been blocked by a brick blast wall so that access from then on was via steep side-steps.

4.6.3 Cleared of undergrowth, the brickwork of the gallery walls was found to be in a poor state in many areas and repair works will be required soon if collapse of this structure is to be prevented. Traces of door or gate fittings were noted at the four entrances into the gallery. A large iron strap hinge remained *in situ* at the bottom of the east doorway, encased in a large tree trunk.

4.6.4 Along the north wall of the gallery vertical scars suggested the former presence of a row of toilet cubicles arranged with six on either side of the passage leading to the outer defences (Fig. 5, Room 51). The clearance work provided confirmation of this and revealed the bases of a dozen lavatory pans and their associated soil pipes. The cubicles were fronted by a concrete path with a drainage gully along its southern side but the lavatories themselves had been previously removed, their associated soil pipes being capped off with concrete and the wall scars neatly repaired.

4.6.5 A row of mortised Yorkstone blocks had supported the ends of the cubicle walls along the front of the range. The use of such stone is consistent with the primary construction of the fort, rather than a later date, so these latrines are likely to be an original feature of the site. It is unfortunate that the only nineteenth-century plan of the fort seen by the writer is damaged in this area so the details are unclear. These latrines do not appear on a detailed plan of the site drawn and amended between 1935 and 1947, hinting that they are earlier.

4.7 Observation of other minor excavations and clearance work

4.7.1 Note on two water-pump bases

Clearance of vegetation on the concrete path in front of casemate Rooms 40/43 and 52/56 revealed the presence of two small, damaged concrete bases into which were set iron bolts. Cleaning and study of these indicated that they are probably the truncated bases for hand-cranked water pumps, which no doubt drew water from the large storage cisterns that lie below Rooms 43 and 52. Each base was associated with an iron drain grate. The eastern one of these appeared to be original and carried the maker’s mark ‘Lowe’s Patent No. 3’ (Plate VI).

4.7.2 Note on the early walking surface outside casemate 38/40

Removal of a small section of the existing concrete path outside Room 38/40 allowed the nature of the underlying soil deposits to be recorded. The concrete itself appeared to be of twentieth-century date and was about 0.12m thick. It sealed an earlier walking surface consisting of a light grey-brown clay loam containing much brown pea-shingle. This deposit was about 0.04m thick and rested on a layer of clay make-up containing chalk lumps and some brick fragments. The subsequent excavation and insertion of a number of other concrete sections in the path was not observed by the writer so to what extent the recorded sequence is typical cannot be certain.

4.7.3 Note on the 'dumb waiter' lift shaft in east basement Room 23

In the east corner of east basement Room 23, what initially looked like a vertical light-well filled with modern wood, plastic and other late twentieth-century debris, proved to be of rather more interest. Clearance of the hatchway established that this shaft housed a wooden framed elevator/lift, roughly 1 metre cubed in size (Plates VIII & IX). The collapsed remains of the lift structure lay in the bottom of the shaft, along with the associated counter-weights, pulley wheels, and steel hawsers. A small round aperture in the wall below the open hatch housed the spigot to which a crank-handle (not found) had been attached for manually operating the machine (Plate VIII).

Rather than being an ammunition hoist associated with the artillery mounted at the fort, this was clearly a domestic structure. Its size indicated that it was not for the use of fort personnel. Nevertheless, its positioning is significant. Other fittings, for boilers and fireplaces within Room 23 itself, suggest that this room probably functioned as a basement kitchen. At ground level, access to the lift shaft is from the side of a passage-way (Fig. 5, Room 81) which lies directly opposite Room 84. Ground floor Room 84 is characterised by being rather more ornately finished than the other casemate rooms; it is believed to be the original fort officer's dining room. The positioning of the lift thus makes complete sense – food for the officers' table was prepared in the basement kitchen, hoisted in the lift to ground level and then taken across the narrow passage into Room 84 for serving.

