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Southampton Archaeology Unit

Report 726

Archaeological watching brief on the extension to the Frewen Library, University of Portsmouth, Portsmouth, Hants

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2005



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Report on the archaeological watching brief on the extension to the Frewen Library, University of Portsmouth, Portsmouth, Hants.

By PR Cottrell BA

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1. Summary.

A watching brief on the groundworks for an extension to the University of Portsmouth Frewen Library revealed a large feature, interpreted as the outer moat of the post-1665 fortifications, and other features which were probably related to the outermost defensive line of the same date.

2. Introduction

The Archaeology Unit of Southampton City Council carried out an archaeological watching brief on an extension to the Frewen Library, University of Portsmouth, Portsmouth (fig 1) on behalf of Fitzpatrick Contractors Ltd & University of Portsmouth. The observations were made by R Radford, I Wellington and A Marshall between 11/7/2005 and 12/8/2005. The project was managed by P Cottrell. The pottery was scanned by Dr AD Russel and the clay tobacco pipe was scanned by P Cottrell.

The site lay within an area identified by the Portsmouth City Council's Sites and Monuments Record as containing archaeological potential.

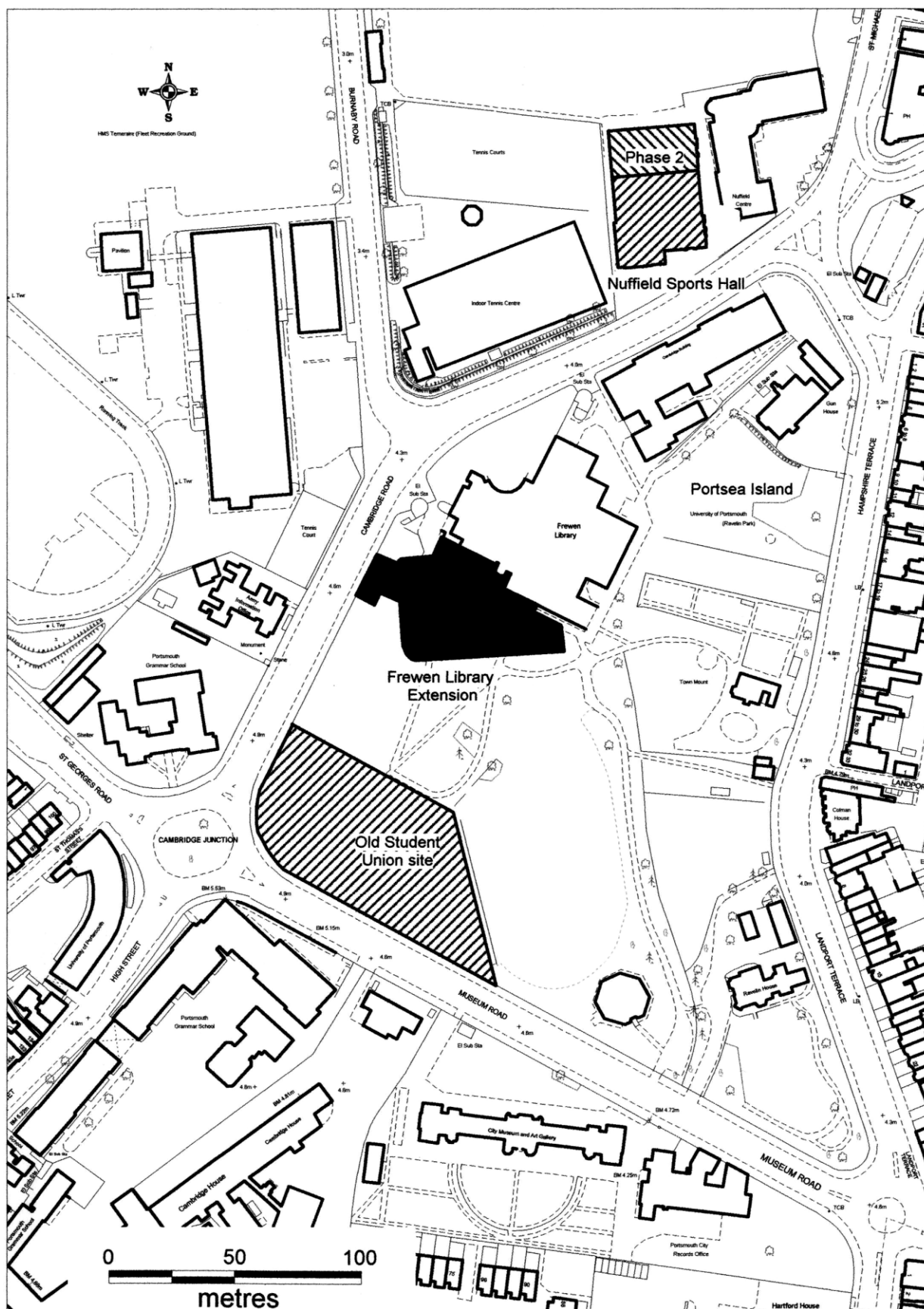


Figure 1. Site location, with nearby sites mentioned in the text

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3. Watching brief methodology.

The methodology followed that specified in the Scheme of Investigation. The archaeological work on site consisted of observation of the machine excavation of the ground beam trenches and other foundations (Fig 2).

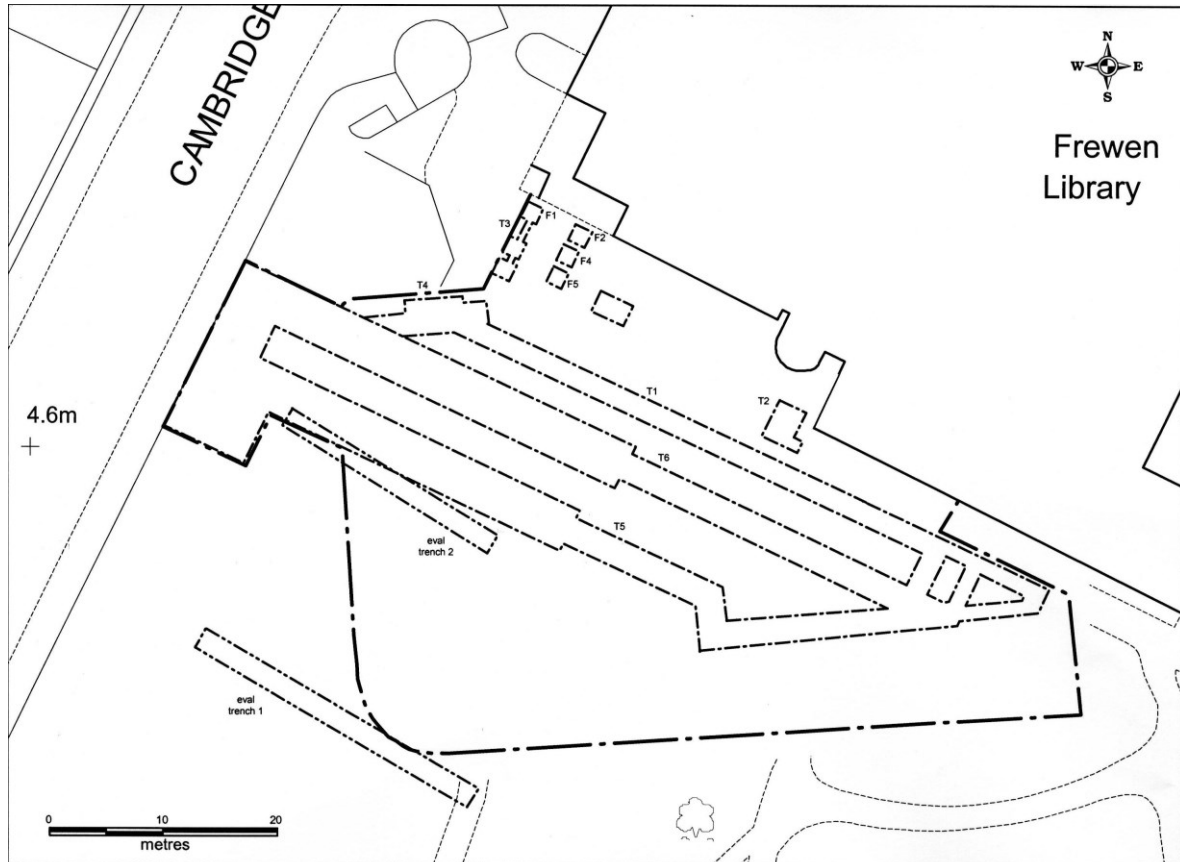


Figure 2. Location of trenches and other foundations observed and the 2004 evaluation trenches.

