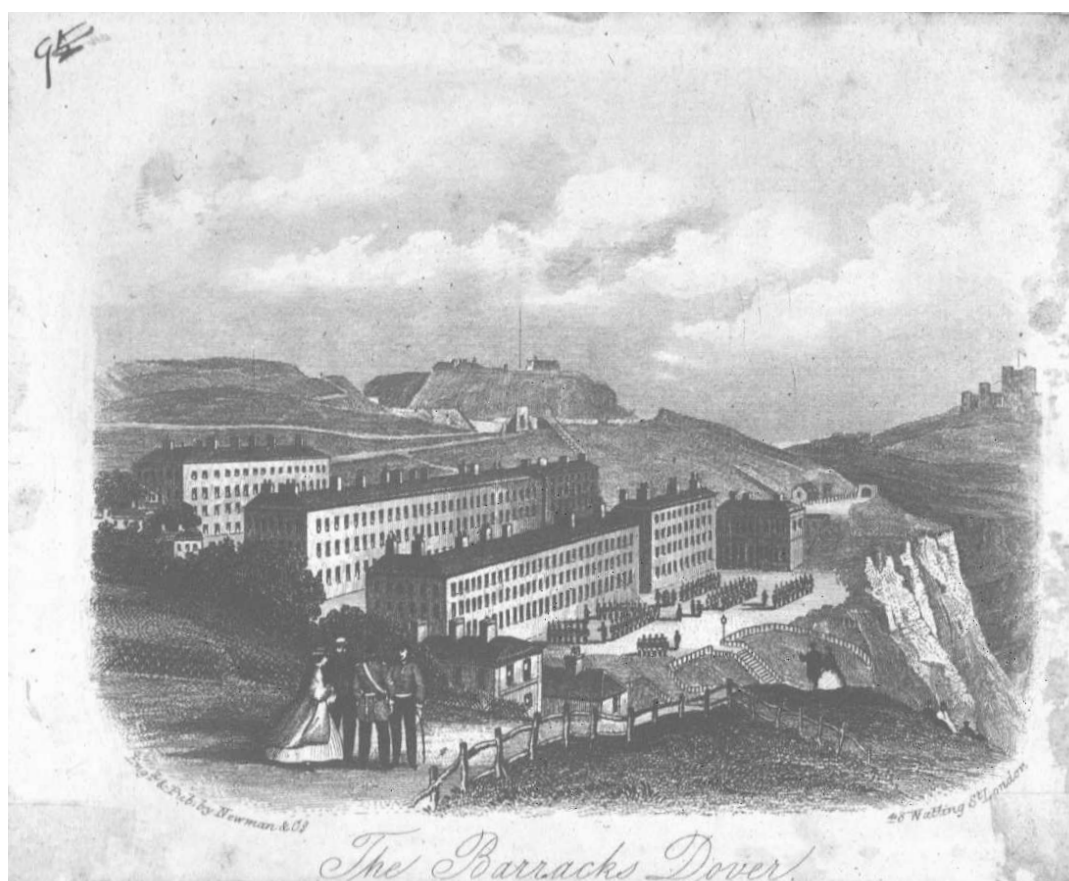


THE WESTERN HEIGHTS DOVER, KENT

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Report No 4: The Grand Shaft Barracks
19th and 20th-century infantry barracks



SURVEY REPORT

PAUL PATTISON & ANDREW WILLIAMS

Photography by STEVE COLE & ALUN BULL



ENGLISH HERITAGE

ARCHAEOLOGICAL INVESTIGATION
SERIES 25/2001 (Revision of 2004)





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THE GRAND SHAFT BARRACKS

19TH-AND 20TH-CENTURY INFANTRY BARRACKS

**ARCHAEOLOGICAL INVESTIGATION REPORT SERIES 25/2001
(REVISION OF 2004)**

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A view of Grand Shaft Barracks from the harbour, in the late 19th or early 20th century, showing the austere Napoleonic accommodation blocks on the cliff top (d01798; reproduced by kind permission of Dover Museum)



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ABBREVIATIONS USED IN THE TEXT

NCO	non-commissioned officer
OD	Ordnance datum
OS	Ordnance Survey
RE	Royal Engineers
RSJ	reinforced steel joist
WC	water closet



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GLOSSARY

Board of Ordnance

The government department responsible for supply of arms, ammunition and warlike supplies to the country's fighting forces on land and sea, until abolition in 1856.

Magazine

A place for the storage of gunpowder. Generally applied to any ammunition storage, the term more particularly refers to the place where gunpowder was kept loose in barrels or cases (often called a main magazine).

Nissen hut

A type of temporary hut building invented in 1915, characterised by its semi-circular section composed of a double skin of corrugated-steel sheeting.

Shifting lobby

A room next to a magazine in which men change into and out of magazine working clothes. This was to prevent metal on their ordinary clothing from sparking and thus igniting the gunpowder. Access to the magazine was generally prevented by a waist-high barrier between it and the shifting lobby.



1. INTRODUCTION

Between February and June 1999, field archaeologists from the Royal Commission on the Historical Monuments of England (RCHME) and English Heritage (Brooklands, Cambridge Office) surveyed and analysed the buildings, ruined structures and earthworks associated with the former Grand Shaft Barracks, on the Western Heights, Dover (NMR No TR 34 SW 464; SAM No Kent 187). The survey was partly funded by Dover District Council, utilising funds made available from the South-Eastern Regional Development Board. The work also formed part of the Western Heights Project, undertaken at the request of Kent County Council as part of an Interreg II programme relating to historic fortifications in Kent, Nord-Pas de Calais and West Flanders. This programme was co-ordinated for several partners in Kent by Kent County Council and funding for Western Heights was shared between the RCHME and the European Union. The field investigations were the responsibility of staff of the RCHME in Cambridge.

This report is no 4 in a series of ten to be produced on the Western Heights fortifications.

Figure 1
*Dover Western Heights,
location maps (pale
yellow = land below
50m OD; light grey =
land 50-150m OD; dark
grey = land over 150m
OD; pale brown =
urban areas)*





The Western Heights, on the south-western flank of the port and town of Dover (Fig 1), occupy the north-eastern end of a long ridge, which extends towards Folkestone. This ridge, with extensive views in all directions, is a prominent topographic feature that reaches a height of 125m (410ft) above OD, with a narrow flat top and steep sides which, in places, turn to cliffs. The Western Heights fortifications are concentrated at the north-eastern end of the ridge. Work on their construction began towards the end of the 18th century and rapidly developed during the Napoleonic Wars, with the principal aim of preventing a flanking or rearward assault on Dover.

The northern slope of the ridge is the more even and along it was constructed a continuous defensive line, while the southern face is more sinuous and broken, with stretches of vertical cliff providing natural defences interspersed with steep slopes and natural combes. One of these combes, a pronounced northward re-entrant with a high cliff at its lower end, was utilised by the Georgian military engineers as a convenient location for the Grand Shaft Barracks (Fig 2).

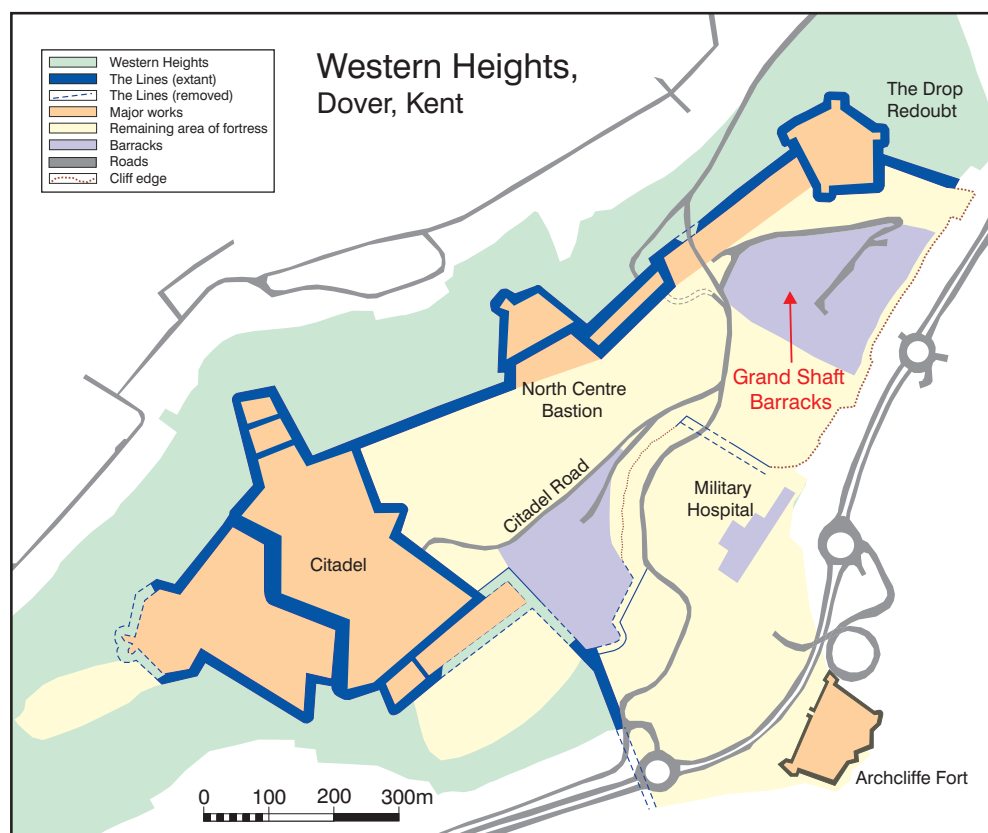


Figure 2
Location map showing the main components of the Western Heights, with the Grand Shaft Barracks at top right

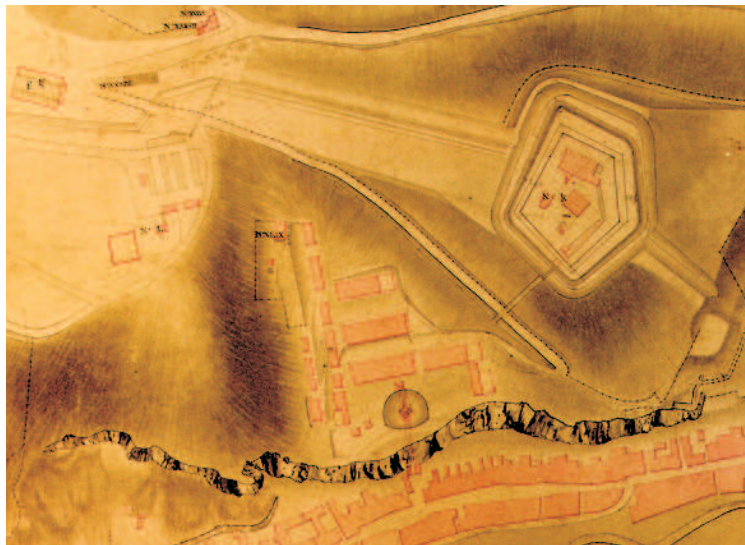


Figure 3
The site of Grand Shaft Barracks (lower centre) from the air in 1978: note the survival of the Gymnasium and Troop Stable/Mobilization Equipment Store to the right of the pentagonal fort known as the Drop Redoubt (NMR: TR/3140/1/360 © Crown Copyright)



2. BRIEF HISTORY

Authority was given to build the Grand Shaft Barracks by the Barracks Department in 1804, at around the same time that the Board of Ordnance was beginning construction on the Western Heights fortifications. The Department's intention was to provide accommodation for 700 men in addition to the 800 being quartered in the Western Heights works by the Board of Ordnance, effectively adding a complete infantry regiment to defend the Heights, the docks and the town. The barracks were completed rapidly, in 1805, although work continued on the various fortifications on the Western Heights until 1816 (PRO: WO/44/572 note on map; Coad and Lewis 1982, 163; 177). The earliest plan depiction dates to 1810 (Fig 4).



The site chosen for the barracks was in a combe directly overlooking the harbour, with cliffs preventing direct access between the two. The engineer in command, Brigadier General Twiss, brought attention to this problem in a letter to the Board of

Figure 4
Grand Shaft Barracks and the Grand Shaft (flattened circle at centre bottom) in 1810 (extract of PRO: MR/1349 © The Public Record Office)

Ordnance written in the autumn of 1804. He pointed out that the roads and footpaths across the Heights were dangerous in wet weather and that they were indirect, slowing down the rate of deployment of troops to and from the town. He proposed an innovative solution comprising a vertical shaft containing a staircase, occasioned by his observation that “*the new barracks are little more than 300yds horizontally from the sea..... and about 180ft above the high-water mark*”. His idea came to fruition between March 1805 and 1807 with the construction of the Grand Shaft (Coad and Lewis 1982, 163-4).

In the second half of the 19th century, the barracks reached their maximum extent, with various buildings added around the original core. These buildings, including a church, a school, a gymnasium, a laundry and married soldiers' quarters, were located either higher



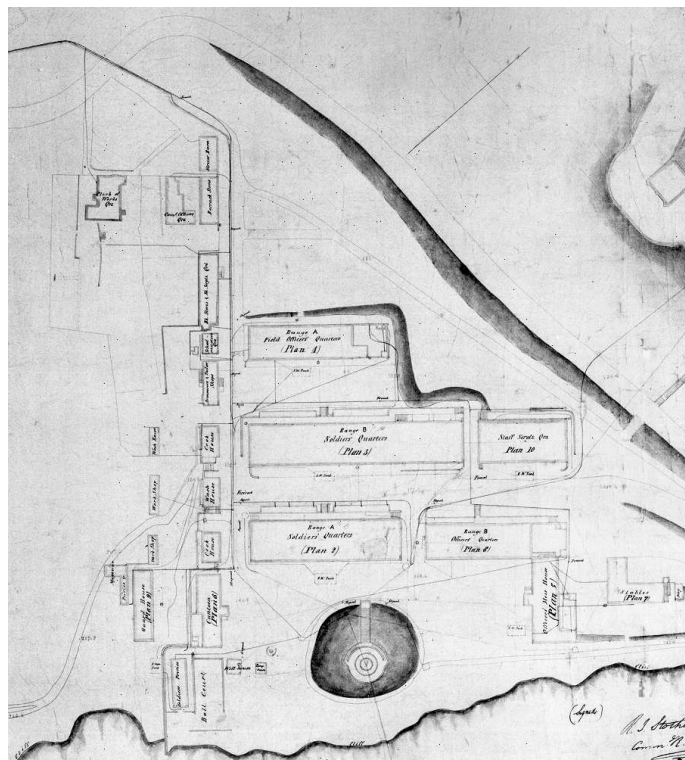
Figure 5
Grand Shaft Barracks
(at lower centre) in
1858 (extract from
PRO: WORK/43/1598;
reproduced by kind
permission of the
Public Record Office)



(as Grand Shaft Barracks were known at that time), noted that they were “*situated in an open, airy and lofty position removed from the civil population of Dover*”, but it also saw the need for additional buildings and sanitary improvements; some 1,071 men were

accommodated in 51 rooms (PRO: WO/33/581). The work of the Commission resulted in a standing committee, the Army Sanitary Commission, which was to oversee national improvements in barrack design (Douet 1998, 199).

