



**BUILT HERITAGE CONSERVATION FRAMEWORK
FOR
DOVER WESTERN HEIGHTS**

A Report to Dover District Council, English Heritage and Kent County Council

Liv Gibbs BA MA (Cantab.) Ph.D.

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ABBREVIATIONS

AA	anti-aircraft
BC	battery command
BCP	battery command post
BL	breech loader
BL	British Library
BOP	battery observation post
CDMU	Coastal Defence Maintenance Unit
CO	Commanding Officer
CRE	Commanding Royal Engineer
DRF	depression range finder
DWH	Dover Western Heights
HAA	Heavy anti-aircraft
HMPS	Her Majesty's Prison Service
IGF	Inspector General of Fortifications
KA	Kent Archives
LMG	light machine gun
MT	motor transport
NA	National Archives
NCO	Non-commissioned Officer
NMR	National Monuments Record
OP	observation post
pdr	pounder
PF	position finding
QF	quick-firing
RA	Royal Artillery
RBL	rifled breech loader
RCHME	Royal Commission on the Historical Monuments of England
RE	Royal Engineer
REME	Royal Electrical Mechanical Engineers
RGA	Royal Garrison Artillery
RML	rifled muzzle loader
SB	smooth bore
WD	War Department
WO	War Office
YOI	Young Offenders' Institution

GLOSSARY

Sources: RCHME Survey Reports Nos 2-10, except where otherwise stated

Apron

A sloping concrete surface, forming the front face of a gun emplacement, designed to deflect incoming shells over the top of the position

Artillery store

A subsidiary building in a fortification for the storage of equipment for the operation and maintenance of artillery pieces

Banquette

A low platform in the rear face of a rampart, with a low parapet to enable infantry to fire over it. Same as an **infantry step**

Barbette

A protective breastwork or forward edge of an emplacement, over which guns fire

Bastion

Part of a fortification which projects from the main work to provide flanking fire for its defence

Batter

The inward slope of the face of a wall or revetment (Saunders)

Battery

A work, either permanent or temporary, where artillery is mounted

Battery observation post

A position from which the area commanded by a battery is observed

Berm

A level space between the base of a rampart and the scarp face of a ditch, designed to absorb the weight and pressure exerted on the latter by the former

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

Bofurs gun

A light anti-aircraft gun built by the Swedish company Bofors

Bombproof

A thick covering of earth and other material over a vaulted room (barrack, store, magazine, etc.), providing protection against incoming fire

Breech-loader (BL)

A gun which is loaded from the rear of the barrel

Caponier

A covered communication, usually in the form of a trench with raised sides, running from the *enceinte* to a detached work

or

A powerful casemated work, projecting perpendicularly across a ditch for the purpose of delivering flanking fire (Duffy)

Carronade

A short heavy cannon, with a large bore, for close range defence

Cartridge

An amount of gunpowder or other explosive made up into a measured charge, usually contained in a silk bag, which was placed in a gun behind the shell. Firing the gun ignited the cartridge and thereby propelled the shell out of the gun towards its target

Cartridge store

A chamber used to store powder that was already made up into cartridges

Cascable

A round or ring-shaped projection at the breech end of a gun, so shaped to anchor a rope

Casemate

A bombproof vaulted chamber used for a variety of purposes, including artillery or small arms positions, storage of ammunition and to provide troop accommodation

Chemin des rondes

A passage or sentry path on the top of the scarp wall with a parapet for cover

Citadel

A self-contained fortress intended as a place of last resort (Saunders)

Cordon

A continuous rounded projection situated at a change in angle on the face of a fortification, usually between the scarp revetment and the parapet

Counterguard

A defensive work with two faces forming a salient angle, usually placed in front of a bastion to cover and protect its flanks

Counterscarp

The exterior slope or revetment of a ditch

Counterscarp gallery

A casemate built behind the counterscarp of a ditch providing flanking fire along the same ditch

Covered way

A continuous walkway, protected from enemy fire by an earthwork parapet

Curtain

A length of defensive wall or rampart, protected from enemy fire by an earthwork parapet

Davit

A simple crane, usually an iron post, curved at the top and fitted with a pulley, for hoisting heavy ammunition from one level to another

Depression range finder

An instrument used to work out the position of a target in order to set the range and bearing for guns to fire upon it

Drawbridge

A bridge which was hinged at one end only so that the other could be raised, usually by chains or strong ropes

Embrasure

An opening in a parapet or wall through which a gun – usually an artillery piece – can be fired

En barbette

A gun mounted to fire over the forward edge of its emplacement

Enceinte

The main defensive enclosure of a fortress excluding the outworks. Also known as ‘the body of the place’ (Saunders)

Enfilade fire

Fire coming from a flank which sweeps the length of a fortification

Entrenched camp

A protected area for the assembly or re-grouping of an army (Saunders)

Escarp

See **scarp**

Expense magazine

A small magazine in which ammunition was stored for immediate use in part of a fortification

Fenestration

The arrangement of windows in the elevation of a building

Fieldwork

A temporary or semi-permanent fortification, usually an unrevetted earthwork, constructed during a field campaign or to meet an emergency need

Fixed ammunition

Ammunition in which the shell and cartridge are combined in a single casing

Flanking fire

Artillery or small arms fire coming from a flank (e.g. in a bastion or *caponier*) to sweep the length of the fortification

Glaçis

An external slope beyond an outer ditch, usually carefully and gradually extended in a long slope towards the field or ground level and often massively reinforced with earth and other materials to absorb incoming shell fire

Gorge

The rear of a fortification; usually the neck of a bastion or a detached work

Guard house

In this particular eighteenth-century context, a building fortified with thickened walls and loopholes for defence of a defined area. Normally, the guard house is found at the entrance to a military establishment, to check exit and entry of all personnel, and to confine those on a charge

Gun room

An enclosed chamber for an artillery piece or small arms; usually designed to fire along a ditch or flank

Haxo casemate

A casemate constructed on the *terre-plein*, but open to the rear, providing gun crews with protection against enfilade fire

Holdfast

A metal plate fixed to the floor of an emplacement to anchor a gun firmly in position

Howitzer

An artillery piece, shorter and lighter than its equivalent conventional smooth bore calibre, specialising in firing shells at high angles

Infantry step

See *banquette*

Lamp recess

An alcove or small tunnel in a wall into which a lamp is placed to illuminate a windowless chamber, often a magazine. A pane of glass set into a brass frame across the recess prevents sparks from entering the chamber

Lamp room

A chamber where lamps were cleaned, refitted and maintained

Lighting (or lamp) passage

A narrow passage adjacent to a magazine, containing recesses in the party wall to allow lamps to be placed for the illumination of the magazine

Line(s)

A massive ditch and a profiled rampart with *banquette* (ALG)

Loophole

A narrow opening in a wall for small arms fire. They are internally splayed to provide the defender with a wide arc of fire, and narrow externally to make it difficult for an enemy to fire in

Machicolation

A projecting gallery, generally above an entrance, with openings for vertical defence of the foot of a wall

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). See also **cartridge store** and **shell store**

Murder hole

A small hole, slot or loop in a fortification, looking down on an enemy and through which weapons could be discharged or projectiles dropped

Musket

A light smooth-bored infantry weapon

Militia

The main national reserve force of part-time soldiers

Mortar

A short but large-calibre artillery piece designed to fire shells at high angles of elevation

Musketry gallery

A series of chambers with loopholed embrasures allowing musket fire

Muzzle-loader

A gun which is loaded from the front of the barrel

Newel

A spiral stairway of circular plan

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

Oculus

A small hole or aperture

Parade Ground

A protected open area on which regular musters and exercises take place

Parapet

A low wall or earthen breastwork protecting the front or forward edge of a rampart

Pharos

A Roman lighthouse

Piquet house

A small post for a sentry or guard detachment

Pivot

The point about which an artillery piece is traversed

Platform

A hard surface, sloping gently up to the rear, on which a gun was placed to provide a firm firing position and which would dampen its recoil

Position finder (PF)

An instrument by a gun can be directed onto a target, even when moving; the two main types are position finder and **depression range finder**

Position finding cell (PFC)

A room on the flanks of a battery for housing the position finding equipment. There are at least two chambers – one for receiving and one for transmitting

Postern

A small, subsidiary gateway to a fortification, often concealed so that its use was not observed from outside. A postern could also function as a **sally port**

Piquet house

A small guard or sentry post

Quick-firing (QF)

A gun equipped with a quick-action breech mechanism, and using fixed ammunition, enabling a rapid rate of fire

Racer

A curved steel track set into the gunfloor. The wheels of a traversing platform engaged with the racer to ensure smooth movement of the gun about a pre-determined arc of fire

Ramp

An incline on the rear slope of a rampart to allow the movement of troops and guns

Rampart

The main defence of a fortification, comprising an often massive and carefully profiled earthwork, on or behind which a large part of the garrison and its weaponry are situated

Redan

An outwork to a fortification, with two faces formed into a salient angle, and an open gorge to the rear

Redoubt

A small enclosed work without bastions, often used as an outwork

Re-entrant

An angle formed in the line of a fortification to face inwards from the field

Revetment

The retaining wall of a rampart or the side of a ditch

Rifle

An infantry weapon whose barrel is ‘rifled’ by continuous spiral grooves on the inside of the barrel. The grooves caused the bullet to spin in flight, thus ensuring greater speed and accuracy

Rifled muzzle-loader (RML)

A muzzle-loading gun is loaded from the front of the barrel which in this case is ‘rifled’

Salient

An angle formed in the line of a fortification to project outwards towards the field

Sally port

A small door or gate, often masked or concealed, through which defending troops can make a surprise ‘sally’ or counter-attack

Scarp

The outer slope or revetment of a rampart, or the inner side of a ditch (Saunders)

See **escarp**

Shell

The projectile fired from an artillery piece. Shells comprised a metal case filled with an explosive charge which exploded either on impact or after a set time had elapsed

Shell recess

A small reinforced locker on or near the gun floor, for storing a few shells for ready-use

Shell store

A chamber, often bombproof, in a sunken or underground position, in which shells are stored

Shifting lobby

A room next to a magazine or cartridge store in which men change into and out magazine working clothes. This was to prevent metal on their ordinary clothes 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

Side arms store

A room for storing the side arms (i.e. all the equipment required to load and fire an artillery piece – sponge, rammer, etc.)

Slit trench

A small rectilinear trench, with spoil along the forward edge, forming a temporary defensible position for infantry

Small arms

Portable firearms, principally carbines, muskets, pistols and rifles

Smoke vent

A hole in a casemate wall or vault which enabled the noxious fumes to disperse after firing a gun

Superior slope

The upper surface of a rampart or *glacis* which has a gradual slope to enable the defenders to see their enemy

Talus

The rear slope of a rampart

Tenaille

A low-lying defensive work sited in a ditch between bastions, designed to protect the main face of a fortification or curtain

Tenaille trace

A succession of redans at right angles to each other to form a zigzag front (Saunders)

Terre-plein

A level surface on a rampart, behind the parapet, providing a platform for guns

Trace

The plan of a fortification

Traverse

An earth bank or wall, usually placed across the *terre-plein* and thereby dividing it into sections, to confine or eliminate the effect upon defending troops of enfilade fire and bursting shells. A traverse could also be used to bombproof structures on the *terre-plein*

Traversing platform

A mounting for an artillery piece, with small wheels which enabled it to be moved through a fixed arc on curved rails or racers

Unclimbable fence

Usually found in the ditch of a work or defining its perimeter, an 8ft-high metal palisade with sharp spiked top to prevent it from being scaled

Work

A general term for any work of defence

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INTRODUCTION

This Built Heritage Conservation Framework (BHCF) was commissioned by Dover District Council, with the support of English Heritage and Kent County Council, as a stage in the production of a master-planned approach to the conservation management of one of England's most challenging heritage sites – Dover Western Heights (DWH) in south-eastern Kent.

Almost all of the Western Heights is a Scheduled Monument ('Fortifications, Roman lighthouse and medieval chapel on Western Heights') and a Conservation Area (the 'Western Heights Conservation Area'), and contains two Listed Buildings – the Citadel's Officers' Quarters (listed as the 'Administration Block, Dover Young Offenders' Institution', Grade II), and the 'Grand Shaft stairs and attached railings' (Grade II).

The purpose of this BHCF is to build on the RCHME Survey Reports Nos 2-10 for the Western Heights (published 2001–4, based on survey work carried out in 1998) and the Alan Baxter Associates' (ABA) *Conservation Management Report* (2010). It has been based almost entirely on secondary sources, with limited reference to primary sources. The intention is to synthesise the understanding of the development of the site, to assess the significances (the sum of the 'heritage values') of the site and its component parts and their elements, to identify the main issues which affect those significances and to make recommendations to preserve or enhance them. These significances and recommendations are intended to be considered and used by the commissioning bodies to draw up a 'vision' for the future use or uses of the Western Heights, as a reference document (e.g. against which development proposals may be assessed), and when formulating policies and management priorities for the future. The BHCF looks not only at the immediate future of the Western Heights, but also at the medium- to long-term challenges and opportunities, in the context of Dover District Council's *Core Strategy* (adopted February 2010), which under paragraph 3.2 includes the objective: '10. Ensure the intrinsic quality of the historic environment is protected and enhanced and that these assets are used positively to support regeneration, especially at Dover'. Paragraph 3.60 of the *Core Strategy* states 'The town's historic environment represents an immense but under-utilised asset. In particular the Castle and Western Heights need to fully fulfil their potential to attract visitors and enhance understanding, without harming their intrinsic qualities, in a way that also co-ordinates with other attractions in the centre, such as the Museum and Roman Painted House.'

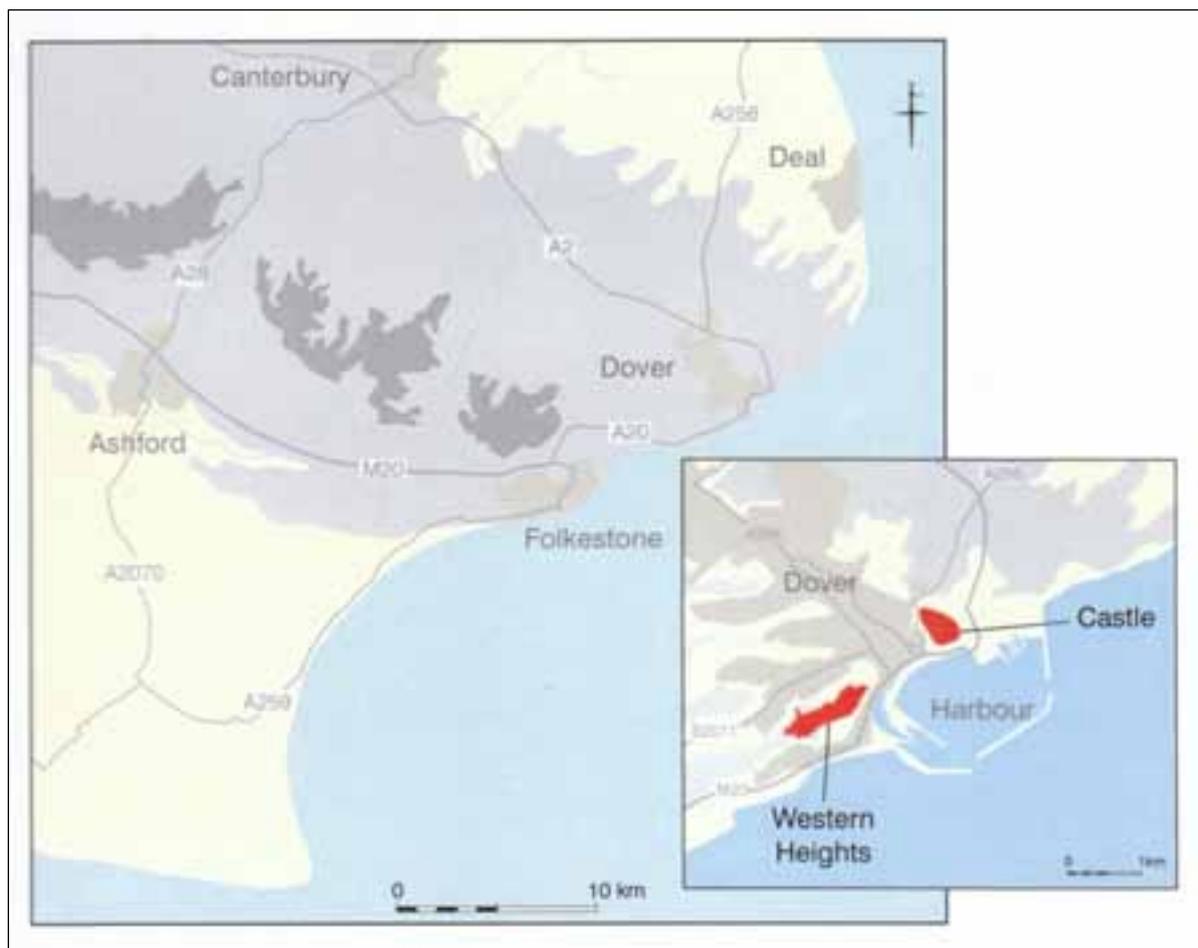
The BHCF has been confined to 'heritage values' (as defined in *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment* published by English Heritage in 2008), but has had regard to the information on 'ecological values' included in the ABA Report.

Less detailed in its content than a conventional Conservation Plan or Conservation Management Plan, the BHCF is intended to provide a superstructure (hence 'Framework') underneath which Conservation Plans (with a detailed Gazetteer) can be produced for component parts of the site as and when the need arises, each of which would be consistent with the significances outlined in this Built Heritage Conservation Framework.

UNDERSTANDING THE SITE

A summary of the development of the built heritage on Dover Western Heights through time is presented here in chronological order.

- The town of Dover in south-eastern Kent lies in the valley of the River Dour, flanked by chalk bedrock (the White Cliffs). To the west, the Western Heights occupy high ground (reaching 125m above Ordnance Datum) at the eastern end of a long chalk ridge stretching from Dover westwards towards Folkestone.



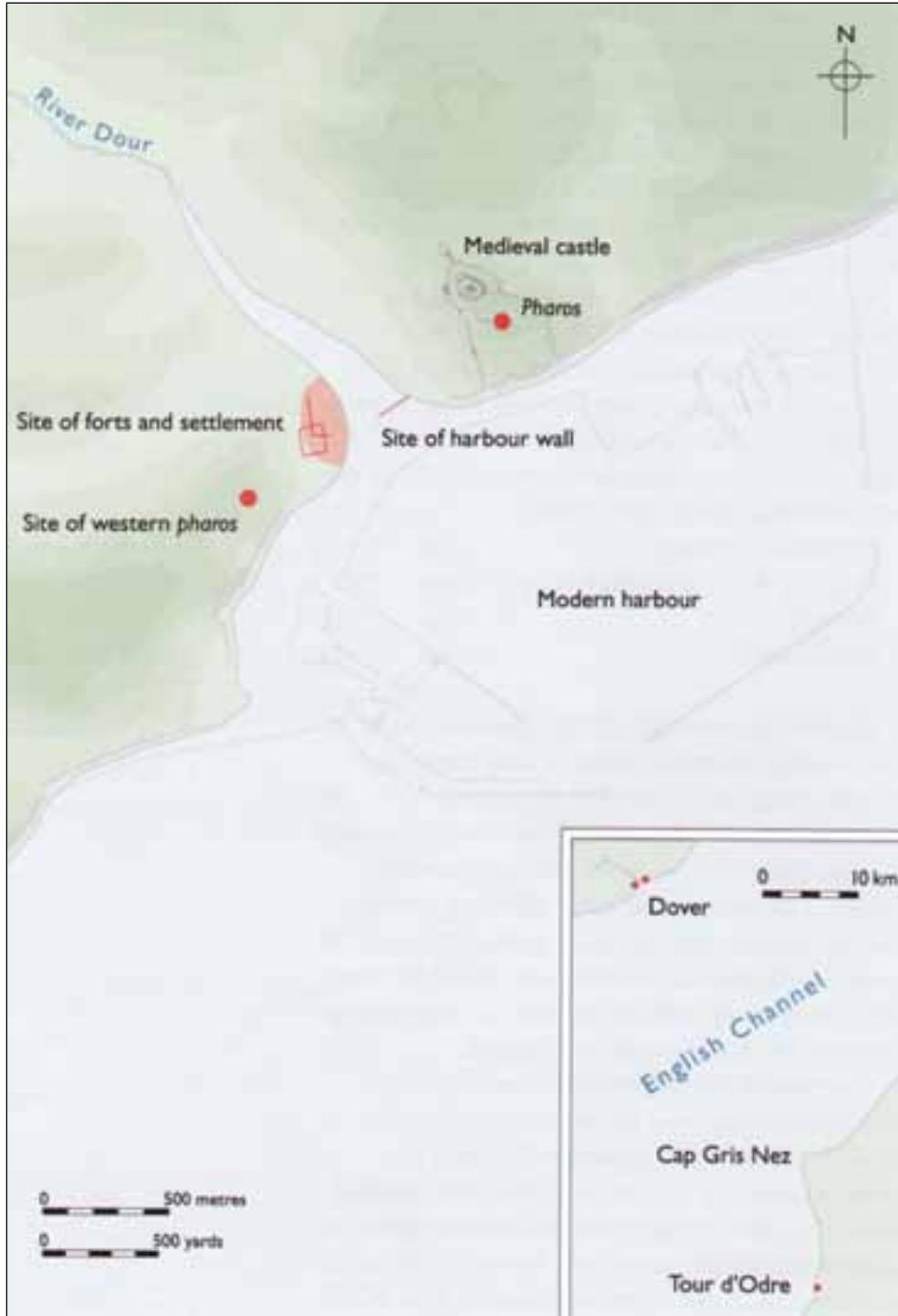
Map showing the location of Dover Western Heights (RCHME Report No. 2: Figure 1);
pale yellow = land below 50m OD, light grey = land 50-150m OD, dark grey = land over 150m,
pale brown = urban areas

Second century AD

- The *classis Britannica* (the Roman fleet in British waters) chose Dover (*Dubris*) as its headquarters on the British side of the Channel and in *c.* AD 115–20 laid out a large **fort** as its base on a shoulder of land below the Western Heights on its north-eastern slope. This fort was never completed, but a second fort built *c.* AD 130–40 on a similar alignment was finished.
- Between AD 117 and AD 140 two massive lighthouses were constructed on the cliffs to the west and east of the River Dour to guide ships from France into the harbour. The

lighthouse (*pharos*) built on the Western Heights is thought to have been polygonal in plan and to have been constructed from a variety of materials (some of them re-used) including Kentish rag stone, tile and brick (Knocker 1862; Wheeler 1929; Booth 2007).

- To the north of the *classis Britannica* fort was an extensive civilian settlement with substantial buildings including a military bath-house (constructed *c.* AD 140–60) and a prestigious dwelling known as the ‘Painted House’ (built *c.* AD 200) on account of the painted wall plaster used in its fine decoration.



Map showing the location of the pharos on the Western Heights and that on the eastern cliff (Booth 2007: Figure 17)

Third century

- The *classis Britannica* left Dover in the early third century and the fort was abandoned.
- In the context of Saxon raids, in the later third century the Roman army constructed a Shore Fort overlying the north-eastern part of the former *classis Britannica* fort (Pearson 2002).

Fifth/sixth century

- The Shore Fort was occupied until at least the first half of the fifth century, and there is evidence of occupation into the sixth century.

Twelfth century

- A **round church** or chapel measuring 10.6m in diameter was built *c.* 500m south-west of the *pharos*. Its walls were of flint with an external plinth of Caen stone, pilasters at intervals, and a doorway in its western side. At the eastern end, the wall was subsequently lowered and a trapezoidal extension measuring 7.6m x 4.3m with a square end was added. The building's walls were subsequently reduced in height to just above foundation level and buried (Gibbs 2004b).

Sixteenth to eighteenth centuries

- A depiction of Dover in 1538 included a **substantial building of unknown function** on the Western Heights. It is too large and in the wrong location to be the church/chapel.

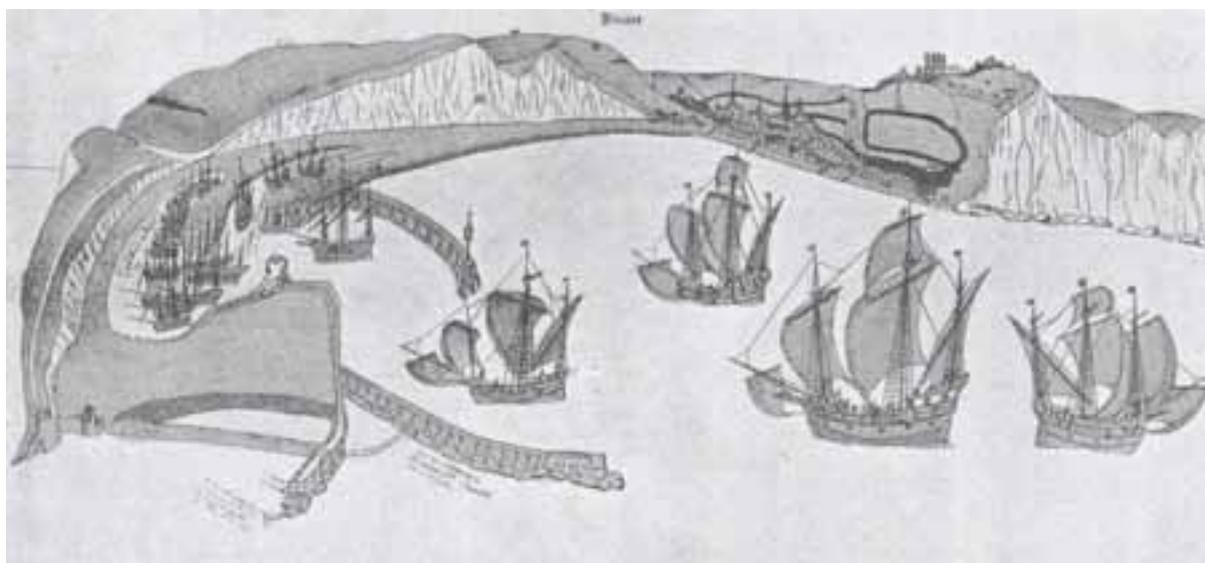


Depiction of Dover, work by John Thompson, 1538 (BL Cott. Aug.I. i.22-23, d27894 Dover Museum);



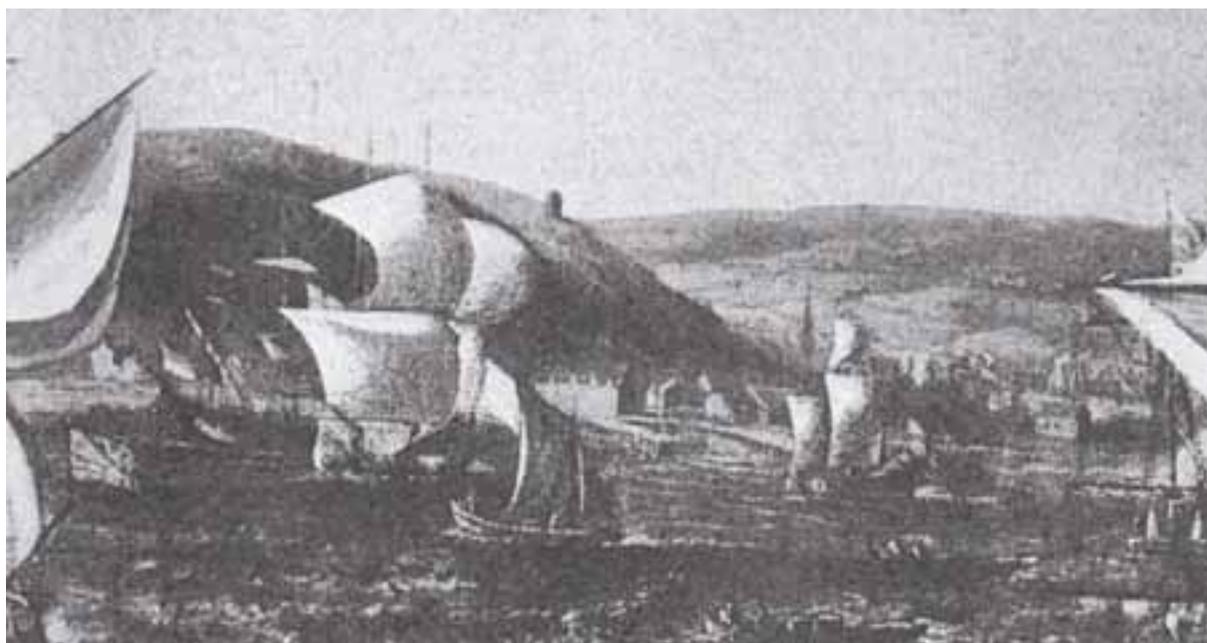
Detail of the building on the Western Heights, from the Depiction of Dover, 1538

- Antiquarians illustrated and described the surviving remains of the *pharos* on the Western Heights. A drawing of Dover Harbour dating from c. 1543 may contain a depiction of the *pharos* on the Heights.



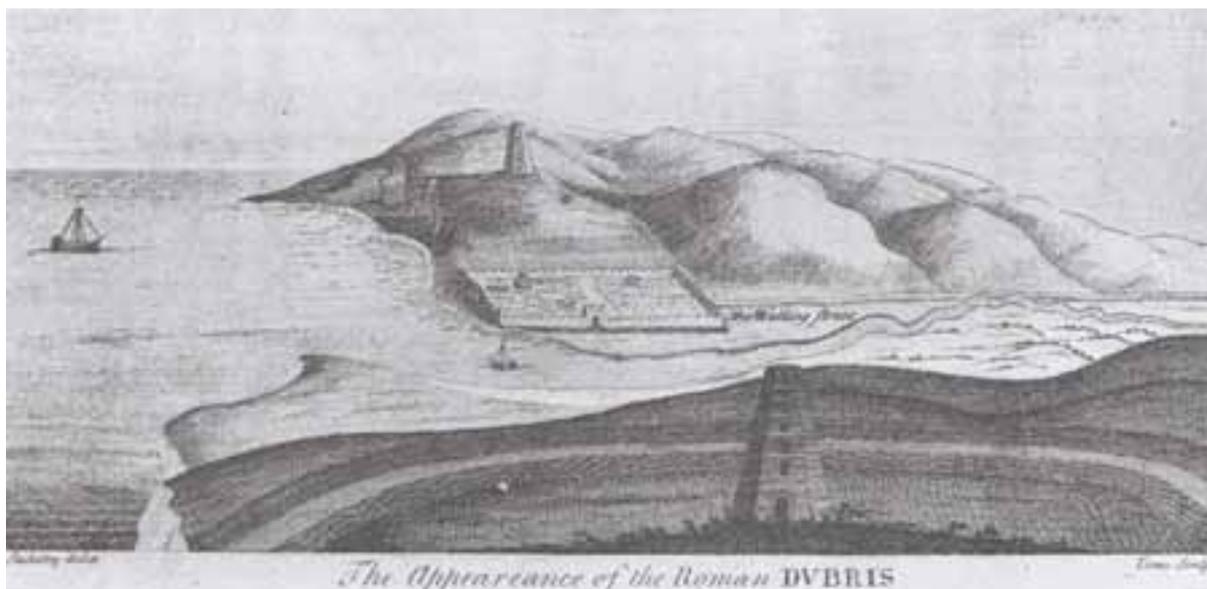
Diagrammatic depiction of Dover in 1543, perhaps showing the pharos on the Western Heights under the 'D' of Dover (extract of BL Cott. Aug. I. i, 22. 23, reproduced in Wheeler 1929: Plate VIII)

In *The Itinerary of John Leland in or about the years 1535-1543*, Leland noted that 'On the toppe of hie clive between the towne and the peere remaineth yet, abowt a flyte shot up ynto the land fro the very brymme of the se clyffe, a ruine of a towr, the which hath bene as a pharos or a mark to shyppes on the se; and therby was a place of Templarys' (ed. Toulmin Smith 1964, volume 4: 50). William Lambarde, in his *Perambulation of Kent* (1576), wrote 'There standeth yet, upon the high cliffe, between the Towne and the Peere (as it were) not farre from that which was the house of the Templers, some remaine of a Tower, now called Bredenstone, which had been, both a Pharos for comfort of Saylor, and also a ... (or watch house), for defence of the inhabitants.' William Camden, in *Britannica* (1607), stated that 'On the other cliff ... there are remains of a very ancient structure. For some unknown reason, it has been called *Caesar's Altar*; but John Twyne of Canterbury, a learned old man who in his youth saw it to a large extent intact, has assured me that it was a Pharos for a beacon to assist nocturnal navigation.' An oil painting of Dover from the sea dating to c. 1690 showed the *pharos* on the Heights.



Detail of Dover from the sea, showing the pharos on the bare slope of the Western Heights, extract of an oil painting c. 1690 (reproduced in Wheeler 1929: Plate IX)

In 1693, Lord Sydney, on being appointed Lord Warden of the Cinque Ports, requested that the Grand Court of Shepway should meet on 'Braidenstone Hill', where he had been told that three of his predecessors had been sworn into office (before that they had been installed at a ceremony at Shepway Cross, Lympne – the base of the Court of Shepway). Bernard de Montfaucon, in his *Supplement au Livre de L'Antiquité Expliquée et Représentée en Figures, Tome Quatrième* published in 1724, described the *pharos* as a 'grand morceau de mazures, de pierres et de chaux, qu'on voit auprès de Douvre, que les gens du pays appellent, je ne fai pourquoi, *la goutte du diable*' (p. 137). William Stukeley, in his *Itinerarium Curiosum* (Centuria II, 1776) included a conjectural reconstruction drawing of Roman *Dubris*.



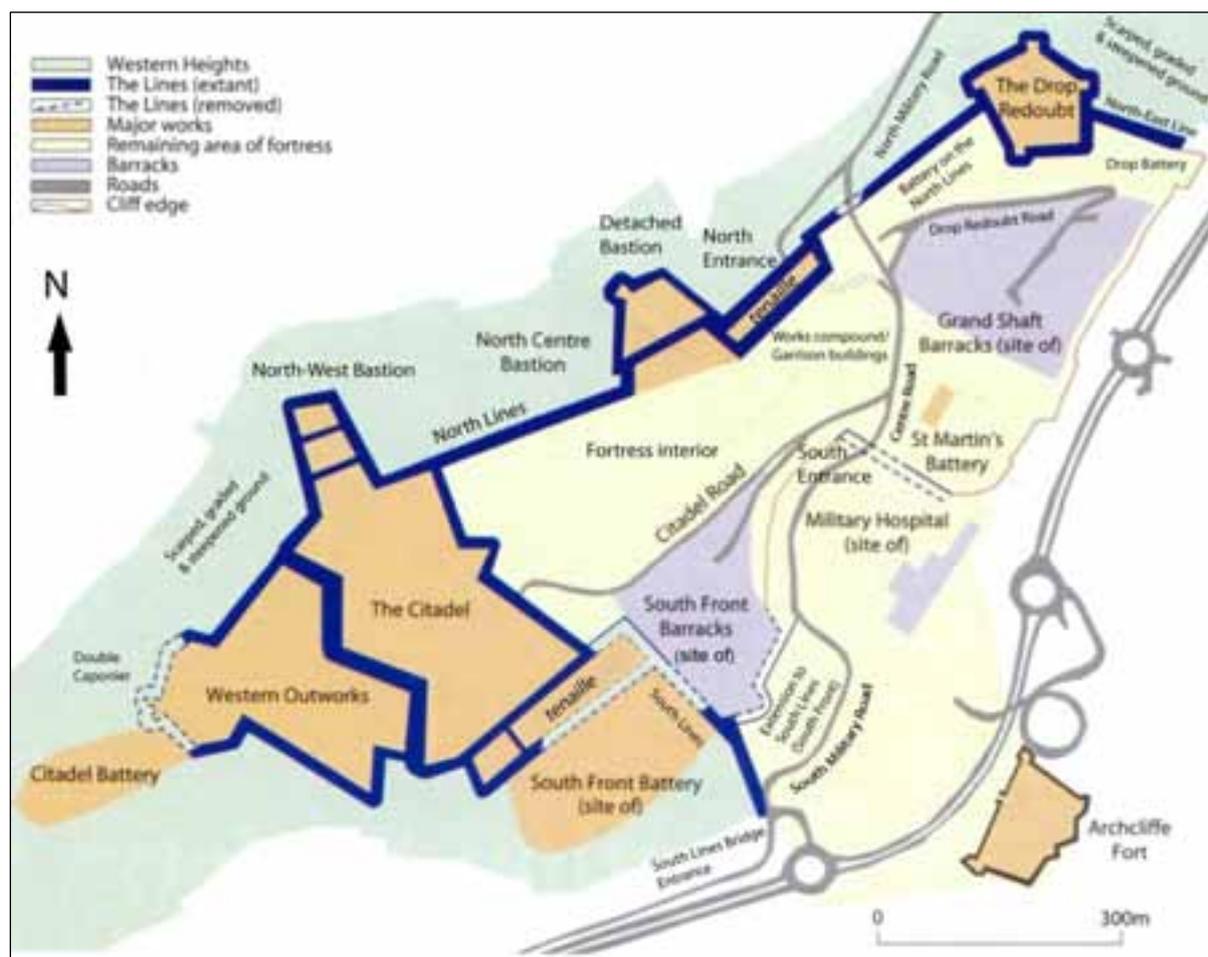
William Stukeley's conjectural reconstruction of Roman Dubris, showing the pharos on the Western Heights above the classis Britannica fort (1776)

The History of Dover Castle, written by the Reverend William Darell (Queen Elizabeth I's chaplain) but not published until 1786 when it was illustrated with drawings made in 1760, included an engraving which the editor entitled 'Bredenstone, or the Devil's Drop' and described in the caption as 'a small Fragment of a Building said to have been a Watch-Tower, now vulgarly called *Bredenstone*, and the *Devil's Drop*, from the Hardness of the Mortar. To this Place every new Lord Warden of the Cinque Ports comes in Procession, and here takes his Oath of Office. This Fragment stands on a Hill opposite to the Castle, the Town of Dover lying in the Valley between them' (p. 1, Plate X). This drawing showed the *pharos* as an amorphous chunk of masonry with a large, fallen fragment next to it. It appears, therefore, that during the first half of the eighteenth century the *pharos*'s condition deteriorated appreciably.



Bredenstone, or the Devil's Drop, drawn 1760 (Darell 1786: Plate X)

In Gough's *Camden* (1789) he noted that the tower was 'now reduced to a very small ruin called the Bredenstone, on which the lord Warden is sworn as formerly at Shipway.' Edward Hasted, in the revised, 1800 second edition of *The History and Topographical Survey of the County of Kent*, noted that the Lord Warden 'is now usually sworn at Bredenstone hill' (volume 9, p. 501), and that 'The hill, on the south-west side of this town, called Bredenstone hill, on which the ruin of the ancient Roman *pharos*, or watch-tower, remains, ... is within the lordship of Bredon, within the liberty of this town, and was once belonging to the commandery of Swynfield, in this neighbourhood, belonging to the knights hospitallers of St John of Jerusalem' (volume 9, p. 525). It is possible that some of these observations had been made earlier than the date of publication of the various volumes (particularly in the case of subsequent editions), so it should not be presumed that these antiquarian accounts necessarily accurately reflect the situation with regard to the survival of the *pharos* remains and installation ceremonies still being held there when the books were published.



Plan of the Western Heights, showing the fortifications constructed from the 1780s onwards (RCHME, with additions by the author)

1778

- When war broke out between Britain and France, during the **American War of Independence** (1775-83), defences in Britain were refurbished amidst rising fears of a French invasion.

1779

- Improvements were made to Dover Castle, and the small sum of £2,100 was allocated for the construction of three gun batteries to defend Dover harbour from naval bombardment and landings (North, Townshend and Amherst) and **fieldworks** on the Western Heights (where the Board of Ordnance bought a large amount of land) to protect the port and town (Akers 1887: 38). These were probably temporary, small-scale earthworks for artillery and infantry, and were ‘the first sustained modern attempt to fortify this hill’ (Coad and Lewis 1982: 150). The Western Heights represented a strong, defensible position at the eastern end of a long, chalk ridge, with its panoramic views. On its northern and eastern sides there are steep slopes, whilst on the southern side the near-vertical cliffs form a natural barrier, thus making the narrow corridor of level ground on the ridge from the west the obvious route along which to launch an attack. Until the late 1770s, the possibility of a flanking attack on Dover from the west had not been regarded as a sufficient threat to justify the construction of defences on the high ground of the Western Heights. To an enemy landing force, the Western Heights were of fundamental

strategic importance, representing a major opportunity to secure entrenchments and emplace heavy siege guns with which to bombard the castle's defences. If the castle fell, the town of Dover would probably have been taken and used as a bridgehead port from which to carry out an inland campaign along Watling Street to London. The batteries and fieldworks constructed on the Western Heights were designed by **Lieutenant Thomas Hyde Page (CRE Eastern Coastal District, CRE Dover)**. Construction work was mainly carried out by military labour from the Militia Regiments.

- Hyde Page put forward a request for £1200 to modernise **Archcliffe Fort** (south of the Western Heights on a low cliff overlooking the harbour). The store house in the north-western part of the fort was demolished and **Commanding Royal Engineer Quarters** were built, from which the CRE could supervise the construction of the Western Heights' fortifications and works to other defences in the Dover area (Gibbs 2004a).



Sir Thomas Hyde Page, by Sir Thomas Northcote RA, with Landguard Fort in the background, painted c. 1783 (Tyntesfield House, Somerset, National Trust)



Archcliffe Fort from the north-west, showing the Commanding Royal Engineer Quarters, watercolour by Samuel Joseph Mackie (1823-1902), painted c. 1845 (Dover Museum)

1780-1

It was decided that the fieldworks already constructed on the Western Heights should be replaced by a more comprehensive system of defences (Welby 1983: 4-5). In 1780, the Board of Ordnance purchased more land on the Heights. A much more ambitious defensive scheme was devised by Hyde Page. His proposals for the Heights were shown on at least three working plans from *c.* 1780 to 1784. The earliest of these is an **undated and unsigned plan** (KA Do P/1), but the similarities in content and style with later attributed plans suggest that it was drawn up by Hyde Page, probably in 1780-1. This plan depicted two proposed independent forts, comprising a larger one at the western end of the ridge (with massive salients facing westwards, northwards and southwards, and smaller salients in the gorge facing eastwards across the ridge) and a smaller, simpler, four-sided fort at the eastern end of the ridge. They were intended to act together, and with detached outworks between the forts and to the west, to stop an enemy force taking the Heights and thereafter the port of Dover. It is clear from the plan that the proposed fortifications on the Western Heights were envisaged as part of a wider set of defences protecting Dover, including those at Dover Castle to the east, and the batteries and Archcliffe Fort at harbour level. Annotations on the plan indicated the fields of fire from the two forts, revealing that there would have been a considerable number of dead areas not covered by gunfire from the eastern fort, including most importantly over the harbour. In September, Hyde Page indicated that he proposed to arm the 'new works upon the Heights' with a considerable quantity of ordnance: 24 pdr cannon (16), 18 pdr cannon (20), 6 pdr cannon (24), 68 pdr carronades (12), making a total of 72 pieces (Akers 1887: 39).



Plan showing the proposed defensive works on the Western Heights, with annotations showing their fields of fire; undated, but probably 1780-1 and before 1784; unsigned, but probably drawn by Lieutenant Thomas Hyde Page (KA Do P/1)

- The design of both the eastern and western forts was amended in a number of ways and depicted on two subsequent, very similar plans – one signed by Hyde Page, undated but of the early 1780s (NA: WO 78/1779), the other dated 1784 but with the signature obliterated, drawn in a very similar hand to the plan signed by Hyde Page (NA: MR 1/1345). The 1784 plan reveals that the western fort was to be a more complex work than that shown on the earliest of the three working plans, and the orientation of the eastern fort had been rotated slightly to ensure that its guns could now command the harbour satisfactorily.



Plan by Lieutenant Thomas Hyde Page (CRE Dover) showing the ambitious design for the defences under construction on the Western Heights, dated 1784 (extract from NA: MR 1/1345)

- The scheme of defences depicted on **Hyde Page's 1784 plan** was as follows.
 - A large, independent **western fort** was proposed, straddling the ridge to command the approach from Folkestone. It was depicted as a multi-salient artillery fortification consisting of a principal obtuse-angled salient facing west, the flanks of which narrowed to a gorge (the area thereby enclosed may have been at a higher level so guns there could cover the perimeter) and were protected by two short traverses to the rear. This principal salient was to be flanked to the north and south by a smaller and larger salient. The fort's eastern side was to consist of an irregular series of smaller salients, with slightly larger ones to the north and south of a larger, central salient. The entrance to the fort

appears to have been in the north-eastern part of the gorge, served by the high road running from Folkestone to Dover. A multitude of gun positions was depicted on the ramparts of all the salients (suggesting that a 360 degree field of fire and overlapping fields of fire from the salients was intended), beyond which were a ditch and *glacis*. The interior was represented as being tripartite as defined by the defences, with a Guard House on the western side of each of the three areas, and a single structure in the middle on the eastern side (perhaps a magazine).

- A smaller, independent **eastern fort** was planned at the end of the ridge overlooking the town, about a mile from the western fort. This was depicted as an irregular, four-sided work, its largest salient facing northwards reflecting the emphasis on defending against a land attack but with gun positions on all its ramparts (again suggesting a 360 degree field of fire was intended). The main entrance was on the southern side. In the centre of the fort's interior, a Guard House was shown. The ground outside was to be scarped into an irregular work with a *glacis*.
- Small **detached outworks** were envisaged on the ground between the two main forts and controlling the approach from the west.

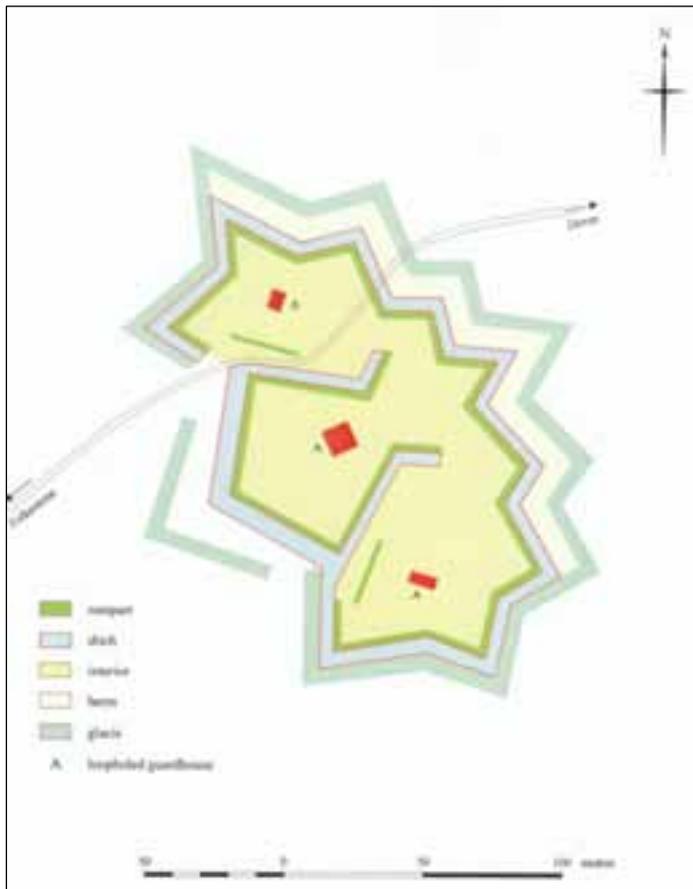
Annotations on the 1784 plan indicated that the Duke of Richmond (Master General of Ordnance) had ordered construction works to start on the western fort in 1782, beginning with the south-western salient, whilst the eastern fort was labelled as 'works ordered to be executed' (NA: MR 1/1345). Inside the western fort, the three brick Guard Houses had been finished, each with loopholes for independent and mutual defence by musketry (NA: WO 55/780).

1787

- Hyde Page wrote to the Duke of Richmond that 'Lieutenant Hay reports that the Works are in a very unfinished state, nevertheless that he has traced their general outline and marked them on the survey' (NA: MPH 1/248/2). The survey plan by **Lieutenant Lewis Hay (CRE Dover)** showed the **western fort** occupying *c.* 24 acres and containing its three Guard Houses (NA: MPH 1/248/6). Several detached outworks had been constructed to the east and west of the western fort. A note on the plan indicated that at the **eastern fort**, the ground had been broken, the implication being that the outline of the fort had been roughly established. The loopholed Guard House was depicted in the middle of the eastern fort's interior. Construction of the eastern fort's eastern rampart is likely to have covered the remains of the *pharos*, so it may have been in this period that the tradition of holding the installation ceremony for the newly appointed Lord Warden of the Cinque Ports at the Bredenstone was suspended. A **sutler's shed** (for a civilian merchant who sold provisions to soldiers), depicted on the plan west of the eastern fort, suggests that troops were stationed on a relatively permanent basis nearby. The plan also depicted the **high road** from Folkestone to Dover, and a road starting west of Archcliffe Fort and ascending the slope up the Heights (roughly midway between the western and eastern forts) to meet the high road on the ridge.



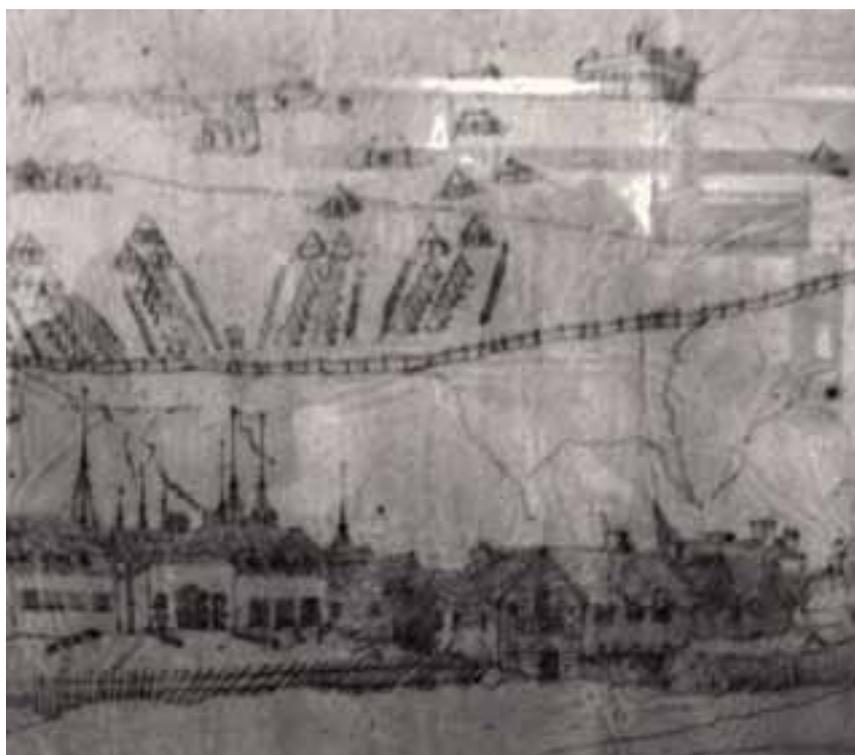
Survey plan by Lieutenant Lewis Hay (CRE Dover) showing the defences built on the Western Heights, dated 1787 (extract of NA: MPH 1/248/6)



The Citadel in 1787 (after NA: MPH 1/248/6; RCHME Report No. 2: Figure 5)

1793-6

- In 1793, war with France resumed. Over the next three years, the modest sum of £4,885 was spent on the Western Heights defences, but details of how the funds were allocated are very limited.
- In 1794-5, **five large, wooden stables** were constructed for the Board of Ordnance on the ridge near the junction between the high road leading from Dover towards the western fort and Folkestone, and the road climbing up the Heights from Archcliffe Fort. These stables would have been for draught horses, suggesting that construction materials were being transported and field artillery moved.
- A pen and ink drawing made in *c.* 1796 depicted the loopholed Guard House in the eastern fort, and below it a military encampment on the Heights' southern slopes (with the harbour below).



Military encampment on the southern slopes of the Western Heights, and the loopholed Guard House in the eastern fort, pen and ink drawing c. 1796 (extract of d16841 Dover Museum)

1797-1805

- The threat of a French invasion was particularly high in 1797-8, in 1801 and in 1803-5. As early as 1798, **Lord Melville** (Secretary of State for War) set out in a memorandum the crucial role of the Western Heights and Dover Castle in the defence of southern England: ‘... The possession to an enemy of Dover Castle of the opposite Entrenched Height and of the town and port, fortified in the manner that he would soon accomplish and defended by 6 or 7,000 men would establish a sure communication with France and could not be easily wrested from his hands. The conquest of this alone would be to him a sufficient object could he arrive with means of immediately attacking it. Its preservation to us is most important...’ (NA WO 30/68). In spite of the invasion threats in this period, between 1797 and 1804 expenditure on the Western Heights ceased.

- When war resumed in 1803 (following the temporary Peace of Amiens of 1802), Napoleon prepared a vast invasion fleet and created new harbour facilities for it at Boulogne, Étaples, Ambleteuse, Wimereux, Calais, Dunkirk and Ostend. Along the coast he assembled 80,000 men, supported by more than 2,000 vessels, and waited for a moment when French naval forces were at least temporarily in control of the Channel. In Britain, the military engineers planned for defence in depth along the most likely lines of attack. One of the most important of these was thought to be a landing on the south-eastern coast, followed by an advance along the North Downs to capture Chatham dockyard and cross the River Medway. In this case, Dover (and possibly Ramsgate) was considered to be the French's most probable strategic target – to capture and use as a bridgehead port. From 1804, in order to guard against an attack further west, a chain of interdependent circular gun-towers was constructed on the coast west of Folkestone (the design adapted by Captain William Ford (CRE Dover) from the Corsican concept of **Martello towers**) and the **Royal Military Canal** was dug to hinder a consequent advance via Romney Marsh. Inland, the rear of both possible lines of attack was protected by developing Chatham as a barrier fortress, and plans were made for there to be military camps along the North Downs to be connected to Maidstone by a military road. As a major target, Dover was crucial in this scheme and thoughts therefore turned once again to improving its defences.

1803-4

- In July 1803 discussions on how to improve the fortifications on the Western Heights began in earnest amongst a senior committee of engineers – **Lieutenant Colonel William Twiss (CRE Southern District), General Morse and General d'Aubant** – with considerable input from **Captain William Ford (CRE Dover)**. Twiss wrote to Dundas that he thought that the Western Heights could be held by 'detached Redoubts with small garrisons', and that he had 'attentively viewed' the Western Heights with the 'idea of improving the works begun here during the American War, by a system of fortification, so as immediately to form this position into an intrenched camp where a corps of 5,000 or 6,000 men might remain in security, and with tolerable convenience, and in readiness to move against an enemy wherever required' (NA: WO 55/778; Akers 1887: 50). Ford was asked to draw up a comprehensive plan to improve Dover's defences as a whole, including the Western Heights, which he submitted in a report in December – more comments and revisions followed. Pragmatically, the committee proposed utilising the existing, unfinished works, and closing 'the gorges of three salient works with lines reciprocally flanking each other' (Akers 1887: 52). All works were to be constructed as fieldworks, which could be transformed into permanent works at a later stage. In two key respects, Ford's design differed from that of Hyde Page. First, there was to be a third work (initially a 'tower of communication', but after revision the North Centre Bastion) between the western fort and the eastern fort, designed to cover dead ground between the two – with this in mind, all three were designed to act either independently or as part of the set. Second, these three works were to be linked by Lines (a ditch and profiled rampart with *banquette*) which, in conjunction with the cliffs on the southern and south-eastern sides of the hill, would turn the fortifications into an entrenched encampment or fortress on the Western Heights. The result would be a secure, defensible base providing accommodation for a large number of troops, intended as a strategic reserve which could resist an enemy invasion force which had landed elsewhere in Kent. In April 1804, approval was finally given for what was still fundamentally Ford's plan even after comment and revisions (NA: WO 55/778), and for an estimate of £30,000 for the works. On 21 April 1804 the order was given for work to

start on the Western Heights under the general command of Brigadier General Twiss and the local direction of Ford.



*General William Twiss (1774/5-1827),
portrait by Sir Thomas Lawrence*

1804-16

- The defences on the Western Heights designed by Ford were constructed over the course of twelve years. As the works progressed, some amendments and additions were made to the design. Construction was by military labour from the Militia Regiments, who camped on the Heights whilst they worked: for example, a diarist (T. Pattenden) wrote in May 1804 that the W. Middlesex Regiment ‘pitched their tents on the Heights near the three Guard Houses which were built in the American War’ (Welby 1983: 9). The main components of Ford’s scheme as built were as follows.
 - **The western fort (the Citadel).** Hyde Page’s existing fort was altered and completed. Permission was granted to revet the western, northern and southern flanks in 1807 – this turned the fieldwork into a permanent fortification (NA: WO 55/778).



*Plan of the Citadel, drawn 1811 (extract of
NA: MPH 1/506)*



Plan showing the Citadel in 1811 (after NA: MPH 1/506; RCHME Report No. 2: Figure 8)

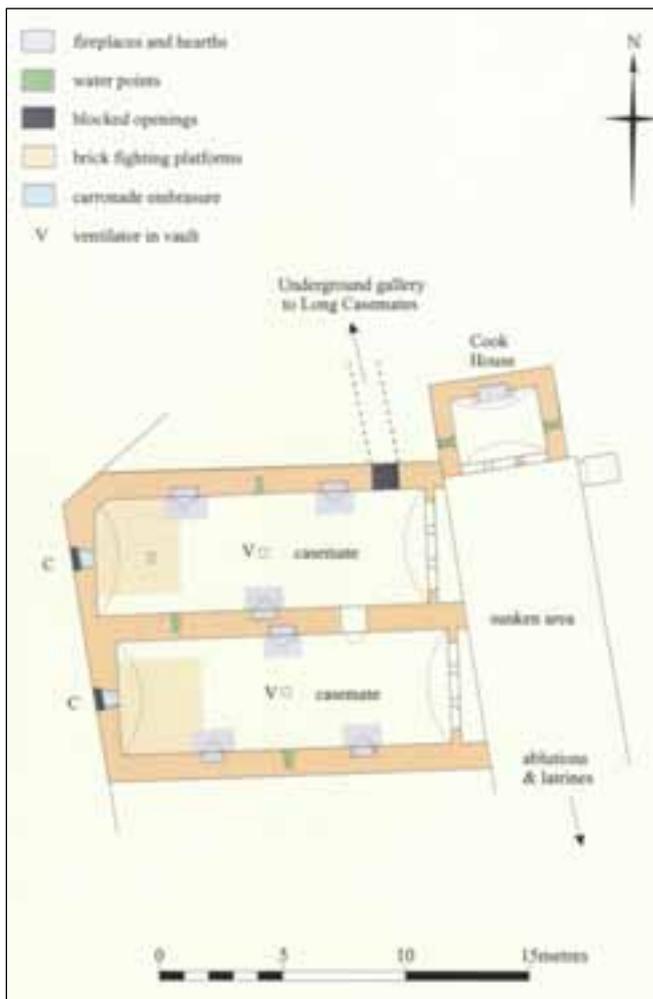
- The **western face** of the Citadel was completed as three salients (a principal, central salient flanked by a smaller northern and southern salient). It followed and probably re-used the 1779-80s works, but was amended (e.g. the flanks of the principal, central salient no longer extended back into the gorge). On the *terre-plein*, a total of twelve gun positions were created, from which artillery could fire westwards from the three salients (six from the central salient, four from the southern salient and two from the northern salient). In each of the two re-entrant angles on the western face, two sets of three casemates were added (the **Left Wing and Right Wing Casemates** later called **West Face and West Flank Casemates**, and the **South-West Face and South-West Flank Casemates**). These were planned in 1804 but not authorised until 1807, since to have been constructing them whilst an invasion was thought to be imminent would have made the western face of the fort unacceptably vulnerable. Each casemate combined barrack accommodation with a gun room for ditch defence. It was afforded a brick front elevation containing a central fan-lit doorway (with window above), flanked on each side by a segmental-arched window. The ditch elevation of each casemate contained a single gritstone embrasure for a carronade. Each casemate had a parabolic vault and was heated by three fireplaces. In front of the casemates was a sunken area containing an Ablutions building and Latrines. A casemated Cook House was provided for each group of casemates, opening off the Parade Ground between the sets of three casemates.



The West Face Casemates in the Citadel, front elevation, photo taken 1998 (NMR: AA043936)

- On the **southern face**, the salients of Hyde Page's design were replaced by a straight, double (inner and outer) ditch with a *tenaille* in between to protect the fortification's face. At *terre-plein* level, most of the *tenaille* was

formed into an earthwork and *banquette*, from which infantry could defend the steep slope of the Heights on the southern side. At the western end of the *tenaille*, a cross ditch separated off the end, forming a demi-bastion which could be defended independently at *terre-plein* level from *banquettes* (facing south, east and west), and at ditch level by gun rooms. Access to the *tenaille* was from a newel stair shaft inside the south-western part of the Citadel, followed by an underground gallery to a sally port on the *glacis*, and a set of steps up to the *terre-plein*. Two casemates serving as barracks and gun rooms were built in the demi-bastion in the *tenaille*'s western end to flank the western part of the South Ditch beyond the *tenaille* (**Short Casemates**). In front of these casemates was a sunken area, containing a casemated Cook House, Ablutions and Latrines. The casemates were each afforded a brick front elevation containing a central doorway (with a window above), flanked on each side by a segmental-headed window. Each casemate had a parabolic vault and was heated by three fireplaces. A doorway allowed communication between the casemates. Unique to these casemates was the provision of water points on their internal walls (a lead pipe in a recess with a door) because of the considerable distance from the rest of the Citadel. The ditch elevation of each casemate contained a single gritstone embrasure for a carronade.



Plan of the Short Casemates in the Citadel (RCHME Report No. 2: Figure 29a)

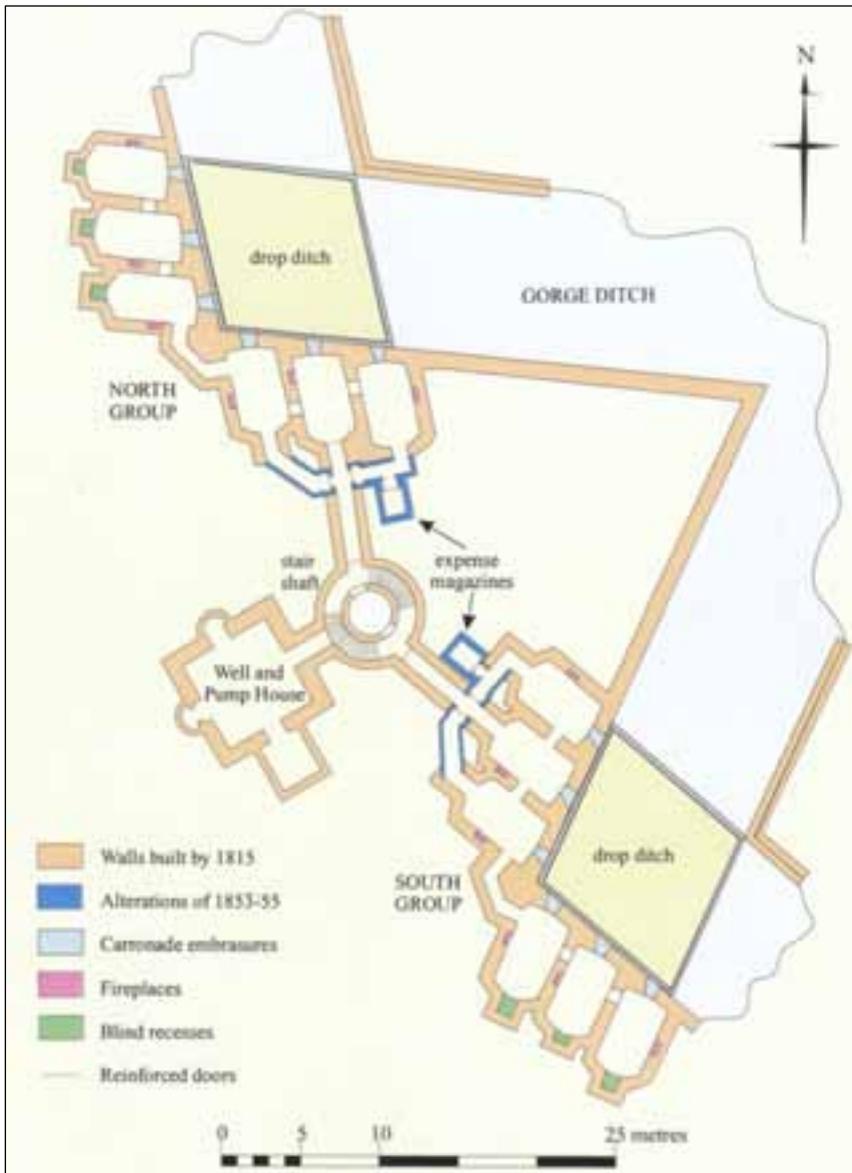
Two pairs of two-storeyed casemated barracks, arranged on the north and south sides of a sunken area, were constructed at the re-entrant angle of the south-western salient and the *tenaille* (**Long Casemates**). The southern pair was designed to permit defence of the ditch at the south-western end of the *tenaille*, whilst the northern pair comprised Cooking Casemates. The ditch elevation of the southern casemate pair was afforded tall, narrow, segmental-headed windows on three levels, arranged in triplets; the highest level was blind apart from a small window in the lower part of central opening of each triplet. It is not clear how these openings could have functioned as embrasures. The upper rooms had vaulted ceilings, and each southern casemate was heated by three fireplaces.



The Long Casemates in the Citadel, south elevation facing onto the ditch, photo taken 1998 (NMR: 032741)

- The **eastern face** was built so it closed the Citadel's gorge, thereby protecting the ridge-top (within the area defined by the Lines), which was open ground sloping gradually eastwards. From the gorge, gunfire could sweep all of this ground, protecting the rears of the North Centre Bastion and the North Entrance, as well as the western flank of the Drop Redoubt. Ford originally intended there to be a salient to the north and south of a central redan (much as Hyde Page had envisaged), but in planning works to complete the gorge in 1809-10 he amended and simplified the design – the two salients were removed so the gorge comprised two long curtains and a central **redan**, and the height of the rampart was increased (NA: MPH 1/228/2-3). Five gun positions were created on the *terre-plein* – one in the redan and four further north, the

latter covering the approach to the **Main Entrance** (which was located at the northern end of the gorge, as it had been in Hyde Page's fort but perhaps not in exactly the same location), as well as the ridge within the fortress between the Citadel and the Drop Redoubt. Ford added two groups (north and south) of six casemated gun rooms without barrack accommodation (each in two sets of three) behind the redan's scarp to protect the faces of the redan and to provide ditch defence for the Main Entrance (the **Gorge Casemates**). Access to each group of six gun rooms was from a gallery leading from a circular stair shaft (containing two independent spiral staircases), which also served the Citadel's well (see below). The ditch elevation of each casemate contained a single gritstone embrasure for a carronade. Each casemate was heated by a single fireplace. Gritstone pilasters were built against the counterscarp revetment of the redan's rounded salient to prevent ricochets from the Gorge Casemates.



Plan of the Gorge Casemates in the Citadel (RCHME Report No. 2: Figure 35)



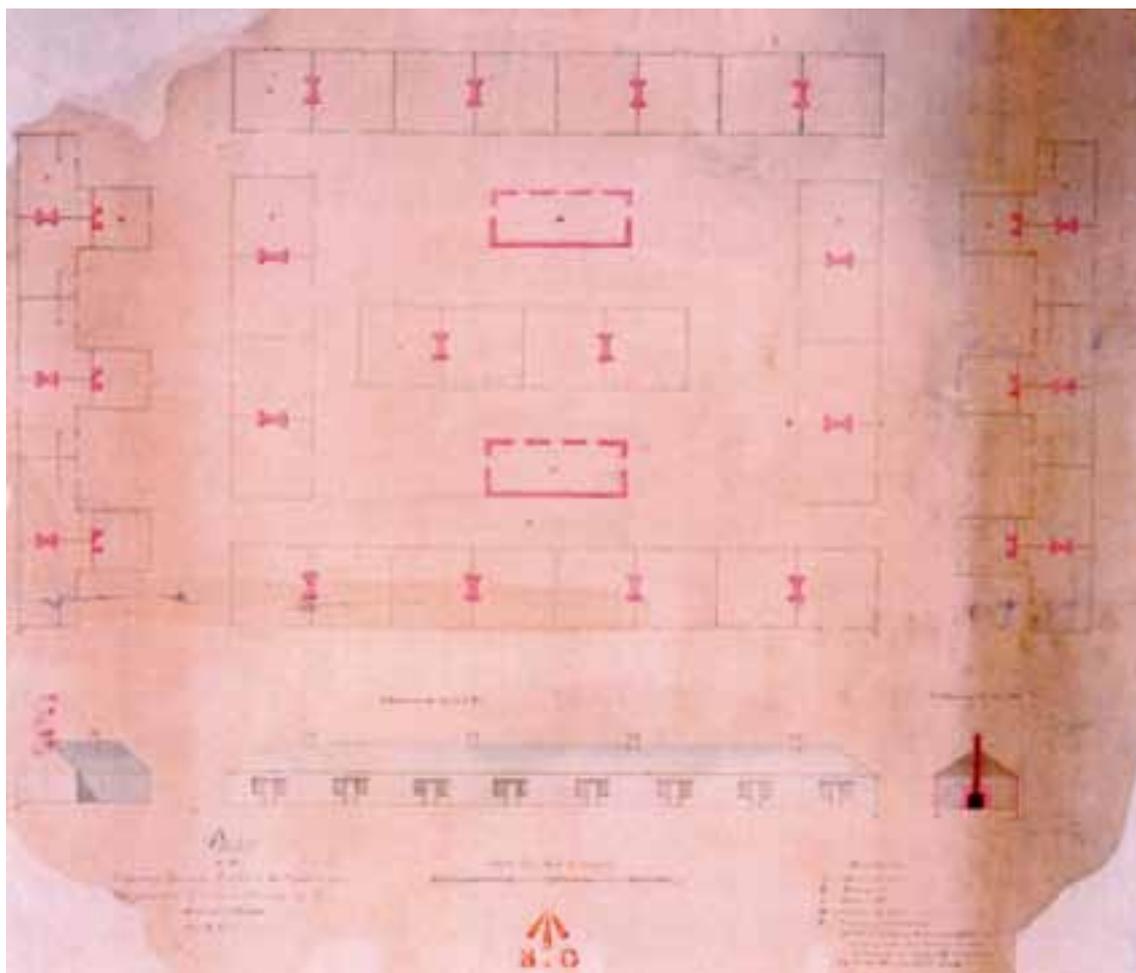
Anti-ricochet pilasters against the counterscarp of the Gorge Ditch, from the west, photo taken 1998 (NMR: BB032731)

- The **northern face** of Hyde Page's design was amended so that the northern salient was converted into a huge, projecting, three-tiered bastion (initially referred to as the **Right Wing (Inner, Centre and Outer)** but later the **North-West Bastion**), and the north-eastern salient became the North Ditch (with four gun positions on the *terre-plein* of its rampart) and the eastern face's Gorge Ditch and rampart, the two meeting at the junction with the North Lines. The North-West Bastion was intended to provide flanking fire for the North Lines, the three self-contained parts separated by two cross ditches at a higher level than the main ditch. Each part's *terre-plein* provided close defence for the one below. The cross ditches were defended by small arms fire from casemates behind the scarp revetments and by flanking fire from casemates behind the main ditch's east counterscarp revetment. The **Inner North-West Bastion** was afforded artillery positions for longer-range defence. Four stair shafts led down to underground galleries, which served all parts of the bastion and its casemates. The **Centre North-West Bastion** was designed for infantry defence. Its *terre-plein* was formed into a *banquette* with a battered brick parapet on the north, east and west faces. The **Outer North-West Bastion** was built as an earthwork with no provision for its own defence, but was profiled to allow fire over it from the Centre North-West Bastion. **The Inner North-West Bastion Casemates** were built as a row of five casemated gun rooms for small arms fire, located behind the cross ditch's scarp wall. Each casemate was afforded a parabolic vault and a communicating doorway with the adjacent casemate, and was heated by a single fireplace. On the scarp elevation each casemate contained six splayed small arms loopholes. **The Right and Left Flanking Casemates** were built in the re-entrant angles, where the ditches of the North-West Bastion met those of the Citadel. In each angle there was a group of six casemated gun rooms (two sets of three), the western and eastern groups of similar

design with parabolic vaults (but with different access arrangements). Each casemate was afforded a single gritstone embrasure for a carronade on the ditch elevation, and was heated by one fireplace. The Right Flanking Casemates were provided with a doorway to allow communication between casemates, but the Left Flanking Casemates were not. The **Centre North-West Bastion Casemates** were built as a row of eight casemated gun rooms to provide small arms fire through loopholes in the cross ditch wall. Each casemate was heated by one fireplace.