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All archaeological records were made using the Southampton City Council archaeological recording system (SMART system). The colours of deposits were recorded using the Munsell Soil Color Chart and these are used in this report (Munsell Color 1975). The archive is stored on Portsmouth City Council premises.

4. Site location and topography.

The site is located to the south of the existing library buildings in the north-west corner of Ravelin Park in Cambridge Road, between Old Portsmouth and Portsea.

The area of the site was generally level at a height of about 4.5m OD. The geological survey map (Ordnance Survey 1976) shows the site to lie on gravel.

5. Historical and archaeological background.

The harbour town of Portsmouth at the south-west corner of Portsea Island was in existence by the late 12th century and received a charter from Richard I in 1194. It developed into an important port for trade with Europe. During The Hundred Years War it was raided and burnt by the French in 1338 and 1369. As a result, the first fortifications were built, a simple earth and timber rampart surrounded by a ditch, with towers at the corners (Patterson, 1985).

By the early 16th century the landward defences were in a ruinous condition. The adoption of Portsmouth by Henry VII as a base for the building and repair of the king's ships, and the threat of war with France, prompted a major period of rebuilding, updating and repair during the reigns of Henry VIII and Elizabeth I, and further improvements were carried out up to the outbreak of the Civil War.

In the area of the roundabout about 100m to the south of the site was the site of the Town Mount. This was an earthwork that protected the main gate out of Portsmouth on the road to London, and was an early form of bastion. This was described by Leland in 1542 as 'a gate of tymber at the North East Ende of the Town and by it is cast up an hille of erth diked wherein be gunnes to defend the entire town by land'. The Town Mount bastion had been enlarged by 1568 and completely redesigned by 1600.

The restoration of Charles II in 1660 prompted a major rebuilding of the defences in the most up-to-date style, with extra moats, outworks and fieldworks designed by the military engineer Bernard De Gomme and begun in 1665. The Town Gate was moved further west, the Town Mount Bastion was enlarged and by 1700 a new fortification, the East Ravelin, with a series of outworks and a moat to the north and east, was built to the east of the bastion, partly in the south part of what is now Ravelin Park. The East Ravelin was part of the outer line of defences protecting the bastions of the inner line. During the 1740s and 1750s the outer defences were

remodelled to the designs of Desmaretz and his successor, Archer. The outer moat was filled in and replaced by a wider glacis. Maps of the 18th and early 19th centuries show the changes in the layout and extent of the moats and outworks (Patterson, *op cit* and Currie, 2004 (b)).

Historic maps show that on the north-east and east sides of the defences, east of the Town Bastion, the outer edge of the glacis was followed by a series of streets. One, shown on a map of c1750 as the 'Road to South Sea Castle', ran south-east across what is now Ravelin Park from near the junction of Cambridge Road and Burnaby Road to join Landport Terrace. This road was closed after the demolition of the defences and its location became part of the grounds of Government House, a late Victorian house that was demolished some time after 1938. The line of the road and the outer edge of the glacis ran across the south part of the site of the existing library building.

The defences were demolished in the 1860s and 1870s without any record being made of the upstanding remains. Cambridge Road, along the west side of Ravelin Park, one of the first roads to be cut through the defences, was opened in 1864. An Ordnance Survey plan dated 1867 shows the location of the Town Bastion, with the line of Cambridge Road cutting through it. Alexander Road, now Museum Road, was laid out along the south side of the grounds of Government House, now Ravelin Park, and opened in 1877.

The site of the library extension was believed to be on or near the site of a section of Portsmouth's defences dating from the 1660s. The existing Frewen Library appears to be situated at the northern edge of the outer defensive works surrounding the Town Mount and East Ravelin, and partly on the alignment of the old road.