5. General conclusions

5.1 The clearance work undertaken at Fort Burgoyne has confirmed the generally well preserved character of the site, where considerably less damage to the structures has occurred than at the comparable Western Heights fortifications on the opposite side of the Dour valley. It is equally apparent that regular routine maintenance is required at the present fort in order to prevent further deterioration of the surviving structures on this now empty site.

5.2 A number of significant structural features have been re-exposed at the fort. It is now abundantly clear that a detailed, systematic study of the complete complex is urgently required, not only to chart the evolution of the primary Victorian structures but also their subsequent re-use during the First and Second World Wars, and the more recent military occupation of the site.

5.3 Despite the close proximity of the medieval castle and evidence for an earlier earthwork occupying the site of the present fort (Parfitt 1995), no finds or other evidence for pre-Victorian activity was discovered during the present investigations. Given the extensive earthmoving associated with the construction of the fort this is perhaps unsurprising but there remains some potential for the survival of such evidence on less disturbed parts of the site. It may be suspected that much of the area of the internal parade ground is largely undisturbed.

6. Bibliography

Coad, J.G., 1995 *English Heritage Book of Dover Castle and the defences of Dover* (Batsford/EH, London).

Coad, J.G. and Lewis, N., 1982 'The Later Fortifications of Dover', *Post-Medieval Archaeology* **16**, 141–200.

Parfitt, K., 1995 'A Lost Earthwork near Dover Castle', *Kent Archaeol. Rev.* **121**, 10.

Saunders, A., 2007 *Fort Burgoyne* (unpublished report prepared for EH April 2007).