- In the **interior** of the Citadel, the **three loopholed Guardhouses** built in the 1780s remained *in situ* until at least 1811, but they had been removed by 1813, so there were no longer any permanent buildings on the Parade Ground and therefore the protection afforded to the garrison was improved. In 1805, a **well** was sunk behind the redan, with water being found at a depth of 420ft (128m) – ‘a prodigious feat of engineering and absolutely crucial if a garrison was to occupy Western Heights for any length of time under siege’ (Coad 1995: 87). It was served by an adjacent stair shaft to the east containing two independent spiral staircases (lit by borrowed lights), from which shaft three passages emanated – one to the well, and two to the two sets of Gorge Casemates. By 1809 a **well house** had been built over the well, consisting of a large square underground chamber with a smaller rectangular chamber to the south (both of brick), lit by windows in the north and west walls served by a semicircular light well; access was from the stair shaft which served the Gorge Casemates and a short gallery. Two structures depicted on the 1784 plan on the southern side of the Citadel may have been a large water tank and a temporary main magazine.

In 1805 a **temporary barracks** for a garrison was built in the middle of the Citadel’s interior between the central loopholed Guard House and the well. According to a plan surveyed and drawn in 1817 of the temporary barracks as constructed (NA: MPH 1/506), all the buildings were of timber except the kitchens, which were of brick (because of the fire risk); roofs were of slate. The barracks consisted of five blocks of Soldiers’ Quarters, two being of eight bays and three of four bays, arranged as two interlinked courtyards. Each bay served as a barrack room for twenty men sleeping two to a bed. Within each of the two courtyards there was a Cooking Kitchen. North and south of the Soldiers’ Quarters, and with their front elevations facing away from them, were two blocks containing Officers’ Quarters. Each block comprised six rooms for officers (each room to accommodate either one Captain or two Subalterns), with three rooms at the back for their servants. Each bay/room in the Soldiers’ and Officers’ Quarters was heated by a fireplace. Two small blocks to the north-west and south-west of the main complex may have been Latrines.



Plan of the temporary barracks as built in the Citadel in 1805, surveyed and drawn 1817; north is to the right on the page (extract of NA: MPH 1/506)

- **The eastern fort (Drop Redoubt).** Hyde Page's four-sided eastern fort was converted by Ford into a pentagonal redoubt – the eastern, southern and western faces were re-used, but the northern face was replaced by shorter north-eastern and north-western faces. In addition, the ditches were deepened and the ramparts were heightened. Positions for twelve guns were provided on the *terre-plein* to fire *en barbette* over the parapet on all but the southern face itself. The **Main Entrance**, located in the southern face, consisted of a wooden bridge over the ditch. A sentry box in the western revetment guarded the entrance's plain, brick gateway, from where a passage led through the rampart to a new **Guard Room** and **lock-up** (with **Soldiers' Privies** behind) on the western side of a sunken passage, which in turn led to the **Parade Ground**. In the south-western part of the Redoubt, a free-standing brick **Main Magazine** with shifting lobby was constructed with thick walls, gables rising above the parabolic vault and a pitched slate roof, the whole magazine being enclosed by a perimeter wall and space left around it in case of an explosion. On the northern side of the Parade Ground, bombproof **Soldiers' Quarters** were built (authorised in 1805) consisting of four casemates for barrack accommodation, and at the eastern end a fifth, shorter casemate containing a Cook House (with a separate wash house behind it), all with doorways between them. Each casemate was afforded a parabolic vault, a brick front elevation comprising a central doorway flanked on each side by a flat-

arched window and a further tall window above the doorway, a brick rear elevation with a large lunette window set high up, and two fireplaces. To the rear and sides of the range of casemates there was a dry area. The **loopholed Guard House** was demolished in 1812-13, leaving the Redoubt with an essentially open interior for the protection of the garrison.



Plan of the Drop Redoubt and the adjoining North Lines (left) and North-East Line (right), drawn 1811 (extract of NA: MPH 1/506)



Dover Castle from the Heights, watercolour by Captain Thomas Lloyd Durrant (fl. 1790-1830), painted 1808 (FA1990.23.25 Hampshire Museums Service); the wall on the left is thought to belong to the coal yard at the works compound; the Drop Redoubt is depicted (left of the tent in the distance) with its loopholed Guard House, freestanding Main Magazine and guns on the terre-plein, whilst in the foreground is a military tent

- **The North Centre Bastion.** This independent bastion was constructed midway between the Citadel and the Drop Redoubt on a short natural spur. It was designed to defend the land front, and especially to provide flanking fire along the northern slopes of the Heights. In plan, the Bastion resembled a triangle with a truncated northern tip, its longer eastern and western flanks narrowing to a shorter northern face. It incorporated the detached outwork in this location constructed by Hyde Page as part of his set of defences for the Heights. The

massive unrevetted ditch and rampart of the Bastion were built across the east–west line of the earlier outwork. Two tiers of defence (an inner bastion closer to the fortress interior, and an outer bastion) were created, each of which could be defended independently. The modified rampart and ditch of the earlier outwork closed off the outer bastion from the inner bastion. An underground gallery connected the two bastions. The inner bastion contained two traverses pointing inwards at right angles from the west flank, and the gorge incorporated a smaller bastion so the entrance could be flanked from within the Heights. Access to the inner bastion was from the fortress interior through a gap in the western end of the gorge. The bastion was designed with positions for six 24-pdr carronades – two on both the eastern and western flanks and one in each salient angle with the northern face.



Plan of the North Centre Bastion and the adjoining North Lines, drawn 1811 (extract of NA: MPH 1/506)

- **The Lines.** Ford and Twiss transformed the set of independent fortifications on the hilltop into an entrenched encampment or fortress by constructing Lines between them. These Lines were designed to protect a large field force in garrison quarters who could not be accommodated in the forts.
 - The **North Lines** linked the Citadel with the North Centre Bastion and the Drop Redoubt. The **North Entrance** to the fortress was located between the North Centre Bastion and the Drop Redoubt at the narrow end of the ridge at the top of a slight coomb, which was flanked on the west by the North Centre Bastion and on the east by the North-East Flank of the North Lines. As the North Military Road finished its moderate ascent from the town of Dover and reached the entrance, the course of the road described an elongated loop (and was therefore covered by crossfire from the east and west) before crossing the North Lines on a bridge. This was the principal entrance for works traffic and building materials, which were transported up the carefully engineered incline of the North Military Road. Lime sheds, lime kilns and water tanks were constructed just outside the entrance, and a **Works Compound** was set up just inside the entrance, centred on the

Ordnance Stables (built in 1794-5 near the junction between the roads), with a **Coal Yard** south of the Stables. Further west was a **Tool Yard**.

- The **South Lines** (a rock-cut ditch and profiled rampart with *banquette*, authorised in 1806) were designed to secure the south-western flank of the fortress from attack along the lower road from Folkestone (this Old Folkestone Road was considered the most vulnerable point on the southern face). They extended from the north-eastern corner of the Citadel's *tenaille* southwards down the steep slope to a point roughly halfway down, where three two-storey casemated gun rooms accessed from a newel stair and area to the rear (the **South Lines Casemates**) were positioned to cover the lower part of the South Lines as they ran down the remainder of slope to the cliff edge. **South Lines Bridge** (which illustrations suggest was a fixed-span wooden structure) was constructed to allow the Old Folkestone Road to cross the South Lines, from where one could either enter the fortress (a Guard House was built at the junction with the South Military Road, which climbed the steep slope north-eastwards to meet the North Military Road) or continue eastwards along the low road towards the quayside.



Plan showing the South Lines (extending downhill from the north-eastern corner of the Citadel's tenaille), the South Lines Casemates, South Lines Bridge and Guard House, dated 1811 (extract of NA: MPH 1/506)

The **North-East Line** closed the ground between the Drop Redoubt and the escarpment to the south-east, its V-shaped ditch with rampart on the southern side preventing attacking troops moving from the northern, landward front southwards around the eastern side of the Drop Redoubt.

- **Sculpting of the ground around the fortress.** The natural slopes of the ridge all around the fortress were shaped or ‘sculpted’ using scarping, grading and steepening to achieve difficult angles of approach and controlled fields of fire with no dead ground where an attacking force could pause in safety. Immediately west and east of the Citadel’s North-West Bastion, for example, the slope was cut into a series of large, inclined ‘steps’, forming long, narrow alleys which facilitated ascent but which were actually designed to be killing zones where enemy troops would be at the mercy of defenders firing from the Bastion’s flanks. Similarly, the ridge around the Drop Redoubt was scarped to produce massive slopes with steep angles which would make an infantry attack hazardous and exhausting, whilst the ground between these slopes and the Redoubt was shaped into long, gradual slopes, so that once the attacking troops reached the crest of a scarp, they would be exposed to fire from the parapet with nowhere to take cover.



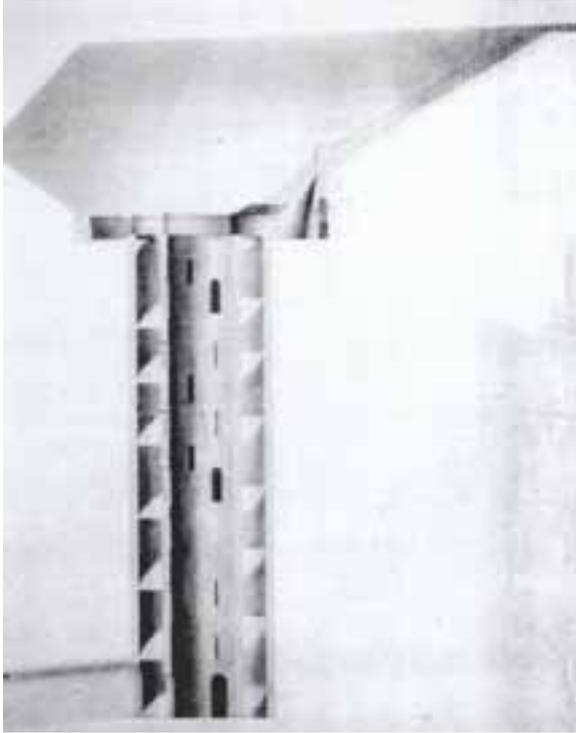
The inclined steps (killing zones) west and east of the Citadel’s North-West Bastion, photo taken 1978

1804

- In June, permission was given for a permanent barracks for 700 men to be built (**Grand Shaft Barracks**) – accommodation for a further 800 men was to be provided in casemates in the actual fortifications (NA: WO 55/778). The site selected for this permanent barracks was south-west of the Drop Redoubt in a coomb overlooking the harbour. In order to provide level, solid platforms for the buildings, massive terraces were cut into the chalk bedrock of the coomb’s steep slopes. Plans of the Western Heights drawn in 1810-13 show the general layout of the Barracks, but do not specify the specific uses of the buildings (e.g. a plan of 1810, NA: MR 1/1349). A plan drawn in 1861 (NMR: WD/2506) does indicate their uses. Most of the accommodation was

arranged in three parallel ranges on the terraces facing south-east around and overlooking the Parade Ground. It consisted of large, austere blocks of double-pile plan, built of brick with deep sash windows and a slate roof. On the first terrace was Soldiers' Quarters Range A and Officers' Quarters Range B, whilst immediately adjacent and at right-angles to the Officers' Quarters was an Officers' Mess defining the north-eastern end of the Parade Ground. The second terrace contained Soldiers' Quarters Range B, whilst on the third terrace was the smaller Officers' Quarters Range A. On the steep, south-western side of the coomb a broad flight of steps linked the terraces, west of which were ancillary buildings on two terraces. These included a Canteen (overlooking the end of the Parade Ground), Cook Houses, Wash Houses, an Armourer's Workshop and Barrack Stores. Access to the Barracks was from Drop Redoubt Road (which ran along its northern side) down the main steps, and from Archcliffe Fort (located south of the Heights) along a footpath which led past a two-storey Guard House with veranda where the path entered the Barracks. The complex was completed by 1805.

- In October, Twiss sought and was given approval for a means of facilitating the movement of troops between the new permanent Barracks in the coomb and the town below, since cliffs prevented easy direct access between the two. He wrote that 'the new barracks ... are little more than 300 yards [274m] horizontally from the sea beach,... but in order to communicate with them from the centre of the town, on horseback the distance is nearly a mile and a half and to walk it about three-quarters of a mile, and all the roads unavoidably pass over ground more than 100 feet [30m] above the barracks, besides the footpaths are so steep and chalky that a number of accidents will unavoidably happen during the wet weather and more especially after floods. I am therefore induced to recommend the construction of a shaft [the **Grand Shaft**], with a triple staircase.... the chief object of which is the convenience and safety of troops ... and may eventually be useful in sending reinforcements to troops or in affording them a secure retreat' (NA: 55/778). This involved cutting a bowl-shaped hollow in the cliff immediately below the new Barracks' Parade Ground, in which was constructed a flight of stone steps (with central hand-rail) leading down the slope, bifurcating at a landing, the two flights then descending to opposite sides of a flat, stone-paved area containing the entrance to a vertical shaft (c. 10m (33ft) below the level of the Parade Ground), which was sunk down to ground level (a distance of 42.67m (140 ft)). This shaft was lined with brickwork and contained a central, hollow, brick column supporting three intertwined spiral staircases (with Purbeck stone treads) and acting as a light-well. Each staircase was built with four borrowed lights, and each light was afforded a small landing. It is unlikely that there was initially segregation relating to who used which staircase – soldiers would have descended the stair from the Parade Ground in two groups (separated by the handrail), then down the two separate stairs to the top of the shaft, before dividing again and making for one of the three staircases in the shaft itself. Gates at the bottom of two of the three staircases meant that access could be controlled when necessary. At the bottom of the shaft a vaulted gallery was built, at the end of which was a small Guard Room and main gate to the harbour and town, set within a walled compound (NA: WO 55/778). The Grand Shaft was built between March 1805 and 1807.



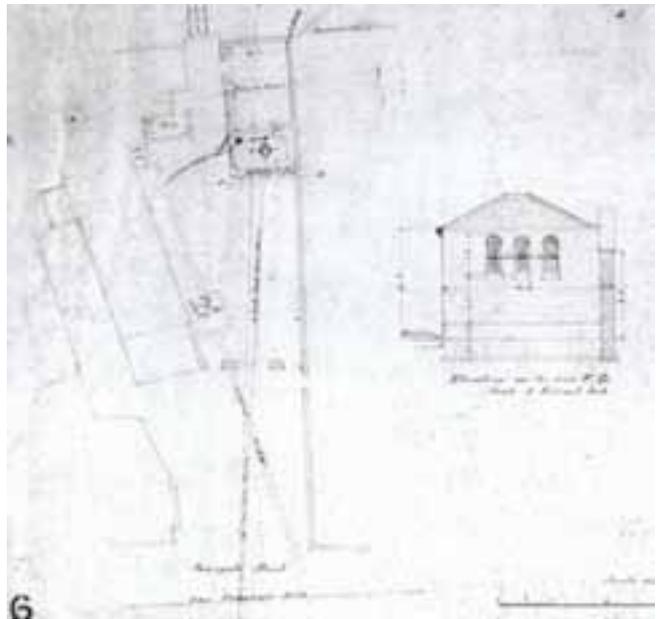
*Section through the Grand Shaft, drawn 1808
(NA: WD/2354)*



*The steps from the Parade Ground down to the
entrance to the Grand Shaft, photo taken 1998
(NMR: AA008568)*



*The Grand Shaft's light well, looking upwards,
photo taken 1950s (Pevery 1996: 10)*



*The Guard Room (built by 1807) at the foot of the Grand
Shaft, drawn 1855-6 (extract of NMR: WD/2403)*



Heights Barracks from the Rope Walk, watercolour by Captain Thomas Lloyd Durrant, painted 1808 (FA1990.23.19 Hampshire Museums Service)

1804-6

- A **Military Hospital** was built in a coomb east of the South Military Road.

1805-6

- During construction works, remains of the twelfth-century **round church** were discovered and excavated, but an account was not published.
- Completion of the Drop Redoubt's defences further buried the remains of the *pharos* (Bredenstone).



Dover Town and Heights from the Guildford Guard, watercolour by Captain Thomas Lloyd Durrant, painted 1809 (FA1990.23.17 Hampshire Museums Service)

1810-13

- A number of **survey plans** were drawn in this period, showing the layout of the Western Heights fortifications as built, and the extent of progress made. The most informative is perhaps that of 1813 (NA: MR 1/1346). At the **Citadel**, the original three loopholed Guard Houses had been removed since the 1811 plan was drawn, but the temporary barracks were still *in situ*. Work on a proposed new Main Entrance (planned since 1809) in the southern part of the gorge had barely begun – it was depicted and labelled on the 1813 plan as ‘Breach’. At the **Drop Redoubt**, the original loopholed Guard House had been demolished since the 1811 plan was drawn. The 1813 plan also showed the routes of the **military roads** on the Western Heights. It appears that the route of the road climbing the slope from the south had been amended from that shown on Hay’s 1787 plan (South Military Road). At the point where it joined and became the high road from Folkestone to Dover and descended the gentler slope towards Dover (North Military Road), a road also led eastwards to the Drop Redoubt. Further down the South Military Road, a road led westwards and divided, with one arm heading towards the north-eastern corner of the Citadel’s *tenaille* and the other towards a point on the South Lines north of the South Lines Casemates.



Plan showing the Western Heights fortifications, drawn c. 1810-12 (extract, NA?)



Plan showing the Citadel, North Lines and North Centre Bastion, dated 1810 (extract of NA: MR 1/1349)



Plan showing the North Lines, Drop Redoubt, North-East Line, the Grand Shaft Barracks and the Grand Shaft, dated 1810 (extract of NA: MR 1/1349)



*Plan showing the Citadel and South Lines, dated 1811
(extract of NA: MPH 1/506)*



*Plan showing the North Lines, Drop Redoubt and North-East Line, dated 1811
(extract of NA: MPH 1/506)*



Plan showing the Citadel (including the positions of the guns on the terre-plein and the 'Breach' of the proposed new south-eastern Main Entrance), dated 1813 (extract of NA: MR 1/1346)



Plan showing the North Lines, North Centre Bastion (including the positions of the guns on the terre-plein), the North Entrance, the Stables and south of them the Works Compound, dated 1813 (extract of NA: MR 1/1346)



Plan showing the North Lines, Drop Redoubt (including the positions of the guns on the terre-plein), North-East Line, the scarping, grading and steepening of the northern and eastern slopes, and the Grand Shaft Barracks, dated 1813 (extract of NA: MR 1/1346)

1814-17

- Ford put forward elaborate and very costly proposals to improve the defences of Dover further, which would link the Western Heights and Dover Castle with an earthwork and close the town of Dover to the north (NA: WO 55/779). He also estimated that a further £90,000 would be required to complete the defences on the Western Heights. The arrival of peace in 1815, however, meant that none of these plans was put into effect.

1815

- The war between Britain and France ended.
- By the end of the war, the vast sum of £238,889 (excluding some major costs such as that of bricks – the main building material used on the Heights and the day-to-day spending of the Army annual budget) had been spent on constructing the Western Heights fortifications (1793-6, 1804-16; NA: WO 55/779; Coad and Lewis 1982: Table 1).

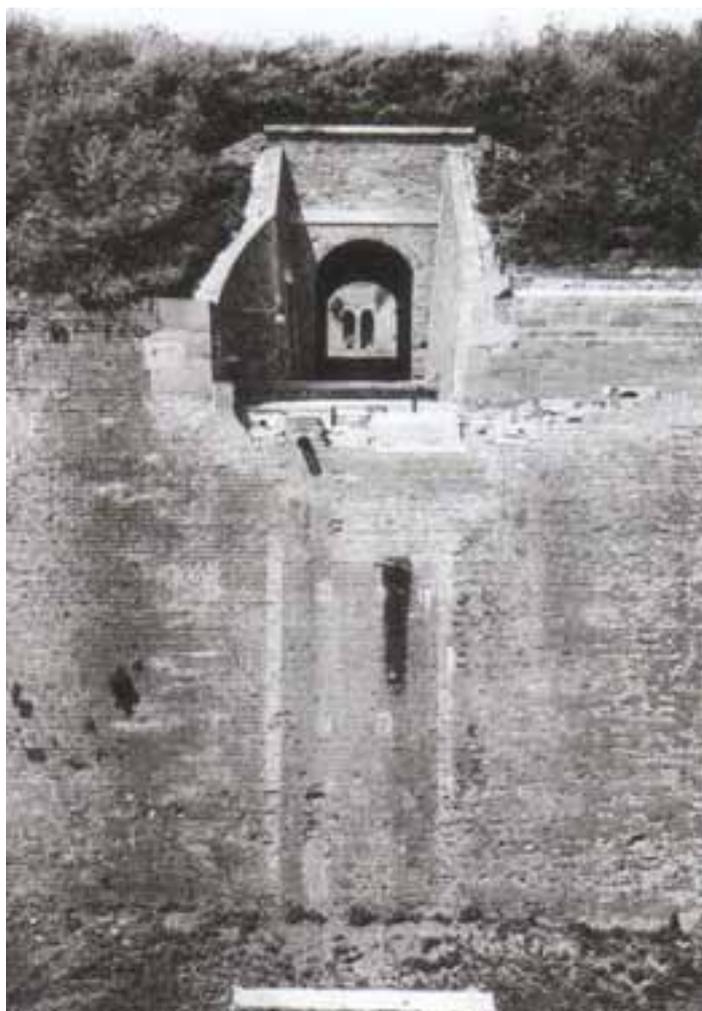
1816

- Expenditure on the Western Heights defences and **construction works ceased**. Ford did not realise his aim of finishing the construction of all the components of his defensive scheme for the Heights. Only the Drop Redoubt was largely complete.

1817-50s

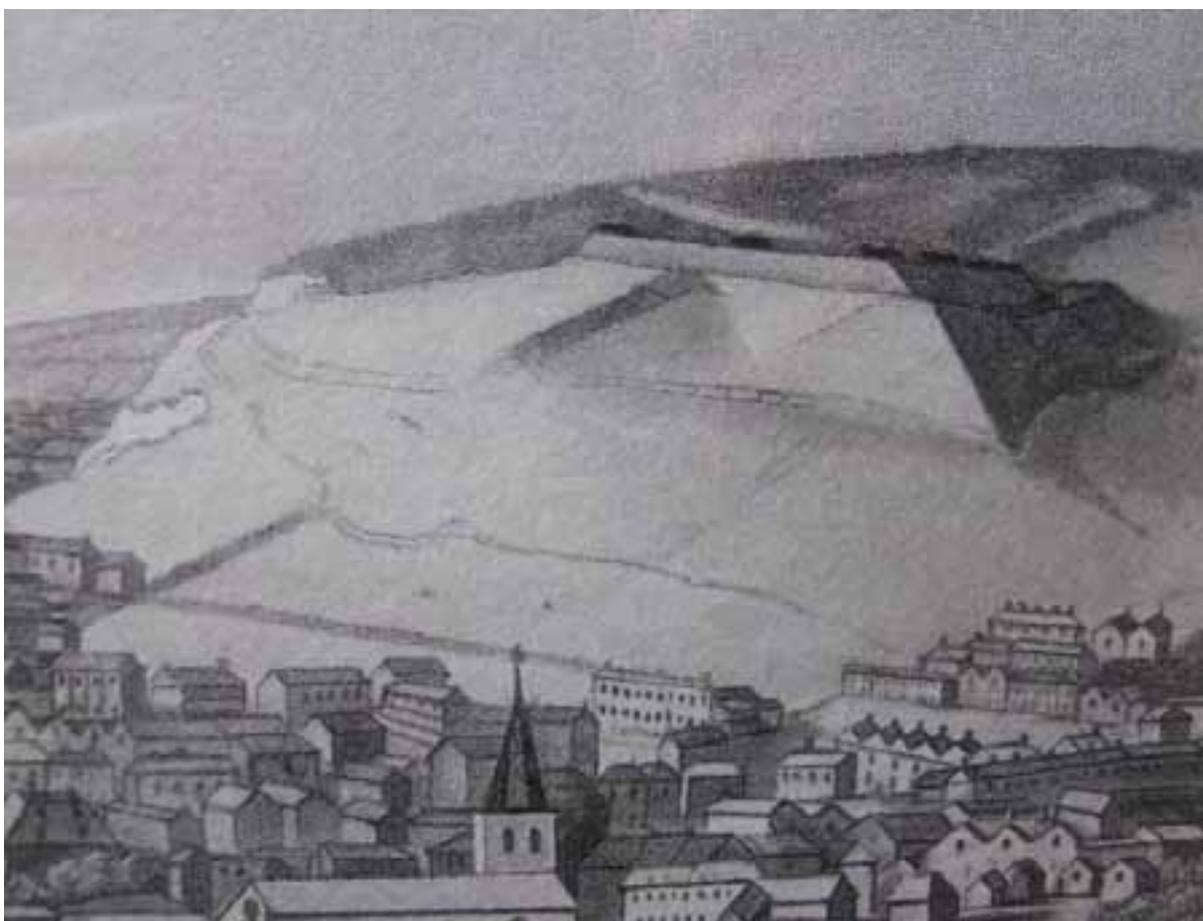
- The **Drop Redoubt** was the only part of the Western Heights garrisoned after hostilities ended. Fourteen heavy guns and nine mortars were mounted on the *terre-plein* and

retained for **saluting** there (Akers 1887: 61). Between 1815 and *c.* 1860, very few changes were made to the *terre-plein* – of the twelve original *en barbette* gun positions, two were moved northwards, almost entirely concentrating the armament on the land front. In 1821, the **Soldiers' Quarters** (four casemates intended for fifty men each) were occupied by married gunners, a Keeper and offices for the Royal Artillery and Royal Engineers. In 1823, the **wooden bridge** at the Main Entrance was replaced with a new footbridge (NA: WO 55/780). This was fixed span for two-thirds of its length on the counterscarp side, with a shorter moving span which swung on a fixed pivot in front of the entrance. When not in use, or in defensive mode, the moving span was rotated to sit flush with the curtain wall on a recess which extended east of the entrance. A carved brick suggests the work was carried out by 1827. By 1830, the garrison consisted of 84 NCOs and men and was commanded by a captain; this arrangement was the same in 1852 (NA: WO 55/2461; WO 55/2562; WO 55/2931). In 1835, two magazines contained powder and the **Saluting Battery** was still in place (NA: WO 55/783). Between 1844 and 1851, a small **Ablution Room** was built opposite the Soldiers' Quarters on the southern edge of the Parade Ground as a replacement for the wash house behind the Soldiers' Quarters' shorter easternmost casemate (the cook house), and the easternmost casemate was extended backwards to full depth (NA: WO 55/2751 plan 2; NA: WO 55/2931 plan 2).



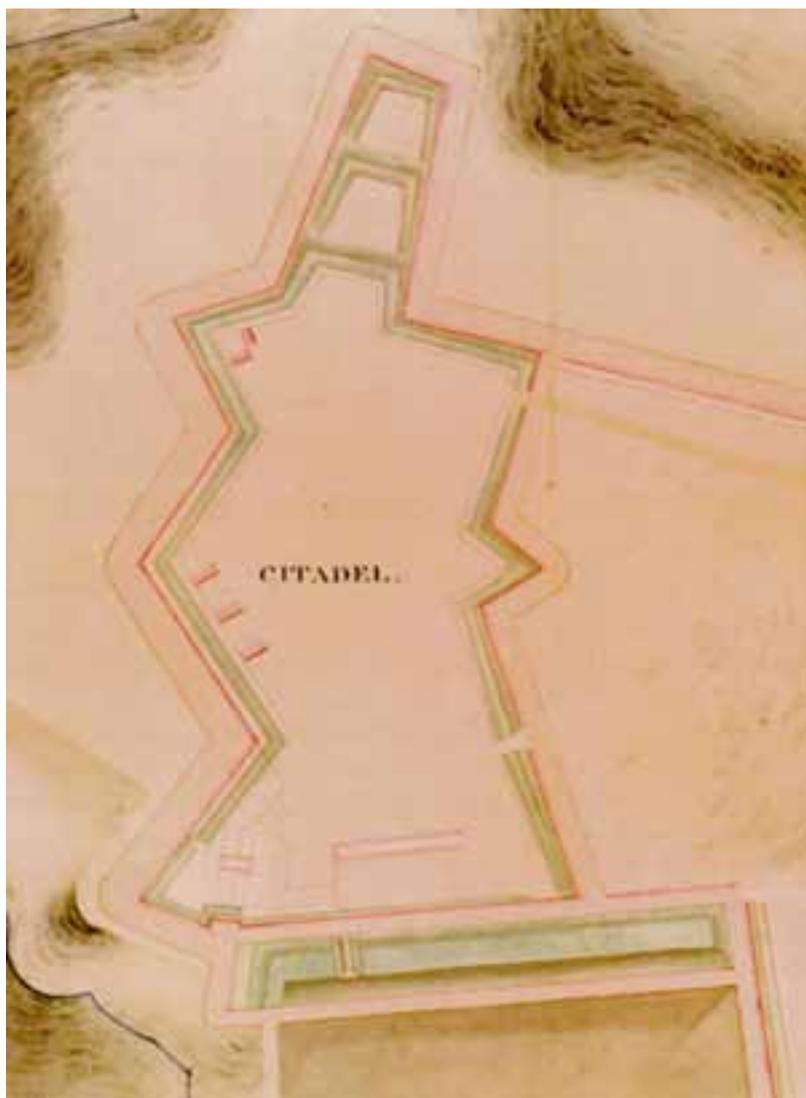
The Main Entrance in the southern face of the Drop Redoubt, looking north, photo taken 1998 (NMR: BB9915909)

- A drawing by William Bethell published in 1819 included a depiction of the Drop Redoubt, the North-East Line and the scarped ground on the eastern and north-eastern slopes of the Western Heights.



A View of the Town and Port of Dover, drawing by William Bethell, published as an engraving 1819, showing the Drop Redoubt, North-East Line and scarped eastern and north-eastern slopes of the Western Heights, from the north-east (extract)

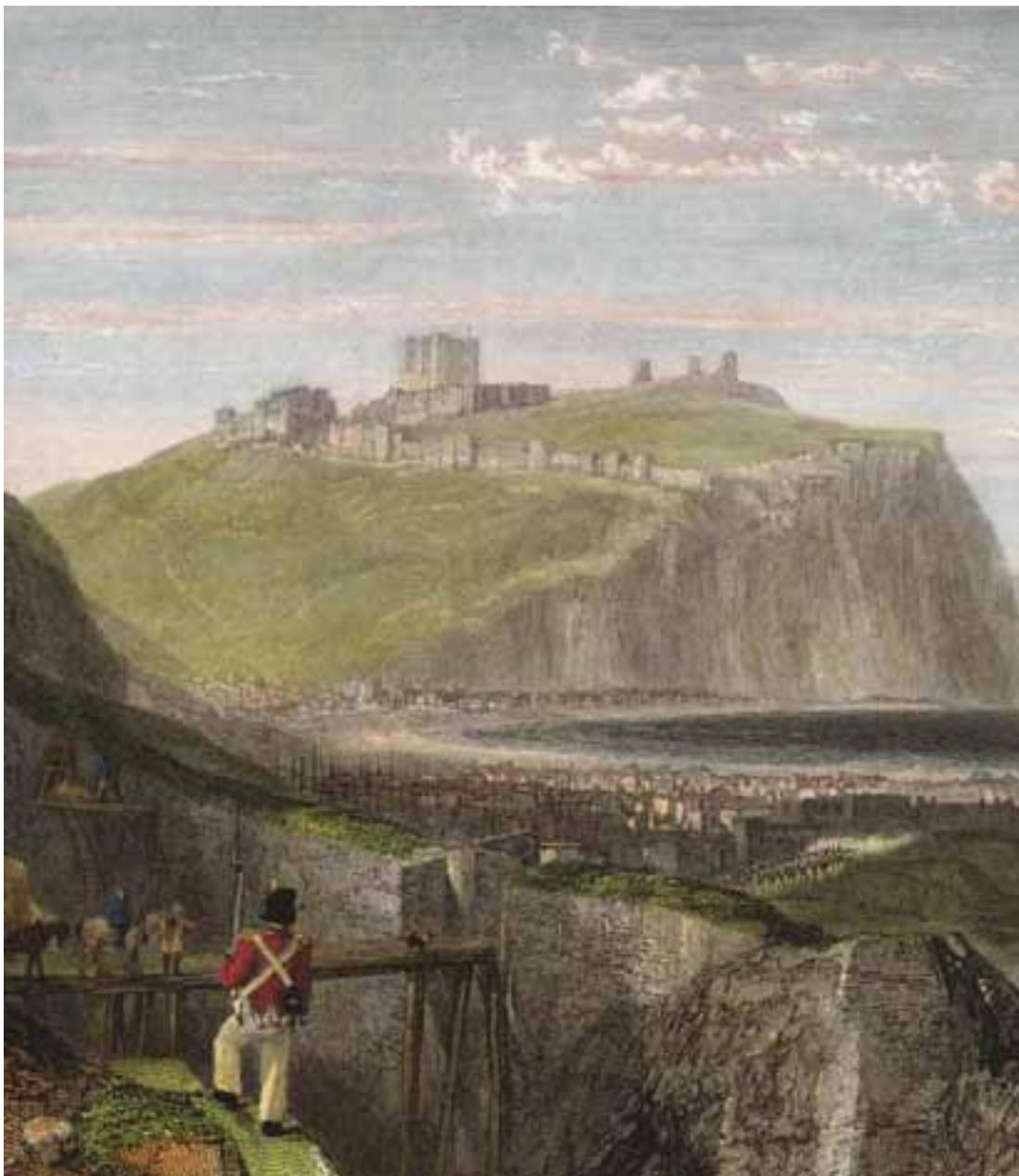
- At the **Citadel**, by 1821 several Board of Ordnance buildings which were incomplete or no longer needed had been pulled down and their materials auctioned or reused in public projects. This included the **temporary barracks** (NA: WO 55/2461; WO 55/2562). Basic maintenance of the Citadel was nevertheless carried out by the Board and the land around the Citadel was let to tenant graziers. In 1835 objections were raised to this practice, since although the Citadel's armament had been withdrawn to the Royal Arsenal in 1819 (NA: WO 55/779), shot and gun carriages continued to be stored there, probably in five **expense magazines** depicted on a plan of 1830 as being in the lea of the western face's rampart (NA: WO 55/783; WO 55/2562). In 1852 an agricultural tenant was granted permission to cut grass from the ditches and graze sheep in the Citadel (NA: WO 55/785; WO 55/2931).



Plan of the Citadel, showing five expense magazines on the western side, drawn 1830 (extract of NA: WO 55/2562/8)

- **William Cobbett**, in his *Rural Rides* (first published in 1830) wrote about his visit to the Western Heights on 3rd September 1823: ‘I went to see, with my own eyes, something of the sort of means that had been made use of to squander away countless millions of money. Here is a hill containing, probably, a couple of square miles or more, hollowed like a honey-comb. Here are line upon line, trench upon trench, cavern upon cavern, bomb-proof upon bomb-proof; in short the very sight of the thing convinces you that either madness the most humiliating, or profligacy the most scandalous must have been at work here for years. The question that every man of sense asks, is: What reason had you to suppose that the *French would ever come to this hill* to attack it, while the rest of the country was so much more easy to assail?... Let the French or let the devil take us, rather than let us resort to means of defence like these. This is, perhaps, the only set of fortifications in the world ever framed for mere *hiding*. There is no appearance of any intention to annoy an enemy. It is a parcel of holes made in a hill, to hide Englishmen from Frenchmen. Just as if the Frenchmen would come to this hill! Just as if they would not go (if they came at all) and land in Romney Marsh, or on Pevensy Level, or anywhere else, rather than come to this hill;...’.

- A watercolour by **J.M.W. Turner** painted in 1826 showed the South Lines and, in the foreground, the **South Lines Bridge**.



Dover from Shakespeare's Cliff, engraving by George Cooke after a watercolour by J.M.W. Turner (1775-1851), dated 1826, showing in the foreground the wooden bridge crossing the South Lines and a workman on a scaffold, probably repairing the counterscarp

- During this period the **Grand Shaft Barracks** continued to be occupied by troops passing through Dover who stayed for varying amounts of time. In 1837, for example, the 2nd Battalion Rifle Brigade stayed there for three months.

1840s-50s

- In the 1840s-50s, there were three periods of alarm (invasion 'panics') in Britain caused by imagined aggressive French intentions – 1847-8, 1851-2 and 1859. Feelings of insecurity about French hostile intentions, and that the nation was unprepared against

possible invasion, coupled with awareness of the major advances which had been taking place in weapons technology and the changes in naval tactics caused by the use of steam power for warships, led to calls for Britain's coastal defences to be improved and programmes of fortification construction.

1847

- **Colonel Tylden** submitted a report on the state of the Dover defences, in which he argued that the ridge immediately west of the unarmed Citadel was the most probable point for an attack on the Western Heights. He pointed out that at the Citadel, the ditch between the 'centre and outer work' was unfinished. At the Drop Redoubt, the scarp was revetted only up to a height of 23ft and the counterscarps were unrevetted; the ditches were not all excavated to their full depth, and lacked flank defence; and the bridge across the ditch to the entrance was of wood. Unfinished too were the North Lines, the North Centre Bastion, and the *glacis* (Akers 1887: 62-4).

1851

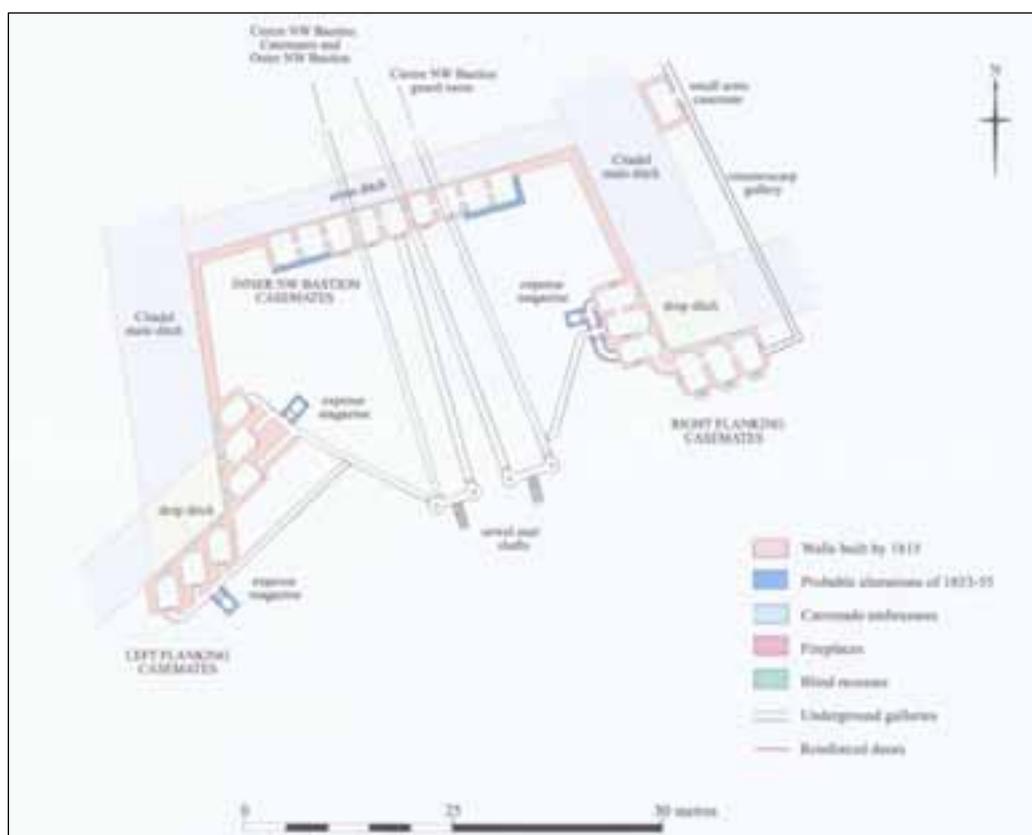
- In spite of Tylden's report, three years later in February 1851 the **Citadel** was still unarmed. The **Drop Redoubt** was manned and equipped with artillery pieces deemed inadequate for effective defence, namely three 24-pdrs on traversing platforms, six 12-pdrs mounted *en barbette* for saluting and one 8-inch mortar (NA: WO 55/785).

1853-5

- In February 1853, **Lieutenant Ben Hay Martindale (CRE Dover)** requested some new artillery for the **Drop Redoubt**, comprising eight 42-pdrs (NA: WO 55/785).
- In March 1853, works were at last proposed to repair and complete the **Citadel** so it could be used again (NA: WO 55/785), and were completed by 1855, as follows.
 - To form part of the existing bridge into a drawbridge.
 - To finish the escarp of the South Lines by connecting it with the return of the counterscarp wall of the Citadel, and construct casemates therein for 4 guns.
 - To put up a portion of the casemates to receive 500 men and temporarily a proportion of officers.
 - To renew decayed fittings of 5 traverses intended for expense magazines.
 - To close the breach left in the rampart with an earthen breastwork.
 - To construct a gallery of communication from main work to casemates constructed for reverse fires to flank the ditch of lower wing [i.e. North-West Bastion].
 - To mount artillery in casemates for flank defence.
 - To lay down curbs and pivots for 22 Traversing Platforms to arm the work [on the *terre-plein*].
 - Repairing the facing of the scarp and counterscarp walls.

The second item on the list refer to the insertion of the **Upper South Lines Casemates** into the angle of the eastern end of the *tenaille's* inner ditch scarp and the northern end of the South Lines' scarp, thus rectifying a weakness in Ford's defensive scheme. In each of the two flanks, a pair of two-storey gun rooms was built, and openings for them were cut into the existing scarp revetment. Each casemate was afforded an embrasure for a carronade flanked by small arms loopholes on the ground floor, and another carronade embrasure on the first floor, so they could fire westwards along the *tenaille's* inner ditch and southwards along the South Lines' ditch. The third item on the list refers to the improvement of the Citadel's existing casemates and related facilities so they could

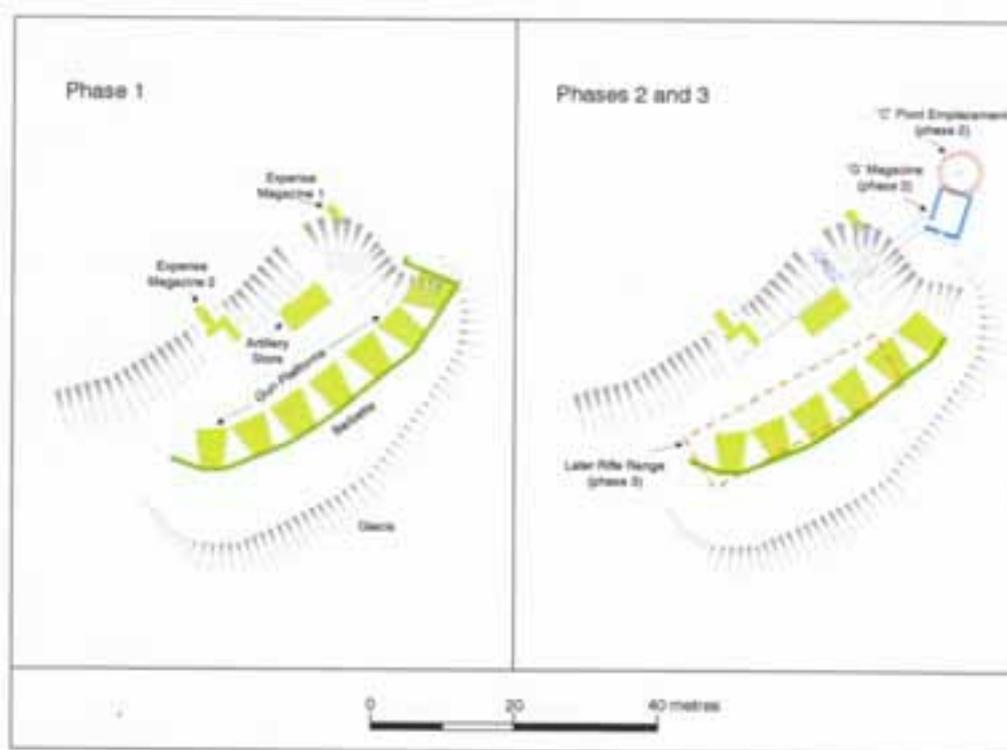
accommodate more men (e.g. at the southern end of the area belonging to the South-West Flank Casemates, Latrines for NCOs were added). The 42nd Highlanders were the first to occupy the improved Citadel accommodation in 1856 (Batcheller 1857). The ‘gallery of communication’ in the sixth item on the list refers to the construction of the **Counterscarp Gallery and Casemates** behind the eastern counterscarp of the North-West Bastion, which had been part of Ford’s design for the Bastion but was not built during the 1804-16 period of construction works. The Counterscarp Gallery was built descending from the Right Flanking Casemates beneath the North Ditch, off which two small arms casemated gun rooms opened to the west (each with six loopholes on the ditch elevation). The gallery terminated in three Counterscarp Casemates (each gun room having a single gritstone embrasure for a carronade on the ditch elevation, a communicating doorway between the casemates, and a fireplace in the southern casemate only). The scarp and counterscarp casemated gun rooms for defence of the ditch were also completed (e.g. the **Gorge Casemates**, and **in the North-West Bastion, the Inner North-West Bastion Casemates and the Right and Left Flanking Casemates**).



Plan of the Inner North-West Bastion Casemates, Right Flanking Casemates, Left Flanking Casemates, and part of the Counterscarp Gallery leading to the Counterscarp Casemates (after HMPS: 402513; RCHME Report No. 2: Figure 40)

- In June 1853, Martindale requested the issue of guns, carriages and racers for the **Citadel**, consisting of six 32-pdr, sixteen 18-pdr cannon and fifty 12-pdr carronades. The carronades were for the casemates, whilst the cannon were intended for the *terre-plein*, ‘to be placed as nearly as possible to their old positions’ (NA: WO 55/785).
- In *c.* 1853, following a report to the Inspector General of Fortifications concerning the ‘sea batteries’ protecting the port and harbour at Dover, a new ‘Battery on the Cliff in

front of Drop Redoubt' (**Drop Battery**) was constructed south-east of the Drop Redoubt close to the cliff edge overlooking the western docks. It consisted of a simple curved rampart behind which were eight positions for guns (ground platforms for 42-pdr cannon mounted on garrison carriages firing *en barbette*), a free-standing artillery store and two expense magazines (NA: WORK/43/1598).



Phase plans showing the development of the Drop Battery (RCHME Report No. 10: Figure 3)

1854

- The remains of the **round church** were uncovered once again during military construction works. This time the excavated remains (the flint mortar core of the foundations and a small area of the facing stone) were subsequently left exposed (Clayton 1862: 87).



The remains of the round church on the Western Heights, looking east, photo taken 2011 (author)

1855-6

- At the **Grand Shaft Barracks**, the **Soldiers' Quarters Range B** was extended eastwards by several bays in a closely matching style, no available site having been found for building new barracks which were deemed necessary. The 93rd Highlanders were the first to occupy the newly extended quarters. The Officers' Mess was also improved (Batcheller 1857: 93).

1856

- At the end of the Crimean War, returning British troops were accommodated for months in **encampments** on the Western Heights and at Dover Castle barracks, there being insufficient barrack accommodation to cater for the large numbers of troops involved. The regiments stationed at Dover were 'the 42nd Royal Highlanders, partly in the Citadel, and the remainder encamped on the Citadel plain; the 93rd Highlanders on the South Lines; the 41st regiment, on the slopes to the westward of the Heights barracks; the 44th in Archcliffe Fort meadow; the 49th in the Hospital meadow; and the 79th Cameron Highlanders, quartered in the Castle barracks' (Batcheller 1857: 94-5). A series of paintings and lithographs by Dover artist William Burgess (1805-61) depicted the encampments.



Camp of 41st Regiment, Dover Heights, undated (probably 1856) coloured lithograph from a painting by William Burgess (1805-61)



Camp of the 93rd Highlanders, Western Heights, Dover, undated (probably 1856) coloured lithograph from a painting by William Burgess (1805-61)



Camps of 44th & 49th Regiments, Arch Cliff Fort, Dover, undated (probably 1856) coloured lithograph from a painting by William Burgess (1805-61)

- William Burgess also depicted the fortress interior of the Western Height's fortress. The absence of buildings allowed large quantities of men to be assembled for parade and drill.



A regiment on parade on the fortress interior at the Western Heights, looking east, painting by William Burgess (1805-61), undated but probably mid-1850s (d00853 Dover Museum)

1856

- In November, Burgoyne argued in a *Memorandum of Defences of Great Britain* that the Western Heights defences needed completing and improving – he estimated that expenditure of £250,000 and a garrison of 6,000 would render Dover secure (NA: WO 33/54).

1858-60s

- In October 1858, **Major William Drummond Jervois** (Assistant Inspector-General of Fortifications) wrote to the Secretary of State for War, putting forward specific proposals for completing and improving the Western Heights fortifications: 'What is chiefly required here is to complete the North Lines – to close the rear of the position between the Citadel and the Drop Redoubt by scarping away the chalk ... to make a cut in the chalk to connect the Drop Redoubt with the cliff, and to provide flank defences to the ditch of that redoubt, which is at present entirely without it. It is also proposed to place an advanced work on the ridge to the west of the Citadel in order to increase the strength of this part on which the enemy's attack would most probably be directed; this outwork will be provided with a reverse fire on either side to command the ground outside the Citadel which is at present unseen from any part of the defences. It is intended also to provide some officers' quarters in the Citadel, there being at present only accommodation for men. The new quarters will be arranged so as to join an interior keep to the work.' (NA: WO 33/5-10). Jervois's proposals were approved and £165,000 was authorised to be spent at Dover. The works were designed by **Captain Edmund Frederick du Cane (CRE Dover)**, with general supervision by Jervois, and the majority were carried out during the 1860s.



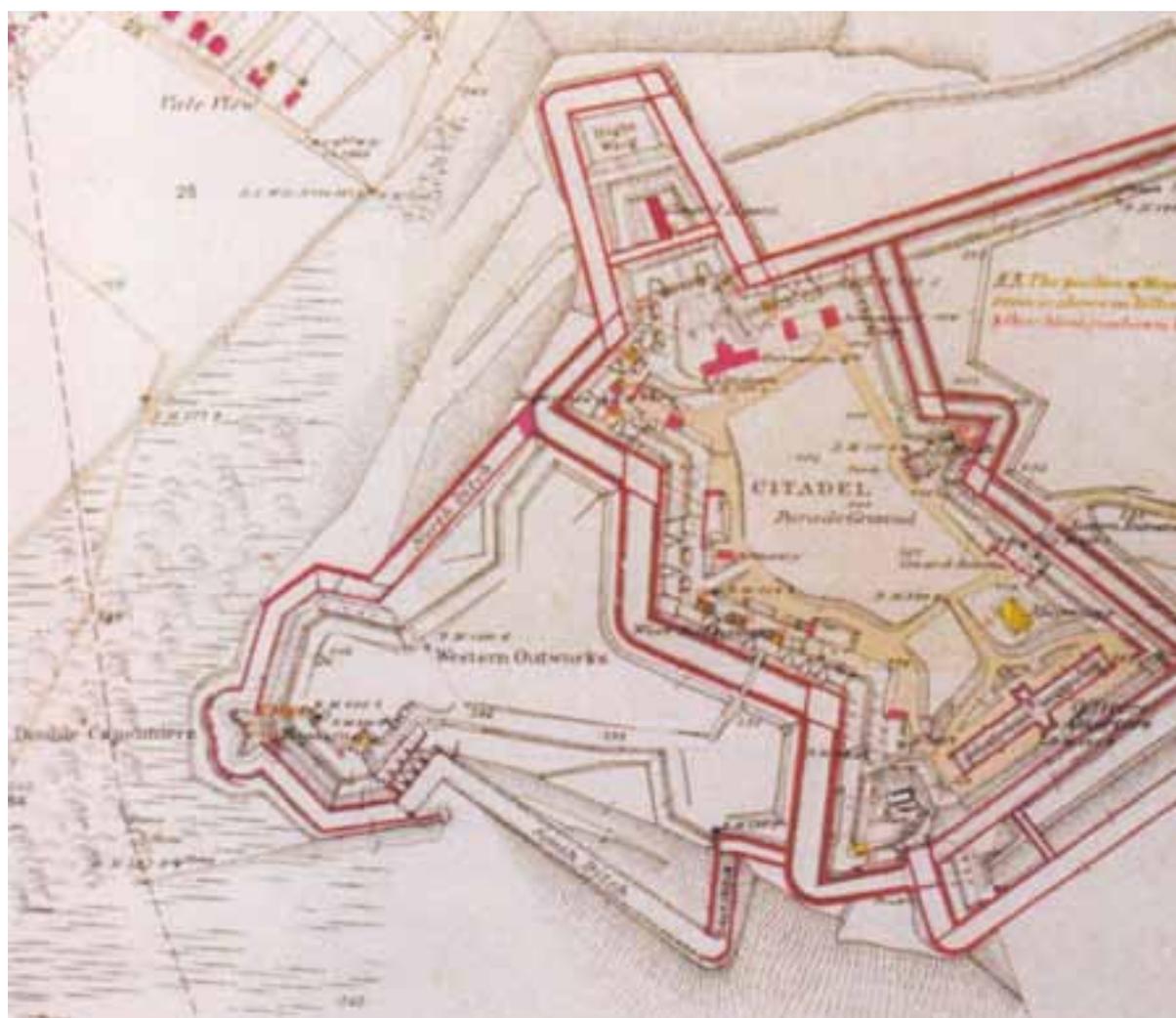
Lieutenant Colonel William Jervois (1821-97),
steel engraving c. 1862



Lieutenant Edmund du Cane (1830-1903),
painted 1851 (Royal Engineers Museum)

- In 1859, the **Royal Commission on the Defences of the United Kingdom** was set up as a response to the last of the three periods of popular alarm in the 1840-50s caused by imagined French aggressive intentions. In the *Report of the Commissioners appointed to consider the defence of the United Kingdom 1860*, in relation to Dover the Commission commented, 'It is, in fact, the only place in England which partakes of the nature of a strategical fortress or intrenched camp in its primary object' (section 159). It went on to report: 'The completion of the works on the Western Heights, and several improvements to the existing defences, are now in full progress, as follows; viz., the formation of the ground between the Citadel and Drop Redoubt, so as to be seen from the former work; the completion of the north lines and of a work in the centre of these lines, called the North Centre Bastion; caponiers to flank the ditches of the Drop Redoubt, and a counterscarp to that work, are in course of execution; the connexion of the latter work with the adjacent cliff by a rampart and ditch; the formation of an outwork to strengthen the west front of the Citadel, which is the part most open to attack; the scarping of the south side of the heights, that portion of the works being at present quite open; the completion of the line connecting the Citadel with the sea; casemated barracks for officers, for whom there is at present no accommodation in the Citadel, are being provided; lastly, store-rooms and powder magazines, for which there was no previous provision, are being constructed. It appears to Your Commissioners that these works are necessary to render the western heights secure, and they recommend that they be carried out according to the authorized plans, which seem to be well devised' (section 161). The Commission recommended that a further £170,000 should be added to the £165,000 already approved for the Western Heights and Dover Castle.

- A variety of works was carried out to improve the **Citadel**.



Plan showing the Citadel and Western Outworks, drawn 1871 (extract of NA: WO 78/2755/12)

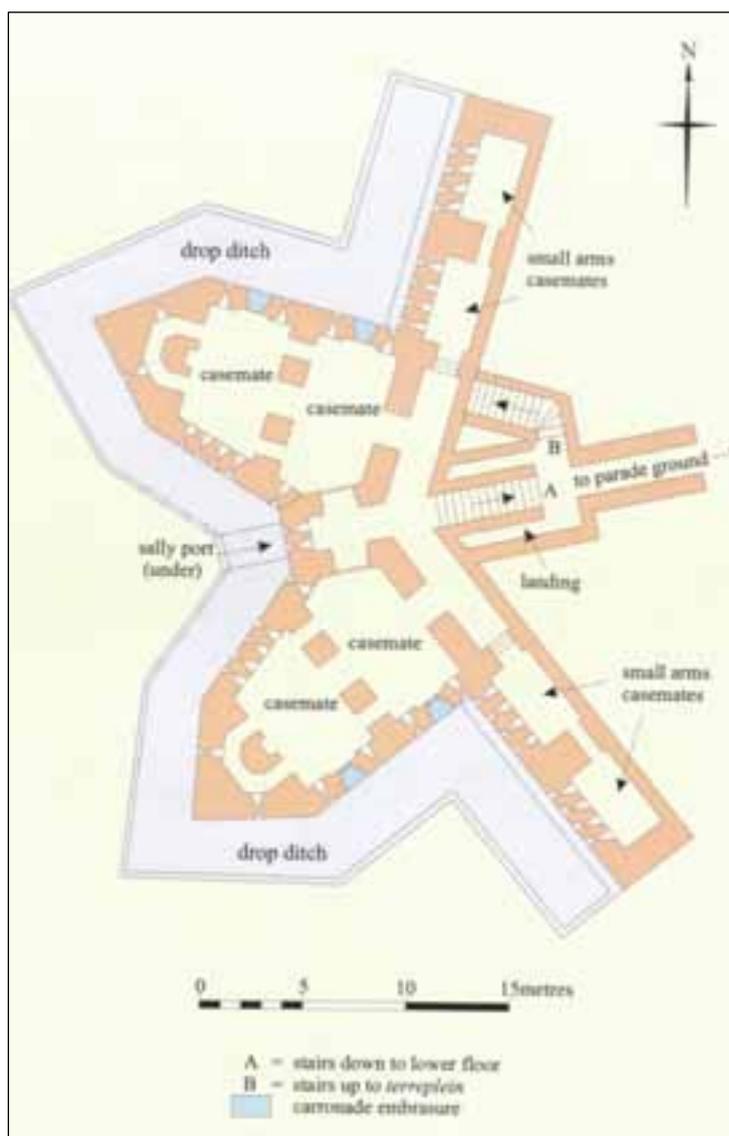
- **The Western Outworks** (built 1860s). Constructed as an irregular, polygonal, advanced work, the perimeter (defended by ditch and rampart) enclosed an area of flat ground on the Western Heights extending from the Citadel as far as a very narrow point on the ridge, thus enabling more complete and effective defence of the western approaches to the fortress. Its ditch extended from and returned to the main ditch of the Citadel – the counterscarp was revetted in flint interspersed with brick string courses (although this was not completed in the South Ditch), whereas the scarp revetment was of brick. Access between the Citadel and the Western Outworks was over a new bridge, from the West Sally Port. The rampart did not follow the ditch but instead was shaped to incorporate a West Bastion (overlooking a Double Caponier) and two demi-bastions (the **North Demi-Bastion** and **South Demi-Bastion**), together designed to command the longer approaches from the west. The southern part of the east rampart followed the Citadel's main trace and was probably formed by remodelling its counterscarp bank, which had been laid out during the American War. There appears to have been no fixed artillery on the Western Outworks' ramparts – the intention was probably to deploy mobile artillery as necessary. No buildings were constructed

on the area enclosed by the ramparts, both for the safety of men garrisoned in the Western Outworks and so that the Citadel's field of fire was not impeded.

The ditch of the Western Outworks was secured by flanking fire from casemated defences, which comprised a two-storey Double Caponier (containing gun rooms) and two sets of defensible casemated barracks behind the scarp revetments (the North Flank Casemates and South Flank Casemates). The form of the **Double Caponier** allowed each caponier to flank one main face of the main ditch with carronade and small arms fire, whilst loopholes for small arms provided cover for the ditch between the two caponiers (particularly the approach to the sally port and its drawbridge between them). A drop ditch prevented attackers getting too close to the embrasures and loopholes in the caponiers' walls. Access to the Double Caponier was from the east down a long stair in a gallery onto a landing on the upper level (and thence stairs to the lower level). In the face wall were two small arms loopholes, below which was a battered recess containing two 'murder holes' designed to cover the sally port's drawbridge. On both levels, each caponier was divided into two rooms, each with a fireplace and a single carronade embrasure flanked by single small arms loopholes in one wall, and one or four small arms loopholes in the opposite wall. At one end on each level, a U-shaped gallery provided access to a pair of loopholes in the pointed end of each caponier. On either side of the landing on the upper level were the small arms galleries, each comprising two casemates (with communication between them) with four small arms loopholes per casemate. On the lower level, there were two expense magazines flanking the stair.



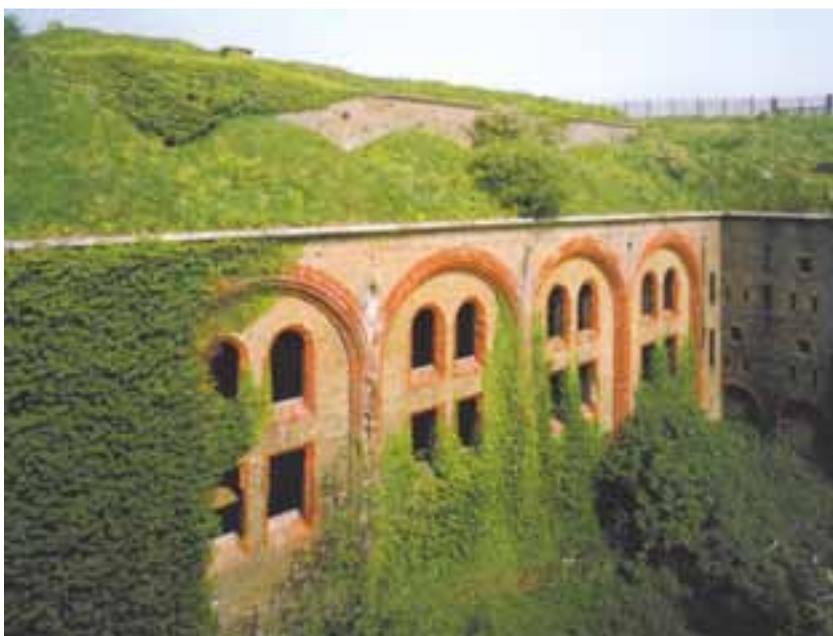
The Double Caponier in the Western Outworks, from the south-west, photo taken 1958/9 (d07891Dover Museum)



Plan of the upper floor of the Double Caponier in the Western Outworks (after HMPS: 402478, 402484; RCHME Report No. 2: Figure 73)

The **South Flank Casemates** consisted of two ranges arranged at right-angles to one another in the re-entrant where the South Flank met the South Ditch. The larger of the two ranges (oriented north-east to south-west) contained casemated barrack rooms (each heated by one fireplace) on two basement levels, with a passage at the rear linking the casemates and providing borrowed light from the windows on the south-eastern front elevations. Considerable architectural embellishment was afforded to the windows of the barrack rooms – the paired south-eastern-facing windows (with semicircular heads on the upper floor and flat heads on the lower floor) were embellished with two chamfered orders, each pair being recessed within a giant arcade of segmental arches of alternating plain and half-round moulded orders. The smaller range (at right-angles to the larger range) consisted of two levels of small arms galleries, each level containing three small casemates (with a pair of small loopholes per casemate), which flanked the main range and the ditch but in peacetime functioned as the Cook House (upper floor) and Ablutions (lower floor), according to a plan of 1897 (HMPS: 402514).

In the lower level, slits within a segmental-headed recess with a battered back functioned as ‘murder holes’, so fire could be directed downwards at the base of the scarp wall. Above the rear half of the larger range’s barrack rooms were casemated gun rooms, referred to on original plans as ‘Haxo casemates’, but which were enclosed at the rear so they could double as Officers’ Quarters (HMPS: 402575). The front elevation of each casemate contained a carronade embrasure overlooking the South Ditch and its *glacis*. These casemates were served by a magazine on the opposite side of a sunken courtyard or gorge behind the larger range.



The South Flank Casemates in the Western Outworks, from the south, photo taken 1998 (NMR: BB032747)

The **North Flank Casemates** were two-storey throughout, and consisted of a main barrack range oriented east–west, and a small arms gallery (containing three rooms on each floor) extending north-eastwards from the eastern end. In many respects of their layout and details, they were similar to the South Flank Casemates – differences included that there were only three casemated barrack rooms rather than four, the upper galleries rather than lower galleries were provided with ‘murder holes’, there was no surface range of ‘Haxo’ casemates, and in each small arms room there was one loophole rather than two.

- **The Officers’ Quarters** (built 1860-1). The 1858 interim report on the Western Heights by the Barrack and Hospitals Improvement Committee had noted ‘Up to the present time no Officers’ Quarters nor accommodation for headquarters of a regiment have been provided’ (NA: WO 33/581). The construction of the Officers’ Quarters in the Citadel rectified this deficiency. The building was constructed in a sunken area on the southern side of the Citadel, reached from the Main Entrance or Parade Ground via a short road followed by a central stair and twin diverging ramps for horses and wheeled traffic. It was built parallel to and therefore was protected by the *tenaille*. This position was chosen for the Officers’ Quarters so it was afforded maximum protection against artillery fire or naval bombardment, whilst not having the disadvantages of poor light and low

ventilation found in casemated accommodation. If the Citadel's defences were breached, the Officers' Quarters could be used as a 'keep of last resort' – survivors could regroup there, hold out and await relief. The sunken area in which the Officers' Quarters were built had been created as part of Ford's design (built 1804-16), when two structures were located there (shown on plans of 1810-13), but these were removed after 1816. In order to allow the Officers' Quarters to be built, the sunken area was enlarged to both the east and west. A variety of defensive features was incorporated in the building.

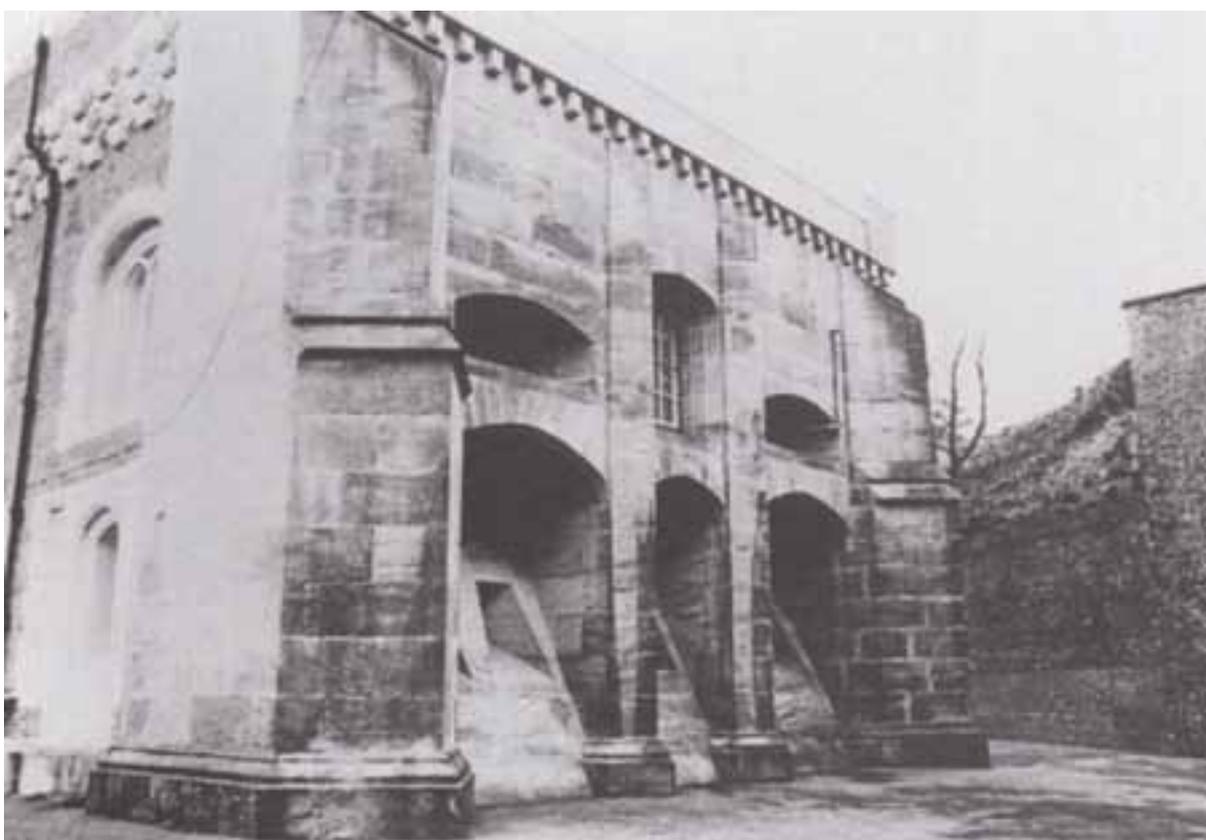
- A bombproof roof capable of being used as a fighting platform.
- Heavily fortified eastern and western end elevations faced with gritstone. Full-height triangular buttresses reinforced these end walls at their edges and divided each end wall into three bays (the triangular form of the buttresses ensuring there were no 'blind spots' and allowing a greater field of fire from loopholes on the wall). On the ground floor, each bay contained a recess with a battered back incorporating one or more loopholes, above which a narrow slot acted as a 'murder hole'. On the first floor, the outer bays each contained a loophole, whereas the central bay was afforded a window.
- Triangular buttresses flanking the northern and the (principal) southern entrance porches.
- Loopholes in splayed reveals (e.g. raking both sides of the porches, flanking both northern oriels and towards the ends of the northern elevation).
- Metal-framed casements in loopholes.
- Armoured external doors and internal window shutters to the entrance porches.
- Very thick internal transverse walls.
- Basement ceilings of fireproof construction.
- A substantial water-storage capacity and fireplaces in the basement.

The building combined pragmatism with embellishment, the latter including fake defensive elements. Externally, it was designed in Tudor Gothic style and constructed with red facing brick and limestone dressings for plinths, window- and door-surrounds, corbelled eaves and parapet coping – on the southern elevation there were three tiers of fake-machicolation as eaves decoration.

The *Barracks Accommodation Report* of 1855 had argued for the segregation of different ranks. This was reflected in the internal organisation of the Officers' Quarters. Its ground and first floors were divided into three distinct, non-communicating areas – the Officers' Quarters (living accommodation and mess facilities for the Field Officer, for the other officers based at the Citadel, for the Messman, and for attending servants), the Commanding Officer's accommodation, and the Quartermaster's Stores. The two separate areas in the basement included rooms containing water tanks and stores, many with fireplaces perhaps enabling prolonged occupation during a siege. Internal fixtures and fittings were specially designed in Tudor Gothic style for the building (e.g. corbels and a dresser in the Mess Room, a Press with Gothic-panelled doors in the Quartermaster's Stores) and reflected gradations of rank among the officers and their servants living in the building (e.g. different styles of moulded stone chimneypieces, degree of elaboration on newels).