Figure 6
Grand Shaft Barracks
in 1861 (extract from
NMR: WD 2506 ©
English Heritage)



alterations and new building resulting from the recommendations of the Commission (see the Bibliography for a list). Of particular value are two plans, dated 1858 and 1861, showing all the Napoleonic buildings and their functions (Figs 5 and 6). There are earlier plans but they are less detailed, because of limitations in the scale or purpose of survey, so they do not depict all of the buildings shown on the 1858 and 1861 plans (eg PRO: MR/1346, dated 1814; Batchellor, dated 1844; PRO: WO/44/572, dated 1854).

Many of the buildings of Grand Shaft Barracks are recorded in detail on a set of plans, mainly of the 1860s and 1870s, which were probably prepared to accompany the



By 1896, there were 912 officers and men stationed in the barracks (Fig 7; PRO: WO/78/2426/20). A few minor additions were made to the buildings - e.g. a Troop Stable and Mobilization Vehicle Store in 1899 and an Infants School in 1902-3 - while existing buildings were modified for new functions.

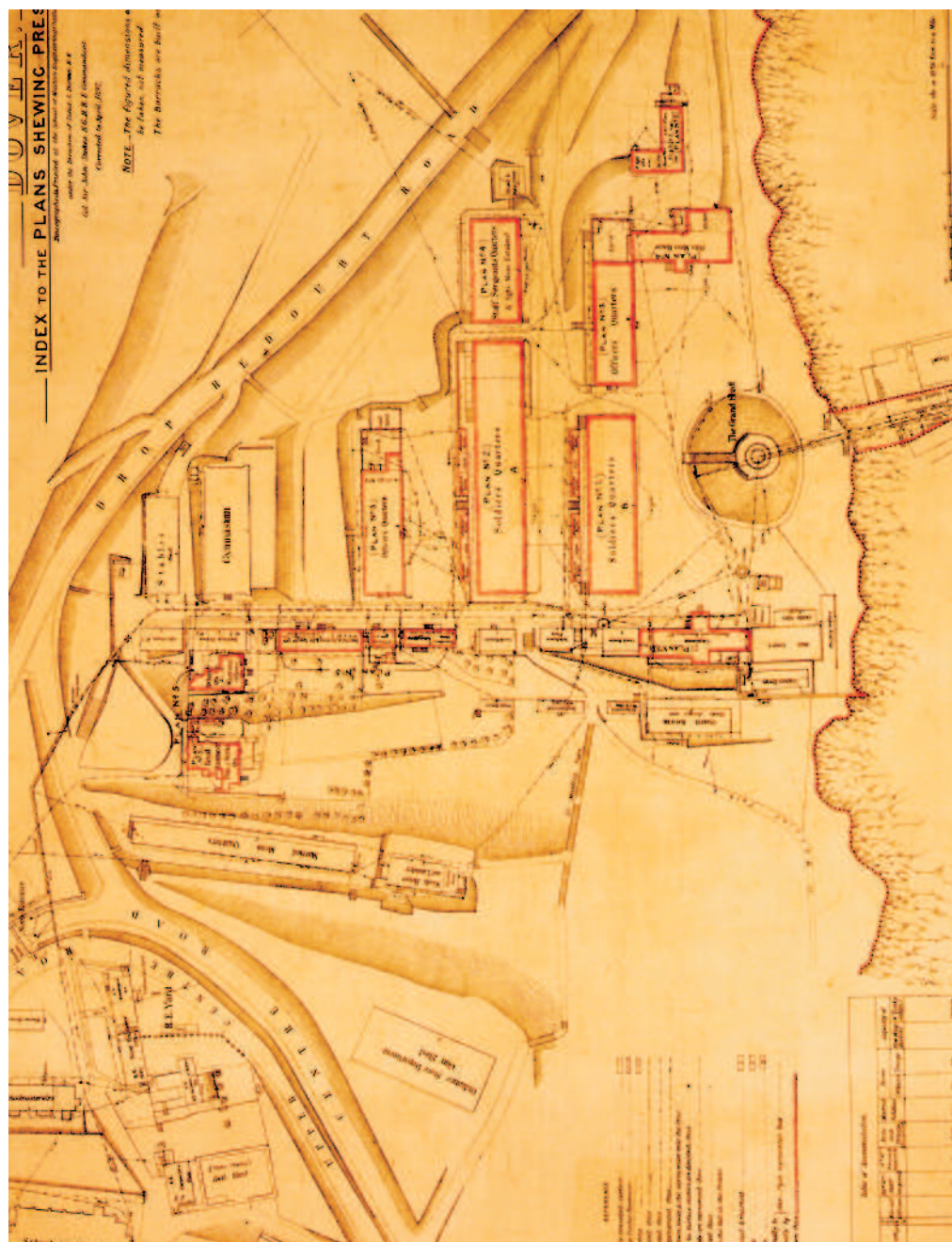


Figure 7
The Grand Shaft Barracks in 1896 (PRO: WO/78/2426/20 © The Public Record Office)



Several temporary buildings were erected during the Second World War, some replacing structures demolished by enemy action. In addition, a large shelter was built underground on the south-western part of the barracks site and its entrance can be found in the woodland there.

The barracks were decommissioned in 1960 and most of the buildings levelled in 1965, although two buildings were left standing: the Gymnasium survived in 1979 but was removed by 1983, while the Troop Stable/Transport Shed stood until 1997 (Fig 3; NMR APs: MAL/83001/37-9).



Figure 8
Grand Shaft Barracks
from the air in 1945
(NMR:
106G/UK/610/Part
IV/6327 © MOD)

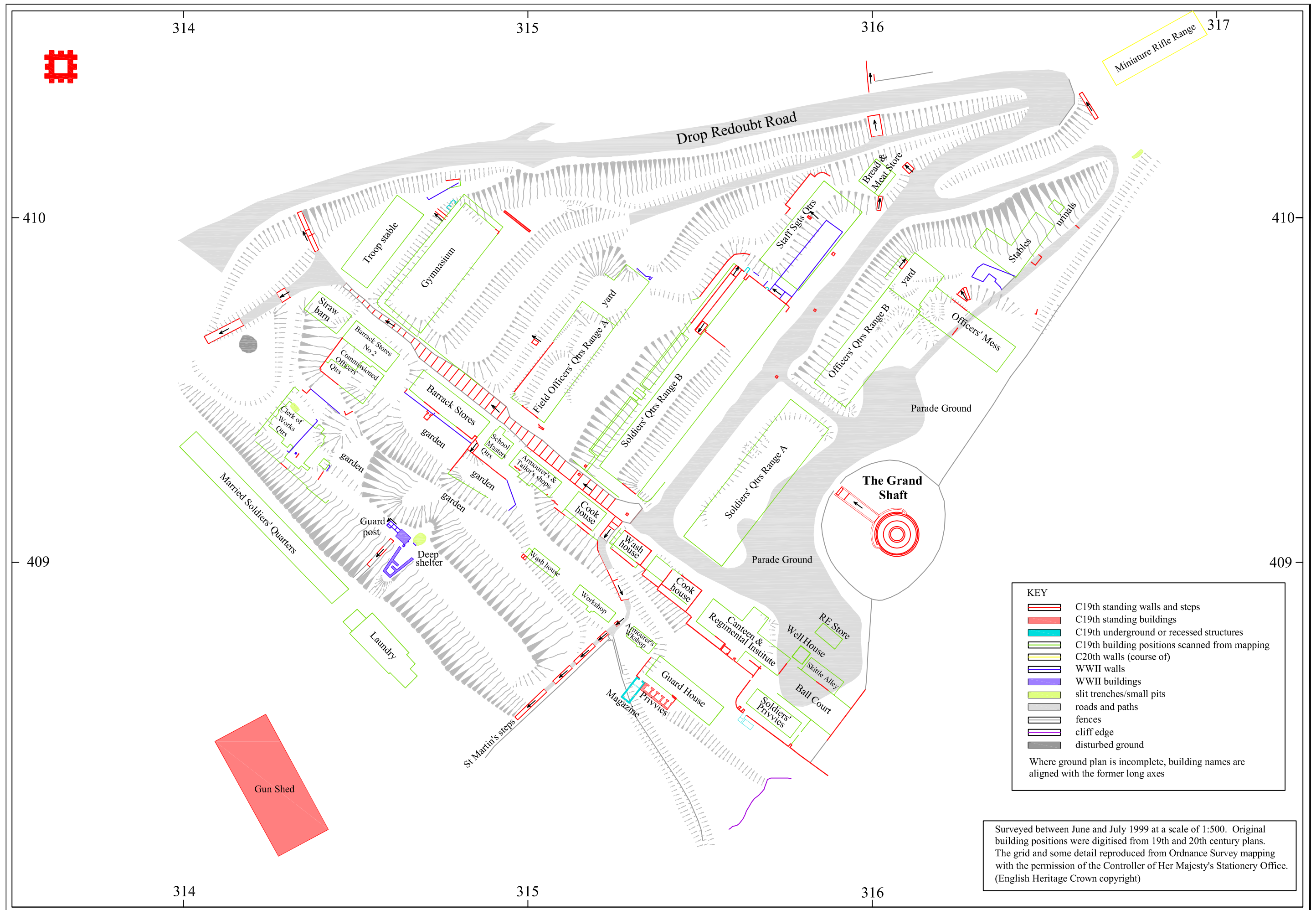


Figure 8 The Grand Shaft Barracks; survey plan showing all visible archaeological features and sites of demolished buildings.



3. **DESCRIPTION and INTERPRETATION**

In reading this account, refer to the survey plan, Figure 9.

The construction of the barracks required major modifications to the steep slopes of the combe. The buildings were placed on a series of massive terraces, cut from and built over the chalk bedrock, to provide level and solid platforms. These terraces are still a prominent feature and demolition of the buildings has not, for the most part, severely damaged the basic profile of the site. It is important to realise that several of the large blocks were built on split levels represented by two terraces; each terrace did not necessarily contain a single building. Several terraces stand to heights in excess of 2.0m; the scarp at the edge of Drop Redoubt Road is, in places, some 3.5m.

The original design of the barracks was simple: the major part of the accommodation was provided in three parallel ranges on terraces facing south-east, with the Parade Ground and the Grand Shaft below them, then the cliff edge. Drop Redoubt Road formed the northern flank while the terraces were linked by a broad flight of steps on their south-western side. On the steep south-western side of the combe, the ground was terraced at right angles to the accommodation ranges, and on these were placed ancillary buildings: cookhouses, stores, workshops and recreational facilities. Access to the whole site was via Drop Redoubt Road and by a track from Archcliffe Fort.

A detached site occupied ground on the ridge top north-west of Centre Road. The Royal Engineers' had offices and stores here, and there were also communal buildings including the garrison chapel, school and schoolmaster's house. All have been demolished and replaced by modern buildings.

A) THE GRAND SHAFT and THE PARADE GROUND

The Parade Ground was the functional and ceremonial centre of the entire barracks complex, where drill and close manoeuvres were practised and where rewards were given and punishment meted out. The construction of the Grand Shaft, after the basic barracks plan had been established, severely compromised the utility of the Parade Ground; a fact emphasised by the location of the shaft right at its centre. Such an awkward arrangement is unusual for the era, when emphasis was placed on the symmetrical disposition of the soldiers' and officers' accommodation around a central Parade Ground. However, with an invasion expected, there was a pressing need to

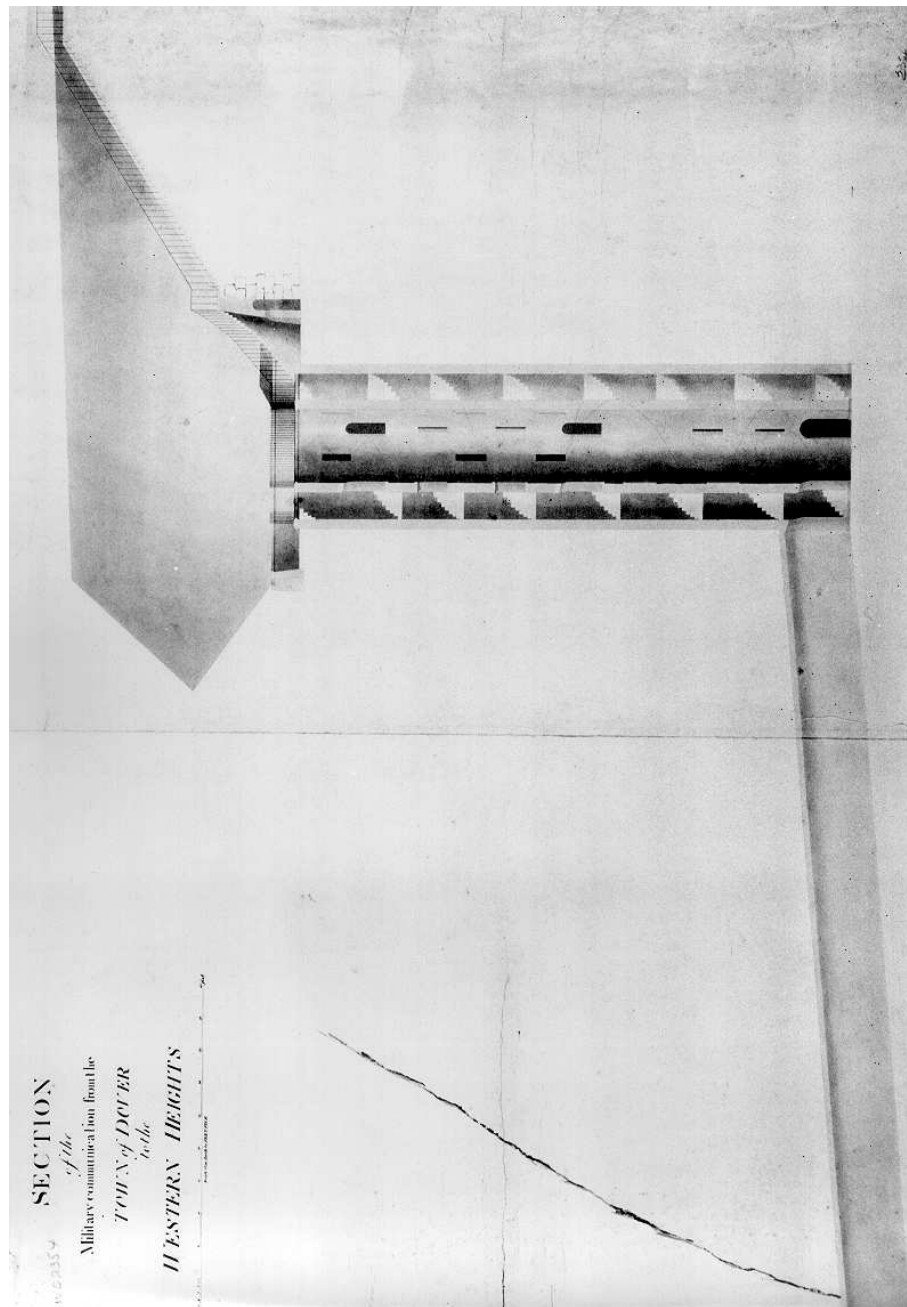


Figure 10: Section through the Grand Shaft, drawn in 1808 (NMR: WD/2354 © English Heritage)



enable rapid troop deployment from the barracks into the town and docks, which would otherwise have been along a tortuous route. Twiss himself remarked that ‘(although) *the new barracks (were) little more than 300 yards horizontally from the sea on horseback the distance (was) nearly a mile and a half* (Coad and Lewis 1982, 163-4).