A watching brief on drainage works at the new Ravelin Park Car Park, on the site of the Old Student Union, 65m south of the site (Currie 2004 (c)), showed that elements of the fortifications of Old Portsmouth lay under this area. On the west side of the car park two sections of massive stone walls over 2m and 2.8m wide were observed. These were thought to be part of the forward facing wall of the east

side of the Town Bastion. Near the east side of the site, a further series of five walls were found. These were thought to be part of the main walls of the East Ravelin, with three walls between them, possibly part of the internal arrangements of the Ravelin.

Excavations by Russell Fox in 1972 in the south of Ravelin Park, north and east of the Old Student Union, then the NAAFI Club, showed that the East Ravelin was on the site of the east half of the Club and extended further east, with the moat and glacis beyond. Two trenches some 30m further east exposed a feature interpreted as an infilled moat, part of the earlier fortifications of the 1660s (Fox, 1991). This suggested that elements of the 17th century defences had extended beyond the remodelled defences of the mid-18th century and that the remains of these works might be expected to extend under the present development site.

Further evidence that remains of fortifications might exist in the area of the library is a map, dated 1773, by Lt Col Archer, chief engineer of Portsmouth, which shows an earthwork glacis linking the Amhurst Redoubt, to the north of the library site, with the north side of the East Ravelin. Currie (2004 (a)) suggested that this may have been a proposed work that was not built, but it also appears on Grimm's map of Hampshire, dated 1776, and on Milne's map of Hampshire, dated 1791. However it does not appear on the first Ordnance Survey map of Hampshire, of 1810, so its existence may have been relatively short.

Trial trenches excavated by CKC Archaeology in 2004 on the site of the proposed extension failed to find any definite trace of the known fortifications of Old Portsmouth, and it was considered that the area was outside the main defensive circuit (Currie, 2004 (b)). Minor features were thought to be post-fortification. A large linear feature was found on the west side of the site but it was not possible to confirm that it was connected with the fortifications. It was considered that further observations would be required in order to interpret this feature.

6. Results.

6.1. Natural deposits

The earliest deposits exposed were contexts 3 and 21. Context 3 was gravel in a sandy clay matrix with occasional patches of brickearth. This was exposed over most of the site at between 4.0m OD and 4.3m OD and was interpreted as the natural gravel. Context 21 was a mixed light grey and yellowish brown clay, underlying 3 and exposed in irregular patches in the eastern part of the site.

Above the gravel was context 2, slightly stony, strong brown, silty clay, generally c0.4m thick but up to 0.8m thick in places. This was interpreted as a natural brickearth deposit overlying the gravel. The upper part of the deposit was disturbed and contained brick fragments. It was not present over the whole site.

6.2. Post medieval (circa 1550 – 1750)

Feature 17 was a large linear feature, aligned approximately WSW – ESE, located in the south side of the west half of Trench 5. The exposed part was 21.7m long, measured from the west end of Trench 5, and it was cut to the east by feature 18. The feature was not recorded in Trench 7, which joined the west end of Trench 5. However photographs of Trench 7 show a patch of darker soil within the natural gravel, extending beyond the west end of Trench 5. This may have been a continuation of 17, about 2m beyond the end of Trench 5. The bottom of the feature was below the machined level (c3.0m OD). Two fills were recorded. The earlier, 16, was very pale brown, moderately stony, sandy silt containing small fragments of chalk. It formed a steeply sloped deposit on the south side of the feature. Several marine mollusc shells, mostly cockles, and the bowl of a clay tobacco pipe, dateable to the mid-18th century, were recovered from it. Fill 15 was yellowish brown, moderately stony, silty sand. The feature appeared to be tapered in plan, reducing in width from over 2.1m to 0.9m at the top and from over 2.1m to 0.4m at the machined level (c2.9m OD). In three transverse sections the sides appeared to be steep or nearly vertical. However the section across the feature at the west end of Trench 5 showed the fills, 15 and 16, sloping down to the north and overlaid by a gravel deposit, which was recorded as context 3. This would suggest

that the gravel to the north of the feature was actually redeposited gravel, forming a fill of 17, and that the feature was wider than it appeared. Further east this gravel was noted to be “much cleaner”, suggesting that the deposit was disturbed or redeposited.