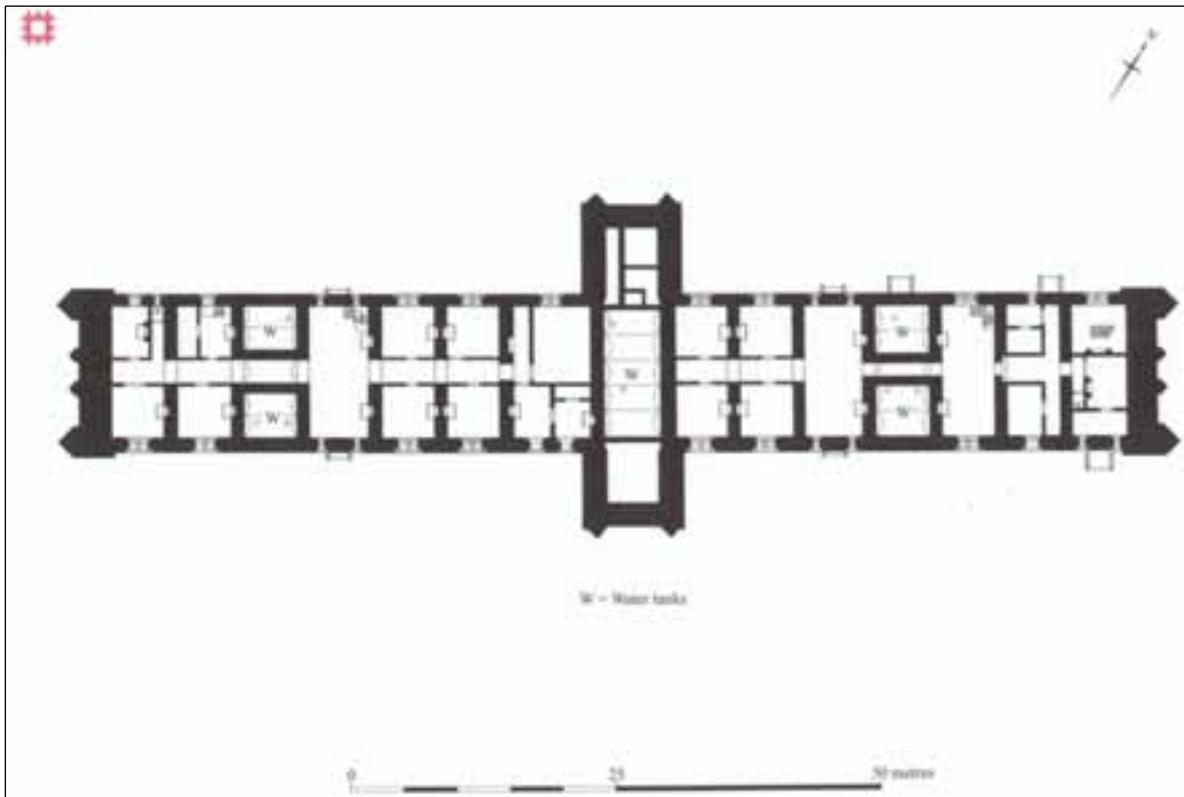
The southern (original front) elevation of the Officers' Quarters in the Citadel, photo taken 1998 (NMR: BB032722)



The eastern elevation of the Officers' Quarters in the Citadel, photo taken 1950s (Peverley 1996: 25; Dover Museum)



The Officers' Quarters in the Citadel, plan of the ground floor (lower drawing) and first floor (upper drawing) (after HMPS: 402584; RCHME Report No. 2: Figure 65)



The Officers' Quarters in the Citadel, basement plan (after HMPS: 402579; RCHME Report No. 2: Figure 66)

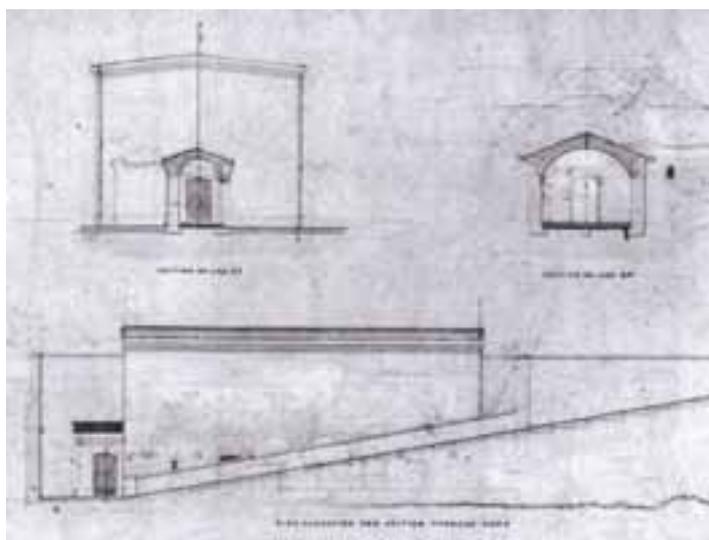


Officers' Quarters, armoured shutter to a first-floor window on the northern porch's western elevation, photo taken 1998 (NMR: AA043959)



Officers' Quarters, stair (with elaborate newel) from the ground floor to the first floor of the CO's Quarters, photo taken 1998 (NMR: AA043958)

- **The Main Magazine** (built by 1859). Constructed as a freestanding, bombproof brick structure in a rectangular cutting dug in the slope on the Parade Ground's south-eastern extremity, the magazine was afforded thick walls and was lined by a vertical blast wall which barely protruded above ground level. The roof had a very slight pitch. Inside was a lighting passage, a shifting room and two identical magazine chambers (with semicircular vaults) containing wooden racks for storing barrels of gunpowder.



The Main Magazine in the Citadel, elevations and sections, drawn 1859 (extract of NMR: WD/2480)

- **The Main Entrance** (built late 1850s). This casemated and bombproof brick structure was constructed south of the central redan in the Citadel's eastern face as the only vehicular entrance to the Citadel and replaced the original Main Entrance further north in the gorge rampart (which had been built in the early 1780s and remodelled in 1804-16). Initially planned in 1809, the rampart had been breached in this new location by 1813, but construction of the entrance, and to a new design, was not resumed until the late 1850s, after which the original Main Entrance and its small Guard House fell out of use. The road which had led westwards from South Military Road towards the Citadel's *tenaille* was re-routed to lead to this new Main Entrance (**Citadel Road**). Defence for the approach to the entrance was provided by guns in the Gorge Casemates ditch and by musketry fire from a *banquette* on the rampart south of the entrance.

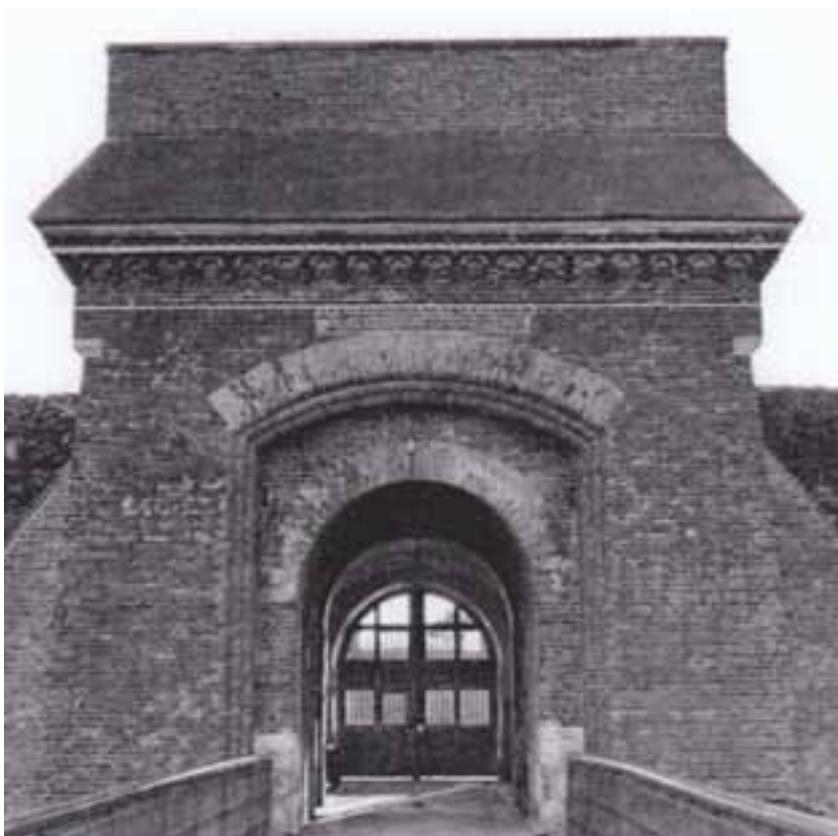


Banquette at the southern end of the gorge rampart, from where the approaches to the Citadel's Main Entrance were defended, photo taken 1998 (NMR: BB032736)

The defensive arrangement at the new Main Entrance comprised a bridge over the Gorge Ditch, with a lifting span which closed against the outer gateway. From there a double-leaf gate opened into a revetted tunnel (passing under the rampart), with a doorway on its northern side (leading to two casemates housing a **Guard Room** with viewing hatch onto the tunnel, an **Officers' Guard Room** and a **two-cell Lock-up**) and two doorways on its southern side (one leading to a **Detention Room**, the other to a passage and **three Cells**, all within one casemate). Another double-leaf gate in the inner gateway afforded access to the Citadel's interior. Both the elevation in the gatehouse facing onto the interior of the fortress, and that facing onto the Citadel's Parade Ground (containing the inner gateway and windows lighting the casemates), incorporated elaborate decorative and fake-defensive devices (e.g. multiple orders on the arches, and an elaborate brick eaves cornice incorporating false brackets and machicolations). When built, both bays flanking the tunnel contained two round-headed lights beneath an overall round head in a style reminiscent of plate tracery, whilst the lower, northernmost bay contained a lunette window.



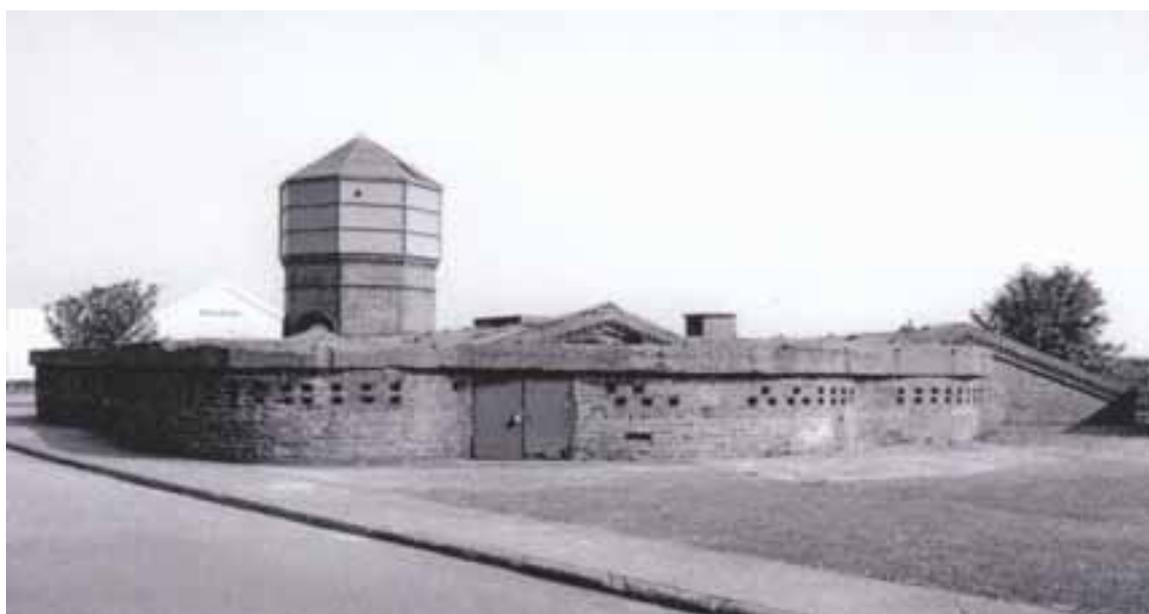
The Main Entrance in the Citadel, viewed from the Parade Ground, photo taken 1998 (NMR: AA043941)



The Main Entrance's gatehouse, looking west into the Citadel, photo taken 1959 (A.5513/48 Dover Museum)

- **The Canteen** (built *c.* 1860). Built on the northern side of the Parade Ground with uninterrupted views across it, the Canteen was constructed as a single-storey, brick building of T-plan (the main range having thirteen bays), with a ceiling comprising shallow, segmental 'fireproof' vaults carried by transverse I-section iron beams. The main range is likely to have contained a Tap Room, a Bar, Tap and Shop, a Library and a Recreation Room, whilst the Canteen Sergeant's Quarters were in the rear wing.

- **The Armourer's Shop** (completed 1870). Located east of the Canteen, this was constructed as a single-storey, square, brick building with a ceiling of 'fireproof' segmental vaults supported on wrought-iron beams, and a forge against the north wall.
- **The Armoury** (built by 1871). A two-cell brick building of unknown origin (but in use as the Armoury in 1871), erected west of the Parade Ground.
- **The Coal Yard and Straw Barn** (built 1860). Built east of the Canteen.
- **The Pump House** (built by 1861). This was constructed over the well on the site of the original Well House, on the eastern edge of the Parade Ground. *The Barrack and Hospitals Improvements Committee, Interim Report on the Dover Western Heights*, issued in 1858, stated that 'the chief defect of the Western Heights Barracks' was the water supply. It reported that the 'steam engine is stated not to be of sufficient power to keep a constant supply, in consequence of the large amount of water wasted by the men'. As a result, a larger brick Pump House was built over the existing well for a larger engine by 1861. The Pump House was constructed as two large sunken, bombproof chambers with segmental vaults – the Engine Room with the well in it and the site of the earlier Well House but extending further south, and the Boiler Room to the west. Both chambers were lit by glazed timber screens and windows looking out onto apsidal light wells. An underground tank west of the Pump House was probably constructed at the same time.



The Pump House, from the south, photo taken 1998 (NMR: AA043943); the high-level water tank shown was built in 1891

- **A Water Tank** (built 1861). A hexagonal 'high level' water tank was built on the *terre-plein* above the West Postern Gate to ensure an adequate head of water to supply surface buildings as part of completion works to the Citadel. It was constructed from cast-iron panels bolted together beneath a shallow-pitched wooden roof, on a brick base, and was by 'Wm Graham & Sons London'.
- **The Parade Ground** was left free of buildings, both for activities (e.g. drill, giving punishments and rewards) and for the protection of the defending troops

so that if attackers gained entry to the Citadel, they could not hide in or behind structures on the Parade Ground.

- The *terre-plein* was remodelled (including heightening of the parapet), as part of which ten 8-inch mortars were added. A plan of 1871 showed that there were gun positions on the western, northern and eastern ramparts, with the majority on the western and northern faces, but there were nevertheless three positions on the gorge face defending the fortress's interior (NA: WO 78/2755/12). Accordingly, ground to both the west of the Citadel (in the Western Outworks) and to the east was left free of buildings.
- On the **Centre North-West Bastion**, a **Guard Room or infantry shelter** was built – a long, narrow, bombproof, single-storey brick building, which was lit by a large window in its southern wall overlooking the cross ditch. Access from the Citadel was via an underground gallery from the Inner North-West Bastion which led to a doorway in the Guard Room's northern wall. In an emergency, a second doorway at the southern end of the eastern wall (with a drawbridge over an external drop-pit) allowed defending troops to escape onto the *terre-plein*.



The Guard Room on the Centre North-West Bastion, from the south-west, photo taken 1998 (NMR: AA043948)

- A second point of access to the *tenaille* protecting the Citadel's southern face was established. South-east of the Officers' Quarters a short vaulted passage was inserted in the rampart, which led to a defensible gate in the scarp revetment and thence onto a bridge (probably with lifting section) across the inner ditch to the *tenaille*. The gate (with a head of cream rubbed brick) was afforded a two-leaf inward-opening reinforced door, with a vertical slit for observation and small arms fire in each leaf.

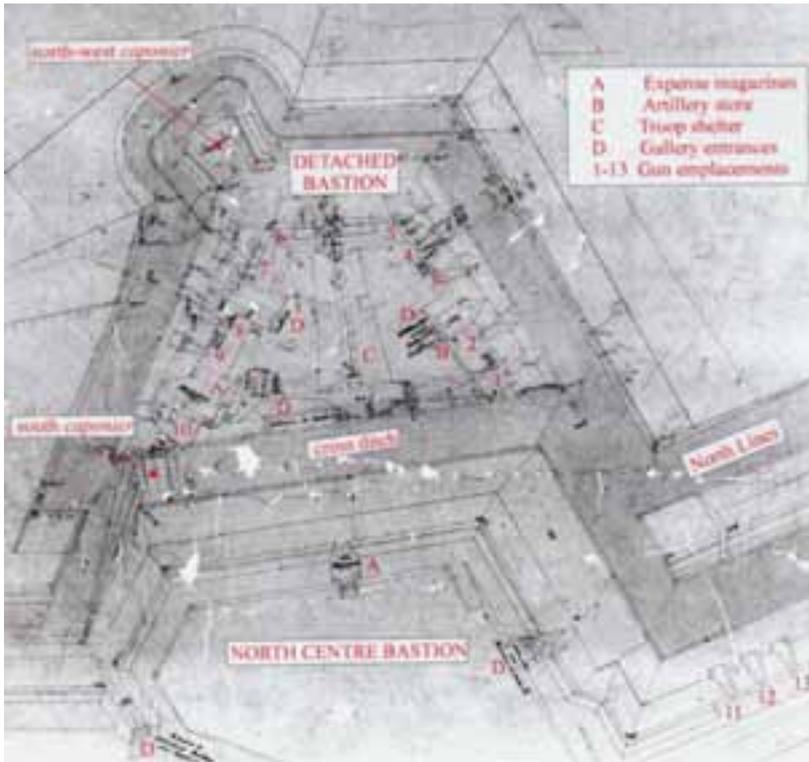


The reinforced two-leaf door which led onto a bridge to the tenaille, photo taken 1998 (NMR: BB032740)



Plan showing the Citadel in 1871 (after NA: WO 78/2755/12, RCHME Report No. 2: Figure 11)

- Extensive works were carried out to complete the **North Lines**, involving the ditch being deepened and the sides revetted.
- The **ground between the Citadel and the Drop Redoubt** was graded, so the two were inter-visible.
- During the 1860s, the **North Centre Bastion** was remodelled, the new version occupying much of the same ground and consisting of two elements constructed to a more powerful and coherent design for the defence of the land front on the Western Heights' northern side. As remodelled, it comprised a southern element (the North Centre Bastion or Inner Bastion), and a northern element (the Detached Bastion) – the gun complement is not known.
 - The **North Centre Bastion** was a three-sided work with a dual purpose: the longer, northern face looked down over and provided cover for the Detached Bastion against attack, whilst the shorter eastern flank and short western flank provided flanking fire along the North Lines towards the Citadel and the North Entrance. This Bastion provided defence principally through infantry, who were located in the **musketry galleries** to cover the ditches, and on the *terre-plein* in open positions behind a parapet from where they covered the Detached Bastion and its counterscarp. For its own defence, it also had three **gun rooms** on the eastern flank with carronade embrasures for covering the North Lines' ditch eastwards to the North Entrance. The *terre-plein* (accessed via three ramps on the eastern and western flanks) had a high **infantry parapet**, and three **traverses** projecting inwards from the rampart. These provided cover for the entrances to a sunken **magazine** in the middle of the northern face, an **artillery store** and the **eastern galleries** on the eastern flank, and on the western flank for the main entrance to all the galleries and the Detached Bastion.
 - The **Detached Bastion** was intended to provide defence principally through artillery. Its prominent northward projection meant it could flank all the ground to the east and west which was not covered by guns at the Citadel and Drop Redoubt. Like the North Centre Bastion, however, it was afforded **casemated galleries, gun rooms and caponiers** for its own defence. The rampart had ten **embrasures for artillery pieces** (four on both eastern and western flanks, and one in the north-eastern and north-western salient angles). It also protected an **expense magazine**, an **artillery store** and entrances to the three **musketry galleries** behind the scarp revetments. The galleries also led to caponiers – one for musketry defence of the cross ditch (**South Caponier**), the other at the north-western angle of the bastion (**North-West Caponier**) – both containing musket loopholes and carronade embrasures. The North-West Caponier was afforded triangular buttresses on its face wall to reinforce the edges and divide the wall into bays, each of which incorporated a battered recess containing a 'murder slot' with loopholes above. A bombproof **Troop Shelter** of cruciform plan was constructed on the *terre-plein* with its main axis running north–south and no doors on the entrances in order to facilitate rapid deployment to and from the guns. The long arms each contained a shelter, whilst the shorter arms formed a through-passage.



Plan of the North Centre Bastion and the Detached Bastion at terre-plein level, drawn 1860s (extract of WD/2517); the text in red was added in RCHME Report No. 7: Figure 4



The Troop Shelter on the Detached Bastion's terre-plein, from the south, photo taken 1998 (NMR: AA008624)



The face wall of the Detached Bastion's North-West Caponier, photo taken 1950s

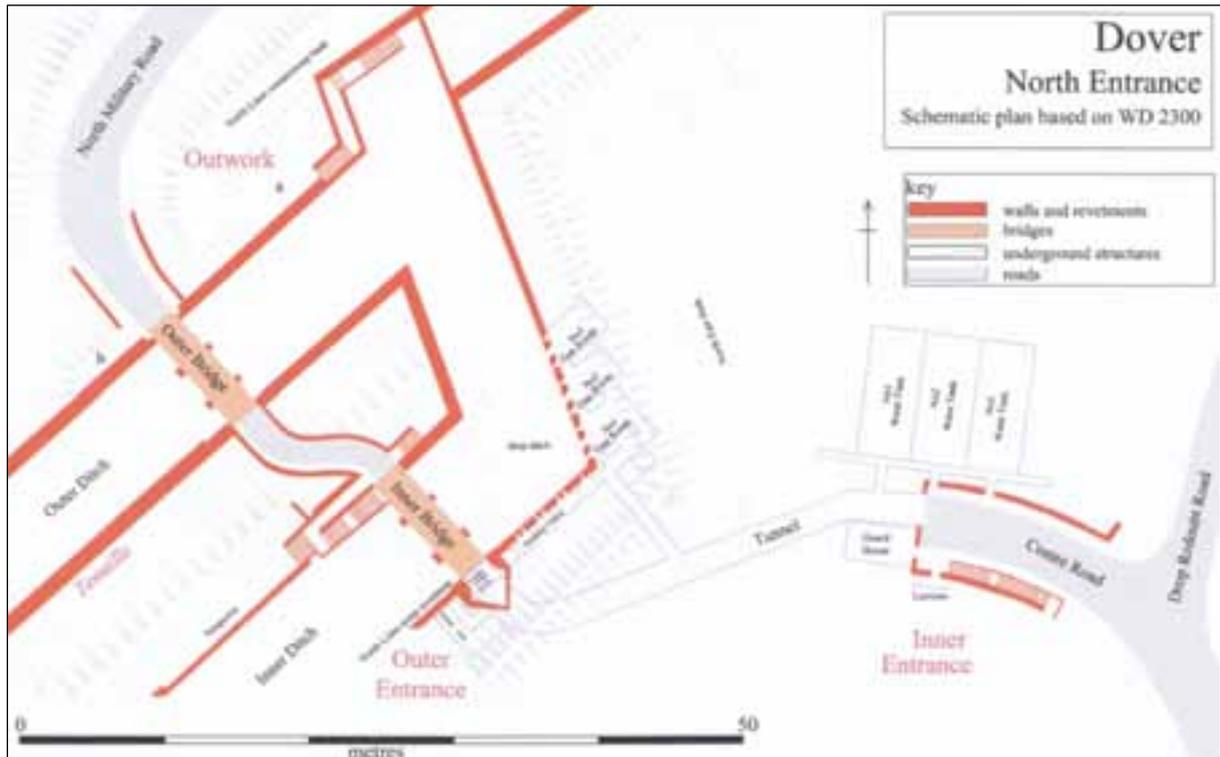
- The **North Entrance** was remodelled (March 1860 to February 1864) into a concealed entrance protected by complex defences, reflecting the perception at the time that a potential assault was likely to come from the north. In the new arrangement the approach of the North Military Road was indirect so the entrance was concealed from view whilst attackers were exposed to fire from the North Lines' counterscarp. The road

approached the fortress from the north-east, turned sharply southwards and narrowed to allow single-file traffic only, passing through a cutting in the counterscarp of the North Lines (a small sheltered position in the angle of the counterscarp with steps down to the outer ditch may have been for a sentry or a small body of defending troops). It then crossed two new (outer and inner) ditches on two new bridges, with a *tenaille* between them in a deep, revetted, sinuous cutting. The road then passed through an outer entrance, entered a sinuous tunnel, passing under the rampart of the Lines and emerging through the inner entrance (incorporating a casemated Guard House) into the fortress. There were eight distinct parts to the remodelled North Entrance's defences.

- An **outwork**. This protected the point where the North Military Road breached the counterscarp of the North Lines.
- The **outer ditch** (1860s) and **inner ditch** (which followed the 1804-15 line) of the North Lines. Both ditches were revetted.
- The **outer and inner timber bridges** crossing the North Lines. Both had a fixed span for the outermost two-thirds. The outer bridge's inner third was a falling drawbridge, whereas the inner bridge's was a lifting drawbridge.
- A ***tenaille*** (a long rectangular island of natural chalk left from the excavation of the twin ditches), with an earthwork capping profiled into a *banquette* at the rear and a shallow scarp at the front (to enable small arms fire to be used troops approaching the counterscarp), between the outer and inner ditches of the North Lines. The *tenaille* played a fundamental role in defending the North Entrance – if a major attack took place, the defenders could abandon the outwork by descending the steps and retreating to the postern gate. The attacking force in the outwork could be fired upon from the *tenaille*, and the drawbridge of the outer bridge dropped. Reinforcements coming from the fortress could get to the *tenaille* via the inner bridge or via the postern gate and steps from the ditch. If the attackers took the *tenaille*, defenders could retreat to the outer entrance and close the inner bridge's drawbridge. The enemy would then have to attack the curtain wall and outer entrance from the *tenaille*'s reverse slope, where they would be exposed to fire from the North Lines' rampart. Carronade and musket fire from the gun rooms could repel an assault from the ditch. Only sustained bombardment would weaken the outer entrance sufficiently for the attackers to be able to proceed further, during which time the defenders could plan and mount a counter-attack.
- The **outer entrance** – the plain, front elevation of this outer entrance contained a drawbridge which closed against a semicircular arch flanked by plain projecting piers forming an outer gate, which sealed the entrance chamber (beneath which was the counterweight recess and mechanism for the drawbridge). A pair of heavy, sliding wooden doors formed an inner gate so the entrance chamber and bridge could be closed off from the tunnel, which led from there through the rampart. Steps led down to a postern gate (with inward-opening doors).
- A sinuous **tunnel** with semicircular vault passing under the rampart of the North Lines. The road was paved with large pine blocks to deaden the noise of solid wheels and horses' hooves in the tunnel. On the eastern side was a stone pavement with kerb. A single elliptical-cone-shaped brick shaft rising vertically from the vault's top (closed at the top by an iron grille) provided ventilation and some light for the tunnel.
- A **musketry gallery and gun rooms** allowing close defence of the North Lines ditches and *tenaille*. Access was through a doorway with reinforced doors halfway along the tunnel's eastern wall, which opened onto a vaulted stair-passage (with a

steep stone stairway and stone wheeling platforms on both sides) descending north-westwards to a lobby (with expense magazine for ammunition for the guns). This lobby served the three gun rooms (each with a central embrasure flanked on each side by a musketry loophole) from which guns fired westwards along the inner ditch towards the North Centre Bastion), and the five casemates of the musketry gallery (all but one with two loopholes).

- The **inner entrance** – the road in the tunnel emerged into the fortress through the inner entrance, which formed the end elevation of a deep cutting. This was retained by high, curving brick revetment walls (topped by a wrought-iron balustrade), which terminated just before the junction with Drop Redoubt Road. The front elevation was built in an Italianate style, and contained two semicircular arches with multiple orders in polychrome brickwork – the eastern one contained the entrance to the **tunnel**, whilst the western one contained the **Guard House** doorway (with window above) and an adjacent window (both openings were afforded red-brick semicircular heads in an arrangement reminiscent of plate tracery). False machicolations, cross details and a pierced parapet surmounted the end elevation. The casemated Guard House had no direct communication with the tunnel, and no detention cells or orderly room; it contained a fireplace and Hot Air Closet for drying the guard's clothes after sentry duty. The reason for the contrast between the inner entrance's highly embellished front elevation and the outer entrance's plain elevation, and for the lack of communication between the tunnel and the Guard House as well as the lack of detention cells or orderly room, may have been that du Cane envisaged the North Entrance as the main exit from the fortress, with the defensive gateway of the outer entrance being largely concealed from the view of people approaching along the North Military Road by the sinuous curve of the cutting through the *tenaille* (the South Entrance or Archcliffe Gate may have been intended as the formal, ostentatious entrance to the fortress, where cells and a prisoners' room were incorporated). The cutting's southern revetment contained the entrance to the vaulted **Guard House latrines**. Behind the cutting's northern revetment was a vaulted gallery providing access to three huge, sunken **water tanks** (fed by the Citadel's well and Pump House), which replaced those built in 1804-16 outside the North Entrance to serve the Western Heights' garrison. The earlier tanks had to be removed to enable construction of the North Entrance's new *tenaille* and twin ditches arrangement.



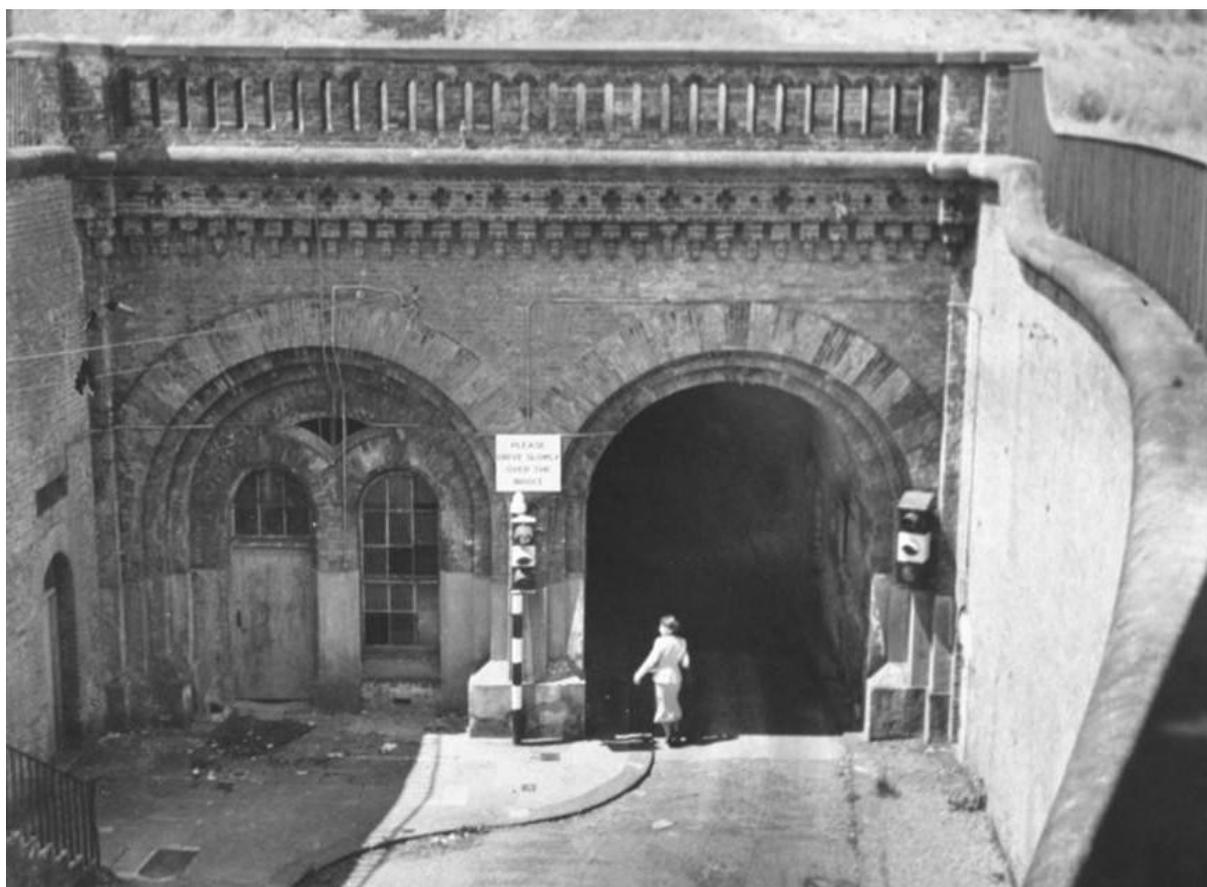
A schematic plan of the North Entrance showing du Cane's scheme of the 1860s, based on a plan dated 1893 (NA: WD/2300b; RCHME Report No. 6: Figure 10)



The North Entrance's outer entrance, photo taken 1958 (d07871 Dover Museum)



A view eastwards along the North Entrance's tenaille, showing the two bridges over the ditches, photo taken 1958/9 (d07902 Dover Museum)



The North Entrance's inner entrance, photo taken 1958/9 (d07870 Dover Museum)

- In 1858, the **Drop Redoubt** was still manned by a company of Royal Artillery (NA: WO 33/581). A plan drawn in 1860 indicated that a storm porch (with lightweight, timber walls) had been added to the front elevation of each casemate in the Soldiers' Quarters. It also shows the location of a **Saluting Battery** on the *terre-plein* in the south-east corner. A watercolour by William Burgess of Dover Castle from the Drop Redoubt's *terre-plein*, probably painted in the mid-1850s, depicted this Saluting Battery as comprising a platform paved with stone flagstones.



Plan of the Drop Redoubt, drawn c. 1860 (NA: WO 78/2555/10); gun positions on the terre-plein were highlighted in red by RCHME Report No. 3: Figure 14b



Dover Castle from the Saluting Battery in the south-eastern corner of the Drop Redoubt's terre-plein, watercolour by William Burgess, probably painted mid-1850s (Dover Museum)

- A variety of improvements were carried out to the **Drop Redoubt** in the 1860s.
 - The addition of a **two-storey caponier** for defence of the ditch to the corner of four out of the five corners of the Redoubt (the exception being the south-eastern corner), and the remodelling of the ditch accordingly. Each caponier was afforded an **expense magazine** at the rear and **musketry galleries** extending along the curtain wall. The flank walls of each caponier were built with carronade embrasures flanked by musketry loopholes on the ground floor, and a row of musketry loopholes on the first floor. The face wall was reinforced at its edges and divided into bays by massive triangular buttresses. Each bay contained a battered recess with a slot or **'murder hole'** on the ground floor, and a row of musketry loopholes on the first floor. Two sets of casemated **gun rooms** were built behind the curtain wall (with access from Caponiers nos 2 and 4) to provide enfilade fire along the ditches of the North Lines and the North-East Line. **Wrought iron gates** within the network of caponiers, musketry galleries and gun rooms included some with interlocking oval decoration and spearhead finials. **Galleried steps** were provided between the main elements (including from the back of two of the Soldiers' Quarters' casemates to two caponiers) to allow rapid safe deployment of troops in the event of an attack. The caponiers and gun rooms had been completed by 1866.



The Drop Redoubt's Caponier no. 3, showing the northern face wall, photo taken 2005



Caponier no. 4, the sally port, and the East Gun Rooms, photo taken 1998 (NMR: BB99/15890)

- The insertion of a **sally port** in the curtain wall south of Caponier no. 4.
- Remodelling the **terre-plein** to accommodate eleven 7-inch RBLs positioned to cover the land front, which involved heightening the **parapet**, inserting **embrasures** in the rampart, and installing a **side arms store** and **ready-use ammunition lockers** (NA: WO 78/2954; WO 33/2775). Gun positions on the north-eastern face were reduced from three to two. Two new *en barbette* gun positions were created at the northern end of the eastern face (involving reconstructing the parapet but without ammunition lockers) to cover the North-East Line, which was being remodelled. The **Saluting Battery** in the south-eastern corner was re-set, and comprised a raised platform of granite and sandstone flagstones.



The Drop Redoubt's terre-plein along the eastern and the north-eastern faces, showing the parapet, gun emplacements and racers for traversing platforms, photo taken 1998 (NMR: BB99/15925)

- The original free-standing **Main Magazine** was improved (by 1866) through the addition of a **vaulted passageway** and **bombproofing** the magazine, covering the whole structure with an earth mound.



The Main Magazine mound and entrance, and on the right the Soldiers' Quarters and Parade Ground, from the east, photo taken 1998 (NMR: BB99/15934)

- The erection of a new **Guard House**, replacing the Guard Room built in 1804/5 on the same plot but set further west to allow for a courtyard, rather than a sunken passage – this new Guard House was on the courtyard’s western side. *The Barrack and Hospitals Improvements Committee, Interim Report on the Dover Western Heights*, issued in 1858, noted that ‘the guard room and lock-up place ... are small, dark and imperfectly ventilated... we understand that they are to be reconstructed, which we recommend’ (NA: WO 33/581). The new Guard House consisted of a bombproof range (with semicircular vaults), containing three casemates – a central **Guard Room** (with a fireplace, stove and hot air closet), **two Cells** to the south (served by a passage against the courtyard wall) and a **Lock-up** to the north. The interior was carefully designed – for example, a rotating serving hatch was built into the dividing wall between the cells so prisoners could be given food without the doors being opened. The front elevation of the Guard House contained semicircular-headed doorways and windows (a variant of du Cane’s design reminiscent of plate tracery).



The Guard House range, and steps to the terre-plein, from the north-east, photo taken 1998 (NMR: BB99/15911)

- The construction of **Officers’ Quarters** on the eastern side of the courtyard opposite the new Guard House. These were built as a range of seven casemates with a smaller eighth casemate in the northern wall containing the **Officers’ Latrines** (all with semicircular vaults). Each casemate’s front elevation consisted of two windows flanking a central doorway, all with semicircular heads (a variant of the design reminiscent of plate tracery). Fittings and decoration were of a standard befitting officers’ accommodation (e.g. a bootscraper by each door, plastered walls with moulded skirting boards, cast-iron fireplace surrounds with beaded edges, the crown and royal initials (V R) cast in the lintel and a stone mantel shelf above).

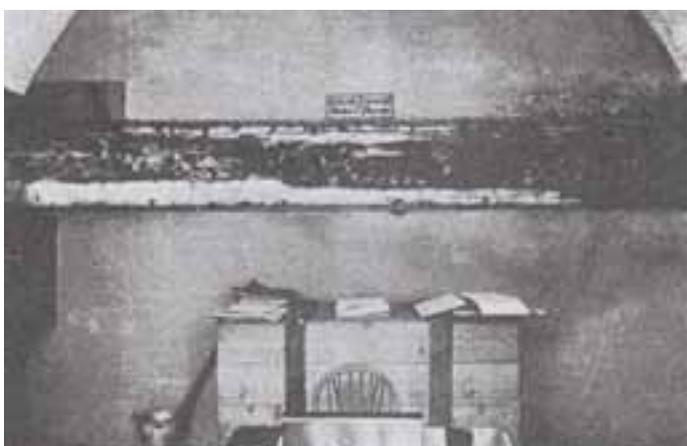


The Officers' Quarters, from the south, with the matching side arms store on the terre-plein, photo taken 1998 (NMR: BB99/15918)

- In 1861, in the course of works construct the **Officers' Quarters**, the foundations of the Roman *pharos* were discovered and excavated. They were *c.* 12-14 ft wide and consisted of flints and mortar forming a concrete bed, on which were tiles and above that *opus signinum*. The military agreed to leave a strip of the foundations visible in the rear wall of casemate 6 (Knocker 1862). Three lumps from these foundations were set up on the *terre-plein* above the Officers' Quarters in rough imitation of the fallen masonry which had represented the ruins of the *pharos* in the eighteenth century. Thenceforth the custom of holding the installation ceremony for the newly appointed Lord Warden of the Cinque Ports at the Bredenstone resumed (Lord Palmerston was installed there as Lord Warden on 28th August 1861).



The excavation of the pharos in the Drop Redoubt, photo taken 1861 (Wheeler 1929: Plate XII)

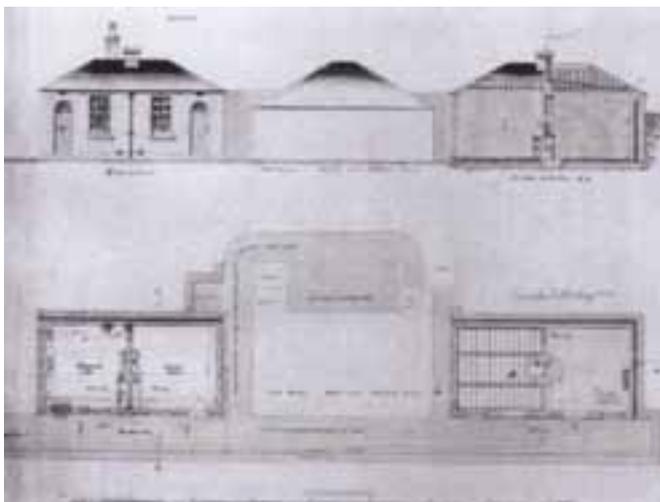


The foundations of the pharos visible in the rear wall of casemate 6 of the Officers' Quarters at the Drop Redoubt, photo taken c. 1891 (Wheeler 1929: Plate XIII A)

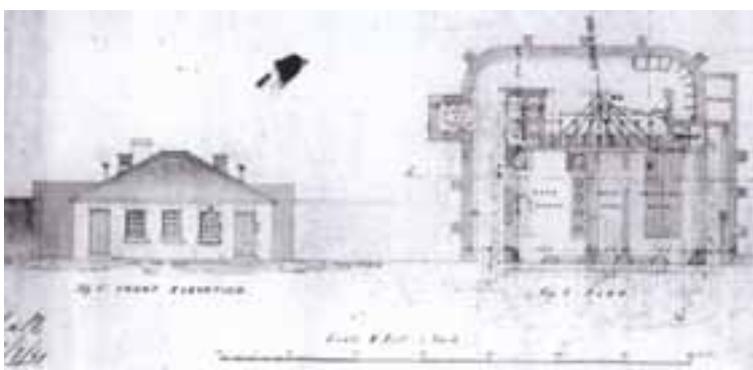


The imitation Bredenstone, comprising lumps from the foundations of the pharos, set up on the Drop Redoubt's terre-plein in 1861 (Wheeler 1929: Plate XIB)

- On the southern side of the Parade Ground facing the Soldiers' Quarters, a new single-storey range of buildings was constructed, comprising an **Ablution Room, Bath Room, Cook House, Latrines, and eastern and western Staff Sergeants' Quarters**. This range replaced the small Ablution Room built in the same location between 1844 and 1851. Measuring just 36m x 11.5m, the **Parade Ground** was paved with large brick-shaped cobble stones. A **water tank** was located below-ground in its centre.



Plans and elevations of the Staff Sergeants' Quarters, dated 1861 (NMR: WD/2508)



Plan and northern (front) elevation of the Ablution Room, Bath Room, Cook House and Latrines, dated 1861 (NMR: WD/2507)

- The dry area behind the **Soldiers' Quarters** and beside their end walls was much reduced by the remodelling of the ramparts.

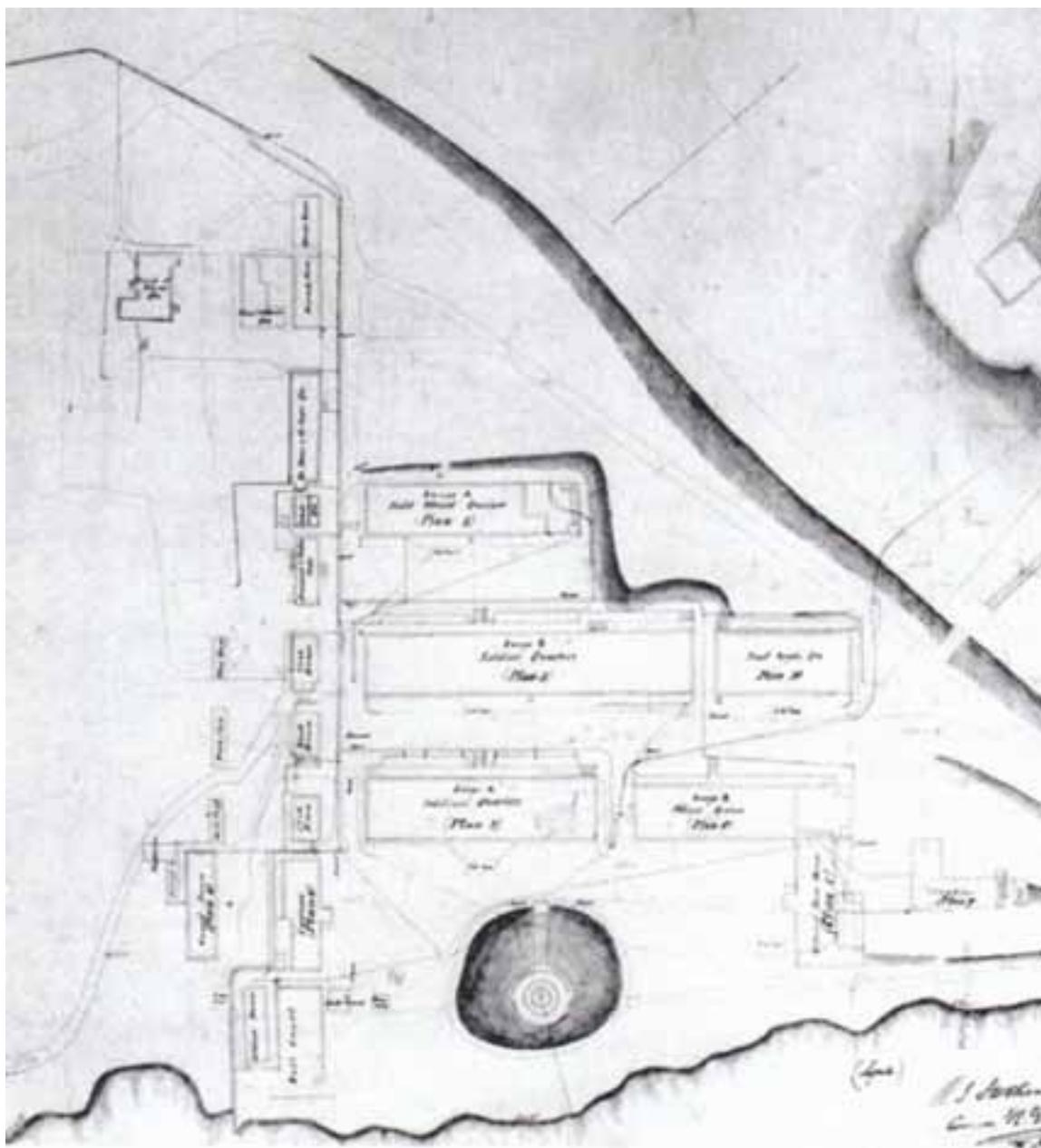


The front (southern) elevation of the Soldiers' Quarters, with their storm porches, drawn 1867 (NMR: WD/2516)

- Between 1859 and 1862, the original North-East Line (built 1804-10) was replaced by a new **North-East Line** running in a more south-easterly direction to the cliff edge. Its ditch was revetted in flint interspersed with brick string courses on the northern side, and in brick on the southern side. Its profiled rampart with *banquette* was built on the southern side of the ditch.
- Construction of the new North-East Line's rampart (on the southern side of the ditch) truncated the north-eastern edge of the existing **Drop Battery**, blocking its field of fire in that direction. In order to compensate for the Battery's truncated field of fire, a new, circular **emplacement ('C')** was created on top of the Line. On the flank under the Line's rampart, a **magazine ('G')** was constructed.
- A plan drawn in 1861 (NMR: WD/2506) showed the uses of the various buildings at the **Grand Shaft Barracks**. Buildings which had been constructed on the main terraces since the plans drawn in 1810-13 included a **Stables** (east of the Officers' Mess) and a **Staff Sergeants' Quarters** (at the eastern end of the second terrace); the **Soldiers' Quarters Range B** (on the second terrace) had been extended eastwards by several bays in a closely matching style in 1855-6. The ancillary buildings now also included a **Schoolmaster's House**, a **Commissioned Officers' Quarters**, a **Clerk of the Works Quarters** (with gardens), a **Straw Barn**, **Soldiers' Privies**, **Guard House Privies** and a **Magazine** (the latter contained powder for the whole Barracks).



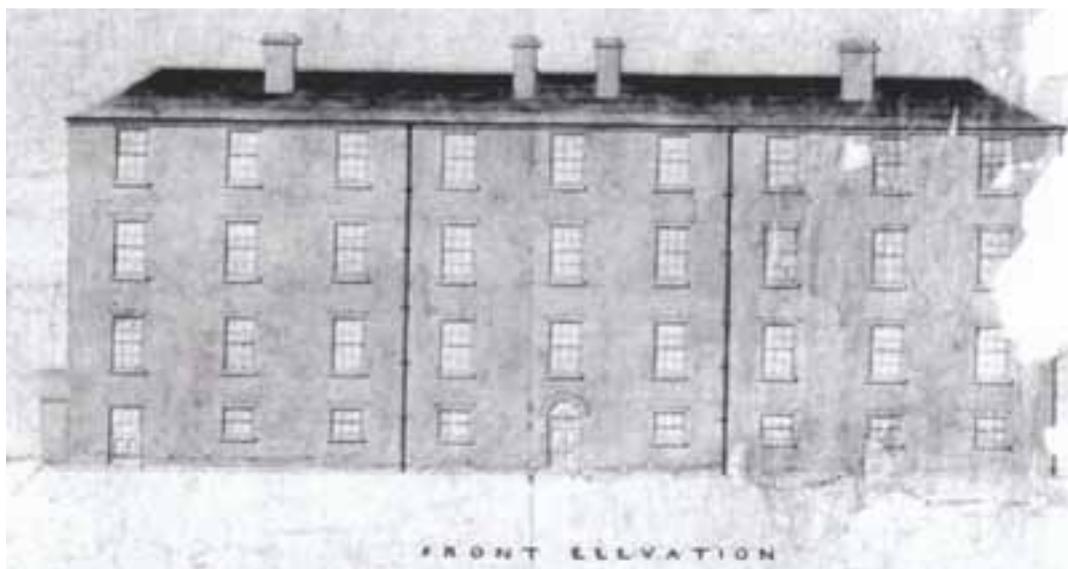
The Grand Shaft Barracks and its Parade Ground, from the south-west, print c. 1850s



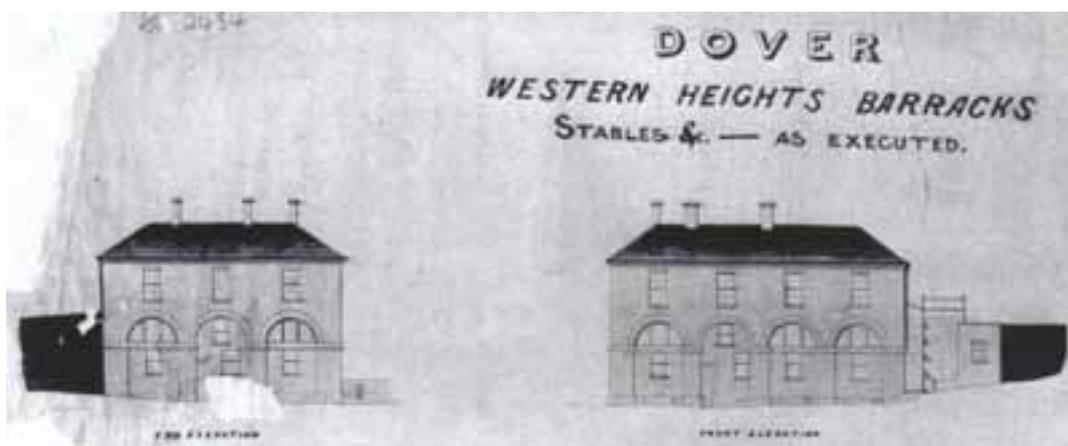
Plan of the Grand Shaft Barracks, drawn 1861 (extract of NMR: WD/2506)



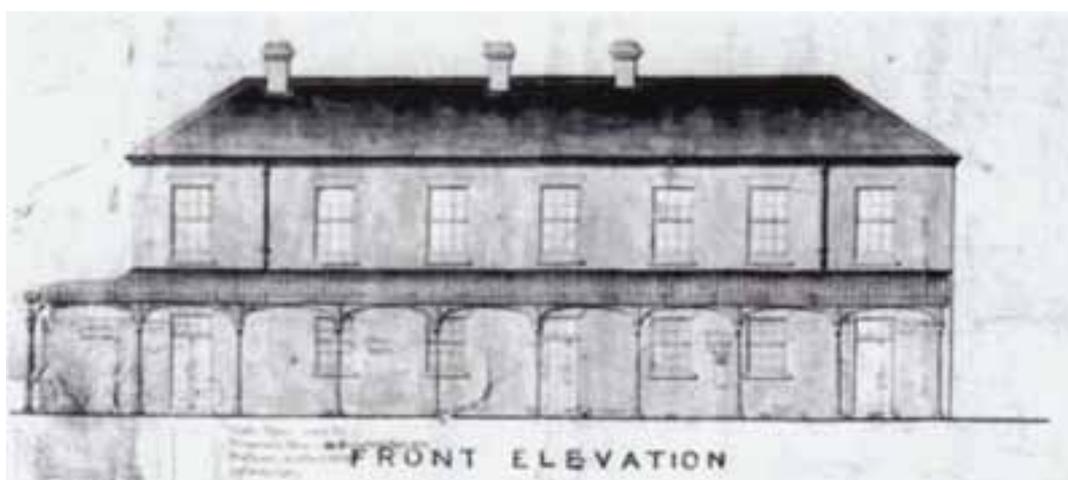
Soldiers' Quarters Range B, south-eastern elevation, drawn 1865 (extract of NMR: WD/2453); this range had been extended eastwards in 1855-6



The Officers' Quarters Range B, south-eastern elevation, drawn 1860 (NMR: WD/2446)



The Stables east of the Officers' Mess, south-eastern and south-western elevations, drawn 1860 (extract of NMR: WD/2434)



The Guard House at the Grand Shaft Barracks, south-eastern elevation, drawn 1861 (extract of NMR: WD/2405)

- The 1858 interim report on the Western Heights by the Barrack and Hospitals Improvement Committee identified the need for improvements to be made to the accommodation and sanitary conditions at the **Grand Shaft Barracks**, where 1,071 men were accommodated in just 51 rooms (NA: WO 33/581). Consequently, amongst the improvements made to the accommodation and sanitary conditions at the barracks was the construction of a **Married Soldiers' Quarters** and an associated **Laundry** (built 1869-70 west of the north-south steps on a new, upper terrace). These Married Soldiers' Quarters consisted of a two-storey range containing quarters for 26 families, each with a single-room apartment with a cupboard and a fireplace; a covered veranda extended along the building's exterior at first-floor level, reached at each end by stairs from ground level. The accommodation therefore conformed to the model plan for Married Soldiers' Quarters, as prepared in 1860 for quarters at Hounslow by the office of the Inspector General of Fortifications following the 1858 interim report of the Barrack and Hospitals Improvements Committee. This required one-room family accommodation, with fireplaces for heating and cooking, and lavatories in sanitary towers at the end of each block reached by a veranda.

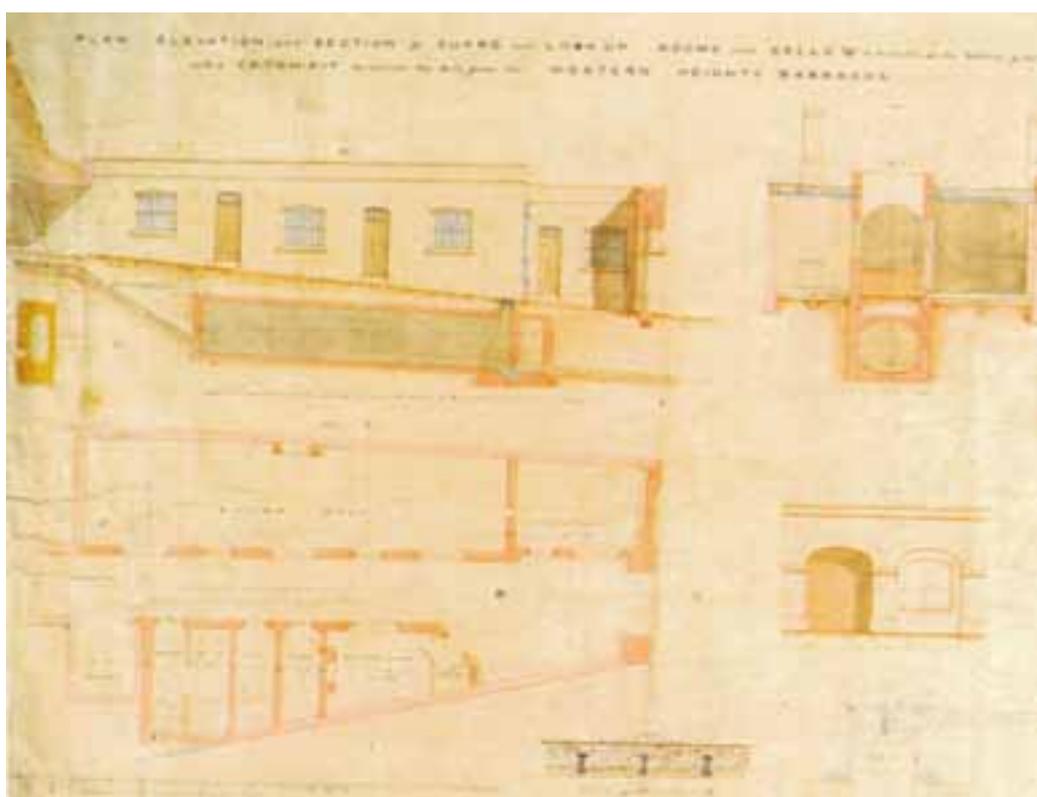


The Married Soldiers' Quarters (north-eastern elevation) at the Grand Shaft Barracks, drawn 1870 (extract of NMR: WD/2466)

Other new buildings constructed at the Grand Shaft Barracks included a **Bread and Meat Store** (built 1868-9 on a platform north-east of the Staff Sergeant's Quarters), a **Gymnasium** (built 1867-8 on a new fourth terrace), and a **Troop Stable** (built on a new top terrace). The tiny Guard Room at the foot of the Grand Shaft was deemed inadequate by Barrack and Hospitals Improvement Committee – it reported that 'the Bottom Grand Shaft Guardhouse had no ventilation ... is too small for discipline. ... Too small for prisoners and pickett ... privy defective and offensive'. This Guard Room was demolished and replaced in 1859 by a larger **Guard Room** complex consisting of two single-storey ranges divided by the central roadway (on the eastern side a large Guard Room and smaller Lock-up Room occupied the full length of the compound, and on the western side an Officers' Guard Room, two Cells and a Latrine). As part of the works, the problematic foil-water system serving the Barracks was improved. It may have been in this period that segregation of the staircases began – in 1881 a map labelled the staircases 'Officers', 'Sergeants' and 'Soldiers' (NMR: WD unref/a). This division conforms to the Queen's Regulations at the time, which forbade off-duty fraternisation between Officers, Sergeants and other ranks.



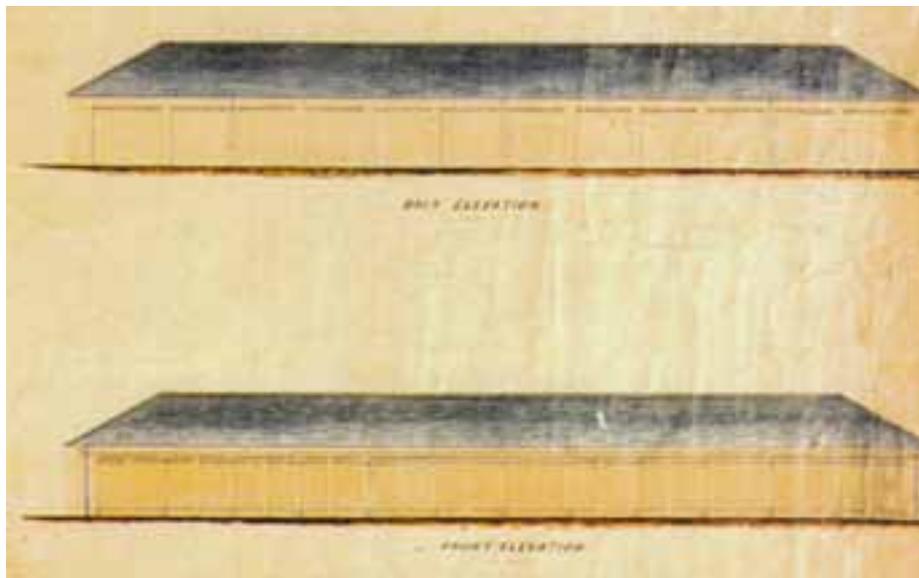
The Gymnasium at the Grand Shaft Barracks, drawn 1871 (extract of NMR: WD/2414)



Plan and elevations of proposed new Guard Room at the base of the Grand Shaft, drawn 1859 (extract of WD/2404)

- In the mid-nineteenth century, the central section of the South Military Road and North Military Road became referred to as **Centre Road**. Probably in the late 1850s, a **Gun Shed** was erected on top of the ridge east of Centre Road (NMR: WD/2506). It was designed as a single-storey, twelve by three bay building of pier and panel brick

construction. Its western elevation had an open front divided into twelve bays, so that artillery pieces on wheeled carriages could be stored there. The Gun Shed's location near the junctions of roads suggests it was intended to accommodate a mobile reserve of artillery which could be rapidly deployed across the Western Heights to supplement fixed guns, perhaps in connection with the use of the lighter Armstrong rifled field-guns.



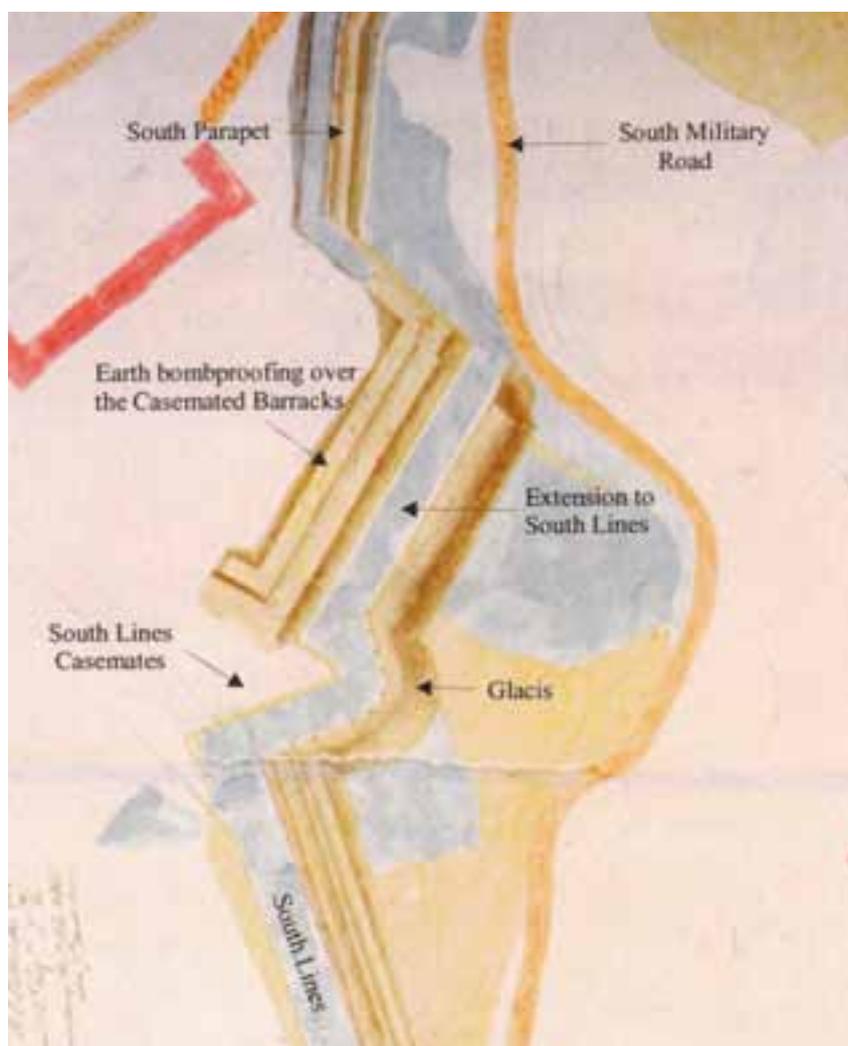
Elevations of the Gun Shed, drawn 1861 (NMR: WD/2411)

- In 1859, a **Church and School** for use by the Western Heights garrison was built on the northern part of the area north-west of Centre Road (*Dover Express & East Kent News* 27th April 1962). By 1861, east of the Church and School a detached house had been constructed containing **Schoolmaster's Quarters with an Infants School** at its southern end for boys and girls. The works compound had become the **Royal Engineers (RE) Yard** (containing offices and quarters for a Turncock responsible for the barracks' water supply), and a **Wagon Shed** had been erected on the south-western part of the area. The Ordnance Stables (built 1795) had been demolished.



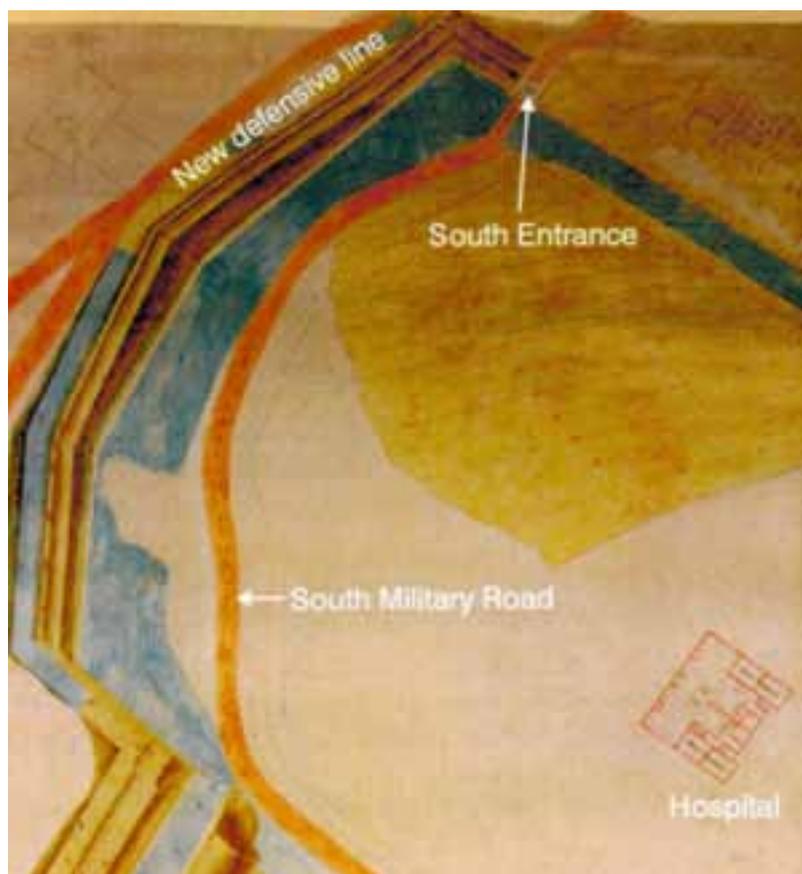
The Church and School, photo taken late nineteenth/early twentieth century

- In *c.* 1858, **Married Soldiers' Quarters** were constructed on the **South Front** south of Citadel Road. They were depicted on a plan of 1860 (NA: MR 1/1300). When built, they consisted of a long, three-storey range with short wings projecting from each end. All the rooms in the main range, and almost all in the wings, were single – half of the south-western wing had an Infant School on the ground floor, and four rooms on the first and second floor of the north-eastern wing were treated as pairs (probably for the more senior NCOs). Separate lavatories for men, women and children were located to the north-west of the Quarters. The *Army Medical Department Report 1860* is thought to have been referring to these Married Soldiers' Quarters when it commented: 'As common to the Western Heights Barracks and Citadel, the new quarters for the married soldiers may here be referred to. This building, on an upper level of the Heights, forms a range of admirable accommodation for its purpose. The rooms, though small, are comfortable; each is furnished with its small cooking range for the family, and for general use there exist an excellent washhouse, laundry, drying-machine, suitable latrines, and other modern improvements of a sanitary character. This 'married' barrack is well warmed, lighted with gas, and, in great convenience to its distantly detached position from the main barracks of the troops, has the children's school-room attached to it.'



Plan showing proposals to improve the South Front, dated 1860 (extract of NA: MR 1/1300); the structure coloured deep red is the Married Soldiers' Quarters; black text was added by RCHME Report No. 9: Figure 4

- From *c.* 1858, du Cane and Jervois started to plan how to improve the defences of the Western Heights' **South Front**. This involved redesigning the south-western approach to the Heights, and included the addition of a new, defensible third main entrance to the fortress further up the ridge than the South Lines Bridge Main Entrance. The proposals were shown on a plan of 1860 (NA: MR 1/1300). An **extension to the South Lines** – comprising a massive ditch with counterscarp revetment of faced flintwork, and a *glacis* – was constructed, which ran north-eastwards from the existing **South Lines Casemates** (to the eastern end of which a **caaponier** was added), along the crest of the slope above the South Military Road, and then turned south-eastwards (as the **South Entrance Ditch**) to extend to the cliff face. Above the road, the chalk slope was cut back to form a sheer face (the **South Parapet**), and the excavated spoil was used to grade the ground to the south so it could be defended from firing positions on the extension to the South Lines. The South Military Road crossed the South Entrance Ditch on a **bridge** (a combination of fixed span and drawbridge), and entered the fortress through the new, third main entrance (the **South Entrance** or **Archcliffe Gate**). Du Cane designed the elevation of the gatehouse facing those approaching the fortress in an ostentatious, Gothick style (suggesting it was intended to be the formal, main entrance to the fortress), with multiple orders on the four-centred arch of the gateway. Defensive features included **musketry loopholes** and **embattled machicolations**, which may have functioned as 'murder holes'. Off the northern side of the gatehouse were casemated chambers containing a **Guard Room**, a **Prisoners' Room** and **two Cells**, with **loopholes** in the ditch elevations of the Prisoners' Room and Cells.



Plan showing proposed works further uphill on the South Front including the South Entrance, drawn 1860 (extract of NA: MR 1/1300/3); white text was added by RCHME Report No. 6: Figure 7

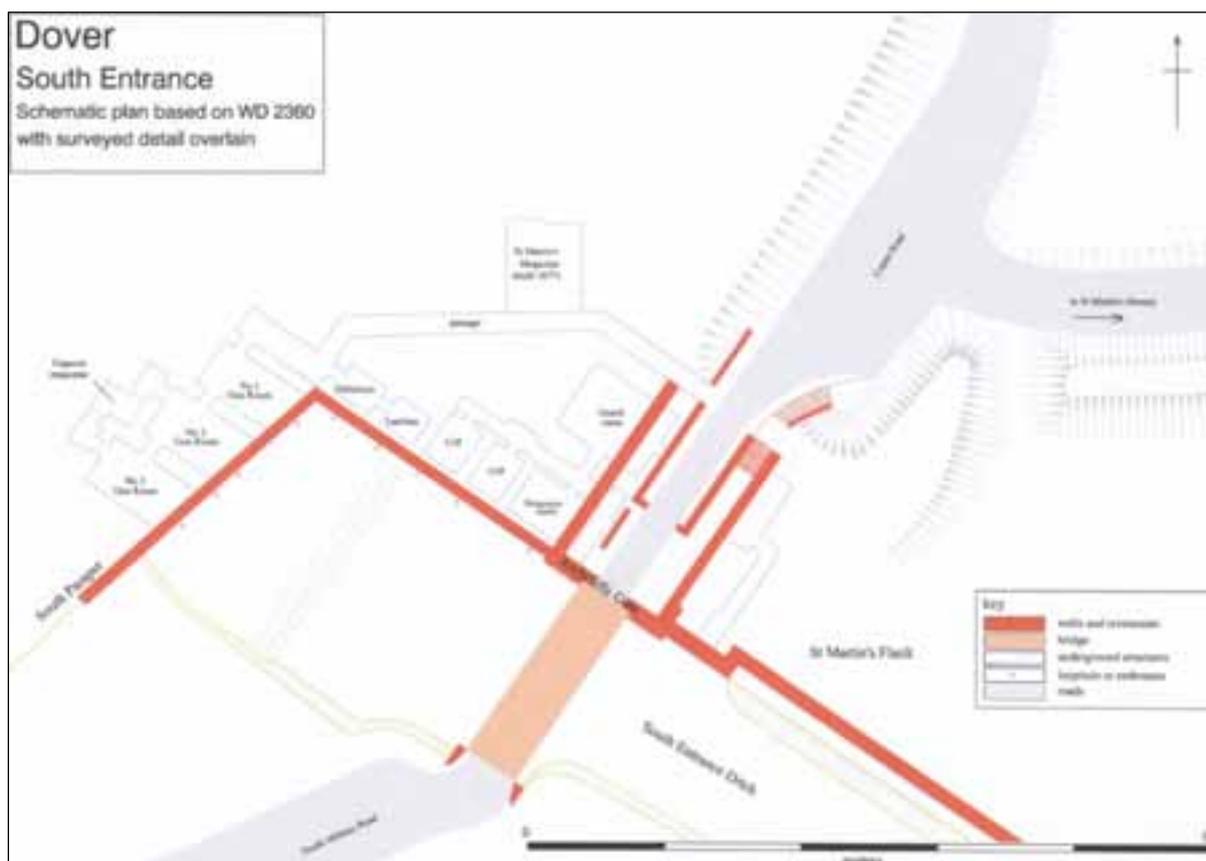
At the north-western end of the South Entrance Ditch, a complex of linked rooms was created to cover both the ditch and the new entrance to the fortress, comprising three casemated **Gun Rooms** with carronade embrasures, musket loopholes and large *oculi* (to allow smoke to escape and light in) on the front elevation, fireplaces inside to heat them, an **Expense Magazine** to the rear, and associated **Ablutions and Latrines** (with loopholes in their ditch elevations), all linked by a **Passage** (which also connected with Centre Road uphill of the gatehouse). Immediately south of Archcliffe Gate, on the northern side of the South Entrance Ditch (known as **St Martin's Flank**), an earth rampart was constructed in four tiers as it descended the steep slope, and was set back from the ditch leaving a wide **berm**, on the western edge of which was a *chemin des rondes* (sentry path) incorporating an **integral parapet** to provide cover for musketry.