Today the Parade Ground survives as an open area with only revetment walls visible.

The Grand Shaft is 140ft (42.67m) deep, driven vertically through the chalk cliff and lined with Common-bond brickwork (Fig 10). In the centre of the shaft is a hollow column, in Flemish bond, which supports three intertwined spiral staircases, while also acting as a drain and a light well (Fig 11). The three staircases all have stone treads running between the shaft wall and the central column. Four borrowed lights with semicircular heads, stone lintels and wrought-iron grilles are provided on each staircase. The exact spacing of the lights varies slightly with the geometry of each staircase but the interval between each one is roughly thirty steps. Each borrowed light has an accompanying small landing. The stone sills of the lights are canted into the stairs



Figure 11
*A view up the central
lightwell of the Grand
Shaft (NMR: AA008570
© Crown Copyright
1999)*

probably to increase the available light. At the bottom of the shaft, there are low semicircular arches at the rear of each stair: scars in the jambs suggest the position of doors, possibly to small cupboards which held tools and maintenance materials.

The base of the Grand Shaft leads directly into a vaulted gallery, at the end of which was a guard-room and main gate to the town, contained within a walled compound. The



gallery meets the wall of the shaft at a groined junction. From here, the gallery has a segmental vault and is brick lined in Flemish bond; ascending courses placed below the springing of the vault compensate for slope as the gallery descends towards the town. This slope was probably designed to facilitate drainage of the gallery, especially as the top of the shaft was open to the elements. Moreover, the shaft also carried the drainage from the Grand Shaft Barracks, with unpleasant consequences as revealed in 1858 when the Interim Report of the Barracks and Hospitals Commission noted that *'the drainage from the Western Heights Barracks is brought down to the town sewers by a vertical pipe to the shaft and stairs. When the privies are flushed the force of the water down the pipe forces the sewer gas through traps into houses and the shaft. A large tank is required at the bottom of the shaft with a foul air pipe'* (PR: WO/33/581).

The gallery emerges through a semicircular arch into the Guard House compound; the arch is rebated for a pair of doors or gates that opened outwards. The compound is roughly bisected by a roadway linking the gallery to Snargate Street. With the exception

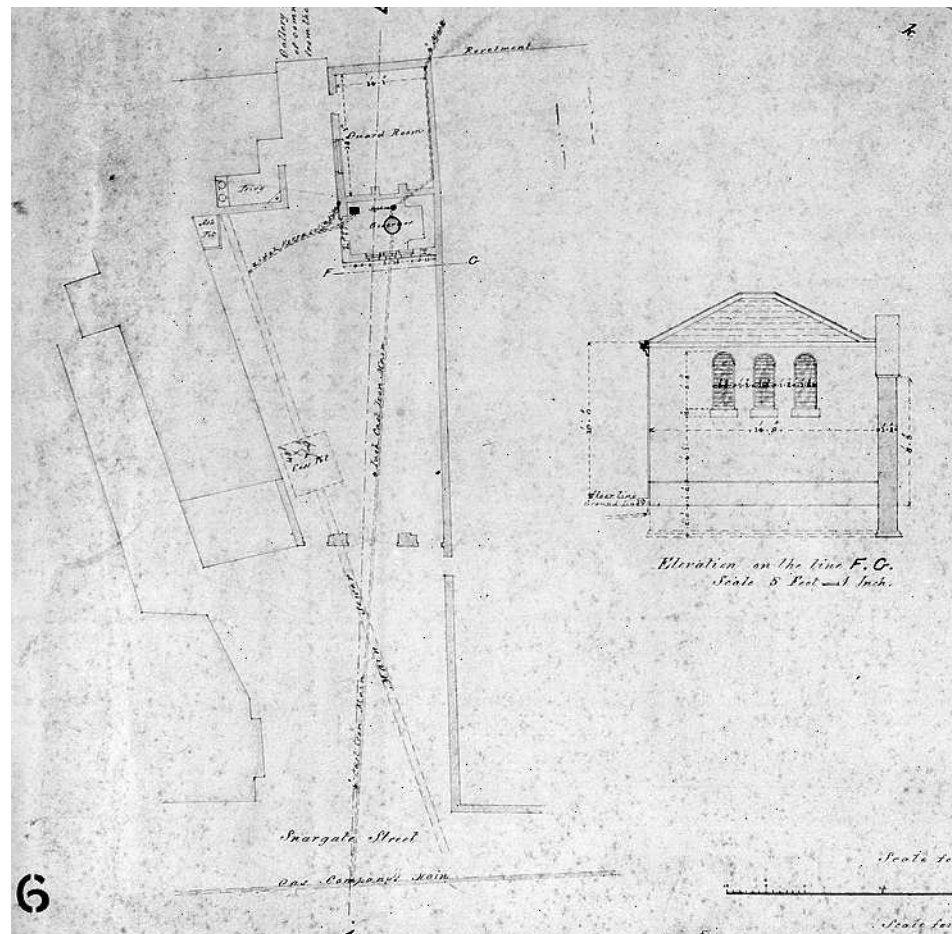


Figure 12
The Guard Room at the
base of the Grand Shaft
in 1855-6 (extract of
NMR: WD 2403 ©
English Heritage)

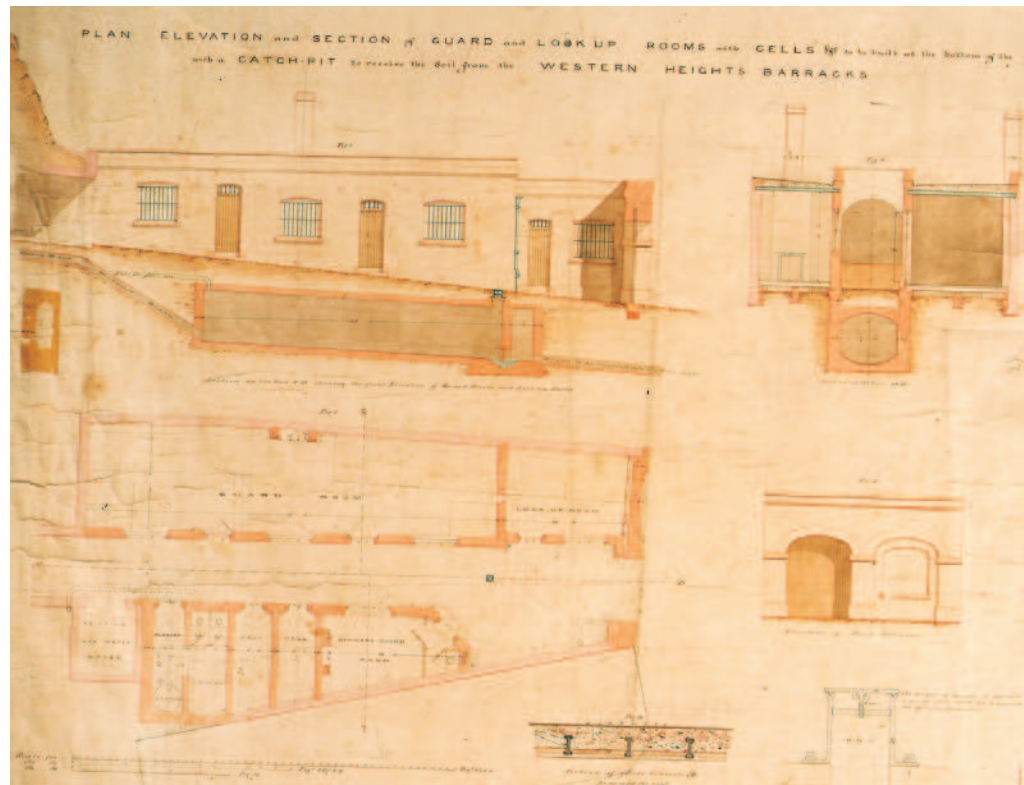


Figure 13
*The proposal drawings
for a new Guard Room
at the base of the Grand
Shaft, dated 1859
(extract of NMR: WD
2404 © English
Heritage)*

of a small building on the eastern side and sections of the perimeter wall, the original group of buildings has been demolished and partially replaced by modern re-creations of the gateway and guard house.

The Napoleonic Guard House was a tiny structure, shown on a plan of 1855-6 when it was proposed to pipe gas for lighting in the barracks: a small room was to be added to the original Guard Room to contain a governor for the gas supply. The plan shows a simple Guard Room with a hipped roof, a fireplace, a single door and a window, situated on the east side of the gallery entrance, with a privy and ash pit on the opposite side (Fig 12). The inadequacy of this building was highlighted in the Interim Report of the Barracks and Hospitals Commission of 1858 which noted that *'the Bottom Grand Shaft Guardhouse had no ventilation....is too small for discipline.... Too small for prisoners and pickett....privy defective and offensive'*.

These buildings were demolished and replaced shortly afterwards: proposal plans were drawn up in 1859 for a larger Guard House complex, comprising two single-storey ranges divided by the central roadway (Fig 13). The eastern range occupied the full length of the compound and comprised a large Guard Room and a smaller Lock-up



Room. The new western range comprised an Officers' Guard Room, two Cells and a Latrine, and incorporated an existing Gas Meter House which had been built in a different location to that proposed in 1855-6. The provision of a Guard Room for officers is unusual, it being common practice to arrest those guilty of minor misdemeanors (e.g. being drunk) and escort them to their own quarters. It may be that this building was a precaution against drunken officers climbing the shaft but it serves to emphasise the separation of officers and men in the Victorian army. It may also give an indication of when segregation of the staircases started (see below).

Today, only the Gas Meter House is intact, built against the revetment of the cliff face in English bond brickwork with stepped eaves courses, a flat roof, and a segmental head to the single doorway. The 1859 plan shows double doors but the surviving jambs show no evidence for this. Very little remains of the other buildings: a pair of stone slabs in the western wall of the compound may be from splashbacks in the demolished latrines; the cesspit recommended so graphically by the 1858 report is said to be *in situ* under the central path. It was a large structure, ovoid in section and almost as long as the eastern range (Fig 13).

The wall of the compound, although much repaired, follows the Napoleonic line. The narrow entrance onto Snargate Street appears on a lithograph of 1810, with a four-point archway spanning the roadway and flanked by smaller similar archways for pedestrians, an arrangement also shown on the plan of 1855-6 but without an elevation to confirm the arch details. The entrance to the new Guard House, shown on the plan of 1859, comprised two segmental archways having brick imposts standing on a deep plinth with

an abutment with projecting stone coping. The eastern arch was blind as it formed the end wall of the Lock-up Room. A replica of this entrance has been built as part of the recreated Guard House (Fig 14).

The top of the Grand Shaft is c 10m (33ft) below the level of the Parade Ground



Figure 14
*The recreated entrance
to the Guard House at
the base of the Grand
Shaft (NMR: BB013811
© Crown Copyright
1999)*



in a bowl shaped hollow cut from the chalk (Fig 15). A flight of stone steps descends between brick retaining walls with stone copings, then bifurcates at a small landing half way down the bowl. The two flights then descend against the battered Flemish-bond retaining wall of the lower part of the bowl, emerging on opposite sides of a stone paved area around the shaft top. All the stairs have square-section, wrought-iron handrails set in stone copings while the tops of both the shaft and the central column have wrought-iron spear top railings with urn and spear finials on the posts for the gates to the three staircases. The style of the present railings is Victorian.



Figure 15
The top of the Grand Shaft in 1998, showing the stairs descending the bowl-like depression from the Parade Ground, the railings and the entrances to the three staircases at the top of the shaft (NMR: AA008568 Crown Copyright 1999)



Tradition and anecdotal evidence have long held that the three staircases were provided for separate ranks ie respectively for *Officers and their ladies*, *Sergeants and their wives* and *Soldiers and their women*. This is reinforced by a map of 1884, which labels the staircases *Officers*, *Sergeants* and *Soldiers* (NMR: WD unref/a). This division conforms to the Queen's Regulations of this period, which expressly forbid fraternisation off-duty between Officers, Sergeants and other ranks. The Georgian army, however, was not so class-conscious and the shaft was clearly built originally to provide as quick a descent as possible for a large number of fully equipped infantry. Well-drilled soldiers could descend the stair from the Parade Ground, separated into two groups initially by a central handrail, then down the two separate stairs to opposite points at the top of the shaft. It would then be a simple matter to further divide, making for one of the three stairs of the shaft itself. No doors or gates appear to have been provided at the head of the three stairs, possibly to avoid hindering descending troops. However, at the foot of the staircases, semicircular arches with pintles in their jambs provide evidence for the mounting of gates or doors to close off the stairs. Two stairs, and the bottom of the central column, can also be closed off from the gallery by a gate hung on pintle hinges underneath a wrought-iron barred fanlight in the semicircular arched entrance to the column. This arrangement might pre-date the allocation of the stairs to different ranks and could suggest that one stair was used for everyday traffic with the other two kept for the emergency movement of troops. Scars in the jambs of the semicircular arched entrance to the gallery suggest that a pair of gates, probably beneath a fanlight, was installed in this position. These gates closed inwards and could have been closed behind troops withdrawing up the staircase.