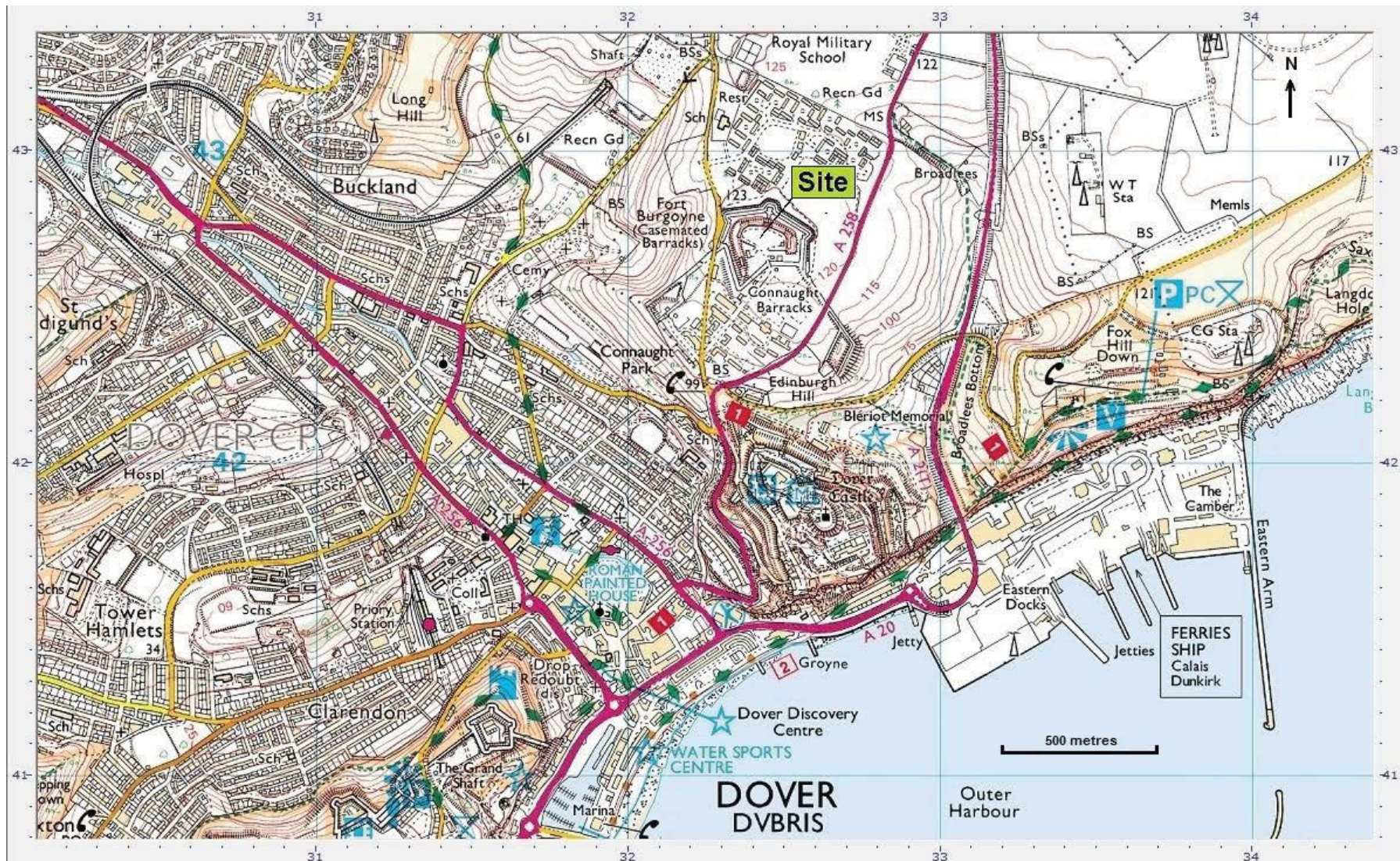