The South Entrance Ditch's northern scarp revetment, showing the smoke vents, and below them the carronade embrasures and musket loopholes of the gun rooms, photo taken 1959 (NMR: A.5513/6)



The South Entrance or Archcliffe Gate, photo taken 1958/9 (d07872 Dover Museum)



A schematic plan of the South Entrance, based on a plan of 1878 (NA: WD/2360; RCHME Report No. 6: Figure 31)

- In April 1860, the Defence Committee considered proposals for the construction of new casemated barracks, a location in the vicinity of the South Lines being considered the best site for them, perhaps because the intention was to have a body of troops quartered close to the Citadel on the western side of the fortress (considered to be the most vulnerable to an attack) as the majority were then based on the eastern side, at the Grand Shaft Barracks and the Drop Redoubt. The new casemated barracks were to provide bombproof accommodation for 400 men, thus increasing the Western Heights garrison to the recommended level of 91 officers and 2,437 men (NA: WO 33/2775). Works to build these new **casemated South Front Barracks** started later that year, and were complete by 1863. They were constructed as was a range of truncated L-shape form, consisting of three floors of casemated rooms (with semicircular vaults) arranged around the sides and ends of a long rectangular gorge, the latter forming a protected courtyard onto which all the rooms faced. Its front (south-eastern) and end elevations were afforded decoration including a deep bracketed eaves cornice. Elaborate cast iron verandas and bridges across the courtyard allowed communication between the rooms of the south-eastern and north-western ranges. The north-western range comprised two working floors (a third being a terrace only), with the latrines and stores on the ground floor, and artisan shops, latrines, cookhouses, ablutions, stores and pantries on the first floor. In contrast, the north-eastern range was devoted almost entirely to accommodation (mostly for soldiers and sergeants but with some officers' rooms at the north-western end). A short south-eastern range contained a guard room at ground level. The rest of the barracks complex was built on terraces on the rising ground between the casemated barracks and Citadel Road. A plan drawn in 1871 (NA: WO 78/2755/9)

showed this as comprising a row of **three water tanks** (built before 1810 probably to serve the South Lines Casemates, Archcliffe Fort and the Military Hospital, and from the 1860s the new South Front Barracks too), a **Canteen and Reading Room** (first terrace), a **Married Soldiers' Quarters** (second terrace), a **Laundry** (third terrace), a **Stables**, and a **Bread and Meat Store** (Citadel Road). The *Army Medical Department Sanitary Report 1864* was very complimentary about the newly constructed casemated barracks, which it described as 'a master piece of military with sanitary engineering, the latter being here admirably carried out in this description of barrack construction, all the modern improvements in ventilation, warming, and lighting having been effected, and which give to the rooms an airy, light, and comfortable appearance. The several accessories, too, cook-houses, lavatories with baths, water latrines, urinals, &c, are all of excellent provision.'



The casemated South Front Barracks, south-eastern elevation from the ditch, photo taken 1958/9 (d07879 Dover Museum)



The casemated South Front Barracks, looking north-east along the gorge, photo taken 1958/9 (d07874 Dover Museum)

- The size, form and layout of the **Military Hospital** (built by 1806) were shown on a plan of 1860 (see above; NA: MR/1300/3). It still consisted of a single building containing medium-sized and smaller rooms, arranged around a sub-divided, roofed courtyard. The rooms along the ends of the building were labelled ‘West Hospital’ and ‘East Hospital’, each with access to half the courtyard. A small range of rooms extended from the centre of the rear (northern) elevation, within a walled yard. Along the front of the building was a colonnade. The *Army Medical Department Report 1860* severely criticised the Military Hospital: ‘The hospital accommodation provided for the corps occupying the Western Heights barracks and the Citadel, is in a building situated at a considerably lower level than these are. The building overlooks the town, and is a doubly constituted one for the sick of two regiments distinctly; it affords very inadequate cubic space in the wards for the allotted number of sick, and the average rate for the regiments in occupation at the close of the year had been 780 cubic feet per patient in one corps, and only 600 in the instance of the other. Although much has been done in better ventilating the wards and passages by air shafts and the supplying of ventilating fire-grates, the defects of the hospital are many still, there being no baths or satisfactory ablution arrangements, the kitchens are small, although each is possessed of a range sufficient for the cooking of the respective regimental hospital diets. It will be unnecessary here to define further in regard to this hospital, as the site for a new one came under discussion of the Authorities towards the end of the year, that of the present establishment, standing within an amphitheatre of the Western Heights, and low down the slope towards the town, being objectionable in reference to that freedom around of external ventilation, so main a desideratum in the sanitary position of every such establishment.’ The *Army Medical Department Sanitary Report 1864* was just as disparaging about the Military Hospital: ‘The hospital of these heights has so many inherent defects that nothing short of a reconstruction would remedy them. It is greatly deficient in accommodation as to cubic and superficial space for ordinary cases, and requires an itch and an infection ward, also greatly proper bath and lavatory apartments. Its general accommodation is quite inadequate for the proper convenience of the sick of two regiments which it frequently happens have just returned from Indian or tropical service. Bearing on this latter point, Dr Taylor well remarks that Dover appears to be a very ineligible station for regiments just returned from such service, on account of the steep ascents to their barracks and the fatigues inseparable from their marches and garrison duties being very trying to the many enervated men.’
- By December 1867, £263,260 had been spent on completing and improving the Western Heights as a land front fortress, and it is likely that many of the works planned in the early 1860s had been largely finished by then. Construction of buildings and other elements, however, continued in the following decades as the need arose.
- Between the critical *Army Medical Department Sanitary Report 1864* and 1871-81, when a 1:500 Dover Town Plan was surveyed, improvements were made to the **Military Hospital**. Four single-storey huts were built on land either side of the main building – two ‘**West Hospital Huts**’, one ‘**East Hospital Hut**’ and beyond that an ‘**Infectious Disease Hut**’. In the range of rooms against the building’s rear elevation, on the 1871-81 plan the room immediately adjacent to the courtyard was labelled as a **Cookhouse**; a **Mortuary** had been added to the northern end of this range. A little further up the hill behind the Military Hospital a **Married Soldiers’ Quarters** was built for it. A short-cut route was devised from the Military Hospital to ground just in front of St Martin’s Battery which by-passed the South Military Road and therefore facilitated access with the

fortress. It comprised steps leading from the eastern side of the Military Hospital up the hillside adjacent to the South Entrance Ditch, across a small drawbridge and up a long, **stepped passage** with defensible doors at the lower end and an elaborate iron gate at the top end. In front of the main Military Hospital building was a landscaped **'Recreation Ground'**. West of the Military Hospital there was an extensive shelter-belt of trees, at the southern end of which (in line with the West Hospital Hut) was an area labelled **'Old Burial Ground'**. Local tradition holds that this was where plague victims were buried in the seventeenth century, and that it remained in use until the nineteenth century: 'In 1665, the plague ... was brought to Dover It raged with great violence, and upwards of 900 persons fell victims to it in this town. The dread of the infection was so great, that the dead bodies, some in coffins, but more without, were carried to a place of burial in carts.*... *A piece of ground on the side hill, above Archcliff fort, and close to the new military hospital, was consecrated for this purpose. It is called *The Graves*, and many respectable families have continued to bury here till within these few years. In the general consternation no account of the funerals appears to have been kept, as no traces of so large a number can be found in the register book, either of the church of Hougham, in which parish the ground is situated, or in those of the churches in Dover' (Batcheller 1845: 35).



The Military Hospital from the south-west, showing the Hospital Huts added to the west and east of the main building (Archcliffe Gate can also be seen on the horizon), postcard, earlier twentieth century



The Military Hospital from the west, showing the Recreation Ground in front of the main building and the Hospital Huts to the sides, photo taken 1906

- The *1869 Report of Commissioners into works carried out under the 1860 report* stated: ‘Works carried out. The additions and alterations authorized and approved by the Commission, and since carried out or in progress, are:
 1. The addition of an outwork to the West of the Citadel.
 2. The completion of the casemated officers' quarters, and sundry smaller works in the Citadel.
 3. The completion, in an approved form, of the lines between the Citadel and Drop Redoubt, and the addition of a bastion in the centre, called the North Centre Bastion.
 4. Re-modelling the Drop Redoubt, and constructing lines to the eastward of it.
 5. Constructing the South Lines and South Entrance, with barracks on the South Front.
 6. Re-modelling the East Front of the Castle Heights, and constructing casemates for 72 men.
 7. A new work on the hill overlooking the Castle.’ (section 171)
‘We are of opinion that the works generally have been well constructed as regards permanency and stability, that the slight failures which have occurred are not more in number, or greater in extent than might have been reasonably anticipated, and that these failures have been satisfactorily remedied’ (section 172).

1870s-1910

- The defence of the land front by fixed artillery at the Western Heights became unsustainable, since it was too vulnerable to the ever-increasing power and accuracy of incoming fire. As a result, the role of the Western Heights as a defensible fortress declined, the older fixed armament was gradually withdrawn, and instead the emphasis was increasingly on its role as a large barracks and mobilisation centre.

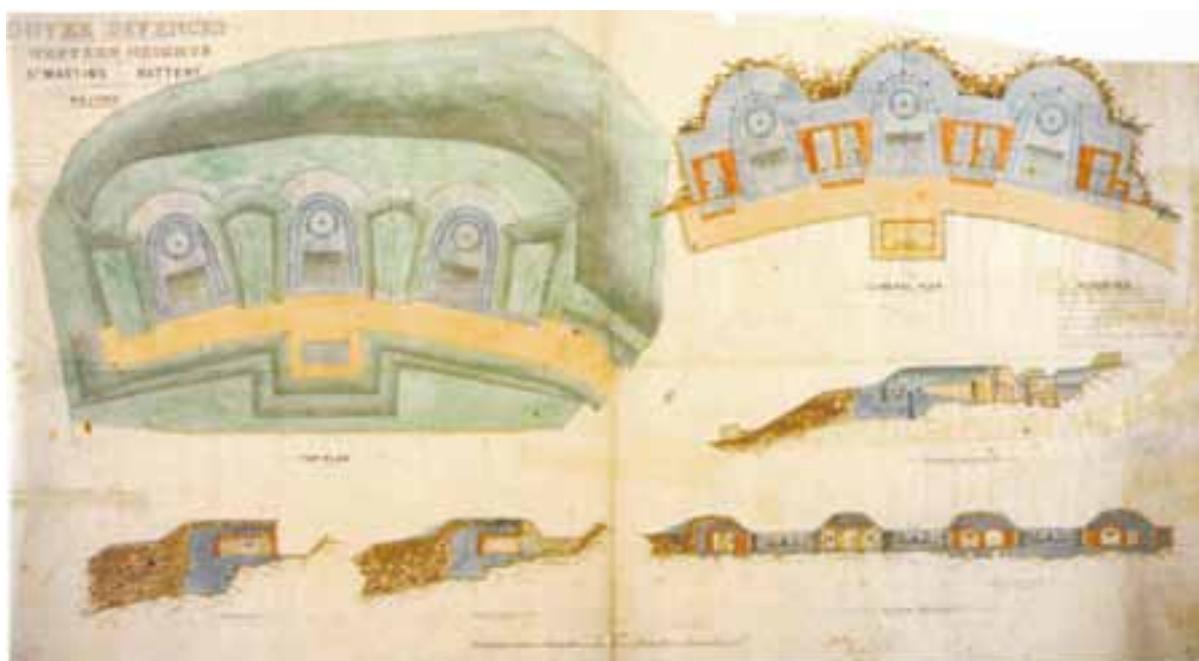
- In 1870, the first rifled guns (introduced into service in the late 1860s, with priority given to the Royal Navy) were allocated to coastal defence. At Dover, several **coastal batteries** were built during the early 1870s to protect the developing harbour and port from seaward bombardment, including St Martin's Battery on the Western Heights, Hospital, Shoulder of Mutton and Shot Yard Batteries in Dover Castle, and a battery of 9-inch RMLs at Archcliffe Fort. In 1872-82, Admiralty Turret was constructed on the harbour itself with six 16-inch RMLs.

1871-88

- At the **Citadel**, new buildings constructed included a **Troop Stable**, a **Carpenter's Shop**, a **Soldiers' Room**, an **Artillery Store** and a **Bread and Meat Store**.

1874

- Construction started of **St Martin's Battery** near the cliff edge south of the Grand Shaft Barracks where it overlooked Dover Harbour. The proposal to build the Battery had been made in 1872, the intention being that it should replace the Drop Battery, although the Drop Battery retained its armament whilst St Martin's Battery was being constructed. Located on an artificial terrace cut into the hillside just below the crest, it was designed with a curved trace and a *glacis* for low visibility, three deep, concrete gun emplacements each for a 10-inch RML gun with shell stores and cartridge stores in between, a further cartridge store at the north-eastern end of the battery and a shell store and lamp store at its south-western end. A covered way was constructed running behind the Battery and linking it with the South Military Road. Behind the covered way an artillery store was dug into the hillside. Construction was completed in 1877.



Plans and sections of St Martin's Battery, dated 1877 (NMR: WD/2359)



St Martin's Battery, showing the original porch to cartridge store E and shell store D, photo taken 1998 (extract of NMR: AA99/09714)



St Martin's Battery, showing the doors to the lamp store (right) and shell store A, with the lamp recess between them, photo taken 1998 (NMR: AA9909711)

1876

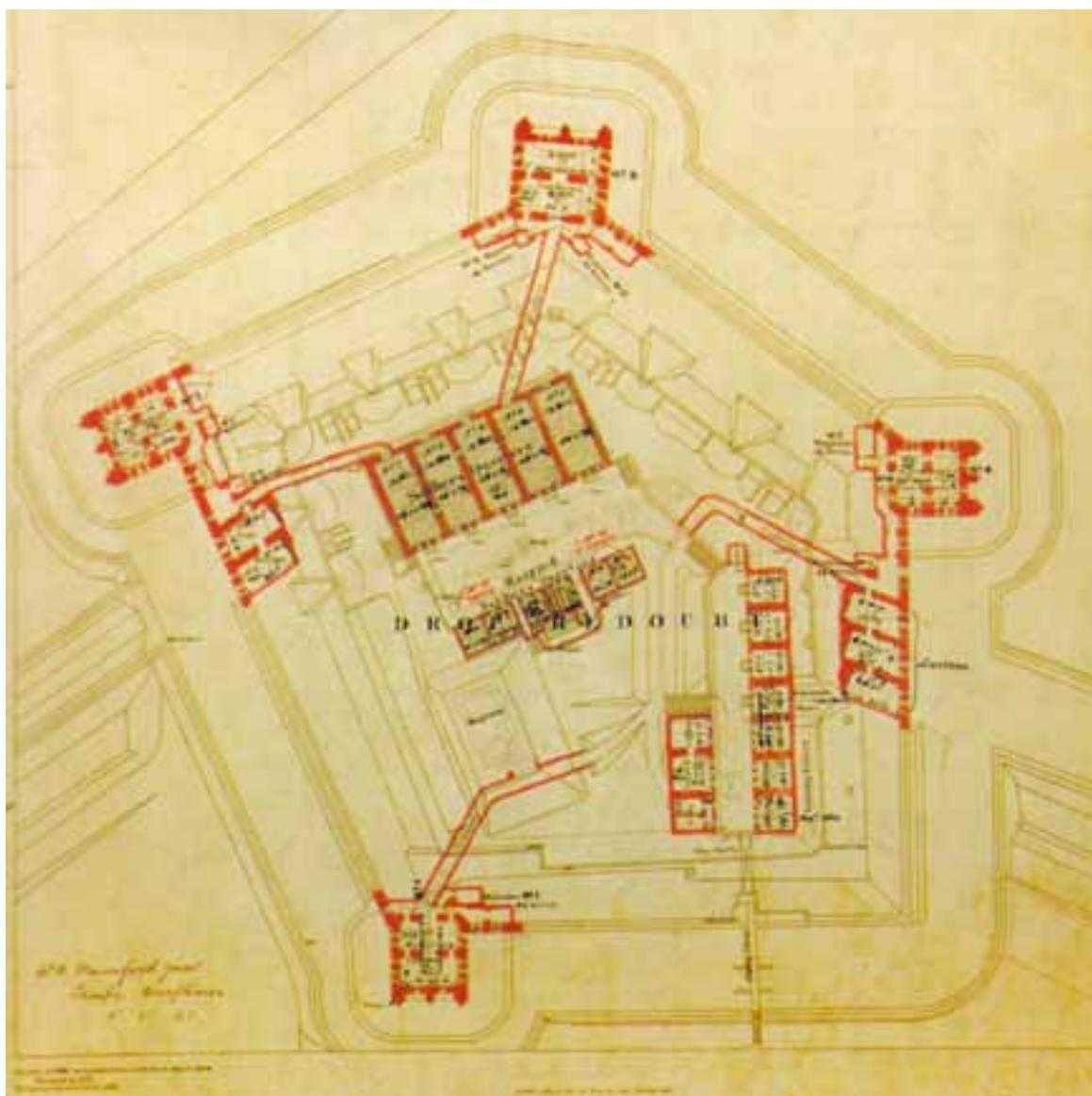
- At the **Citadel**, the armament consisted of the older smooth-bore weapons installed after the 1853-5 works – eighteen 18-pdr carronades and twenty 12-pdr carronades in the casemates for ditch defence, and ten 8-inch mortars for defence of the land approaches added after further remodelling of the *terre-plein* in the 1860s (NA: WO 33/2775). A plan of 1871 showed there were more gun emplacements on the *terre-plein* (notably on the more vulnerable western and northern faces), many with traversing platforms and embrasures, suggesting that the guns for these positions had probably never been installed, and therefore that the *terre-plein* was under-armed (NA: WO 78/2755/12).
- At the **Drop Battery**, the armament consisted of three 42-pdrs and three 7-inch RBLs. It was proposed that these should be replaced by five 64-pdrs RMLs. 'G' magazine was afforded a new entrance incorporating access to expense magazine no. 1.

1877

- To serve the recently constructed **St Martin's Battery**, a **Magazine** was built at a safe distance, located off the **passage** serving the **South Entrance's gun rooms** (NMR: WD/2360).

1881

- At the **North Centre Bastion**, on the *terre-plein* the three artillery positions covering the Detached Bastion's eastern flank had been removed before 1881 (NMR: WD/2517; RCHME Report No. 7: Figure 4, Nos 11-13). At the **Detached Bastion**, the rampart had been amended – four of the embrasures created by 1867 had been infilled by 1881, namely one on the western face, and three on the eastern face (NMR: WD/2300).
- A plan depicted the defences and buildings at the **Drop Redoubt** (NMR: WD/2514). This indicated that the **Staff Sergeants' Quarters** had been converted to **Married Soldiers' Quarters**.



Plan of the Drop Redoubt, surveyed 1858, revised 1871 and 1881, annotated 1893 (extract of NMR: WD/2514)

1884-5

- A **public-works Convict Prison** was built at the bottom of the **South Military Road** on its eastern side (immediately west of **Archcliffe Yard**), designed by Edmund du Cane (formerly CRE Dover) now in his roles as a Director of Convict Prisons and Inspector-General of Military Prisons (Brodie et al. 2002: 124, 126, 131 and Table 5.1). The Convict Prison contained three wings (A-C) of 204 cells and was completed in 1887-8. Wings A-B had brick cells, whilst C contained corrugated-iron sleeping berths. Men imprisoned there built and maintained the prison buildings, made items for prison use, and carried out projects for the government (including construction works to the harbour).



The Convict Prison in its walled compound (extract of photo taken 1939)

1886

- At the **Drop Redoubt**, there were eleven 7-inch RBL guns on the *terre-plein*, and fifteen 12-pdr carronades in the caponiers and gun rooms. It was proposed, however, that most of the RBLs should be replaced by six 64-pdr RMLs, with just two RBLs kept for flanking purposes, and that the 12-pdr carronades should be replaced by fourteen 24-pdrs (NA: WO 33/2775). This proposal was approved in September 1887, but revisions were made during its implementation.
- At the **Drop Battery**, it was recommended that the five 64-pdr RMLs should be removed, since St Martin's Battery with its three 10-inch RMLs had been constructed nearby.
- At the **North Centre Bastion**, it was recommended that the two 18-pdr carronades in the gun rooms should be replaced by 24-pdrs. It also proposed that four 7-inch RBLs should be mounted on the *terre-plein* of the **Detached Bastion**, and that two 40-pdr RBLs should be kept ready so they could be mounted on the *terre-plein* of the North Centre Bastion's salients (NA: WO 33/2775).

1887

- By this time, a small quantity of rifled ordnance had been mounted at the **Citadel**, rectifying the problem of the *terre-plein* being under-armed (as suggested by the 1871 plan). In September, on the *terre-plein* there were eight 64-pdr RMLs and eight of the old 8-inch mortars; the ditch casemates had twenty-five 24-pdr mounted carronades, and a further eight unmounted; the 'counterguard' (probably the south-western salient or the *tenaille's* south-western demi-bastion) had eight unmounted 24-pdrs; and the **Western Outworks'** Double Caponier had eight 18-pdr carronades (NA: WO 33/2775). In the 1887 armament return, however, approval was given to reduce the Citadel's artillery complement by removing the old mortars, fifteen of the 24-pdr carronades (including the eight for the counterguard), whilst adding a 64-pdr RML and a 5-inch BL. The Western Outworks was to lose all of its 18-pdr carronades and to have a moveable armament consisting of one 4-inch RBL, two 40-pdr RBLs, two 6.6-inch RML howitzers, two 3-pdr

QFs and two machine guns (NA: WO 33/2775). The reason for these changes was probably that the ability of the large land fortresses to provide effective defence was being questioned – tactics were altering towards moveable armament and the rapid deployment of mobile field forces, equipped with the new magazine rifles, machine guns and mobile breech-loading artillery. The proposal was approved, but changes were made during its implementation.

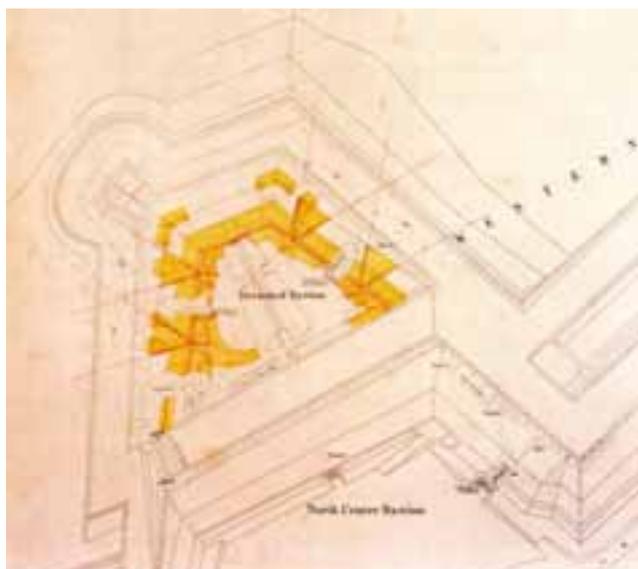
- At the **North Centre Bastion** and **Detached Bastion**, only the ditches were defended by artillery: two 18-pdr carronades in the North Centre Bastion's gun rooms, and three 24-pdr carronades in the Detached Bastion's North-West Caponier. In accordance with the Committee's recommendation of the previous year, the 18-pdrs carronades in the North Centre Bastion's gun rooms were replaced by 24-pdrs. The *terre-pleins* of both bastions were still unarmed.
- In the **South Entrance** casemates, two 12-pdr carronades were mounted, which were altered soon afterwards to 24-pdrs.
- In the **North Entrance**, two 18-pdr carronades were mounted in the gun rooms, but these were increased to 24-pdrs shortly afterwards. The **outer and inner bridges** were strengthened so they could take the weight of horse teams pulling heavy mobile artillery pieces.

1888

- At **St Martin's Battery**, a new **cartridge store** was constructed below ground in the hill behind the Battery, reached via a passage with its entrance behind the artillery store (NMR: WD/2362).

1889

- At the **North Centre Bastion**, proposals were drawn up for a single emplacement to be added on the *terre-plein* of the north-eastern salient (NMR: WD/2300). As the new emplacement was accessed via a long ramp, it may have been designed for a moveable artillery piece (e.g. a 40-pdr RBL).
- At the **Detached Bastion**, a drawing of the *terre-plein* showed four emplacements for 7-inch RBLs (recommended by the 1886 Committee), which were to be mounted on blocked-up platforms, but a subsequent plan showed 'L' pattern traversing slide carriages which needed embrasures (NMR: WD/2301; WD/2300). The emplacements were built in accordance with the latter plan, with concrete *barbettes* and gunfloors containing racers for the traversing platforms. In addition, the rampart was thickened on the inside, the old embrasures were infilled and new ones were created. The expense magazine, artillery store and entrances to the galleries received some re-designing in the same positions, and new ready-use shell recesses were constructed next to the emplacements.

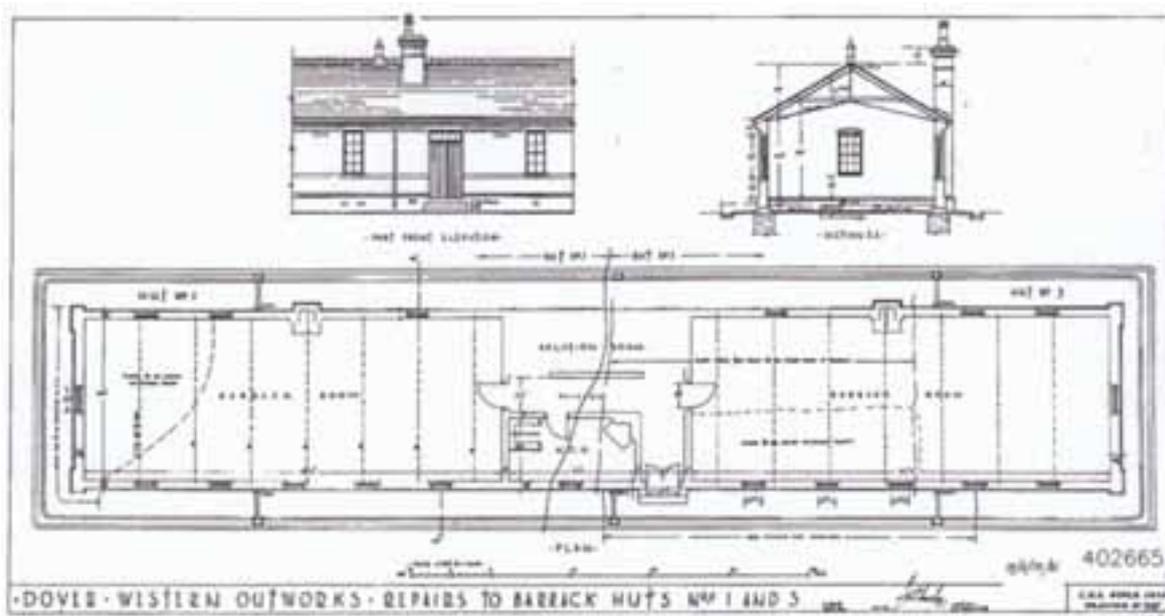


Plan of the Detached Bastion, showing proposed changes to the terre-plein (in yellow) to accommodate four 7-inch RBL guns, drawn 1889 (extract of NMR: WD/2300)

1890s

- The **Citadel** had ceased to be regarded as a **land fortress**, and instead operated as a **large barracks and mobilisation centre** (referred to as **Citadel Barracks**). It was required to accommodate a regular infantry battalion (up to 1,000 men) and to be able to provide temporary accommodation for reservists. Some buildings were adapted to take new roles (e.g. the **Canteen** became the **Recreational Establishment**, as part of which an NCOs Room and a Coffee Room were added). Amongst the buildings constructed during this decade were the **Warrant Officers' Quarters Nos 1-2**, which were built immediately north of the Main Entrance. These comprised two single-storey brick buildings – No. 1 (the more northerly) was rendered and austere, whereas No. 2 was afforded a more elaborate front (with blue-brick window sills, terracotta flat arches and an Arts-and-Crafts-style brick frieze) and a balustraded entrance porch in the re-entrant of the wing (HMPS: 402530; HMPS: 402481). On the southern side of the Parade Ground and fronting onto it a **Sergeants' Mess Establishment** was constructed. It was constructed as a single-storey brick building with a terracotta plaque bearing Queen Victoria's cipher and the date 1898 on its west wall, and contained a large Mess Room (with Dining Room and Billiard Room), Kitchen, Cook's Room, Scullery, Larder, Store, Bar and Beer Cellar (HMPS: 402630). From 1897, the **former Cook House** between the areas located behind the South-West Flank Casemates and South-West Face Casemates was adapted and extended to form a large complex of **Shower Baths, Boiler Rooms and Drying Rooms**.
- In 1890-1, the **Western Outworks** were developed to provide surface barracks and related facilities (**Hut Barracks**), in the context of the mobilisation policy which required barracks to be able to accommodate large numbers of troop reinforcements in times of crisis. All but one of the new buildings constructed were sited fronting onto a terraced road, which originally connected the Citadel, via the West Sally Port and bridge (through a revetted cutting in the counterscarp), with the South Flank Casemates, North Flank Casemates and the Double Caponier, but was subsequently extended across the North Ditch to the Citadel Battery in 1898. When built, the accommodation comprised six

single-storey, brick barrack huts and a small Cook House. No attempt was made to bombproof them. The **barrack huts** were afforded some decoration externally – each was built with a terracotta plaque (with the cipher of Queen Victoria and the date 1890) on one gable, cogged eaves, and openings with flat arches comprising moulded and joggled terracotta *voussoirs*. Internally, each hut contained two large barrack rooms (each with a stove) arranged either side of a central area containing the entrance, Sergeant's Bunk (with fireplace) and an Ablution Room. The small **Cook House** (located between huts 4 and 5) was built as a square, single-cell building, with a timber veranda on the southern front, and a tiled, pyramidal roof with ventilator. In 1899, a Bath House for an NCO and three men was added to the rear of the building. A Preparation Room was subsequently added to the west end.



Plan and elevations of Barrack Hut Nos 1 and 3 (built 1890-1) in the Western Outworks, drawn 1940 (HMPS: 402665)

1890

- At the **North Centre Bastion**, on the *terre-plein* a single emplacement (probably for a 40-pdr RBL) was added to the north-eastern salient, then altered, and a similar one was added to the other salient. Both had concrete gun floors and vertical *barbettes* to support the 40-pdr RBLs recommended in 1886. Overbank carriages were needed to fire over the high infantry parapet, which was nevertheless afforded embrasures. Ready-use shell recesses were inserted in the rampart for each emplacement (NMR: WD/2309; NA: WO 33/2775).

1891

- At the **Citadel**, a 'high-level' hexagonal **Water Tank** was constructed by the Pump House to ensure an adequate head of water to supply surface buildings during a period of rapid expansion of surface facilities. It was constructed of cast-iron panels bolted together beneath a shallow-pitched wooden roof, on an elaborate brick base on a stepped plinth, with gauged arches and moulded detailing on the openings, and a stepped and cogged brick cornice at the base of the tank. Above the entrance was placed a frieze with a terracotta plaque bearing Queen Victoria's cipher and the date 1891 (identical to those on the Hut Barracks in the Western Outworks).

1892

- In April, at the **Citadel** there were still eighteen 24-pdr carronades mounted for defending the Citadel ditch, and only eight 64-pdr RMLs on the *terre-plein*, but the mortars had been removed. Approval was given for two machine guns for the Citadel, from which nine of its 24-pdr carronades were to be withdrawn (NA: WO 33/2775). There was no mounted artillery in the **Western Outworks**, but four machine guns had been approved to defend it.
- At the **North Centre Bastion** and **Detached Bastion**, it was recommended that the two 24-pdr carronades in the North Centre Bastion's gun rooms be reduced to one, and the three 24-pdrs carronades in the Detached Bastion be reduced to two (NA: WO 33/2775). On the *terre-plein* of the North Centre Bastion, no artillery was allocated in the armament return, in spite of the works which had been carried out in 1890. On the *terre-plein* of the Detached Bastion, although the four 7-inch RBLs were approved, they were not mounted (NA: WO 33/2775).
- It was recommended that the two 24-pdr carronades in the casemated gun rooms of the **North Entrance** and in the **South Entrance** should be reduced to a single 24-pdr.
- **St Martin's Battery** still had three 10-inch RMLs. Approval had been given for long-range mountings for the guns.
- At the **Drop Redoubt**, the RBLs were still in place, and the 24-pdr carronades had been mounted (NA: WO 33/2775). In August, the installation of the 64-pdr RMLs was finally approved, as was retention of two 7-inch RBLs and the addition of two machine guns on parapet mountings. Only six of the carronades were *in situ*; the other eight were dismounted and without carriages, and it was recommended that they be returned to store. Two of the RMLs were to be located in the northern and north-western salients, and the other four were to be put in a new detached position ('the Battery on the North Lines'), which was to be constructed on the flank west of the Drop Redoubt (NA: WO 33/2775). There the ridge had been formed into a rampart by Ford, but not to take artillery.
- The **installation ceremony** of Frederick Hamilton-Temple-Blackwood, 1st Marquis of Dufferin and Ava, as the new **Lord Warden of the Cinque Ports** took place on the Drop Redoubt's *terre-plein* by the **Bredenstone**.



The installation of the 1st Marquis of Dufferin and Ava as Lord Warden of the Cinque Ports at the Bredenstone on the Drop Redoubt's terre-plein in 1892

1893

- At the **Drop Redoubt**, a proposal plan showed that seven 64-pdr RML guns were to be installed – four on the ridge and three in the Redoubt – but only six were actually put in position.
- The 1881 plan of the **Drop Redoubt** was annotated in 1893, revealing that changes of use were being made to the internal buildings and structures as the emphasis changed from defence of the land front to barrack accommodation and related facilities. These included the conversion of caponiers (nos. 2-4) to barrack accommodation and a canteen (NMR: WD/2514). This process continued until the end of the First World War.
- Plans were approved for a **Battery on the North Lines** immediately west of the **Drop Redoubt** to form part of the Redoubt's defences (rather than being a battery in its own right). The Battery was located on the ridge immediately west of the Drop Redoubt, where it could command the valley to the north. It contained emplacements for four 64-pdr RML guns and a side arms store located between emplacements 2 and 3. The rear of the battery was protected by both a screen bank topped with a hedge and a screen of trees. A covered way through the screen bank provided access to the Battery (NMR: WD/2513).



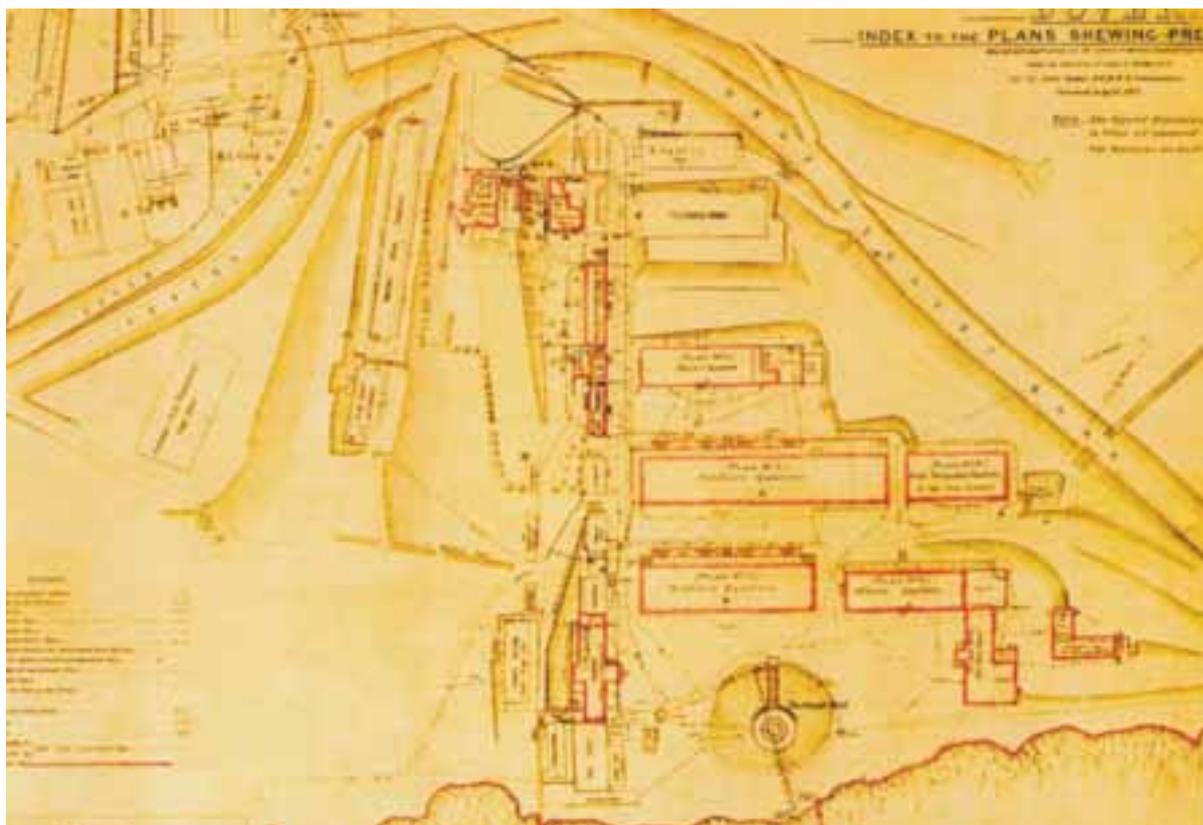
Plan of the Battery on the North Lines, showing the proposed emplacements and screen bank, dated 1893 (NMR: WD/2513); red text was added by RCHME Report No. 3: Figure 51

1895

- The **public-works Convict Prison** at the bottom of the South Military Road closed.

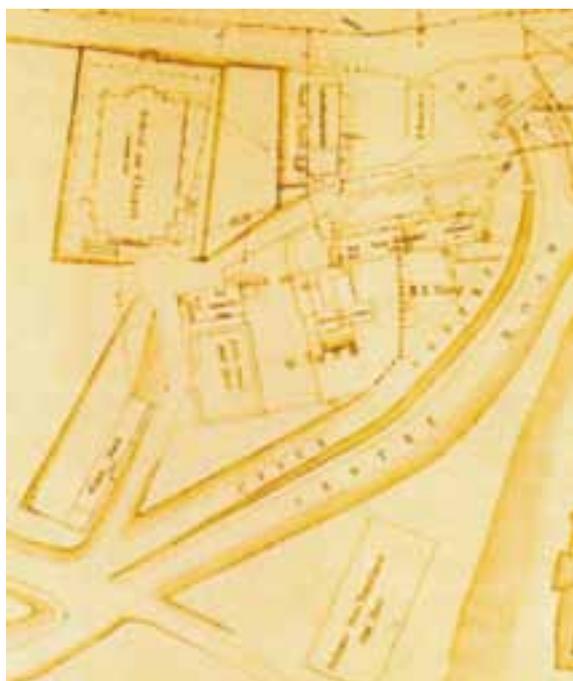
1895-7

- A plan drawn in 1896 depicted the **Grand Shaft Barracks** (NA: WO 78/2426/20). This included buildings constructed since the 1861 plan – a Bread and Meat Store (built 1868-9 on a platform north-east of the Staff Sergeant's Quarters), a Gymnasium (built 1867-8 on a new fourth terrace), a Troop Stable (built on a new top terrace), a Married Soldiers' Quarters (built 1869-70) and a Laundry (built 1869-70) on the upper terrace west of the north-south steps. There were 912 officers and men stationed at the Barracks.



Plan of the Grand Shaft Barracks, drawn 1896 (extract of NA: WO 78/2426/20)

- Also shown on this 1896 plan (NA: WO 78/2426/20) were the **buildings north-west of Centre Road** (where facilities for the whole garrison and an RE Yard were located) and the Gun Shed east of Centre Road.

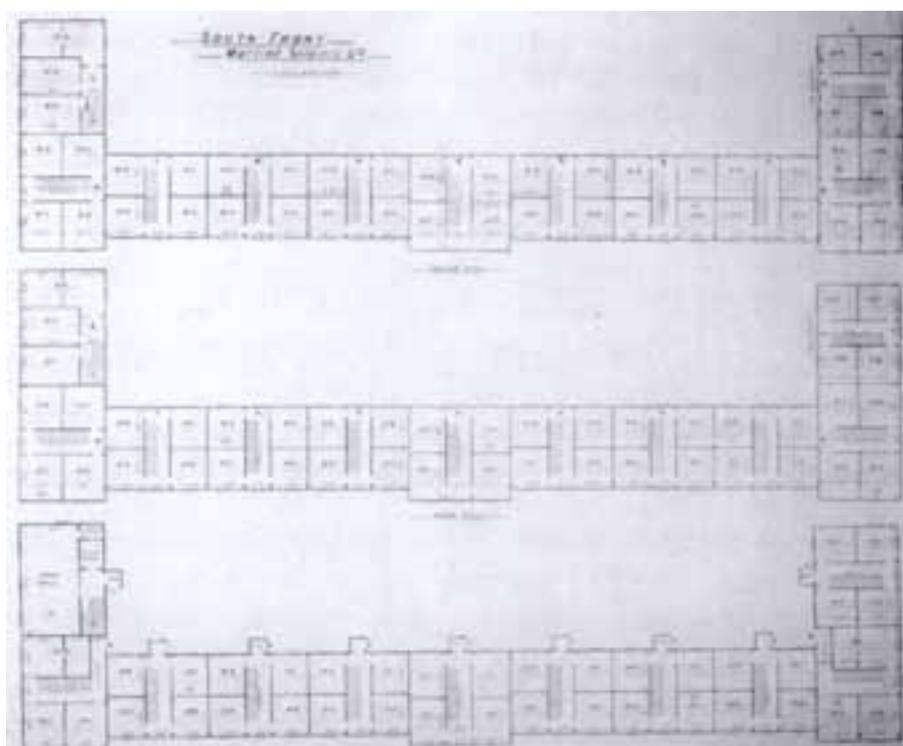


Plan of the area north-west of Centre Road, drawn 1896 (extract of NA: WO 78/2426/20)

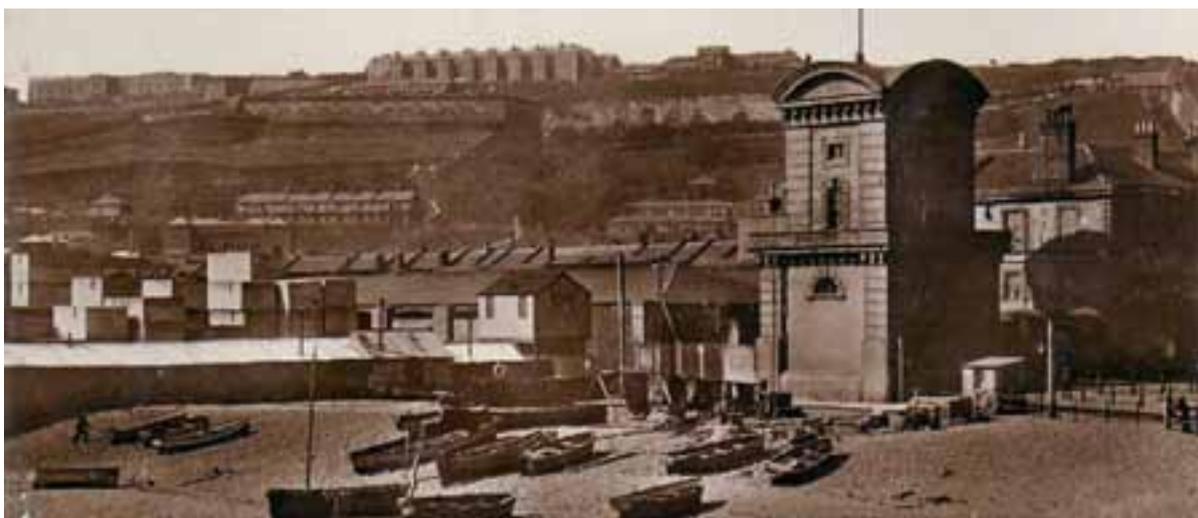


The Grand Shaft Barracks, from Wellington Bridge, postcard, late nineteenth/early twentieth century

- Plans of 1895 (NMR: WD/2374) and 1896 (NA: WO 78/2426/4) indicated the arrangement of accommodation in the **Married Soldiers' Quarters** at the **South Front Barracks**. This does not appear to have been improved markedly since the Quarters were built in the late 1850s. In 1895-6, the main block contained 84 single rooms, whilst the wings had 32 single rooms, just four twin-room flats and an Infant School. The lavatories continued to be at a distance from the Married Soldiers' Quarters building.

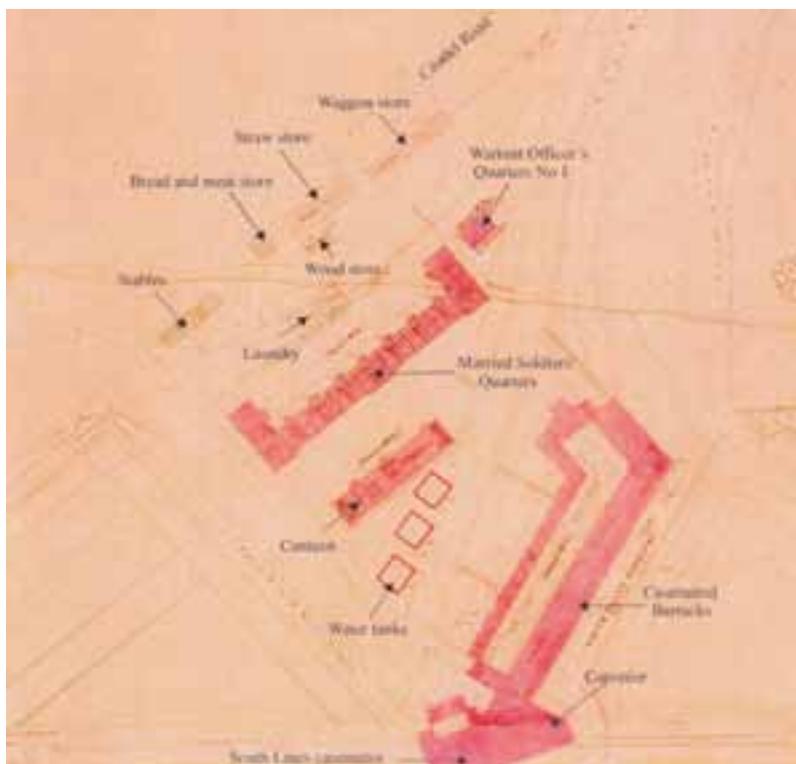


Plan of the Married Soldiers' Quarters at the South Front Barracks, dated 1896 (extract of NA: WO 78/2426/4)



The casemated South Front Barracks and further up the slope their Married Soldiers' Quarters, from Admiralty Pier; the Citadel's Officers' Quarters are on the far left; postcard, late nineteenth/early twentieth century

- Plans reveal that in 1896-7, at the **South Front Barracks** the **casemated barracks** housed over 380 officers and men, and there were a further 120 in the **Married Soldiers' Quarters** (NA: WO 78/2426/3-4).
- A plan of 1897 showed the layout and uses of the buildings of the **South Front Barracks** (NA: WO 78/2426/2), including those buildings constructed since the 1871 plan. **Warrant Officer's Quarters No. 1** had been built just to the north-east of the Married Soldiers' Quarters. On Citadel Road, a **Straw Store**, **Wood Store** and **Wagon Store** had been erected.



Plan of the South Front Barracks, dated 1897 (extract of NA: WO 78/2426/2); text in grey and the red outlining of the water tanks were added by RCHME Report No. 9: Figure 6

- The gun rooms of the **South Lines Casemates and caponier** had been converted to provide extra accommodation.
- At the **Citadel**, a plan of 1897 showing accommodation revealed the many changes which had been made to the **Officers' Quarters** (NA: WO 78/2426/6). Of the room suites, only the Quartermaster's Stores, the Mess and the Messman's accommodation were unaltered. Rooms had been re-allocated to different people and functions altered. New room-uses included a Billiard Room for the officers. The basement had begun to be used as officers' servants' kitchens, supplementing the storage function, and the water tanks were no longer in use.

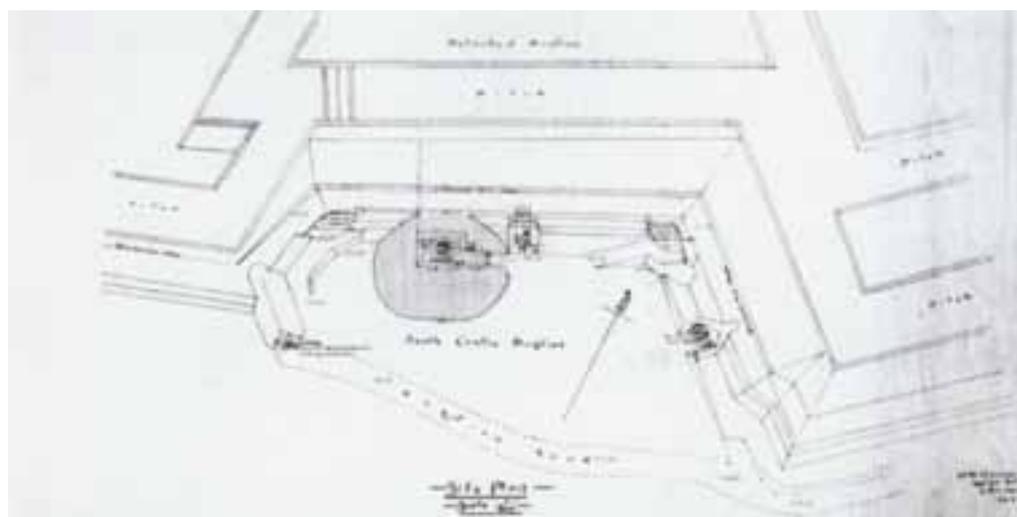
1897-1900

- At the **South Front Barracks**, on Citadel Road **Warrant Officers' Married Quarters Nos 2-3** were built (a pair of semi-detached houses).



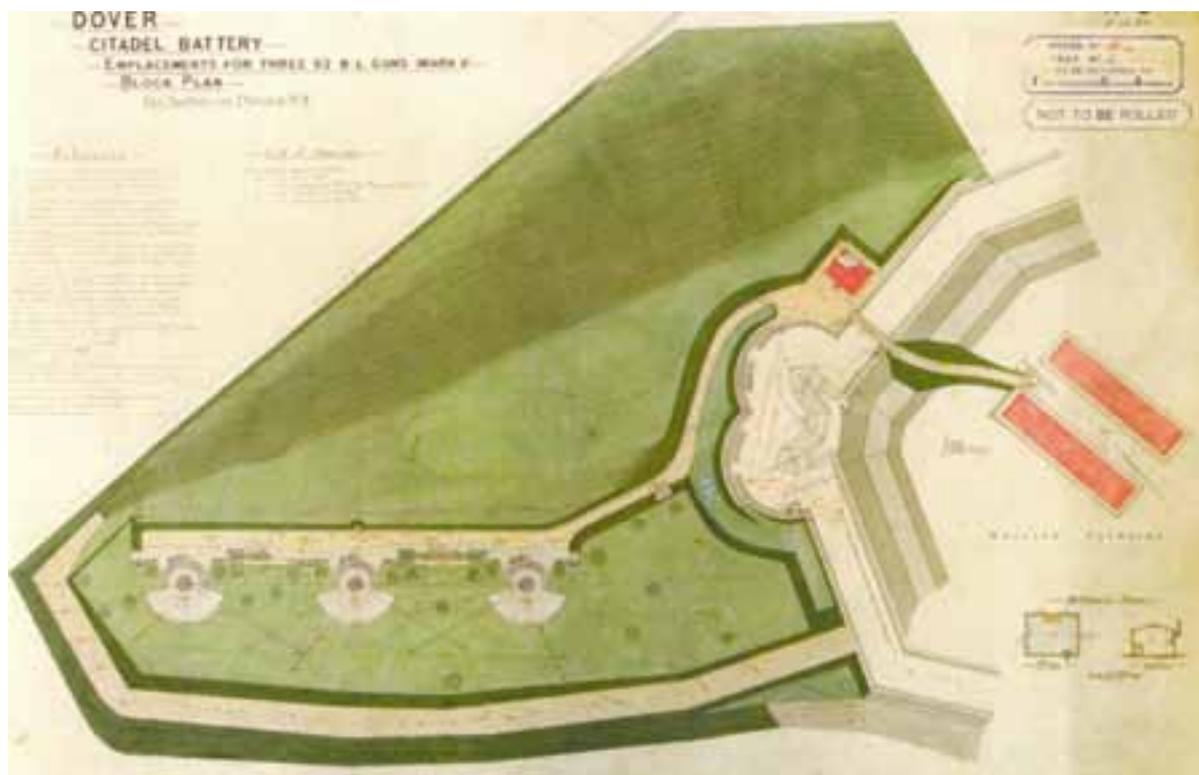
Elevations of the South Front Barracks Warrant Officers' Quarters Nos 2-3, dated 1900 (NMR: WD/2320)

- In 1898, at the **North Centre Bastion** a shell and cartridge store for mobile armament was constructed under a large oval, bombproof mound behind the rampart (NMR: WD/2310). It was intended to serve artillery capable of rapid deployment to counter a threat anywhere in the vicinity of Dover.



Plan of new shell and cartridge stores for movable armament on the North Centre Bastion, drawn 1900 (extract of NMR: WD/2310)

- In 1898, the construction began of a coast artillery battery (**Citadel Battery**) immediately west of the Western Outworks. This was one of a new generation of coast artillery batteries with a low profile, protected by a concrete *barbette*, a sloping earth and sand *glacis* and an unclimbable fence. When built, the Battery consisted of three emplacements (each to house a 9.2-inch Mark X BL guns) laid out in series with underground magazines, stores and gun detachment shelters below them. A covered way ran behind the Battery, past its Caretaker's Quarters, over a bridge across the North Ditch and into the Western Outworks, where some of the 1890-1 barrack huts appear to have provided peacetime accommodation for the gun crews. Construction works on the Battery were completed in 1900, and the guns were installed in 1901-2. The Battery's principal role was counter-bombardment, warding off enemy shipping in the Channel threatening to shell the port of Dover – the guns' range was almost 10 miles.



Plan of the Citadel Battery, dated 1901 (NA: WO 78/5107/5)

- A battery was constructed downhill from the Citadel's *tenaille* (**South Front Battery**) to increase the coastal artillery defences protecting the harbour and port of Dover. It was built with three emplacements (each for a 6-inch BL gun) laid out in series with underground magazines, stores and gun detachment shelters below them. It was allegedly in this period in relation to the Battery's construction that the *tenaille* itself was modified – the outer ditch was infilled for three-quarters of its original length and the *tenaille* was cut away, leaving a 45 degree slope on the southern side.
- In 1898, at the **South Front Barracks**, on Citadel Road **Victoria Hall** was erected by the Church of England Soldiers and Sailors Institute. It is thought to have been constructed as a temperance alternative to the Canteen and Regimental Institute (which were of similar design but also sold beer), with Married Quarters for a civilian caretaker at one end. When built, Victoria Hall consisted of a long, rectangular, single-storey range containing a central six-bay hall with a three-bay room at its south-western end (all lit by

large tripartite casement windows) and a four-bay Married Quarters at the north-eastern end (lit by smaller casement windows, and a single sash window in the north-easternmost bay containing a bedroom). A dedication stone on the south-western side of the entrance was laid on 8th December 1898 by Lord Roberts of Kandahar VC, a Christian military hero.

- People who died at the Military Hospital appear to have been taken to parish churches in the town for the funeral service, with the place of burial depending on their families' wishes. The burial ground next to the Military Hospital is not thought to have been used for military burials.



A military funeral procession departing from the Military Hospital, photo taken late nineteenth century

1899

- North of Drop Redoubt Road, a substantial, brick, detached house (**Warrant Officer's Quarters No. 3**) was built to accommodate the Warrant Officer from the Grand Shaft Barracks.

1901

- At the **Citadel**, a hexagonal 'high-level' **water tank** was built on the *terre-plein* above the West Postern Gate (south of that erected in 1861) to ensure an adequate head of water to supply surface buildings during the period of rapid expansion of surface facilities. It was constructed from cast-iron panels bolted together beneath a shallow-pitched wooden roof, on a brick base, and was by 'Douglass Bros Ld Blydon on Tyne'.

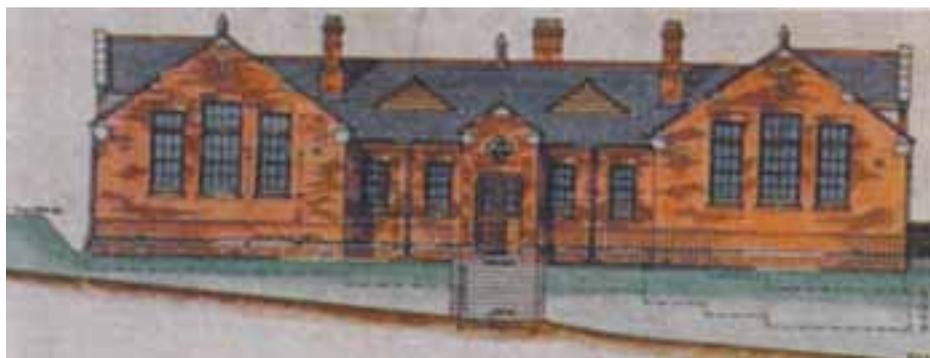
1902

- At the **Citadel**, approval was given to remove the nine obsolete 64-pdr RMLs. The carronades had already been removed, leaving just six machine guns for defending the whole Citadel (NA: WO 33/2775).

- At the **Drop Redoubt**, the only armament was two machine guns (NA: WO 33/254).
- At the **Battery on the North Lines**, there were four 64-pdr RML guns. These were removed in 1903 (NA: WO 33/254).
- At **St Martin's Battery**, the three 10-inch RMLs do not appear in the armament tables, and may have been removed.

1902-3

- In the **area north-west of Centre Road**, a larger **Infants School** for the use of the whole garrison on the Western Heights was built south-west of the Church and School, replacing the smaller Infants School at the southern end of the Schoolmaster's Quarters.



The Infants School, south-east elevation, drawn 1903 (extract of NMR: WD/2350)

1903

- At the **South Front Barracks**, on Citadel Road **Victoria Hall** was converted into a school and educational establishment. At the south-western end a two-storey wing was added (with a classroom on the ground floor and a Men's Educational Room and store room on the first floor, lit by large tripartite windows) and a lean-to veranda was built along two-thirds of the south-eastern wall of the original (1898) building.



Victoria Hall, from the north-west, photo taken 1998 (NMR: 028135)

- At the **South Front Barracks**, on Citadel Road the **Straw Store** was converted into or replaced by a **Troop Stable and Mobilisation Store for Equipment and Vehicles**, and the **Wagon Store** by a **Modelling Store and ASC Store** (NMR: WD/231).

- The **Gun Shed** was being used as a **Cart Shed** by the Royal Engineers. A 'Washing Platform' comprising granite setts in front of the shed's four middle bays was probably constructed in this period.

1905

- At the **Drop Redoubt**, the **Married Soldiers' Quarters** (originally Staff Sergeants' Quarters) had been converted to **Dining, Recreation and Reading Rooms**.

1906

- In April, the *Approved Armaments* for the **Western Heights** listed the following: South Front Battery three 6-inch BL; Citadel Battery three 9.2-inch guns; Citadel Land Front two G. machine guns; Drop Redoubt two G. machine guns; General Defence, Western Heights, six M. machine guns.

1907

- In the *Dover Defence Scheme* revised in May of that year, the **Citadel** was classified as a large barracks and mobilisation centre (NA: WO 33/437).
- No guns were mounted in the **North Centre Bastion** or **Detached Bastion**.
- In the ditch of the **North Lines**, immediately east of the North Centre Bastion's east face, a **rifle range** 30 yards long was established. Its butt was constructed against the face of the Bastion, thus preventing or hindering small arms fire from part of the east gallery and indicating that defence of the Bastion from the galleries was then considered unlikely (NMR: WD/2364).
- At the **Citadel Battery**, two parapet-mounted Maxim machine guns were installed for close defence.

1908

- Behind the **Citadel Battery**, a new **Battery Command Post** was established. It consisted of two floors – a telephone room below an open Depressed Range Finding position. Another floor was added a few months later; in 1914-15 this upper floor was given walls and an asbestos sheeting roof.

1909

- At the **South Front Barracks**, the number of officers and men accommodated in the casemated barracks had been reduced to 400 (NMR: WD/(1909)).
- A photograph taken in the early morning on 25th July 1909 showed people on the **South Lines Bridge** waiting to catch sight of **Louis Blériot** in his plane – he was attempting the first successful crossing of the English Channel in a heavier-than-air aircraft and had taken off from Baraques destined for Dover. He landed safely on Northfall Meadows near Dover Castle. Sometime between 1909 and 1939 the bridge was demolished as part of improvements to the road system.



The South Lines Bridge, from the east, photo taken 25th July 1909

1910

- At the **Drop Redoubt**, there was no armament (NA: WO 33/488).
- At the **Citadel Battery**, the three 9.2-inch guns were still mounted. In December, one of these guns was withdrawn and the emplacement stayed empty thenceforth. The parapet mountings of the machine guns were replaced by tripod mountings.

1911

- A plan showed the **Double Caponier** on the **Western Outworks** as **War Quarters for the Citadel Battery** (the Hut Barracks had served as peacetime accommodation but were not bombproof), for which role alterations were made to the northernmost and southernmost casemates of the small arms galleries so that Ablutions and WCs could be installed. It was intended to accommodate 46 men (HMPS: 402581). There was direct access to the Battery from the North Ditch and the Double Caponier via two sets of steps.
- At the **Citadel**, a new **Cook House** was built across the face of the 1804-16 casemated Cook House, which had served the West Flank Casemates and was now converted for storage purposes. The new building was a single-storey, steel-framed structure with a roughcaste exterior. At the same time, the two northern rooms of the West Flank Casemates were converted from barrack rooms into Dining Rooms. A Reading Room had been added to the **Sergeants' Mess Establishment**.

1912

- At the casemated barracks in the **South Front Barracks**, there were no troops in residence (NA: WO 33/602).
- At the **North Entrance**, the gun rooms were adapted for other uses, including as a **telephone exchange** (NA: WO 78/5101).

1913-14

- At the **Citadel**, the **Recreational Establishment** was extended and raised (in brickwork matching the original), and room-uses were altered. There was now a Supper Room which doubled as a Lecture Room (with a stage), Dressing Rooms, Stores, a Grocery Shop, a Soldiers' Room, a Corporals' Room, a Reading Room, a Library and a Billiard and Games Room.

1914

- William Lygon, 7th Earl Beauchamp, was the last newly appointed **Lord Warden of the Cinque Ports** to be installed at a ceremony by the **Bredenstone** on the Drop Redoubt's *terre-plein*. Thereafter the ceremony took place at the Close of Dover College.

1915-17

- At the **Drop Redoubt**, in January 1915 there was one 6-pdr QF gun to provide anti-aircraft cover. By 1916 another such gun had been put in place. In 1917 both guns were removed (NA: WO 33/704; WO 33/746; WO 33/828).
- At the **Battery on the North Lines**, slit trenches on the ground between the emplacements and the screen bank may have been created during this period (and/or in the Second World War).
- At the **Citadel**, in 1917 there was one anti-aircraft gun – a 3-inch QF 20cwt for local defence against German bombers and zeppelins (NA: WO 33/828).
- At the **Citadel Battery**, in 1916 the 9.2-inch guns and two machine guns were still mounted. That year, the two machine guns were withdrawn.
- The **fortress interior** was still being used for parades. A photograph taken in this period also indicates that the ground had been formed into four large terraces (descending gradually eastwards) and sports pitches set out for use by the troops (goal posts are visible immediately behind them).



The East Surrey Regiment assembled on the fortress interior, looking west, photo taken 1914-18 (East Surrey Regiment, Woking)

1919

- After the First World War, the **Drop Redoubt** was probably not permanently occupied, instead being managed under a care-and-maintenance regime.

1920s

- At the **Citadel**, many casemates were no longer used to accommodate troops (although some were still housed in the Western Outworks' North Flank Casemates and South Flank Casemates and the Double Caponier, and most of the accommodation and related

facilities were located in the 1890-1 Hut Barracks). In 1922, a large **Dining Room** was added to the **Cook House**. Between 1911 and 1929, almost 900 men were accommodated in the Citadel and Western Outworks.

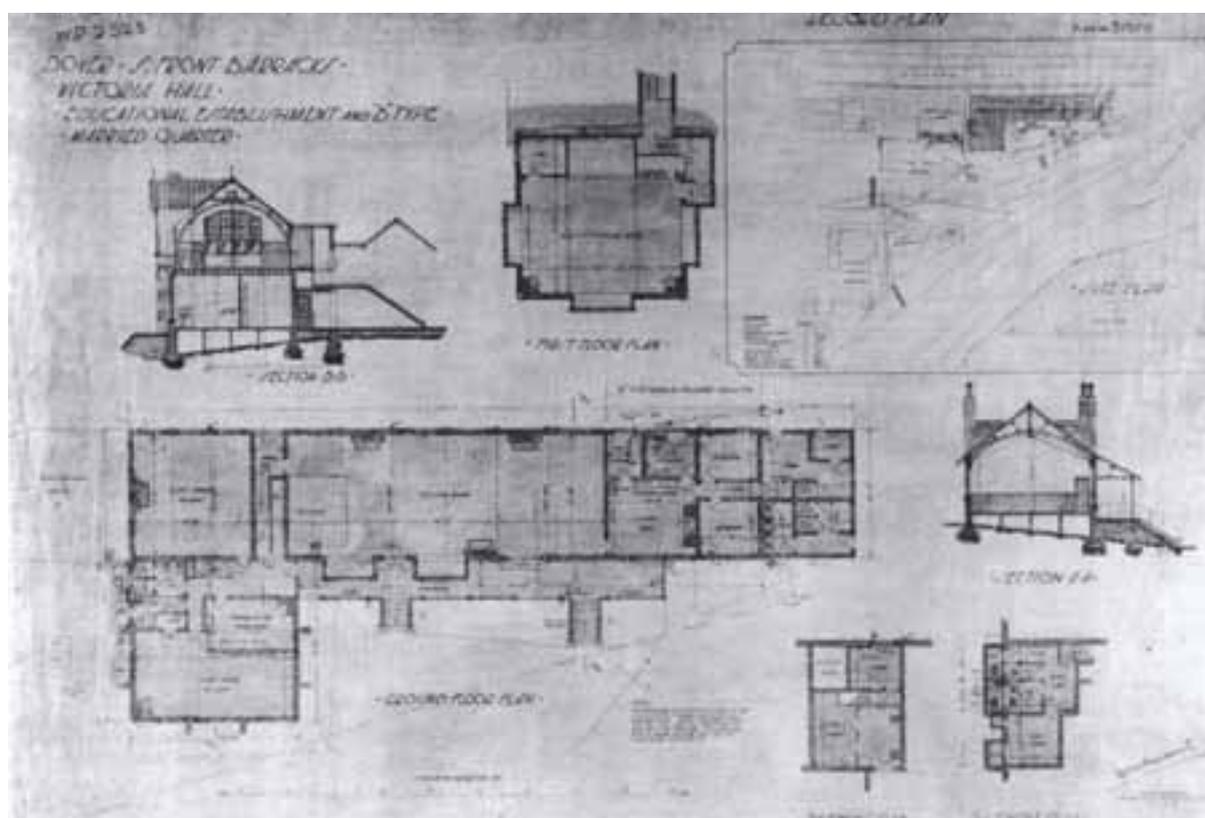
- At the **Citadel**, **electricity** replaced **gas lighting** (the latter had been installed in 1860).

1925

- **North of Drop Redoubt Road**, a large **detached house** had been built **east of Warrant Officer's Quarters No. 3** to accommodate high-ranking officers from the Grand Shaft Barracks.
- At the **Drop Battery**, a **miniature rifle range** had been constructed on the site of the gun floor.

1926

- At the **South Front Barracks**, on Citadel Road **Victoria Hall (Educational Establishment and Married Quarters)** on Citadel Road, a plan indicated the uses of the rooms.



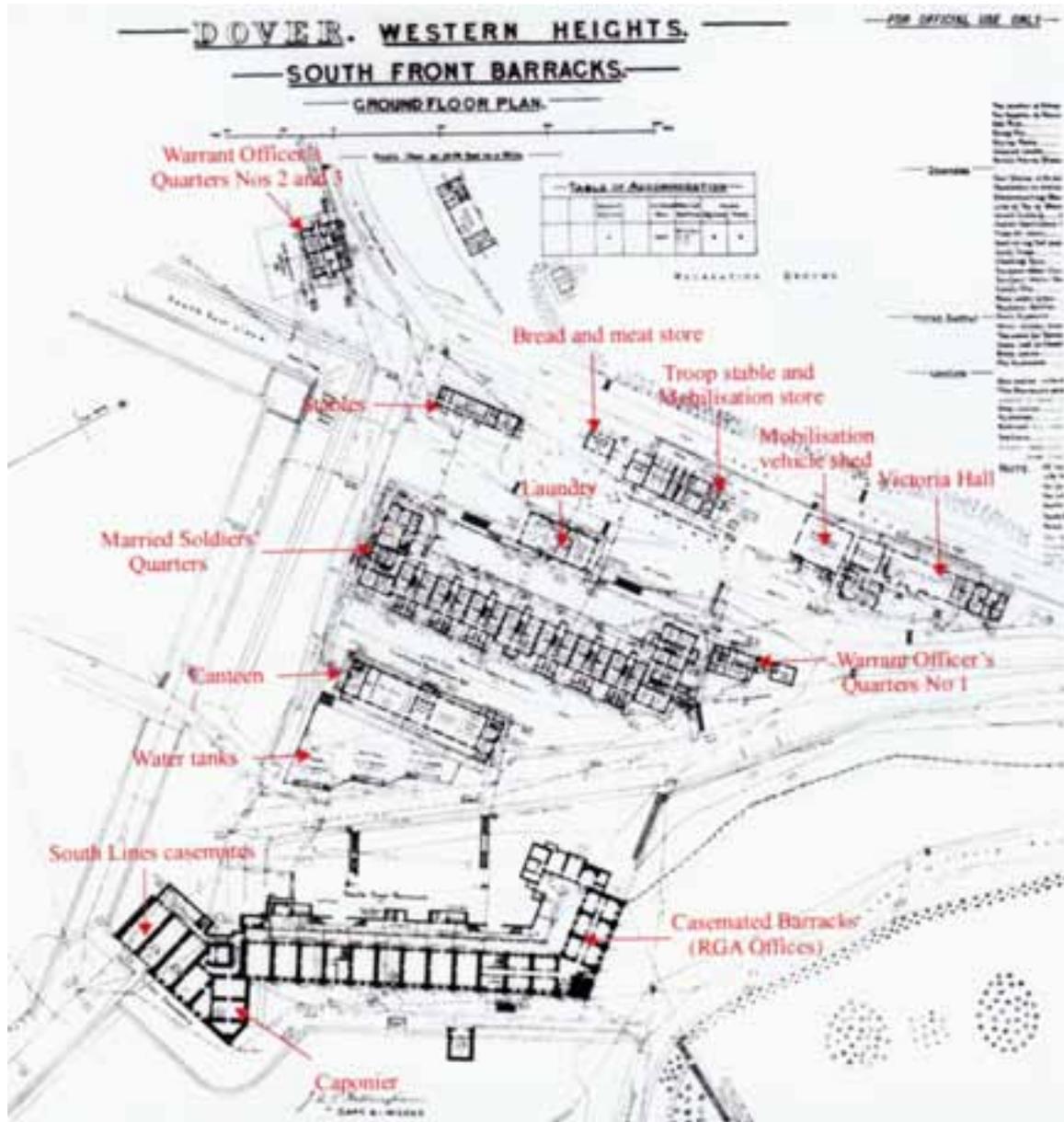
Plans and elevations of Victoria Hall, dated 1926 (NMR: WD/2323)

1927

- At the **Citadel**, the West Flank Casemates ceased to be used for dining. A new **Dining Room** was built north of and linked to the **1911 Cook House**. It was constructed as a single-storey, brick building of pier-and-panel construction.
- A plan of the **South Front Barracks** showed the arrangement and uses of buildings (NMR: WD/(1927 Ground Floor)). The **casemated barracks** were disused, and had latterly been used as **Records and Pay Offices** by the **Royal Garrison Artillery**. On

Citadel Road, the Modelling Store and ASC Store had been converted for use as another Mobilisation Vehicle Shed.

