

# FORT PITT, CHATHAM, KENT AN EARTHWORK ANALYSIS OF JACKSON RECREATION GROUND

## SURVEY REPORT

Magnus Alexander



*This report has been prepared for use on the internet and the images within it have been down-sampled to optimise downloading and printing speeds.*

*Please note that as a result of this down-sampling the images are not of the highest quality and some of the fine detail may be lost. Any person wishing to obtain a high resolution copy of this report should refer to the ordering information on the following page.*

## FORT PITT, CHATHAM, KENT

# AN EARTHWORK ANALYSIS OF JACKSON RECREATION GROUND

Magnus Alexander

NGR: TQ 7485 6770

© English Heritage

ISSN 1749-8775

*The Research Department Report Series incorporates reports from all the specialist teams within the English Heritage Research Department: Archaeological Science; Archaeological Archives; Historic Interiors Research and Conservation; Archaeological Projects; Aerial Survey and Investigation; Archaeological Survey and Investigation; Architectural Investigation; Imaging, Graphics and Survey, and the Survey of London. It replaces the former Centre for Archaeology Reports Series, the Archaeological Investigation Report Series and the Architectural Investigation Report Series.*

*Many of these are interim reports which make available the results of specialist investigations in advance of full publication. They are not usually subject to external refereeing, and their conclusions may sometimes have to be modified in the light of information not available at the time of the investigation. Where no final project report is available, readers are advised to consult the author before citing these reports in any publication. Opinions expressed in Research Department reports are those of the author(s) and are not necessarily those of English Heritage.*

Requests for further hard copies, after the initial print run, can be made by emailing:

Res.reports@english-heritage.org.uk

or by writing to:

English Heritage, Fort Cumberland, Fort Cumberland Road, Eastney, Portsmouth PO4 9LD

Please note that a charge will be made to cover printing and postage.

## **SUMMARY**

An earthwork survey was undertaken within the western part of Jackson Recreation Ground, Chatham, Kent during September 2007. The purpose of the survey was to determine the extent of earthworks of the Napoleonic Fort Pitt which lay immediately to the east in order to inform designation advice and future management. Earthworks of several periods were recorded. Earthworks associated with Fort Pitt were seen to extend several metres into the recreation ground all along its eastern boundary. In the south the remains of outworks, including a substantial bank that had formerly connected to Delce Tower to the west were recorded. Several other 19th century features were also seen though these were not necessarily associated with the fort. In the 1920s the park was substantially remodelled with the creation of a large sports field terraced into the centre of the recreation ground and a smaller terrace now containing a playground to the north west. The recreation ground was incorporated into Chatham's wider Second World War defences against invasion and earthworks and structural remains from this period were also recorded.

## **CONTRIBUTORS**

The historical background is based on material provided by Veronica Fiorato and Peter Kendall which included the description of the current condition of the fort.

## **ACKNOWLEDGEMENTS**

We are grateful to Simon Swift, Ian Fleming and Bob Wade of Medway Council for facilitating access to the recreation ground. Wayne Cocroft commented on the report text.

## **ARCHIVE LOCATION**

The project archive will be deposited with the National Monuments Record, Swindon.

## **DATE OF SURVEY**

17 to 21 September 2007.

## **CONTACT DETAILS**

Brooklands, 24 Brooklands Avenue, Cambridge, CB2 8BU

Magnus Alexander, 01223 582776, [magnus.alexander@english-heritage.org.uk](mailto:magnus.alexander@english-heritage.org.uk)

*Front cover: Oblique aerial photograph of 1948 looking south-west towards Fort Pitt, centre. The survey area is to the west (right) of Fort Pitt marked by the white areas where Second World War defensive works have been reinstated (RAF/SFFO/540/12 0109, 5 May 1948).*

# CONTENTS

INTRODUCTION	1
TOPOGRAPHY AND GEOLOGY	2
HISTORICAL BACKGROUND	4
DESCRIPTION	7
Fort Pitt	7
Jackson Recreation Ground	8
ANALYSIS	13
Historic mapping	13
Aerial Photography	16
CONCLUSIONS	23
METHODOLOGY	25
REFERENCES	26

## INTRODUCTION

This survey was undertaken at the request of English Heritage's Heritage Protection department to inform advice about the possible designation of the remains of Fort Pitt (NGR: TQ 7485 6770). The survey established which earthworks were directly associated with the fort, their condition and precise location. It also contributed to the on-going research in support of a potential application for Chatham to become a candidate World Heritage Site. The survey has also provided a broader historical understanding and an assessment of the current condition of this section of Chatham's defences. It will also inform future advice by South East Region on the management of the fort and its environs.

Fort Pitt is a large early 19<sup>th</sup> century fort that was constructed to defend the important naval installations at Chatham. Most of the fort's buildings have been demolished and its interior is now occupied by a school and college, though two listed buildings and a water pump remain. Despite the losses most of the fort's outline may be traced and extensive lengths of brick walls remain. To the east and south, surface traces of the fort's outer ditch have been removed. To the west, on Jackson Recreation Ground, there are substantial earthworks, including the traces of the fort's counterscarp bank, remains of an earthwork leading west towards Delce Tower and evidence for the development of the recreation ground and Second World War defensive works.

## TOPOGRAPHY AND GEOLOGY

Chatham is situated on the north coast of Kent just under 50km west of Central London. It is on the River Medway which flows eastwards into the Thames Estuary. The survey area is approximately 200m to the south of the old centre of Chatham, or about 1km to the west of the current centre at NGR TQ 7485 6770. Rochester is roughly 1.5km to the north west. It is situated on the end of a spur of land projecting northwards. The highest point in the survey area was in the south at an elevation of just over 50m OD. From this point the land drops away to the west and north but across most of the survey area it is the north facing slope that dominates. The underlying geology across the whole study area is Upper Cretaceous Middle Chalk, a white chalk with flints in the upper beds (IGS 1977).



Fig 1: Location

Fort Pitt was carefully positioned to deny an enemy the high ground overlooking the dockyard, and its two outlying towers of Delce and Gibraltar controlled road access to Rochester Bridge. It would have been intended to function both as a stand-alone fortification capable of withstanding enemy attack but also as a key component of a wider defensive ring protecting the Chatham dockyard and barracks area in conjunction with other Chatham fortifications. Its fire would have crossed with Fort Amherst on the opposing north-eastern high ground above Chatham town, which was re-constructed as a major citadel in the Napoleonic period.

## HISTORICAL BACKGROUND

As early as the 1770s the lack of fortification on the south hill above Chatham had been identified as a weakness in the existing defences. In 1779 Hugh Debbieg, the Chief Engineer at Chatham, proposed the substantial rebuilding and extension of the Chatham Lines; a linear defence protecting the landward side of the dockyard and barracks originally built in the 1750s (Kendall 2005, ch2; ch4, 6). To enhance the defences he also proposed the construction of a detached fort on the hill south of Chatham where Fort Pitt was later built (ibid, ch4, 8). This location was of particular strategic significance with its commanding views of the dockyard, The Lines, the River Medway and the approach to Rochester Bridge. It was acknowledged that failure to fortify this hill could jeopardise Chatham's security (ibid, letter ch4, 12) and purchase by the War Office of land in the area was confirmed by an act of parliament in 1782 (ibid). In a letter of October 1783 Debbieg mentions that the hill had been used as an encampment for troops and records that:

'The land south of Chatham purchased by the Board of Ordnance contains about 30 acres. No works of fortifications have yet been erected there but it is partly occupied by upwards of 4,500,000 bricks deposited in different parts for that purpose'.

The letter also describes how:

'... a great quantity of chalk to make lime has been dug and burned there ... two fields ... have been ploughed up for the purpose of picking stones for the New Road ... [and] ... sod has been cut for banking up the sides of the above road' (ibid, ch4, 15).

With the troop encampment, bricks, lime works, new road construction, fresh ploughing, and turf cutting, the hill was a large construction site at this time. Contemporary plans demonstrate that a major work in the form of a star fort on the later site of Fort Pitt was being considered as part of grandiose enhancement of the Chatham defences (ibid, ch5, 7-11) but work was suspended and this design was not ultimately built. In part this was due to their cost but also to the end of The War of American Independence (1775-83). Peace led to a change in government and in turn to changes in key personnel with the Duke of Richmond taking over as Master General of Ordnance and bringing with him his own ideas on how the defences should be organised (ibid ch5, 16-7). He concentrated resources and energies on Sheerness and elsewhere, and Debbieg felt slighted by the abandonment of his Chatham plans. His public statements to this effect led ultimately to his court martial and enforced retirement (ibid, ch4, 17-8).