The location of feature 17 coincided very closely with that of the feature (21) exposed in Trench 2 of the field evaluation (Currie, 2004 (b)). The position of that trench was approximately adjacent to the south side of Trench 5 and the south edge of feature 21 was on a similar alignment to feature 17 (fig 3). Feature 17 was interpreted as probably being part of the outer moat of the later 17th century defences (see below, p14).

Feature 8 was a large feature near the west end of Trench 1. Its east edge was aligned roughly SSE – NNW and the west edge was at an approximately 90° angle to it. This suggests that the edges converged at a right angle, about 2m north of the trench. The sides exposed in section were steeply sloped. The fill, 9, was very dark, greyish brown, slightly stony, silty clay loam with lenses of gravel. Feature 8 was not visible in Trench 6, 2.3m to the south. It may have been cut or obscured by feature 33 and context 20. Its location, north of feature 17, suggests it may represent a part of the outer defence line, beyond the outer moat.

Feature 4, observed in Trench 1, was a linear feature aligned approximately SSE – NNW. It was c1.6m wide and at least 4.8m long. It cut layer 2 and was over 1.1m deep, with roughly vertical or undercut sides. The fill, 5, was a mixture of stony loam with gravel and contained brick fragments, which suggest a post-medieval or later date. Its alignment, approximately parallel with the east side of feature 8, suggests a possible association, and this also may represent an element of the outer defences, robbed of stone.

Feature 22, was observed in Trench 6. It was at least 1.1m deep, 3.6m wide at the top and 2.2m wide at the machined level with steeply sloped sides, flared at the top. It extended 2.0m across the trench from the north side. It was roughly in line with feature 4 in Trench 1 and may have formed a terminal of that feature. The fill, 23, was moderately stony, dark brown, sandy loam with common brick fragments.

Feature 27, observed at the west end of Trench 6, was a curvilinear feature, 0.8m wide. It was only observed in the base of the trench, below later deposits (context 20). The fill, 28, was very stony, dark yellowish brown, sandy clay. A sherd of medieval pottery was recovered from it. Photographs show a narrow band of a lighter coloured deposit at the outer edge of the feature. Beyond the west end of Trench 6, in Trench 7, the photographs show a similar curved feature that was not otherwise recorded. This appeared to consist of two bands of a light coloured deposit with a darker, yellowish deposit between them. The curvature was similar to that of 27 and it is possible that the two were related. These features may have been natural in origin and it is possible that the two features represent a natural depression, containing a medieval or post-medieval fill, possibly related to the construction of the 17th century defences. Alternatively they may represent fills of a large feature, possibly a continuation of 17.

6.3. Early modern (post 1750)

A deposit comprising gravel, possibly redeposited natural, mixed with dark yellowish brown clay loam and over 1.2m thick, was recorded over several parts of the site as context 20. The largest area of context 20 was in the central part of Trenches 5 and 6 and here it appeared to form the fill of a large feature. This was assigned context number 33 during the post-excavation process. However it is possible that the deposits collectively recorded as 20 may represent more than one, not necessarily contemporary, feature.