B) THE ACCOMMODATION RANGES

The accommodation blocks were arranged around and overlooking the Parade Ground, as far as was possible conforming to the accepted plan of the period. All of these were built as part of the original Napoleonic design and comprised large austere blocks of double-pile plan. Construction was of brick, laid to English-bond with flat arch window heads, deep sashes and a half-hipped slate roof concealing a central valley. The buildings described below were all part of the Napoleonic barracks, except where stated otherwise, starting from the Parade Ground and proceeding up the combe slope. The functions of each building are taken from the 1858 and 1861 plans, except where stated otherwise (Figs 5 and 6).

The Soldiers' Quarters Range A

This was the smaller of the two soldiers' barracks, providing accommodation for 336 men and 21 NCOs in a 21 by 2 fenestrated bay block of three storeys (Fig 16). The block

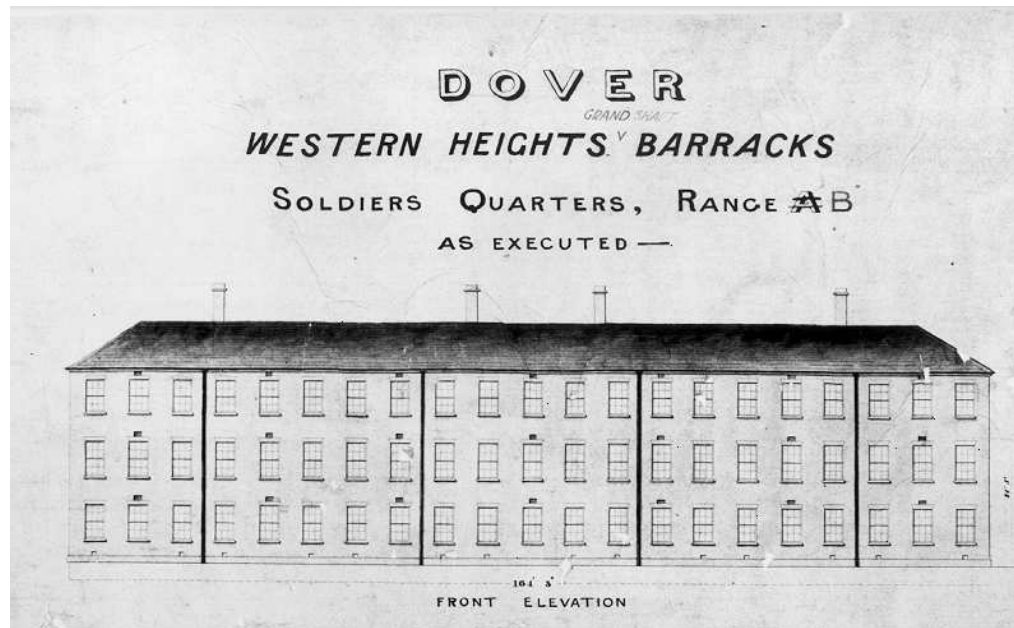


Figure 16
The Soldiers' Quarters
(Range A):
south-eastern elevation
in 1860 (extract from
NMR: WD/2452 ©
English Heritage)

was divided into 'flats' of three bays, each with its own door in the rear of the building. Opposite each door, across a paved alley, were the Ablution Rooms and Urinals contained in a single-storey range parallel to the main block. Each 'flat' was self-contained and had its own wooden staircase against the rear wall.

The site lies under the present car park and is very smoothed, with little visible on the surface. A shallow scarp, up to 1.0m high, betrays the underlying presence of the north-western and, possibly, the north-eastern walls.

The Officers' Quarters Range B

The Officers' Quarters was a structure of 9 by 2 fenestrated bays, in three storeys and a half basement (Fig 17). It was sub-divided into heated one-room quarters reached from axial corridors running from a central lobby and stair well. Access was gained from the ground floor in the rear elevation and via the basement in the front elevation. Judging by other surviving examples, this appears to be a standard plan for the period (eg Maidstone). A small enclosed yard was attached to the eastern end.

Today, only a scarp, 1.2m high, marks the change in level between the half basement on the south-east and the ground floor on the north-west. Additionally, a low bank, which presently flanks a modern path, may conceal part of the south-western end wall. A flight of steps survives on the northern side of what was the yard and gave access to the alley



alongside the rear elevation. The site of the eastern corner of the building, near its junction with the Officers' Mess, is a mass of confused mounds and hollows, indicating considerable disturbance.

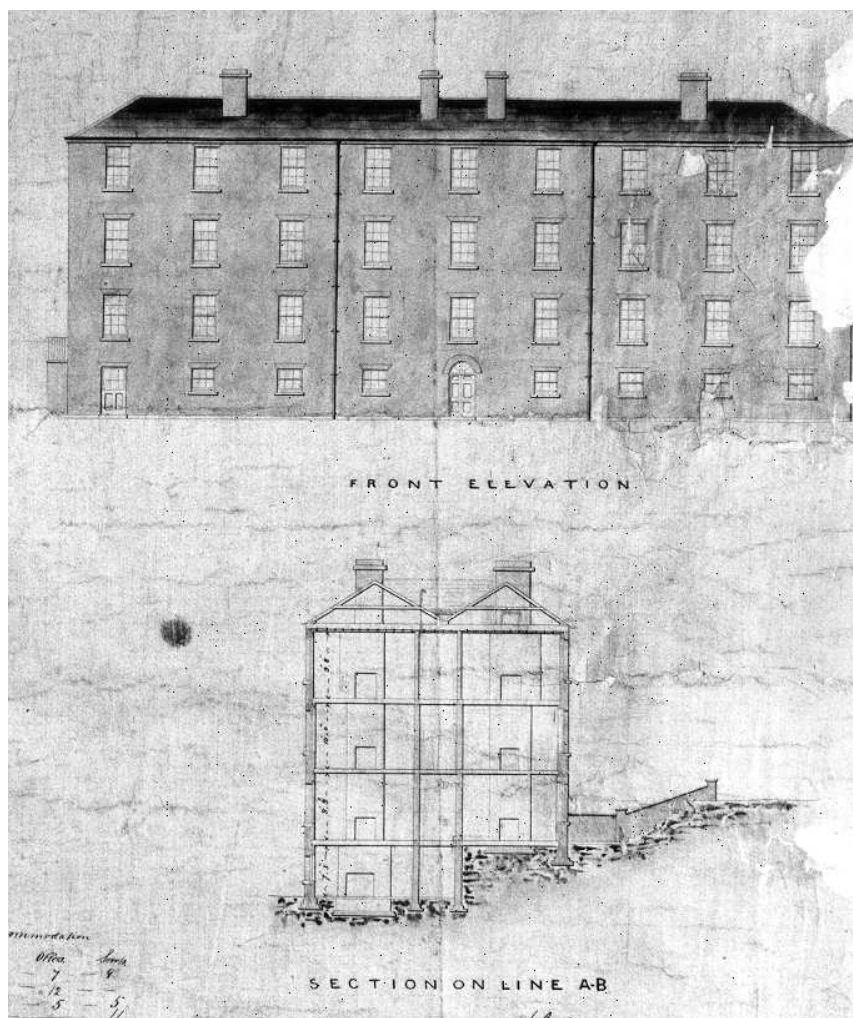


Figure 17
The Officers' Quarters
(Range B):
south-eastern elevation
and section in 1860
(extract from NMR:
WD/2446 © English
Heritage)

The Officers' Mess

This was set at a right angle to the Officers' Quarters Range B, adjoining the south side of the yard, and defined the north-eastern end of the Parade Ground. The site of this building is now divided in two by a trackway, but the northern half is clearly defined by a rubble-filled depression. A short section of brick walling, 0.8m high, is part of the north-eastern ground floor wall. Part of a cross-axial partition wall is visible in the track surface.

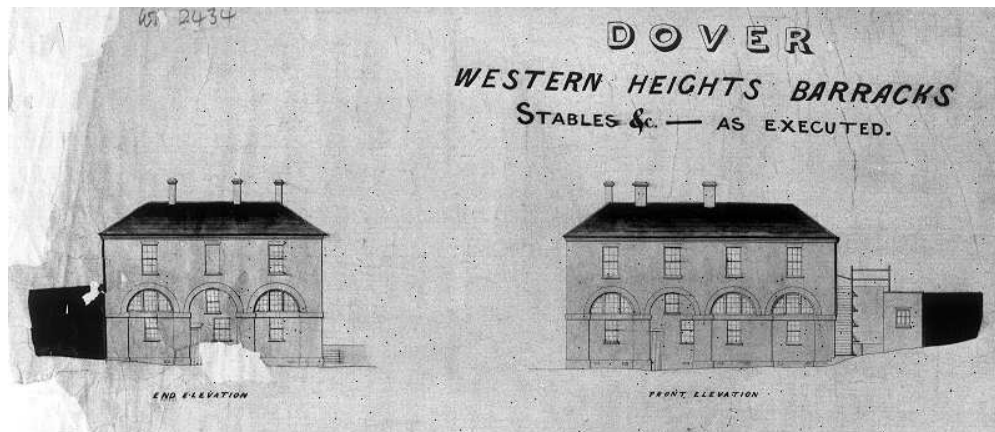


The Stables

The stables for the officers' chargers were placed in an L-shaped block to the east of the Officers' Mess. The 1860 plan shows a 3 by 1 bay, three-storey block with the stalls and the forage loft above, accommodated in an arcade of semicircular arches two storeys high (Fig 18). The third storey, conventionally fenestrated, accommodated a guardroom. Loose boxes and a further forage store were placed in a similar 2 by 1 bay wing making up the L. An enclosed yard was formed in angle of the two wings.

Nothing was certainly observed of this building, except perhaps a patch of stone setts in the surface of the present track, which originally may have been outside the south-eastern elevation. A concrete floor can be seen outside the site of the south-western elevation.

Figure 18
The Stables:
south-eastern and
south-western
elevations in 1860
(extract from NMR:
WD/2434 © English
Heritage)



The Soldiers' Quarters Range B

This huge structure provided accommodation for 480 men and 40 NCOs in a 35 by 2 fenestrated bay block of three storeys and a basement. The block was divided into 'flats' of three bays, each with its own door in the rear of the building (Figs 19 and 20). Opposite each door were the Cookhouses, Privies and Ablutions contained in a single-storey range running parallel to the main block. Each 'flat' was self-contained and had its own wooden staircase against the rear wall. This occasioned one of the two major criticisms of the barracks during the Barracks and Hospitals Improvement Commission visit in 1858, which noted that the staircases cut off a great deal of the light from the windows (the other obvious criticism was the co-location of the Privies and Cookhouse). The Commission noted also that all the barracks ceilings were lined with zinc; why is not clear. The basement contained stores and offices, with entrances in the front elevation.



Figure 19
The Soldiers' Quarters
(Range B), shortly
before demolition. The
size and sombre nature
of the barracks is
apparent (d08611 ©
Dover Museum)



Of the south-western two-thirds of this building, little is visible: a prominent but graded scarp, 1.8m high, marks the north-western edge of the terrace on which the block stood but is, in part, the product of cutting away the terrace revetment wall. Parallel and to the south-east is a second scarp on the line of the principal internal axial wall and probably results from its removal. Part of the south-western end wall to the basement, in yellow stock brick laid to English bond, survives.

However, the north-eastern third has fared better, with the survival of most of the basement level which, in 1865, was occupied by three rooms; a large Bath Room on the north-east, and two Store Rooms. There are remains of the north-western, north-eastern and south-western walls of this level, mainly in yellow stock brick laid to English bond and formerly rendered. Although most of the render has fallen off, the pick marks in the brickwork, made to give the render a good hold, are visible. The basement level is reached down a flight of stone steps which originally led to a corridor; the steps have been given a concrete screed and iron anti-slip bars along the leading edges; a concrete drainage channel has been let into the steps on the wall side. The north-western wall is a revetment for the terrace and the steps originally led into a corridor. Only a stub of the other wall, 0.58m wide, projects from the north-eastern wall, preserving a short section of the corridor, in the end of which is a blind recess at floor level. The recess is 0.77m wide and 1.62m deep with a shallow brick relieving arch augmented by an inserted RSJ. The recess is clearly pencilled onto the 1865 plan and is therefore later. The north-eastern

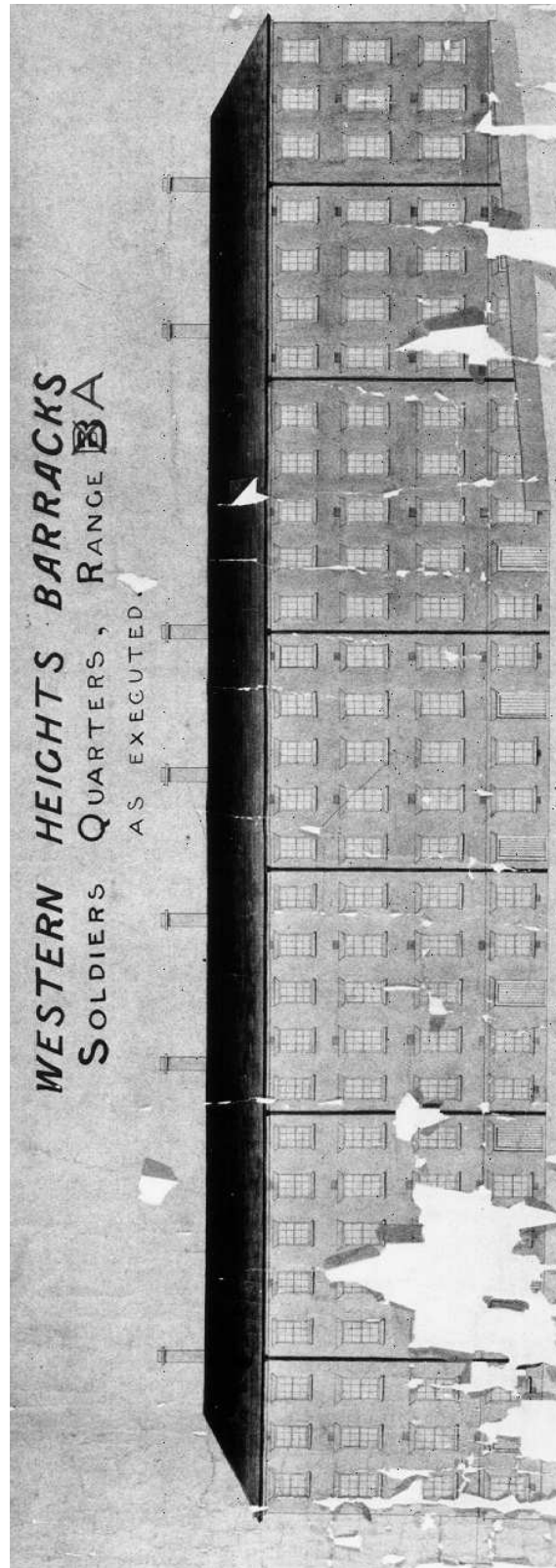


Figure 20 *The Soldiers' Quarters (Range B): south-eastern elevation in 1865 (extract from NMR: WD/2453 © English Heritage)*