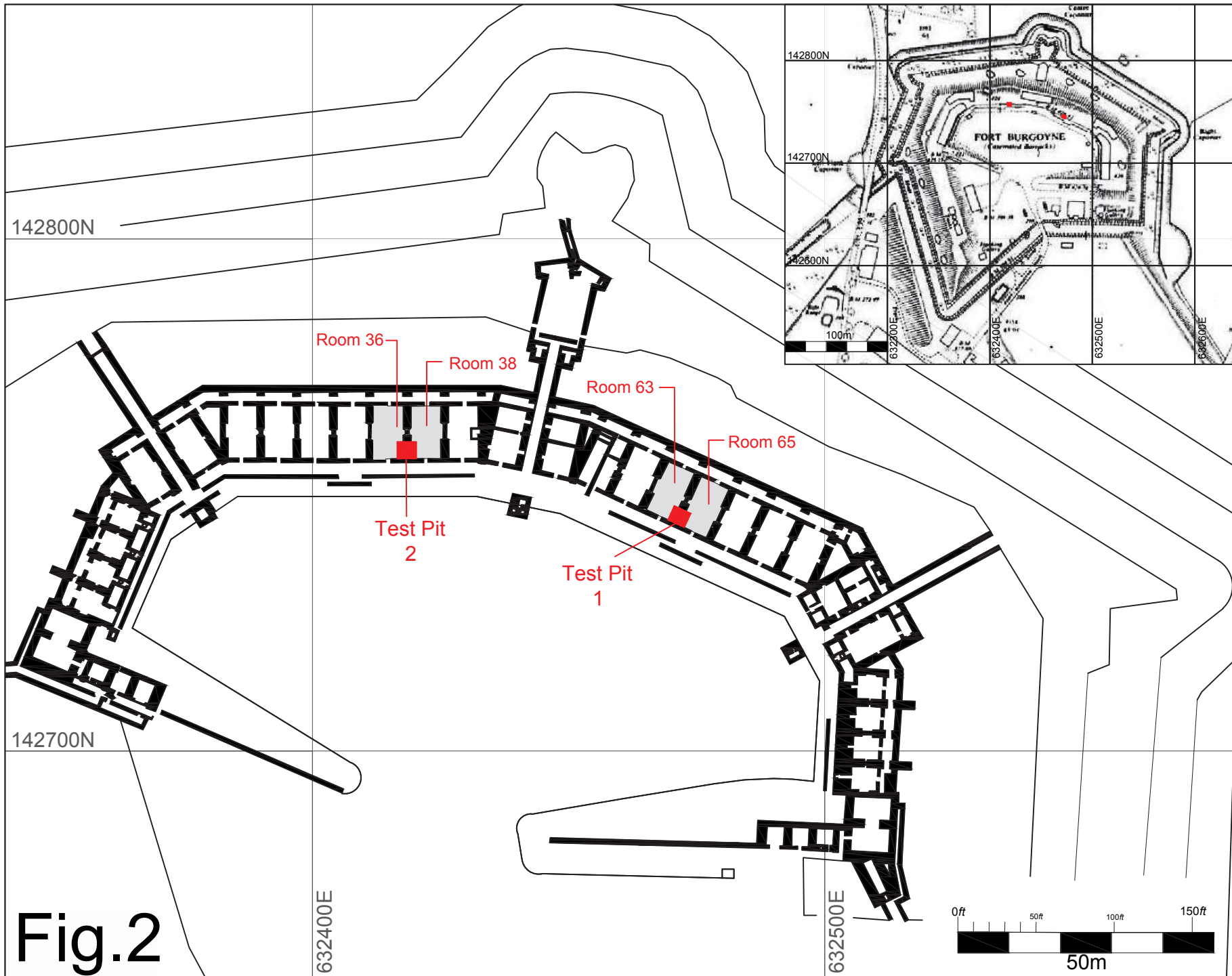