The use of Fort Pitt as a defensive site lasted for a relatively brief period. Coinciding with a renewed outbreak of hostilities with France, construction finally began on the site in 1803 when a military hospital was built. Although hospital staff were employed in September 1803, no patients were recorded during the first few months which raises questions about whether the facility was ever used as a hospital at this time (Kendall 2006, 51); the first record of wounded soldiers at Fort Pitt is in 1814 (Morrison 1993, 1). The construction of the fort itself began in 1805; the ramparts were constructed around the existing hospital buildings (converted to barracks) which may explain the



asymmetric internal layout of the fort that can be seen on later maps and plans (Kendall 2006, 51). Entries in the Royal Engineers' letter books for the early years of the 19th century provide information on the dates and cost of construction with £21,830 spent in 1805 and the major expenditure falling in the next few years (£17,092, £11,509, £13,213 and £7,709 in 1806-9 respectively) with much smaller sums being expended in 1810-13 (£3,471, £976, £40 and £230) (Kendall 2005, ch6, 23). The fort appears to have been largely completed by 1813. It was certainly manned at this time; it is known that the original garrison was replaced in 1814 by the Royal Marine Artillery who used Fort Pitt for emergency accommodation, although they had to vacate the blockhouse in 1815 to allow wounded from the Battle of Waterloo to be housed (Howard nd, 3). Two outlying towers were completed by 1812 to the west and east of Fort Pitt (known as Delce and Gibraltar) to control the roads leading to Rochester Bridge (Gulvin nd, 11). Delce Tower was linked to Fort Pitt by a substantial earthwork shown on a map of 1813 (below). It seems that some final construction work was not completed until some time after Waterloo, but construction was apparently finished by February 1819 when a letter reports that '... Fort Pitt was constructed ...' (Kendall 2005, ch6, 16, author's italics).

In 1828, Fort Pitt again became a hospital (Howard nd, 4) though the 1841 census describes the site as a military hospital *and* barracks. The barracks appear to have been the casemated blockhouse which probably housed 172 soldiers plus officers, wives, and children. The hospital apparently contained 227 patients as well as medical and administrative staff, and their families, giving a total population approaching 500 (Kendall 2006, Annexe 1, 6). In 1847, an asylum for mentally ill servicemen was added in a separate fenced off area to house up to 32 men and 2 officers (Howard nd, 5; Gulvin nd, 12), though this was described in 1858 as:

'more a house of detention or of observation than an asylum. The fence surrounding the building is only 4½ feet high and has frequently been cleared by patients at a bound' (Kendall 2006, 67).

Fort Pitt was designated a General Military Hospital in 1849 (Howard nd, 5) and in 1851 housed a Principal Medical Officer, a Deputy Purveyor, 10 officers, 447 patients as well as three officers living in Fort Pitt House (Kendall 2006, 60), a similar population to ten years earlier. The grounds of the fort were landscaped at about this time to provide airing grounds for the patients and this included use of the ramparts as walks (Howard nd, 9). The report of an inspection in 1858 described the hospital in detail and made clear that the casemated blockhouse formed a part of the hospital by this time (Kendall 2006, 67). Florence Nightingale selected Fort Pitt as the site for the first Army Medical School which opened in 1861 (Howard nd, 11), but before this date Fort Pitt was already an important military hospital complete with a museum of anatomy and other curiosities (Howard nd, 5). The medical school remained at Chatham for two years, until relocation to Netley in 1863 (Howard nd, 11). The fabric of the fort underwent some alterations during its use as a hospital, most notably the demolition of the central tower in 1910 to provide space for expanding hospital accommodation (Howard nd, 12, Medway Council MED 623-1) which consisted of a large pavilion plan extension (Morrison 1993, 2). The hospital finally closed in the 1920s (Gulvin nd, 13).

In September 1929 the local Education Board bought Fort Pitt from the War Department for £6,000 converting the hospital buildings to provide accommodation for a Technical School for Girls (Howard nd, 21). Much of the fabric of the fort was extant at this time, including the dry moat (ibid, 22) but the casemated barracks were demolished in about 1932 to allow for development (Medway Council, MED 623-1), though this did not take place until after 1968 (below).

During the Second World War modifications were made to some of the buildings to protect against bomb damage and heating and lighting were installed in the underground chambers so that they could be used as air raid shelters for the pupils and teachers (Howard nd, 27). At this time Chatham was a designated defensive nodal point (FSG 2007) which Fort Pitt was a vital part of. Given the extent of the earthworks recorded and visible on aerial photographs it is surprising that there is no record of the direct use of the fort by the military at this time.

Since the Second World War new buildings were added to the site to enhance the educational accommodation and Fort Pitt remains in use as a school and colleges. The site is currently (2007) divided between three institutions: University for the Creative Arts (formerly Kent Institute of Art and Design, KIAD); Fort Pitt Grammar School and Mid Kent College (City Way campus).

Fort Pitt was of an unusual transitional form of fort (Saunders 1989, 144): superficially it was an outmoded bastion fort and may have been the last example of a bastioned fort built in England. Its blockhouse was a much more experimental feature for this date, as was its central tower comparable to a number of others in Medway such as those at Fort Clarence and Gillingham Tower and also Fort Pitt's own auxiliary tower guardhouses at Gibraltar and Delce. Structures such as the cavaliers (gun mounts laid out in conjunction with a ravelin in the direction of an expected encircling attack) were also experimental. These features are no longer visible although buried evidence may remain.

## DESCRIPTION

### Fort Pitt

The defences of Fort Pitt are of brick and earth construction, roughly trapezoidal in shape with bastions at each of the four corners. These were surrounded by a now-infilled dry ditch with a substantial glacis. Originally there was a detached casemated set of barracks forming a blockhouse to the north and a ravelin and caponier to the south. The blockhouse was a major building cut into the hillside with brick revetted dry moats to either side. The external sides of these remain visible to the west and east of the KIAD building and parts of the internal wall of the moats are preserved beneath that building. The blockhouse formed an integral part of the outer defences; though outside the body of the fort they were attached to it so that troops could withdraw safely into the blockhouse if under threat. A photograph and plans which survive indicate the massive scale of this building. It had a flat roof which could have been used as a gun platform and sufficient accommodation in casemated barracks (vaulted chambers) to house approximately 500 men. Much of this structure was demolished after the First World War but historic fabric in the form of brick walls and vaulting survives in the basement of the present building.

With the exception of part of Fort Pitt's southern defences, which have been built over, it is possible to trace the defences around most of the fort. In its north-east corner the line of the top of the rampart survives as a low north-west to south-east earthwork to the north of the grammar school. The north-eastern bastion survives in very good condition with its infantry fire step intact. The fire step continues to be visible along much of the internal length of the eastern rampart although there have been some minor modifications here, presumably to provide walkways for the recuperation of hospital patients. Externally the eastern side of the fort is by far the best preserved; drawings in the The National Archives (MPH 1/475) indicate an original depth of ditch ranging from a minimum of 15 feet deep (4.57m) dependent upon the topography, to 20 feet 4 inches deep (6.2m), a rampart rising 19 feet (5.8m) above the top of the ditch with the scarp revetted in brick and this is well illustrated in this area. Tennis courts currently occupy the location of the infilled ditch. Although the counterscarp is not visible, it is described in a historical source of 1819 as being revetted, presumably also in brick. Parch marks seen parallel to the line of the fort wall on the school playing fields in July 2007 may indicate the line of the revetment. The south-western bastion partially survives as an earthwork to the west of the College entrance and the fire step is also visible here. To the north of this bastion a car park currently occupies the in-filled ditch although the earth rampart is clearly visible as the eastern and northern boundary of this car park. The north-western rampart also survives as an extant brick and earth feature with an external road on the line of the ditch.

Internally there was an off-centre tower keep that contained a well (Howard nd, 3), two cavaliers (gun mounds) in the south of the fort and a magazine, all now demolished. Photographs of the tower survive which indicate that it was a substantial three storey keep with corner turrets to a flat roof (Medway Council, MED 623-1). Two of the surviving buildings in the interior are listed: Crimea House, a Grade II listed former

barracks hospital block that originated in 1803, and the Music House (also Grade II listed) which was the lunatic asylum for the hospital. There is also a grade II listed cast iron water pump to the south-west of Crimea House (listed building descriptions 172968 - 70). Parts of the Girls Grammar School occupy the later 19th century hospital wards. These are not listed and were substantially damaged by a major fire in 1973 (Howard nd, 30-1). There are no visible fort structures or other remains of buildings associated with the 19th century hospital phase within the defences although it is anticipated that evidence for these will survive as buried features.