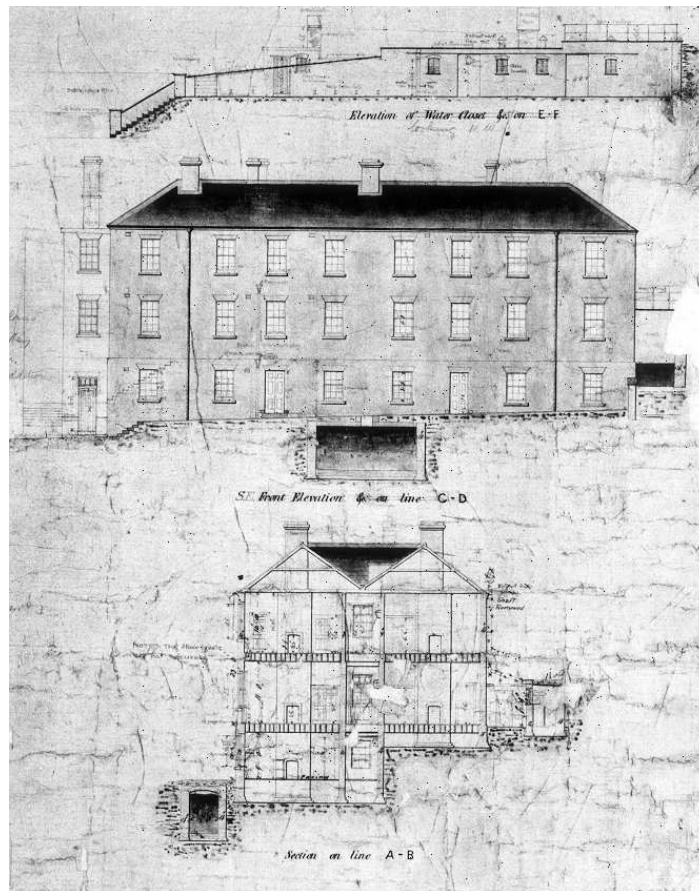


Figure 21
The Staff Sergeants' Quarters: south-eastern elevation and sections in 1865 (extract from NMR: WD/2449 © English Heritage)

wall is the end wall of the whole block; it contains a single recess, 0.76m high by 0.66m wide and 0.47m deep, with a sandstone lintel: probably for a lamp. The south-western wall is an internal partition and survives up to 2.5m high: remains of render stops conspicuously two courses from the top and there is a crudely inserted horizontal slot, 0.93m wide and 0.07m high, at high level.

Above and alongside the north-western wall is another corridor

2.04m wide, at ground floor level, defined by a brick wall 1.95m tall. This corridor formerly provided access to the Ablution rooms behind the main block. At its north-eastern end, a flight of steps leads up onto a concrete surface formerly separating this block and the Staff Sergeant Quarters to the north-east. The steps are in stone, with lead plugs for iron railings at the edges, but they have been repaired with concrete and cream-coloured non-slip tiles (by Doulton and Co, Lambeth, London).

The Staff Sergeants' Quarters

This was an 8 by 2 bay building of two storeys and a half basement (Fig 21). It was divided into single, heated rooms, with three bays at the north-eastern end occupied by a Library (first floor), Mess (ground floor) and Kitchen (basement). To the rear was a range of Privies. It stood in June 1942 but by August 1945, had been demolished, possibly by enemy action, and replaced by two single-storey structures, probably Nissen huts (NMR: HLA/574/64-5; 106G/UK/610/6360-1).



The site of this building is divided by a strong scarp, 2.0m high, in part reflecting the stepped double-pile plan of the original structure, with the half basement on the lower level. However, the step was probably accentuated by works for the two Second World War buildings and a large concrete floor, 48.0m by 12.0m, belonging to one of them, takes up most of the lower level.

On the upper level is a recessed section of the north-western terrace revetment wall, 2.32m high, and its curved corner into the north-eastern wall, standing 2.73m high. The revetment wall has three vertical render strips, each 0.4m wide, marking the former positions of partitions, as it housed Privies. Beyond the western strip are three holes cut in the brickwork, one above another and each 0.35m tall by 0.25m wide. There is no trace of the Second World War building.

The Bread and Meat Store (Fig 22)

A small rectangular brick building with a slate roof, well-ventilated and provided with a verandah to provide air and shade, constructed between 1868-9 on a platform north-east of the Staff Sergeants' Quarters (NMR: WD/ 2408A). It was also demolished during the Second World War. Only the platform is visible, reached by two flights of concrete steps, one with brick flanking walls.



Figure 22
The Bread and Meat Store, south-east elevation as drawn in 1869 (extract of NMR: WD 2408A © English Heritage)

The Field Officers' Quarters, Range A

This building, on the highest terrace of the Napoleonic design, was virtually identical to the Officers' Quarters Range B, although there were some suites of three or four rooms, probably for higher ranking occupants. There was a small enclosed yard on the north-eastern end (Fig 23).

The building outline is visible; the north-western ground floor wall is an eroded foundation; the south-western basement wall stands to 1.1m, rendered internally; a slight scarp covers the foundation of the south-eastern wall. Inside, a steep scarp, 1.6m high, results from the removal of the main internal wall between the half basement and ground floor, and from it a projecting bank probably covers a cross-axial internal partition wall. Outside the north-eastern end, a cut in the terrace probably marks the site of steps, while a squarish platform marks the site of the yard.

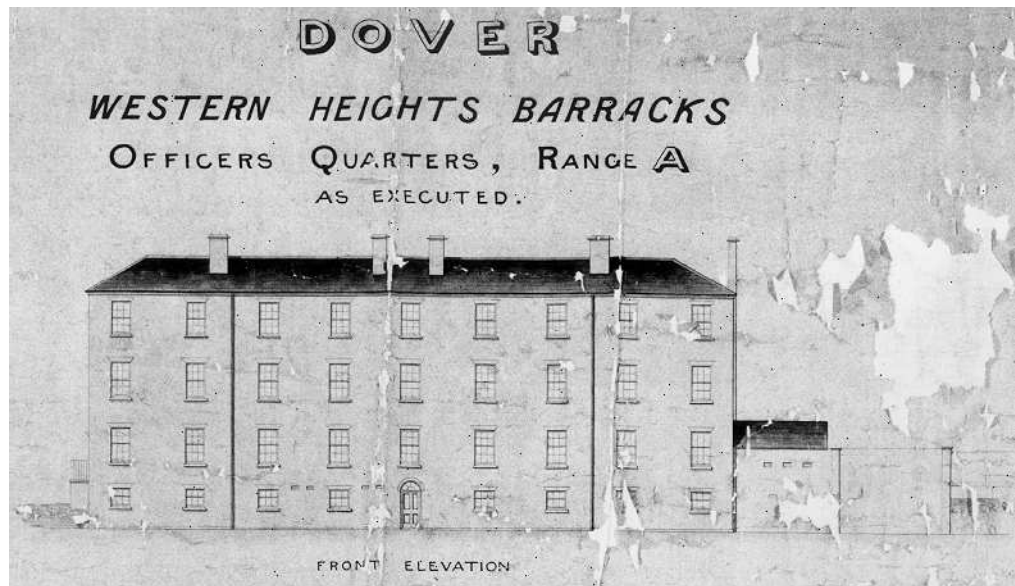


Figure 23
The Field Officers' Quarters: south-eastern elevation in 1860 (extract from NMR: WD/2445 © English Heritage)

The Gymnasium

The gymnasium was built on a new terrace north-west of the Field Officers' Quarters between 1867 and 1868. It was a brick-built two-storey hall of 10 by 4 fenestrated bays with a pitched slate roof (Fig 24). There were offices, with a gallery over, at the south-western end. In common with other early army gymnasia it had a centrally placed lantern and flanking lights to illuminate the gymnasium floor and substantial queen-post trusses to support apparatus (Douet 1998, 146).

The site of the gymnasium occupies two-thirds of a large platform, now littered with brick rubble that is, in places, several feet deep. This exceptional depth reflects the fact that the building was simply demolished and the rubble left on site. Fragments of the walls protrude at the eastern corner and along the north-eastern side, in yellow stock brick laid to English bond. Most of the south-eastern wall is concealed by a brick-strewn scarp, 1.0m high. An enormous scarp defines the north-western edge of the terrace and let into the north-eastern end is a small two-celled Privy with a flat slate and concrete roof. Inside are remains of a WC and a double ceramic urinal.

The southern third of the terrace was an open area in front of the gymnasium, probably for outdoor exercise. A free-standing wall, 0.36m wide, at the north-eastern end of the terrace stands to its full height of 2.75m, with buttresses on the north-eastern face. It was probably for raquet ball games.



Figure 24: The gymnasium, south-east elevation as drawn in 1871 (extract of NMR: WD/2414 © English Heritage)

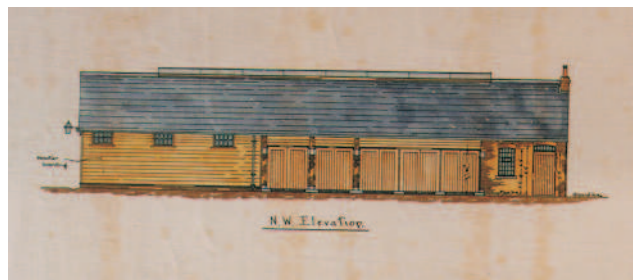


The Troop Stable/Mobilization Equipment Store

A Troop Stable occupied the top terrace in 1889 (NMR: WD 2300). In 1899, it was rebuilt to for a new function in accordance with the Mobilisation Centre policy of the late 19th century, to aid the rapid deployment of troops and equipment in the event of an invasion (Fig 25). Identical buildings were provided at both South Front Barracks and the Citadel. The new building was a light construction of wood and some brick with a

louvred slate roof, retaining a stable for eight draught horses at the north-eastern end. The new elements comprised a wagon and machine gun shed in the centre and a general mobilization equipment store at the south-western end.

Figure 25
The Troop Stable and Mobilization Equipment Store, NW elevation, as drawn in 1903 (extract of NMR: WD 2435 © English Heritage)



This building was demolished in 1997. Very little now remains: a short length of revetment wall against the scarp to Drop Redoubt Road that seems to have formed one side of a detached storage bay; and a patch of concrete floor.

C) THE ANCILLARY BUILDINGS

Most of the original ancillary structures, comprising stores, canteens, workshops, gardens etc, stood to the west of the main steps. The platforms on which these were built, along with fragments of walls and floors, are visible on four artificial terraces cut into the steep slope. Although the area is now heavily wooded and overgrown, the remains of many structures can be identified. Most of the ancillary buildings were arranged originally on two parallel terraces (the LOWER and INTERMEDIATE TERRACES, with a single building on a third terrace (the MIDDLE TERRACE). A fourth terrace (the UPPER TERRACE) was added in the late 1860s to accommodate Married Soldiers' Quarters and a Laundry.

THE LOWER TERRACE

On the lower terrace there were a series of structures, originally free-standing, but by 1925, the gaps between them had been filled with further additions and extensions. The result was a continuous range of buildings facing onto the main steps (NMR: WD unref/b). From the southern end, they are as follows:



The Soldiers Privies

At the south-western end of the Parade Ground, a deep vertical cut was made into the hillside and faced with a very high revetment wall. This wall, which is ramped down to the cliff edge, is an admirable piece of bricklaying, incorporating an elegantly curved western corner. It contains a single original doorway, 2.15m high and 0.92m wide, with an internal rebate for a wooden door surmounted by a shallow segmental arch of stretchers; alternate bricks are grooved to look like headers. The doorway gives onto a short vaulted passage, 2.32m long and 1.14m wide, with a single step up half way along. Off the south-eastern side of this passage is a semi-sunken barrel-vaulted chamber reached through a semi-circular archway whose lintel was at waist level, 1.04m from the floor; but now removed. The chamber, now partly filled with rubble, has patchy remains of rendering on the walls, and a ceramic pipe enters the vault on the south-western side. It appears to have been a septic tank, probably serving the Privies associated with the Guard House on the terrace above.

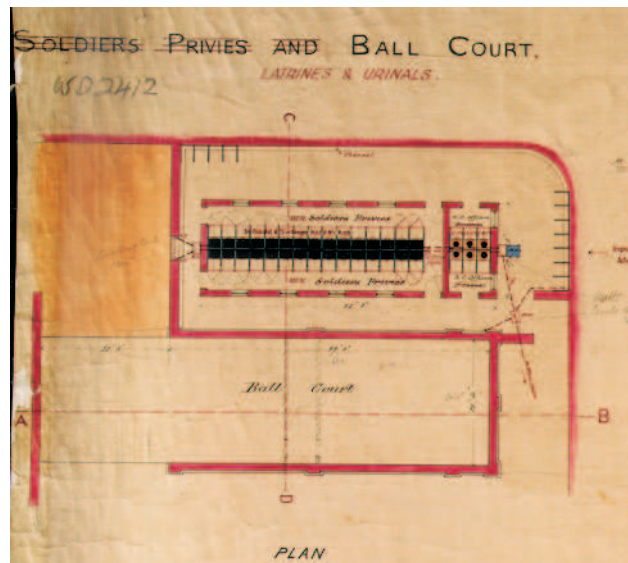


Figure 26
The Soldiers' Privies and Ball Court, as drawn in 1867 (extract of NMR: WD 2412 © English Heritage)

Adjacent to the doorway, two secondary brick piers formerly supported a water tank associated with the Privies. The piers, 2.3m high, are built against the wall and project 1.05m at the base. The tops are flat and spanned by an RSJ, while iron T-bars protrude from the pier ends.