Fig. 1 Map of Dover showing relationship of Fort Burgoyne to the town and castle (*Based on the Ordnance Survey's 1:25000 map of 2004 with the permission of the Controller of Her Majesty's Stationery Office, ©Crown Copyright Licence No. AL100021009*)



Ground Floor
Plan
Fort Burgoyne

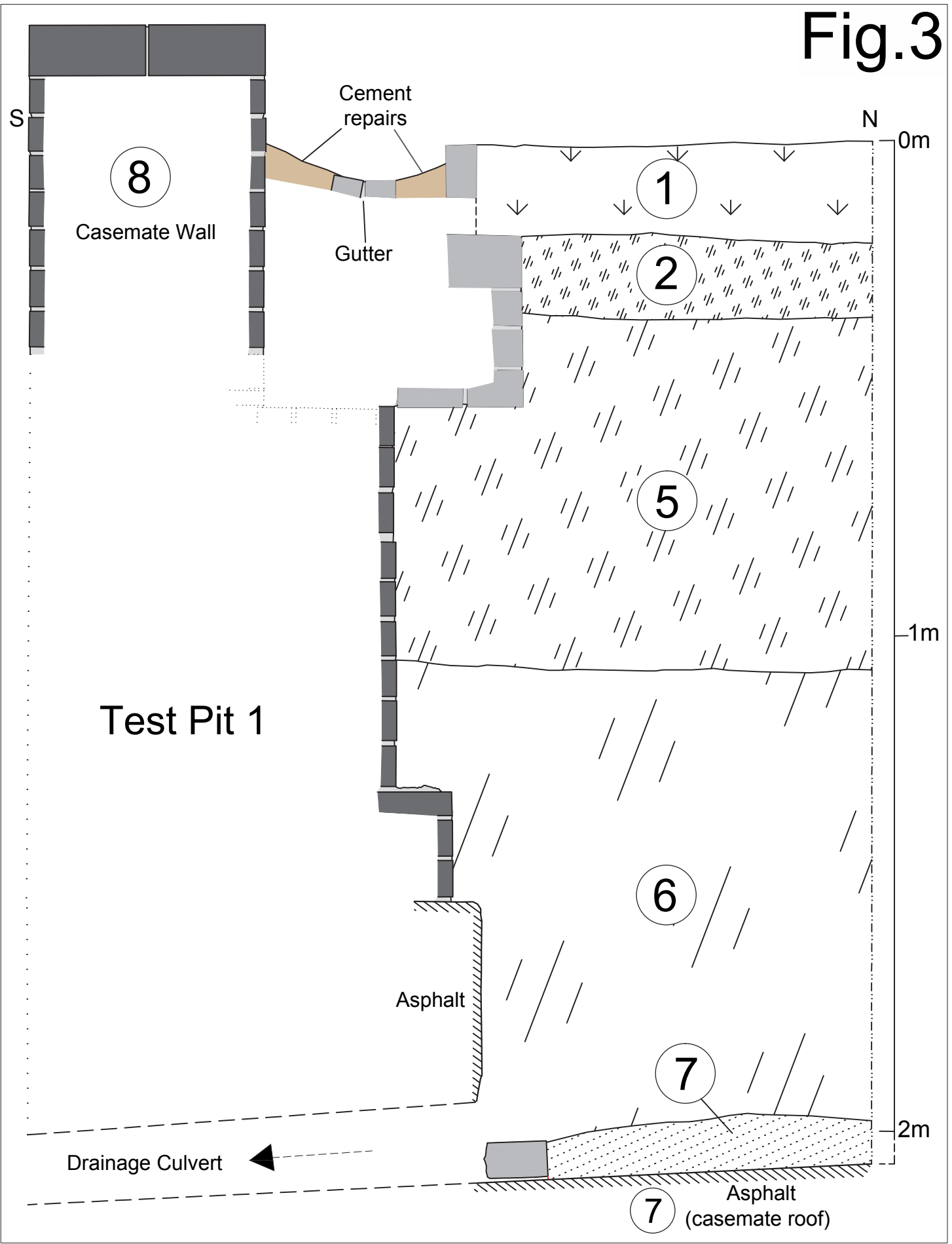
CANTERBURY ARCHAEOLOGICAL TRUST LTD.	
<small>A REGISTERED CHARITY</small>	
<small>92a Broad Street, Canterbury Kent - CT1 2JF Tel 01227 462062 Fax 01227 784724 Email admin@canterburytrust.co.uk</small>	
PROJECT NAME Fort Burgoyne	
PROJECT CODE FBD-WB-13	
SITE ADDRESS Fort Burgoyne Dover Kent	
DRAWN BY P-SA	SCALE(S) 1:1000/ 1:5000
DATE 08/07/13	LAST REVISION 09/07/13
CHECKED KP	
REF/DRG NO. L:/	