## **Jackson Recreation Ground**

The survey was confined to the western part of Jackson Recreation Ground, an area roughly triangular in shape with a point to the south, centred on NGR TQ74856770. Its eastern side is defined by the boundary with Kent Institute of Art and Design, Fort Pitt Grammar School, and Mid Kent College and on the west by City Way. To the north the survey did not extend as far as New Road and was limited to the pedestrian footpath that ran east-west immediately north of the playground, around the slope above the bowling green, along the southern boundary of Fort Pitt House and down to the junction between New Road and the rough road that runs up to Fort Pitt Hill. The survey area is shown in green on Fig 2; hachures outside this area are based on OS data.

At the time of the survey works were in progress to create a skateboard park within the recreation ground. The construction site was surrounded by temporary fencing and could not be surveyed. A temporary haul road had been created to allow plant access and an area to the south of this had been disturbed by vehicle parking and was also not surveyed.

To the north of the survey area New Road runs along a terrace formed by being cut into the natural hill slope along its southern side. At its western end the artificial terrace slope merged with the natural slope but it increased markedly in height to the east. A second terrace above and south of New Road within the recreation ground formed a level area with tennis courts and a bowling green, the slopes again merging with the natural slope at the western end and increasing in size towards the east. Fort Pitt House (originally the 'Clerk of the Works House' built c. 1800) also lies on the south side of New Road and was presumably constructed on a terrace but this was not clear. These terraces, their embankments and Fort Pitt House lay outside the survey area. A sharp scarp defines the western side of the survey area where the recreation ground runs alongside City Way. This steadily increased in height and steepness towards the south until it was over 2m high at the college entrance.

The centre of the site is dominated by a large rectangular sports field measuring over 100m by 70m (approximately the size of a football pitch) terraced into the hillside. This is both a negative and a positive feature; cut into the natural slope on its uphill side and built out from it on the downhill side. It is oriented east-north-east to west-south-west and the natural slope steepened to the east so the terrace is both cut more deeply into the uphill slope and built further out at this end. A cast concrete track leads up from City Way onto the east end of the field. The slope formed where the terrace had been

cut into the hillside was featureless and of a uniform angle. It was mainly covered in rough grass and the topsoil had been stripped by mechanical excavator at its eastern end. The downhill, built up, slope is also generally of a consistent angle. It is possible to discern a faint narrow feature running diagonally up part of the east end of the north west face formed where the slope levelled off slightly. On the west end of the same slope, below the corner was a slight step. Slightly east of this, just below the edge of the terrace is a small scoop with a bulge below it and immediately east of this a vehicle track had eroded the scarp edge. There are also some undulations running directly down slope in this area. From the top of the scarp running along the side of City Way a gully curves around the base of the central terrace earthwork for about 40m. This is well defined at its western end and faint but clear to the east but was intermittent in its central section, probably as a result of infilling by material eroding from the features above. On the north west corner of the terrace above these features is a polygonal parch mark and in one area concrete was clearly visible below the turf. Running away from this feature and parallel to the terrace edge is what appeared to be the faint remains of vehicle ruts, possibly associated with the track. The rest of the terrace is slightly uneven and several shallow gullies are visible running across it. These are generally oriented either across or along the terrace at right angles to one another. The downhill (northern) slope forming the terrace has faint intermittent traces of an internal counter-slope forming a very slight bank along the edge. This is clearest along the eastern side and around the north eastern corner. Elsewhere it may in fact be associated with the shallow internal features.

The rest of the site can be divided into three areas. Letters in brackets refer to Fig 12.

In the north-west corner of the survey area is a rectangular terrace oriented roughly along the natural slope, west-north-west to east-south-east, and defined by clear slopes measuring a maximum of 120m by 32m. This is also both a negative and a positive feature and is partly occupied by a children's playground. At the western end of this area, on its southern (uphill) side, is a smaller sub terrace, also rectangular, that measures approximately 60m by 20m. On the sub-terrace are the remains of a structure of some form (a) visible at its western end both as a small but well defined scarp and in places by building remains just below the turf. It is less well defined to the east but was 13m wide and approximately 18m long. In the internal angle between the sub-terrace and the main terrace is a very slightly raised area. The triangular area between the playground terrace and the sports field consists of an apparently natural slope crossed by a gentle scarp probably created by the removal of material from below (b). This scarp merges with the natural slope at its western end and in the east appears to run under the central terrace earthworks. It has some slight undulations running down slope and at one point clearly bulged out. There is a secondary scarp above the main slope. Above this the ground is uneven but the only clear feature is a small ridge running down hill (north/south) with a slightly amorphous gully immediately to the west. Below the scarp the ground is more level with an irregular mound approximately in the centre. To the west of this is a shallow spur projecting from the scarp and at the west end of this area are several hollows including one broad flat-bottomed gully running into the recreation ground at right angles to City Way. To the east of the playground terrace is a clear but gentle slope (c) that had been cut by the terrace at its western end. Above this (south) is a second

fainter slope parallel to the first. All the main slopes in this area were similarly oriented running roughly horizontally along the natural slope.



*Fig 2: The north-west of the survey area, looking north-west*

Most of the area to the east of the sports field consists of moderately steep natural slopes dropping down towards the north and north-north-west forming a slight bowl. The far eastern boundary of the survey area is marked by a tall retaining wall for the fort moat beyond. There is a clear slope, partially obscured by vegetation, dropping away from this wall forming a faint glacis (d), which runs up the natural slope. At the south end the boundary turns west and running alongside this is a more level area defined by a slightly steeper scarp running east-west parallel to the boundary and about 6m from it (e). Within the corner between these two sections is an entrance into the college. A foot path has been worn into the slope here slightly eroding the east/west slope creating a short slope on the downhill (northern) side. To the west the recreation ground boundary again turns south and another flat area, defined by a west facing scarp running parallel to the boundary and 6-7m from it, runs for about 60m before ending at a north facing cross slope. This level area is cut by a small gully. Just below the corner between these latter two sections are several scooped features that appear to be later than the other slopes and have disturbed them. However, the east to west slope appears to run out into the recreation ground for a short distance rather than running around the corner to meet the north-south slope. Below these features, to the north, is a linear earthwork that ran roughly east west along the slope dropping slightly towards the west (f). This probably originally consisted of a fair sized bank, possibly with ditches on both sides but it had weathered down to a simple slope with flatter areas above and below. At its eastern end it is cut by modern features and abutted those associated with Fort Pitt. At its western end it appears to end at a slight bulge that was part of a complex

series of interrelated earthworks (g). Above the bulge a scarp of a similar size to the linear described, continues along the slope further to the west and above this are a few smaller parallel slopes creating some small terraces. These are all cut at their eastern ends by a sub-rectangular feature (h). At their western ends a series of gullies and banks run diagonally up the steeper ground here from north-east to south-west (i). Some have the appearance of track ruts but others are less regular. Just to the west of these is a short section of another scarp that ran along the natural slope on a similar orientation to the small terraces above the larger slope mentioned above (j). These features ended abruptly leaving a narrow blank area running directly down slope, between them and the earthworks of the sports field. Above these complex earthworks the ground slopes upwards with a few broad, irregular platforms defined by slight scarps.