In the angle formed by the revetment wall, little remains visible of the free-standing

rectangular privy building as shown on a plan of 1867 (Fig 26). It was surrounded by screen walls and the broken stub of one such wall can be seen protruding from the main revetment. There were also two groups of urinal stalls against the revetment on the north-west and south-west: three vertical strips of brick and slate mark the site of the former but both sets are obscured by later latrine facilities comprising rendering, ceramic urinals and twin metal brackets for flush cisterns.



The Ball Court

Originally for handball, this stood next to the Soldiers Privies (Fig 26). In 1929, it was subdivided to include a squash court (NMR: WD/2427).

Part of what is probably the north-eastern wall of the ball court, 0.65m wide, can be seen in the surface of the car park.

The Well House

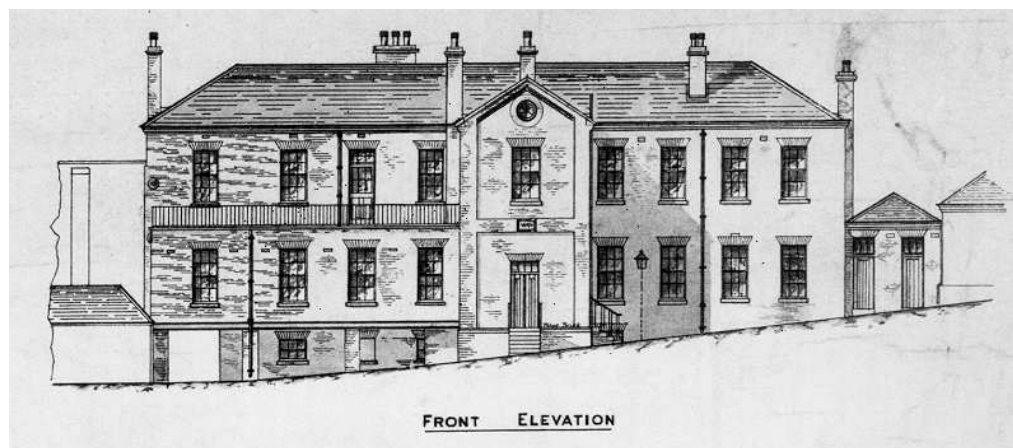
This stood adjacent to the Ball Court and a small patch of vegetation marks its location. A temporary barrier of scaffolding poles encloses the well head.

The Canteen and Regimental Institute

The Canteen was located on the south-western side of the Parade Ground, an unusual location probably occasioned by the already compromised design of the Barracks. It may have been provided to replace the primitive cooking arrangements in the barrack ranges, and therefore anticipated one of the main requirements of the 1858 Commission. After 1861, it doubled as the Regimental Institute. It was a single pile, two-storey building of 9 by 3 fenestrated bays, with a half basement at the south-eastern end. The central bays on both the front and rear elevations projected outward, the former acting as a stair, the latter a porch etc. The building was altered in 1891 and 1899 (Fig 27).

The remains of this building comprise a terraced platform, with a curving scarp, 1.1m high, at the south-eastern end. This scarp is modern and cuts through the half basement level: the original south-eastern wall can be seen in the car park, flush with its surface.

Figure 27
*The Canteen and
Regimental Institute,
north-eastern elevation,
as drawn in 1903
(extract from NMR:
WD/2416 © English
Heritage)*





Part of the north- eastern wall is visible, almost concealed by a scarp. The south-western side of the platform is reveted by a brick wall up to 2.8m high, near the centre of which are remains of the projecting central bay at the rear of the building, comprising parts of the side walls and a round-headed relieving arch, 2.0m wide and 1.8m tall; part of a lobby in 1903 (NMR: WD/2416). The revetment wall to the south is battered in largely original brickwork, which to the north is vertical and rebuilt in a mixed bond. The lower courses of the south-western wall of the building remain visible, along with the concrete floors of small yard areas between it and the revetment wall. There are iron supports for a tank or cistern in the north-western corner.

The Cook Houses and the Wash House

North of the Canteen were two Cook Houses, with a Wash House between. They were free-standing buildings of single pile plan and all three, like the Canteen, anticipated the requirements of the 1858 Commission.

The north-western, south-eastern and north-eastern walls of the first Cook House are visible, standing up to 1.4m high, but the latter deteriorates to a scarp. The south-western wall is barely visible on the surface of the platform but the revetment wall beyond it is up to 3m high, rebuilt with yellow stock brick in English bond over red brick in a random bond in its lower courses. Remains of a concrete floor lie between the revetment wall and the south-western wall.

The area north-west of the Cook House was originally open but by the late 19th century, it was occupied by a small building: the revetment wall, up to 2.3m high in very mixed brickwork, incorporates vertical strips of single headers and the broken stubs of vertical slate slabs. The latter look like urinal stalls but the site is known to have been a Printers Store (NMR: WD unref/a).

The Wash House, which was converted to an Ordnance Store Department Workshop (NMR: WD unref/a), has left very little surface trace: visible only are parts of the south-eastern and north-eastern walls, up to 1.4m high. The battered revetment wall on the south-west, up to 2.5m high in English bond, is partially hidden by rubble.

The second Cook House is partially obscured by soil erosion from the slope to the south-west. However, there are two short sections of wall on that side, both around 1.0m high: one is part of the building, the other part of the terrace revetment.



The Armourer's and Tailor's Shops

This building also contained a Warrant Officer's Quarters (NMR: WD unref/a). Nothing is visible on the surface but immediately to the south-west is a ramped way, which led up to buildings on the intermediate terrace: it is now defined by a scarp which has partially eroded over the site of the building itself. The opposite side of the way has a concrete revetment wall, probably of Second World War date, incorporating circular ceramic drains: the butt joint between the concrete and the brick revetment wall of the lower terrace is clear.

Outside the south-eastern end, there is a short section of wall, 1.3m high, with a north-western return, faced internally with white tiles. This is another example of filling in between the original buildings, though its purpose is not known.

The School Master's Quarters

This building subsequently contained accommodation for a Staff Sergeant (NMR: WD unref/a). Nothing is visible on the surface but behind the site is the terrace revetment, up to 2.25m high and predominantly battered, in yellow stock brick laid to English bond. An edge-set header course, 1.53m from the base, suggests that the terrace was heightened at some time. The wall contains inserted circular drains of about 0.2m diameter formed from semi-circular moulded bricks. In the centre of the revetment is a short length of vertical walling which protrudes slightly from the battered wall; the stub of a light wall, one stretcher thick, returns to the north-east from its northern edge. At the north-western end of the revetment, a stairway ascends to the intermediate terrace. The steps are mainly in concrete and slate, each tread 1.85m wide, and flanked by high brick wall that continues across the intermediate terrace.

The Barrack Stores and the Barrack Warden's Quarters

This was a single pile, two-storey building with a three-quarter basement, of 6 by 2 fenestrated bays with a pitched slate roof. The northern half comprised living accommodation on two floors (Fig 28).

The principal remains comprise parts of the south-western and south-eastern walls, in red brick laid to English bond. Much of the north-western end is obscured by rubble. The terrace revetment wall is battered and refaced in concrete with circular ceramic drainpipes. A gap in this wall leads to a small brick chamber, 1.55m by 1.24m wide, on the terrace above.

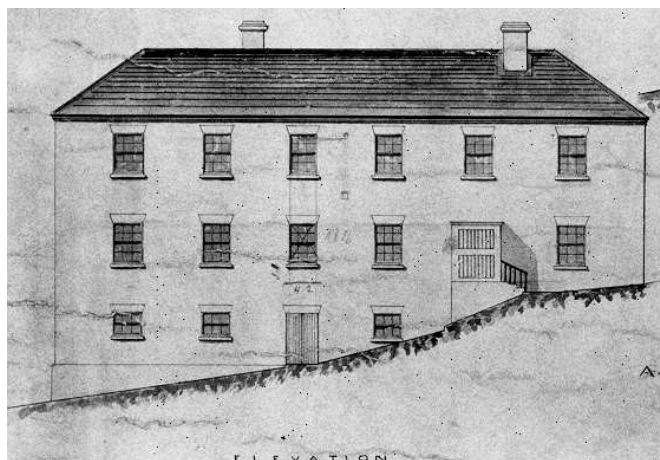
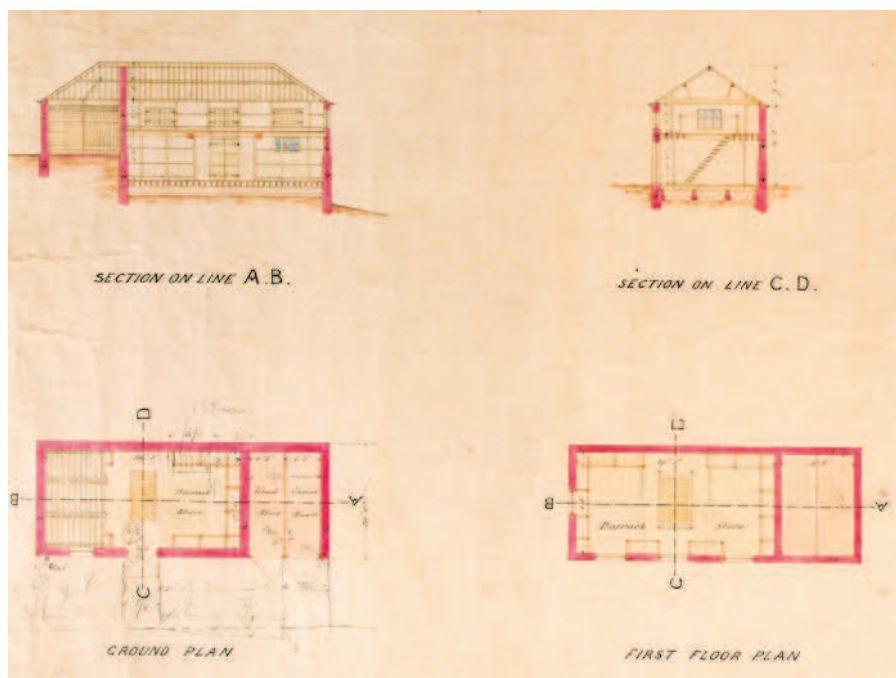


Figure 28 (left)
The Barrack Stores and Barrack Warden's Quarters, north-eastern elevation, as drawn in 1856 (extract from NMR: WD/2407 © English Heritage)

Figure 29 (below)
The Barrack Store No 2, as drawn in 1867 (extract of NMR: WD/2408 © English Heritage)



The Barrack Store (No 2)

In 1867, this structure was a large two-storied large storehouse, with a single-story Wood Store and an Engine House in the north-eastern end (Fig 29). There had been little change by 1889 (NMR: WD 2300). It is defined by a platform, although no walls are visible, with rubble scarps 1.3m and 1.0m high on the south-east and the south-west respectively.



The Commissioned Officers' Quarters/Barrack Warden's Quarters

This was a detached residence with a garden laid out on its south-western side along the intermediate terrace (NMR:WD/2300). The site of this building lies behind Barrack Store No 2 in a deep cutting reveted on the north-west and south-west by high brick walls up to 3.0m high, laid to English bond. The north-western wall has a butt joint, west of which the brick is rendered and a brick pillar has been inserted in the corner: this short stretch was the northern end wall of the building proper: all the remaining walls are revetments for the cutting. East of the butt joint, red brick is used in place of the yellow stock brick elsewhere.

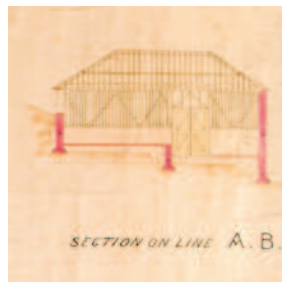


Figure 30
The Straw Barn, as drawn in 1867 (extract of NMR: WD/2408 © English Heritage)

The Straw Barn

This building, of brick and timber, was built on a split level and terraced into the hillside (Fig 30). Today, its site is marked only by a platform, with a prominent scarp on the south-eastern side, 1.2m high.

THE INTERMEDIATE TERRACE

Working from the south, buildings are as follows:

The Guard House

A footpath from Archcliffe Fort formerly approached the barracks from the south-west. Where it entered the barracks there was a Guard House, a two storey brick building of 7 by 2 fenestrated bays, with a pitched slate roof. In customary fashion, the ground floor was divided into a lock up, guardroom and cells and in common with many guardhouses it had a verandah to shelter the guard in wet weather. The first floor was divided into an

officer's room, orderly room and court martial room (Fig 31).

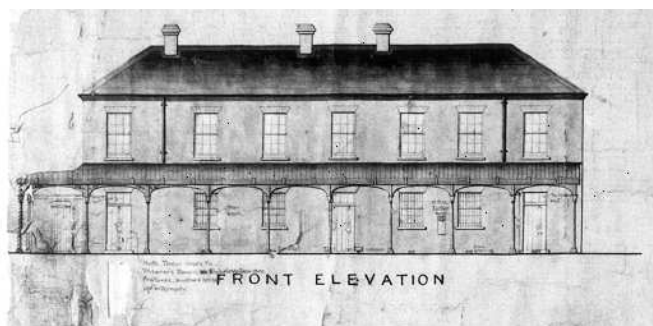


Figure 31
The Guard House, north-eastern elevation, as drawn in 1861 (extract from NMR: WD 2405 © English Heritage)

The site is now overgrown and only a fragment of the south-western wall could be seen. However, the terrace continues to the



south-east of the Guard House for another 25m, right to the cliff edge, though only a very small store building stood there (NMR: WD unref/b).

The Guard House Privies and Magazine

A row of privies were set back into the bank behind the Guard House and these survive in good condition, complete with roof. They are constructed in yellow stock brick laid to English bond, with stone floors. There are five barrel-vaulted cubicles, three single and two double, each entered through a tall entrance with a rubbed brick lintel over; originally closed by wooden doors with lights over, except the fourth from the south, which was a urinal without a door. From the south they were: Officer's Privy; NCOs' Privy; a common Privy; a Urinal and the Prisoners' Privy. Inside each are various remains of ceramic urinals and WCs (Figs 32-34).