- In the early years of the twentieth century, improvements had been made to the **Married Soldiers' Quarters** at the **South Front Barracks**. These were shown on plans of 1909 (NMR: WD/(1909) and 1927 (NMR: WD/(1927 Ground Floor). The main range now had two-room flats (living room and bedroom) for ordinary soldiers, and new structures projecting from the south-eastern elevation contained a scullery and WC. There was a similar arrangement of rooms in the wings, including three- and four-room apartments, also with new sculleries and WCs; the Infant School was no longer present. The old lavatories at a distance from the Quarters were disused.



Plan of the South Front Barracks, dated 1927 (extract of NMR: WD/(1927 Ground Floor); text in red was added by RCHME Report No. 9: Figure 7

1928

- At the **Officers' Quarters** in the **Citadel**, the ground floor of the central bay underwent major alterations. These included the northern entrance being made larger and taking over from the southern entrance as the Main Entrance; the original Larder and Pantry, service stair, wine and beer cellars were removed and replaced by a new Hall and stair; the original stair was also taken out and replaced by a Wine Store, Store, Larder and Pantry; the original southern entrance was converted to a window for the Pantry (HMPS: 402582).
- In the **Citadel**, two single-storey, rendered-brick buildings were constructed to a common design as a **Company Office, Company Store and Sergeants' Bunk**. One was west of the Regimental Institute, the other north of the area behind the South-West Flank Casemates. They held stores of clothing, small arms and sundry supplies. In the **Western Outworks**, a **Company Office & Stores Building** was constructed (also to a common design) immediately east of Barrack Hut No. 2.

1929

- At the **Citadel**, the **Recreational Establishment** (built as the **Canteen** in 1860) had become known as the **Regimental Institute**.



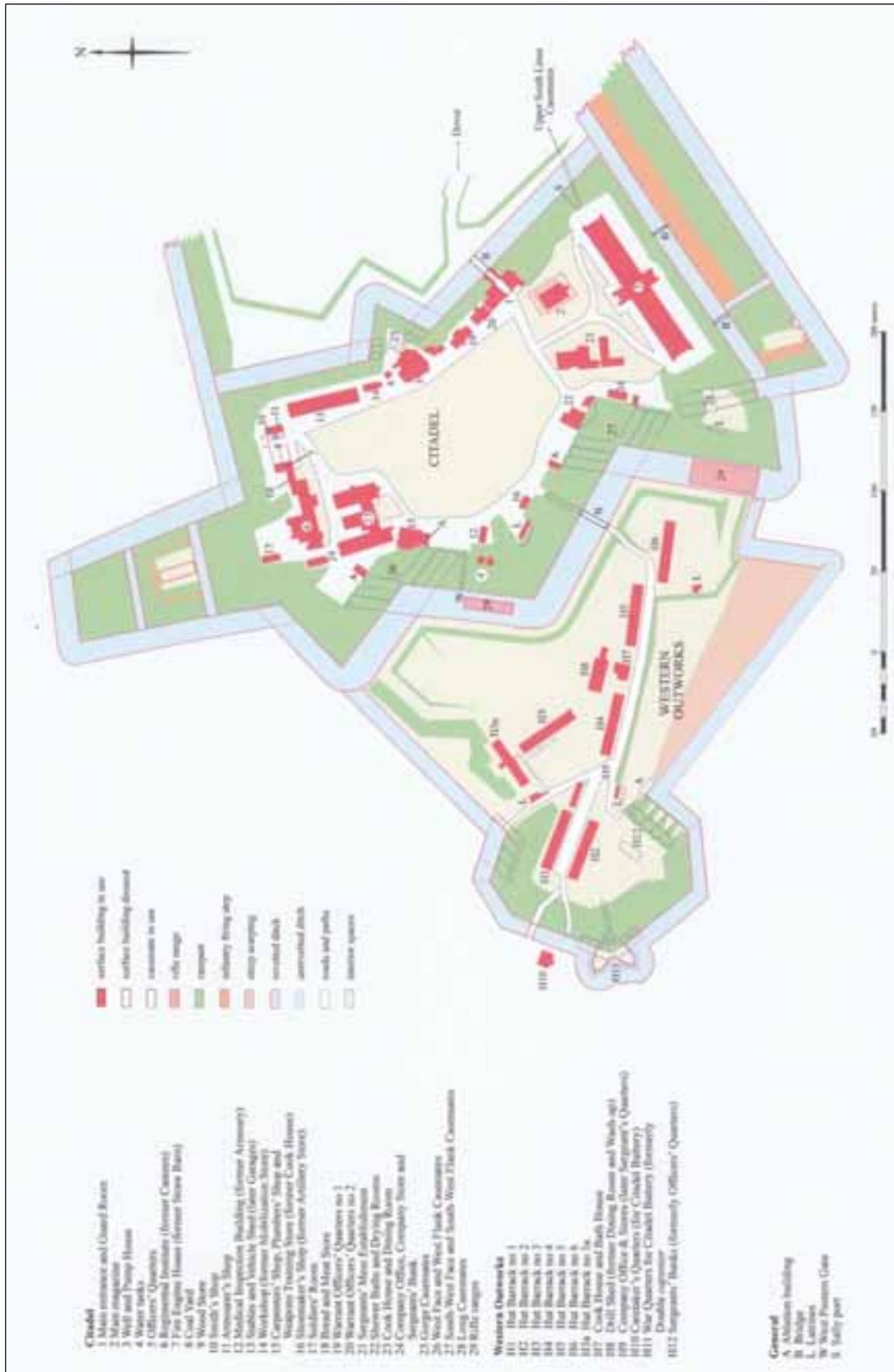
The Regimental Institute (former Canteen, then Recreational Establishment), photo taken 1998 (NMR: AA043938)

1930

- A second **underground water tank** had been constructed north-west of the Pump House in the **Citadel** (HMPS: unref.).

1932-3

- At the **Citadel**, a further new **Dining Room** was added to the **1911 Cook House**. In the new arrangement, the Cook House was located between the 1927 Dining Room and the new 1932 Dining Room. Sometime between 1911 and 1933, the **Carpenter's Shop** was demolished. In 1933, the **Regimental Institute** was extended, with improvements including the provision of improved staff accommodation. A number of changes to room uses were made – rooms now included a Restaurant, a Corporals' Games Room, and a Corporals' Restaurant.



Plan showing the Citadel c. 1933 (after HMPS: 402582, Report No. 2: Figure 12)

1934

- At the western end of the **Citadel Battery**, an anti-aircraft Lewis gun position was installed.

1937

- The **Gun Shed** east of Centre Road was converted for the repair and storage of motor vehicles (NMR: WD/2438; WD/2442).
- The **South Front Battery** was labelled on the 1:2500 map published in 1937 as 'Disused', but was still legible on 1939 aerial photographs.

1938

- At the **Citadel Battery**, during the Precautionary Period the two 9.2-inch guns were still in position and were manned by the Royal Garrison Artillery, accommodated in the Citadel.



The Western Heights, from the east, photo taken 1939



The Western Heights, from the south-east, photo taken 1939



The Western Heights, from the west, photo taken 1939; the remains of the South Front Battery (south of the Citadel's tenaille) are visible on the right

1939-45

- The **Citadel** and **Western Outworks** continued to accommodate and provide facilities for troops stationed on the Western Heights and manning AA and coastal batteries. **Nine pillboxes and observation posts** were constructed on the Citadel's *terre-plein*. **Light AA emplacements** were formed in the Western Outworks. Changes of use continued to be made to the buildings (e.g. in the **Western Outworks** the **Cook House, Bath House and Preparation Room** became a **Bath House complex**, and the **Company Office & Stores Building** was converted into **Sergeants' Quarters**). Some **bomb damage** was suffered (e.g. in the **Western Outworks**, the **Dining Room** attached to the Cook House was destroyed by enemy action in 1940).



Men from the Citadel Battery on parade in front of the Double Caponier in the Western Outworks (their War Quarters), photo taken after bomb damage to the ditch's revetment wall incurred on 7 November 1940 (www.kenthistoryforum.co.uk)

- In 1939, a **camp of hutments** was erected on ground immediately **east of the Citadel's redan** to accommodate the staff of a **Heavy Anti-Aircraft Battery (D7)** located further to the east. The camp and battery remained in use throughout the war and for several years afterwards, but were then removed (the hutments are visible on an aerial photograph taken in 1945: NMR: 106G/UK944/6090-1).



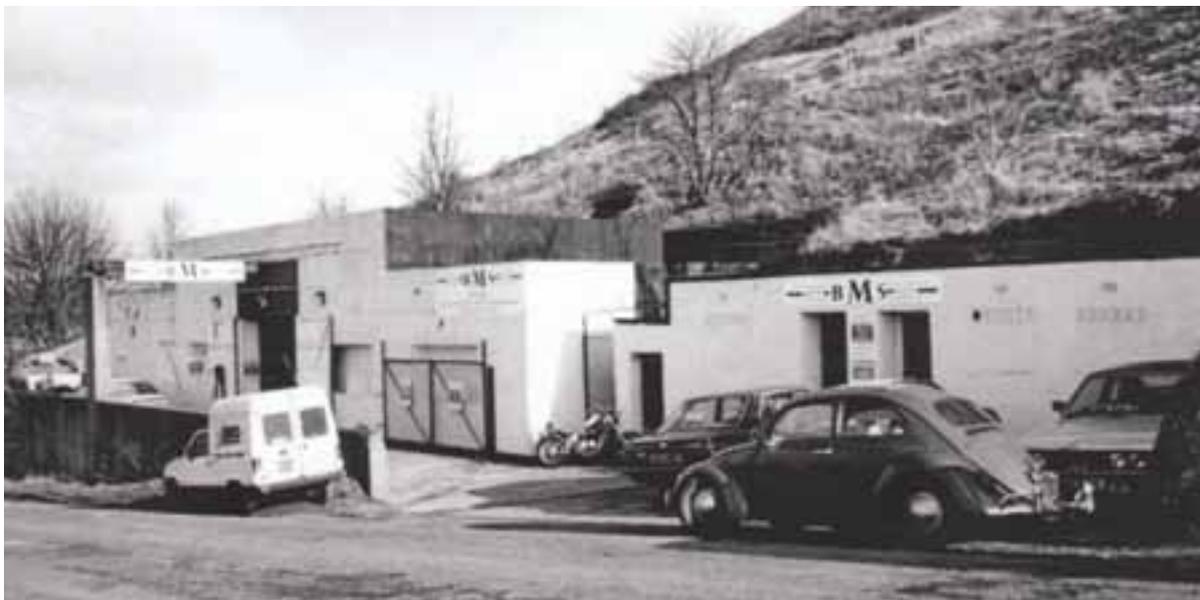
The Citadel, and to the east the camp of hutments built in 1939, photo taken 1945 (106G/UK944/6090-1)

- At the **Drop Redoubt**, an **Observation Post** with integral shelter was set into the top of the magazine mound (visible on a 1941 aerial photograph) and remained in use until 1943. Some **slit trenches** and **weapons pits** inserted into the rampart may date to this period (NA: WO 192/45; NMR: HLA/373/982-3). A flat-roofed brick building replaced the western block of the Staff Sergeants' Quarters, possibly as a **shelter or communications room** (either in the Second or First World War.) A number of units passing through Dover stayed in the Redoubt, to which graffiti attests. Its last recorded operational military activity was as a base for one hundred men of 4 Commando Unit and fifty men of the Canadian Carleton and York Regiment on the night of 21st/22nd April 1942. Simon Fraser, the Lord Lovat, was photographed on the Parade Ground in front of the Soldiers' Quarters briefing his men for Operation Abercrombie – a raid to reconnoitre the German positions at Hardelot.



Lord Lovat briefing 4 Commando Unit on the Parade Ground in front of the Soldiers' Quarters at the Drop Redoubt, photos taken 21st April 1942 (Imperial War Museum, Western Heights Preservation Society)

- **North of the Drop Redoubt**, a **Light Anti-Aircraft Battery** was established, probably for a Bofors gun (the site is visible on aerial photographs from 1941 onwards, NMR: HLA/373/932-3). Access was from a terraced track from the North Military Road. It consisted of six structures – a sentry post, a small office building, two Nissen huts, an open concrete pit and a gun emplacement. The battery was on a terrace – its southern side consisted of the *glacis* (in which were slit trenches and weapons pits for local ground defence), and whilst its northern side was a scarp of deposited material on the slope.
- By 1941 (according to aerial photograph evidence), c. 500m north-east of the North Entrance on the southern side of the North Military Road a reinforced-concrete **walled compound** was dug into the hillside, in which was built a pair of reinforced-concrete buildings – an **Instrument Workshop and separate overnight Living Accommodation** for night duty staff. Located at the eastern end of the compound, the workshop was built as a six-bay concrete structure (containing three rooms) with a flat blast-proof roof, steel casement windows (on the front elevation only to minimise the effects of bomb damage), a pair of sliding steel doors in a tall doorway on the front elevation, and a travelling gantry crane. Further west, the living accommodation consisted of a flat-roofed single-storey building of similar construction to the workshop. It is not known which unit occupied them first and for what purpose, but by 1943 they were being used by the 7th Coastal Defence Maintenance Unit (7 CDMU) of the Royal Electrical and Mechanical Engineers (**REME**), the unit personnel being based at the Ordnance Store on St John's Road and concerned with maintaining optical instruments for aiming and calibrating the coast artillery weapons around Dover. The detached location of the compound meant that the sensitive instruments were removed from the dirty surroundings of the Ordnance Store (by Priory Station) and a greater degree of protection against enemy bombardment was provided.



The REME workshop, from the north-west, photo taken 1998 (NMR; RCHME Report No. 10: Figure 20)

- The **North-East Line** was hit by a bomb (the crater is visible on an aerial photograph taken in 1941: NMR: HLA/373/982-3).
- At the **Grand Shaft Barracks**, some buildings were demolished, including the **Bread and Meat Store**, the **Staff Sergeants' Quarters**, and the **Clerk of Works Quarters**. In

some cases Nissen huts were erected in their place. A large, deep, **underground shelter** and nearby **guard post** were constructed on the south-western part of the Grand Shaft Barracks site as a refuge against bombing and shelling.



The Grand Shaft Barracks, Drop Redoubt and Battery on the North Lines, photo taken 1945 (NMR: 106G/UK/610/Part IV/6327)

- At the **South Front Barracks**, aerial photographs taken in 1942 indicate there had been bomb or shell damage in this area, including two direct hits on the **Married Soldiers' Quarters** (NMR: HLA/549/6054-5). The damage had not been repaired by 1945 or 1950 when further photographs were taken, and the site was derelict by 1953 (NMR: 541/508/4100-1; OS/53T79/66-7). On **Citadel Road**, probably during the Second World War the **Troop Stable and Mobilisation Store for Equipment and Vehicles** was replaced by a **Motor Transport (MT) Building**. This was constructed as a brick building of pier and panel construction, its Citadel Road elevation consisting of an open front so that vehicles could be driven into the building (subsequently, the space between these piers was infilled with darker brick). Its roof was afforded skylights in both slopes, probably to provide the overhead light necessary for the light repair of military vehicles.



The South Front Barracks and South Lines, photo taken 1945 (NMR: 106G/UK/610/6362); text in white was added in RCHME Report No. 9: Figure 3

- An **artillery observation post** was built on top of **Archcliffe Gate**.
- In 1940-1, when the possibility of a German invasion led Churchill to approve the construction of a ring of fixed-gun '**emergency batteries**' around the British coast, **St Martin's Battery** on the Western Heights was converted to act as one of these batteries (**Western Heights Battery**). Its main role was the close defence of Dover harbour (to engage attacking or unauthorised vessels), but it was also intended to resist landings, air raids and attack from the landward side (NA: WO 192/198). The Battery consisted of three 6-inch BL guns, which were mounted in new, covered, brick gun houses constructed in the old open emplacements; behind each emplacement was built a two-storey structure with a gun detachment shelter on the upper floor and storage facilities on the ground floor. Infantry positions for close defence were also established, including a slit-trench and two concrete pillboxes of type 23 (one at the northern end of the Battery, the other behind and above the Battery). St Martin's Battery remained operational until December 1944. Maintenance continued until the guns were removed in 1947.
- The **Citadel Battery** was fully operational (NA: WO 192/45). On aerial photographs taken in 1945, the guns in emplacements I and III can be seen, with their metal turrets and loading platforms at the rear. Pillboxes and slit trenches were constructed in and near the battery.

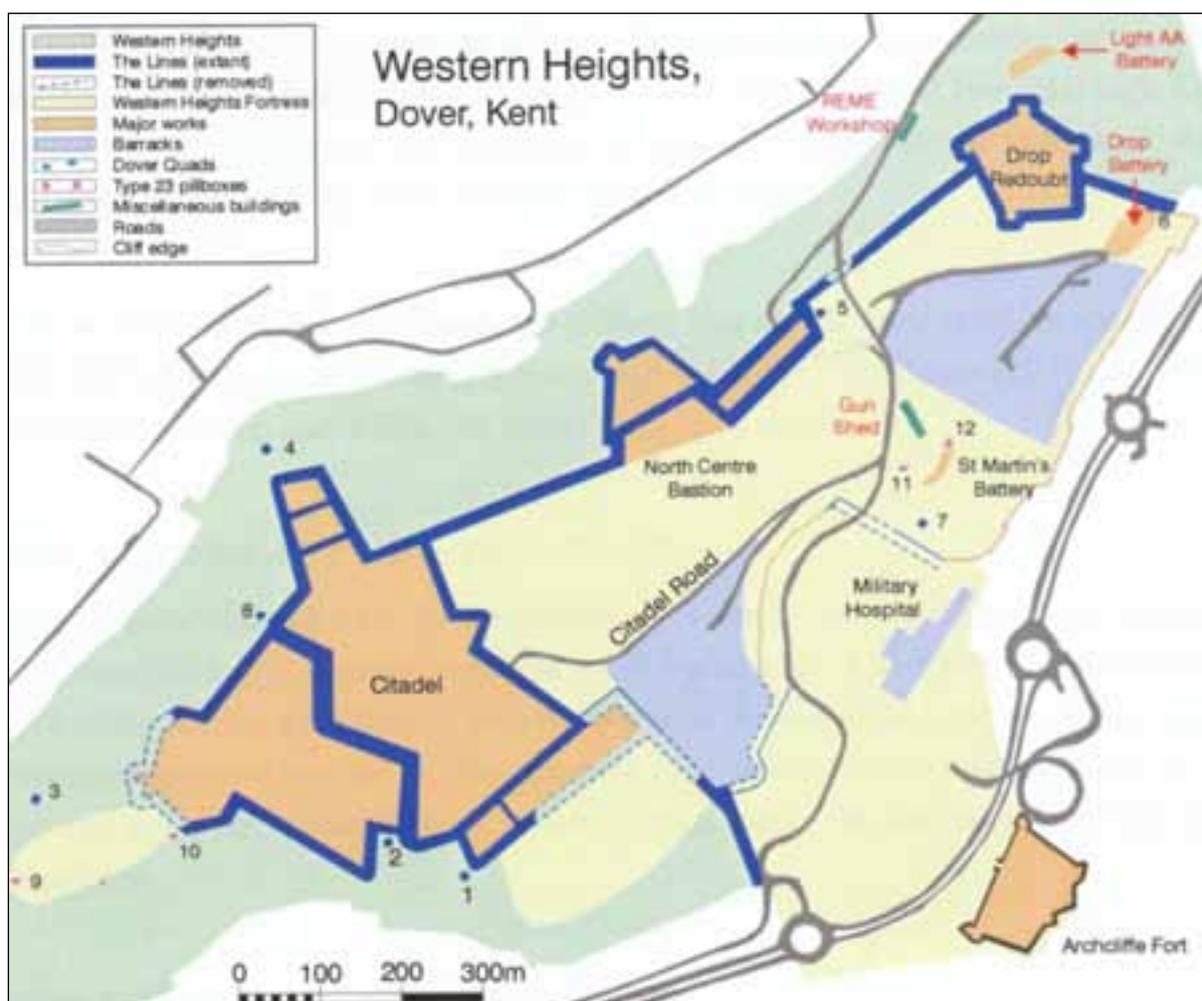


The Citadel Battery in use (photo taken c. 1939-45)



The Citadel Battery and Western Outworks, photo taken 1945

- A ring of **pillboxes** was constructed around the Western Heights to provide blanket cover for the approaches and defence for particular installations. They were of two basic forms – four of **Type 23** (a standard form found throughout Britain, here intended to provide close defence against ground and air attacks for the Citadel Battery and St Martin's Battery), and fifteen **Dover Quads** (referred to when built as **pagoda pillboxes**, these were scattered to cover the approaches to the Heights, each one inter-visible with one or more of the others). A further fifteen Dover Quads were constructed along the western approaches to Dover. The Dover Quads (designed by the locally-based Major Vandeleur) appear to have been confined to the Dover area, apart from two possible exceptions in western Wales. Four types of Dover Quad (A-D) have been identified on the basis of their plan. All were built of concrete with brick facings inside and out, and flat overhanging reinforced concrete roofs, one narrow doorway in the rear wall (often approached along a narrow slit trench or system of trenches), wide outward-splaying embrasures to cover the ground on all sides, and a small embrasure for close defence of the doorway. Concrete ricochet steps on the downward-facing slopes of the embrasures prevented enemy bullets from entering. Inside the pillboxes there were small recesses for the storage of arms and ammunition. All four of the Type 23 pillboxes on the Heights survive, but only eight of the fifteen Dover Quads.



Plan of the Western Heights showing the location of the surviving pillboxes, numbered 1-12 (RCHME Report No. 10: Figure 10)

1947

- In the **Officers' Quarters** at the **Citadel**, the whole of the **basement** was in use as a **hospital** (HMPS: 402582).
- At the **Citadel**, buildings demolished since 1947 include the **Armourer's Shop**, the **Armoury (later Laboratory, then Medical Inspection Building)**, the **Troop Stables (later Stables/Mobilisation Vehicles Stores, then Garage)**, the **Artillery Store (later Shoemaker's Shop)**, the **Soldiers' Room, Shower Baths, Boiler Rooms and Drying Rooms**, the **Bread and Meat Store**, and the two **Company Office, Company Store and Sergeants' Bunk** buildings.

1950s

- At the **Drop Redoubt**, aerial photographs taken in 1953 show that some internal buildings had been at least partly dismantled. Among these were the **Ablution Room, Bath Room, Cook House, Latrines** and eastern **Staff Sergeants' Quarters**.



The twentieth-century shelter on the site of the western Staff Sergeants' Quarters, and the remains of the Ablution Room, Bath Room, Cook House, Latrines and eastern Staff Sergeants' Quarters demolished after the Second World War, photo taken 1998 (NMR: BB99/15932)

- In 1954, the **Citadel** and the northern and eastern part of the **Western Outworks** were transferred by the War Office to the Prison Commissioners, and the southern and western part of the Western Outworks to Dover Corporation. From 1957, the Prison Commissioners' area was used as a Borstal, subsequently a Young Offenders' Institution, and then an Immigration Removal Centre (run by Her Majesty's Prison Service). In the years that followed, repairs were carried out, and a considerable number of changes were made in relation to this new use, during which elements were removed. On the **Citadel's terre-plein**, for example, gun emplacements, expense magazines, ready-use lockers, pillboxes and embrasures in the parapet were removed, buried or filled in (although most of the parapet wall and elements including *banquettes* did survive), and limited sections of rampart were levelled. The **Main Magazine** was at least partly destroyed and infilled. In the **Main Entrance**, the casemates and their doorways were altered to form reception and security offices. On its elevation overlooking the Parade Ground, the plate-tracery-

effect heads of the windows flanking the gateway were removed and new casements installed. The adjacent **Warrant Officers' Quarters Nos 1-2** were joined and rendered.



The terre-plein of the western face in the Citadel, showing a racer from a traversing gun platform and embrasures in the parapet, before their removal or concealment, photo taken 1959 (A5513/34 Dover Museum)

The Officers' Quarters at the **Citadel** were adapted for new roles, as part of which there was considerable subdivision of the rooms and many historic elements were removed (e.g. fireplaces except in the basement, cupboards and most shutters, although a considerable number of original doors were left *in situ*). On plans of 1953, the building comprised a first-floor Education Block and ground-floor Stores in the western part, an Administration Block extending eastwards from the centre, and a Hospital at the eastern end in the former CO's Quarters (HMPS: 100666). The Hospital stayed as a separate unit, although its cellar was re-integrated with the rest of the basement. The Education Block consisted of classrooms and an Assembly Room in the former Mess Room. In the basement, an entrance was inserted in the west wall, the water tanks were removed, and doorways were inserted to link the eastern and western parts of the basement for the first time. The five easternmost bays (including the CO's Larder) were converted into a 'Separate Cell Block', with ten cells (with reused historic cell doors brought in from elsewhere), washroom facilities, offices and stores. Plans drawn in 1987 showed the building as the Admin, Punishment, Hospital and Reception Block (HMPS: 305875; 305877; 305879; 305881). The building is currently an Administration Block.

Elsewhere at the Citadel, casemates were converted for storage use and as workshops, during which fittings were removed (e.g. fireplaces, racks) and embrasures were infilled. Large, new **accommodation and facilities buildings** were constructed on the Parade Ground from 1956 to the 1990s, as part of which the ground level was raised and terraced in places. On one part of the Parade Ground, an all-weather football pitch was created. **Razor wire** was attached to the ditch revetments and a few years ago high, wire **fences and security gates** were installed throughout the Citadel interior to improve control of inmate movement. The **bridge leading to the Western Outworks** was replaced.

In the **Western Outworks** within the area occupied by the Borstal, the **North Curtain**, **North Demi-Bastion** and **rampart** extending south-eastwards as far as the bridge from the Citadel were levelled. The **Hut Barracks** were converted into specialised accommodation providing vocational training for prisoners (e.g. as a Bricklayer's Shop).

- **East of the Citadel**, an **arc of houses** was constructed immediately east of where the **camp of hutments** had been during the Second World War.
- Photographs taken in 1958/9 revealed the poor condition of some elements.



The Soldiers' Quarters at the Drop Redoubt, photo taken 1958/9 (d07905 Dover Museum)

- In 1959, the War Office demolished most of the **South Lines Casemates**, the adjoining **caponier** and most of the **South Front Barracks** (the **casemated barracks**, **Canteen**, **Married Soldiers' Quarters**, **Laundry**, **Warrant Officer's Quarters No. 1** and on **Citadel Road** the **Stables**, the **Bread and Meat Store** and the **Mobilisation Vehicle Shed and ASC Store**). The western end of the South Lines Casemates, and very limited parts of the casemated South Front Barracks (comprising parts of the rear wall of the north-west range in the chalk face of the hillside, including tiled areas and fireplaces, possibly indicating the positions of latrines and wash-houses), survived the demolition process. Some buildings on Citadel Road were spared and were put to new uses by the Home Office. **Warrant Officers' Married Quarters Nos 2-3**, for example, were converted to flats. **Victoria Hall** became the **Young Offenders' Institution Officers' Recreation Club**. The **Motor Transport Shed** also survived.



Remains of the north-western range of the casemated South Front Barracks, and on the left those of the South Lines Casemates, photo taken 1998 (NMR: AA028134)

- The former **public-works Convict Prison** at the bottom of the **South Military Road** (eastern side) was demolished (it was absent from the 1957 1:2500 map) and the site was used as a **coal yard**.

1960s

- In 1962, on the **area north-west of Centre Road**, the **Church and School, Infants School** and **RE Yard** were demolished by the War Office. By 1966, **houses (Knights Templars)** had been built around the perimeter of this area on all but the western side (shown on the 1971 1:2500 map and an aerial photograph taken in 1975).
- In 1962, a large area on the Western Heights was designated as a **Scheduled Monument**.
- New uses envisaged for the various parts of Heights in the Kent Development Plan (1962) included residential, industrial, deposition of household refuse and waste, Prison Commission purposes, and public open spaces. In 1962-3, negotiations took place between the War Office and Dover Corporation concerning the sale of most of the Western Heights to the Corporation. The principal issue as far as Dover Corporation was concerned was access – it wanted to build a new approach road from the north so the Heights could be opened up for development, which would involve demolition of the North Entrance. The War Office refused permission to destroy the North Entrance on the grounds of its heritage significance, but agreed to a plan to construct a new bridge which would span the North Lines. This plan was abandoned. Instead, in 1967 a breach was made through the **North Lines** allowing Centre Road to be connected to the North Military Road, thus by-passing the **North Entrance**. In the process, the fourth, westernmost gun emplacement of the **Battery on the North Lines** was destroyed and **Warrant Officer's Quarters No. 3** (north of Drop Redoubt Road) was demolished.
- A row of **houses (Heights Terrace)** was constructed against the eastern edge of the arc of houses to accommodate the Borstal officers.
- At the **Western Outworks**, the **ditch** around the western end between the North Flank Casemates and South Flank Casemates (including that around the **Double Caponier**) was used as a landfill site. Structures between the Western Outworks and the Citadel Battery were removed and partially levelled, removing surface traces, including those of the Caretaker's Quarters, Latrine Block, Artificer's Shop, much of the covered way, and some Second World War structures.



The Citadel Battery after the infilling of the western part of the Western Outworks' ditch and the levelling of structures serving the Citadel Battery, photo taken 1966 (NMR: MAL/66081/102)

- At the **South Front Barracks** on the site of the former **Married Soldiers' Quarters**, a row of **houses (Western Close)** was built.
- In 1963, Dover Corporation leased the site of the former **casemated barracks** at the **South Front Barracks** for use as a **coal yard**.
- In 1964, **Archcliffe Gate** and its **bridge** were demolished, and the northern and central sections of the **South Entrance Ditch** were infilled. On the uphill side of the gate, Centre Road was widened and a **car park and viewing point** over the harbour were created.
- In 1965, most of the **Grand Shaft Barracks** was demolished, having been decommissioned in 1960. During demolition, the Barracks were used as a set for the film *The War Game*. Two substantial buildings were left standing – the **Gymnasium** (which Dover Corporation intended to convert into an indoor sports arena) and the **Troop Stable/Transport Shed**. The **Guard House Privies** (set back into the bank behind the Guard House) and **Magazine** (adjacent to and continuous with the Guard House privies) were also spared.
- At the bottom of the **South Military Road**, buildings on **Archcliffe Yard** were demolished. On part of this site and allotments to the east, the **AVO Factory** (subsequently **Megger**) manufacturing electrical testing equipment was built in 1965-6. A further building was subsequently added on the site of the former public-works **Convict Prison** to the west.
- In *c.* 1969, the **gateway and Guard Room** at the foot of the **Grand Shaft** were demolished.
- The main building of the **Military Hospital** (which had been serving as the Royal Engineers' Headquarters) and its **Married Soldiers' Quarters** to the north were demolished (all buildings were still shown on the 1957 1:2500 map), leaving the two West Hospital Huts, the East Hospital Hut and the Infectious Disease Hut in place. An **Engineering Works** was built on the site of the Military Hospital's **Recreation Ground**. This was the arrangement represented on the 1971 1:2500 map.
- In 1968, the Roman *pharos*, round church and a portion of the Western Heights' northern defences (the North Centre and Detached Bastion, to the east the North Lines including the North Entrance, the Drop Redoubt and North-East Line) were transferred from the War Office to the **Ministry of Public Buildings and Works** (and then English Heritage).
- The **South Front Battery** was still depicted on the 1:10,560 map published in 1961, but had been removed and/or covered over by the time the 1:2500 map was published in 1971.

1970s

- Repairs were carried out to the **Grand Shaft** by Dover Corporation.
- On the former **Military Hospital** site, the remaining **hospital huts** were demolished. **Light engineering buildings** were constructed on the site of the former Military Hospital's main building, the hospital huts and the Married Soldiers' Quarters. The **Engineering Works** was replaced by **Channel House** (the P&O Ferries building) in 1979/80.
- **East of the Citadel**, the **arc of houses** was demolished apart from a cluster in the north-western corner (the houses were present on an aerial photograph taken in 1975, but absent from a 1978 photograph). The cluster of houses in that north-western area, and another short row on the southern extremity of where the camp of hutments had been located, have become **Citadel Crescent**.

- At the **Drop Redoubt**, the front walls and parapets of the **Soldiers' Quarters** were taken down. The **bridge** over the ditch was removed.



The Western Heights from the east, photo taken 1975

1980s

- North of Drop Redoubt Road, the **house** for high-ranking officers from the Grand Shaft Barracks **east of the former Warrant Officer's Quarters No. 3** was demolished. A new house was built nearby (on the western end of the **Battery on the North Lines**).
- Sometime between 1979 and 1983, at the site of the former **Grand Shaft Barracks**, the **Gymnasium** was demolished.

1990s

- In 1995, **at the lower entrance to the Grand Shaft**, the 1859 Guard Room's front elevation was used as the basis for a new, recreated **gateway and Guard Room** constructed on the footprint of the demolished structure.

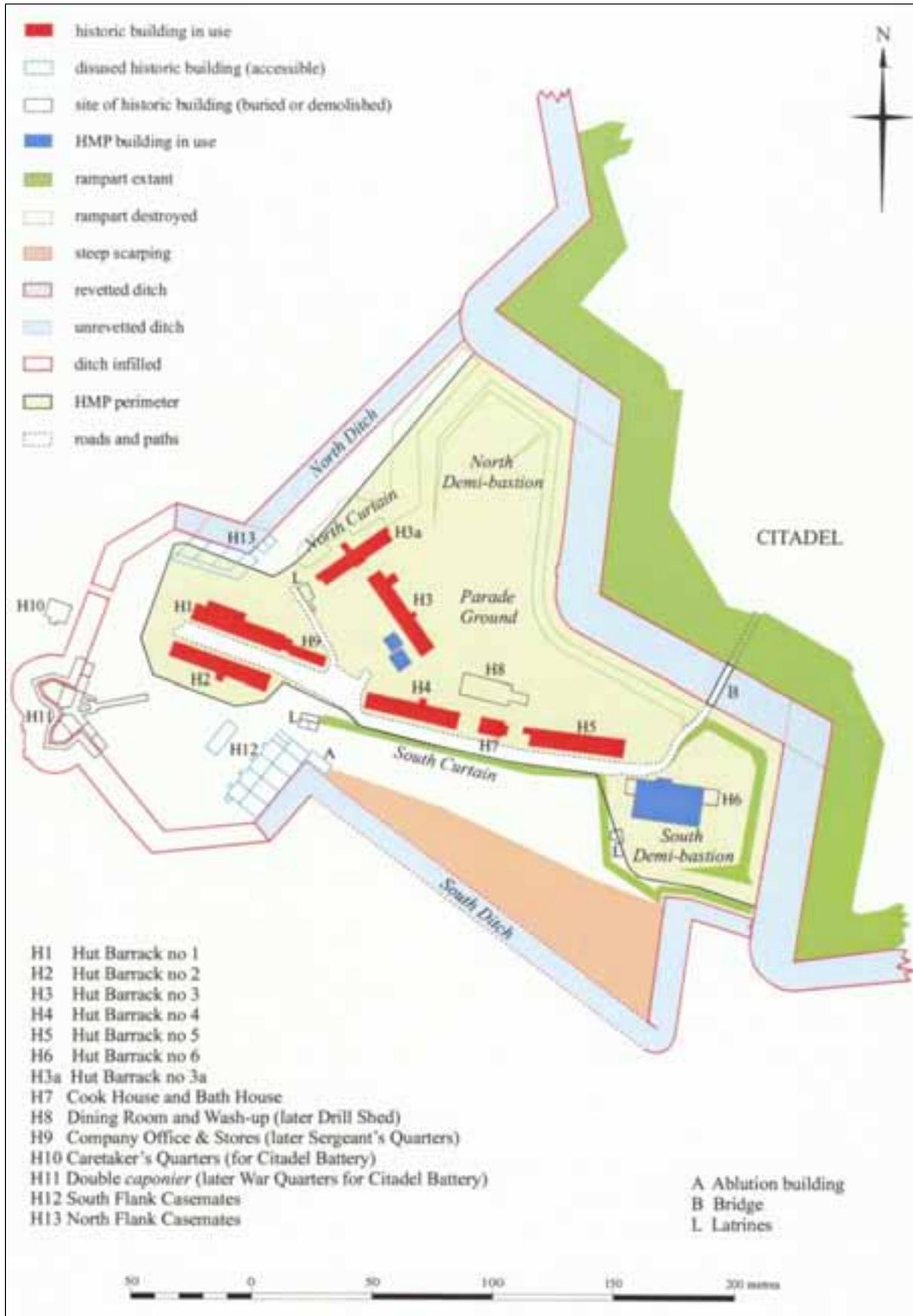


The recreated lower entrance (gateway and Guard Room) to the Grand Shaft, photo taken 1998 (NMR: BB013811)

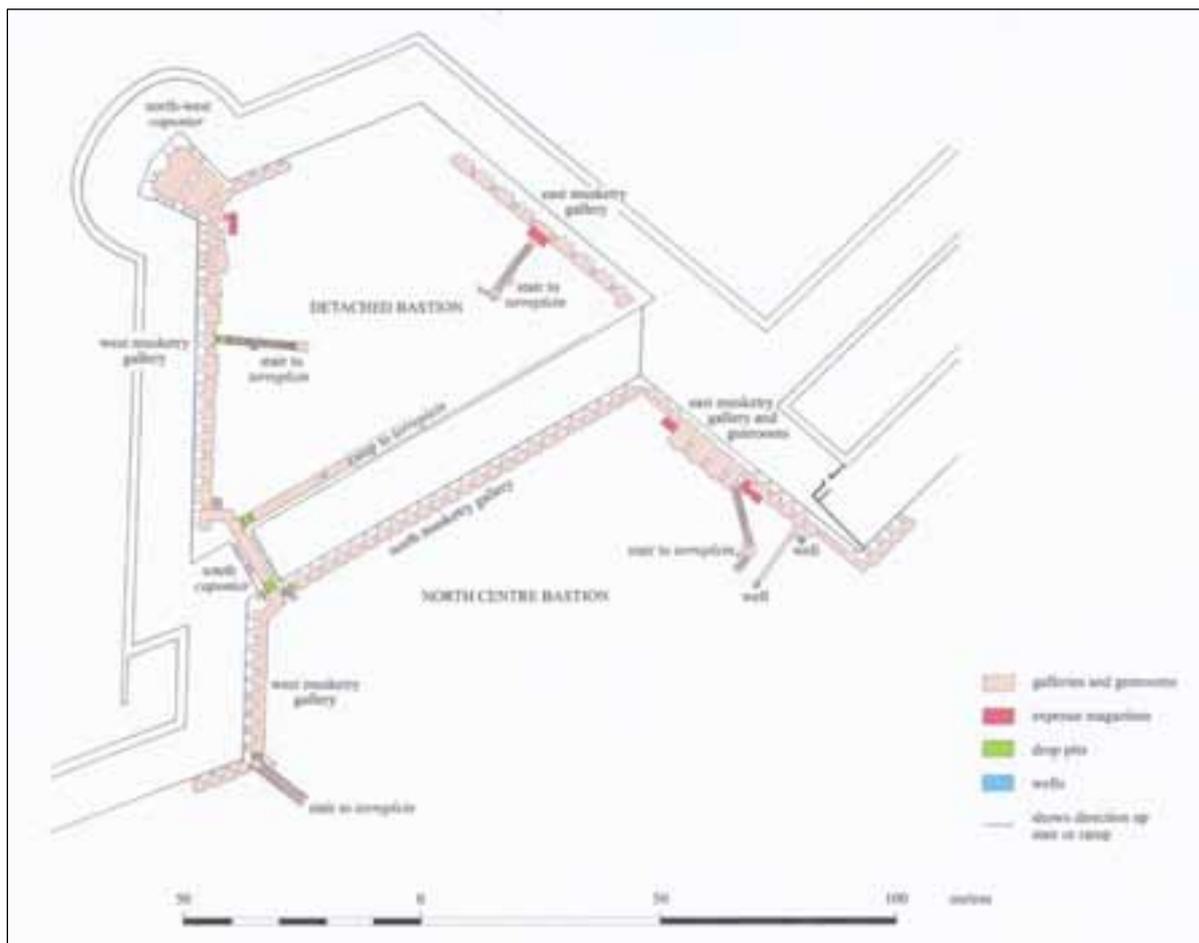
- In 1997, at the site of the former **Grand Shaft Barracks**, the **Troop Stable/Transport Shed** was demolished.
- In 1998, the **Officers' Quarters in the Citadel** and the **Grand Shaft** were designated as **Listed Buildings** (both Grade II).



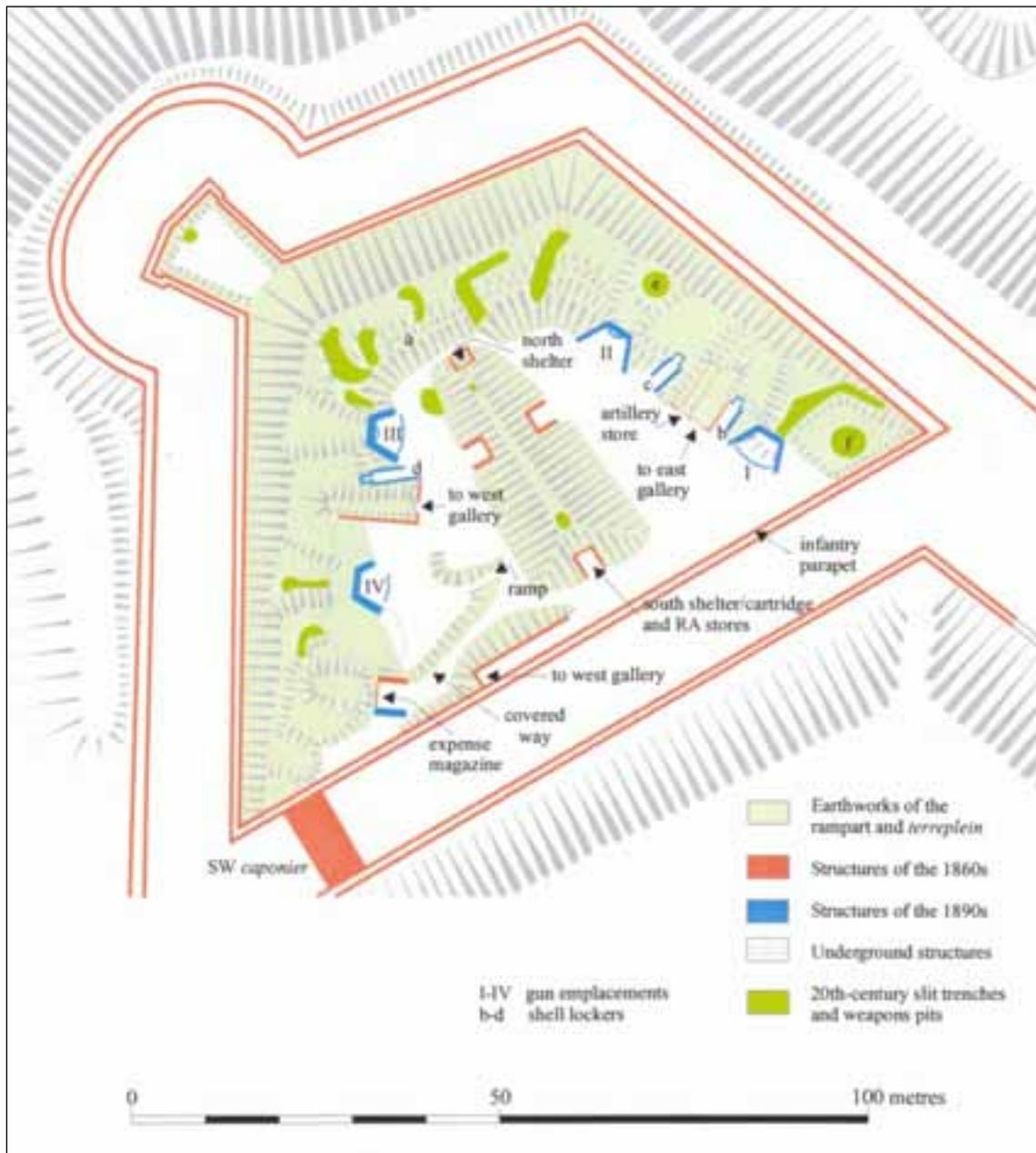
Plan showing the Citadel c. 1998 (RCHME Report No. 2: Figure 15)



Plan showing the Western Outworks c. 1998 (RCHME Report No. 2: Figure 71)



Plan of the North Centre Bastion and Detached Bastion at ditch level (RCHME Report No. 7: Figure 8a)



Plan of the Detached Bastion at terre-plein level (RCHME Report No. 7: Figure 20)



Plan of the Drop Redoubt (RCHME Report No. 2: Figure 19)

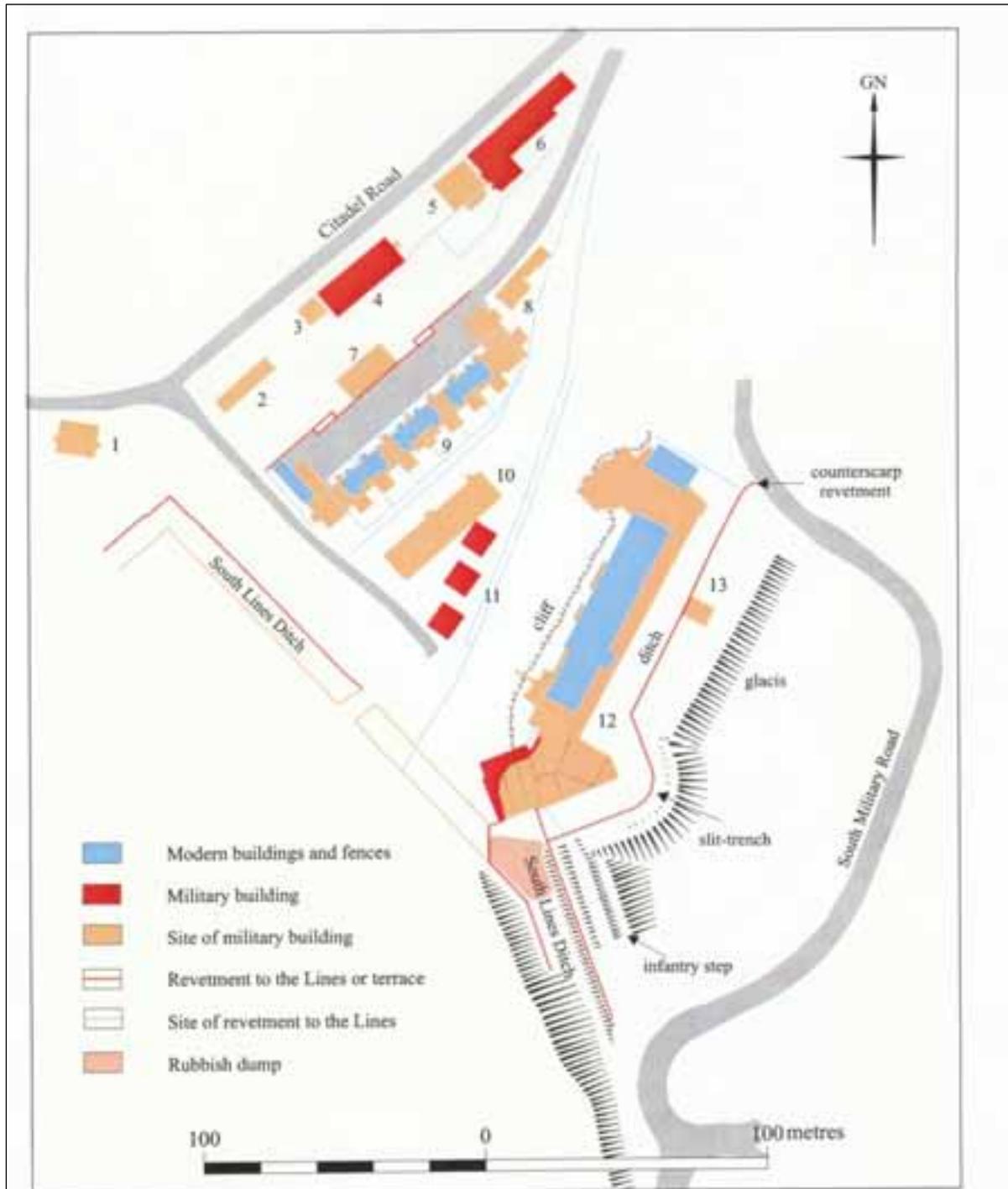
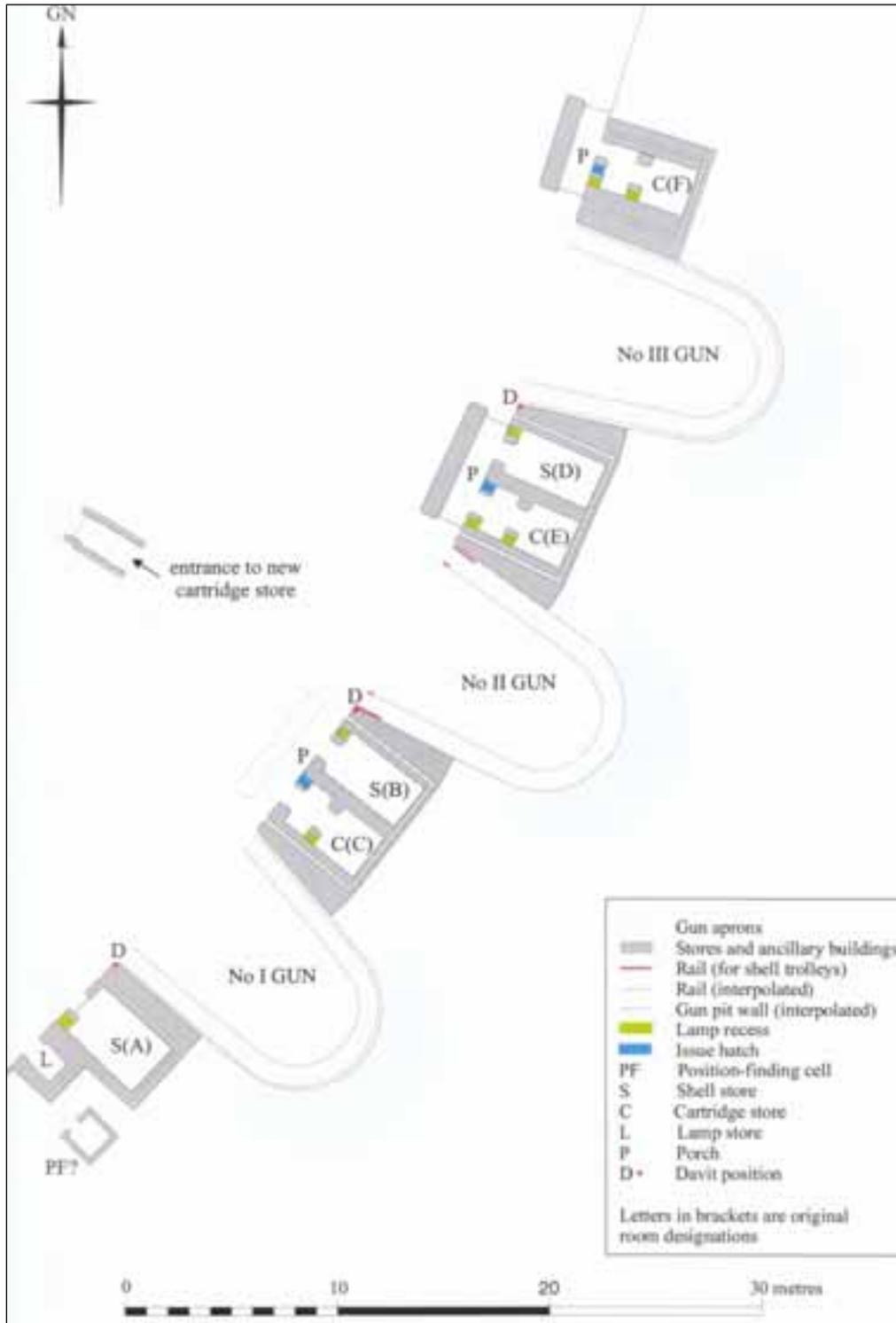


Figure 8
Plan showing surviving elements of South Front Barracks, with the location of demolished buildings from the plan of 1927

- | | |
|---|-----------------------------------|
| 1 Warrant Officers' Quarters nos 2 and 3 | 7 Laundry |
| 2 Stables | 8 Warrant Officer's Quarters no 1 |
| 3 Bread and Meat Store | 9 Married Soldiers' Quarters |
| 4 Motor Transport Shed, on the site of:
Troop Store and Mobilisation Store | 10 Canteen |
| 5 Mobilisation Vehicle Shed | 11 Water Tanks (underground) |
| 6 Victoria Hall | 12 Casemated Barracks |
| | 13 Coal Store (behind revetment) |

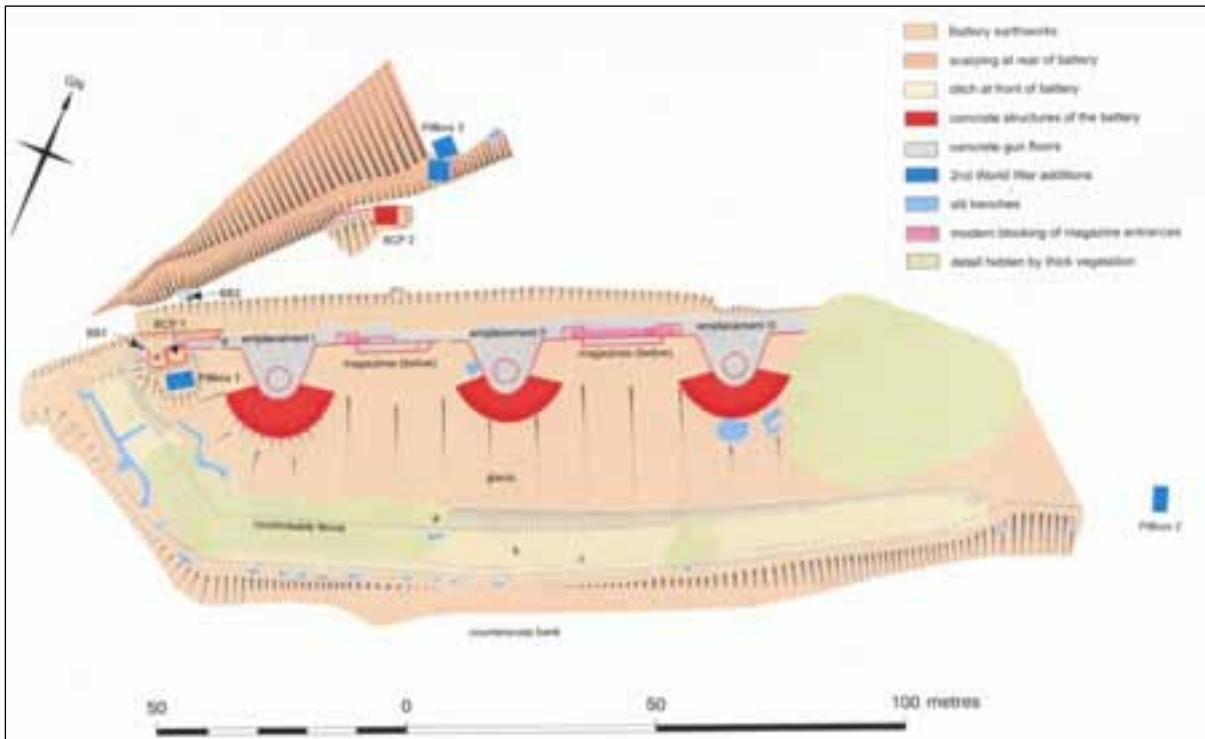
Plan of the South Front Barracks (RCHME Report No. 9: Figure 8)



Plan of the surviving elements of St Martin's Battery (RCHME Report No. 5: Figure 8)



Plan of St Martin's Battery and Western Heights Battery (RCHME Report No. 5: Figure 12)



Plan of the Citadel Battery (RCHME Report No. 8: Figure 6)

2000-12

- In 2000, the **Western Heights Preservation Society** was formed. A volunteer-run organisation, its stated aims are: 'Promoting and publicising the Western Heights. Clearing, tidying and protecting the built heritage. Collecting and spreading information about the Heights. Working towards improving public access to parts of the site that are currently inaccessible.' Members of the Society carry out vegetation clearance and general maintenance work (agreed with English Heritage) to the Drop Redoubt.
- The **Drop Redoubt** is opened to visitors by the Western Heights Preservation Society several times a year, sometimes with re-enactors present.
- In 2002, the **Citadel and the northern and eastern parts of the Western Outworks** formerly used as a Young Offenders' Institution became an **Immigration Removal Centre**, run by HMPS.
- In 2003, a major fire gutted the eastern and central sections of the original building of **Victoria Hall**. The whole building has subsequently remained unused.
- There is no public access to either the **North Centre Bastion and Detached Bastion**, or to the **North Entrance**.
- The ditch of the **South Lines** is infilled from its origin at the junction with the Citadel's *tenaille* southwards as far as the South Lines Casemates. Only the western end of the **South Lines Casemates** survives. The **extension to the South Lines** (but not the caponier) survives. The **site of the casemated South Front Barracks** is in use as a **haulage yard**. The northern and middle sections of the **South Entrance Ditch** on the **South Front** are infilled.
- The **Grand Shaft** is opened to visitors several times a year. The **site of the Grand Shaft Barracks** remains unused.
- There is open public access to the **Citadel Battery, St Martin's Battery, the Drop Battery** and the eastern end of the **Battery on the North Lines**.
- The site of the **Military Hospital** is occupied by **light engineering buildings** and **Channel House**.
- **Grazing** (using Dexter cattle and Konik ponies) has been reintroduced to parts of the slopes around the Western Heights to assist in returning the area to chalk grassland.

ASSESSMENT OF SIGNIFICANCE

ANALYSING THE SITE

The ‘Understanding the site’ and ‘Assessment of significance’ sections in this *Built Heritage Conservation Framework for Dover Western Heights* have been compiled using secondary sources (principally the nine volumes of RCHME Survey Reports based on survey work carried out in 1998 and published in 2001–4, Coad and Lewis 1982, Saunders 1989, and other sources for *comparanda*), supplemented by limited primary research. For ease of cross-reference, the names given to the site’s parts in the RCHME Survey Reports have been adopted here.

Since this is a strategic, ‘framework’ document, it is not appropriate to include a Gazetteer containing a detailed description and assessment of significance of every ‘element’ within the site’s ‘components’. Instead, what follows below is a summary of the significances at the Western Heights, which should be read in conjunction with the RCHME Survey Reports for further information. It is recommended that prior to any development at each of the site’s components, a Conservation Plan and detailed Gazetteer for that component should be compiled, each one showing due regard for its relationship with the other components and the site as a whole. This would eventually result in conservation management documents for the whole site, which would in turn reduce the current reliance on the RCHME Survey Reports when managing the site, for which role they were never intended since their remit was not to consider significance or management.

APPROACH TO ASSESSING SIGNIFICANCE

The approach adopted here to assessing the nature of the significance of the Western Heights’ built heritage is a combination of the concept of ‘levels of significance’ (which indicates ‘how significant’ a site or part of a site is deemed to be, or ‘valued’), with the concept of ‘heritage values’ (which considers the ‘ways in which a site or part of it are significant’). Together these approaches cover the crucial questions of *how significant* something is, as well as *why* it is significant.

The concept of ‘*levels of significance*’ as part of a methodology for assessing the significance of a site, its components and their elements was pioneered by James Semple Kerr in the early 1980s in Australia, and was described and improved in successive editions of his publication *The Conservation Plan* (see the most recent 6th edition, 2004, National Trust of Australia NSW). This methodology has been used extensively in Australia and also in Britain over the last thirty years (to which it was introduced by Kate Clark, when working for English Heritage). An underpinning principle is that the number of levels of significance (described as a ‘hierarchy’ or rungs on a ladder), and the terms used to describe them, should be chosen to suit the site being analysed.

The concept of ‘*heritage values*’, which may be attached to sites, was set out by English Heritage in *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment* (2008: 27-32):

- *Evidential value*: the potential of a place to yield evidence about past human activity
- *Historical value*: the ways in which past people, events and aspects of life can be connected through a place to the present (illustrative or associative value)
- *Aesthetic value*: the ways in which people draw sensory and intellectual stimulation from a place (design or artistic value)

- *Communal value*: the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory (commemorative, symbolic, social or spiritual value).

APPLYING THE APPROACH

The large number and complexity of the fortifications on the Western Heights makes the summation of significance especially challenging, but the structured approach used here facilitates the identification of what matters most about the site and why. Analysis carried out by the author for this *Built Heritage Conservation Framework for Dover Western Heights*, both of the site as a whole and in terms of its components and their elements, using the concept of ‘heritage values’, suggests that they generally fall into five main ‘strands’ or themes. These ‘strands’ are described below in order to avoid at least some of the inevitable repetition of phrases in the ‘Summary of the significances at the Western Heights’, where the specific ways in which the site, its components and their elements are significant are also articulated. Where elements do not fit into these strands (e.g. the round church, and the *pharos*), their significance is explained in terms appropriate to them but using the same concept of ‘heritage values’.

It is proposed here that four ‘levels of significance’ are appropriate for assessing the significance of the built heritage of the Western Heights. The site, its components and their elements (individually or as groups) have been assessed in terms of the following levels of significance:

- Level A: *exceptional significance* in a broad context
- Level B: *considerable significance* (deserving inclusion on a national list or schedule of sites of significance)
- Level C: *some significance*
- Level D: *little significance*.

In most cases a component or element has been assessed as being of one level of significance, but where it does not fall clearly into one level of significance, it has been described as spanning two levels (e.g. Level A/B, Level B/C). Components or elements which have been assessed as *detracting* from the significance of the site or parts of it are referred to as *intrusive (INT.)*. A component or element can be significant in its own right, but also intrusive with respect to other elements.

Strand 1 – Illuminating changes in the national anti-invasion defence strategy

To hold Dover has long been regarded as to hold the key to England. From the initial decision in 1779 to construct fieldworks on the Western Heights to protect the port and town of Dover, followed just a year or so later by the decision to construct a more comprehensive system of defences on the Heights, up to the breaching of the defences by a new section of road in 1967, the Western Heights’ fortifications shed light on national defence strategy.

In the 1780s scheme for defending the Western Heights, a powerful western fort was envisaged on the ridge which would resist a French attack after a landing in the Folkestone area, supported by a smaller eastern fort overlooking the town and harbour, with detached outworks between and around the forts.

Between 1804 and 1816, the works already constructed were improved and added to so that three main fortifications (the Citadel, North Centre Bastion and Drop Redoubt) were linked by Lines (a ditch and profiled rampart with *banquette*) to create an entrenched encampment or fortress on the hilltop, designed to operate as a secure base from which to counter-attack French invaders *en route* to London. It is to this strategic role that the essence of the Western Heights’ fortifications as we know them should be attributed.

In the late 1850s and early 1860s, it was considered vital to complete and render impregnable the Western Heights' fortifications to a feared French assault. In the *Report of the Commissioners appointed to consider the defence of the United Kingdom 1860*, the Commission commented, 'It is, in fact, the only place in England which partakes of the nature of a strategical fortress or intrenched camp in its primary object' (section 159). The reworking at this time of the North Entrance, the North Centre and Detached Bastion and the Drop Redoubt, the creation of the Western Outworks and South Front defences, and the improvement of the Lines, all signal the imperative felt by the military engineers and the politicians that the Western Heights could not be allowed to fall into enemy hands. Yet only a few decades later, such was the pace of technological change, the idea of defensible forts had been abandoned and the Western Heights was no longer required to function as a mighty fortress, but instead as a large barracks and mobilisation centre for troops who would meet the enemy in the field, this change being most obviously manifested in the undefended Hut Barracks built in 1890-1 in the Western Outworks. The Western Heights continued in this role until the army departed from the site in the 1950s.

Strand 2 – Illustrating the contribution of the military engineers who have shaped the Heights

Several generations of military engineers have left a legacy of often extraordinarily complex defences on the Western Heights which both illustrate their skills and resonate because of the stature of their designers. The basis of the defensive scheme on the Heights which is still evident today was created in the 1780s by Lieutenant Thomas Hyde Page, who was influenced by the ideas of the renowned French military engineer Marc-Rene, Marquis de Montalembert (1714-1800). In *La Fortification Perpendiculaire* (published 1776-96), Montalembert pointed out the disadvantages of the general-purpose 'bastion system of defence' (e.g. the weakness of the curtains and of the bastions' short flanks) and anticipated the advantages of the simple traces of the 'polygonal system of defence' which could be more easily adapted to the terrain. Hyde Page's design for the defensive scheme on the Western Heights incorporated a number of Montalembert's ideas – for example, the western fort was designed with a *tenaille* trace (a succession of redans at right angles to each other forming a zig-zag front) and as many guns as possible on all the ramparts to achieve superiority of long-range firepower, whilst the eastern fort was afforded a simple, four-sided trace with long, straight curtains (also all packed with guns) and no bastions, and between the two forts were detached outworks which were designed in relation to the terrain and were intended to hinder an attacking force from approaching the forts themselves (i.e. for depth of defence).

Hyde Page gained experience of fortification design whilst serving as a military engineer in North America. He distinguished himself as *aide-de-camp* to General Pigott at Bunker Hill (17th June 1775), when he was severely wounded, losing his leg below the knee. On his return to Britain, Hyde Page was appointed CRE Eastern Coastal District (1778-82), in which capacity he improved the defences at key defence installations including Dover, Sheerness, Chatham, along the Thames and at Landguard Fort (Felixstowe). At Landguard Fort Hyde Page designed three redoubts (each with loopholed Guard Houses) and a multi-salient entrenched camp, which have a number of features in common with his designs for the Western Heights. The extent of Hyde Page's ambitions for the defences on the Western Heights is manifest in the plans he drew of the proposed fortifications – indeed he also constructed CRE Quarters in Archcliffe Fort at the foot of the Western Heights to act as a base from which to supervise the works on the Heights and elsewhere in the area. In 1783 Hyde Page was knighted for his military services and was elected a Fellow of the Royal Society. His expertise as a military engineer remained in demand for the rest of his career, much of it relating to drainage improvement schemes.

There are many surviving examples on the Western Heights of the skilful, state-of-the-art and forward-thinking designs of Captain William Ford and Brigadier General William Twiss. Under the supervision of Twiss, for instance, Ford's designs for adapting and completing the defences started by Hyde Page (still following the ideas of Montalembert) also anticipated aspects of the polygonal system of defence. At the Citadel (western fort), Ford simplified the multi-salient gorge so it comprised just two long curtains with a central redan, and he replaced the southern face with a simple, straight curtain with *tenaille*, whilst the northern face became a massive, triple-tier North-West Bastion (which clearly separated offensive from defensive fire), and he introduced single- and two-storey casemates at the re-entrant angles for defence of the ditch. The Drop Redoubt (eastern fort) was converted from a four-sided to a pentagonal work. Ford also transformed one of Hyde Page's detached outworks into an independent, two-tier, caponier-like North Centre Bastion for defence of the northern slopes and linked the independent fortifications with long, straight Lines to form an entrenched encampment or fortress on the hilltop. Twiss devised a stair shaft nearly 43m deep within the chalk cliff, which contained three intertwined staircases to facilitate communication between the barracks in the coomb and the town and harbour below. This stair shaft was a major feat of engineering, visually spectacular and deserves its name – the Grand Shaft. The sinking of the Citadel well to a depth of 128m was a similarly impressive feat of engineering, here served by an adjacent stair shaft containing two independent spiral staircases.

It has been said of Twiss and Ford that 'These two men had more impact on the defences of Dover than any military engineers since the time of Henry II and Henry III' (Coad 1995: 70). Ford oversaw the construction of a wide range of defences during his service at Dover in addition to his work on the Western Heights, including improvements to Dover Castle and Archcliffe Fort, and is credited with having adapted the Corsican concept of Martello Towers for implementation along Britain's southern and eastern coast. Twiss, described as 'an engineer of great inventiveness' (Saunders 1989: 138), designed fortifications in Canada in the 1770s, as CRE Portsmouth (1785–92) supervised the construction of defences including the second fort at Fort Cumberland, and served as CRE Southern District from 1792 to 1809. He was appointed Colonel-Commandant of the Corps of Royal Engineers in 1809 (but continued to act in a supervisory role at Dover), and was promoted General in 1825. As CRE Southern District, at Dover Castle Twiss was responsible for a wide range of works including alterations to the medieval defences, the construction of Canon's Gateway, four new bastions, the Underground Works and Spur, and the Underground Barracks, whilst elsewhere in the Dover area he supervised the construction of the Royal Military Canal, the Martello Towers, and Shorncliffe Redoubt and Battery.

Lieutenant Ben Hay Martindale's contribution at the Western Heights during the 1850s was a crucial one both formatively in his career and at the beginning of the rejuvenation of the fortifications after decades of disuse, when he supervised the completion of Ford's 1804-16 defensive scheme, notably at the Citadel. At Dover Castle Martindale also oversaw the modernisation of the defences (e.g. adding a caponier to Hudson's Bastion). He went on to serve as Commissioner of Roads and Railways in Australia in 1857-60, and once back in England in 1862 Martindale became the Assistant Inspector-General of Fortifications and Director of the Barrack Department. In 1871 he was appointed CB (Companion of The Most Honourable Order of the Bath), civil division. Having reached the rank of Colonel, Martindale resigned from the army in 1873 to become General Manager of the London and St Katherine Docks Company, of which he was made a director in 1889.

The zenith of military engineering at the Western Heights, however, was in the 1858-67 period during which Lieutenant Edmund du Cane, supervised by Major William Jervois (Assistant Inspector-General of Fortifications), transformed the formidable defences of Hyde Page's and Ford's making into an impregnable fortress, most notably in the sophisticated remodelled North Entrance and the ingenious Detached Bastion. Du Cane incorporated state-of-the-art caponiers (a feature of the polygonal system of defence) into the Drop Redoubt, Western Outworks, the extension to the South Lines and the North Centre Bastion and Detached Bastion. At the South Front Barracks and the Western Outworks' North and South Flank Casemates he designed highly protected, casemated barrack accommodation. In the Citadel Du Cane created (following Jervois's recommendation) the Officers' Quarters as a 'keep of last resort', ingeniously blending real defensive features with accommodation organised so it differentiated between the ranks, the whole building (inside and out) designed in a Tudor Gothic style. It is this architectural elaboration of the gatehouses and other functional buildings, however, and especially the trademark features such as the use of decoration with a medieval flavour including fake-defensive devices (e.g. machicolations) and plate-tracery-style windows and doorways, that marks out and elevates du Cane's contribution, such as in the Citadel's Officers' Quarters and Main Entrance, the North Entrance's inner entrance, and in the Drop Redoubt's Officers' Quarters and Guard House.

The contribution of du Cane to the architectural heritage of England is considerable. His work at the Western Heights forms a substantial part of his corpus, which also includes Fort Burgoyne (Dover) and major forts around Plymouth (e.g. the North-East Defences including Crownhill Fort, and Tregantle designed with Crossman who was responsible for devising Fort Wallington). Du Cane is better known, however, for his subsequent influential role in prison reform and design, including Wormwood Scrubs Prison (London) in 1874, and public-works Convict Prisons at Borstal (Rochester) in 1874, Chattenden (Chatham) in 1877, and at the Western Heights (Dover) in 1884-5. His interest in such matters had started during the early 1850s in Australia, where he organised convict labour on public works and supervised the construction of buildings including prisons and barracks before returning to Britain to design fortifications. In 1863 Du Cane was appointed a Director of Convict Prisons and Inspector of Military Prisons, in 1869 he became Chairman of the Convict Prison Directors (a role he held until 1895), Surveyor-General of Prisons, and Inspector-General of Military Prisons, and in 1878 he was made Chairman of the newly appointed Commissioners for local prisons. Du Cane was made CB (civil division) in 1873 and KCB (civil division) in 1877. Jervois's career was an extremely distinguished and influential one (Assistant Inspector-General of Fortifications 1856-62, Secretary to the Royal Commission on the Defences of the United Kingdom 1859-60, Deputy Director of Works at the War Office 1862-75, Governor of the Straits Settlements 1875-7, Governor of South Australia 1877, Governor of New Zealand 1883-9, appointed CB (civil division) 1863). Indeed, he has been described as 'the most important influence on British fortification design during this period' (Douet 1998: 158). Works incorporating Jervois's designs include the Alderney forts (1850s), the Gosport Advanced Line (e.g. Fort Brockhurst 1858) and the Royal Commission forts (1860s).

Strand 3 – Holding evidence of the changing conditions in which soldiers and their officers lived

The extraordinary diversity of barrack accommodation from c. 1805 to the 1890s constructed on the Western Heights has the potential to shed important light on both the changes made over time in response to rising concern for soldiers' welfare, and the increasing material expression of rank in the army. Evidence survives, for example, of contrasts between the casemated Soldiers' Quarters of the Drop Redoubt and Citadel compared with those of the Western Outworks'

South Flank Casemates, North Flank Casemates and Hut Barracks, or in the examination of the apparently carefully differentiated accommodation for ranks at the Citadel's Officers' Quarters and the Drop Redoubt's Officers' Quarters. The existence of historic plans and elevations of the barracks documenting how they changed adds to this potential.