*Fig 3: The north-east of the survey area, looking east*

The area to the south of the main terrace is near the crest of the natural topography here and slopes down more to the west than the north. A clear bank, oriented north-east to south-west, runs along the south-eastern side of this area parallel to the recreation ground boundary (k). On its north-western side the scarp is uneven, probably as a result of subsequent activity, and merges into the natural slope. To the south-east the scarp is more clearly defined. At the southern end of this feature the ground has been disturbed but the earthwork appears to turn to the south-east and runs into the corner of the recreation ground. Between the bank and the recreation ground boundary is a broad ditch defined by a shallow scarp to the north-west with a narrow flat area between this and the scarp of the bank; the south eastern scarp can be seen but not surveyed due to heavy vegetation. At their northern ends the bank and ditch have been truncated by subsequent activity but the bank clearly aligns with a clear east-north-east facing scarp with a slight counterscarp (l) that also runs parallel to the

south eastern boundary of the recreation ground for about 10m before turning away from it to the north west where it can be seen to continue through the construction site (September 2007) for the skateboard park. A post for a CCTV camera has been installed on the bank at the point where it turns, the cable trench for which is clearly visible as a vegetation mark running away to the west where a junction box has been installed next to the pavement alongside City Way. Below (west of) the south-west end of the bank described above a small south facing scarp runs west before curving around to the north where it forms a shallow gully before petering out. Immediately below this is a small scooped feature. From here a southwest facing scarp runs into a series of north-north-west facing scarps that ran parallel to City Way (m) becoming increasingly faint, until they reach the haul road for the skateboard park construction site. Within the triangular area defined by this feature, the slight bank to the east, and the haul road to the north, were a few vague and intermittent features, the best preserved of which could be seen to form ridges on two general alignments; east to west (n) and north-north-west to south-south-east (o). They were too faint to record accurately but their general alignments were surveyed. In the eastern part of the area, an apparent series of sub rectangular platforms could be seen defined by slight scarps and ridges, the clearest of which was to the south. However, as several of the defining features align with the general trend of ridge features in this area they are unlikely to be platforms. To the west two scoop features immediately above the main scarp down to City Way were recorded but were clearly associated with modern works. Across the survey area several concrete bases with fixings were recorded, these were apparently for park benches, now gone.



*Fig 4: The south of the survey area, looking south west along the south eastern boundary showing the remains of the earthwork that ran across to Delce Tower*



## ANALYSIS

### Historic mapping

Historic mapping allows for the interpretation and approximate dating of many of the features recorded during the survey. Ordnance Survey mapping prior to 1932 omits Fort Pitt for military reasons.

A map of 1782 (British Library Additional 15533) shows the area to the south of Chatham and Rochester prior to the construction of Fort Pitt. This map is schematic and appears to have compressed the area between the two settlements. Consequently it is difficult to be sure exactly where on this map the fort was later constructed. The encampment of the 52<sup>nd</sup> Foot shown appears to be too far to the east to be the site of Fort Pitt which throws the interpretation of Debbieg's comments and the purchase of the land (above) into some doubt. However, given the inaccuracy of the mapping it is probably simplest to accept the suggested development of the site (above) and to assume that the placement of the encampment is in error or that the map is simply too inaccurate to show the location accurately. Later historical developments support this interpretation (Peter Kendall, pers. comm.).

An 1806 map (TNA: PRO, MR 1/815 (extracted from WO 55/2298)) shows the form of the fort at this stage with most of the outer works completed including the bastions and the moat. The ravelin in the south, and the northern casemates which are shown as 'Situation for casemated barracks' had not been built at this stage. A star shaped outer glacis mirroring the shape of the fort itself is shown as being planned but this was built closer to the fort on the east and south sides and linked into the work running across to Delce Tower on the west. This map suggests that the two towers, Delce and Gibraltar, and the southern ravelin were not originally planned but added later. Fort Pitt House is shown as 'Clerk of the Works House' and was probably the first building constructed on New Road. A 'Public Road' is shown on the line of the present City Way.

A map of 1813 (National Archive MD 174, 31 PT E; Fig 5) shows the fort in its almost complete form. The northern casemates and additional internal buildings have been constructed and the ravelin and the two outlying towers are also included. Externally, works are shown around the south west corner of the bastion. A covered way is shown with a south facing glacis that ran north-east, parallel to the moat, before turning north west and then west north west running across to Delce Tower on Delce Road (TQ74626772). This feature aligned directly with the earthworks recorded in this area (j) and is cut by the sports field and the skateboard park. In particular the shallow gully is probably all that remains of the trench itself and the denuded bank formed part of the glacis. Fort Pitt House is also shown and the area to the west that later became the bowling green and tennis courts is shown as a separate enclosure suggesting that the terracing here may date to this period.

The first edition of the Ordnance Survey 6 inch map (1866) omits Fort Pitt, but Fort Pitt House is shown as is a clear north facing scarp running east to west immediately south of the area of tennis courts and bowling green, clearly the fore runner of the present slope

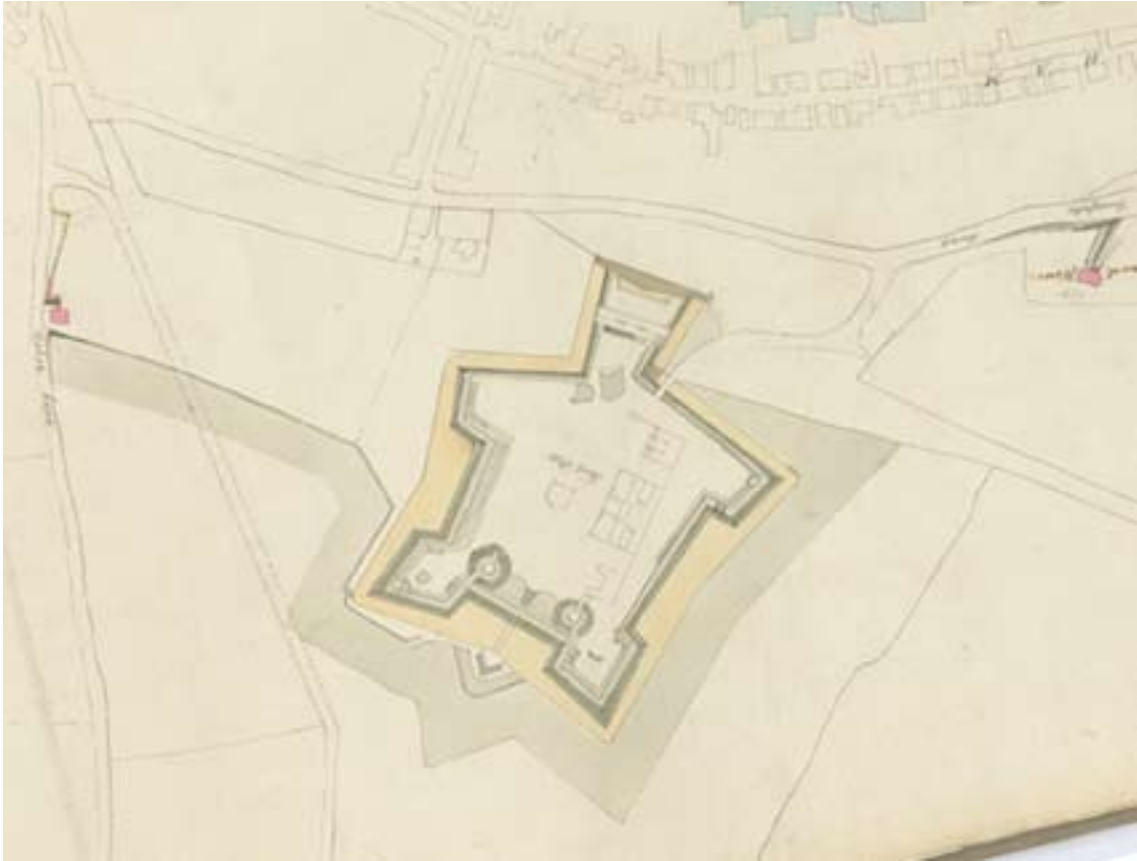


Fig 5: John Handfield's map of 1813 (TNA: PRO, MD 174, 31 PT E)

here. No slope down to New Road is shown. A footpath is shown running across the survey area from the north east, to the south east corner of the grounds of Fort Pitt House and on south westwards to City Way. The section immediately east of Fort Pitt House is still in use and the diagonal features running up the steep bank to the south (i) clearly align with it. They must have been formed as the footpath eroded the steeper terrace edge and drifted as people avoided muddy areas. Further south it is not shown how the path crossed the glacis running across to Delce Tower but it must have been out of use and somewhat eroded for this to be possible. A field boundary is shown running south-south west from Fort Pitt House but no trace of this was seen during the survey.

An annotated 25 inch Ordnance Survey map of 1875, based on the 1866 survey, (TNA: PRO, WO 32/18207; Fig 6) shows the same information as above but the footpath is noted as an encroachment, suggesting that it was of relatively recent origin. It also shows the fort itself including works in the survey area which are broadly the same as those shown on the 1813 map, though considerably more detailed. The fort was surrounded by a moat with an external retaining wall. This appears to be on the line of the current boundary of the recreation ground. Beyond this the map shows a clear glacis much of which is still preserved as earthworks (d, e, f). On the north west corner of the main fort is a projecting outwork of some form, slight traces of which are also preserved. More complex outworks are recorded outside the south west bastion. These seem to be a small south facing bank some of which seems to remain and, to the south of this outside the study area, a substantial cut feature that must have been seriously damaged when the access road to the college was inserted on this line in the 1960s. A path

is shown leading to the north running parallel to the outer wall of the fort here in a gully or trench defined by slopes to east and west. The western slope is shown with a substantial counter-scarp probably forming a glacis and the path peters out where this bank turns from running slightly east of north to running west of north. This outwork then turned to the west-north-west, where a small ramp is shown running up onto the top of the glacis, and then ran towards Delce Tower. This section is shown as having a ditch behind the glacis but has been destroyed by the sports field and skateboard park.