The magazine, which contained powder for the entire barracks, is adjacent to and continuous with the Guard House Privies, separated only by a butt joint and slightly set back. It was constructed under the hillside, its roof asphalted to prevent percolating water and bomb-proofed by the earth above it (Figs 33-4)



Figure 32
*The Guard House
Privies in 1999 (NMR:
AA99/01924 © English
Heritage)*

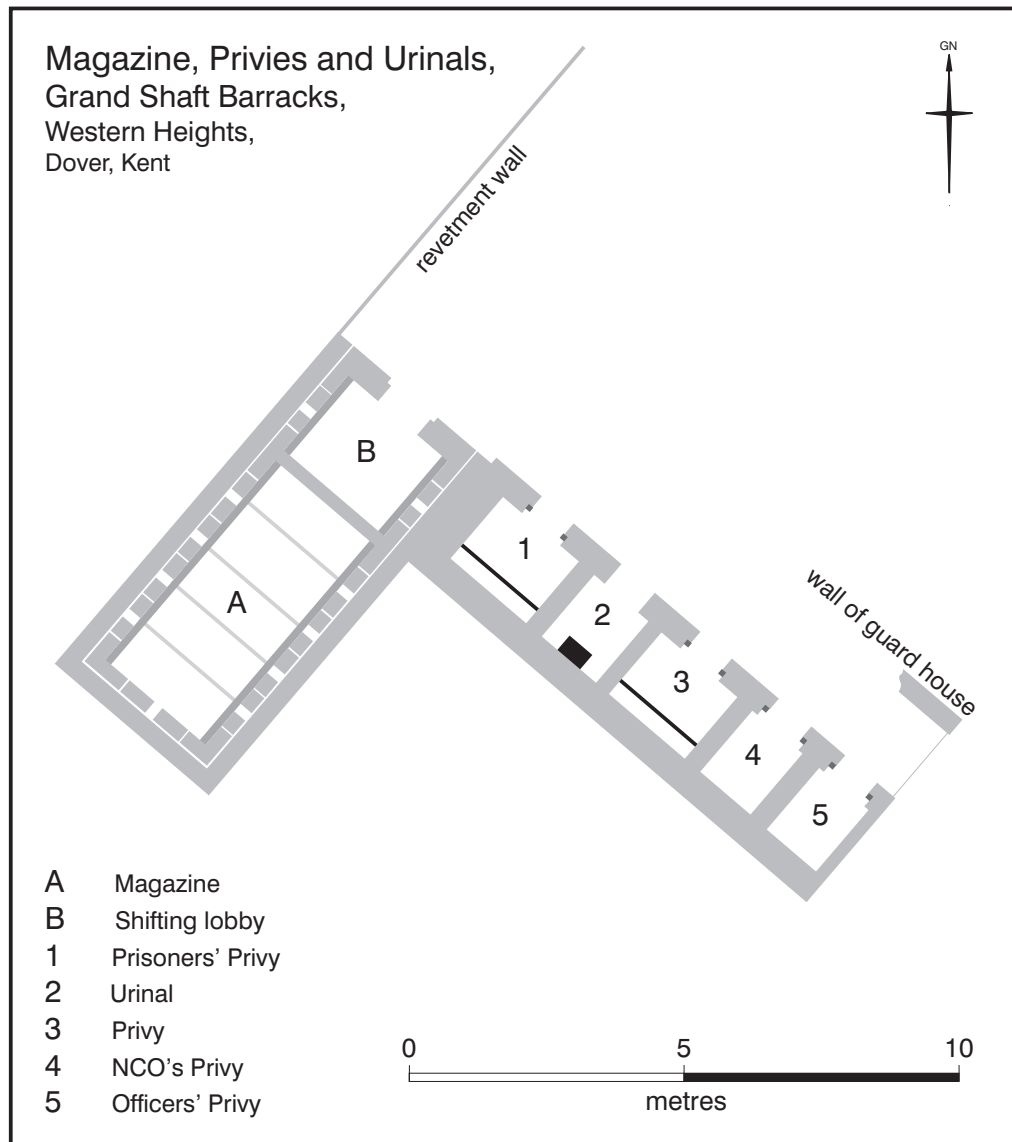
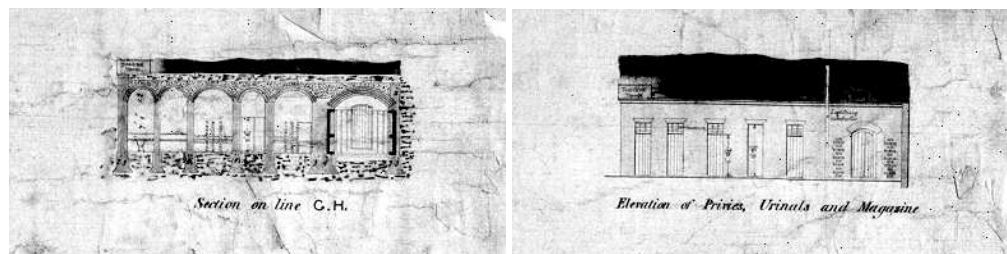


Figure 33
*The Guard House
Privies and
Magazine in 1999*
(© Crown
Copyright)

Figure 34
*The Guard House
Privies and Magazine,
section and north-east
elevation, as drawn in
1861 (extract of NMR;
WD/2405 © English
Heritage)*



The magazine is of similar construction to the Privies, in yellow stock brick laid to English bond. The entrance, in the centre of the elevation and now damaged, is rebated for double inward opening wooden doors. Over the entrance is a shallow segmental arch

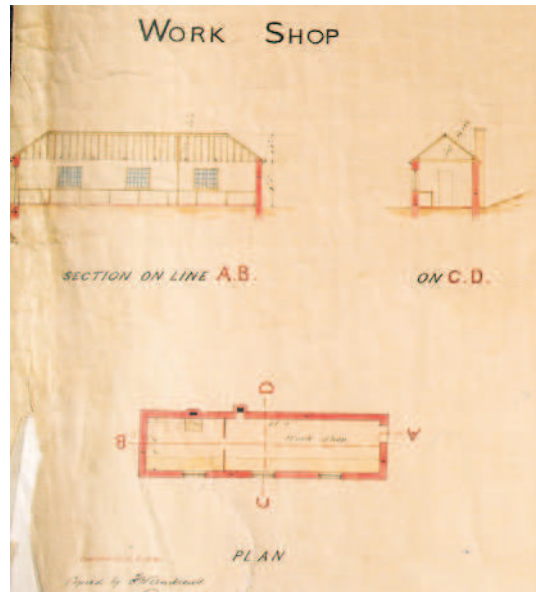


Figure 35
A Workshop, as drawn in 1867 (extract of NMR: WD/2412 © English Heritage)

in rubbed brick with incised lines halving the bricks. There is a concrete sill to the doorway and glazed airbricks to the cavity on each side.

Internally, the construction is entirely brick with glazed airbricks to the cavity. It is sub-divided into an outer Shifting Room and an inner Magazine, separated by a partition wall one stretcher thick. In both rooms there is an offset course, the former support for a raised timber floor that helped to keep munitions dry. The walls, 2.3m high above this floor, have gaps of one

header arranged in vertical lines and small timber slats built into the pointing gaps: these supported a timber lining and storage racks. The whitewashed ceiling is a shallow barrel vault, 2.94m high, springing from a course of sandstone slabs on the wall tops.

The Workshops and the Wash House

Three small single storey brick buildings, constructed probably during the Napoleonic phase, stood in series immediately north-west of the Guard House and are shown on a plan of 1867. These were respectively an Armourers' Shop, a Workshop and a Barrack Sergeant's Wash House (Figs 35-6). Although the area is quite overgrown,

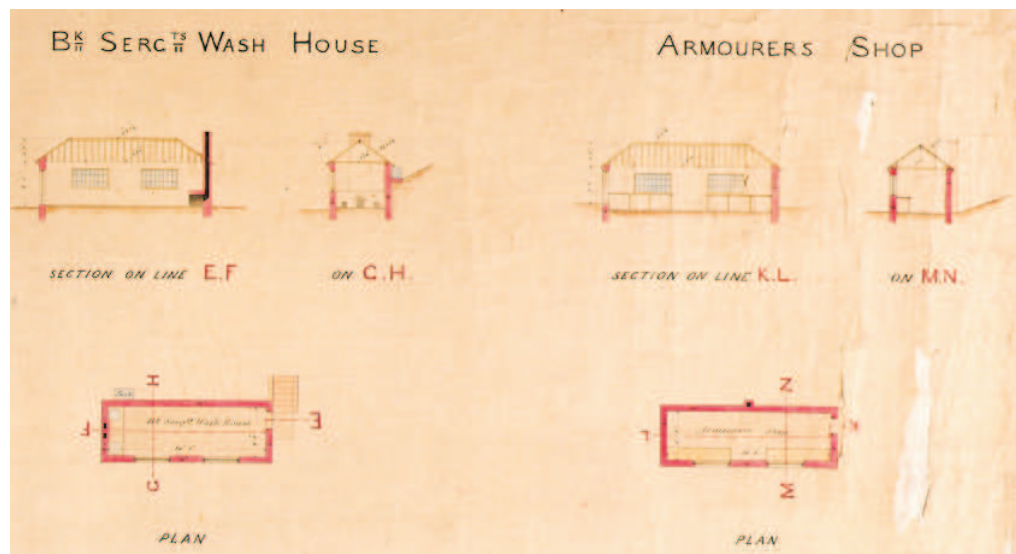


Figure 36
The Barrack Sergeant's Wash House and the Armourer's Shop, as drawn in 1867 (extract of NMR: WD/2412 © English Heritage)



there did not seem to be any surface remains except for part of a flight of brick steps near the north-western corner of the Barrack Sergeant's Wash House.

Gardens

There are two platforms, defined by the prominent, 2.0-4.0m high scarp of the intermediate terrace, immediately south-west of the Armourer's/Tailor's Shops and School Master's Quarters. On the Tithe Map of 1844 and on a plan of 1889, both areas are shown as gardens for the Barrack Master's Quarters (Fig 37). The southern platform was enclosed on the north-west and south-west by a brick wall. The wall dividing the gardens is intact, in red brick laid to English bond.

THE MIDDLE TERRACE

The majority of this terrace contains no visible structures and probably never did; perhaps suggesting that the terracing was made before the exact building layout had been determined. Only one building stood on the terrace in the original design; the Clerk of Works Quarters, at the very northern end of the terrace, with walled or fenced gardens extending to the south-east. The terrace continues for 90m to St Martin's Steps, with few visible features but much brick rubble, except for an isolated brick shaft, 1.2m by 1.0m and 1.2m tall, which does not seem to be *in situ* but rather, may have tumbled from the upper terrace. The terrace continues beyond St Martin's Steps, where two slight overgrown hollows suggest the former existence of other buildings, of unknown date and function. The only other features on the terrace are of Second World War date.

The Clerk of Works Quarters

This was quite an elaborate residence with its own gardens (Fig 37). It had been demolished before 1942 and a single, Nissen-type building erected on its site (NMR: HLA/574/64-5). The house was approached along a track descending from Drop Redoubt Road and a path from the top of the main steps: both routes remain as woodland paths, carried in a cutting and along a terrace respectively. The site is very overgrown and there is very little sign of the house but there is a level platform contained by the massive terrace scarps on the south-west and north-east, with smaller scarps, 0.7m and 1.0m high respectively, defining the north-western and south-eastern edges. Part of a revetment wall, 1.2m high, is just visible on the south-west where the rest has been covered by erosion of the terrace scarp itself. A similar evetment scarp exists on the north-east and has been re-faced with a thick layer of concrete, probably of Second World War date: at its north-western end is the top of a shaft or drain. In the centre of the platform is a

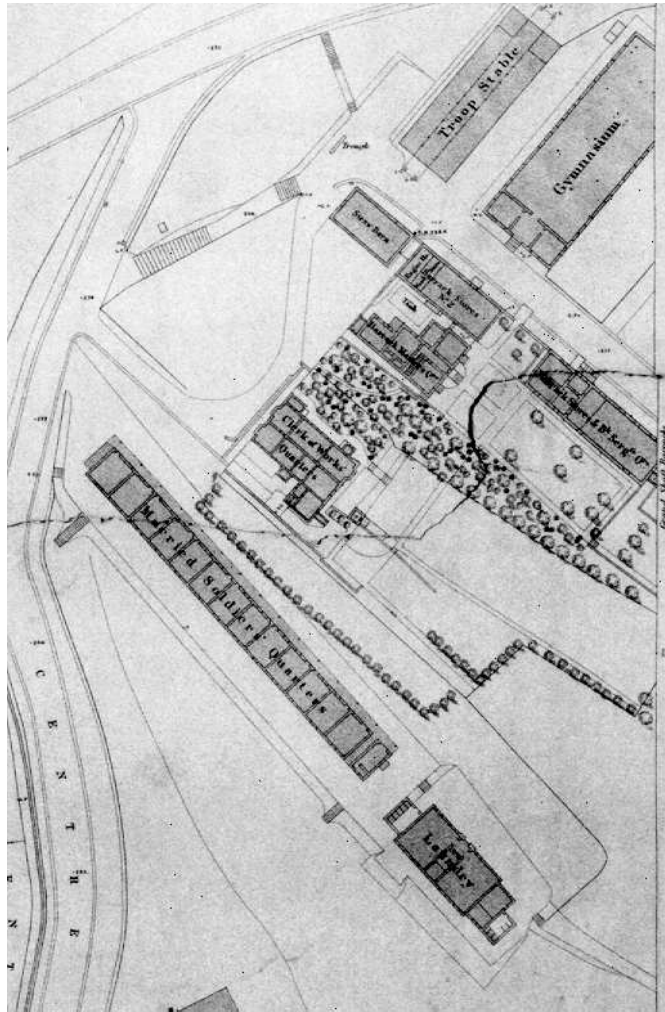


Figure 37
The Gardens associated with the Barrack Master's Quarters and the Clerk of Works Quarters, in 1889. The Married Quarters and Laundry lie to the south-west (extract of NMR: WD/ 2300 ©English Heritage)

concrete floor, rebated at the edge to take a course of brickwork, the base of the Second World War building.

The Second World War deep shelter and guard post

A shelter was constructed under the hill as a refuge against the prolonged shelling and bombing to which Dover was subjected in the Second World War. The entrance has been sealed off but the approach is visible, cut back into the terrace scarp. The splaying sides of the cut have been revetted with ramped red brick wing walls. Two blast walls, one butted to

each wing wall, prevent a direct approach to the entrance by leaving only narrow gaps on opposite sides. There is a tall façade at the entrance and a large concrete lintel is just visible. Behind the façade, the ground has been deliberately collapsed into the tunnel, leaving a small crater.