Fig.2

Fig.2 Plan showing position of excavated test pits with (inset) overall plan of Fort Burgoyne

(Based on the Ordnance Survey's Map (C) Crown Copyright, Licence No. AL100021009

Fig.3

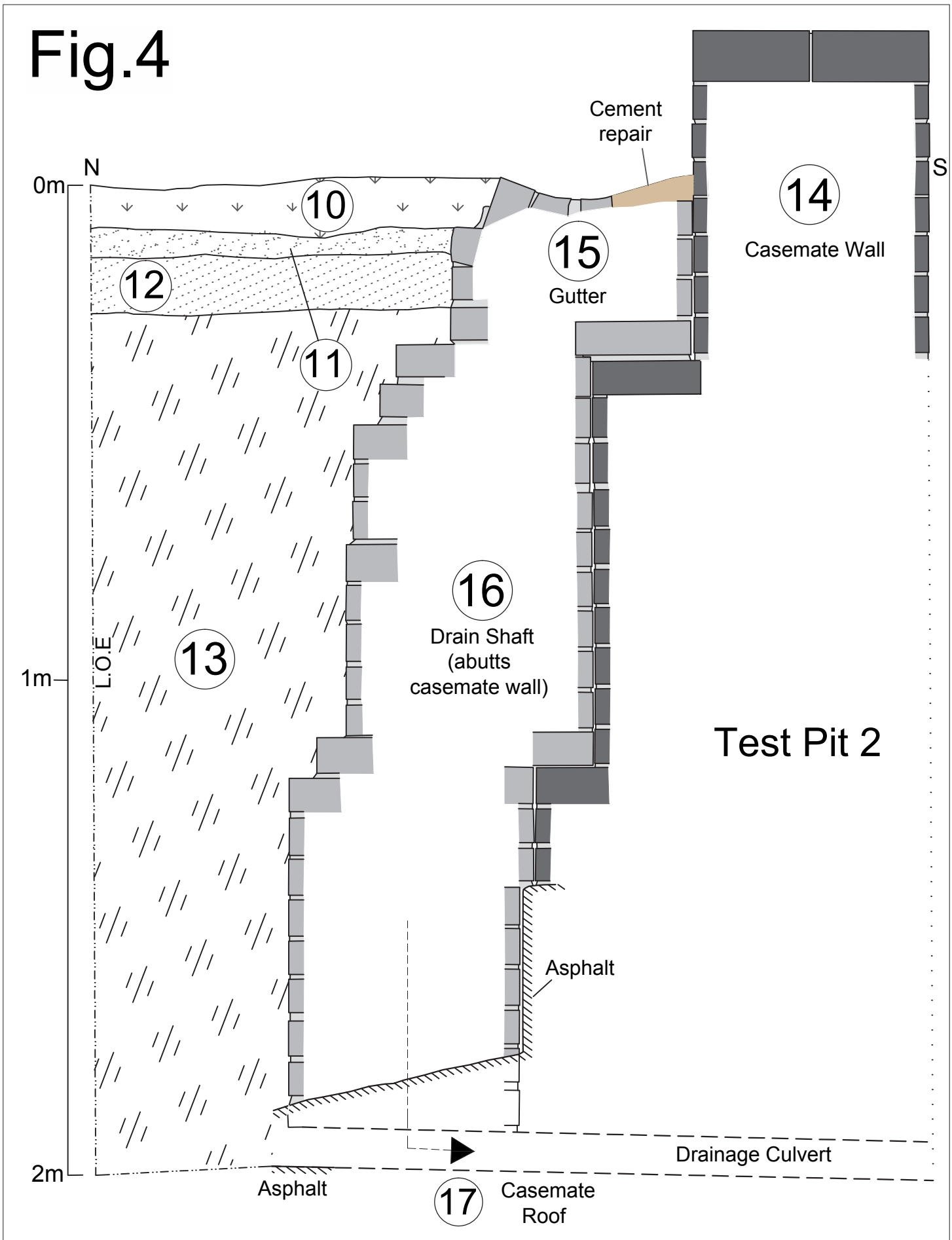


CANTERBURY ARCHAEOLOGICAL TRUST LTD. <small>A REGISTERED CHARITY</small> <small>92a Broad Street - Canterbury Kent - CT1 2LJ Tel. 01227 462062 Fax 01227 784724 Email admin@canterburytrust.co.uk</small>	PROJECT NAME	DRAWN BY	SCALE(S)
	Fort Burgoyne	P-S.A	1:10
	PROJECT CODE	DATE	LAST REVISION
	FBD-WB-13	3/07/13	03/07/13
	SITE ADDRESS	CHECKED	
Fort Burgoyne	K.P		
Dover	REF/DRG NO.		
Kent			