Fig 6: Annotated Ordnance Survey 25 inch map, 1875 (TNA: PRO, WO 32/18207)

The second edition of the Ordnance Survey 6 inch map (1898) again omits the fort and adds little new information. However, it shows City Way as Pattens Lane and omits the central part of the long west north west to east south east section of the outwork that ran across to Delce Tower suggesting it had already been slighted by this time. The third edition map (OS 1909) shows the same information but shows a hatched boundary running along New Road, up City way for a short distance before cutting across to Delce Road which it then follows southwards. The meaning of this is uncertain but is thought to possibly represent the edge of the War Department land as a similar feature is shown on maps of Dover Castle from this time (Andrew Williams, pers. comm.).

Between the third edition and the fourth edition of the 6 inch maps (OS 1932) there were major changes within the survey area. City Way (named as such for the first time)

had been widened by being extended eastwards creating the steep slope that runs along this side of the recreation ground. The slope immediately to the south of New Road is shown for the first time and it is clear that the existing slope south of this was remodelled and the tennis courts and bowling green created. The central sports field had been created necessitating the rerouting of footpaths across the recreation ground. The earlier footpath that had created the features at (i) was diverted northwards and ran on around the base of the lower sports field earthworks, possibly eroding the slope at (j) and probably creating the gully noted below the north west corner of the sports field. A second path is shown running up through the area of the sub-rectangular feature (h) and on close to the north west corner of the fort, possibly affecting the earthworks seen there. The playground terrace is also shown for the first time though the smaller sub-terrace containing the sunken feature is not. To the east and south-east of Fort Pitt other terraces were also created during this period. These works were most likely to have been constructed after the First World War, during the 1920s. It is unclear if the casemated barracks had been demolished by this time though, as they are shown blank rather than stippled as the other buildings are, it seems likely.

No new mapping was published until the 1950s and it is aerial photography that shows the developments in the recreation ground during the Second World War and after.

## **Aerial Photography**

Aerial photographs of Jackson Recreation Ground exist from the Second World War onwards. Early photographs are indistinct; these show that there were extensive defensive works across the recreation ground though it is only in later images that their form can be identified. It can also be seen that the casemated barracks have been demolished, though nothing had been built in their place. In 1941 (RAF/S377/H50/1416 82, 7 Aug 1941) these works are visible as a linear feature running from the north eastern corner of the recreation ground west south-west across to below the north eastern corner of the sports field (this section may just have followed an earlier field boundary), then diagonally across the face of the lower sports field slope to just below its north west corner. Another linear feature is visible running south from this along the eastern side of the sports field with an east-west section across its southern end forming a 'T' shape. Exposed chalk indicates that these had only recently been constructed and the apparent lack of some features visible later suggests that the defences were still in the process of construction. Some pale linear features are also visible on the sports field at this date though their origin, form and function cannot be determined. The terrace in the north west of the recreation ground has some works at its western end parallel to City Way but they are unclear, and there is a pale linear mark running along the terrace visible, possibly wear from vehicles using the terrace. The small sub terrace in the north-west corner of the survey area and containing the sunken rectangular feature is not visible until 1942 (RAF/HLA/561 6049, 1 Jun 1942) when this showed as a substantial rectangular structure, apparently with an access way at the west end running north west towards City Way and surrounded by pale material, presumably chalk make up. It is unknown what this feature was but it was probably still being constructed. In the context of Second World War defensive works and it is most likely to have been an emergency reservoir but the lack of buildings in the immediate vicinity

is unusual (Peter Kendal pers comm. It can also be seen that a rectangular structure had been constructed on the north western corner of the sports field and that the linear features had been extended from this point southwards to run parallel to City Way but it is still not possible to determine their form. Other earthworks are visible on these photographs to the south of Fort Pitt, outside the study area, identifying it as a major strong point in the event of invasion. The historical information above records some civil defence work within the fort relating to this period but not any direct use by the military which is somewhat surprising.

Photographs from January 1945 (RAF/106G/LA/98, 1077; Fig 7), though poor, show, in addition to the above features, that elsewhere in the park most of the modern elements described above are visible including the terrace containing the bowling green and tennis courts. The moats along the western side of Fort Pitt appear to be open and the line of the earthwork originally running across to Delce Tower can be seen. The far south of the study area is defined by the cut used by the access road to the current Mid-Kent College from City Way and an earthwork is visible on this alignment (and in later photographs) though it is narrower and appears more in keeping with the fort out works.



Fig 7: Aerial photograph of 1945 (RAF/106G/LA/98 1077, 15 Jan 1945, English Heritage (NMR) RAF photography)

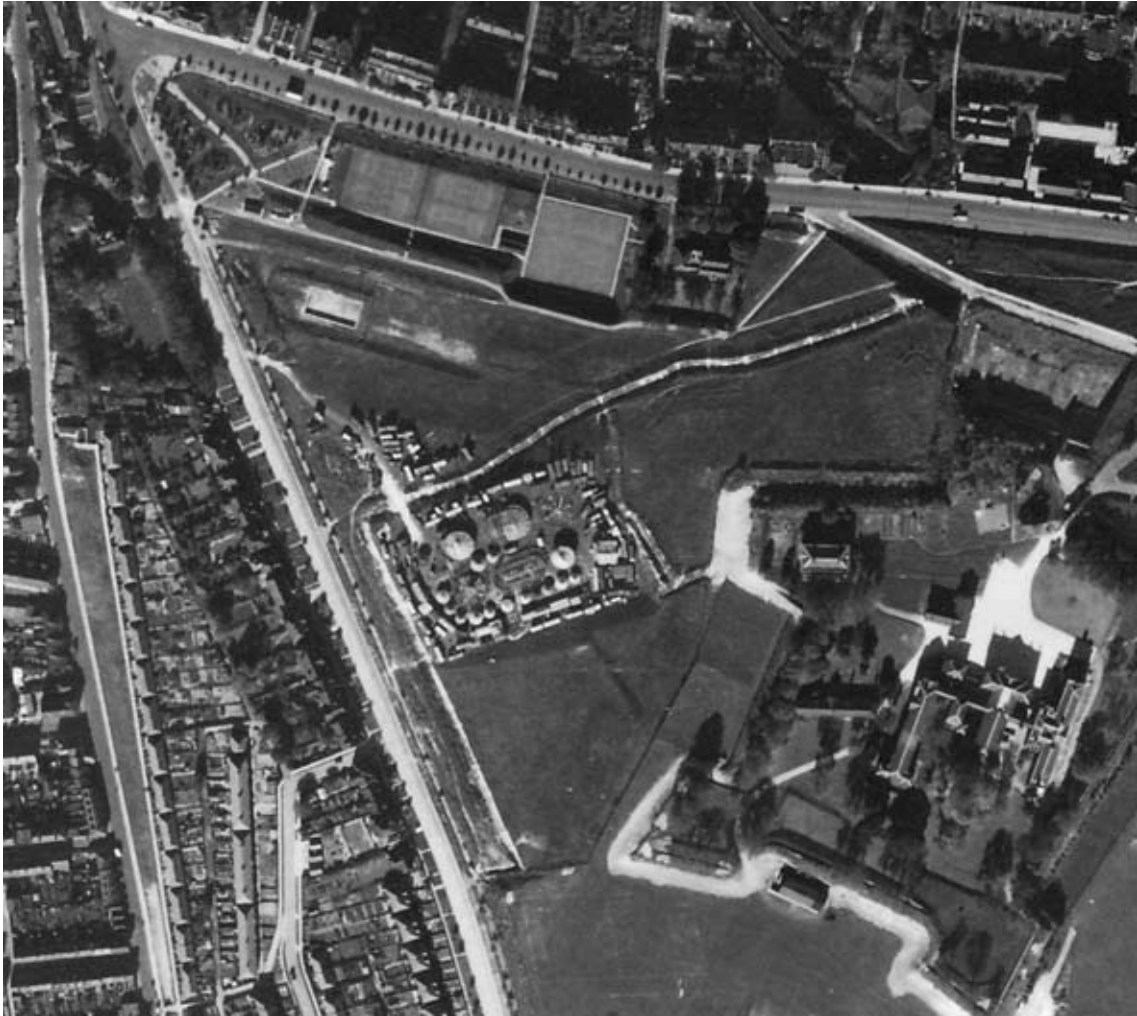


Figure 8: Aerial photograph of 1946 (RAF/CPE/UK1789 4174, 11 Oct 1946, English Heritage (NMR) RAF photography)