On the terrace near the deep shelter entrance is a small semi-sunken Guard Post of similar date, approached down a short flight of concrete steps with brick side walls. It is in identical red brickwork, with walls 0.23m thick, and a slightly overhanging concrete roof, 0.15m thick, which slopes very slightly to the north-east. The interior is a single rectangular room of 3.08m by 1.82m, with the entrance rebated for a door and an observation slit, 1.32m long and 0.47m high, in the north-eastern wall overlooking the barracks. The south-eastern wall has a vent and flue for a stove and the southern corner is



broken out and lined with angled brickwork, emerging outside in a small concrete-lined hole.

Just to the south-east is a small shaft, one brick thick, 0.96m by 0.58m by at least 0.8m deep. The north-east wall has deliberate gaps in the brickwork and probably formed a soakaway for a latrine.

THE UPPER TERRACE

This terrace was constructed in the late 1860's. At the time of survey, it was very overgrown and therefore not thoroughly investigated. However, it appeared to have no obvious visible remains, and the terrace appeared to be eroded and graded. It originally supported two structures:

The Married Soldiers' Quarters

Built in 1869-70 of brick with a pitched slate roof, this two-storey range provided quarters for 26 families, each in a one-room apartment with a covered verandah. Each apartment contained a cupboard and a fireplace with a small range. Stairs at the north and south ends of the range reached the first floor apartments and a sink and ash bin were provided in a separate room at the south end of the range (Fig 37-8).

Figure 38
The Married Soldiers' Quarters, north-east elevation, as drawn in 1870 (extract of NMR: WD/2466 ©English Heritage)



The provision of single room apartments with a first floor verandah conform to the model plan prepared in 1860 by the office of the Inspector General for Fortifications, and first implemented at Hounslow. At Grand Shaft Barracks, the location of the married quarters some distance from the barracks may either be a result of using the only site available by 1869 or the desire to separate families from the rough soldiery (Douet 1998, 145).

The Laundry

Constructed of brick with a slate roof in 1869-70, this building stood to the south-west of the Married Soldiers' Quarters (Figs 37, 39). The central block housed the Laundry and



Figure 39

The Laundry for the Married Soldiers' Quarters, north-east elevation, as drawn in 1870 (extract of NMR: WD/2466 ©English Heritage)



Wash House facilities, while smaller wings contained ablutions and latrines for men, and for women and children respectively.

D) MISCELLANEOUS BUILDINGS

The Miniature Rifle Range

This was built in 1936-7 on the site of Drop Battery, just to the north-west of the main barracks area.

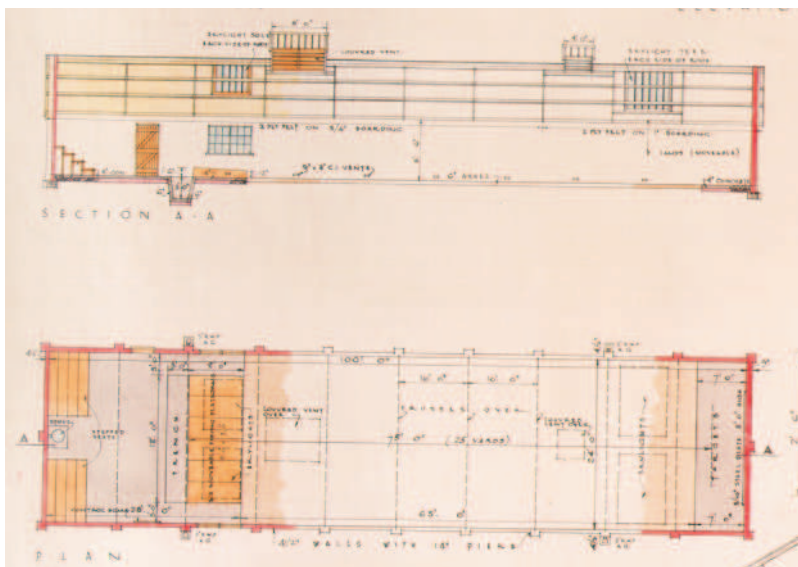


Figure 40

The Miniature Rifle Range, built in 1936-7 (extract of NMR: WD/2423 ©English Heritage)

It was a short range some 25 yards in length, contained in a rectangular brick building of slight construction and a pitched felt roof ventilated with louvres (Fig 40).

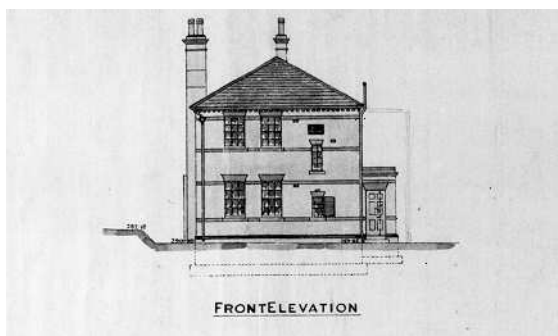
The Officers' Houses

Two substantial detached houses, north of Drop Redoubt Road and behind the North

Lines, were built to provide comfortable accommodation for higher ranking officers. The first, built in 1899 for the Warrant Officer at the barracks (referred to as Warrant Officers Quarters No 3), was a substantial brick house with slate roof and porched entrance (Fig 41). It was demolished in 1967 to

Figure 41

Warrant Officers Quarters No 3, south elevation, as drawn in 1900 (extract of NMR: WD/2451 ©English Heritage)





make way for the new course of the North Military Road. The second house, a little larger than the first, was added to the east, probably by 1925 (NMR: WD unref/b). It was demolished in the 1980s.

E) THE DETACHED PART OF THE BARRACKS NW OF CENTRE ROAD

During the initial construction on the Western Heights fortifications, this area contained a works compound: as early as 1795 there were wooden stables for the draught horses used by the Board of Ordnance (PRO: WO/44/572). By 1810 there were also two brick buildings and a coal yard, all of which survived in 1861 when the area formed part of the Royal Engineers (RE) Yard. At this time, the two buildings were offices and a third comprised quarters for a Turncock who was responsible for the barracks' water supply.

In 1861, the use of the area also included buildings for the whole garrison of the Western Heights, notably a large Chapel and School (Fig 42), together with a detached house for the Scoolmaster. Expansion continued and by the 1890s there were more RE buildings in and around the earlier compound (Fig 43). A new Infants School was erected to the south-west of the Chapel in 1902-3, a neat structure in red brick with Portland stone dressings and a Welsh slate roof (Fig 44). There were further additions to the RE compound until after the Second World War. All of the buildings survived in 1953 but



Figure 42
*The Garrison Chapel,
now demolished
(d07904 © Dover
Museum)*



Figure 44
*The Infants School of 1902-3 (extract of NMR:
WD/2350 ©English Heritage)*

Figure 43
*The detached part of the barracks, from a drawing
of 1896 (extract of PRO: WO/78/2426/20; © The
Public Record Office)*

the site had been levelled and new houses erected by 1966, probably following the re-routing of the North Military Road through the North Lines (NMR: OS/53T79/118-9; 58/7170/160-1).

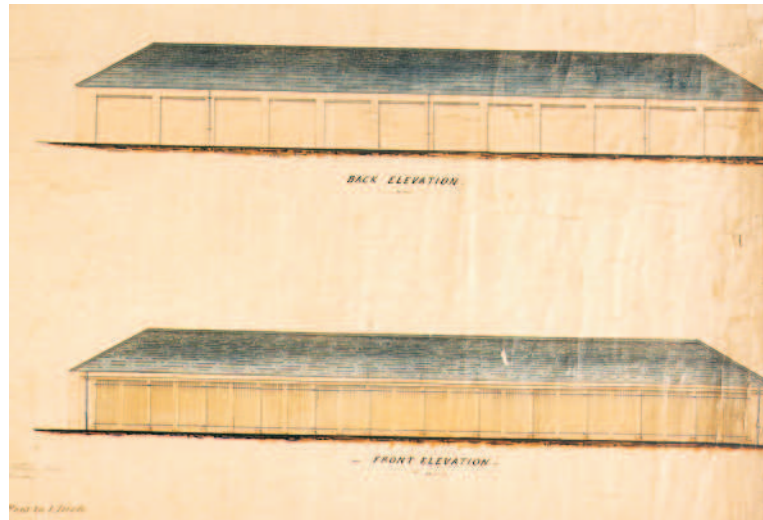
The Gun Shed

This building, still in use as a garage, is located on the top of the ridge with access from the eastern side of Centre Road. Its structural form and its absence from plans until 1861 hint at a construction date in the late 1850s; a record plan of 1867 identifies it as a Gun Shed, and one of 1892 specifically as the Ordnance Store Department Gun Shed (NMR: WD/2506; 2411; PRO: WO/78/2426/20). As such it was not part of the barracks but by 1904 it had been converted as a Cart Shed for the nearby Royal Engineers Store and finally, two plans of 1937 reveal the proposal to convert the building for the repair and storage of motor vehicles, as part of the barracks complex (NMR: WD/2438; 2442).

It is a single-storey, twelve by three bay building of pier and panel construction with the piers in English bond and the panels in Flemish. It has a Welsh-slate roof with red clay ridge tiles and cast-iron guttering. The western elevation originally had an open front, divided into twelve bays by ten timber posts with deep chamfers and stops. A wall plate, formed from six scarf-jointed pieces of timber of heavy scantling and with a deep chamfer on the inside face, runs the entire length of this elevation. King-post trusses with



Figure 45
*The Gun Shed, as
drawn in 1867 (extract
of NMR: WD/2411
©English Heritage)*



iron strapping and square bolts rest on this plate, while angle ties with tusk-tenons are placed at each corner of the building.

As originally built and shown on the 1867 plan,, the long open

frontage provided ‘parking bays’ for artillery pieces on wheeled carriages (Fig 45). The central location of the building, at a junction of main roads, suggests that its purpose was to accommodate a mobile reserve of artillery for rapid deployment across the Western Heights, perhaps in connection with the tactics proposed for the new Armstrong rifled field-gun (Coad and Lewis, 179). In 1859, a special committee recommended that the lighter Armstrong field guns should cover both the flanks and the ground between bastions in order to prevent an enemy force using this ground to position their own rifled artillery for the bombardment of the fixed defences.

By the 1890s, the role of the Western Heights defences had changed to a Mobilisation Centre - a large defensible supply centre from which a field army operating against an invading force in the surrounding region could be supplied with troops and equipment. In this context, the Gun Shed may have continued to house mobile artillery equipment until the turn of the century. However, by 1903, three new stores had been built for mobilisation equipment (see page 22) and a year later the Gun Shed was being used as a Cart Shed by the Royal Engineers. The ‘Washing Platform’ of granite sets in front of the four middle bays of the shed, shown as an undated alteration in red ink on the 1867 plan, probably dates from this period (NMR: WD/2411)

Plans of 1937 reveals the proposal to convert the building for the repair and storage of motor vehicles, comprising three instructional lorries, nine two-seater cars, seventeen General Service lorries and one four-seater car (NMR: WD/2438; WD/2442). The provision of instructional lorries suggests that the remodelling may have been connected with the conversion of the Army from horse-drawn transport to motor vehicles, which



took place in the 1930s. The simple design of the original building made conversion to a garage relatively straightforward, with the lintels of the central four doorways being raised for lorries and new garage doors, made from steel, replacing the originals. The rear of the shed was partitioned to form 'M.T stores' for vehicle spares at the south end and offices at the north. Roller shutter doors for the stores and a doorway and windows for the office were inserted in the rear wall beneath concrete lintels. Both garage and stores were lit by inserted skylights and heated by a small flat-roofed boiler house added to the north wall. The large inspection pit which survives at the south end of the garage, lined with glazed white brick, appears to be a later addition as it is not shown on the 1937 plans.

In the revetment wall south of the Gun Shed, two vent pipes indicate the position of the 2000-gallon petrol tank installed at this time but the small oil store next to it has been demolished, leaving no obvious traces (NMR: WD/2438).

At the same date, an additional garage was proposed north of the converted Gun Shed: this was built and also survives. It is a small single-storey building, in red brick laid to stretcher bond with a pitched slate roof, called a 'standard garage'. It accommodated three vehicles and had roof trusses of 'L' section steel angle. The present garage doors may be the 'Éclair Balanced Doors' specified on the 1937 plan (NMR: WD/2443; WD/2438).



4. SURVEY AND RESEARCH METHODS

Paul Pattison, Moraig Brown and Duncan Garrow carried out the archaeological survey. Control and most of the archaeological detail was supplied using a Wild TC1610 electronic theodolite with integral EDM. The XYZ coordinate data was captured on a Wild GRM 10 Rec Module and plotted via computer using Key Terra-Firma software on a Hewlett Packard Designjet 750C plotter; heights were transferred from an OS benchmark on the Centre Road at NGR TR 3139 4085.

Any remaining archaeological detail was supplied at 1:500 scale, with details of some structures at 1:100 scale, using conventional graphical methods.

The report has been written and researched by Paul Pattison, utilising earlier work by Andrew Williams and Duncan Garrow. Documentary research was undertaken at the Public Record Office in Kew, the NMRC in Swindon, the Centre for Kentish Studies in Maidstone and at Dover Museum. For the most part this comprised a search for cartographic and pictorial sources. All drawings are by Moraig Brown.

Steve Cole carried out site photography.

The site archive and a copy of this report will be deposited in the archive of English Heritage at the National Monuments Record Centre, Kemble Drive, Swindon SN2 2GZ, to where further enquiries should be directed.

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5. ACKNOWLEDGEMENTS

The authors are grateful for the help of Paul Johnson (PRO, Kew) and John Iverson (Dover Museum) for their help in this project.



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- WD/2411a *Dover, Western Heights, Plans and Elevations of Magazines and Cartridge Stores, dated 1882*
- WD/2412 *Dover Western Heights, Grand Shaft Barracks, Soldiers' Privies and Ball Court, Work Shop, Barrack Sergeant's Wash House and Armourer's Shop, dated 1867*
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- WD/2414 *Western Heights, Elevations of Gymnasium, dated 1871*
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- WD/2443 *Dover Grand Shaft Barracks, Proposed Garage, dated 1937*



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- WD/2449 *Dover, Western Heights Barracks, Staff Sergeants' Quarters*, dated 1865, with alterations to 1905
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D08611 *Soldiers' Block 'A' shortly before demolition*

D07904 *Garrison Chapel*

NATIONAL
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The National Monuments Record contains all the information in this report - and more: original photographs, plans old and new, the results of all English Heritage and RCHME field surveys, indexes of archaeological sites and historical buildings, and complete coverage of England in air photographs.



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