	(1) Topsoil		(6) Large Chalk rubble
	(2) Chalky dump		(7) Clay
	(5) Chalk rubble		

Fig.3 Test pit illustrating deposits against casemate wall

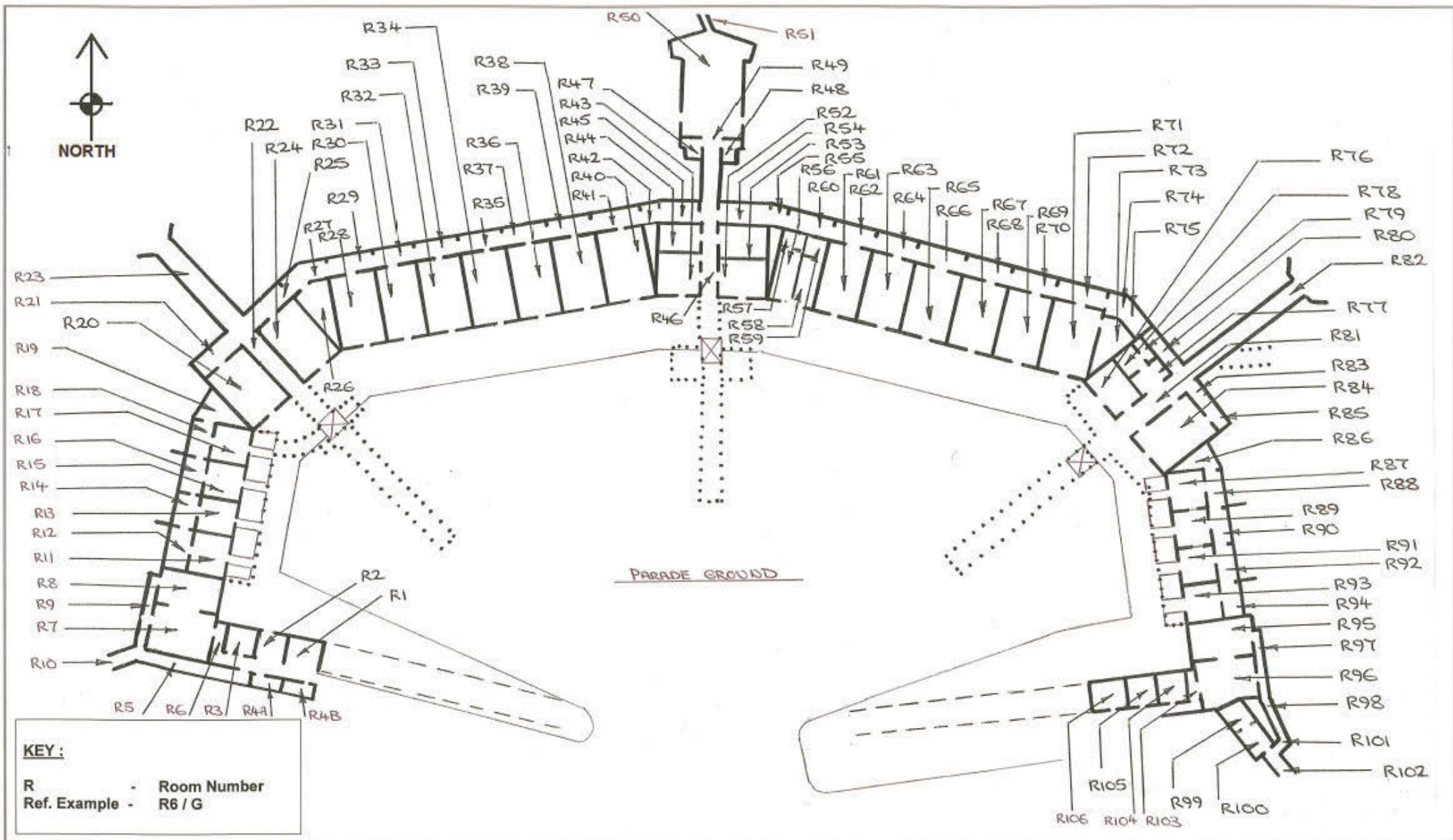
Fig.4



CANTERBURY ARCHAEOLOGICAL TRUST LTD. <small>A REGISTERED CHARITY</small> <small>92a Broad Street - Canterbury Kent - CT1 2JQ Tel 01227 462062 Fax 01227 784724 Email admin@canterburytrust.co.uk</small>	PROJECT NAME Fort Burgoyne	DRAWN BY P.-S.A	SCALE(S) 1:10	
	PROJECT CODE FBD-WB-13	DATE 03/07/13	LAST REVISION 03/07/13	
	SITE ADDRESS Fort Burgoyne Dover Kent	CHECKED K.P		
		REF/DRG NO.		

	(10) Modern Turf		(13) Chalk rubble
	(11) Metalling		
	(12) Clay Deposit		

Fig.4 Test pit illustrating deposits against Casemate Walls



Fort Burgoyne
 Connaught Barracks
 Dover

Fig. 5 Ground Floor Plan

(Scale 1:500 Approx.)