Most of these works are visible on the photograph of 1946 (RAF/CPE/UK1789 4174; Fig 8) which is dominated by a fair taking place on the sports field and several rides and numerous stalls can be seen. A track runs southwards onto the field from City Way, clearly to allow access as many vehicles appear to be parked next to it on the moderately sloping ground below the field. This track shows brightly, presumably from the exposed chalk, and much of the wear must have been contemporary with the photograph. The intermittent use of this area by travelling fairs may account for some of the very minor earthworks in the area. Access onto the sports field was by a casual track that is visible on aerial photographs. Between the track and City Way a disturbed area is visible which was also present in 1945 but its nature could not be determined. To the north of this, between the large rectangular feature and City Way, the ground appears to be disturbed and a cut feature is visible. Taken together these might suggest outlying defensive works relating to City Way. The rectangular feature probably constructed in early 1942 on the terrace above the tennis courts clearly shows as a substantial negative feature, most likely a reservoir. On the lower part of the terrace to the east of the probable reservoir there appear to be large worn areas, also faintly visible in 1945 but their origin is unknown. Large pale areas around the west and south west bastions of Fort Pitt itself suggest that moat in these areas had recently been infilled. The remains of the earthwork that

connected Fort Pitt with Delce Tower can clearly be seen and there appears to be a gap in the earthworks about halfway between the top edge of the sports field and the outer boundary of the fort. This is not original and probably marks the line of a later path or service trench crossing the area.



*Fig 9: Aerial photograph of 1947 (RAF/CPE/UK2301 5123, 9 Sept 1947, English Heritage (NMR) RAF photography)*

The clearest image of the wartime defensive earthworks is on the aerial photograph of 1947 (RAF/CPE/UK2301 5123; Fig 9). It can be seen that the main section, which ran from the north eastern corner of the recreation ground west south west and across the face of the downhill slope to the sports field consisted of a ditch with a substantial bank on the downhill (northern) side and a smaller bank on the uphill side in the more open eastern area. Semi-regular paths appear to have been worn across this feature which can be seen in 1946 and possibly in 1945 and it is possible that intermittent barriers existed, such as coils of barbed wire which could be extended at short notice to create an unbroken barrier. The barrier running parallel to City Way appears to be less substantial, using the slope up to the sports field at its northern end, and apparently consisted of two linear features, probably fence lines, possibly with a shallower ditch between them.

At the southern end of this feature the ground appears more disturbed and a clear ditch is visible where it meets the east-west cutting running across from City Way to the point of the south west bastion of Fort Pitt. A path ran to the north and west of these linear features which is also visible in 1945, and around the north western corner of the sports field this had caused considerable erosion. Immediately to the north of this area was a diamond shaped area of disturbed, scrubby ground also present in 1945 and 1946. In the latter image less scrub is visible and the feature may have been relatively recent. The track used by the fair to gain access to the sports field is also clearly visible. Above this area, on the corner of the sports field, the structure noted above is visible. This appears to be unroofed and consist of two interlocking 'L' shaped walls. Across the sports field numerous pale scars can be seen some of which can be seen on the wartime images, and so will relate to military activity. Some do not and may be marks remaining from stalls and other features associated with the fair. Elsewhere little has changed although the pale scars around the bastions of Fort Pitt already appear to have grassed over.



*Fig 10: Aerial photograph of 1948 (RAF/CPE/UK2534 5208, 24 Mar 1948, English Heritage (NMR) RAF photography)*



The most significant features of the 1948 photographs are the large areas of pale ground where the Second World War defences had been, clearly resulting from works to reinstate the recreation ground (RAF/CPE/UK2534 5208; Fig 10). The areas of chalk to the east of City Way, north of the main defences, suggest that the features here may have been defensive. Some attempt also appears to have been made to level up the sports field. Photographs from 1950 show that it took some time for the ground to recover (58/491, 7 Apr 1950, 5020).

Oblique photographs from a few weeks earlier in 1948 add a little additional information (RAF.CPE/UK/2440 0073, Fig 11). The form of the structure on the corner of the sports field can just be seen and confirmed as two interlocking 'L' shaped walls, apparently about chest height. The sunken structure in the north-west of the recreation ground can also be seen and appears to be holding some water and probably has ladders running up the sides. The area of Delce Tower is visible immediately to the left of and slightly below the reservoir. The base of the tower and a wall running north away from the tower (to the left) can be seen, both of which are shown on maps as early as 1813 and which still survive.



*Fig 11: Oblique aerial photograph of 1948 (RAF.CPE/UK/2440 0073, 4 Feb 1948, English Heritage (NMR) RAF photography)*

Photographs taken in 1968 reveal the earthworks within the recreation ground in great detail (MAL/68003 5281 47, 28 Jan 1968,). On the terrace in the north western corner of the study area play equipment (a roundabout, see-saws and swings) can be seen

where the current playground is located. The probable reservoir has been infilled and grassed over as is the rest of this terrace. Trees along the path to the north are visible as saplings and must have been planted relatively recently. To the east and south of this area the ground surface appears relatively undisturbed and the features recorded can clearly be seen. A few discrete mounds are visible on the middle terrace and on the level area above this (to the south) are several small depressions; though clearly relatively late the origin of these minor features is uncertain. The line of the Second World War defences can clearly be traced as a broad stripe of disturbed ground running diagonally across the study area, clearest to the northeast of the sports field where, further to the east, the remains of the upslope bank are visible. Across the face of the lower sports field slope it is much less clear. A broad stripe of disturbed ground is also visible running along much of the west side of the study area parallel to City Way. To the northeast of the sports field the complex of narrow linear features (g & i) are visible and the photograph clearly shows how they are on two orientations with a more east/west series being cut by a northeast-southwest group and both are cut by the Second World War earthworks to the north. To the south and immediate east the ground is disturbed with several irregular features and no obvious form or function can be determined. On the sports field a large number of linear features running along and across it can be seen as well as several less regular depressions. At the west end of the sports field faint earthworks suggest that the current access on to it from City Way had been in use from prior to this date. To the south of the sports field the earthwork that originally connected Delce Tower to Fort Pitt is very clear. West of this a series of very faint but discrete ridges can be seen running roughly parallel to City Way, these were noted during fieldwork, and their orientation recorded, but were too faint to accurately survey. Across the centre of this area faint east-west ruts may mark a track from City Way into Fort Pitt that had grassed over. However, the presence of what appears to be a recently installed manhole or similar at the City Way end of these features, noted during the survey, and the presence of the access road to the south, apparently recently constructed, suggest the recent insertion of services for the new buildings within Fort Pitt. At this date the area of the former casemated barracks has still not been built upon.

Later aerial photographs add little to that of 1968 other than to show minor developments such as the installation of the concrete access road at the west end of the sports field, the development of the play area to its current size (both by 1992) and the growth of trees around the recreation ground (OS/92389 2, 11 August 1992).

## CONCLUSIONS

There appear to be six main phases of activity represented by the earthworks surveyed within Jackson Recreation Ground. See Fig 13.

The earliest features surveyed appear to be the scarps (b & c) that run along the natural slope in the north western part of the survey area, apparently forming a lynchet. They were clearly cut by, or overlain by, later features and it seems probable that these were the remains of a field system of pre 18<sup>th</sup> century date. Further to the east the series of narrow terraces are cut by later features and are also early. It is not clear if they are of the same period as the possible lynchet to the west but there are faint linear earthworks visible on the lynchet (not seen at the time of survey but visible on the 1968 aerial photograph) of a similar scale that they appear to align with so they may have been part of the same phase of activity. However, it is equally likely that they represent later tracks that simply followed the earlier lynchet, predating the New Road turnpike. These features have been truncated at their eastern end by a roughly rectangular feature and the area above them, to the south, has also been disturbed. These features could not be assigned to any particular phase but it seems possible that they are associated with the late 18<sup>th</sup> century use of the area and may form an intermediate phase of activity.