Strand 4 – Allowing experience of the awesome and massive scale of the defences, and of the architectural embellishment of some elements

Awe at the scale of the Western Heights and its fortifications is probably the dominant emotion experienced by visitors. Not only do the scarp and counterscarp walls dwarf the visitor walking along the ditches, but the distance (a mile) between the Citadel at one end and the Drop Redoubt at the other that is evident in views from the harbour cannot fail to impress once understood. There are vertiginous slopes, sheer drops, terrifying killing zones, deadly caponiers, 'murder holes' and unassailable entrances, which elicit a powerful reaction from people who visit the defences. The magnitude of the Grand Shaft, whether looking up or down within the shaft, is similarly awesome. Some elements (most notably the work of du Cane) combine architectural embellishment with defensive features (including ornamental fake-defensive elements), for example on the Citadel's Officers' Quarters, and the Western Outworks' South Flank Casemates, and the North Entrance's inner entrance (the casemated South Front Barracks were demolished), which retain the aesthetic appeal today which was intended when they were designed.

Strand 5 – Bringing communities together in common cause to preserve the distinctiveness and sense of place for future generations

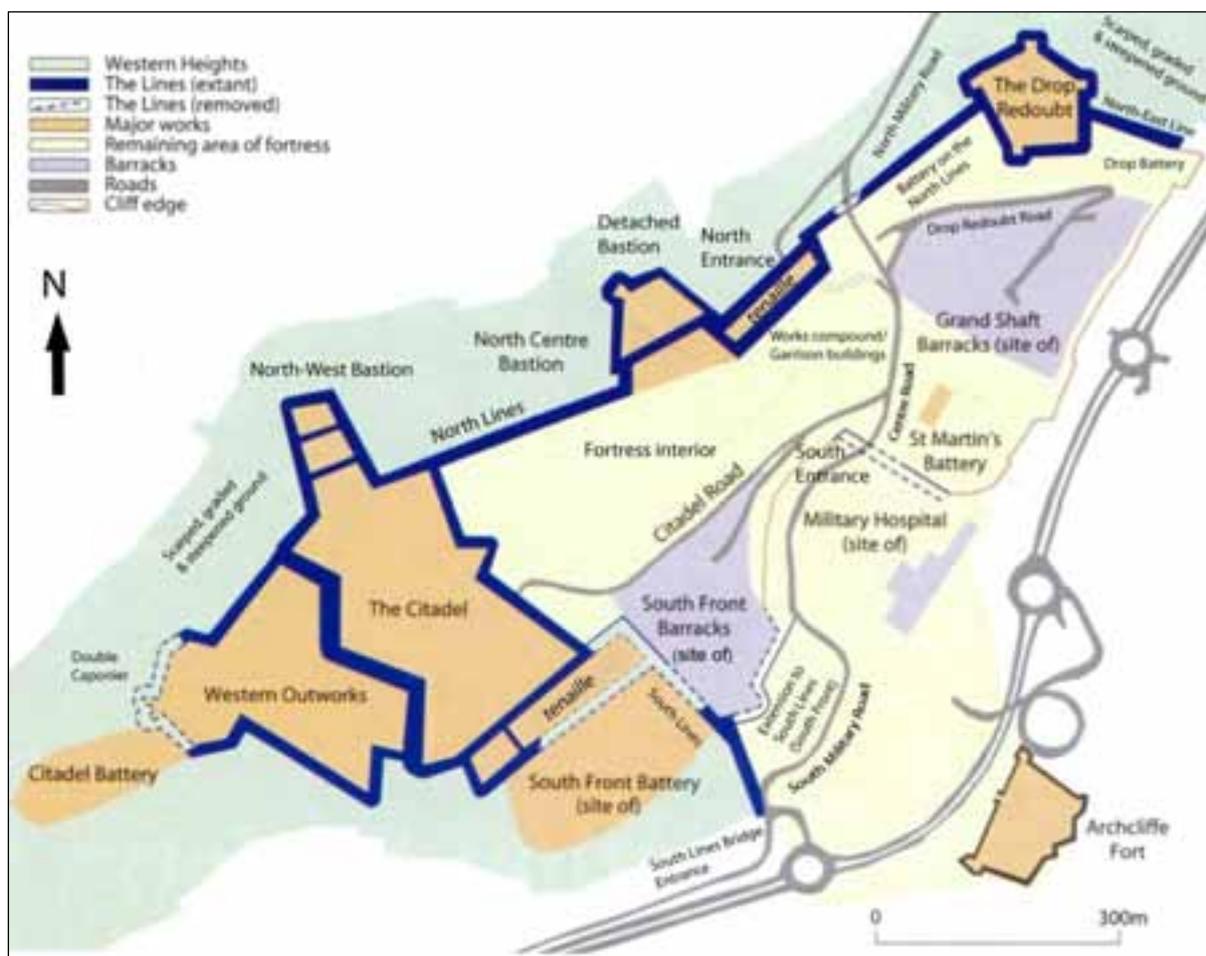
From the seventeenth century to 1914 (with a break between the *c.* 1780s and 1861), the installation ceremony for the newly appointed Lord Warden and Admiral of the Cinque Ports (for many years one of the most powerful figures in England) was held by the Bredenstone on the Western Heights (the ceremony was relocated to the Drop Redoubt's *terre-plein* in 1861 when pieces of the foundations from the Roman *pharos* discovered during construction of the Officers' Quarters were placed there). Although the ceremony was moved to the Close of Dover College for the Lord Warden appointed in 1934, as the place of an important ceremony for a major figure over a long period of time the Western Heights is still valued by those who are concerned to perpetuate the traditions of the now-honorary and ceremonial position of Lord Warden, the Grand Court of Shepway, and the Confederation of the Cinque Ports.

Many men were garrisoned at the fortifications on the Western Heights from the later eighteenth century to the mid-twentieth century, or passed through *en route* to or from a conflict or posting. Some were treated at the Military Hospital, others died there. The Western Heights have a special meaning to those men who served there during the Second World War (e.g. manning the coastal batteries, or the 4 Commando Unit based at the Drop Redoubt), and to relatives of men who stayed with their regiment, for example, at the various barracks on the Heights over the centuries.

In recent decades, other communities have started to value the Heights. From the 1950s onwards, when the army left the Heights and the fortifications and land were transferred to new owners, a rising tide of voices called for the significances of the Western Heights to be recognised and for the fortifications to be spared the bulldozer and instead conserved for everyone to appreciate. In this respect, the Western Heights Preservation Society and the White Cliffs Countryside Partnership continue to play a key role, carrying out agreed general maintenance works and improving public access (both physical and intellectual), including opening the Drop Redoubt to the public several times a year. The distinctiveness of the Western

Heights, and the strong sense of place which that distinctiveness engenders, increases the social value of the Western Heights as a place.

SUMMARY OF THE SIGNIFICANCES AT THE WESTERN HEIGHTS



Plan of the Western Heights (RCHME, with additions by the author)

The whole site

1779 to present

Level A significance. The Western Heights fortifications comprise an unparalleled group of components that add up to more than the sum of their constituent parts. Having started in 1779 as fieldworks designed by Lieutenant Thomas Page (CRE Eastern Coastal District, CRE Dover) to protect the port and town of Dover in the context of a threatened French invasion, a more ambitious defensive scheme for the Heights comprising a pair of forts (with detached outworks) was devised in the early 1780s, also by Hyde Page. In 1804-16, once again in the face of an imminent French invasion, the complex was transformed by Captain William Ford (CRE Dover) under the supervision of Brigadier General William Twiss (CRE Southern District) into an entrenched encampment or fortress through the linking of the fortifications on the Heights with the cliff-edges using defensive Lines, and the extensive scarping, grading and steepening ('sculpting') of the slopes and approaches around the entire circuit of defences. Remodelling and additions carried out in 1858-67 by Lieutenant Edmund du Cane (CRE Dover) under the supervision of Major William Jervois (Assistant Inspector-General of Fortifications) were designed to make the Western Heights impregnable to a French assault. Adapted from use as a land fortress to a large barracks and a mobilisation centre during in the 1880s, the Western

Heights retained this role until the army left the site in the 1950s. The site retains coherence as a fortified complex and strong sense of place as a military landscape. (*Strand 1*)

More specifically, the Western Heights are significant because they:

- illustrate perhaps more clearly than any other place in England, through the huge repeated investment manifested in the defences, the real fear of French invasion and consequential loss of sovereignty felt in the 1780s, during the Napoleonic Wars and again in the 1850s (*Strand 1*)
- demonstrate on a single site the immense skill of a succession of the most influential military engineers in British history (Hyde Page, Twiss, Ford, Jervois, du Cane), and changing approaches to systems of defence (e.g. *tenaille* trace to polygonal) during the later eighteenth and nineteenth centuries (*Strand 2*)
- possess unparalleled potential, through the wide range of barrack accommodation that survive with extensive supporting documentation, to shed new light on changing conditions for soldiers and officers over a period of great change (*Strand 3*)
- elicit strong emotions and feelings of empathy in visitors to the site today through the combination of the immense scale of the site, the number, complexity and awesome nature of the defences, the range of defensive devices designed to outwit and defeat an attacking enemy force, and the architectural embellishment of defensive elements (*Strand 4*)
- bring together communities who care passionately about conserving and presenting the Western Heights for current and future generations of visitors. (*Strand 5*)

Key views towards the Western Heights

- *Level B significance.* The best view of the Western Heights as a whole (other than from the air) is from Dover Castle (particularly from the top of the Great Tower but also from any of the western defences), from where the huge scale and the overall arrangement and form of the fortifications can be appreciated, with the Drop Redoubt in the middle ground and the Citadel on the skyline. This view (e.g. depicted by artists in the past including Captain Thomas Lloyd Durrant in 1808), and the reciprocal view from the *terre-plein* of the Drop Redoubt (e.g. painted by William Burgess in the mid-1850s), are important reminders of the mutually supporting roles of the two fortifications in the defence of the town and port of Dover.
- *Level B significance.* The long view of the Western Heights from harbour level (e.g. the Western Docks) allows an appreciation of the huge extent of the fortifications – it is still possible to discern the Citadel’s Officers’ Quarters near the western extremity and the Drop Redoubt at the eastern end.
- *Level C significance.* From places along the B2011 Folkestone Road, the massive and looming presence of the Western Heights’ fortifications surmounting the northern slopes can still be discerned.

The Citadel (western fort)

1779-96

- *Level A significance.* The western fort – protecting the western end of the ridge on the Western Heights – is the more complex of two independent forts and detached outworks designed by Hyde Page as an ambitious defensive scheme to protect the Western Heights and thereby the port and town of Dover from attack in the context of the threat of French invasion during the American War. The *tenaille* trace of the western fort as designed by Hyde Page, with salients on all its sides, demonstrates his design response to

the contemporary perception that the fort needed 360 degree defences, but the greater scale of the salients on the western side indicates that an attack was thought most likely to come from that direction. Its design demonstrates the influence of the ideas of the French military engineer Montalembert, who advocated a move away from the bastion system of defence, for example in the use of salients with long faces and putting as many guns as possible on the ramparts (cf. the entrenched camp with loopholed Guard Houses at Landguard Fort (Felixstowe) constructed by Hyde Page in 1778-84). The western fort also anticipates aspects of the polygonal system of defence (increasingly adopted during the nineteenth century), in which independent forts were designed to operate in conjunction with each other (here the eastern fort) and detached outworks for defence in depth but not to be joined as part of a continuous *enceinte*. (*Strands 1, 2*)

- *Level A significance.* Buried archaeological remains of Hyde Page's western fort may hold evidence of the form and scale of its defences (including the flanks of the central salient narrowing to a gorge flanked by traverses shown on the 1784 and 1787 plans, and the trace on the northern, eastern and southern faces), and of the original design of its interior (of open character for the protection of the garrison, containing just three loopholed Guard Houses – a poorly understood class of building). (*Strand 2*)

1804-16

- *Level A significance.* The innovative, massive trace of the Citadel, as completed by Ford under Twiss's supervision in response to the imminent threat of a French invasion and likely attempt to take Dover, demonstrates the engineer's skill in adapting the existing incomplete fortification by Hyde Page, while introducing far-sighted engineering solutions to produce a complex, powerful fortification capable of countering the perceived threat from all directions, but thought most likely to come from the west or north. Influenced by the ideas of the French engineer Montalembert, Ford retained Hyde Page's multi-salient western face (largely a pragmatic decision given the very real invasion threat), added state-of-the-art casemated gun rooms (including some with barrack accommodation) to the re-entrant angles for ditch defence, simplified the trace of the gorge (to comprise just two long curtain and a central redan) and the trace of the southern face (to form a straight curtain with *tenaille*), and constructed a caponier-like three-tier North-West Bastion (itself a major piece of military engineering separating offensive from defensive firepower) on the northern face, all of which anticipated aspects of the polygonal system of defence favoured increasingly during the nineteenth century. (*Strands 1, 2, 4*)
- *Level B significance.* The casemates designed by Ford demonstrate the application of the principle of separating ditch defence from offensive fire at *terre-plein* level, as advocated by Montalembert (cf. the broadly contemporary casemates at Fort Cumberland (Portsmouth)). Displaying a range of forms (e.g. the majority are single-storey but some two-storey), and state-of-the-art in terms of the degree of proofing against bombardment, improved ventilation (hence allowing dual use as barrack accommodation and gun rooms), water supply for drinking and washing, separate cook house, ablutions and latrines, these sets of casemates were all carefully positioned in relation to the defences and according to their intended role(s) and demonstrate the skilful, integrated nature of Ford's design and incorporation of the latest thinking in casemate design. One notable contrast, for example, is between the casemated barrack accommodation with gun rooms on the western face (West Face and West Flank Casemates, South-West Face and South-West Flank Casemates) and the southern face (South Casemates with their internal water points, two-storey Long Casemates) *versus* the casemated gun rooms without barrack accommodation on the northern face (North-West Bastion Casemates –

Inner North-West Bastion Casemates, Left and Right Flanking Casemates) and on the eastern face (Gorge Casemates). (*Strands 2, 3*)

- *Level B significance.* The well, sunk to a depth of 420 ft (128m), is ‘a prodigious feat of engineering and absolutely crucial if a garrison was to occupy Western Heights for any length of time under siege’ (Coad 1995: 87). Access was from an adjacent stair shaft containing two independent spiral staircases. Both well and stair shaft were the work of Twiss, and demonstrate his considerable skill as an engineer. They constitute a related but less complex version of the Grand Shaft with its three intertwined staircases designed by Twiss to serve the Grand Shaft Barracks. (*Strand 2*)
- *Level A/B significance.* Buried archaeological remains of the Main Entrance at the northern end of the gorge as designed by Ford (replacing that by Hyde Page) may hold evidence of its form and defensibility. (*Strand 2*)
- *Level B/C significance.* The open character of the Citadel’s interior, as retained by Ford when completing Hyde Page’s fort but currently compromised by modern development, demonstrates the perceived importance of affording protection to the garrison (by ensuring there was nowhere for an enemy to hide – for which unimpeded views across the interior from the ramparts needed to be maintained – or structures which could injure or kill defenders if they were hit by incoming fire), as well as space on the Parade Ground for drill, punishments and rewards. (*Strands 2, 3*)
- *Level A significance.* The large inclined ‘steps’, cut into the hillside forming long narrow alleys or ‘killing zones’ to the west and east of the North-West Bastion, illustrate better than anywhere else around the perimeter of the fortress Ford’s skilful, extensive scarping, grading and steepening of the natural slopes of the ridge on the *glacis* and approaches to the fortress to produce difficult angles of approach and controlled fields of fire with no dead ground where an attacking force could safely rest. This military ‘sculpting’ of the ground (also still legible elsewhere around the Citadel’s perimeter) has resulted in the dramatic topography of this area today. (*Strands 2, 4*)

1853-5

- *Level B significance.* The construction by Martindale of the missing elements in casemates on the eastern and northern faces designed by Ford in 1804-16 but not built at the time (namely the expense magazines for the Gorge Casemates, and in the North-West Bastion the Counterscarp Gallery (with two small arms casemated gun rooms) and Counterscarp Casemates (gun rooms), the straight rear walls of the Inner North-West Bastion Casemates, and the expense magazines for the Right and Left Flanking Casemates), demonstrates the perceived quality of Ford’s designs nearly fifty years later, and the concern in the 1850s to complete the Citadel so it could once again be used in the context of renewed French invasion scares. (*Strands 1, 2*)

1858-67

- *Level A/B significance.* The Officers’ Quarters, designed by du Cane
 - illustrate Jervois’s recommendation that the building should be designed as a ‘keep of last resort’ for the Citadel – a feature favoured by Jervois in his work elsewhere including at the three contemporary forts (Brockhurst, Rowner and Grange) built to form part of the Gosport Advanced Lines (Portsmouth); defensive elements at the Citadel’s Officers’ Quarters included a bombproof, flat roof which could be used as a fighting platform, massively thick gritstone end walls with triangular buttresses, battered recesses with ‘murder holes’, loopholes, armoured shutters, the basement’s fireproof ceiling and thick internal walls to

- protect water tanks; the external defensive elements (notably those on the end elevations) inspire feelings of awe (*Strands 1, 2, 4*)
- demonstrate the response to the identified need for officer accommodation in the Citadel, and reflect the contemporary concern to separate and differentiate between the ranks in their accommodation (e.g. organisation of internal space, form of staircase newels) (*Strand 3*)
 - show du Cane's approach to the design of defensive structures – his preference for adopting a quasi-medieval style, and combining real defensive elements with ornamental elements, including ones of a fake-defensive form; here the building as a whole (both externally and internally) was designed in a Tudor Gothic style, with contrasting red facing-brick and limestone dressings on the north and south elevations, and fake machicolations as eaves decoration; the ornate east and west elevations have an aesthetic appeal and contrast markedly with the austerity of the highly defended end elevations. (*Strands 2, 4*)
 - *Level B significance.* The Main Entrance, designed by du Cane
 - with its relatively simple set of defences (supplemented by ditch defence from the Gorge Casemates and musketry fire from the *banquette* on the rampart south of the Main Entrance), demonstrates that an assault from within the fortress was not considered a strong likelihood, revealing confidence in the impregnability of the fortress's circuit of defences as a whole (*Strand 2*)
 - illustrates du Cane's flair and proclivity for designing gatehouses in a quasi-medieval idiom, incorporating ornamental elements including some with a fake-defensive character (e.g. use of multiple orders, eaves cornice with false brackets and machicolations) in addition to the necessary defensive devices and discipline arrangements (here a drawbridge and gates of which some remains survive, and the casemated Guard House arrangement) (cf. North Entrance's inner entrance). (*Strands 2, 3*)
 - *Level B significance.* The design of the sunken bombproof Pump House (built in 1861 over the well sunk in 1805) illustrates the importance attached to being able to counter sieges. (*Strand 2*)
 - *Level B significance.* On the Centre North-West Bastion, the Guard Room (infantry shelter) shows the perceived need to provide troops with added resilience to bombardment (cf. Troop Shelter on the Detached Bastion). (*Strand 2*)
 - *Level C significance.* The Canteen (overlooking the Parade Ground from the northern side, extended in matching style to form the Recreational Institute in the 1890s, with subsequent further additions as the Regimental Institute) illustrates the response to the recommendation of the 1858 *The Barrack and Hospitals Improvements Committee, Interim Report on the Dover Western Heights* that liquid refreshment and facilities such as day rooms and reading rooms should be provided in an atmosphere more suitable than public houses (they were supervised by a pensioned NCO) in order to create 'a higher tone of social habits' amongst the common soldiery. (*Strand 3*)
 - *Level C significance.* The high-level Water Tank (built 1861 above the West Postern Gate) demonstrates the engineering response to the identified need to ensure an adequate head of water to supply to surface buildings (for drinking and washing) as part of the improvements by du Cane to the Citadel and living standards for soldiers. (*Strands 2, 3*)
 - *Level C significance.* The vaulted passage inserted south-east of the Officers' Quarters through the southern rampart to a gate containing a two-leaf reinforced door (with slits for observation and small arms fire), which led onto a (former) bridge over the inner ditch to the *tenaille*, together illustrate the measures taken by du Cane to supplement

Ford's 1804-16 access arrangements to the *tenaille* from inside the Citadel (a newel stair, underground gallery and steps). Creation of this new route indicates that the *tenaille* was still deemed an essential part in the defence of the Citadel's southern face. (*Strand 2*)

1890-1954

- *Level C significance.* Two high-level Water Tanks (built 1891 by the Pump House, and 1901 by the 1861 Water Tank above the West Postern Gate) demonstrate the engineering response to the rising need to ensure an adequate head of water to supply surface buildings in the context of the change of use of the Citadel from land fortress to large barracks and mobilisation centre. (*Strands 1, 2, 3*)
- *Level D significance.* The Sergeants' Mess Establishment (overlooking the Parade Ground from the southern side) and the Warrant Officers' Quarters Nos 1-2 (north of the Main Entrance), all built in the 1890s, demonstrate the provision of new facilities and accommodation in the context of the Citadel ceasing to be regarded as a land fortress and instead being used as a large barracks and mobilisation centre. These buildings have been extensively modified subsequently. (*Strands 1, 3*)
- *Level D significance.* The Cook House and Dining Rooms (built 1911, extended 1922, 1927, 1932-3), located south-west of the Canteen/Recreational Establishment, demonstrate the response to the need to be able to cater for the rising number of men accommodated at the Citadel whilst it was in use as a large barracks and mobilisation centre. (*Strands 1, 3*)

1954 to present

- *Level B significance.* From the slopes of the Western Heights south of the Officers' Quarters, the grandeur and dominance of the building can be readily appreciated. This view is enhanced by the simplicity of the foreground, which contrasts with the more colourful and elaborate southern elevation of the building.
- *Level B significance.* The view from the Western Heights' northern slopes towards the North-West Bastion allows its great scale, three-tier form and relationship with the inclined 'steps' cut into the slope (killing zones where enemy troops would be at the mercy of defenders firing from the Bastion's flanks) to be appreciated.
- *Level D significance.* In the Officers' Quarters, the subdivision of part of the basement in 1956 to make a 'Separate Cell Block' demonstrates one of the ways in which the building was adapted in the context of the Citadel's new use as a Borstal. (*Strand 3*)
- *Level C significance.* The nineteenth-century cell doors installed in 1956 in the 'Separate Cell Block' in the Officers' Quarters' basement may have been relocated from a Guard House on the Western Heights (e.g. in the Citadel's Main Entrance, the Drop Redoubt or Archcliffe Gate), in which case they may hold evidence of the form of elements relating to detention of soldiers on the Heights, but it is possible that they were brought in from another site. Documentary evidence may hold information about their origin. (*Strands 2, 3*)
- *INT.* All the HMPS buildings constructed post-1956, and in particular those constructed on the Parade Ground.
- *INT.* The HMPS high, wire-mesh security fences and gates within the Citadel's interior.
- *INT.* The HMPS razor wire on the defences.
- *INT.* In the Officers' Quarters, the large-scale and widespread surface pipework for services on all floors, and partitions inserted within rooms.
- *INT.* The unification and rendering of Warrant Officers' Quarters Nos 1-2 (e.g. covering the more decorated exterior of No. 2 including an Arts-and-Crafts-style brick frieze on the front).

The Western Outworks

1858-67

- *Level A significance.* The complexity and great scale of the advanced work's defences (North Ditch, South Ditch, South Demi-Bastion, South Curtain, buried archaeological remains of the North Demi-Bastion and North Curtain, and the infilled sections of the North and South Ditches), devised by Jervois and du Cane, demonstrate the perceived contemporary importance attached to rectifying the long-recognised weakness on the south-western flank of the Citadel in the context of renewed fears over French invasion, and the skilful design response by the engineers to cater for the terrain. (*Strands 1, 2, 4*)
- *Level A significance.* The buried archaeological remains of the massive Double Caponier with its gun rooms and small arms gallery (the latter incorporating a battered recess with 'murder holes') demonstrate the contemporary perceived need for powerful ditch defence on the western extremity of the work. Its constituent elements echo some of the defensive solutions used by du Cane and Jervois elsewhere on the Heights (e.g. caponiers in the Drop Redoubt and the Detached Bastion) and on other fortifications which they designed (cf. double caponiers at Fort Burgoyne and Fort Purbrook). (*Strands 2, 4*)
- *Level A significance.* The South Flank Casemates (with misnamed 'Haxo' casemated gunrooms above) and North Flank Casemates – two sets of defensible casemated barracks with small arms galleries (the latter incorporating battered recesses with 'murder holes')
 - demonstrate the design response by du Cane to the need for highly protected casemated barrack accommodation in the advanced work, given its perceived vulnerable location on the Citadel's western flank and in the context of the advances in weaponry power and accuracy (here the casemates were deeply recessed in the rampart for maximum protection, with the main elevation forming the scarp revetment of the ditch and access in the rear from a well-concealed, sunken courtyard or gorge); du Cane also used a variant of this at the contemporary casemated South Front Barracks, and it was employed at other fortifications by du Cane and Jervois (cf. Fort Burgoyne, St George's Barracks Gosport, Fort Purbrook and Fort Wallington) (*Strands 1, 2, 3*)
 - illustrate du Cane's skill and proclivity for combining the functional with architectural elaboration in his military designs, here in the form of aesthetically pleasing moulded orders to the arches and window openings on the front elevation of the casemated barracks (cf. the former casemated South Front Barracks, and the Citadel's Officers' Quarters) (*Strand 2*)
 - demonstrate one of the devices favoured for close defence by du Cane on the Western Heights in the form of battered recesses with 'murder holes' in the small arms galleries, here designed to protect the barrack accommodation as was also the case at the Citadel's Officers' Quarters; in other instances they were part of the ditch defence repertoire (e.g. the Western Outworks' Double Caponier, Drop Redoubt's caponiers) (*Strand 2*)
 - illustrate du Cane's skilful design in ensuring that all the necessary facilities were provided in one self-contained location as efficiently as possible, and that the accommodation was also differentiated according to rank, through the doubling up of defences as peacetime accommodation ('Haxo' casemated gunrooms above the casemated barracks doubling as Officers' Quarters, small arms galleries as Cook House and Ablutions) (cf. the South Entrance complex of casemates). (*Strand 3*)

- *Level B/C significance.* The open character of the interior (somewhat reduced by the 1890-1 Hut Barracks and modern security fences) demonstrates the contemporary importance when the advanced work was designed of maintaining the Citadel's field of fire and protecting the garrison accommodated in the North and South Flank casemates. (*Strand 2*)

1890-1 to 1954

- *Level C significance.* The six Hut Barracks and Cook House, constructed in 1890-1, illustrate the contemporary requirement to be able to accommodate large numbers of troops in the context of the Citadel and Western Outworks being increasingly regarded as a large barracks and mobilisation centre rather than as a land fortress. Their lack of bombproofing demonstrates the confidence at the time that these buildings were safe from bombardment in this location. (*Strands 1, 3*)
- *Level D significance.* The Company Office & Stores Building (constructed in 1928 at the south-eastern end of Hut Barrack No. 1) demonstrates the need for buildings in which to store clothing, small arms and sundry supplies for the large number of men accommodated in the Western Outworks and Citadel when they were serving as a large barracks and mobilisation centre. Two buildings were erected in the Citadel for the same purpose that year, but neither survives. (*Strands 1, 3*)

1954 to present

- *INT.* The HMPS building constructed post-1956 on the South Demi-Bastion.
- *INT.* The HMPS security fences and gates.

The North Lines

1804-16

- *Level A significance.* The North Lines (a massive, awe-inspiring ditch and profiled rampart with *banquette*) – connecting the Citadel, the North Centre Bastion and the Drop Redoubt although these were still individually designed for independent defence – demonstrate the need perceived by Ford and Twiss to close the gap between the fortifications and thereby deny an attacking force access to the weakest points of the Citadel and Drop Redoubt – their entrances. The Lines themselves lacked gun positions, with offensive and flanking firepower being concentrated instead in the Citadel, North Centre Bastion and Drop Redoubt at *terre-plein* level and in casemates, supplemented by infantry using muskets firing from the Line's rampart. The North Lines are part of the set of Lines constructed to create an entrenched encampment or fortress on the hilltop to protect a large field force in garrison quarters who could not be accommodated in the Citadel and Drop Redoubt. (*Strands 1, 2, 4*)
- *Level A significance.* The scarping, grading and steepening of the natural slopes of the ridge beyond the North Lines demonstrate Ford's skill in sculpting the *glacis* and approaches to the fortress to achieve difficult angles of approach and controlled fields of fire with no dead ground where an attacking force could safely pause. This ground was designed to be covered by flanking fire from the Citadel's North-West Bastion, the North Centre Bastion and the Drop Redoubt. (*Strands 2, 4*)

The North Centre Bastion and Detached Bastion

1779-96

- *Level A significance.* Infilled and buried sections of Hyde Page's detached outwork may hold evidence of the form and location of an apparently typical example of the series of

such outworks which he designed to supplement the western and eastern forts for defence in depth as part of his ambitious scheme of defences to protect the Western Heights. His use of detached outworks illustrates the beginning of the move away from the bastion system of defence towards the polygonal system (which was increasingly adopted during the nineteenth century), in which independent forts with simple traces operated in conjunction with other forts and detached outworks but were not joined as part of a continuous *enceinte*. (*Strands 1, 2*)

1804-16

- *Level A significance*. Buried archaeological remains of the North Centre Bastion's gorge may contain representative evidence of the form and strength of the fortification which Ford created in the middle of the North Lines on the landward front by remodelling Hyde Page's detached outwork. The inclusion by Ford of a complex, tiered pair of bastions to provide flanking fire both for the North Entrance and for the northern slopes of the Heights illustrates his far-sighted military engineering prowess in anticipating aspects of the polygonal system of defence which was increasingly adopted during the nineteenth century. (*Strands 1, 2*)
- *Level A significance*. The scarping, grading and steepening of the natural slopes of the ridge around the North Centre Bastion demonstrates Ford's skill in sculpting the *glacis* and approaches to the fortress to achieve difficult angles of approach and controlled fields of fire with no dead ground where an attacking force could safely pause. (*Strands 2, 4*)

1858-67

- *Level A significance*. The investment in a major remodelling of Ford's North Centre Bastion by du Cane into an awesomely powerful and coherent design for defence of the land front demonstrates the perceived great degree of threat from that direction. (*Strands 1, 2, 4*)
- *Level A significance*. The design of the remodelled pair of bastions illustrates the application by du Cane of aspects of the fully developed polygonal system of defence, for example in the way that guns flank the North Lines whilst the caponiers and musketry galleries protect the ditch, but also unusually goes further by separating at *terre-plein* level the artillery for long-range defence (Detached Bastion) from the musketry (North Centre Bastion) for flanking fire. (*Strand 2*)
- *Level A significance*. The Detached Bastion's ditch defence galleries, with their elaborate defence mechanisms such as drop pits with drawbridges and battered recesses with 'murder holes', illustrate some of du Cane's characteristic defence devices used elsewhere on the Western Heights (cf. Drop Redoubt caponiers). (*Strand 2*)
- *Level A significance*. The massive counterscarp bank on the eastern side of the Detached Bastion illustrates du Cane's skilful solution to the problem caused by the ground dropping off sharply on this side which was preventing the creation of the ditch for the Bastion. (*Strands 2, 4*)
- *Level B significance*. The Troop Shelter on the Detached Bastion demonstrates the perceived need to provide troops with added resilience to bombardment (cf. the Guard Room or infantry shelter on the Citadel's Centre North-West Bastion). (*Strand 2*)

1875-95

- *Level B significance*. The four RBL positions with their shell recesses, embrasures, expense magazines and artillery store constructed in 1889 demonstrate the contemporary

perceived need for strengthening the artillery provision on the Detached Bastion's *terre-plein* for defence of the land front. (*Strands 1, 2*)

The North Entrance

1804-16

- *Level A/B significance.* Buried archaeological remains may shed new light on the poorly understood entrance and defence arrangements designed by Ford at this vulnerable point in the defensive circuit. Given its proximity to the works compound just inside the fortress, this entrance is thought to have served construction traffic travelling up the North Military Road from Dover. (*Strand 2*)

1858-67

- *Level A significance.* The remodelling by du Cane of Ford's North Entrance arrangements as a state-of-the-art package of awesome, complex defences illustrates his intention to make the most vulnerable location of the whole fortress impregnable to an attack from the northern side. (*Strands 1, 2, 4*)
- *Level A significance.* The innovative and complex engineering of defensive features show du Cane's military engineering skill, including the sinuous plan-form of the approach and tunnel, the well-preserved *tenaille*, the drawbridge and its mechanism, the sliding main doors, the postern gate and layered musketry defences, the ditch defence musketry galleries and gun rooms, and the clear line of sight from the sentry post of approaching traffic or people. (*Strands 1, 2*)
- *Level B significance.* The incorporation of features by du Cane to make the tunnel more user-friendly show his concern for practicality, such as the wooden block flooring and the elliptical-cone-shaped brick shaft rising from the vault which provided ventilation and light. (*Strand 2*)
- *Level A significance.* The inner entrance's front elevation (built in an aesthetically pleasing Italianate style with polychrome brickwork, the use of multiple orders on the arches, and semicircular-headed window and door openings imitating plate tracery) demonstrates du Cane's skill as an architect, and constitutes one of the set of elaborate entrance elevations with medieval-inspired quasi-defensive features (here fake-machicolations and cross details) designed by du Cane on the Western Heights (cf. Archcliffe Gate, Citadel's Main Entrance) and at fortifications elsewhere in Britain in a range of historically-inspired styles (cf. Crownhill Fort). This embellished elevation contrasts markedly with the plain front elevation of the North Entrance's outer entrance (where defence was more important than fine appearance, and which was largely concealed from the view of people approaching along the North Military Road by the sinuous curve of the cutting through the *tenaille*), which suggests that du Cane may have intended the remodelled North Entrance as the major point of exit from the fortress (with the South Entrance (Archcliffe Gate) built in a Gothick style being the formal Main Entrance), a theory reinforced by the lack of a means of communication between the Guard House and adjacent tunnel, and the absence of detention cells and orderly room indicating that the North Entrance was not intended as a detention point (in contrast to Archcliffe Gate). (*Strands 2, 3, 4*)
- *Level B significance.* The view along the deep cutting towards the front elevation of the North Entrance's inner entrance allows its fine appearance and probable intended role as the main exit from the fortress as designed by du Cane to be appreciated.
- *Level B significance.* The incorporation into the design of three water tanks (fed by the Citadel's well and Pump House) illustrates the contemporary concern for maintaining a secure water supply for the Western Heights garrison – the water tanks built in 1804-16

had previously been outside the North Entrance and had to be removed to allow the remodelling of the defences. (*Strand 2*)

1939-45

- *Level C significance.* North-east of the North Entrance on the south side of the North Military Road, the REME Instrument Workshop and separate Overnight Living Accommodation (in a compound) demonstrate the response to the need to provide suitable, blast-proof facilities in a detached location in which the optical instruments for aiming and calibrating the artillery weapons around Dover could be maintained. (*Strands 1, 2, 3*)

The Drop Redoubt (eastern fort)

Second century AD

- *Level B significance.* The buried archaeological remains of the *pharos* (under the Drop Redoubt's eastern rampart behind the Officers' Quarters) may contain evidence of the form and materials of the structure, about which little detail is currently known – excavation in the nineteenth century suggested it was polygonal and constructed from a variety of materials (some of them re-used) including Kentish rag stone, tile and brick. The *pharos* on the Western Heights was one of a pair (the other being on the eastern cliff) built between AD 117 and AD 140 (dated on the basis of ceramic material incorporated within them) high on the chalk headlands either side of the Dour valley to guide ships into the port of the *Classis Britannica* located on the north-eastern slope of the Western Heights. The *pharos* on the eastern cliff (now within Dover Castle) survives to a height of 12.5m, is octagonal in plan externally (with square internal chambers) and constructed of Kentish rag stone, tufa, flint and brick; it is the tallest surviving Romano-British building, and one of only three Roman lighthouses to survive in the world (with those at Corunna in Spain and Leptis Magna in Libya, both of which were larger and of different construction).

1779-96

- *Level B significance.* Buried archaeological remains of a bank at the southern end of the eastern rampart (seen during excavation of the remains of the *pharos* in 1861) may hold evidence of one of the fieldworks constructed by Hyde Page in 1779 to defend the port and town of Dover. Very little is known of the form and location of these fieldworks. (*Strands 1, 2*)
- *Level A significance.* The eastern fort – protecting the eastern end of the ridge on the Western Heights – is the smaller of two independent forts with detached outworks designed by Hyde Page in the 1780s as an ambitious defensive scheme to protect the Western Heights and thereby the port and town of Dover from attack in the context of the threat of French invasion during the American War. The simple trace of the eastern fort (four-sided, comprising long, straight curtains all packed with guns, and no bastions) demonstrates the contemporary perception that an attack was less likely at this end of the ridge than at the western end (although the eastern fort was still afforded 360 degree defences) and the influence of the ideas of Montalembert on Hyde Page's design. It also anticipates aspects of the polygonal system of defence (increasingly adopted during the nineteenth century), in which independent forts with simpler traces were designed to operate in conjunction with other forts (here the western fort) and detached outworks for defence in depth, but not to be joined as part of a continuous *enceinte* (cf. the detached forts at Maker Heights (Cornwall) begun in 1784, and at Berry Head (Devon) complete by 1783). (*Strands 1, 2*)

- *Level A significance.* Buried archaeological remains of Hyde Page's eastern fort may hold evidence of the form and scale of its defences, and in particular the northern face (which was replaced by two shorter faces – the north-eastern and north-western faces – when Ford converted the fort to a pentagonal redoubt in 1804-16), and of the original design of its interior (of open character for the protection of the garrison, containing just one central, loopholed Guard House – a poorly understood class of building). (*Strand 2*)

1804-16

- *Level A significance.* Ford's conversion of Hyde Page's four-sided eastern fort into a pentagonal Redoubt (through the replacement of the northern face with a north-eastern and north-western face), and his weighting of the artillery positions on the northern side of the Redoubt, illustrate the perceived contemporary need to accommodate more guns for defence of the land front, the influence of the ideas of Montalembert on the design, and anticipation of aspects of the polygonal system of defence. His retention and completion (largely unaltered) of the simple trace of Hyde Page's eastern fort demonstrates the perception twenty years later of the essential fitness for purpose of the 1780s design to command the eastern end of the ridge. (*Strands 1, 2*)
- *Level A significance.* The Main Entrance (the only one on the Western Heights surviving from the 1804-16 defensive scheme), with its plain gateway and sentry box, illustrates Ford's concern with the pragmatic in his designs. Buried archaeological remains may hold evidence of the original bridge arrangements. (*Strand 2*)
- *Level B/C significance.* The bombproof casemated Soldiers' Quarters (now missing their front elevations), with their lunette windows in the rear elevations and evidence of former fireplaces on the walls, demonstrate the layout and standard of accommodation provided for the common soldiery in this period. (*Strand 3*)
- *Level C significance.* The open character of the interior – still evident in the Parade Ground immediately in front of the Soldiers' Quarters, but reduced from its original extent by the construction of the range containing the Ablution Room, Bath Room, Cook House, Latrines and Staff Sergeants' Quarters south of the Parade Ground and the bombproofing of the Main Magazine in 1858-67 – demonstrates the design of the interior as originally conceived by Hyde Page and retained by Ford, which was intended to afford protection to the garrison (by ensuring there was nowhere for an enemy to hide – for which unimpeded views across the interior from the ramparts needed to be maintained – or structures which could injure or kill defenders if they were hit by incoming fire), and allow space for drill, rewards and punishments. (*Strands 2, 3*)
- *Level C significance.* The Main Magazine's original form and materials (e.g. freestanding with space around it in case of explosion) illustrates the standard Board of Ordnance design for powder magazines in this period (cf. Royal Ordnance Depot Weedon Bec (Northants.)). (*Strand 2*)
- *Level A significance.* The extensive scarping, grading and steepening of the natural slopes of the ridge around the northern and eastern sides of the Drop Redoubt show Ford's skill in sculpting the *glacis* and approaches to the fortress to achieve difficult angles of approach and controlled fields of fire with no dead ground where an attacking force could safely pause. Of the natural slopes of the ridge around the entire perimeter of the fortress reshaped by Ford, the survival of the sculpting on this area is second only to that immediately west of the Citadel's North-West Bastion. (*Strands 2, 4*)

1816-50s

- *Level C significance.* The remains of the former swing bridge (part fixed span, part rotating) installed in 1823 illustrate the contemporary need to improve the Redoubt's defences as the only garrisoned fortification on the Heights during this period, and the efficient nature of the design, which allowed the bridge to sit neatly against the curtain. (*Strand 2*)

1858-67

- *Level A significance.* The additions and alterations by du Cane to the defences of the Drop Redoubt (including four caponiers and two sets of gun rooms) are easily distinguishable from the earlier build and illustrate the contemporary concern to improve the fortress's ability to defend the land front. They also demonstrate especially clearly the upgrade of the Drop Redoubt in line with the fully developed polygonal system of defence. (*Strands 1, 2*)
- *Level A significance.* The four massive, two-storey caponiers added to all but one of the corners of the Drop Redoubt, with attached musketry galleries and expense magazines, illustrate the adaptation of the Redoubt so it was protected by ditch defence, complementing the artillery on the *terre-plein* for more distant targets. The use of triangular buttresses, battered recesses with 'murder holes' and loopholes on the face wall of each caponier constitutes one of du Cane's trademark sets of defensive devices intended to improve close defence (cf. the Detached Bastion's North-West Caponier). The decorative wrought iron gates in the network of caponiers, musketry galleries and gun rooms – contrasting with the otherwise plain, functional interiors – demonstrate du Cane's proclivity for embellishing defensive structures. (*Strands 2, 4*)
- *Level A significance.* The enlarged ramparts and remodelled *terre-plein*, with eleven positions for 7-inch RBLs firing through embrasures in the parapet, a side arms store (its façade echoing the architectural style also used by du Cane for the Officers' Quarters' front elevations below), and ready-use ammunition lockers, demonstrate the perceived contemporary need to strengthen cover for the land front. The Saluting Battery (granite and sandstone flagstones) in the south-eastern corner, thought to have been re-set in this period on the site of the earlier version, demonstrates the continued perceived importance of this ceremonial function of the Redoubt. (*Strands 1, 2, 4*)
- *Level A significance.* The two sets of gun rooms (attached to Caponiers 2 and 4) inserted by du Cane in the ramparts of the earlier fort demonstrate the application of the principle of ditch defence for the North Lines and North-East Line. (*Strand 2*)
- *Level B significance.* The galleried steps linking the main parts of the Drop Redoubt (including directly from the rear of two of the Soldiers Quarters' casemates to caponiers) illustrate the provision of protected safe communication routes to allow quick deployment of troops and guns in the event of an attack, and thus the integrated nature of du Cane's design. (*Strands 2, 3*)
- *Level B significance.* The casemated Guard House (comprising a Guard Room, two Cells and a Lock-up on the west side of the entrance courtyard), designed by du Cane
 - demonstrates the arrangements for controlling access to the Drop Redoubt and maintaining discipline (*Strand 3*)
 - with its front elevations containing semicircular-headed doorways and windows (a variant of the design reminiscent of plate tracery), demonstrates du Cane's proclivity for using historically-inspired, aesthetically-pleasing designs to adorn military entrance structures (cf. the Citadel's Main Entrance). These front elevations (now missing some fabric) form an architectural composition with those of similar design on the Officers' Quarters opposite, and demonstrate du

Cane's concern to afford this new entrance courtyard a distinguished appearance, this being the first view of the Drop Redoubt's interior encountered by those passing through the earlier, rather plain gateway built by Ford in 1804-16. (*Strands 2, 4*)

- *Level B significance.* The casemated Officers' Quarters (six casemates for accommodation on the east side of the entrance courtyard) and Officers' Latrines (one casemate on the north side), designed by du Cane
 - show the higher standard of accommodation deemed suitable for officers compared with the common soldiery in this period (e.g. provision of a bootscraper by each door, and plastered walls with moulded skirting boards rather than whitewashed brickwork) (*Strands 2, 3*)
 - with their front elevations (now missing some fabric) containing semicircular-headed window and doorway openings (a variant on the plate tracery design), demonstrate du Cane's penchant for using historically-inspired, aesthetically-pleasing architectural designs for military accommodation structures (cf. the Citadel's Officers' Quarters, and the Western Outworks' South Flank Casemates). The form of the openings on these front elevations is broadly similar to those on the Guard House opposite, with which it forms an architectural composition as part of the distinguished new entrance courtyard to the Redoubt. (*Strands 2, 4*)
- *Level B significance.* The cobbled, rectangular, small Parade Ground in front of the Soldiers' Quarters, re-set in the 1858-67 works, demonstrates the continued perceived importance of a conveniently located, durable area, unimpeded by buildings, on which drill could be carried out and punishments or rewards administered. (*Strands 2, 3*)
- *Level C significance.* The remains of the Ablution Room, Bath Room, Cook House, Latrines and eastern Staff Sergeants' Quarters on the southern side of the Parade Ground (with elements including floor surfaces, fireplaces and other fixtures and fittings) illustrate the layout and standard of accommodation and facilities for the soldiery in this period. Their location, directly opposite the Soldiers' Quarters, demonstrates the segregation of accommodation and facilities for the men from those for the officers (located off the entrance courtyard), which was deemed appropriate in this period. The water tank located beneath the centre of the Parade Ground served the accommodation and facilities buildings around it and shows the perceived importance of a conveniently sited, reliable supply of water for the health of the garrison. (*Strand 3*)
- *Level C significance.* The Main Magazine's vaulted passageway and the bombproofing of the whole structure demonstrate the perceived need to improve its design and increase its protection. (*Strand 2*)
- *INT.* The effect of adding bombproofing to the Main Magazine on the open character of the Drop Redoubt's interior as created by Hyde Page and Ford was profound, transforming it from an essentially open character with appreciable spaces between the structures to a more confined character, where the view from the Soldiers' Quarters did not extend beyond the range containing the Ablution Room, Bath Room, Cook House, Latrines and Staff Sergeants' Quarters on the opposite side of the Parade Ground. (*Strands 2, 4*)
- *Level C significance.* The pieces of foundation from the *pharos* set up on the *terre-plein* above the Officers' Quarters in 1861 in imitation of the Bredenstone which formerly stood in this location, symbolise to those who are concerned to perpetuate the long-lived traditions of the office of Lord Warden of the Cinque Ports the former practice of holding the installation ceremony for the newly appointed Lord Warden at the Bredenstone, which took place in these locations between the seventeenth and earlier

twentieth century (with a gap between the c. 1780s and 1861 when the remains lay buried under the Redoubt). (*Strand 5*)

1914-18 and 1939-45

- *Level D significance.* Elements added to the Drop Redoubt during the two World Wars (including slit trenches and weapons pits cut into the ramparts, and the Second World War observation post on top of the Main Magazine) demonstrate the works carried out to update its defences and to enable it to continue to be used (e.g. 4 Commando Unit, led by Lord Lovat, was based here in the Second World War, to which graffiti attests). (*Strands 1, 2, 3*)
- *Level D significance.* The flat-roofed brick building which replaced the western block of Staff Sergeants' Quarters (built 1858-67) on the same footprint, possibly as a shelter or communications room in the First or Second World Wars, but not of the same form or layout as the earlier building and of very low architectural merit, demonstrates the pragmatic conversion of this part of the Redoubt for a new use with a plain but fit-for-purpose structure. (*Strand 2*)

1950s to present

- *Level A significance.* The view from the Saluting Battery on the *terre-plein* eastwards towards Dover Castle allows a comparison between the current situation and that depicted by a number of artists in the past (e.g. William Burgess in the mid-1850s). The same view allows the great scale and form of Dover Castle and its dominating relationship with the town and port of Dover to be appreciated. Views eastwards, south-eastwards and southwards from the Drop Redoubt (eastern fort) still allow the reason why it was located there in the 1780s to be appreciated – to protect the town and port of Dover – as well as its relationship with other fortifications designed to defend Dover (e.g. Dover Castle, Archcliffe Fort and the batteries at harbour level).
- *Level C significance.* The Drop Redoubt is at the heart of the Western Heights Preservation Society's activities. (*Strand 5*)
- *INT.* Brick repairs (1980s) to the front elevations of the Officers' Quarters.

The North-East Line

1804-16

- *Level A significance.* The North-East Line (the partly infilled remains of a V-shaped ditch, originally accompanied by a profiled rampart with *banquette*) – constructed between the Drop Redoubt's eastern face and the escarpment at the south-eastern edge of the Heights – demonstrates the response by Ford and Twiss to the perceived risk that an attacking force might outflank the defences by moving down the eastern side of the Drop Redoubt. Offensive firepower was concentrated on the Drop Redoubt's *terre-plein* rather than on the Line itself (there were no gun rooms in the Drop Redoubt and therefore no ditch defence at this stage). The North-East Line is one of the stretches of Lines constructed to create an entrenched encampment or fortress on the hilltop to protect a large field force in garrison quarters who could not be accommodated in the Citadel and Drop Redoubt. (*Strands 1, 2*)

1858-67

- *Level A significance.* The replacement North-East Line – a ditch of awesome scale with a profiled rampart and *banquette* on its southern side constructed on a greater scale and on a slightly different alignment from the earlier North-East Line so it extended between the Drop Redoubt's eastern face and the cliff-edge (rather than the escarpment) to the south-

east – demonstrates the perceived inadequacy of its predecessor, and the contemporary concern to ensure the impregnability of the fortress’s circuit of defences on all parts of the hilltop. The Line lacked its own firepower, which was instead provided in the form of offensive and flanking firepower from the Drop Redoubt at *terre-plein* level and from its three East Gun Rooms, supplemented by infantry using muskets on the Line’s rampart. (*Strands 1, 2, 4*)

The South Lines

1804-16

- *Level A significance.* The South Lines (a rock-cut ditch of awesome scale and a profiled rampart with *banquette*) – connecting the north-east corner of the Citadel’s *tenaille* with the cliff-edge to the south – demonstrate the need perceived by Ford and Twiss to protect the Western Heights against an attacking French force advancing towards Dover along the Old Folkestone Road. In contrast to the situation on the North Lines and the North-East Line, where offensive and flanking firepower was provided from the *terre-plein* and casemates of the fortifications (the Citadel, North Centre Bastion and Drop Redoubt) rather than from the Lines, in the case of the South Lines the firepower was provided in the form of enfilade defence along the ditch from the South Lines Casemates constructed mid-way down the Lines, from where they afforded defence for the South Lines Bridge (depicted in a famous watercolour painted by J.M.W. Turner in 1826). The South Lines form part of the set of Lines constructed to create an entrenched encampment or fortress on the hilltop to protect a large field force in garrison quarters who could not be accommodated in the Citadel and Drop Redoubt. (*Strands 1, 2, 4*)
- *Level B significance.* The truncated remains (western end) of the two-storey South Lines Casemates demonstrate the position, scale and aspects of the form of the gun rooms designed to fire down the South Lines and provide defence for the South Lines Bridge and the adjacent entrance to the fortress. The two-storey form of the South Lines Casemates allowed the guns to achieve the angle required to fire down the slope. (*Strands 1, 2*)

1853-5

- *Level B significance.* The design and construction of the Upper South Lines Casemates (two pairs of two-storey gun rooms intended to fire westwards along the Citadel *tenaille*’s inner ditch and southwards along the South Lines’ ditch) demonstrates Martindale’s design solution intended to rectify a weakness in Ford’s 1804-16 defensive scheme, and the concern in the 1850s to strengthen the fortress’s defences on its south-western flank. Little is known of these gun rooms, including the extent of survival of interior elements. (*Strands 1, 2*)

The South Front, South Front Barracks and South Entrance

1804-16

- *Level C significance.* The buried archaeological remains of three underground water tanks of large capacity demonstrate the importance of maintaining a water supply for use by the South Lines Casemates and probably also military installations lower down the slope (e.g. the Military Hospital, Archcliffe Fort). When the South Front Barracks were constructed around them, the water tanks were probably adapted to serve them too. (*Strand 3*)

1858-67

- *Level A significance.* Additions to the South Front defences by du Cane demonstrate the contemporary perceived need to improve the defences on the south-western side of the

Western Heights, including an extension to the South Lines comprising a massive ditch with a counterscarp revetment of faced flintwork, and a *glacis* extending from the South Lines Casemates (only limited remains survive) around a caponier (no longer extant) before running north-eastwards beside the casemated South Front Barracks (no longer extant) to which it afforded protection, the South Parapet, and the massive South Entrance Ditch protecting a new, third Main Entrance to the fortress (the South Entrance or Archcliffe Gate, no longer extant). (*Strands 1, 2, 4*)

- *Level C significance.* The limited surviving remains of the north-western range of the casemated South Front Barracks in the cut-back chalk face of the hillside demonstrate aspects of the form and fittings of the former barracks (e.g. window openings, fireplaces). Buried archaeological remains may hold corroborative evidence of the plan of the casemated Barracks, and further up the slope that of the Canteen and Married Soldiers' Quarters with its related facility buildings (e.g. Laundry), the plans of which are known from documentary evidence. (*Strands 2, 3*)
- *Level A significance.* The massive South Entrance Ditch, and south of Archcliffe Gate (on St Martin's Flank) the four-tier rampart, berm with *chemin des rondes* (sentry path) and integral parapet for musketry, demonstrate the complexity and awesome scale of the defences afforded to the South Entrance as part of the South Front defences. (*Strands 1, 2, 4*)
- *Level B significance.* Buried archaeological remains of the South Entrance (Archcliffe Gate) may hold evidence of the plan and former defensive features (e.g. drawbridge mechanism) of the gatehouse constructed by du Cane as the new, third formal Main Entrance to the fortress in the context of the improvements to the Western Heights defences, and which for a century was such a distinctive feature on the skyline. (*Strands 1, 2*)
- *Level A significance.* Leading off the north side of Archcliffe Gate, the casemated Guard Room, Prisoners' Room and two Cells demonstrate the arrangements for controlling access and for detention at this Main Entrance to the fortress. The loopholes in the ditch elevation of the Prisoners' Room and Cells indicate the perceived need to be able to provide defence from these rooms in an emergency. (*Strands 2, 3*)
- *Level A significance.* At the north-western end of the South Entrance Ditch, the complex comprising three casemated Gun Rooms (with carronade embrasures, loopholes and *oculi* on the front elevation), an Expense Magazine to the rear, and associated Ablutions and Latrines (with loopholes in the front elevations), all linked by a passage (allowing access from Centre Road just north of Archcliffe Gate), shows the comprehensive, integrated nature of du Cane's design for the defences intended to protect the South Entrance and eastern end of the South Front. (*Strands 2, 3*)

1890-1959

- *Level C significance.* Victoria Hall, erected in 1898 by the Church of England Soldiers and Sailors Institute (with dedication stone laid by Lord Roberts of Kandahar VC, a Christian military hero) – when it consisted of a single-storey building containing a hall and room probably intended as a temperance alternative to a Canteen and Regimental Institute, with a Married Quarters for a civilian caretaker at the north-eastern end – illustrates the contemporary concern for soldiers' Christian moral welfare, and the provision of a range of supporting buildings for the garrison as the Western Heights ceased to be regarded as a land fortress and instead operated as a large barracks and mobilisation centre. Distinctions in the size and form of the windows between the hall and room (large tripartite casements), compared with the Married Quarters (smaller casements and a sash window for the bedroom), demonstrate the architectural response by the architect to the

different uses and lighting needs within the building. The eastern and central sections of the original building were gutted by fire in 2003. Victoria Hall nevertheless remains the last standing example of the wide range of institutional buildings provided for the garrison of the Western Heights. (*Strands 1, 3*)

- *Level D significance.* The 1903 two-storey wing added to the south-western end of Victoria Hall (containing a classroom on the ground floor and a Men's Educational Room and store room on the first room, lit by large tripartite windows), and the veranda along the south-eastern wall of the original building, to convert it to a school and educational establishment, demonstrate the increased demand for educational facilities on the Western Heights as the number of soldiers accommodated there rose. (*Strands 1, 3*)
- *Level C significance.* Warrant Officers' Married Quarters Nos 2-3, constructed in c. 1897 as NCOs' Married Quarters for the South Front Barracks (and now the only surviving NCOs' Married Quarters on the Western Heights), demonstrate the expectation of senior Warrant Officers (Sergeant Majors) to live with their families in the same relative comfort as their civilian counterparts (master tradesmen or senior foremen), and the weight which the army placed on encouraging respectable living. (*Strand 3*)
- *Level D significance.* The Motor Transport Shed – probably constructed during the Second World War – illustrates the need for a building in which to carry out the light repair of military vehicles at a time when the Western Heights was in use as a large barracks, so many vehicles were needed to move equipment and men. Its front elevation – originally open so vehicles could be driven in – has subsequently been infilled with brick between the piers, and the former skylights have been covered over with darker slates. (*Strand 2*)

1959 to present

- *INT.* The modern light industrial buildings and lorry shelter (associated with the haulage yard) on the area formerly occupied by the casemated South Front Barracks.
- *INT.* The row of 1960s houses and gardens (Western Close) on the site of the former South Front Barracks' Married Soldiers' Quarters.

The Grand Shaft and Grand Shaft Barracks

1804-16

- *Level A significance.* The Grand Shaft (a vertical shaft c. 43m deep sunk in the chalk containing three intertwined staircases, accessed via steps in a bowl-shaped hollow leading down from the Parade Ground) 'is a bold and imaginative solution to a particular problem, and it remains a singular piece of military engineering' (Coad 1995: 84). It illustrates the skill of the engineer (Twiss) in solving the problem of how to facilitate the rapid, safe movement of troops between the barracks up in the coomb and the town below. Internally, whether looking upwards or downwards, the magnitude of the shaft is awesome, whilst the pattern of light openings is of aesthetic value. (*Strands 2, 4*)
- *Level B/C significance.* The series of massive terraces (aligned east-west and north-south and cut into the coomb), on which the Grand Shaft Barracks and its ancillary buildings to the west were formerly located, in conjunction with the two long flights of steps which facilitated access to the buildings, demonstrate the layout and scale of the former Grand Shaft Barracks and, supported by the various surviving historic images and plans, evoke feelings of melancholy for the loss of the buildings that stood there. (*Strands 2, 4*)

1990s

- *Level D significance.* The recreated gateway and Guard House at the lower entrance to the Grand Shaft. (*Strand 3*)

The Military Hospital

Seventeenth to nineteenth century

- *Level C significance.* An area marked ‘Old Burial Ground’ west of the Military Hospital on the 1871-81 Dover Town Plan may still contain human remains, the analysis of which could shed light on the long-held local tradition that this was the site of ‘The Graves’, where plague victims were alleged to have been buried in the seventeenth century and which remained in use until the nineteenth century. (*Strand 3*)

1804-16

- *Level C significance.* Buried archaeological remains of the former Military Hospital (built 1804) may hold corroborative evidence of the plan of this building, which was constructed at the beginning of the main period of improvements and additions to the fortress on the Western Heights. (*Strands 1, 3*)

1860s/70s to 1960s

- *Level C significance.* Buried archaeological remains of the additions to the Military Hospital itself, the two West Hospital Huts, East Hospital Hut and the Infectious Disease Hut flanking the Military Hospital, and of its Married Soldiers’ Quarters further uphill (built c. 1864-70s), may hold corroborative evidence of the plan of structures constructed to address the deficiencies in the accommodation and facilities identified by the Army Medical Department in 1860 and 1864. Similarly, buried archaeological remains of the Recreation Ground in front of the Hospital may hold evidence of former planting arrangements and potentially could shed light on the rehabilitation of sick and injured soldiers passing through the Western Heights. (*Strands 2, 3*)
- *Level C significance.* Valued by people whose relatives are documented as having been treated or who died at the Military Hospital. (*Strand 5*)

1960s to present

- *INT.* The light engineering buildings on the site of the former Military Hospital and its Married Soldiers’ Quarters.
- *INT.* Channel House (built 1979/80, replacing a 1960s Engineering Works on the site of the former Military Hospital’s Recreation Ground).

The Citadel Battery

1898-1945

- *Level B significance.* As part of counter-bombardment defences designed to ward off enemy shipping in the Channel threatening to shell the port of Dover, the Citadel Battery (with its less well-preserved partner battery at Langdon Cliff) demonstrates the rapid evolution of artillery defence technology in the late nineteenth century. Its completeness means it illustrates particularly well the form of a new generation of coastal batteries with a low profile, concrete *barbette*, *glacis*, unclimbable fence, three gun emplacements (with remains including the ruined but still intelligible loading platform in emplacement III), underground magazines, stores and detachment shelters, and a battery command post. (*Strands 1, 2*)

1939-45

- *Level C significance.* One of a group of coastal batteries around Dover which, unlike most other examples around the mainland coast, saw significant action in the Second World

War, the Citadel Battery evokes feelings of pride in and empathy with the soldiers who served there. (*Strand 5*)

The Battery on the North Lines

1893-1903

- *Level C significance.* Constructed in 1893 on the ridge between the Drop Redoubt and the North Entrance where it could command the valley to the north, the Battery on the North Lines demonstrates the perceived need to bolster the Drop Redoubt landward defences even though the Western Heights was ceasing to be regarded as a land fortress and instead was being used a large barracks and mobilisation centre. (*Strands 1, 2*)
- *Level C significance.* The screen bank topped with a hedge and the screen of trees together demonstrate the measures designed to protect the rear of the Battery and are thought to be the only examples on the Western Heights of deliberate planting as part of military engineering. (*Strand 2*)

1960s to present

- *INT.* The house constructed in the 1980s close to the North Lines at the western end of the Battery.

The Drop Battery

1853-86

- *Level C significance.* The Drop Battery (with positions for eight guns), built south-east of the Drop Redoubt close to the cliff edge overlooking the Western Docks, illustrates the perceived need for a new coastal battery to help protect the port and harbour of Dover after the second of the three invasion ‘panics’ in the 1840-50s. The circular emplacement (‘C’) constructed on top of the new North-East Line (built 1859-62), and the magazine (‘G’) built on the flank under its rampart, together demonstrate the design response to the truncation of the Battery’s north-eastern edge and blocking of its field of fire in that direction by the construction of the new North-East Line. The disarming of the Battery in 1886 illustrates the faith placed in St Martin’s Battery, newly constructed nearby. (*Strands 1, 2*)

St Martin’s Battery/Western Heights Battery

1874-c. 1902

- *Level B significance.* One of several coastal batteries built at Dover in the early 1870s, St Martin’s Battery illustrates the importance attached to defending the developing harbour and port of Dover from seaward bombardment (cf. Hospital, Shoulder of Mutton and Shot Yard Batteries in Dover Castle, and at Archcliffe Fort). (*Strand 1*)
- *Level B significance.* The form of St Martin’s Battery as constructed in 1874-7 illustrates the engineers’ design response to the perceived vulnerability of coastal defences to ship-borne artillery – a curved trace and *glacis* for low visibility, three gun emplacements with shell stores and cartridge stores nestled in between and on the ends of the Battery, a lamp store at one end, an artillery store dug into the hillside for protection beyond the covered way, and a magazine built at an even greater distance for safety reasons. (*Strand 2*)

1940-7

- *Level B significance.* The hasty adaptation of St Martin’s Battery in 1940 (forming Western Heights Battery) – for example the addition of spartan crew shelters – to accommodate outdated 6-inch guns for extra harbour defence demonstrates the concept of ‘emergency batteries’, which were widely built in anticipation of a German invasion. The concrete

roof with camouflaging superfluous brickwork and bombproofing earth covering reflects the concern for defence from air attack. The integration of a Type 23 pill-box for both close ground defence and air defence illustrates the nature and perceived imminence of the invasion threat. (*Strands 1, 2, 3*)

1874-1947

- *Level C significance.* Views of the St Martin's Battery/Western Heights Battery complex from harbour level allow its former roles to be appreciated.

The South Front Battery

c. 1898-c. 1906

- *Level D significance.* Buried archaeological remains of the South Front Battery may hold evidence of the exact location and plan of this poorly documented Battery. Equipped with three 6-inch BL guns, it demonstrates the efforts made to increase the coastal artillery defences protecting the harbour and port of Dover during this period. Construction of the South Front Battery was allegedly the reason why the Citadel's *tenaille* was modified (its outer ditch was infilled for three-quarters of its original length and the *tenaille* was cut away, leaving a 45 degree slope on the south side). (*Strands 1, 2*)

The Gun Shed

Late 1850s to present

- *Level C significance.* The Gun Shed (originally with an open western elevation and twelve parking bays), built east of Centre Road near the junctions of roads and the RE Yard, is where mobile artillery pieces on wheeled carriages were stored in readiness to supplement fixed guns on the Western Heights. It is the only surviving building on the Heights designed for the storage of mobile artillery pieces and illustrates the transition from reliance on fixed defences to mobile field forces during the later nineteenth century. Adapted for use as a Cart Shed for the nearby RE Store by 1904 (from which period the 'Washing Platform' granite sets survive *in situ*), alterations in 1937 to convert the building for the repair and storage of motor vehicles retained the bays on the western elevation although lintels were raised and doors were replaced, and the interior was subdivided. (*Strands 1, 2*)

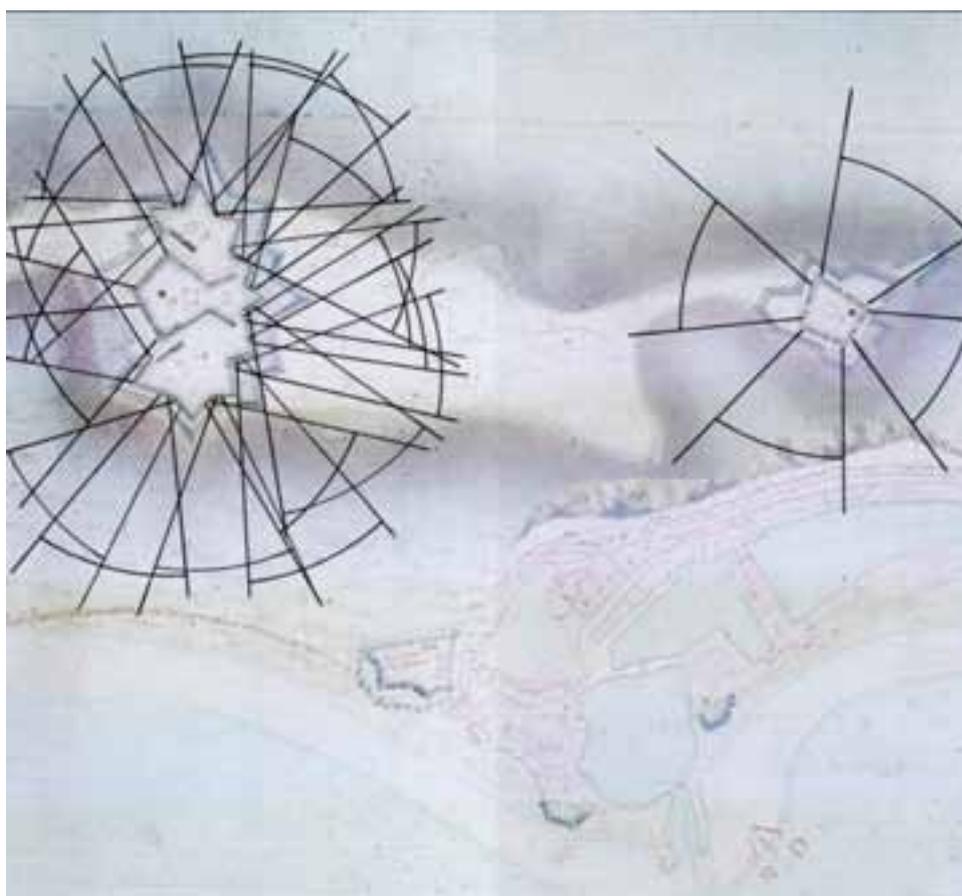
The Fortress Interior: ground between the western fort (Citadel) and eastern fort (Drop Redoubt)

1780s-1950s

- *Level B significance.* The significance of this area lies in its ability to demonstrate two underpinning defensive principles – fields of fire designed by Hyde Page, and maintained by Ford and Twiss, du Cane and Jervois and subsequent military engineers to defend the ridge between the western fort (Citadel) and the eastern fort (Drop Redoubt); and the creation of an entrenched encampment or fortress on the Heights by linking the independent fortifications with defensive Lines, and the fortifications with the cliff edges to the south and south-east, which could protect a large field force in garrison quarters (military tents) who could not be accommodated in the forts. Both objectives required the ground between the fortifications to be kept free of permanent buildings. (*Strands 1, 2*)

The fundamental components of Hyde Page's ambitious scheme of defences for the Western Heights were two independent forts (a large, multi-salient western fort, and a smaller, eastern fort with a simpler trace), supplemented by detached outworks

protecting the ground between them and to the sides. It is clear from Hyde Page's proposal and working plans of 1780-1 and 1784 that he intended both forts to have unobstructed 360 degree fields of fire. His detailed plan drawn in 1784 of the defences under construction depicted the western fort with gun positions on all the salients, including those closing the gorge (eastern face) of the fort, which were designed to have overlapping fields of fire covering the ridge to the east towards the Drop Redoubt. The eastern fort was depicted with gun positions on all four of its faces, including the two faces covering the ridge to the west towards the Citadel. The ground between and around the fortifications was to remain free of structures which would impede the fields of fire and potentially provide a safe haven for an attacking force. Hay's survey plan drawn in 1787 depicting the progress of construction reveals a close correspondence with what Hyde Page had intended.



Plan by Hyde Page of the Western Heights showing the western and eastern forts and the detached outworks under construction, drawn 1784 (extract from NA: MR 1/1345); the intended fields of fire in black have been added by the author

Plans of 1810-13 indicate that when Ford and Twiss updated and completed Hyde Page's forts as part of a series of improvements to the defences on the Heights (1804-16), they equipped the *terre-plein* of the Citadel (western fort) with a total of twenty-one gun positions – twelve on the western face, four on the northern face, and five on the eastern face (i.e. the simplified gorge, as amended by Ford to comprise two long curtains and a central redan). Of the gun positions on the eastern face, four were placed at the northern end of the gorge to cover the approach to the Citadel's Main Entrance, whilst one was on the redan; together they therefore covered the ground to the east along the ridge towards the Drop Redoubt. In converting the four-sided eastern fort into a pentagonal

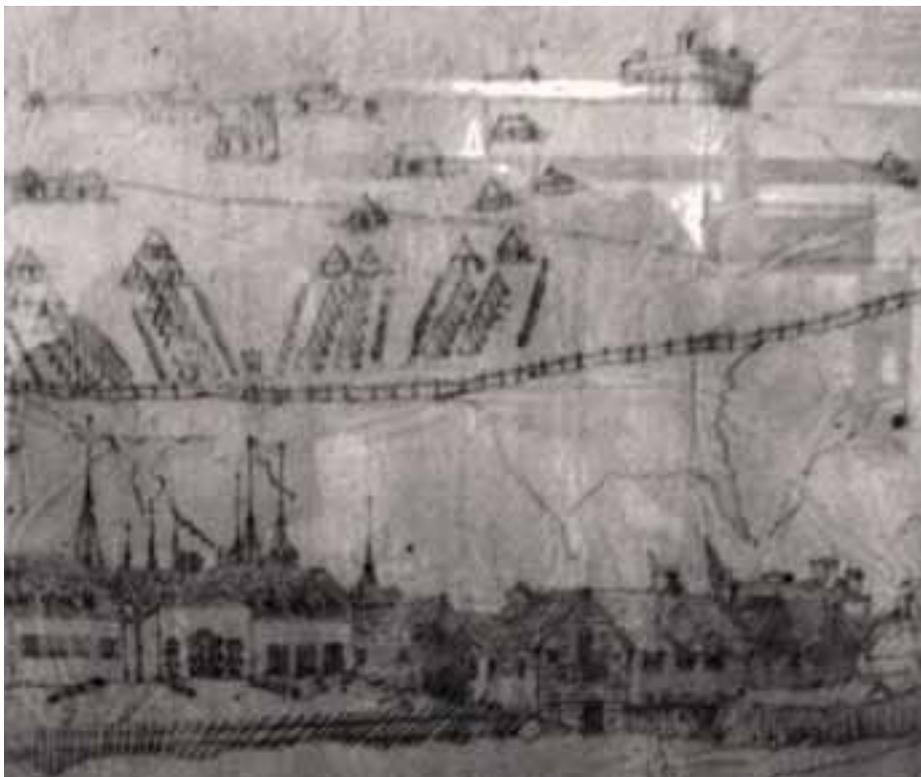
Drop Redoubt, Ford created twelve gun positions on the *terre-plein*, located on all except the southern face, with four of those twelve gun positions being on the western face to cover the ridge towards the Citadel. A third, independent fortification between the two forts was constructed – the North Centre Bastion, an artillery work designed to defend the land front by providing flanking fire along the northern slope of the Heights between the Citadel and Drop Redoubt. Its rear (within the fortress interior) was defended by artillery on the *terre-plein* of the Citadel's eastern face. The only structures constructed within the fortress interior during the 1804-16 period appear to have been those belonging to the Tool Yard south of (and protected by) the North Centre Bastion, and the timber stables and works compound structures just inside the North Entrance at the junction between roads and therefore ideally placed for communication with the fortifications. All would have been sufficiently insubstantial to have been capable of being dismantled quickly in a period of emergency.