Plate II Trial Pit 1 under excavation, looking north-west (Film 16862/2628)



Plate III Trial Pit 2 under excavation, looking east (Film 16863/2667)



Plate IV Room 20, later fireplace over earlier one, looking SW. Scale, 50cm (Film 16881/22)



Plate V Room 20, later fireplace over earlier one, looking NW (note vent pipe below earlier hearth).
Scale, 50cm (Film 16881/25)

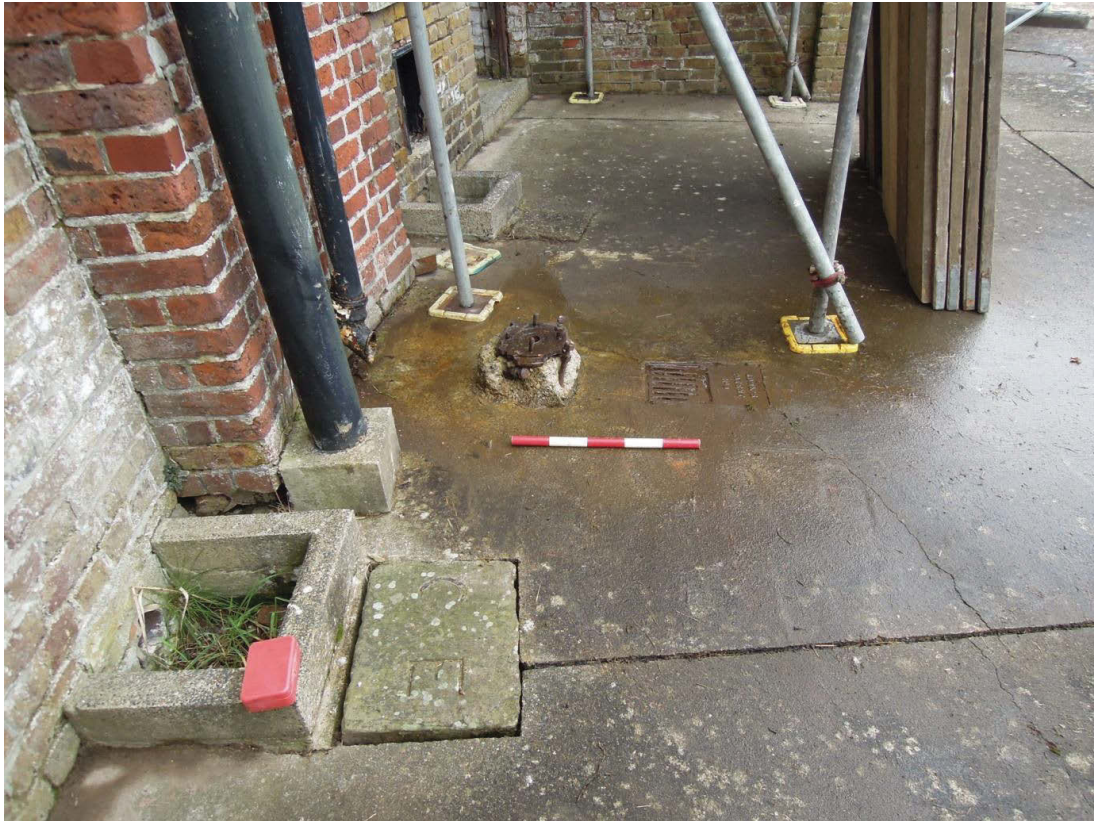


Plate VI Base of probable water pump and drain outside Rooms 52/56, looking E. Scale, 50cm (Film 16864/2759)



Plate VII Room 43, metal-working lathe *in situ*, looking S. Scale, one metre (Film 16879/17)



Plate VIII Basement Room 23, shaft for 'dumb waiter' exposed, looking SE (Film 16880/2930)



Plate IX Basement Room 23, detail of 'dumb waiter' revealed, looking SE (Film 16880/2924)



Plate X Barbican structure (Room 50) before clearance, looking north (Film 16893/3157)



Plate XI Barbican structure (Room 50) after clearance, looking north (Film 16894/3208)