The second main phase consists of the earthworks associated with the outer defences of Fort Pitt. These are restricted to the western side of the fort and follow its boundary, extending several metres into the recreation ground. They largely consist of the remains of the glacis for the outer retaining wall of the fort's moat though around the point of the north west bastion they are more complex and old mapping suggests that there were small outworks here of some form. The most significant area is that to the south of the skateboard park where the last surviving stretch of the covered way and glacis that originally extended across to Delce Tower remain. The narrow level area here between the bank and ditch might represent the top of a retaining wall and suggests that archaeological deposits may remain, though it appears that this feature had a relatively short lifespan, as did the fort itself as a defensive structure. Note that there are also significant remains in the vicinity of Delce Tower also likely to date to this period. The 1813 map (Fig 5) shows the tower with an outwork running west for a short way and then north. Whilst the tower itself has been demolished foundations and retaining walls are likely to survive and the outworks are still visible, apparently in good condition.

There are few features remaining from the 100 years between the construction of the fort and the main 20<sup>th</sup> century developments, roughly 1820 to 1920. The earthworks of the path recorded as an encroachment in 1875 and shown on first edition OS maps of 1866 are clearly visible not far to the north east of the sports field and must have originated after the glacis running across to Delce Tower went out of use. It is possible that the faint north-south ridges to the south of the sports field are the remnants of agricultural activity from this period but this is uncertain.

Substantial developments took place within the recreation ground some time between 1909 and 1932, as shown by historic mapping. Though outside the study area, the northern-most terrace was re-cut and extended at its eastern end to create space for

a bowling green. To the south of this a second terrace was created but its intended function is unknown. The main feature from this period is the large sports field terrace, probably a football pitch, created in the centre of the recreation ground. This led to the re-routing of some of the footpaths across the recreation ground which led to erosion in new areas, particularly below the north west corner of the sports field. City Way was also widened at this time leading to the creation of a scarp along the western side of the recreation ground. There are two possible contexts for this work, The terrace and others to the east and south of Fort Pitt may have been created during the First World War for temporary camps associated with Fort Pitt Hospital, or, and perhaps more likely given their sizes, they may date to the period after the First World War when civic works were undertaken to provide employment (Gulvin nd, 13) and always intended as sports fields. The surface of the sports field is covered with faint linear earthworks on two distinct alignments roughly at right angles to one another; along the field and across the field, there are also numerous small amorphous hollows. The origins of these features is uncertain, though at least some of them are visible on Second World War aerial photographs as pale marks. The linear features might be the remnants of sub-surface drainage and broadly contemporary with the creation of the sports field. However, if the sports field was created during the First World War, it is possible that they are the remnants of hut footings associated with temporary accommodation, though such expansion is undocumented. It is likely that some at least are associated with the use of the field by travelling fairs.

During the Second World War extensive defensive works were constructed across the recreation ground, which are discussed in detail above. In the late 1940s the ground was reinstated and both events created substantial areas of disturbance, mainly along City Way, across the northern face of the sports field and continuing east to the north east corner of the recreation ground. Remains from this period are clearly visible in some areas and faintly along most of their length.

Developments in the post war period have been minor (other than the reinstatement of the wartime works mentioned above). Service trenches were cut across the southern part of the recreation ground in the 1960s, presumably for the new blocks constructed within Fort Pitt at this time. At around this time the first rides were installed where the current playground is situated. A few other features apparently associated with services were also noted along City Way. A cast concrete track was constructed to allow vehicle access onto the sports field, possibly replacing an early access route slightly to the north visible as faint earthworks. In autumn 2007 the skateboard park was constructed immediately to the south of the sports field.

Today development of the recreation ground is continuing, reflecting ongoing social change. Old features are being removed, such as park benches, though their bases remain, some continue in use (local schools use the sports field) and new facilities such as the skateboard park are being provided (as are new security measures such as the CCTV required to monitor its use).

## METHODOLOGY

The survey was carried out by Magnus Alexander and Jonathan Millward between 17 and 21 September 2007.

It was conducted using Trimble R8 survey grade differential GPS, set up with a base station and two rovers using differential data supplied by the Ordnance Survey. Additional details are based upon Ordnance Survey Masterplan data.

All readily accessible secondary sources and aerial photographs held by the National Monument Record Centre were consulted.

## REFERENCES

### Published Sources

Geological Survey, 1977 1:50,000 *Chatham, Sheet 272, Drift Edition*. Institute of Geological Sciences (now British Geological Survey)

Gulvin, K R nd *The Napoleonic Defences of Rochester & Chatham*. Medway Military Research Group

Howard, J nd (1993?) *Fort Pitt: Chatham's Unique Site: Designed to Protect, Adapted to Care, Modified to Educate*. Privately published

Ordnance Survey 1866, 6" to 1 mile, Kent, Sheet XIX

1898, 6" to 1 mile, Kent, Sheet XIX

1909, 6" to 1 mile, Kent, Sheet XIX

1932, 6" to 1 mile, Kent, Sheet XIX

Saunders A, 1989 *Fortress Britain*. Hampshire: Beaufort

### Unpublished Sources

#### **British Library**

*Plan of the encampments in the neighbourhood of Chatham...* by Lieutenant Paterson 1782 Additional 15533

#### **The National Archives of the UK (TNA): Public Record Office (PRO)**

MPH 1/475. Four sheets of drawings of Fort Pitt, Chatham, Kent, 1805

MR 1/815. Six items originally accompanying a report to the Board of Ordnance, extracted from WO 55/2298

MPHH 1/585. *Seven sheets of plans and sections of defences on St Margaret's Heights, near Chatham; Plan of Fort Pitt, Chatham. 1813*

WO 32/18207. *Usage of War Department roads and footpaths in Chatham area*. Ordnance survey map dated 1875, 25" to 1 mile, Kent, Sheet XIX.7, annotated, probably based on 1866 survey

#### **Fortress Studies Group**

FSG 2007, Colour photocopy of 1941 map accompanying notes for Fortress Studies Group Annual Conference, 31/8-3/9/2007

### ***Medway Council***

Medway archives file MED 623-I (Fort Pitt),

### ***English Heritage***

Kendall, P 2005 'Defending the Dockyard – the Story of the Chatham Lines'. Unpublished report, English Heritage (unpaginated)

Kendall, P 2006 'Historic Barracks in Medway'. Unpublished report, English Heritage

### ***English Heritage: National Monuments Record collection***

Morrison, K A 1993 'Fort Pitt Grammar School for Girls, formerly Fort Pitt Military Hospital'. RCHME report, National Monuments Record building file reference BFI00722

### ***Aerial photographs***

RAF/S377/H50/I416 82, 7 Aug 1941

RAF/HLA/561 6049, 1 Jun 1942

RAF/I06G/LA/98 1077, 15 Jan 1945

RAF/CPE/UK/I789 4183, 11 Oct 1946

RAF/CPE/UK2301 5123, 9 Sept 1947

RAF/CPE/UK/2440 0073, 4 Feb 1948 (oblique)

RAF/CPE/UK2534 5208, 24 Mar 1948

RAF/SFFO/540/I2 0109, 5 May 1948 (oblique, front cover)

58/491 5020, 7 Apr 1950

MAL/68003 5281 47, 28 Jan 1968

OS/92389 171, 11 August 1992

### ***Listed building entries***

Listed building entry 172968: Crimea House (Grade II listed late C18 or early C19 former barracks hospital block)

Listed building entry 172969: Water Pump (Grade II listed early C19)

Listed building entry 172970: Music House (Grade II listed early C19 former barrack block then lunatic asylum)