Plan showing the Western Heights' entrenched encampment or fortress as completed by Ford, drawn c. 1810-12 (extract, NA?)

Whilst Hyde Page's forts and detached outworks were being constructed, military encampments on the Heights had to rely on the steep cliffs, forts and detached outworks for any protection. Ford and Twiss rectified this situation by constructing Lines (a massive ditch and profiled rampart with *banquette*) to link the three main fortifications, and to connect the Citadel to the cliff edge to the south and the Drop Redoubt to an escarpment to the south-east which, together with the cliffs along the southern edge, transformed the Heights into an entrenched encampment or fortress. In 1803 Twiss proposed '... a system of fortification, so as immediately to form this position into an

intrenched camp where a corps of 5,000 or 6,000 men might remain in security, and with tolerable convenience, and in readiness to move against an enemy wherever required' (NA: WO 55/778). In other words, the main purpose of the Lines was to protect a large field force in garrison quarters (military tents) who could not be accommodated in the forts. Depictions from the later eighteenth century onwards indicate that such encampments, drill and parades did indeed take place on the Heights outside the forts.



Military encampment on the southern slopes of the Western Heights, with the eastern fort on the hilltop, pen and ink drawing c. 1796 (extract of d16841 Dover Museum)



Dover Castle from the Heights, watercolour by Captain Thomas Lloyd Durrant (fl. 1790-1830), painted 1808 (FA1990.23.25 Hampshire Museums Service); the artist is thought to have been standing by the coal yard (wall on the left) at the works compound

Regiments returning from the Crimean War stationed at Dover in 1856 camped on the Heights: 'the 42nd Royal Highlanders, partly in the Citadel, and the remainder encamped on the Citadel

plain; the 93rd Highlanders on the South Lines; the 41st regiment, on the slopes to the westward of the Heights barracks; the 44th in Archcliffe Fort meadow; the 49th in the Hospital meadow; and the 79th Cameron Highlanders, quartered in the Castle barracks' (Batcheller 1857: 94-5). Some of these were depicted in paintings by William Burgess.



Camp of the 93rd Highlanders, Western Heights, Dover, undated (probably 1856) coloured lithograph from a painting by William Burgess (1805-61)



A regiment on parade on the fortress interior at the Western Heights, looking east, painting by William Burgess (1805-61), undated but probably mid-1850s (d00853 Dover Museum)

The principal priority of Jervois (Assistant Inspector General of Fortifications) in his strategy for improving the Western Heights' fortifications appears to have been to make the circuit of defences supremely impregnable through a process of remodelling and addition. Completing the North Lines and North-East Line was at the top of his list of proposals put forward the site in 1858: 'What is chiefly required here is to complete the North Lines – to close the rear of the position between the Citadel and the Drop Redoubt by scarping away the chalk ... to make a cut in the chalk to connect the Drop Redoubt with the cliff, ...' (NA: WO 33/5-10). Improving inter-visibility between the Citadel and the Drop Redoubt was also regarded as a priority: in the *Report of the Commissioners appointed to consider the defence of the United Kingdom 1860*, it was reported that amongst the works in full progress was 'the formation of the ground between the Citadel and Drop Redoubt, so as to be seen from the former work'. The exact nature of these works is not clear – it may have consisted of localised smoothing of irregular terrain that had been impeding views across the interior. An 1871 plan of the Citadel, and the 1881 Dover Town Plan, both show a very low, sculpted counterscarp bank mirroring the line of the Citadel's gorge and extending for a short distance inside the North Lines and Citadel Road.

When the Citadel was improved in 1858-67 by du Cane and Jervois, the majority of the gun positions were on the western and northern faces, but three were on the gorge rampart (all of them north of the new south-eastern Main Entrance and designed to protect the ridge to the east). At the Drop Redoubt, the *terre-plein* was remodelled for eleven gun positions to cover the land front, of which three positions faced westwards covering the North Lines along the ridge. By 1861, du Cane's remodelling of the North Entrance was well under way with its complex sequence of defensive devices, making this a very secure area at the junctions of roads for the works compound to be located, which now became the RE Yard, and to which a Wagon Shed was added. Such was the convenience of and level of protection afforded to this area that a few buildings serving the whole garrison were also built here during this period on its northern side (a Church and School, and a house containing Schoolmaster's Quarters and an Infants School). This suggests that the benefits of having the RE Yard and garrison buildings in this area outweighed the fact that it was technically still within the area covered by the fields of fire from both the Citadel and Drop Redoubt, which area was otherwise still being kept free of permanent structures. The 1881 Dover Town Plan indicates that the area where the Tool Yard had been located in 1804-16 (south of the North Centre Bastion) had been cleared and was open ground again.

Sometime probably during the late nineteenth or early twentieth century, four broad terraces appear to have been created on the fortress interior (the divisions between them running roughly north-south), set back from the North Lines and the North Centre and Detached Bastion and descending gently downhill from the Citadel eastwards to Centre Road. They are present on a photograph taken in 1914-18 which indicates that sports pitches had been laid out for use by the men accommodated at the barracks on the Heights. Access routes leading to the North Centre Bastion and to the western end of the area north-west of Centre Road (containing the garrison buildings) separated the terraces. These photographs also reveal that the army was still keeping the fortress interior free of buildings. Troops were also still being assembled for parade there during the First World War.



The East Surrey Regiment assembled on the fortress interior, looking west, photo taken 1914-18 (East Surrey Regiment, Woking)

During the Second World War, it is thought that fear of air attack sometimes caused parades to be held in places less visible from aeroplanes (e.g. in the Western Outworks' ditches) than the vast open space of the fortress interior. Early in the war, a camp of hutments and a Heavy Anti-Aircraft Battery were constructed immediately east of the Citadel, but they were promptly removed when the Battery was no longer required a few years after the war ended.



The Western Heights, looking east, showing the terraces (containing sports pitches) within the fortress interior, photo taken 1939

It wasn't until after the army had left the Heights in the 1950s, the Citadel and part of the Western Outworks had been transferred to the Prison Commissioners (1954) and the remaining land conveyed to Dover Corporation (1960s), that some development took place on the fortress interior. In the 1950s, an arc of houses was built east of where the camp of hutments had been during the war, and in the 1960s immediately further east a row of houses was erected to accommodate the Borstal officers (Heights Terrace). Most of the arc of houses was demolished in the mid-1970s; those remaining at the north-western and southern extremities became Citadel Crescent, with a car park on its western side. The sports pitches were extended northwards, for which purpose the rampart of the North Lines in that area and the gorge of the North Centre Bastion were flattened.

In 1962, on the area north-west of Centre Road, the garrison Church and School, Infants School and RE Yard were demolished. By 1966, houses had been built around the perimeter of this area on all but the west side (Knights Templars, their gardens on the flattened rampart of the North Lines on the northern side), so at least retaining the sense of continuity with the fortress interior. No other major development has taken place subsequently on the interior.



The North Centre and Detached Bastion, terraces, and the Knights Templars houses, looking north, photo taken 1978

The network of military roads

1780s to present

- *Level B significance.* The South Military Road and North Military Road, formalised as a military road in the 1780s and ascending the slope of the Western Heights mid-way between the western and eastern forts created by Hyde Page, demonstrates the contemporary need for a road to link the low road and high road running east to west

from Folkestone to Dover to enable the CRE (and other engineers based at Archcliffe Fort), materials, labourers and troops to be transported efficiently to the forts and outworks under construction. This route was amended slightly by Ford in 1804-16 when he was completing the fortress, as part of which he constructed a main entrance at the southern end of the road (by the South Lines Bridge) and at the northern end (North Entrance), and further roads leading from the South Military Road towards the Citadel and to the Drop Redoubt. A third main entrance was added and the central section of the South Military Road was renamed as Centre Road (and its route in the area approaching the North Entrance was amended) by du Cane in 1858-67. This simple, efficient network of military roads on the Heights remains virtually unaltered to this day and forms an important part of the character of the fortress interior. (*Strand 2*)

1950s to present

- *INT.* Houses and their gardens built on the fortress interior since the 1950s (Heights Terrace, Citadel Crescent and Knights Templars).
- *INT.* The car park immediately east of the Citadel (for use by HMPS).
- *INT.* The section of new road constructed in the 1960s to join Centre Road directly with the North Military Road after a stretch of the North Lines had been removed east of the North Entrance, which was thereby by-passed.
- *INT.* Gabions constructed in *c.* 2010 along the northern edge of Citadel Road.

The Round Church

Twelfth century AD

- *Level C significance.* The limited above-ground remains of a small round church or chapel probably built in the twelfth century AD demonstrate the plan of one of a small number of round churches of varied size (this being the smallest of the group with Little Maplestead in Essex) built in England mostly in the twelfth century and reflecting the traditions of previous centuries (notably the Roman *mausoleum*). Most comprised an inner arcade of pointed arches on piers supporting a *triforium* and clerestory beneath a conical roof, with a lower roof at *triforium* level above a circular aisle or ambulatory, following the plan of the Rotunda of Constantine's Church of the Holy Sepulchre in Jerusalem, but some (including the round church on the Western Heights at Dover and St Giles in Hereford) did not have an aisle/ambulatory. Documentary evidence links some of these round churches to the Knights Templar (e.g. the Temple Church south of the Strand in London, Temple Bruer in Lincolnshire, St Michael's Church in Garway Herefordshire) and others to the Knights Hospitaller (e.g. Priory of St John of Jerusalem in Clerkenwell, St Giles in Hereford, Little Maplestead in Essex), whilst there is currently no evidence that others were associated with either the Templars or the Hospitallers (e.g. the two round churches dedicated to the Holy Sepulchre in Cambridge and Northampton, and that on the Western Heights at Dover). Moreover, excavation has demonstrated that not all the Templars' churches were round.

There is documentary evidence that the Templars did indeed have possessions in Kent forming a block extending from the River Medway to Dover – the baillie of Kent was centred on three manors comprising Strood on the Medway, Temple Waltham near Chilham, and Temple Ewell north-west of Dover where there was a preceptory (the latter confirmed by excavation). The negotiations which took place between John and the Pope's legate Pandulph and resulted in a charter being signed on 15 May 1213 handing over the kingdoms of England and Ireland to the Pope (as described by the thirteenth-century chroniclers Roger Wendover and Matthew Paris) were reported as having taken

place 'at the house of the Templars near Dover' by Paris, which may mean the preceptory at Temple Ewell, but has been taken by some authors to mean a house on the Western Heights. Antiquarians from the sixteenth century onwards (e.g. Leland, Lambarde) wrote of the existence of a 'place' or 'house' of the Templars on the Western Heights. Following excavation of the round building on the Western Heights in the early and mid-nineteenth century, and some years later the publication of a plan of the remains, they were interpreted as being those of a round church. Some authors continue to maintain that the round church on the Western Heights belonged to the Templars (e.g. Lord 2002), but there is currently no evidence that this was so. Nor is there convincing evidence of the existence or location of a Templars' house on the Western Heights.

- *Level C*. Buried archaeological remains beyond the excavated area of the round church may hold evidence relating to its context and the construction date, original role and subsequent alteration of the building itself, which are all poorly understood at present.

CONSERVATION ISSUES AND RECOMMENDATIONS

THE AIMS OF CONSERVATION

The Government's 'overarching aim', according to *Planning Policy Statement 5* (published in 2010), is that 'the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations' (Introduction, paragraph 7). This was reiterated in the emerging *National Planning Policy Framework* (draft of July 2011). Conservation is defined in *PPS 5* as 'the process of maintaining and managing change to a heritage asset in a way that sustains and where appropriate enhances its significance' (Annex 2, Terminology).

Planning Policy Statement 5 states that 'Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting' (HE9.1). It also explains that 'Elements of the setting of heritage assets may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral' (Annex 2, Terminology). Both *PPS 5* and the draft *NPPF* require that, 'When considering applications for development that affect the setting of a heritage asset, local planning authorities should treat favourably applications that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset' (*PPS 5* HE10.1, draft *NPPF* paragraph 188).

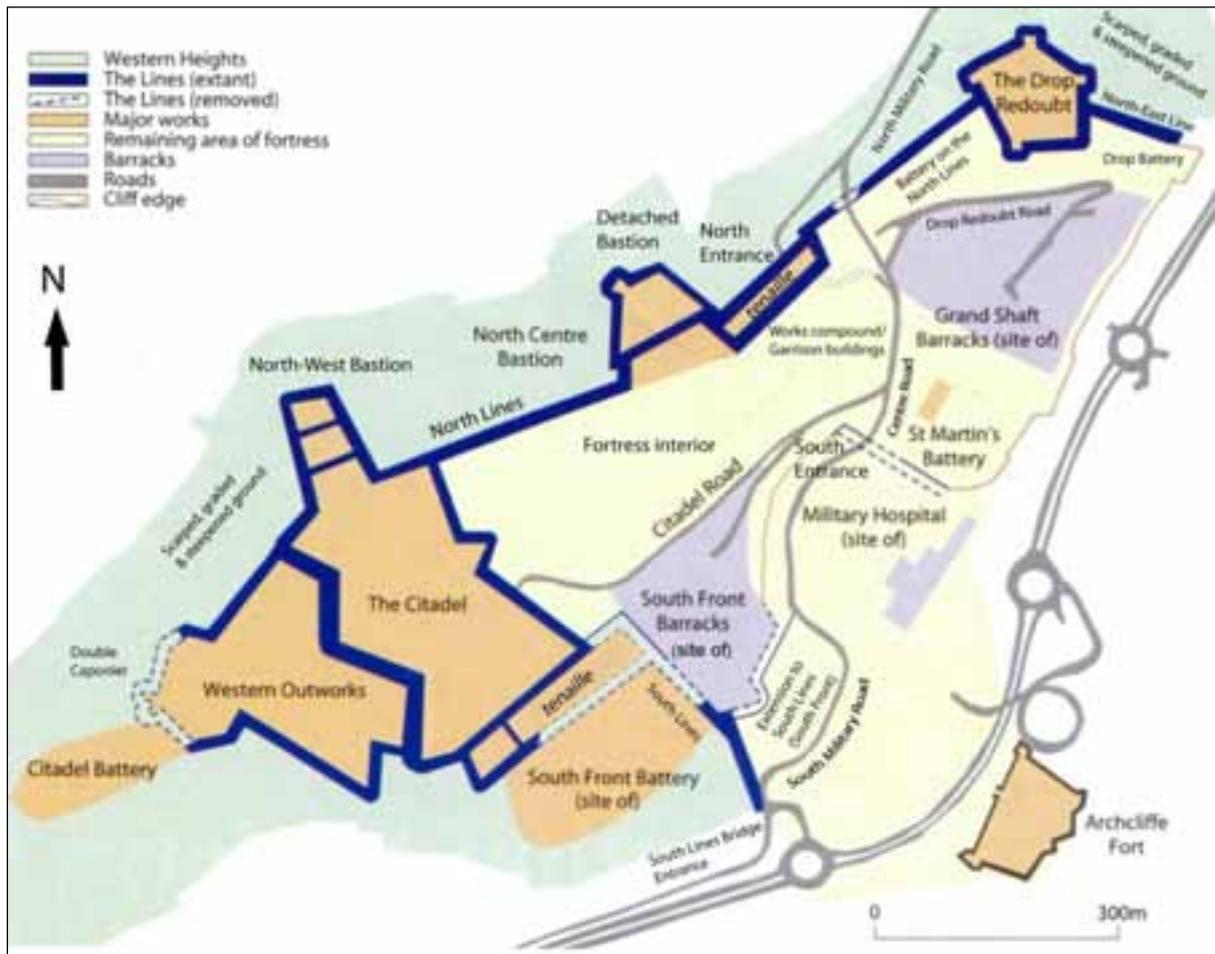
THE APPROACH

Significance should be regarded as fundamental to the conservation management of the built heritage of a site. *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment* (English Heritage 2008) states, 'Every reasonable effort should be made to eliminate or minimise adverse impacts on significant places. Ultimately, however, it may be necessary to balance the public benefit of the proposed change against the harm to the place. If so, the weight given to heritage values should be proportionate to the significance of the place and the impact of the change upon it' (paragraph 162).

As the assessments of significance have been made in this Built Heritage Conservation Framework without regard to conservation management issues (in line with standard practice), there is no simplistic link between the level of significance and subsequent conservation recommendations, but significance is the most important of the factors which have been considered when the recommendations have been developed. The general principle which should be applied is that the more significant a site, component or element is, the greater weight should be given to its preservation. It is not appropriate to state categorically a level of significance including and above which there should be a presumption in favour of retention, but as a general guide it is suggested that this might rest at Level C or some significance. It should *not* be presumed that a site, component or element of Level D or little significance should or can be demolished – each case should be considered on its merits and according to the usual tests and procedures.

In contrast to a Conservation Plan, where *conservation policies* are usually derived from the issues affecting significances, in this Built Heritage Conservation Framework *conservation recommendations* have been made which are intended to be used to inform the conservation management of the Western Heights at a strategic level.

CONSERVATION ISSUES AND RECOMMENDATIONS RELATING TO THE WESTERN HEIGHTS



Plan of the Western Heights (RCHME, with additions by the author)

A summary of the main conservation issues affecting the Western Heights and recommendations to address them are presented here, organised according to issues which relate to the whole site and then by component, generally by theme but not in order of priority.

1.0 The whole site

Almost the whole of the Western Heights was designated as a Scheduled Monument in 1962 (the Schedule entry was last amended in 2001 – see Appendix I, ‘Fortifications, Roman lighthouse and medieval chapel on Western Heights’). In general, the extent of the Scheduled Area appears to be logical and appropriate. The site of the Military Hospital (including the Hospital Huts, Recreation Ground and Married Soldiers’ Quarters), however, was not included in the Scheduled Area, even though the Military Hospital was an integral part of the Western Heights complex. Further research is required to ascertain whether buried archaeological remains survive, the extent of their survival and their significance, and therefore whether there is sufficient justification for extending the Scheduled Area to include the site of the Military Hospital.

Recommendation

1.1 Informed by further research, consideration should be given to extending the Scheduled Area on the Western Heights to incorporate the site of the Military Hospital.

A number of elements ('features') and the ground beneath some are excluded from the Scheduling, which will need to be taken into account when considering whether Scheduled Monument Consent is required in the context of planning works.

Recommendation

1.2 Exclusions from the Scheduling on the Western Heights should be taken into account when planning works.

There are a number of errors in the History section of the Scheduling documentation. Given that this is consulted in Scheduled Monument Consent applications, and frequently cited by authors in relation to the site, it would be desirable for these errors to be corrected on the official Scheduling documentation.

Recommendation

1.3 Errors in the History section of the Scheduling documentation for the Western Heights should be corrected.

There are just two Listed Buildings on the Western Heights, both of which were designated in 1998 (see Appendix I): the Citadel's Officers' Quarters (listed as the 'Administration Block, Dover Young Offenders' Institution', Grade II) and the 'Grand Shaft stairs and attached railings' (Grade II). The Details section in the Listing documentation for both the Citadel's Officers' Quarters and the Grand Shaft contains some errors, such as that there are former stables in the Officers' Quarters' basement, and that the Grand Shaft was designed by Hyde Page (rather than Twiss). Since the information in the Listing Details is consulted in Listed Building Consent applications and frequently cited by authors, it would be desirable for the errors to be corrected on the official Listing documentation.

Recommendation

1.4 Errors in the Details section of the Listing documentation for the Citadel's Officers' Quarters (Administration Block, Dover Young Offenders' Institution) and the Grand Shaft stairs and attached railings at the Western Heights should be corrected.

Most of the Western Heights is a Conservation Area (see map in Appendix I). Its extent is generally slightly greater than that of the Scheduled Area. A notable omission is the site of the Military Hospital, where terraces survive on which the buildings of the Hospital and its Married Soldiers' Quarters formerly stood and which contribute to the historic character of this area. A survey of the area would enable the extent of survival of the terraces to be assessed, whether this area is still one of 'special architectural or historic interest' (despite modern development there) and therefore whether there is a case for extending the Western Heights Conservation Area to include this area.

Recommendation

1.5 Consideration should be given to extending the Western Heights Conservation Area to incorporate the site of the Military Hospital.

Perhaps the over-riding built heritage issue for the Western Heights concerns their coherence as a fortified complex that adds up to more than the sum of its parts. Retaining that sense of a whole entity should be the main strategic aim of conservation management at the site. Wholeness does not require a single use, nor is the imposition of a single new character over the military landscape of the Heights desirable, but it is important that future uses, if they are to be sustainable, are congruent and enable the unique sense of place to persist.

Recommendation

1.6 The conservation management of the Western Heights should seek to retain their coherence as a fortified complex and the sense of the site as a whole entity.

The BHCF has highlighted the increasingly urgent need for a vision for the future use or uses of the Western Heights and a strategy for the site's integrated conservation management to be drawn up and implemented. It has pointed to the previously under-appreciated very high level of significance of the Western Heights' built heritage (the site as a whole and its main components were assessed as being of Level A or exceptional significance, and many of its other components and elements as being of Level B or considerable significance). The BHCF has also identified a number of pressing conservation issues which need to be addressed so that the site's significances are at least preserved and if possible enhanced (including the need to encourage owners to repair and maintain the site's built fabric, to manage the vegetation, and to find one or more new, appropriate uses for the site). Given the high level of concern and enthusiasm amongst various communities for preserving the Western Heights and facilitating visitor access to the site, it may also be beneficial to set up a DWH Forum which could operate similarly to that at Chatham (e.g. holding periodic meetings) with a view to allowing informed debate amongst a wider community of stakeholders.

Recommendations

1.7 A vision for the future use or uses of the Western Heights, and a strategy for the site's integrated conservation management, should be drawn up and, following public consultation, adopted by stakeholders and implemented.

1.8 Consideration should be given to setting up a DWH Forum to allow informed debate about the Western Heights amongst a wide community of stakeholders.

Production of the BHCF has pointed to the need for a range of further assessment to inform the conservation management (including planning of future uses) of the Western Heights. This assessment may cover gaps in relation to understanding and significance (e.g. the nature and extent of grading works carried out in the fortress interior in the 1860s, and when and why the fortress interior was terraced probably in the late nineteenth or early twentieth century), as well as the survival of elements (e.g. the extent of survival of the profiled rampart and *banquette* of the Lines), and applies at the site-wide and component level. At the component level, in order to lessen the reliance on the RCHME Survey Reports which are being used as management documents (for which they were not intended), for each of the site's components a Conservation Plan should be prepared, which is consistent with the approach taken in the BHCF and contains a detailed Gazetteer covering the development, significance and conservation issues and policies relating to all the elements, as well as setting and views. Priority should be given to those components where the overall need is perceived to be greatest, such as where change has the highest potential to harm significance.

Recommendations

1.9 Where gaps in relation to understanding, significance and the survival of elements at the Western Heights have been identified by the BHCF, priority for their assessment (e.g. through documentary research, survey, field evaluation) should be given to addressing those aspects which are required to inform the conservation management of the site or component.

1.10 A Conservation Plan (with detailed Gazetteer covering all elements, setting and views), consistent with the BHCF's approach, should be prepared for each of the Western Heights' components to inform its conservation management.

Although nine survey volumes relating to the built heritage of the Western Heights were produced by the RCHME, not all the components were studied in detail (e.g. the North Lines, North-East Line, South Lines, South Front Battery, fortress interior, Military Hospital). Nor was the synthesis volume for the whole site ever produced (Volume 1 of the intended series of ten). Whilst the BHCF has sought to go some way to remedying this lack of synthesis, it remains the case that the production of Survey Reports for the components of the site not covered by the

RCHME (and adopting a similar approach to the RCHME's) would be extremely useful for the conservation management of the site.

Recommendation

1.11 Survey Reports for the components of the Western Heights not studied in detail by the RCHME should be prepared following the RCHME approach for consistency.

Although the RCHME prepared for its Survey Reports plans of the components of the Western Heights which it studied, and each Survey Report contained a site plan indicating the location of some of the Heights' components, it did not include in any of the nine Survey Reports (and has not subsequently published elsewhere) a plan of the whole site showing all the components. Compilation of a plan of the site as a whole, showing the location of all the components identified by the RCHME, would facilitate the interpretation of the wide range of documentation which relates to the site, and comparison with maps depicting the current use of the site's components, and thereby the Western Heights' conservation management.

Recommendation

1.12 A plan of the Western Heights as a whole showing all its built heritage components, as identified by the RCHME, should be drawn up to facilitate the site's conservation management.

Historic plans of the Western Heights indicate the former presence of defences and buildings which are no longer extant above ground, but of which buried archaeological remains may survive (e.g. 1779/80s fieldworks and outworks, loopholed Guard Houses in the western and eastern forts, Grand Shaft Barracks, South Front Barracks and Military Hospital). Furthermore, the possibility of previously unrecognised buried archaeological remains (including some pre-dating the military occupation) exists across the whole of the Western Heights. Such remains have the potential to cast light on matters such as the unresolved question of the presence of buildings associated with the Templars on the Heights, or the function of buildings shown on early historic depictions such as that produced by Thompson in 1538. In addition, archaeological remains may survive within buildings and structures, being either still visible or concealed (e.g. remains of racks, gun floors, water supply, fitted furniture, decorative schemes, boot scrapers). Such archaeological remains (whether buried, concealed or visible) may contain information for example about various aspects of the form and use of the fortifications and buildings as well as the lives and manifestations of the differentiation by rank of the soldiers and officers at the Heights. The possibility of the survival of archaeological remains, and the need to follow appropriate procedures for their examination, recording and future management, as well as to assess their significance, will need to be part of the planning of works at the site.

Recommendation

1.13 When planning works at the Western Heights, the possibility of the survival of archaeological remains should be taken into account, with appropriate procedures followed for their examination, assessment, recording and management.

Whilst components and elements at the Western Heights have been demolished over the years (notably the Grand Shaft Barracks and South Front Barracks), there is still a considerable number of significant historic buildings and structures capable of being used or found appropriate new uses once repaired (e.g. casemates in the Drop Redoubt and Citadel). When considering how to accommodate new uses at the site or in a component, where possible the existing buildings and structures should be carefully adapted and re-used, taking into account the level and nature of their significance as well as the appropriateness of the proposed new use for allowing significance to be appreciated. New buildings which contrast boldly with the historic military buildings and structures in terms of their materials, scale and form, can compromise the setting, views, character and coherence of components and elements. Pastiche designs employed

on new buildings can be misleading and detract from the setting of historic buildings and structures. In contrast, sensitively located and designed new buildings which are in keeping with the surviving significant historic buildings and structures (e.g. following the principles set out in *Building in Context*, issued by English Heritage and CABI in 2001), or new interiors in buildings and structures where these have been removed, can preserve or enhance significance. Elements inserted in order to facilitate access (e.g. lifts) should be discreet so they do not detract from the ability to appreciate the design and layout of significant military elements.

Recommendations

1.14 Where appropriate, significant historic buildings and structures at the Western Heights should be carefully adapted and re-used to accommodate new uses in ways which allow significances to be preserved or enhanced and appreciated.

1.15 When new buildings are constructed at the Western Heights, they should be located and designed to retain the significances, settings, views, character and coherence of the components and elements.

Up to now, there has been no major development on the ground surrounding the Western Heights' fortifications. Hence it is still possible to appreciate the comprehensive nature of the defensive scheme achieved by Ford and Twiss in 1804-16 on the Heights, comprising Lines linking the western and eastern forts (both constructed by Hyde Page in the 1780s) to create an entrenched encampment on the hilltop, the circuit of defences being supplemented by careful scarping, grading and steepening ('sculpting') of the natural slopes around the fortress to produce controlled fields of fire with no dead ground. The impregnability of the circuit of defences was further increased in 1858-67 by du Cane and Jervois, who remodelled the North Entrance and the North Centre Bastion and Detached Bastion, and added the Western Outworks and South Front defences. To start to build, whether piecemeal or in a more intensive fashion, on the sculpted ground and approaches outside the fortifications would detract from the contribution made by this 'green skirt' to the significance of the Western Heights. Particularly unsustainable on this 'green skirt' would be intensive development, but also tall structures and large buildings, where the great height or mass of the structures would compete with and reduce the impression of massiveness of the defences.

Recommendation

1.16 There should be no development on the 'sculpted' ground and approaches outside the Western Heights' fortifications.

The ridge and the upper slopes west of the Western Outworks are still open ground (on which the remains of the Citadel Battery and further west the Farthingloe Heavy Anti-Aircraft Battery and military hutted camp survive), allowing appreciation of the open nature of the approaches to the Western Heights from the west which the western fort (Citadel) and later also its advanced work were intended to defend. Residential development to the south (Aycliff) and north (Clarendon and Maxton) during the twentieth century did not encroach on the ridge itself or its upper slopes, and development at Farthingloe is still currently sparse. Development on the ridge or its upper slopes west of the Western Heights would detract markedly from this legibility. Since Farthingloe is clearly visible from the Western Outworks and the Citadel's defences (e.g. the North-West Bastion), care would need to be taken that its expansion does not unduly detract from views westwards from the Western Heights' fortifications of the approaches to the site (see *Dover District Heritage Strategy*, Appendix 4 Case Study 3 Farthingloe, final draft for stakeholder consultation 2011).

Recommendations

1.17 There should be no development on the western approaches to the Western Heights (either on the ridge or its upper slopes).

1.18 If development takes place at Farthingloe, it should not unduly detract from views westwards from the Western Heights' fortifications of the approaches to the site.

The introduction of bridges in new locations across the Lines or North Entrance's defences to facilitate access to the fortress interior, or across the defences of the main fortifications (the Citadel, North Centre Bastion and Detached Bastion, and Drop Redoubt), would detract markedly from the ability to appreciate the fundamental defensive principle that, by definition, defended sites such as the Western Heights have in common tight control over access. This was achieved by constructing the minimum number of fortified entrances deemed necessary, and maintaining the ditches and ramparts of the defences so they were impregnable to an attacking force. In the case of the Western Heights, the western and eastern forts (built in the 1780s) were each afforded only one entrance (with a defensible bridge over the ditch), and this situation pertained throughout their military occupation (i.e. until the 1950s). When defensive Lines were constructed in 1804-16 to link the main fortifications to form an entrenched encampment or fortress on the hilltop, there were only two main entrances to the entire fortress, comprising the North Entrance and that by the South Lines Bridge; a third entrance (the South Entrance or Archcliffe Gate) was added in 1858-67. Following construction of the Western Outworks in the 1860s, one bridge across the ditch provided access to this advanced work directly from the Citadel. Construction of the Citadel Battery in 1898 resulted in a bridge being built across the Western Outworks' North Ditch to allow access by the Battery's crew to their peacetime accommodation in the Hut Barracks. There does not appear to have been a practice on the Western Heights of establishing fixed or temporary bridges in new positions to facilitate access across the Lines or to the main fortifications, since this would have negated their defensive purpose. A possible bridge constructed perhaps in the earlier twentieth century at *terre-plein* level between the North Centre Bastion and Detached Bastion (its remains were found by the RCHME in the cross ditch) appears to have supplemented existing access between the Bastions rather than establishing a new route of access across the circuit of defences.

Recommendation

1.19 Bridges should not be constructed in new locations across the Lines or across the defences of the North Entrance or the main fortifications (the Citadel, North Centre Bastion and Detached Bastion, and the Drop Redoubt).

Visitor circulation between the components of the Western Heights' fortifications and therefore appreciation of the role of each component in relation to the whole circuit is currently impeded in many instances. This could be facilitated by removing the vegetation from the ditches of the Lines and main fortifications (the Citadel, North Centre Bastion and Detached Bastion, and the Drop Redoubt) so visitors could walk along stretches of the bottoms of the ditches, although the safety implications would probably mean that this could not be unsupervised access at all times. Historic plans indicate that for defensive reasons there was never unrestricted access along the ditches around the Western Heights' entire defensive circuit (e.g. an enemy force was prevented from being able to move between the Citadel and the North Lines via their ditches), so retaining or reinstating such divisions in historic locations based on documentary evidence would be one way of controlling access to various parts of the site today. If visitor access to the ditches is reinstated in places, wherever possible historic points of access to the ditches should be used and reinstated (e.g. rather than inserting potentially misleading steps or ramps in new locations) so that the legibility of historic military circulation routes around the site as well as the defensive principles employed are retained and enhanced.

Recommendation

1.20 Consideration should be given to enhancing appreciation of the role of the individual components of the Western Heights' fortifications in relation to the whole circuit by allowing visitors to walk along stretches of the bottoms of the ditches. Measures taken to facilitate this access should not harm significances.

Since the army left the site in the 1950s, trees and vegetation have grown up largely unchecked across much of the Western Heights and now obscure the fortifications and the surrounding sculpted ground and approaches, concealing their form and intended function. Before the military arrived on the Western Heights, and indeed throughout the period during which the army managed the Heights, the area was chalk grassland maintained principally by grazing. In recent years, grazing has been reintroduced on parts of the northern and eastern slopes of the Heights by the White Cliffs Countryside Partnership (using Dexter cattle and Konik ponies), which has largely been effective (when combined with manual and mechanical vegetation removal), although it is not without its potential risks to the earthwork defences in the form of degrading through overgrazing and damage from animals' hooves. In order for the legibility of the entire defensive circuit and the surrounding sculpted ground to be restored and maintained, a co-ordinated programme needs to be devised for the whole hilltop which starts with the removal of the woodland and scrub and then maintains these areas as chalk grassland. Clearly this would involve considerable quantities of labour (both of the human and animal variety), so making full use of a variety of sources of labour including, for example, volunteers (including the Western Heights Preservation Society), apprenticeships, youth-training schemes and community payback – all suitably supervised by appropriately trained and skilled people – may be crucial to such a scheme's viability. Given the scale of the area, encouraging farmers to bring in their animals (perhaps including sheep or goats) to graze particular sections may be advantageous, rather than relying on acquiring or borrowing sufficient animals. Care would need to be taken to ensure that any measures to control grazing animals (e.g. temporary fences) did not themselves damage significant remains or detract from the setting of the defences.

Recommendations

1.21 Strategies should be devised to return the Western Heights to chalk grassland.

1.22 Opportunities should be taken to increase the involvement of volunteers and other forms of labour in clearing the trees and vegetation at the Western Heights and preventing re-colonisation.



Konik ponies grazing the northern slopes of the Western Heights (on Clarendon Field on the Western Heights Local Nature Reserve), and Dexter cattle east of the Drop Redoubt, photos taken 2010 (www.whitecliffscountryside.org.uk)

The poor condition of the built heritage at the Western Heights has been identified in this BHCF as a major issue throughout the site, with levels of maintenance and repair being low across much of it (a partial exception being the parts managed by HMPS) and non-existent in places.

Furthermore, the Western Heights' fortifications have been on the English Heritage *Buildings at Risk Register* for a number of years. The 2009 edition of the *Register* stated that 'The extensive Western Heights fortifications are in multiple ownership and parts are at risk, including the Western Outworks (on land managed by the Home Office) and parts of the site that lie within the guardianship of English Heritage: the North Entrance, North Centre Bastion and adjoining Detached Bastion. The areas at risk are robust but steadily deteriorating due to long-term neglect and vandalism'. In the most recent 2011 edition of the *Register*, the parts at risk were still assessed as being in 'poor' condition and their priority category as C (slow decay, no solution agreed); furthermore, the Western Heights' fortifications appeared on the list of ten 'priority sites' in English Heritage's South East Region. Responsibility for assessing the condition of the built fabric, prioritising and carrying out repairs (informed by the significance of elements) and operating an appropriate maintenance regime will obviously remain with the owners of the various components. Lead organisations should set a good example in this respect. Encouraging other owners to follow suit and liaison between owners over the maintenance of components where ownership is split (i.e. to operate a unified maintenance regime across property boundaries) will be crucial to the success of tackling this major issue. It would be beneficial for lead organisations to advise other owners on raising the resources necessary to carry out the repairs and maintenance. Achieving the removal of the Western Heights' fortifications from the *Buildings at Risk Register* should be regarded as a key early objective, but only as the starting point to adopting a long-term and as far as possible co-ordinated approach to the maintenance and repair of the Western Heights' built heritage.

Recommendation

1.23 *As part of a co-ordinated approach to the conservation management of the Western Heights, owners of the component fortifications should be encouraged a) to commission a condition survey of the built fabric which, informed by significances, enables repair works to be prioritised and carried out, and b) to introduce an appropriate regime of maintenance.*

Heritage crime and related anti-social behaviour is an issue affecting many of the Western Heights' components and elements. A coherent strategy for combating heritage crime throughout the Heights is needed (cf. English Heritage's *Heritage Crime Initiative* and the related Heritage Crime Memorandum of Understanding, to which Dover District Council is a signatory, and the *Alliance to Reduce Crime against Heritage (ARCH)*). Given the number of components at the Western Heights, the overall size of the site, and the persistent nature of the heritage crime problem there, one way of tackling it might be to consider the use of volunteers (drawn from members of the local community who care passionately about the site, such as the Western Heights Preservation Society) to act as heritage wardens and work alongside the police.

Recommendation

1.24 *A coherent strategy for combating heritage crime at the Western Heights should be devised.*

The best view of the Western Heights as a whole (other than from the air) – from Dover Castle (particularly from the top of the Great Tower but also any of the western defences) – is compromised by the trees and vegetation covering the Western Heights' fortifications, which hamper the ability to appreciate their great scale and form. Intensive development in the fortress interior, or the addition of tall or large buildings there, would be visible from Dover Castle, and would detract from the quality of the view. If development took place on the upper parts of the Western Heights' eastern slopes, it would detract from this view by reducing the legibility of the scarped ground around the Drop Redoubt intended to protect the eastern end of the Heights. Such factors should be taken into account when planning the future use or uses of the Western Heights and its components (see *Seeing the History in the View* English Heritage 2011, *The Setting of Heritage Assets* English Heritage 2011).



Dover Heights and Town from the Castle, watercolour by Captain Thomas Lloyd Durrant, painted 1808 (FA1990.23.6 Hampshire Museums Service)



A view towards the Western Heights from the Great Tower at Dover Castle, photo taken 2010 (www.travellingspouse.blogspot.com)

The long view of the Western Heights from harbour level (e.g. from the Western Docks), from where it is still possible to discern the Citadel's Officers' Quarters near the western extremity and the Drop Redoubt at the eastern end, is severely hampered by the trees and vegetation on the Heights' southern slopes. Removing the trees and vegetation from these slopes and returning them to chalk grassland would greatly improve the legibility of the fortifications and enable comparison with historic photographs revealing the extent of change (notably the loss of the Grand Shaft Barracks and South Front Barracks).



View of the Western Heights from the Western Docks, photo taken 2011 (author); the Citadel's Officers' Quarters (far left, top) and St Martin's Battery (right of centre) are still discernible amongst the trees and vegetation, which have engulfed the southern slopes

Although the massive scale of the Western Heights' fortifications surmounting the northern slopes can still be seen from places along the B2011 Folkestone Road, intensification of the existing roadside development or the construction of taller or larger buildings there would obstruct these views.

Recommendations

1.25 Measures should be taken to improve the legibility of the scale and form of the Western Heights' fortifications in views towards the Heights (e.g. from Dover Castle and harbour level).

1.26 The impact of proposed development on views towards the Western Heights should be taken into account.

1.27 Glimpsed views of the Western Heights from the B2011 Folkestone Road should be protected.

2.0 The Citadel (western fort)

Post-1956 development by HMPS in the Citadel (consisting of a large quantity of new buildings assessed in this BHCf as being of intrusive form, scale and materials) has severely compromised the ability to appreciate the open character of the fort's interior as originally designed by Hyde Page in the 1780s, and in particular that of the Parade Ground – the latter was maintained as an open area until the departure of the army from the site in the 1950s. This open character was deemed essential to afford protection to the garrison (by ensuring that there was nowhere for an enemy to hide – for which unimpeded views across the interior from the ramparts needed to be maintained – or structures which could injure or kill defenders if they were hit by incoming fire), whilst the Parade Ground provided essential space for drill, punishments and rewards (a policy maintained at a range of defence establishments – cf. the Storehouse Enclosure at the Royal Ordnance Depot, Weedon Bec (Northants.)). High security fences and gates introduced into the Citadel's interior over the last few years have further disrupted the legibility of the layout of the fort's interior including former circulation routes, and in some instances these fences butt up against the elevations of significant buildings, detracting from the legibility of their access arrangements and from their intended fine appearance (e.g. the Main Entrance's western elevation facing onto the Parade Ground). Demolition of the post-1956 buildings, security fences and gates would help to restore the legibility of the Parade Ground's open character and the former circulation routes of the fort's interior. Realistically, this is likely to be achievable only in the context of a post-HMPS use of the Citadel. Planning for this eventuality should include the introduction of public access to the Citadel's interior so that its significances can be

appreciated in addition to those of the defences, most of which (except those on the western side adjoining the Western Outworks) are currently visible from the slopes around the fort.

Recommendations

2.1 The post-1956 buildings, security fences and gates should be removed from the Citadel, and the Parade Ground's open character restored, if and when HMPS vacates the site.

2.2 Public access to the Citadel's interior should be introduced so that its significances can be appreciated, if and when HMPS vacates the site.



The Citadel, looking north, showing the Officers' Quarters (built 1858-67) in the foreground, and the post-1956 development on the Parade Ground, photo taken 2011 (www.subterraneanhistory.co.uk)

Some casemates at the Citadel have been sealed up to prevent access, ventilation is inadequate and no maintenance is being carried out (e.g. Long Casemates), whilst in other instances the front elevations have partially collapsed (e.g. Short Casemates). This has resulted in the loss of significant fabric, reducing the potential for research into the form and use of barrack accommodation and gun rooms through time (see above, 'Assessment of significance', Strand 3). Access to these casemates and ventilation should be re-established and an appropriate maintenance regime implemented. Since potential evidence lies in fixtures and fittings within the casemates (e.g. relating to water supply, heating, ventilation, gun floors), particular care needs to be exercised when considering repairs or alterations to the internal walls, vaults and floors so that such evidence is not inadvertently lost. The cook houses, ablutions and latrines which served sets of casemated barrack accommodation also contain important information about the changing living conditions of troops, and should therefore be regarded as forming a complex with their associated casemates, with each complex being managed as a whole.

Recommendations

2.3 Where casemates at the Citadel have been sealed up, access and adequate ventilation to them should be re-established, repairs carried out and an appropriate maintenance regime introduced.

2.4 Each set of casemates at the Citadel should be managed as a complex with the cook houses, ablutions and latrines which served them.

Over the centuries, changes to the defences and buildings in the Citadel in the form of the removal, alteration or addition of elements have resulted in the loss of significant fabric.

Probably in the 1890s, for example, part of the *tenaille* was cut away and much of its outer ditch was filled in, detracting from the ability subsequently to appreciate how it had functioned as a defensive device. In the Officers' Quarters, in the 1920s the removal of the original main staircase and relocation of the building's main entrance from the south elevation to the north fundamentally altered the access and internal circulation routes in the building; following the departure of the army in the 1950s, the removal of elements including fireplaces, fitted cupboards and dressers (specially designed in Tudor Gothic style for the building by du Cane) reduced evidence of differentiation in rank and the use and decoration of particular rooms; the conversion of openings from windows to doorways detracted from the legibility of the building as a 'keep of last resort'; the introduction of partitions reduced the ability to appreciate the original layout of space for different purposes and ranks (e.g. the large Mess Room which extended across the entire depth of the building, and the groups of rooms afforded to officers and their servants); and the introduction of large-scale surface pipework inside the building detracted from its visual amenity, which was such a fundamental part of du Cane's design. On the *terre-plein*, the removal or burial of gun positions diminished the ability to understand the changes in the number, form and distribution of artillery emplacements there through time.

In the past, most changes have been pragmatic, carried out in the context of adaptations to new uses and perceived threats, or in some instances a desire to reduce the maintenance burden. What has changed is the addition of the concept of significance into the equation; future changes should be informed by the significance of the elements concerned (individually and in relation to the whole) as well as the need to achieve something which is fit for purpose. Care should be taken, for example, not to diminish the ability to appreciate aspects of the significance of external elevations, such as where they combine architectural embellishment with defensive features (e.g. through the addition of extensions which disrupt or block legibility). This applies, for example, to all four external elevations of the Officers' Quarters, both the external elevations of the Main Entrance (because they face onto the Parade Ground and across the fortress interior), and to the front and ditch elevations of casemates. Adding structures on top of buildings (including new floors, shelters, viewing platforms, aerials and satellite dishes, etc.) can also have a major adverse impact on the ability to appreciate significance (e.g. the flat roof of the Officers' Quarters, which du Cane designed to operate as a fighting platform). Erecting non-military structures on the *terre-plein* may reduce the ability to appreciate its former role as the location of gun emplacements and the importance of the principle of maintaining a 360 degree field of fire.

Recommendations

2.5 Care should be taken to ensure that the architectural embellishment of buildings, as well as their defensive features, at the Citadel can be appreciated.

2.6 Non-military structures should not be constructed at the Citadel on the defences or the tops of significant buildings which detract from their significance or character.

The view of the Officers' Quarters' from the slopes south of the Citadel, from where the grandeur and dominance of the building can be readily appreciated, would be interrupted and fundamentally compromised by development in this foreground. Nor should development be allowed to interrupt the view from the Heights' northern slopes across the sculpted ground towards the North-West Bastion.

Recommendation

2.7 Development should not be allowed to interrupt views from the southern slopes towards the Citadel's Officers' Quarters, or from the northern slopes towards its North-West Bastion and the 'inclined' steps on the surrounding 'sculpted' ground.

3.0 The Western Outworks

The ability to appreciate the Western Outworks as a single coherent defensive response to the long-perceived weakness of the Citadel's south-western flank is reduced by the presence of fences marking property boundaries within the advanced work and by the different characters created by vastly contrasting management regimes of the vegetation.

Recommendation

3.1 The owners of the Western Outworks should be encouraged to introduce a single programme of vegetation management for the whole advanced work. Fences marking property boundaries within the Western Outworks should allow unimpeded views across it.

The legibility of the form of the Western Outworks' defences as designed by du Cane and Jervois in 1858-67 has been greatly diminished by the infilling of the western parts of the North Ditch and South Ditch (e.g. the Double Caponier is now completely invisible and inaccessible for maintenance), the levelling of the North Demi-Bastion, North Curtain and other stretches of rampart, and the unchecked growth of trees and vegetation in the ditches. Clearance of the trees and vegetation from the ditches (with a management regime to prevent re-colonisation) would greatly enhance the legibility of their form. Removal of the infill from the North Ditch and South Ditch would reveal the Double Caponier and allow its repair, as well as allowing appreciation of the full circuit of the advanced work's ditch defences. Accurate reconstruction of the North Demi-Bastion, North Curtain and other levelled ramparts would help to reinstate the legibility of the complex set of ramparts which were such a feature of the advanced work's original design.

Recommendations

3.2 The trees and vegetation should be cleared from the Western Outworks' ditches and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

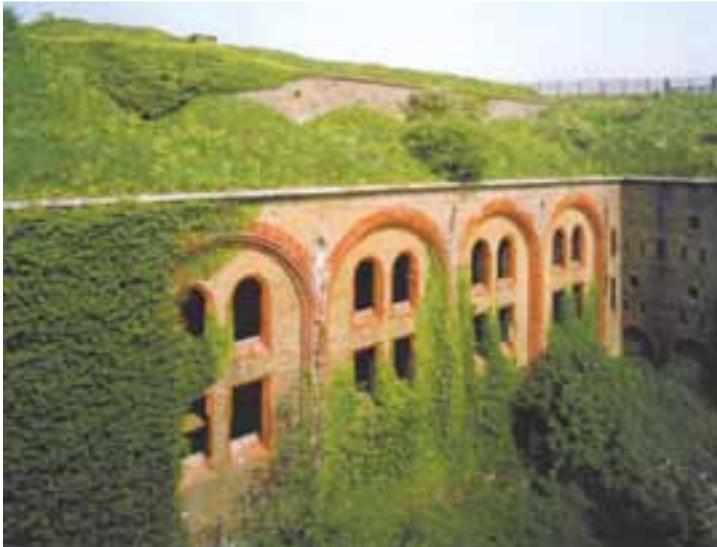
3.3 The removal of the infill from the North Ditch and South Ditch, thereby revealing the Double Caponier and allowing its significances to be appreciated, should be a long-term aspiration for the Western Outworks.

3.4 Consideration should be given to reconstructing accurately the levelled North Demi-Bastion, North Curtain and other stretches of rampart to enhance appreciation of the Western Outworks' defences.

The ongoing lack of maintenance of the Western Outworks' defences is resulting in the collapse of elements (e.g. the North Flank Casemates and South Flank Casemates) and therefore the loss of significant fabric. Forced entry to the casemates and vandalism (on the non-HMPS parts of the work) are also resulting in the loss of significant fabric. Repairs to these elements are needed, accompanied by the introduction of a maintenance regime for the whole advanced work, which will require liaison between the owners. The most recent edition of the English Heritage *Buildings at Risk Register* (2011) noted that 'An Immigration Removal Centre, managed by the Home Office, occupies the Citadel on the Western Heights. The surrounding moats [i.e. ditches] and Western Outworks are in poor condition and there is no programme for their maintenance. Funding for a quadrennial inspection report has not been secured. There has been no progress since the previous report in 2007.'

Recommendation

3.5 A condition survey should be carried out of the Western Outworks which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the Western Outworks.



*The South Flank Casemates, from the south, photo taken 1998
(NMR: BB032747)*

Construction of the Hut Barracks in 1890-1 in the Western Outworks' interior somewhat diminished its open character, but their linearity means it is still possible to appreciate the open character within the advanced work as designed by du Cane and Jervois, so that the field of fire westwards from the Citadel's ramparts was unimpeded and for the protection of the garrison based in the South Flank Casemates and North Flank Casemates. The post-1956 HMPS building (on the South Demi-Bastion) has been assessed in this BHCF as intrusive and, when the opportunity arises, should be demolished and not replaced (with the security fences and gates). This is likely to be achievable only in the context of a post-HMPS use of the Western Outworks. Planning for this eventuality should include the introduction of public access to the interior so its significances can be appreciated in addition to those of the defences, which are currently visible from the slopes surrounding the advanced work.

Recommendations

3.6 Any development within the Western Outworks should allow the open character of its interior and the field of fire westwards from the Citadel's ramparts to continue to be appreciated.

3.7 The post-1956 building, security fences and gates should be removed from the Western Outworks, if and when HMPS vacates the site.

3.8 Public access should be introduced to the Western Outworks' interior so that its significances can be appreciated, if and when HMPS vacates the site.

The survival of the original internal arrangement within the Hut Barracks (constructed in 1890-1) could not be ascertained by the RCHME (all six were constructed to a common plan according to documentary evidence). A survey of the hut interiors would enable this to be ascertained. If the original layout does still survive, it should be retained in at least one of the barrack huts.

Recommendation

3.9 A survey should be carried out to assess the extent of survival of the original layout of the interiors in the Hut Barracks at the Western Outworks. The original layout should be retained in at least one barrack hut.

4.0 The North Lines

Since the departure of the army from the Western Heights in the 1950s, trees and vegetation have colonised the North Lines (most obviously the ditch, but also in places the rampart and *banquette*). The trees and vegetation should be cleared from the entire length of the North Lines (from the Citadel to the Drop Redoubt) and a management regime introduced to prevent re-

colonisation. This might utilise a range of different types of labour (e.g. volunteer, apprenticeship schemes, community payback), supervised and supplemented by appropriately skilled and experienced contractors.

Recommendation

4.1 The trees and vegetation should be cleared from the North Lines (from the Citadel to the Drop Redoubt) and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

Levels of maintenance and repair of the North Lines' built fabric are low, resulting in the loss of significant fabric. Repairs to the built fabric should be carried out and accompanied by the introduction of a maintenance regime.

Recommendation

4.2 A condition survey should be carried out of the North Lines which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the North Lines.

The North Lines' profiled rampart and *banquette* (designed to enable musketry defence of the ditch) have been levelled or considerably reduced in many places, but are thought to survive in some places (the North Lines were not surveyed by the RCHME). The extent of survival of the North Lines' profiled rampart and *banquette* should be ascertained to inform their conservation management. As a result of the rampart having been removed in places, houses and gardens at the northern end of Heights Terrace, north of the Citadel's redan and on Knights Templars are all visible from the northern slopes outside the North Lines and detract from the ability to appreciate the intended role of the Lines (to afford protection for troops camped on the fortress interior). Accurately reconstructing missing stretches of the profiled rampart and *banquette* would enhance the legibility of the North Lines' original form as a whole. Such reconstruction would be highly desirable if further development within the fortress interior was carried out to reduce the development's visibility from outside the Lines.

Recommendations

4.3 A survey should be carried out to ascertain the extent of survival of the North Lines' profiled rampart and banquette to inform their conservation management.

4.4 Levelled stretches of the North Lines' profiled rampart and banquette should be reconstructed accurately to improve the legibility of the North Lines as a whole.

The removal of a stretch of the North Lines immediately east of the North Entrance in 1967, and the insertion of a new section of road there to join Centre Road with the North Military Road, reduced the ability to appreciate the relationship between the North Entrance and the North Lines, and the role of the North Lines themselves (linking the Citadel, North Centre and Detached Bastion, and the Drop Redoubt along the northern side of the Heights as part of the set of Lines which created an entrenched encampment or fortress on the Heights). The construction of a footbridge to span the breach in the North Lines (which would still allow traffic to pass beneath) would be advantageous in helping to restore the Lines' integrity and legibility, as well as allowing visitors to walk along the northern slopes of the Heights outside the North Lines between the Citadel and the Drop Redoubt without having to descend from the Lines to cross the road. A discreet design for the footbridge would prevent it becoming an eye-catching feature in itself, which would detract from the aim of regaining the sense of continuity of the circuit of Lines.

Recommendation

4.5 A footbridge of an appropriate design should be constructed to span the breach in the North Lines and thereby allow visitors to walk along the North Lines between the Citadel and the Drop Redoubt.

5.0 The North Centre Bastion and Detached Bastion

Levelling of the rampart in the North Centre Bastion's gorge and the blocking of the two entrances from *terre-plein* level down to the musketry galleries (to the west musketry gallery, South Caponier and thence the Detached Bastion on one side, and to the east musketry gallery and gunrooms on the other) in order to increase the size of a sports pitch (after the departure of the army from the site in the 1950s) resulted in the loss of significant fabric, a reduction in the ability to appreciate the form and the access and circulation arrangements of the North Centre Bastion and Detached Bastion as remodelled by du Cane in the 1860s, and the loss of working entrances for maintenance and repair purposes or visitors. Reconstructing the rampart and reinstating these entrances in their 1860s positions (based on documentary evidence and under archaeological conditions) would help to restore this legibility, as well as facilitating access to the Bastions, which is currently extremely difficult.

The RCHME noted the remains of a possible former bridge (in the cross ditch) between the North Centre Bastion and the Detached Bastion at *terre-plein* level, which it tentatively dated to the earlier twentieth century. If further research established that this had indeed been a bridge and if details of its date of construction, form and location could be ascertained, reconstruction of a bridge there would enable access to be re-introduced at *terre-plein* level from the North Centre Bastion to the Detached Bastion, from where it would be possible to descend the east and west stairs or the ramp down to the east and west musketry galleries (from where access could be gained across the South Caponier to the musketry galleries under the North Centre Bastion). If the east and west stairs and entrances which formerly provided access up to *terre-plein* level from under the North Centre Bastion were not also unblocked, however, there would be no alternative but to re-trace one's route to leave the Bastions and it would create a misleading impression of the Bastions' historic access and circulation routes.

Recommendations

5.1 The levelled rampart in the North Centre Bastion's gorge and the blocked entrances down to its east and west musketry galleries should be reconstructed accurately to improve the legibility of the form and the access and circulation routes of the North Centre Bastion and Detached Bastion, and to enable access for maintenance, repairs and visitors.

5.2 Further research should be carried out to ascertain details of the construction date, form and location of the possible earlier twentieth-century bridge which may have provided access at terre-plein level between the North Centre Bastion and Detached Bastion. If sufficient evidence exists, consideration should be given to reconstructing a bridge in this location as part of measures to improve access to the Bastions.

Lack of a regular management regime for the North Centre Bastion and Detached Bastion has resulted in the colonisation by trees and vegetation of virtually every exterior surface of the work, including the counterscarp bank, the ditches, the walls of the bastions and caponiers, and the *terre-plein* and rampart of the Detached Bastion. The trees and vegetation are causing the loss of significant fabric, and their presence reduces the ability to appreciate the power and coherence of the design of the North Centre Bastion and Detached Bastion as remodelled by du Cane in the 1860s. Evidence of the re-armament of the *terre-plein* in the 1890s and twentieth-century slit trenches and weapons pits are also obscured by the vegetation. The trees and vegetation should be cleared from the whole of the North Centre Bastion and Detached Bastion and re-colonisation prevented. The addition of non-military structures on the *terre-plein* may detract from the ability to appreciate the sequence and role of defensive structures there.

Recommendations

5.3 The trees and vegetation should be removed from the North Centre Bastion and Detached Bastion and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

5.4 Non-military structures should not be constructed on the terre-plein of the North Centre Bastion or Detached Bastion which detract from its significance or character, so that the legibility of the sequence and role of defensive structures there is retained.



The Detached Bastion's North-West Caponier, from the west, photo taken 1998 (NMR: AA008621)

The low level of maintenance and repair of the fabric at the North Centre Bastion and Detached Bastion since the departure of the army in the 1950s has inevitably led to the decline in condition and failure of some elements (e.g. vaults). Significant fabric is also being lost and damaged through people breaking into the Bastions and into blocked-off areas within them, lighting fires, adding graffiti and stealing elements. To reduce the loss of significant fabric, a programme of repairs is needed followed by an appropriate regime of maintenance for the whole work. Introducing visitor access to the work and removing the trees and vegetation may help to reduce the number of instances of people breaking in and the level of anti-social behaviour there.

Recommendation

5.5 A condition survey should be carried out of the North Centre Bastion and Detached Bastion which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the North Centre Bastion and Detached Bastion.

6.0 The North Entrance

The North Entrance's outwork, outer and inner ditches, *tenaille* and rampart over the outer entrance, tunnel (with its elliptical light and ventilation shaft) and inner entrance have become clogged with trees and vegetation, which have reduced the ability to appreciate the form of the North Entrance's defences and how they operated, as well as their relationship with the North Lines and the North Centre and Detached Bastion, for which the North Entrance's gun rooms and musketry galleries provided enfilade fire. In particular, the fundamental role of the *tenaille* in the defence of the North Entrance cannot be understood with the current level of trees and vegetation. Clearing the trees and vegetation, and preventing their re-colonisation, would help to restore the legibility of the defences.

Recommendation

6.1 The trees and vegetation should be removed from the North Entrance and a management regime implemented to prevent re-colonisation, thereby regaining the legibility of the elements.

The low level of maintenance and repair at the North Entrance since the departure of the army from the site in the 1950s has resulted in the loss of significant fabric. Some significant elements have been removed to try to reduce unauthorised access (e.g. the deck of the bridges), whilst others have been stolen (e.g. fireplaces and doors). Elements have also been damaged by people breaking into the North Entrance and forcing entry to closed-off areas. Repairs need to be accompanied by the introduction of an appropriate regime of maintenance.

Recommendation

6.2 A condition survey should be carried out of the North Entrance which, informed by the significances identified in the BHCF, should inform a programme repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the North Entrance.

The polychromatic, Italianate-style front elevation of the North Entrance's inner entrance (containing the entrance to the Guard House and tunnel) is the most elaborate of the entrance elevations created by du Cane on the Western Heights, and of particular interest for the greater quantity of embellishment compared with the plain, defensive front elevation at the North Entrance's outer entrance (which was largely obscured from the view of people approaching along the North Military Road by the sinuous curve of the cutting through the *tenaille*). Du Cane may have intended the North Entrance as the major point of exit from the fortress, and hoped that this fine Italianate-style elevation (which contained only fake rather than real defences) would remind people leaving the fortress of the high quality of the fortifications. As a result of decades of low levels of maintenance and repair, the inner entrance's front elevation is in poor condition (e.g. the pierced parapet), and a pale shadow of what du Cane intended. Repair and careful cleaning of the brickwork, and reconstructing the elevation's missing elements (e.g. the windows and door of the Guard House) would make a huge difference to enabling the appreciation of its significance once again.

Works which would diminish the ability to appreciate the appearance of the front elevations of the North Entrance's inner entrance and outer entrance, and these entrances' intended former roles, should be resisted. Such harmful works might include the addition of an extension or canopy to the front elevations, constructing a roof or canopy over the deep cutting in front of the inner entrance, or erecting new buildings or other structures which would hinder or block the view towards the inner or outer entrance.

Recommendations

6.3 The front elevation of the North Entrance's inner entrance should be repaired and cleaned and its missing elements accurately reconstructed to restore its fine appearance as designed by du Cane.

6.4 The ability to appreciate the intended original appearance and roles of the North Entrance's inner entrance and outer entrance should be retained.



The front elevation of the North Entrance's inner entrance, looking northwards along the deep cutting, photo taken 1998 (NMR: AA00/9818)

By-passed in 1967 by the insertion of a new section of road through the North Lines which connected Centre Road with the North Military Road, the North Entrance has stood unused and boarded up since then. As a result, it is no longer possible to appreciate the role of the North Entrance as the northern point of access to the fortress (within the North Lines) created by Ford in 1804-16. The North Entrance was remodelled by du Cane in 1858-67 and it is his awesome, complex set of defences which survive remarkably well today. Reinstatement of access through the North Entrance for pedestrians would be a major step forward in improving the legibility of the former access and exit arrangements to the fortress on its northern side and its relationship with the military roads. Under military use, the North Entrance was a vehicular entrance too, but large, modern vehicles passing through its sinuous tunnel (still paved with pine blocks) would probably run too high a risk of causing damage, so they should continue to use the existing road arrangement instead (North Military Road, the 1967 inserted section of road, Centre Road and South Military Road). Visitors should be able to walk through the whole sequence of elements that make up the North Entrance (starting from the North Military Road, over the outer bridge, through the revetted cutting in the *tenaille*, over the inner bridge, through the outer entrance, along the tunnel and out through the inner entrance into the fortress, or in reverse to imagine leaving the fortress), and to be able to see the various defensive devices which du Cane incorporated (e.g. sliding doors, drawbridge). To reinstate access only to the tunnel, for example, would be to give a false impression of the great number of defensive measures which characterised this entrance. Introducing new points of access across the North Entrance's defences (e.g. bridges in new locations) would detract from the ability to appreciate du Cane's ingenious 1860s design. If the risk of anti-social behaviour in the musketry galleries and gun rooms, postern gate, Guard House, latrines and water tanks is considered to be a major concern, the doors to these could normally be kept locked, and access to these areas allowed under supervision on Open Days or pre-arranged tours. It is to be hoped that increasing authorised access to the North Entrance, and providing more opportunities for tours of the closed parts, would deter at least some of those who break in to see what lies behind the boarded-up entrances and the blocked embrasures.

Recommendation

6.5 Pedestrian access to the whole of the North Entrance should be reinstated.

7.0 The Drop Redoubt (eastern fort)

In contrast to the Citadel (western fort), which has seen its interior (and particularly its Parade Ground) severely compromised by post-1956 development and many elements removed, altered and added over the years, the Drop Redoubt has not been subjected to the same level of harmful change, and its coherence as an independent fortification survives more clearly. This should underpin discussions relating to the conservation management including re-use of the Drop Redoubt.

Recommendation

7.1 The excellent survival of the Drop Redoubt as a coherent, independent fortification, as well as its significances, should be taken into account when planning its future use.

From the construction of the eastern fort by Hyde Page in the 1780s until the departure of the army in the 1950s, access to the Drop Redoubt was across a footbridge over the ditch on the southern side and through the Main Entrance (and thence past the Guard House). The subsequent removal of the bridge in an effort to deter unauthorised access to the Redoubt's interior, and the current access arrangement to the Redoubt in which visitors walk through a low, concrete tunnel under the *glacis* on the southern side into the ditch followed (for those with authorised access to the interior) by entry via the Sally Port on the eastern side, have together markedly reduced the ability to appreciate the defended entrance arrangements which pertained throughout the fortification's military life. Given the frequency with which people break into the Redoubt's interior, causing damage to significant elements, it is clear that this deterrence strategy has not worked. Reinstatement of a footbridge (ideally to the 1823 form with its fixed span and moving span which pivoted in front of the Entrance), leading to the Main Entrance, would restore the legibility not only of the defended entrance arrangement, but also of the circulation routes for the whole Redoubt, which are much more difficult to comprehend when entering through the Sally Port. Alterations and additions (e.g. an extension or canopy) should be avoided where such changes would detract from the legibility of the intended design and defensive role of the Main Entrance and Sally Port.

Recommendations

7.2 A footbridge (with fixed and moving spans) should be reconstructed leading to the Drop Redoubt's Main Entrance to facilitate appreciation of its defended entrance arrangements and circulation routes and to improve access to the Redoubt.

7.3 Alterations and additions should not be made to the Drop Redoubt's Main Entrance and Sally Port which would diminish the ability to appreciate their intended design and defensive role.

Since the formation of the Western Heights Preservation Society in 2000, volunteers have worked enthusiastically to clear the trees and vegetation from the Drop Redoubt's defences and interior so that the legibility of their form is restored, as well as to carry out other minor clearance works according to programmes agreed with English Heritage (e.g. removing the rubble from the Ablution Room, Bath Room, Cook House, Latrines and Staff Sergeants' Quarters), and to open the Redoubt for visitors. Given the scale of the task and the speed with which re-colonisation occurs, opportunities should be taken to facilitate the involvement of more volunteers, and perhaps also apprentices and community payback labour. This would allow the regularity and scope of the vegetation clearance activities to be increased, for example to include the scarped, graded and steepened ground around the Redoubt.

Recommendation

7.4 Opportunities should be taken to increase the involvement of volunteers and other forms of labour in works to clear and manage the vegetation at the Drop Redoubt.

Significant elements at the Drop Redoubt have been lost (e.g. the front walls and parapets of the Soldiers' Quarters) through the low level of maintenance and repair carried out there since the departure of the army from the site in the 1950s, and through theft. A programme of repairs, accompanied by the introduction of a regime of regular maintenance, is needed to reduce the further loss of significant fabric. Damage to significant fabric is also being incurred through people breaking into the Redoubt's interior and blocked-off areas, lighting fires and applying graffiti. It is to be hoped that increasing and facilitating authorised access to the Drop Redoubt (e.g. by reinstating a bridge to the Main Entrance) would deter at least some of those who would otherwise break in.

Recommendation

7.5 A condition survey should be carried out of the Drop Redoubt which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the Drop Redoubt.

Parts of the front elevations of the casemates forming the Officers' Quarters, Officers' Latrines and Guard House lining the eastern, northern and western sides of the Drop Redoubt's entrance courtyard respectively (designed 1858-67 by du Cane) are missing, and some windows and doorways have been bricked up. This has reduced the ability to appreciate the casemates' access and lighting arrangements, and has detracted from the distinguished appearance of the entrance courtyard which du Cane designed as an architectural composition, with openings of similar form on three sides of the courtyard built in fine brickwork reminiscent of a variant of plate tracery. The absence of parts of these front elevations is the result of a combination of lack of maintenance and repair leading to collapse of the fabric, and damage inflicted by people breaking in to explore the interior of the casemates. Sections of brickwork were inserted in the front elevations of the Officers' Quarters in the 1980s to prevent their structural failure, which are still in place thirty years later whilst the historic brickwork around them continues to deteriorate in condition, with further collapse of significant fabric seeming likely in places. Repair of the front elevations of the Officers' Quarters, Officers' Latrines and Guard House and accurate reconstruction of the missing sections of brickwork, windows and doors would restore the legibility and fine appearance of the distinguished entrance courtyard as intended by du Cane. Installing a roof or canopy over the entrance courtyard would detract from the legibility of its former military role and would harm the character of du Cane's architectural composition. Once repaired, the casemates in the entrance courtyard might be able to accommodate new uses at this crucial location in the Redoubt, although it would be essential to ensure that elements demonstrating the former military uses and form of these casemates could still be appreciated.

Recommendations

7.6 The front elevations of the Drop Redoubt's Officers' Quarters, Officers' Latrines and Guard House should be repaired and the missing sections of brickwork, windows and doors reconstructed accurately to restore the legibility and distinguished appearance of the entrance courtyard as designed by du Cane in the 1860s.

7.7 Any works to the Drop Redoubt's entrance courtyard should not harm its significance, for example by reducing the legibility of du Cane's design.

7.8 If new uses are accommodated in the Officers' Quarters and Guard House in the Drop Redoubt's entrance courtyard, elements demonstrating their former military uses and form should remain evident.



The Officers' Quarters in the entrance courtyard at the Drop Redoubt, looking south-east, photo taken 2011 (www.fsgfort.com)

The front elevations, parapets and bombproofing of the Soldiers' Quarters (built 1804-16) were taken down after the departure of the army in the 1950s, but the reasons are unknown. It may have been a combination of their poor condition, damp problems in the deep interiors of the casemates, and to deter further vandalism. Since then, most of the facing brickwork on the fronts of the vaults and their supports has also been removed, and the remainder is in a poor and deteriorating condition. The negative effect of the lack of these front elevations on the ability to appreciate these casemates as the former living quarters of soldiers (to some visitors they might appear more like caves), and the relationship of these quarters to the Parade Ground and the Ablution Room, Bath Room, Cook House, Latrines and Staff Sergeants' Quarters opposite, is considerable. Accurate reconstruction of the Soldiers' Quarters' front elevations, parapets and bombproofing would regain the legibility of the form of the casemates themselves and of their relationship with other elements in the Drop Redoubt's interior, as well as potentially opening up possibilities for a variety of new uses within them.

Recommendation

7.9 The front elevations, parapets and bombproofing of the Soldiers' Quarters at the Drop Redoubt should be reconstructed accurately, informed by their significances, to facilitate appreciation of their former appearance and roles.



The Soldiers' Quarters at the Drop Redoubt, from the south, photo taken 1998 (NMR: BB99/15930)

The question of what should happen to the remains of the range comprising an Ablution Room, Bath Room, Cook House, Latrines and (eastern and western) Staff Sergeants' Quarters, which was constructed in 1858-67 on the southern side of the Parade Ground, is a complex one, since this location represents one of the few obvious places in the Redoubt's interior where development might take place as part of finding a new use for the Drop Redoubt. This 1858-67 range replaced a small Ablution Room which had been built sometime between 1844 and 1851 in this location. The western Staff Sergeants' Quarters was subsequently demolished and either in the First or Second World War a flat-roofed shelter or communications room was built on its site. The remainder of the range was partially dismantled soon after the Second World War, and rubble was deposited there over the years until it was removed by the Western Heights Preservation Society from 2003 onwards. The exact date and role of the shelter are uncertain and it has been assessed as being of Level D or little significance, but the *in situ* remains of the remainder of the range of buildings (assessed as being of Level C or *some* significance) still enable an appreciation of the layout and some details of the Ablution Room, Bath Room, Cook House, Latrines and eastern Staff Sergeants' Quarters, which were constructed by du Cane in order to provide better-quality facilities for soldiers garrisoned at the Redoubt.

One possibility would be to record and demolish the shelter and replace it with an accurate reconstruction of the western Staff Sergeants' Quarters (which previously stood on this site), whilst leaving the adjacent remains of the remainder of the range *in situ*. Another possibility would be to record the surviving remains of the 1858-67 range and the shelter, demolish them all and construct in their place the same number of new buildings on the same footprints copying the whole 1858-67 range or to a new design, or if a larger building was deemed necessary one building could be constructed on the overall footprint of the former range to a new design, with the scale, materials and form of the building(s) in keeping with its context. Erecting buildings which contrast greatly with the surviving significant structures at the Redoubt, or a much larger, taller building in this location at the heart of the Redoubt, would harm the setting of the Soldiers' Quarters and Parade Ground. Reducing the size of the Parade Ground, erecting one or more buildings on it or constructing a cover over it would all detract markedly from the ability to appreciate its former roles at the heart of the Redoubt's interior.