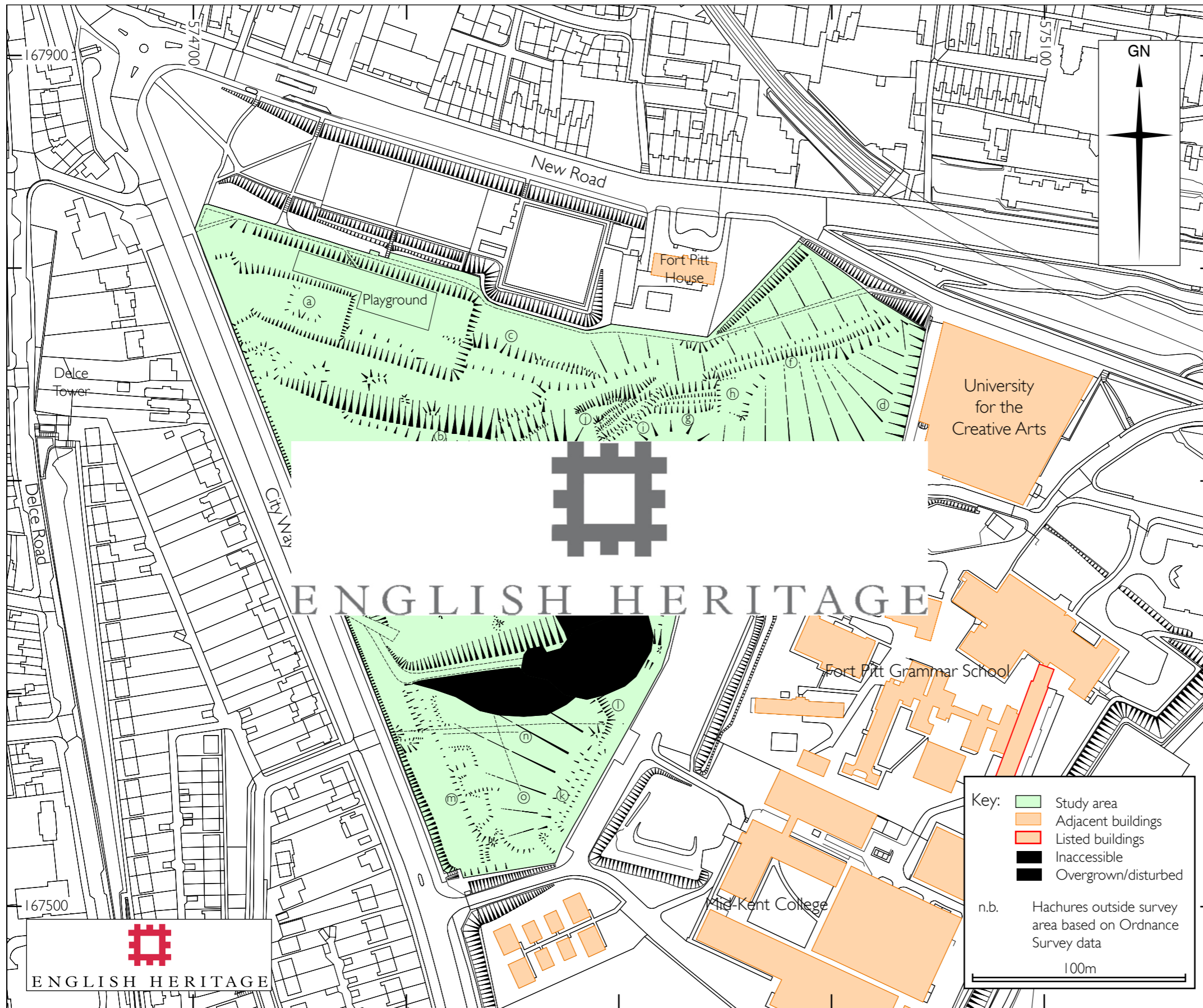


Figure 12 – Survey

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or criminal proceedings. English Heritage GD03085G. 2008





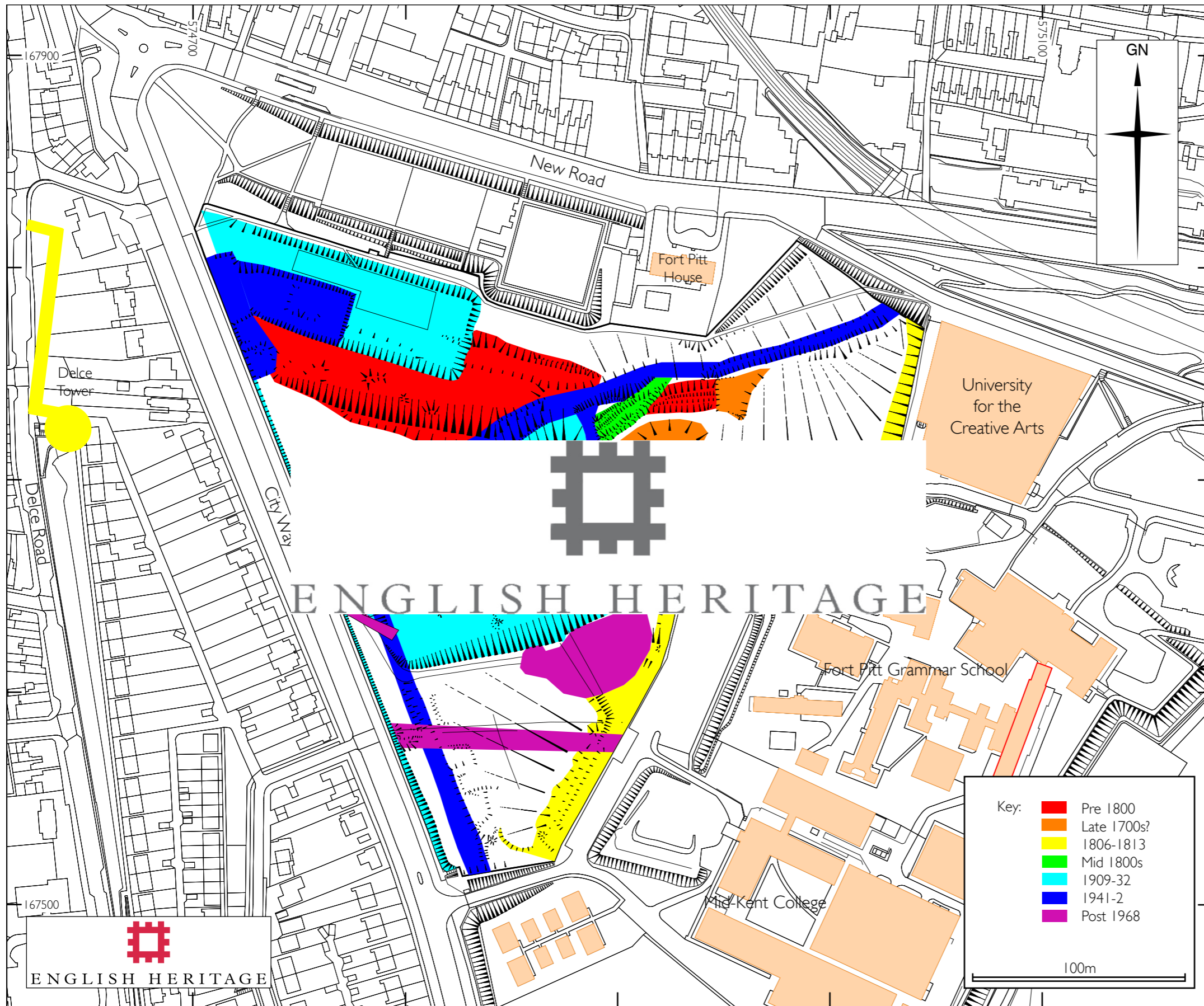


Figure 13 – Interpretation

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or criminal proceedings. English Heritage GD03085G. 2008



## **ENGLISH HERITAGE RESEARCH DEPARTMENT**

*English Heritage undertakes and commissions research into the historic environment, and the issues that affect its condition and survival, in order to provide the understanding necessary for informed policy and decision making, for sustainable management, and to promote the widest access, appreciation and enjoyment of our heritage.*

*The Research Department provides English Heritage with this capacity in the fields of buildings history, archaeology, and landscape history. It brings together seven teams with complementary investigative and analytical skills to provide integrated research expertise across the range of the historic environment. These are:*

- \* Aerial Survey and Investigation*
- \* Archaeological Projects (excavation)*
- \* Archaeological Science*
- \* Archaeological Survey and Investigation (landscape analysis)*
- \* Architectural Investigation*
- \* Imaging, Graphics and Survey (including measured and metric survey, and photography)*
- \* Survey of London*

*The Research Department undertakes a wide range of investigative and analytical projects, and provides quality assurance and management support for externally-commissioned research. We aim for innovative work of the highest quality which will set agendas and standards for the historic environment sector. In support of this, and to build capacity and promote best practice in the sector, we also publish guidance and provide advice and training. We support outreach and education activities and build these in to our projects and programmes wherever possible.*

*We make the results of our work available through the Research Department Report Series, and through journal publications and monographs. Our publication Research News, which appears three times a year, aims to keep our partners within and outside English Heritage up-to-date with our projects and activities. A full list of Research Department Reports, with abstracts and information on how to obtain copies, may be found on [www.english-heritage.org.uk/researchreports](http://www.english-heritage.org.uk/researchreports)*

*For further information visit [www.english-heritage.org.uk](http://www.english-heritage.org.uk)*