Recommendations

7.10 *If one or more new buildings is constructed on the footprint of the former Ablution Room, Bath Room, Cook House, Latrines and Staff Sergeants' Quarters at the Drop Redoubt, in their form, scale and materials they should not harm the setting of the Soldiers' Quarters and Parade Ground.*

7.11 *Development should not take place on the Drop Redoubt's Parade Ground so that its open character, former roles and relationship with the Soldiers' Quarters and the former Ablution Room, Bath Room, Cook House, Latrines and Staff Sergeants' Quarters can continue to be appreciated.*

At present, *c.* 230 years after the eastern fort was designed and constructed by Hyde Page at the end of the ridge to protect the port and town of Dover, and in spite of the changes which have occurred in the harbour and town below, on a clear day the panoramic views from the Drop Redoubt's *terre-plein* mean it is still possible to appreciate why this location was chosen for the fortification, and its part in the wider set of defences (those further west on the Heights, as well as Dover Castle, Archcliffe Fort and the batteries at harbour level) designed to defend Dover from an attacking force. Indeed, the view from the Western Heights towards Dover Castle, either from the south-west with the Drop Redoubt in the foreground or from the Redoubt's *terre-plein* itself, is one which has been depicted by a number of artists over the years (e.g. by Durrant in 1808, and Burgess in the mid-1850s). Impairing the views (e.g. by erecting structures on the *terre-plein* or on the slopes adjacent to the Redoubt), and in particular hindering the comparison of depictions by artists in the past with the present-day situation, would diminish the

experience of visiting the *terre-plein*. Improving access to the *terre-plein* (e.g. a lift to rampart level) would need to be achieved in ways which do not harm the significance or the *terre-plein* itself or that of other elements (e.g. the galleried steps or the entrance courtyard).

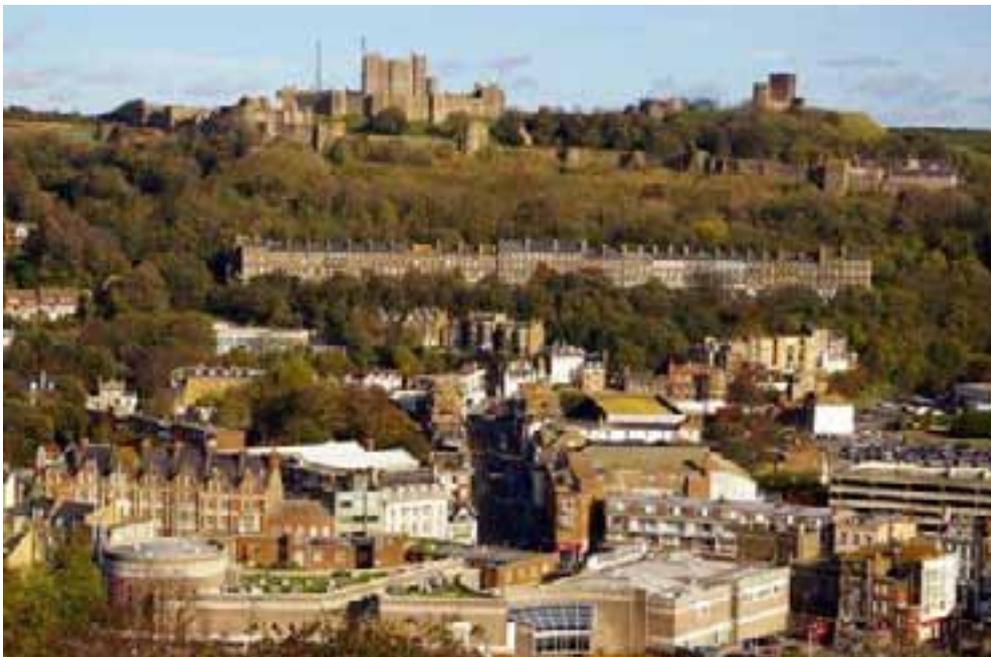
Recommendations

7.12 Views from the Drop Redoubt's *terre-plein* (e.g. towards Dover Castle) should not be impaired.

7.13 Measures taken to improve access to the Drop Redoubt's *terre-plein* should not harm its significance or that of other elements.



Dover Castle from the Saluting Battery on the Drop Redoubt's terre-plein, watercolour by William Burgess, probably painted mid-1850s (Dover Museum)



Dover Castle from the Drop Redoubt on the Western Heights, photo taken 2010/11 (www.world-stay.com)

Throughout its military life, the *terre-plein* was kept free of structures except those which supported the gun emplacements (e.g. side arms stores, expense magazines, ready-use

ammunition lockers). These emplacements and associated structures, as well as the parapet and embrasures, survive well today (in contrast to those formerly on the Citadel's *terre-plein*), demonstrating the changing location, number and form of artillery positions in relation to contemporary perceptions of the most likely direction of an attack. Adding non-military structures on the *terre-plein* may reduce the ability to appreciate its former role as the location of gun emplacements and the importance of the principle of maintaining a 360 degree field of fire.

Recommendation

7.14 *Non-military structures should not be constructed on the Drop Redoubt's terre-plein which detract from its significance or character.*

The exception to restricting the *terre-plein* to gun-related structures was the relocation here in 1861 of a few pieces of the foundations of the *pharos* (Bredenstone) from where they had recently been uncovered during construction of the Officers' Quarters. This enabled the custom of holding the installation ceremony of the Lord Warden of the Cinque Ports at the Bredenstone to recommence – it had been held there from the seventeenth century probably until the remains of the *pharos* were buried during construction of the eastern fort in the 1780s. Once the custom of holding the ceremony at the Bredenstone resumed in 1861, it continued in this location (on the *terre-plein*) until 1914. Comparison of these relocated pieces of foundation with a photograph taken at the installation ceremony in 1892 suggests that they have been formalised as a tent-like structure (with a brick front added) over the years. Their conservation management should be informed by reference to the documentary evidence relating to the pieces of foundation as reset in 1861, and more generally to antiquarian depictions of the Bredenstone. Removal of these pieces of foundation would result in the loss of this visual reminder that the installation ceremony of the Lord Warden used to take place here. The remains of the Bredenstone have never been under a cover or shelter, and this should continue to be the case. The *in situ* remains of the foundations of the *pharos* are visible in the rear wall of casemate 6 of the Officers' Quarters, and should not be concealed.

Recommendation

7.15 *Visual reminders of the tradition of holding the installation ceremony of the Lord Warden of the Cinque Ports at the Bredenstone, and therefore of its relationship with the Drop Redoubt, should be retained.*

7.16 *Consideration should be given to reinstating the tradition of holding the installation ceremony of the Lord Warden of the Cinque Ports at the Bredenstone on the Drop Redoubt's terre-plein, once access to the Redoubt has been improved.*

8.0 The North-East Line

The growth of trees and vegetation in the North-East Line's ditch and on the profiled rampart and *banquette* (located on the southern side of the ditch) has reduced the ability to appreciate the Line's relationship with the Drop Redoubt's three East Gun Rooms, which were constructed in the same period (1858-67) to provide enfilade fire along the ditch of the North-East Line. A clear line of sight needed to be maintained along the ditch for this purpose, and to enable musketry fire from the rampart's *banquette* to be concentrated on an attacking force there, for which reasons the ditch, rampart and *banquette* needed to be kept free of trees and vegetation.

Recommendation

8.1 *The trees and vegetation should be removed from the North-East Line and a management regime implemented to prevent re-colonisation, thereby regaining the legibility of the elements.*

The low level of maintenance and repair to the North-East Line is resulting in the loss of significant fabric. Repairs should be accompanied by the introduction of a maintenance regime for the North-East Line as a whole (ditch, profiled rampart and *banquette*).

Recommendation

8.2 A condition survey should be carried out of the North-East Line which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the North-East Line.

The extent of survival of the profiled rampart and *banquette* is unknown – the RCHME survey of the sculpted ground around the Drop Redoubt did not include this area – but should be ascertained. Accurate reconstruction of levelled stretches of the profiled rampart and *banquette* would enhance the legibility of the North-East Line as a whole.

Recommendations

8.3 A survey should be carried out to ascertain the extent of survival of the North-East Line's profiled rampart and *banquette* to inform their conservation management.

8.4 Levelled stretches of the North-East Line's profiled rampart and *banquette* should be reconstructed accurately to improve the legibility of the North-East Line as a whole.

9.0 The South Lines

The ability to appreciate the form and function of the South Lines, and of the two-storey South Lines Casemates located mid-way down the Line (designed to provide enfilade fire down the rest of the ditch for the defence of the South Lines Bridge – the latter no longer extant), has been reduced by the infilling of the South Lines' ditch from its origin at the junction with the Citadel's *tenaille* southwards as far as the South Lines Casemates (and again further south), and the unchecked growth of trees and vegetation in the remainder of the ditch. The trees and vegetation should be cleared from the ditch and a management regime introduced to prevent re-colonisation. For the same reason, it would be desirable for the infill to be removed from the ditch (under archaeological supervision).

Recommendations

9.1 The trees and vegetation should be cleared from the South Lines' ditch and a management regime implemented to prevent re-colonisation, thereby regaining the legibility of the elements.

9.2 The infill should be removed from the South Lines' ditch to improve the legibility of the South Lines as a whole.

Maintenance and repair of the built fabric have been minimal since the departure of the army from the site in the 1950s – exacerbated by the fragmented nature of ownership of the South Lines – with the result that significant fabric is being lost. Repairs should be carried out and a maintenance regime introduced for the whole of the South Lines, which will require liaison between the various owners.

Recommendation

9.3 A condition survey should be carried out of the South Lines which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the South Lines.

The profiled rampart and *banquette* (located on the eastern side of the ditch), intended for musketry defence against an attacking force approaching from the west, has been levelled for much of its original length but is still legible in limited places (notably immediately south of the South Lines Casemates), and contributes appreciably to the ability to understand how the Lines were intended to be used. A survey should be carried out to ascertain where the profiled rampart and *banquette* still survive. Accurately reconstructing levelled sections of the rampart and *banquette* would enhance the legibility of the South Lines as a whole.

Recommendations

9.4 *A survey should be carried out to ascertain the extent of survival of the South Lines' profiled rampart and banquette to inform their conservation management.*

9.5 *Levelled stretches of the South Lines' profiled rampart and banquette should be reconstructed accurately to improve the legibility of the South Lines as a whole.*

Only the western end of the South Lines Casemates survives, the remainder having been demolished with most of the adjacent 1858-67 caponier and casemated South Front Barracks in 1959. Removal of the rest of the remains of the South Lines Casemates would result in the loss of the visible evidence for how the lower part of the South Lines and the South Lines Bridge were defended, and of the only example on the Heights where casemates were placed mid-way along a Line for its defence rather than such defence being provided by the main fortifications. Accurately reconstructing the demolished (middle and eastern) parts of the South Lines Casemates (based on documentary evidence) would facilitate appreciation of their significance.

Recommendation

9.6 *Consideration should be given to reconstructing accurately the demolished sections of the South Lines Casemates to facilitate appreciation of their form and role in relation to the South Lines and the defence of the Western Heights.*

The Upper South Lines Casemates (two-storey gun rooms), constructed in 1853-5 at the angle of the eastern end of the Citadel *tenaille's* inner ditch scarp and the northern end of the South Lines' scarp to rectify a weakness in Ford's 1804-16 defensive scheme, are currently covered externally by trees and vegetation. Removal of the trees and vegetation should be followed by the introduction of a management regime to prevent re-colonisation. The interiors of these casemates are inaccessible, so the extent of survival of elements there is unknown. The gun rooms are currently unmaintained externally and internally. Repairs should be accompanied by the introduction of an appropriate regime of maintenance. Access to the casemates and ventilation should be re-established to minimise the loss of significant fabric.

Recommendations

9.7 *The trees and vegetation should be cleared from the Upper South Lines Casemates and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.*

9.8 *A condition survey should be carried out of the Upper South Lines Casemates which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the Upper South Lines Casemates.*

9.9 *Access to the Upper South Lines Casemates and adequate ventilation should be re-established.*

10.0 The South Front, South Front Barracks and South Entrance

Whilst the extension to the South Lines survives relatively well, little remains of the numerous buildings which formed the South Front Barracks (as constructed by du Cane in the late 1850s and 1860s) until their mass demolition in 1959 – the limited remains of the casemated South Front Barracks, and further uphill on Citadel Road the Warrant Officers' Married Quarters Nos 2-3 (as flats), the Motor Transport Shed, and Victoria Hall (now unused). Since the mass demolition of the South Front Barracks, the use of the area has become fragmented and diverse, and much of it has become overwhelmed by trees and vegetation, which have diminished the ability to appreciate this area's former use and coherence as a Barracks from the late 1850s to the 1950s. Removal of the trees and vegetation should be accompanied by the introduction of a management regime to prevent re-colonisation. Historic photographs and plans of the former South Front Barracks survive which could inform planning for the long-term redevelopment of

this area and thereby facilitate appreciation of its former military layout, coherence and significances.

Recommendations

10.1 The trees and vegetation should be removed from the site of the South Front Barracks and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

10.2 Historic photographs and plans of the former South Front Barracks should be taken into account in any future long-term redevelopment proposals for this area.

The low level of maintenance and repair of the extension to the South Lines is resulting in the loss of significant fabric. Repairs need to be carried out and an appropriate maintenance regime established.

Recommendation

10.3 A condition survey should be carried out of the extension to the South Lines which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the extension to the South Lines.

The setting of the remains of the casemated South Front Barracks and of the extension to the South Lines is compromised by this area's use as a haulage yard, with large lorries manoeuvring and parked with the result that views of the remains of the casemated Barracks and defences are often blocked. The modern light industrial buildings do not follow the footprint of the former casemated South Front Barracks (buried archaeological remains may survive) and are of a much smaller scale, with the result that the considerable scale of the former building, and its relationship with its defences, are difficult to imagine. Historic photographs and plans of the former casemated South Front Barracks and its context survive which could inform planning for the long-term redevelopment of this area and thereby facilitate appreciation of its former military layout and significances. Care would need to be taken with regard to the scale, form and materials of any new development in this location so that it does not detract from the ability to appreciate the *in situ* remains of the former casemated South Front Barracks or the extension to the South Lines, or from long views from harbour level towards the surviving nearby historic military elements on the Heights (notably the Citadel's Officers' Quarters further west), which would be much more visible if the hillside is returned to chalk grassland. Densely packing the area with new buildings would greatly hinder appreciation of the surviving defences and the former casemated South Front Barracks.

Recommendations

10.4 Historic photographs and plans of the former casemated South Front Barracks and the extension to the South Lines should be taken into account in any future long-term redevelopment proposals for this area.

*10.5 Any development on the site of the casemated South Front Barracks should be appropriate in scale, form and materials to its context and should not detract from the setting of the *in situ* remains of the former casemated Barracks and the extension to the South Lines, or from long views from harbour level towards the surviving nearby historic military elements (notably the Citadel's Officers Quarters further west).*



The site of the casemated South Front Barracks (with modern lorry shelter built against the remains of the casemated Barracks), photo taken 2011 (www.subterraneanhistory.co.uk)

Further up the slope from the site of the casemated South Front Barracks (but below the 1960s houses built on the site of the Married Soldiers' Quarters), the three large water tanks (constructed 1804-16 for use by the South Lines Casemates and other military installations further downhill) are extant below ground, and the terraced ground where the South Front Barracks' Canteen (built in the 1860s) formerly stood is still evident (buried archaeological remains may survive). Historic photographs and plans of the former Canteen survive which could inform planning for the long-term redevelopment of this area and thereby facilitate appreciation of its former military layout and significances.

Recommendation

10.6 Historic photographs and plans of the former Canteen at the South Front Barracks should be taken into account in any future long-term redevelopment proposals for this area.

On the next level uphill, the houses and gardens constructed in the 1960s on the site of the South Front Barracks' Married Soldiers' Quarters do not follow the footprint of the former buildings, are of a much reduced scale and have been assessed in this BHCF as intrusive. Buried archaeological remains may survive of the Married Soldiers' Quarters, its Laundry and Warrant Officer's Quarters No. 1. There are historic photographs and plans of these buildings which could inform planning for the long-term redevelopment of this area and thereby facilitate appreciation of its former military layout and significances.

Recommendation

10.7 Historic photographs and plans of the former Married Soldiers' Quarters, its Laundry and Warrant Officer's Quarters No. 1 at the South Front Barracks should be taken into account in any future long-term redevelopment proposals for this area.

Of the South Front Barracks' buildings on Citadel Road, few are extant above ground, but buried archaeological remains may survive of some buildings (e.g. the Stables, and the Bread and Meat Store). The Warrant Officers' Married Quarters Nos 2-3 are still in use as flats, allowing some appreciation of their significance. The Motor Transport Shed has been assessed in this BHCF as being of Level D or little significance. In contrast, Victoria Hall has been assessed as

being of Level C or some significance (see below). Filling the area to the west and/or east of the MT Shed with new buildings (particularly if they were of uniform design, tall or large) would detract from the legibility of the former arrangement of this part of the South Front Barracks, which consisted of buildings of a range of sizes, forms and uses but all of which were single-storey apart from the Warrant Officers' Married Quarters Nos 2-3 and the extension to Victoria Hall. This is a sensitive location (on the road approaching the Citadel's Main Entrance) which is visible from a number of places (e.g. the Citadel's *terre-plein*, the fortress interior, harbour level). When planning the future use of this area, it will be important to ensure that the scale, form and materials of any new buildings do not detract from views or the legibility or setting of significant elements (e.g. Victoria Hall, the fortress interior).

Recommendation

10.8 Any development on the site of the South Front Barracks on Citadel Road should facilitate appreciation of the former military layout and significances of this area. In its scale, form and materials, such development should not detract from views within or towards the fortress or the legibility or setting of significant elements.

Since fire gutted the central and eastern end of the single-storey range of Victoria Hall in 2003, the whole building has stood empty. As the last standing example of the wide range of institutional buildings formerly provided for the garrison of the Western Heights, the building is of sufficient significance (it has been assessed in this BHCF as being of Level C or some significance) to make it worthy of repair and being found a new use. When built in 1898, Victoria Hall consisted of a single-storey range containing a hall probably intended as a temperance alternative to a Canteen and Regimental Institute, with a Married Quarters for a civilian caretaker at one end, to which was added in 1903 a two-storey wing containing a school and educational establishment. The internal layout in the original building and wing, and the distinctions in window form and size, should be retained as far as possible to enable continued appreciation of how the building was used and lit. Any further extensions should not detract from the legibility of the 1898 and 1903 plan.

Recommendation

10.9 Victoria Hall should be repaired and found a new use which facilitates appreciation of its significances.

The currently heavily wooded nature of the South Parapet (flanking the South Military Road) disguises its former defensive form, role and relationship with the other South Front defences – du Cane cut back the chalk slope in the 1860s to form a sheer face and the spoil was used to grade the ground to the south so it could be defended from firing positions on the extension to the South Lines. Removal of the trees and vegetation, and management of the South Parapet as a bare chalk slope once again, would enhance the ability to appreciate its intended original form and role.

Recommendation

10.10 The trees and vegetation should be cleared from the South Parapet and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

Following demolition of the South Entrance (Archcliffe Gate) and its bridge in 1964, the South Entrance Ditch was partially infilled at its northern end and entirely so in its central section (which have become colonised by trees and vegetation), whilst further south the South Entrance Ditch and St Martin's Flank still survive down to the cliff edge but are now covered with trees and vegetation. This has reduced the ability to appreciate the original form and intended role of these elements in defending Archcliffe Gate and the south-western side of the fortress as part of the South Front defences, as designed by du Cane in 1858-67. Clearance of the trees and vegetation from the South Entrance Ditch and St Martin's Flank and the introduction of a management regime to prevent their re-colonisation, and the removal of the infill from the ditch

(under archaeological supervision), together with the addition of a physical indication of the location, plan and scale of the former bridge and Archcliffe Gate (e.g. marked in outline on the ground), would make du Cane's arrangement easier to appreciate than it is at present. A more ambitious but nevertheless worthwhile project would be to reconstruct Archcliffe Gate accurately on its former footprint, based on surviving historic photographs and plans of the former structure. The demolition of this formal Main Entrance to the fortress was a major loss to the Western Heights – its distinctive, majestic profile on the skyline was a notable feature in historic photographs.

Recommendations

10.11 The trees and vegetation should be cleared from the South Entrance Ditch and St Martin's Flank and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

10.12 The infill should be removed from the South Entrance Ditch to improve the legibility of the element as a whole.

10.13 A discreet physical indication of the former location, plan and scale of the former bridge and Archcliffe Gate should be made in order to facilitate appreciation of the former layout of the South Entrance.

10.14 Consideration should be given to reconstructing Archcliffe Gate accurately on its former footprint.

Although Archcliffe Gate and its bridge do not survive, still extant are the two separate networks of casemates set behind the South Entrance Ditch's northern and eastern scarp revetment. These consist of the Guard Room, Prisoners' Room and two Cells (originally with access from the northern side of Archcliffe Gate), and the Gun Rooms, Expense Magazine, Ablutions and Latrines (with access via a passage from Centre Road north of Archcliffe Gate). Openings in the scarp revetment (smoke vents, embrasures, loopholes) have been sealed up to try to prevent unauthorised access and therefore damage to and loss of significant fabric, but this remains a problem. There is no access to the casemates and the level of ventilation is low. Reinstating access and ventilation to the casemates, carrying out repairs and the introduction of an appropriate regime of maintenance, will be needed to minimise further loss of significant fabric. Introducing authorised access for visitors to the surviving networks of associated casemates would facilitate appreciation of the original form and roles of Archcliffe Gate and the South Front defences and may help to deter people from breaking in and thereby damaging significant fabric.

Recommendations

10.15 A condition survey should be carried out of the two networks of casemates behind the South Entrance Ditch's scarp revetment which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the casemates behind the South Entrance Ditch's scarp revetment.

10.16 Access and ventilation should be re-established to the casemates behind the South Entrance Ditch's scarp revetment.



The infilled northern end of the South Entrance Ditch and the smoke vents of the casemates behind the northern scarp revetment, looking north, photo taken 1998 (NMR: AA00/8595)

11.0 The Grand Shaft and Grand Shaft Barracks

The demolition of the Grand Shaft Barracks was not only a major loss in itself, but it also reduced the ability to appreciate the original role of the Grand Shaft as devised in 1804 by Twiss and Ford – to facilitate the rapid movement of large numbers of troops between the Grand Shaft Barracks and the town and harbour below. Nevertheless, the survival of the Grand Shaft itself, the open character of the Parade Ground (to facilitate the rapid assembly and movement of troops, as well as for drill practice), and the survival of the terraces on which the Grand Shaft Barracks stood, mean that the role and relationships of the Grand Shaft can still be appreciated. Development on the Parade Ground would fundamentally reduce this legibility.

Recommendation

11.1 The open character of the Parade Ground at the Grand Shaft Barracks should be retained so that the relationship between the Parade Ground, the Grand Shaft and the site of the Grand Shaft Barracks remains legible and allows appreciation of how the Grand Shaft facilitated rapid movement of large numbers of troops between the Grand Shaft Barracks and the town and harbour below.

Altering the use of the upper entrance to the Grand Shaft (i.e. the bowl-shaped area containing the steps and landing leading to the entrance), or the addition to or alteration of its form, would greatly diminish the ability to appreciate its original simple, efficient design and therefore how it was intended to be used.

Recommendation

11.2 The ability to appreciate the original simple, efficient design of the upper entrance to the Grand Shaft should be retained.

The Grand Shaft is currently only opened to visitors occasionally but has the potential to provide a more regular route for pedestrian access between town and harbour level, the former Grand

Shaft Barracks site and the eastern end of the Heights (e.g. the Drop Redoubt), which would also enable the Grand Shaft's significances to be more widely appreciated. Making the Grand Shaft more accessible, for example to the disabled or those with buggies (e.g. through the addition of a lift in the light-well), would need to be achieved in a way which does not detract from its significances.

Recommendations

11.3 Consideration should be given to increasing the frequency of pedestrian access to the Grand Shaft so that its significances can be more widely appreciated and access is facilitated between harbour and town level, the site of the Grand Shaft Barracks, and the eastern end of the Western Heights.

11.4 Measures devised to improve access to the Grand Shaft should not detract from its significances.

Trees and vegetation have grown up on the terraces formerly occupied by the Grand Shaft Barracks, the Parade Ground and the bowl-shaped area containing the Grand Shaft's upper entrance, and once cleared have rapidly re-colonised. Clearance of the trees and vegetation needs to be accompanied by the introduction of an appropriate management regime which prevents re-colonisation.

Recommendation

11.5 The trees and vegetation should be cleared from the terraces formerly occupied by the Grand Shaft Barracks, the Parade Ground and the bowl-shaped area containing the Grand Shaft's upper entrance. A management regime should be introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

In spite of the demolition of almost all the Grand Shaft Barracks buildings (only the Guard House Privies and Magazine survive), the survival of the main east–west terraces formerly containing the barrack accommodation, the north–south terraces further west on which the ancillary buildings stood, the two flights of steps which facilitated access to the various buildings, and the Parade Ground (between the barrack accommodation and the entrance to the Grand Shaft), together still readily allow an appreciation of how the complex was arranged and used. When considering possible new uses for the site of the Grand Shaft Barracks, the area should be treated as a whole, with the aim of retaining the ability to appreciate the former military layout and significances of the area. Historic photographs and plans of the former Grand Shaft Barracks survive which could inform the redevelopment of this area. Constructing structures other than buildings on the platforms, particularly if they are low-level (e.g. gardens, a playground, tennis courts, a sculpture park) would not allow the sense of bulk of the former barrack buildings to be appreciated, and risks giving visitors a misleading impression about the former use of this area. Provision of the trappings which many residential schemes today usually include (e.g. private gardens and parking) on the terraces themselves would detract markedly from the legibility, simplicity and coherence of the former military arrangement.

Recommendations

11.6 Historic photographs and plans of the former Grand Shaft Barracks should be taken into account in any future redevelopment proposals for this area.

11.7 If buildings are constructed on the site of the Grand Shaft Barracks, they should be designed to reflect the scale, location and massing of the former barrack accommodation and ancillary buildings, and the existing terraces, footpaths and steps should be retained. The relationship between the terraces, footpaths, the Parade Ground and the Grand Shaft, and the area's sense of coherence, should be preserved.

When considering possible new uses for the site of the Grand Shaft Barracks, the negative impact on the legibility of the surviving remains and relationships at the site should be taken into account of allowing vehicular access to the area and the requirement for parking, both in terms of roads and the number of vehicles.

Recommendation

11.8 When planning new uses at the site of the Grand Shaft Barracks, the negative impact of vehicular access and parking on the ability to appreciate the area's former military layout, relationships and significances should be minimised.

12.0 The Military Hospital

In recent decades the Military Hospital has been treated as the poor relation out of the components of the Western Heights. When heritage designations were afforded to the Heights, it was not included in the Scheduled Area or in the Western Heights Conservation Area. Since the Military Hospital's demolition in the 1960s and 1970s and its replacement by light engineering buildings and Channel House, it has largely been a case of out of sight, completely out of mind. In terms of the amount of research which has been carried out relating to the Hospital, the RCHME barely mentioned it in their Survey Reports (there appear to be no catalogue entries for it in the Swindon archives either), it doesn't get a mention in the main publications about historic hospitals, and it is rumoured that the records held in the buildings were destroyed with them. Fortunately, the Military Hospital is depicted on some plans showing the Heights' fortifications, and on Ordnance Survey maps and photographs, whilst inspection reports include sections relating to this hospital (e.g. carried out by the Army Medical Department in the 1860s); other documentation may survive. It is surely inappropriate to continue to ignore this aspect of the military use of the Western Heights.

Constructed from 1804 just south of the South Military Road, and extended in the 1860s with adjacent Hospital Huts, a Recreation Ground in front of it, a Married Soldiers' Quarters uphill and a protected short-cut route up the hillside, the Military Hospital formed a fundamental part in the lives of sick or injured soldiers passing through the Western Heights. Buried archaeological remains of the Military Hospital may survive which, in conjunction with surviving documentation, can potentially add a different dimension to the picture of what is known about the accommodation and facilities provided for soldiers at the Western Heights (see above, 'Assessment of significance', Strand 3). Such evidence could also enable a more informed assessment of whether the site of the Military Hospital should be included in the Scheduled Area and/or the Western Heights Conservation Area (see above). Indicating the possibility of the survival of buried archaeological remains of the Military Hospital on the Historic Environment Record would also assist the area's conservation management.

Recommendations

12.1 A survey and field evaluation should be carried out to ascertain the extent of survival of buried archaeological remains of the Military Hospital at the Western Heights. Research should identify the type, quantity and location of documentation relating to the Military Hospital and its potential for shedding light on the accommodation and facilities provided for sick and injured people who stayed at the Military Hospital.

12.2 The possibility of the survival of buried archaeological remains of the Military Hospital should be indicated on the Historic Environment Record.

Local tradition holds that the 'Old Burial Ground' shown on the 1871-81 1:500 Dover Town Plan amongst the trees west of the Military Hospital's West Hospital Hut is the site of 'The Graves', where plague victims are alleged to have been buried in the seventeenth century, with the burial ground having continued in use until the nineteenth century. Little documentary evidence appears to have come to light so far concerning the circumstances and identity of these burials, beyond references in local history accounts published during the nineteenth and twentieth century (e.g. Hasted 1800, Batcheller 1845, Bavington-Jones 1907). Field evaluation and analysis of any surviving human remains, accompanied by documentary research in relation to the area, may shed more light on the matter. Any proposed development or other changes in

land use in this area would need to take into account the possibility of the survival of human remains, particularly if they may be plague victims (see *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England*, English Heritage 2005).

Recommendation

12.3 Field evaluation and documentary research should be carried out to ascertain the nature and extent of survival of buried human remains at the site known as 'The Graves' west of the site of the Military Hospital.

The setting of the site of the Military Hospital, its Recreation Ground and further uphill its Married Soldiers' Quarters, is compromised by this area's occupation by light engineering and commercial buildings, which have been assessed in this BHCF as being intrusive. Further research would enable a more detailed assessment of the significance of Channel House to be carried out to inform its conservation management. Historic photographs and plans of the former Military Hospital buildings and its Recreation Ground survive which could inform planning for the long-term redevelopment of this area and thereby facilitate appreciation of its former military layout and significances.

Recommendations

12.4 Research should be carried out to assess the significance of Channel House.

12.5 Historic photographs and plans of the former Military Hospital buildings and its Recreation Ground should be taken into account in any future long-term redevelopment proposals for this area.

13.0 The Citadel Battery

Parts of the Citadel Battery are overgrown with vegetation and trees, which reduce the ability to appreciate the range and form of the defensive devices included in the 1898 design. Clearing the trees and vegetation would help to regain this legibility. A management regime should be established to prevent re-colonisation.

Recommendation

13.1 The trees and vegetation should be cleared from the Citadel Battery and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

The low level of maintenance and repair of the Citadel Battery since the mid-twentieth century has contributed to the deterioration of its condition which, in conjunction with vandalism, people breaking into underground areas (magazines, stores and gun detachments) and theft of elements, has resulted in the loss of significant fabric. The conservation management of the Citadel Battery needs to address the whole complex. Repairs should be accompanied by the introduction of an appropriate maintenance regime. Accurate reconstruction of at least one of the emplacements (probably emplacement III, where parts of the loading platform survive although in a ruinous state), informed by the *in situ* remains and documentary evidence, would improve the ability to appreciate how the Citadel Battery operated. The underground elements are currently neither securely sealed nor easily accessible to authorised visitors. If the Battery is to continue to be managed on an open-access basis, measures to enable these underground areas to be inspected safely by passing visitors would reduce the loss of significant fabric incurred through people breaking in, although vandalism may still occur.

Recommendations

13.2 A condition survey should be carried out of the Citadel Battery which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the Citadel Battery.

13.3 Consideration should be given to reconstructing accurately at least one of the emplacements at the Citadel Battery to facilitate appreciation of its original form and the former role of the Citadel Battery.



The Citadel Battery, emplacement III, photo taken 2011 (author)

Development on the slope in front of or to the sides of the Citadel Battery (i.e. to the south, west and east) would reduce the ability to appreciate its original role (it was constructed in 1898 to provide counter-bombardment designed to ward off enemy shipping in the Channel threatening to shell the port of Dover).

Recommendation

13.4 Development should not take place on the slope in front of or to the sides of the Citadel Battery so that its original role can continue to be appreciated.

The legibility of the relationship between the Citadel Battery and the Western Outworks was severely reduced by the levelling of structures between the two works, which accompanied the infilling of the adjacent western end of the Western Outworks' ditch in the 1960s. This levelling removed surface traces of the covered way (which led from the Citadel Battery to a bridge over the Western Outworks' North Ditch and thereby to peacetime accommodation and facilities in the Hut Barracks and War Quarters in the Double Caponier), and other facilities serving the Citadel Battery – the Caretaker's Quarters, Latrine block and Artificer's Shop. Buried archaeological remains may survive of these buildings and structures. Removing the infill from the Western Outworks' ditch (see above) would help to restore the legibility of this relationship. Constructing new buildings or structures on the ground between the Citadel Battery and the site of the bridge to the Western Outworks other than on the footprints of the former buildings would hinder appreciation of the nature of the former close working relationship between the two works and would potentially give a misleading impression to visitors.

Recommendation

13.5 Development should not take place on the ground between the Citadel Battery and the Western Outworks other than on the footprints of the former facilities buildings which served the Citadel Battery.

Improving the legibility of the Citadel Battery and the Second World War remains (e.g. pillboxes) on the slopes north and west of the Western Heights' fortifications would not only facilitate visitor appreciation of the significance of these elements, but would also enhance the range of heritage remains which can be viewed by visitors walking along the ridge and slopes (perhaps on a heritage trail) between the remains of the Second World War Heavy Anti-Aircraft Battery and military hatted camp at Farthingloe (see *Dover District Heritage Strategy*, Appendix 4 Case Study 3 Farthingloe, final draft for stakeholder consultation 2011) and the Western Heights.

Recommendation

13.6 Consideration should be given to improving the legibility of the Citadel Battery and the Second World War remains on the slopes west and north of the Western Heights so that they can be appreciated by visitors walking between Farthingloe and the Western Heights.

14.0 The Battery on the North Lines

Since the departure of the army from the Western Heights in the 1950s, trees and vegetation have overwhelmed the Battery on the North Lines, making it extremely difficult to discern its form or its relationship with the Drop Redoubt, which it was designed to supplement for defence of the land front when built in 1893. The trees and vegetation should be removed from the Battery and a management regime introduced to prevent re-colonisation. Care will be needed not to remove the screen bank (originally topped with a hedge) and the screen of trees designed to protect the rear (southern side) of the Battery, since these make a fundamental contribution to its significance as what are thought to be the only examples on the Western Heights of deliberate planting as part of military engineering.

Recommendation

14.1 The trees and vegetation should be cleared from the Battery on the North Lines and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

The level of maintenance and repair at the Battery on the North Lines since the mid-twentieth century has been very low, and has resulted in the loss of significant fabric. Repairs should be accompanied by the establishment of an appropriate regime of maintenance.

Recommendation

14.2 A condition survey should be carried out of the Battery on the North Lines which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the Battery on the North Lines.

Any development on land between the Battery on the North Lines and the Drop Redoubt would disrupt the crucial relationship between the two works, which were designed to defend the land front together.

Recommendation

14.3 Development should not take place on ground between the Battery on the North Lines and the Drop Redoubt so that the intended role of the two works (to defend the land front together) can continue to be appreciated.

The insertion of a new section of road through the North Lines connecting Centre Road with the North Military Road (thereby by-passing the North Entrance) in 1967 caused the destruction of the Battery on the North Lines' fourth, western-most gun emplacement and the demolition of the Grand Shaft Barracks' Warrant Officer's Quarters No. 3, which had been constructed north of Drop Redoubt Road in 1899. In the 1980s, the detached house for high-ranking officers from the Grand Shaft Barracks which had been built further east by 1925 was also demolished, and a new house was built nearby on the truncated western end of the Battery on the North Lines (south of the line of gun emplacements). Both the inserted section of road and the 1980s house have reduced the ability to appreciate the former continuity of the circuit of the North Lines in this area and the original form of the Battery on the North Lines. The long-term aspiration for this part of the Heights should be to seek to restore the legibility of the form and relationship of the North Lines and the Battery on the North Lines.

Recommendation

14.4 The conservation management of the North Lines and the Battery on the North Lines should seek to restore the legibility of their form and relationship.

15.0 The Drop Battery

The Drop Battery has become obscured by trees and vegetation since the departure of the army from the Heights in the 1950s. Removal of the trees and vegetation, followed by a maintenance regime to prevent re-colonisation, is needed to restore the legibility of the form of the Drop Battery, and to allow appreciation of its original role (it was built in c. 1853 to protect the port and harbour of Dover) and its relationship with the North-East Line (built 1859-62), which truncated its north-eastern edge and field of fire in that direction.

Recommendation

15.1 The trees and vegetation should be cleared from the Drop Battery and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

The low level of maintenance and repair to the Drop Battery since the mid-twentieth century has resulted in the loss of significant fabric. Repairs should be carried out and an appropriate maintenance regime established.

Recommendation

15.2 A condition survey should be carried out of the Drop Battery which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the Drop Battery.

Development on the slope below the Drop Battery (either in front or to the sides) would compromise the ability to appreciate the Battery's original role in defending the port harbour and of Dover.

Recommendation

15.3 Development should not take place on the slope in front of or to the sides of the Drop Battery so that its original role can continue to be appreciated.

16.0 St Martin's Battery/Western Heights Battery

The conservation management of St Martin's Battery (constructed in the early 1870s, including the magazine constructed in 1877 for safety reasons at a distance off the passage serving the South Entrance's gun rooms) and Western Heights 'Emergency Battery' (comprising alterations to St Martin's Battery in 1940) needs to treat them as one complex, so that the same overall conservation approach is applied to elements of different dates and in locations some distance apart, and changes and additions made in different periods remain legible.

Recommendation

16.1 The conservation management of St Martin's Battery and Western Heights Battery should treat them as one complex so that alterations and additions made in different periods in response to the changing nature of the threat can be appreciated.

Trees and vegetation have obscured parts of the Battery complex, reducing the ability to appreciate its form, phases and roles. These should be cleared and a management regime established to prevent re-colonisation.

Recommendation

16.2 The trees and vegetation should be cleared from the St Martin's Battery/Western Heights Battery complex and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of the elements.

The low level of maintenance and repair at the St Martin's Battery/Western Heights Battery complex since the mid-twentieth century is resulting in the deterioration in condition and loss of significant elements. Repairs should be accompanied by the introduction of an appropriate maintenance regime. The complex also suffers from forced entry to closed-off areas, vandalism and graffiti. Anti-social behaviour is a problem here as it is in other parts of the Heights, but is particularly on view in this location as many people (visitors and locals) walk from the nearby car

park to enjoy the high-quality views over the harbour and out to sea. This may act as a deterrent for people who might otherwise explore other parts of the Heights. Increasing the frequency of authorised access to closed-off areas, combined with regularly removing graffiti and other evidence of damage, may help to decrease forced entry to the complex and vandalism and thereby help to reduce anti-social behaviour in this location.

Recommendations

16.3 A condition survey should be carried out of the St Martin's Battery/Western Heights Battery complex which, in conjunction with the significances identified in the BHCF, should inform a programme of repairs intended to minimise the loss of significant elements. An appropriate maintenance regime should be introduced for the complex.

16.4 Consideration should be given to converting closed-off to open-access areas where possible to facilitate appreciation of the stores and ancillary buildings of the St Martin's Battery/Western Heights Battery complex.

Development either within the St Martin's Battery/Western Heights Battery complex (e.g. beside the covered way), or on the slope below the complex to the front or sides, would compromise the ability to appreciate the former roles of St Martin's Battery (built in the early 1870s to defend the harbour and port of Dover from seaward bombardment) and of Western Heights Battery (alterations were made to St Martin's Battery in 1940 so it could defend Dover against air or ground attack in the context of a German invasion). The complex is one of the few components of the defences on the Heights still visible and readily identifiable from harbour level.

Recommendation

16.5 Development should not take place within the St Martin's Battery/Western Heights Battery complex, or on the slope below the complex (to the front or sides), so that its former roles and views of the complex from harbour level can continue to be appreciated.

17.0 The South Front Battery

The South Front Battery – thought to have been constructed in the late nineteenth century to increase the protection afforded to the harbour and port of Dover – is poorly documented. According to the RCHME, its creation may have been the reason for the modification of the Citadel's *tenaille* (the outer ditch was infilled for three-quarters of its original length and the *tenaille* was cut away, leaving a 45 degree slope on the southern side). Documentary research may be able to shed more light on when and why the *tenaille* was modified. Although the remains of the disused South Front Battery were still evident on aerial photographs taken in 1939, they are not discernible above ground today, and may have been levelled or removed when this area was smoothed to make a football pitch. To inform the conservation management of this area, it would be beneficial to ascertain from survey and field evaluation the extent to which buried archaeological remains of the Battery survive, and to confirm the former South Front Battery's plan.

Recommendations

17.1 A survey and field evaluation should be carried out to ascertain the extent of survival of buried archaeological remains of the South Front Battery and its plan.

*17.2 Documentary research should be carried out to ascertain when and why the Citadel's *tenaille* was modified and if this was related to the construction of the South Front Battery.*

If buildings were constructed on the slope in front of or to the sides of the former South Front Battery, they would detract from the ability to appreciate the original role of this Battery. Reconstructing the South Front Battery, or constructing buildings elsewhere on the slope south of the Citadel's *tenaille*, would detract from the ability to appreciate the form and role of the sculpted ground (as created by Ford and Twiss in 1804-16), and would harm the setting of the Citadel's southern defences and the Officers' Quarters.

Recommendation

17.3 Development should not take place on the slope south of the Citadel's tenaille so that it remains possible to appreciate the original role of the South Front Battery and the form and role of the sculpted ground, and the setting of the Citadel's southern defences and the Officers' Quarters is not harmed.

18.0 The Gun Shed

Built east of Centre Road probably in the late 1850s, the Gun Shed is the sole survivor on the Western Heights of a building designed for the storage of mobile artillery pieces on wheeled carriages. By 1904 it was being used as a Cart Shed and from 1937 for the repair and storage of motor vehicles. Assessed as being of Level C or some significance in this BHCF, the Gun Shed should be retained and managed so that evidence of its original form remains legible. Given that the Gun Shed has had a vehicle-related role since it was built, the continuation of this role is desirable.

Recommendation

18.1 As the sole survivor on the Western Heights of a building designed for the storage of mobile artillery pieces on wheeled carriages, the Gun Shed should be managed so that its significances can continue to be appreciated.

The area around the Gun Shed is overgrown with trees and vegetation, making it difficult to appreciate its role in relation to other elements and components on the Western Heights including the military road network, to which it needed good access.

Recommendation

18.2 The trees and vegetation should be cleared from the area around the Gun Shed and a management regime introduced to prevent re-colonisation, thereby regaining the legibility of its relationship with other elements and components on the Western Heights including the military road network.

19.0 The Fortress Interior: ground between the western fort (Citadel) and eastern fort (Drop Redoubt)

The ability to appreciate the open character of the ground between the western fort (Citadel) and the eastern fort (Drop Redoubt), as deliberately designed by Hyde Page in the 1780s and maintained by subsequent military engineers until the army left the Heights in the 1950s, has been reduced by subsequent development (the houses and gardens of Heights Terrace, Citadel Crescent and Knights Templars). Hyde Page's ambitious 1780s scheme of defences for the Heights intended that both independent forts should have 360 degree fields of fire, and that there should be only outworks between the forts, with nowhere for an attacking force to hide. To this arrangement in 1804-16 Ford and Twiss added a third fortification (the North Centre Bastion) between the Citadel and the Drop Redoubt and linked all three with each other and with the cliff edges using Lines, thus forming an entrenched encampment or fortress to protect military encampments on the Heights and to close the rear of the fortifications. Du Cane and Jervois retained the defensive principle in 1858-67 whilst remodelling and adding to the circuit of defences to render them impregnable. Throughout the military occupation of the Heights, the fortress interior was therefore kept free of permanent structures, with the exception of the area just inside the fortress by the North Entrance, where in 1804-16 the works compound and from c. 1858 onwards a few buildings for use by the whole garrison were built (Church and School, Schoolmaster's Quarters and Infants School) adjacent to the RE Yard (formerly the works compound). The convenience of this area close to the North Entrance at the junctions of roads apparently outweighed the desirability of keeping the entire fortress interior protected by the Citadel's and Drop Redoubt's fields of fire entirely free of permanent structures.

At present, the modern development within the fortress interior (all assessed in this BHCF as intrusive) covers the minority of the area, and it is still possible to appreciate the open character

of the fortress interior as intended by the military engineers and its relationship to the defences designed to protect it. The more development takes place in the fortress interior, the more this ability will be reduced, ultimately to the point where it is completely compromised. Particularly harmful to the surviving open character of the interior would be intensive development, which risks giving the misleading impression of the site comprising a settlement surrounded by fortifications and would be visible from the Heights' northern slopes outside the North Lines and in long views (for example from Dover Castle). Also detrimental would be the addition of tall or large buildings in the fortress interior, which would further reduce the impression of massiveness of the defences and the ability to appreciate the defensive principles of inter-visibility and fields of fire between the Citadel and Drop Redoubt. Development constructed within the fortress interior in arrangements other than following the north–south grain as established by the terraces (e.g. roads or buildings aligned east–west, diagonally or in a circle) would detract from the character of the interior as created by the military. A precedent for removing buildings from the interior was set by the army itself, which demolished the camp of hutments as soon as it was no longer required after the Second World War, and the arc of 1950s houses was demolished in the mid-1970s, with the result that the open character of the area west of Heights Terrace was also restored.

Recommendations

19.1 Conservation management of the fortress interior should seek to preserve or enhance its open character.

19.2 Any new development within the fortress interior should respect the special character of the area, should not detract from the impression of massiveness of the defences, and should ensure that the defensive principles of inter-visibility and fields of fire can continue to be appreciated.

19.3 The north–south grain of the fortress interior as established by the terraced terrain should be preserved.

Since the departure of the army from the site in the 1950s, trees and vegetation have colonised parts of the fortress interior. Whilst parts of the interior have been kept clear so they can be used (e.g. for sports), the trees and vegetation for example at the junctions between the terraces and around the edge (e.g. flanking Citadel Road) have not been removed and reinforce the sense of separation between them, detracting from the open character of the fortress interior and hindering views across it, downhill and into the interior from outside the North Lines. The trees and vegetation also detract from the ability to appreciate the principles of fields of fire and inter-visibility as formerly maintained by the military.

Recommendation

19.4 The trees and vegetation should be cleared from the fortress interior and a management regime introduced to prevent re-colonisation, thereby helping to regain the legibility of the open character of the fortress interior.

Aspects of the development of the fortress interior about which little is known but which have implications for its conservation management concern the nature of the grading works which documentary sources indicate were carried out to the ground in the fortress interior in 1858–67 to improve inter-visibility between the Citadel and Drop Redoubt, and the creation of four terraces (descending gently eastwards) on the fortress interior, probably in the late nineteenth or early twentieth century. Carrying out these works may have removed, damaged or concealed the remains of earthworks and buried archaeological remains (e.g. earthwork remains of the outworks constructed in the 1780s, and buried archaeological remains of the Tool Yard of 1804–16). According to the History section in the Scheduling for the Western Heights, construction of the Knights Templars houses 'is considered to have caused significant disturbance to archaeological deposits' relating to the various former buildings and structures on the area north-west of Centre Road (e.g. the Ordnance Stables, works compound, Coal Yard, Church and School, Schoolmaster's Quarters, Infants School, Wagon Shed), but the actual extent of survival of buried archaeological remains in this area is not known. Since the fortress interior was not one

of the areas surveyed by the RCHME in 1998, it would be beneficial to undertake documentary research to ascertain the nature of the grading works and terracing, to undertake a survey to identify the remains of earthworks, and to carry out targeted field evaluation to assess the extent of survival of buried archaeological remains. The results of these assessments would need to be taken into account when planning works to the fortress interior.

Recommendation

19.5 Research should be carried out to ascertain the extent of survival of archaeological remains in the fortress interior to inform its conservation management.

The fortress interior has a relatively long history of use as a venue for sports activities. Historic photographs indicate that, probably in the late nineteenth or early twentieth century, sports pitches for use by the garrison were laid out on terraces in the central area of the fortress interior, which still permitted the interior to be used for assembling troops and did not compromise other defensive principles. Whilst goal posts and similar paraphernalia usually have a minimal negative visual impact, other elements such as sports pavilions, all-weather pitches (particularly if large or with brightly coloured surfaces) and floodlights can have a major negative impact on the character and coherence of the fortress interior.

Recommendation

19.6 Sports facilities and fixtures installed in the fortress interior should not harm its character or coherence.

Car parks can potentially harm the character and coherence of the fortress interior and the setting of elements through their size, surface treatment and lighting (e.g. if they are large, the surface material's colour contrasts markedly with the surrounding ground or it is overtly marked out in bays, or there is tall security lighting), and the large number of parked vehicles in one place. The car park located a short distance east of the Citadel, for example, harms the setting of the Citadel's eastern defences and the approach to its Main Entrance. Further east within the fortress interior (e.g. on Heights Terrace and Knights Templars), the visual impact of the parking arrangements (on the drives in front of the houses, in bays opposite or by the side of the roads) is currently generally less harmful, with vehicles being relatively low in number and dispersed rather than concentrated in formal car parks.

Recommendations

19.7 The negative visual impact of car parks and other parking arrangements on the character and coherence of the fortress interior and the setting of elements should be minimised.

19.8 A long-term aspiration for the fortress interior should be the removal of the car park immediately east of the Citadel and the ground there being returned to chalk grassland to improve the setting of the Citadel's eastern defences and the approach to its Main Entrance.

20.0 The network of military roads

The simple, efficient network of military roads on the Western Heights created during the later eighteenth and earlier nineteenth centuries is still largely unaltered (a section was inserted to bypass the North Entrance in 1967) and largely undiluted by the addition of later roads – only a few small roads have been added to serve the later twentieth-century houses. This sparse network forms an important part of the character of the Western Heights Conservation Area.

Recommendation

20.1 The legibility and simplicity of the sparse network of military roads on the Western Heights should not be compromised by new development.

The high road (originally from Folkestone) connecting the Citadel with the North Entrance (and thence via the North Military Road to Dover) has been lost since the army departed from the

Heights. Reconstructing a path on its former route would regain the legibility of this part of the military road network.

Recommendation

20.2 Consideration should be given to reconstructing a path on the former route of the high road from the Citadel to the North Entrance.

After the North Entrance was by-passed in 1967 with the insertion of a stretch of new road linking Centre Road directly with the North Military Road, the section of North Military Road just north of the North Entrance (within the by-passed area) was afforded some parking spaces along its sides for use by people visiting the northern slopes of the Heights. Up to now, it has been clear from its form and materials that this had been the stretch of the North Military Road leading to the North Entrance. Resurfacing and marking out this area so it becomes car park rather than road, or converting it to chalk grassland, would reduce the ability to appreciate the former route of the road which, as the high road from Folkestone to Dover, has been in existence since at least the eighteenth century.

Recommendation

20.3 The character of the road just north of the North Entrance (within the by-passed area) should be preserved as the North Military Road.

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- WD/2309 *Dover. Western Heights. North Centre Bastion. Proposed Platforms for 40-pdrs on 'Overbank Carriages'. Dated September 1890. Approved September 1890.*
- WD/2513 *Dover, North Lines, Plan Shewing proposed Bank and Hedge, to secure Guns from Sea View, proposal drawing, dated 29th August 1893.*
- WD/2374 *Dover South Front Barracks & Hospital. Plan Shewing Occupation. War Dept Ordnance Survey sheet LXVIII.14.16, revision of 1881, coloured and annotated in 1895.*
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- WD/2310 *Dover. Western Heights. North Centre Bastion. Record Plan of New Shell & Cartridge Stores for Moveable Armament. Dated 1900.*
- WD/2320 *Dover Western Heights, South Front Barracks. Record Plan of Warrant Officers' Quarters Nos 2&3, dated 1900, corrected to 1905.*
- WD/231 *Dover South Front Barracks. Record plan of Troop Stable for 6 Horses & Storage for Mobilization Equipment, Vehicles &c, dated 1903.*
- WD/2350 *Western Heights, Dover, Record Plan of Infant School Accommodating 156, date 1903.*
- WO 192/45 *Fort Book, Citadel Fort, Dover 1901-1945.*
- WD/2364 *Dover Western Heights. North Entrance Ditch. Record Plan of 30yds Rifle Range. Dated 30th June 1907.*
- WD (1909) *Dover. Western Heights, South Front Barracks; Ground Floor Plan, at 1:500 scale, Ordnance Survey, dated 1909 with corrections to 1927.*
- WD/2323 *Dover. South Front Barracks. Victoria Hall Educational Establishment and "B" Type Married Quarter. Record plan and sections, dated 1926.*
- WD (1927a-c) *Dover. Western Heights. South Front Barracks; First, Second and Third Floor Plans, at 1:500 scale, Ordnance Survey, dated 1927.*
- WD/2438 *Dover Grand Shaft Barracks, Proposed Accommodation for Mechanised Transport, dated 1937.*
- WD/2442 *Dover Grand Shaft Barracks, Proposed Accommodation for Mechanised Vehicle Transport, dated 1937.*

Her Majesty's Prison Service

Arranged in chronological order

- 402513 *Citadel Dover. Plan and Sections of Casemates at the North-West Face.* Undated, probably 1850s.
- 402578 *Dover Citadel. Officers' Quarters. Roof Plan.* Probably 1859.
- 402579 *Dover Citadel, Officers' Quarters. Basement Plan.* Date illegible but probably 1859.
- 402584 *Dover Citadel, Officers' Quarters. First Floor and Ground Floor Plans.* Dated 1859.
- 402632 *Dover Citadel. Officers' Quarters. Detail of dresser, dwarf press for mess kitchen, press for officers' servants' rooms and step ladder.* Dated 1st October 1859.
- 402634 *Dover Citadel. Detail of internal doors, Officers' Quarters.* Dated 1st October 1859.
- 402635 *Dover Citadel. Officers' Quarters. Details of table press, shelves, office, with desk for Quartermaster's Store.* Dated 1st October 1859.
- 402478 *Dover Defences, Western Outwork, Revised Drawing of Caponière.* Dated 18th February 1863.
- 402484 *Dover Defences, Western Outwork, Revised Drawing of Caponière, details.* Dated 24th February 1863.
- 402575 *Dover Defences, Plan, Elevation and Sections of Casemates in South Flank of Advanced Work West of the Citadel.* Not dated but c. 1863.
- 402530 *Dover, Citadel Barracks, Record Plan of Warrant Officers' Quarters No. 1.* Dated November 1890.
- 402481 *Dover Citadel, Record Drawing of W Officers' Quarters No. 2, adjoining Entrance.* Dated 13th March 1891.
- 402514 *Dover Western Outworks, Plan of South Casemates.* Dated 2nd September 1897.
- 402630 *Dover Citadel, Record Plan of Sergeants Mess Establishment.* Dated 27th February 1900.
- 402581 *Dover Western Heights, Citadel Barracks & Western Outworks Ground Floor Plan. Proposed Electric Lighting.* A fine record plan originally drawn in 1911, with alterations to show proposed electric lighting installation of July 1921.

- 402582 *Dover Western Heights, Citadel Barracks & Western Outworks Ground Floor Plan.* A copy of the 1911 plan, printed in 1930, incorporating annotations to November 1929 and with further annotations to July 1947.
- Unref. *Dover Citadel Barracks Pumping Establishment.* Dated 28th August 1930.
- 305875 *HMYCC Dover. Admin, Punishment, Hospital and Reception Block. ?Basement plan.* Dated June 1987.
- 305877 *HMYCC Dover. Admin, Punishment, Hospital and Reception Block. First Floor plan.* Dated June 1987.
- 305879 *HMYCC Dover. Admin, Punishment, Hospital and Reception Block. ?Basement plan.* Dated June 1987.
- 305881 *HMYCC Dover. Admin, Punishment, Hospital and Reception Block. Roof plan.* Dated June 1987.

Kent Archives

Do/P 1

Survey of the Environs of Dover, with Works to be constructed on the Western Heights, undated but after 1779 and before 1784, unsigned but probably by T H Page.

APPENDIX I

HERITAGE DESIGNATIONS AT THE WESTERN HEIGHTS

This monument is scheduled under the Ancient Monuments and Archaeological Areas Act 1979 as amended as it appears to the Secretary of State to be of national importance. This entry is a copy, the original is held by the Department for Culture, Media and Sport.

Name: Fortifications, Roman lighthouse and medieval chapel on Western Heights

List entry Number: 1020298

County	District	District Type	Parish
Kent	Dover	District Authority	Dover

Date first scheduled: 08 August 1962

Date of most recent amendment: 09 March 2001

UID: 30282

Reasons for designation

The fortifications at Western Heights survive well as a series of earthworks and brick and masonry structures which will retain archaeological evidence relating to the adaptation and development of their defences over more than 150 years. The remains represent the largest, most elaborate and impressive surviving example of early 19th century fortification in England. Together with other contemporary defensive works at Archcliffe Fort, Fort Burgoyne and Dover Castle, Western Heights provides an insight into the continuing military importance of Dover during the 19th and 20th centuries. In addition, the Roman lighthouse, the medieval chapel and the field terracing will retain archaeological remains relating to the earlier occupation of the headland. The use of parts of the monument for recreational activities and the provision of history and nature trails give it importance as a public amenity and a valuable educational resource.

History

The monument includes the remains of a Roman lighthouse, field terraces and a medieval chapel subsequently surrounded by 18th, 19th and 20th century defensive works, all situated on a prominent chalk ridge known as the Western Heights which overlooks the town of Dover. The Roman lighthouse, the medieval chapel and a portion of the northern defences are in the care of the Secretary of State. The Grand Shaft and the Officers' Mess (now used by HM Prison Service) are Grade II Listed Buildings.

The lighthouse on Western Heights is one of a pair constructed in around the 1st century AD on the headlands flanking either side of the major Roman port of *Dubris* to help guide in cross-channel traffic. Its foundations survive as two 1m square blocks of flint, tile and mortar which were apparently moved to their present location on the eastern side of the Drop Redoubt during construction of the officers' quarters in 1850. However, the remains are close to their original position. In the 12th century a chapel was built on the southern edge of the Heights, 500m south west of the lighthouse. The chapel, of which the flint and mortar core of the foundations and a small area of stone facing survive, had a circular nave 10.6m in diameter and a rectangular chancel 7.6m in length and 4.3m wide. Its unusual form, which mirrors that of the church of the Holy Sepulchre in Jerusalem, has led to suggestions that it was constructed by the Knights Templars, a group of whom are believed to have left Dover before 1185. Western Heights has been extensively modified by landscaping associated with its later military usage but the

lighthouse, chapel and a fragmentary series of field terraces visible immediately beyond the scarp at the foot of the northern defences demonstrate that it was occupied from much earlier times.

The defences on Western Heights were initially begun in 1779 during the war with America, Spain, Holland and France, and although in 1781 the Board of Ordnance purchased 33 acres of land, by the end of the war in 1783 the works were still not completed. A map of 1784 shows a bastioned fort on the site of the present Drop Redoubt, a series of earthwork batteries and a second bastioned work extending for the full width of the western side of the plateau. A 350m length of bank and double ditch situated on the scarp between the present Citadel and North Centre Bastions probably belongs to this early building phase. Little further work was done at the site until the outbreak of war with France in 1793. Between 1793 and 1796, 4,885 pounds was spent on building, but this ceased entirely from 1797 to 1804. Following a renewed invasion scare, during 1803-1804 plans were drawn up by Captain William Ford to enhance the existing fortifications with the intention of housing a garrison of sufficient size to secure the Heights against attack, whilst enabling it to direct flanking fire onto any invasion force attempting to assault the town and port from the west. The defences were to consist of a main defensive point or citadel on the western side of the Heights and a redoubt on the eastern side linked by strong defensive lines; their construction began in April 1804 under the direction of Lt Col William Twiss. The Drop Redoubt was built between 1804 and 1815 and commands extensive views of the town, harbour and castle. It has bomb proof barracks for 200 men and was intended to mount 12 of the heavy 24 pounder guns, with two carronades for close protection. When initially begun, the Citadel consisted of a large parade ground surrounded by store houses, barracks, magazines and an unrevetted defensive ditch. It was originally planned to arm the Citadel with forty-three 18 pounder guns, and 31 carronades. Water for the barracks was supplied via a well 130m in depth.

Troops needed to be able to move rapidly between the Heights and the town below and this was facilitated by the construction of the Grand Shaft staircase. The Grand Shaft was built between 1805 and 1807 to a design by Capt Hyde Page and consists of three spiral staircases around a vertical circular brick shaft which descends for 140 steps to a tunnel linking up with Snargate Street. Slightly north of the Grand Shaft was the Grand Shaft Barracks with accommodation for 1,300 men, 59 officers and eight horses. Both this and a 180 bed military hospital near the Archcliffe Gate were completed in 1804 but have subsequently been demolished to foundation level. When the armistice with France was signed in 1814 both the Citadel and the North Centre Bastion on the North Lines remained unfinished. Between 1793 and 1815 a total of 238,889 pounds had been spent on the fortifications. In 1815 just 1000 pounds were spent and in 1816 nothing at all. Only the Drop Redoubt remained garrisoned after 1816 and the Heights were let for grazing. Work in completing and revetting the ditches around the Citadel did not begin again until 1853 and also included the addition of flanking casemates and a two storey casemated barracks in the South Lines designed to accommodate an extra 500 men. At the end of the Crimean War in 1856 five returning regiments were temporarily encamped upon the Heights in tents.

The unification of Germany and the perceived threat of Napoleon III led, in 1859, to the appointment of a Royal Commission to review the state of England's fortifications. Both the Commission's secretary, Major W F D Jervois and his superior, General Sir John Fox Burgoyne, Inspector General of Fortifications had already reviewed Dover and as a result it was recommended that work continue to complete, deepen and revet the North and South Lines, to add flank defences to the Drop Redoubt, construct officers' accommodation within the Citadel and add an advanced work on the high ground at its western side. The Citadel and the Drop

Redoubt were also to be made intervisible and the resultant landscaping necessitated the removal of the top of the ridge, with the excavated chalk used to increase the angle of the scarps beyond the lines. The completed lines stretch for almost 12km and consist of 9m wide ditches cut to a depth of between 9m and 15m into the natural chalk. The sides of the ditches are faced either with brick, or in later constructional phases flint with coursed brickwork and pits were dug at each angle in order to prevent direct passage along their base. The angles are also overlooked by loopholed galleries or casemates running behind the revetment walls, or have loopholed covered walkways or caponiers, all of which would have allowed the ditches to be swept with artillery and small arms fire whilst providing access to outworks such as the Citadel Outer Bastion and the North Centre Detached Bastion, finally completed between 1860 and 1874.

It had been recognized as early as the Napoleonic war that any attack on the Heights would come from the high ground immediately west of the Citadel and the new Western Outwork, completed before 1867, was designed to combat this threat. The outwork is triangular in plan and consists of a converging pair of ditches which extend for 200m from the western side of the Citadel and originally met in a polygonal work with two casemated and loopholed caponiers. The caponiers and the tip of the Western Outwork have been buried by landfill but survive intact. The defences of the Citadel were further enhanced by the new Officers' Mess of 1860, designed by Jervois and incorporating a bomb proof roof, loopholes and embrasures. Additional accommodation for 400 soldiers was provided by South Front Barracks, built in 1860 within a deep trench excavated on the southern face of the Heights. The barracks also had a bomb proof roof of vaulted brick and earth, but were demolished in the 1960s. In around 1867 the North Lines Right Battery was constructed immediately west of the Drop Redoubt. It was intended to be mounted with four 64 pounder rifled muzzle loaders (RMLs). This battery, which may also have been known as St Stephen's Battery, survives as a series of emplacements. A second battery, Drop Battery was already in existence immediately to the south of the redoubt and was mounted with three 24 pounders. By 1876 it had three 42 pounders and three 7 inch rifled breech loaders (RBLs), but was disarmed in 1886 and only the two magazines remain visible.

There were originally two access points to the Western Heights, the North Entrance and the Archcliffe Gate. The North Entrance has been superseded by a modern road cut through the North Lines in 1967 but survives intact. It consists of bridge supports originally carrying the North Military Road across the outer ditch onto a tenaille or island within the North Lines, from which the road continued southwards across a second bridge and through a tunnel in the rampart to the inner gateway. The inner gateway includes a guardroom and a stairway giving access to an artillery store, a magazine and gunrooms looking out across the North Lines. Southern access was via the South Military Road and the Archcliffe Gate, a substantial brick gate with an external drawbridge which was demolished to foundation level in the 1960s. The ditches adjacent to it were filled with rubble, but a partially buried caponier is visible to the west in addition to a series of bricked-up caves cut into the natural chalk face. These are of unknown function but are clearly shown on a plan of 1814 and may relate to the pre-military use of Western Heights.

After the major work on Western Heights during the 1860s and 1870s, efforts in the latter part of the 19th century concentrated on improving coastal defence. St Martin's Battery was constructed on a terrace cut into the southern slope of the Heights in the 1870s and mounted three 10 inch rifled muzzle loaders (RMLs). However, the battery was superseded by the construction between 1898 and 1900 of Citadel Battery, and had been disarmed by 1908. Citadel Battery lay immediately west of the Western Outworks, and contained three 9.2 inch guns. The

battery survives as three semi-circular concrete gun pits, with underlying magazines, holdfasts and the remains of the metal gun floors, in addition to some associated structures.

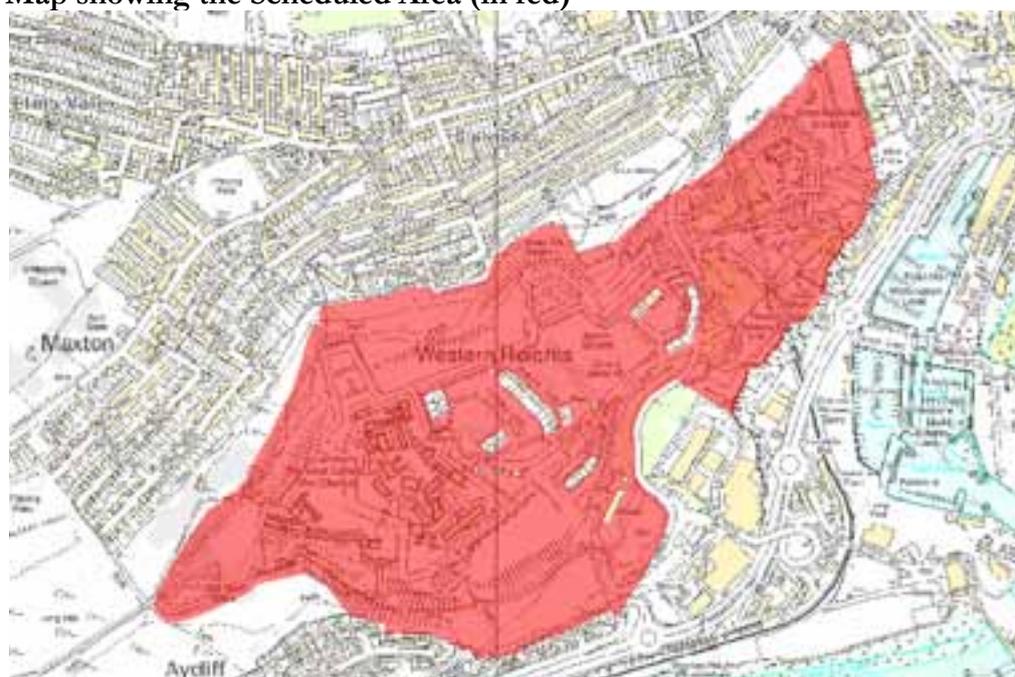
Following the completion of the new Admiralty harbour at Dover in 1907, an Admiralty Port War Signal Station controlling all shipping within the harbour was located on Western Heights, but moved to Dover castle in 1914. During World War I the Heights were primarily used for their barrack accommodation, although Citadel Battery remained armed and in 1916 Drop Redoubt was provided with searchlights and two 6 pounder Hotchkiss guns to counter air raids, whilst the Citadel received a single 3 inch gun. Following the outbreak of World War II and the renewed threat of invasion, three 6 inch breech loaders were fitted to the disused St Martin's Battery, where the old gun pits were filled with concrete, and concrete and brick gun houses built over the top. Two Type 23 pillboxes were also constructed nearby. The Citadel Battery now mounted two 9.2 inch guns and was provided with two Type 24 pillboxes and a spigot mortar. A further series of Type 23 and 24 pillboxes as built around the perimeter of the Heights for close defence and as complemented by weapons pits, slit trenches and blast shelters. The Western Heights were gradually abandoned by the Army in stages between 1954 and 1961.

A number of features are excluded from the scheduling; these are all fences, display, security and custodial fittings and facilities, modern services, buildings, goalposts, playground equipment, the surfaces of all paths, roads and hard standings, all standing buildings within the Citadel and the Western Outworks, the building 100m north east of the North Entrance, the two buildings south of Citadel Road adjacent to Heights Terrace and the Gun Shed; the ground beneath all these features is, however, included.

The construction of a series of houses immediately east of the Citadel and in the area adjacent to the North Entrance is considered to have caused significant disturbance to archaeological deposits relating to the militia huts, the Royal Engineers buildings, the School Master's Quarters and the coal yard. These houses and their gardens, including the ground beneath them, are therefore totally excluded from the scheduling.

National Grid Reference: TR 31038 40590

Map showing the Scheduled Area (in red)



This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.

Name: Administration Block, Dover Young Offenders' Institution

List entry number: 1375598

Location: Administration Block, Dover Young Offenders' Institution, Western Heights

County	District	District Type	Parish
Kent	Dover	District Authority	Dover

Grade: II

Date first listed: 08 July 1998

Date of most recent amendment: Not applicable to this List entry.

UID: 469562

Details

TF 3140 DOVER WESTERN HEIGHTS

685/7/10010 Admin block, Dover Young Offenders' Institution

GV II

Formerly known as: Officers' Quarters, Western Heights. Officers' Quarters within Citadel, now offices. 1861, by the Inspector-General of Fortifications. Red brick with limestone dressings and flat asphalt roof. Gothic Revival style. Double-depth plan. EXTERIOR: 2 storeys and basement; 15-window range. Similar front and rear elevations have deep projecting centre bays, cornice and deep parapet to a former bomb-proof roof. The entrance is flanked by buttresses with a flat 2-centre archway and steps up to a mid C20 door beneath a pair of gun ports and a panel with the royal coat of arms dated 1861. Windows have paired Tudor-arched lights with 4/4-pane sashes under flat-ground-floor and 4-centre arched first-floor arches, with a mid-point Tudor-arched doorway to the inner elevation with flanking lights, under cross-light oriels with weathered coping to front and rear. Large clasping buttress to the ashlar ends, which are divided into 3 bays, the middle one narrower with gun recesses and splayed side. INTERIOR: The entrance hall has a large mid C20 stair, and rooms off an axial round-arched passage the length of the building. The basement contains former stables, stores and water tanks. HISTORY: Formed the quarters and mess for the officers in the Western Heights Citadel (SAM), which was built in the 1800s. The original accommodation was all in casemates. With its gun ports and bomb-proof earth-filled roof, it was partly intended as a defensible keep in the event of the Citadel being stormed. The level of defence is representative of a time of rapid developing artillery and fortifications.

Listing NGR: TR3095840541

National Grid Reference: TR 30958 40541

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.

Name: Grand Shaft stairs and attached railings

List entry number: 1375599

Location: Grand Shaft stairs and attached railings, Drop Redoubt Road

County	District	District Type	Parish
Kent	Dover	District Authority	Dover

Grade: II

Date first listed: 08 July 1998

Date of most recent amendment: Not applicable to this List entry.

UID: 469563

Details

TR 34 SW DOVER DROP REDOUBT ROAD (south side), Western Heights 865/7/10008
Grand Shaft stairs and attached railings

II

Underground spiral stair. 1803-05, by Sir Thomas Hyde Page, RE, under Lt Col William Twiss, RE Divisional Engineer. Brick and cast-iron. Three concentric flights of winder stairs round an open shaft, the opening at the top, with curved stairs meeting in a single flight up to the former parade ground in front of the barracks. SUBSIDIARY FEATURES: iron railings with urn finials round top of shaft and to stairs up, with a lamp standard on the stairs. HISTORY: connected the Grand Shaft Barracks (demolished) with Snargate Street at the base of the cliffs, to allow the rapid movement of troops between the barracks and the shore. The three stairs were designated for 'gentlemen and their ladies, officers and their wives, and soldiers and their women'. A 'bold and imaginative solution to communication problems (and) a unique piece of military engineering.' (Coad and Lewis 1982)

Listing NGR: TR3110241449

National Grid Reference: TR 31605 40907

The Western Heights Conservation Area