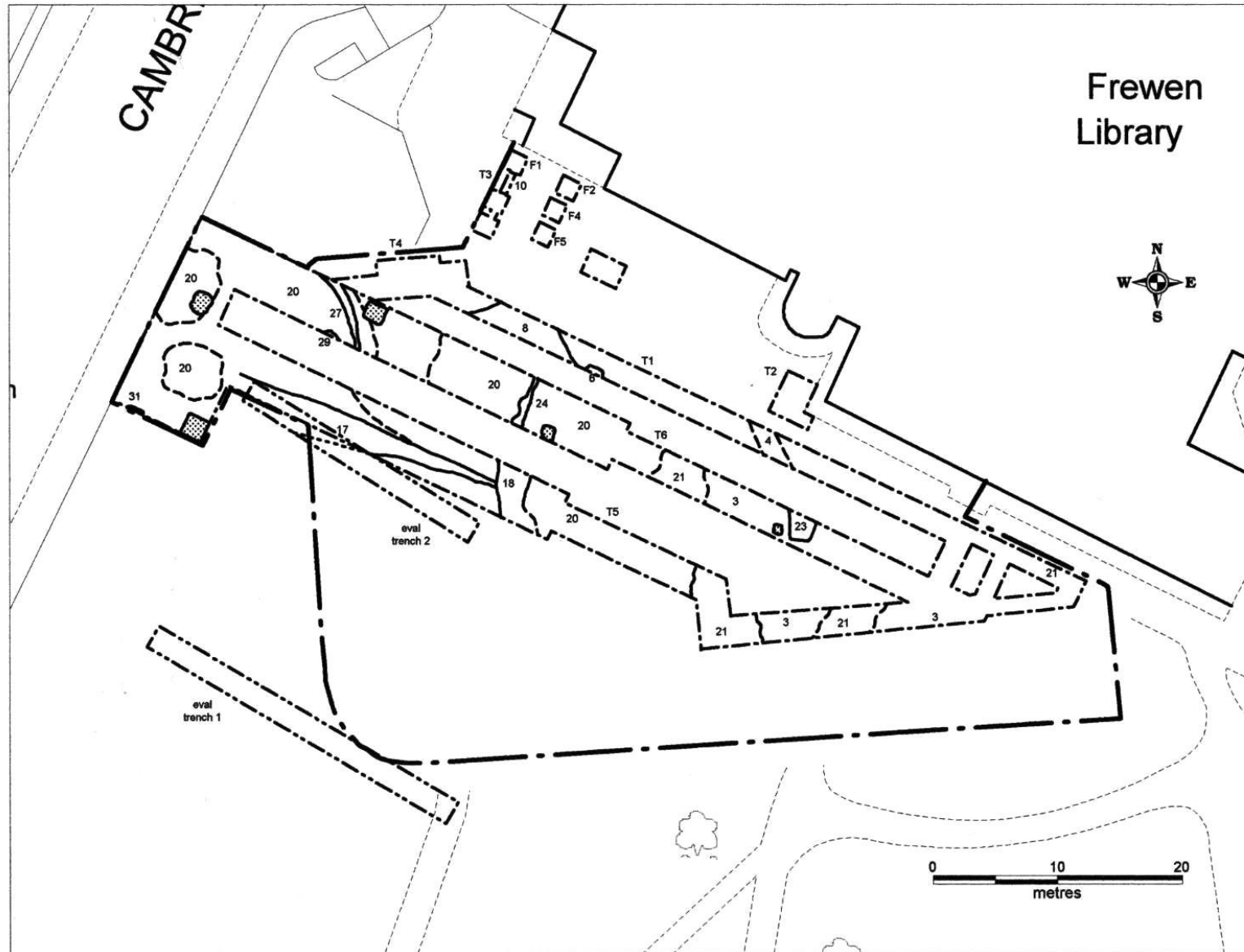


Figure 3. Site plan, modern features are shaded
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In trench 5, the east edge of 20 formed an indistinct sloping interface with layer 3 and cut the underlying clay, 21. To the west, in Trench 5, the relationship between 20 and fill 19 of feature 18 was indistinct and it is possible that 18 was actually part of feature 33. The width between the west edge of 18 and the eastern extent of 20 in Trench 5 was c16m at the base of the trench and over 17.5m at the top. In the centre of Trench 6, context 20 measured c24m east – west at the base of the trench but in the west part of the trench it was shallower and extended to the west end of the trench. Two irregular areas of context 20 were exposed in the base of Trench 7. These may represent deeper parts of the same feature or deposit continuing westward from Trench 6. Context 20 contained a few fragments of brick and glazed floor tile. A fragment of an early modern glass bottle and two sherds of pottery, one dating from the 17th century and one from the 19th century, were recovered.

Feature 18, which cut 17 near the centre of Trench 5, was a linear feature, aligned approximately north – south. It was over 4.6m wide at the top and was at least 1.3m deep, with a sloping west side. The east edge was indistinct. The fill, 19, was dark yellowish brown, moderately stony, silty clay containing a few fragments of brick and small fragments of chalk. The interface between 19 and context 20 to the east was unclear and it is possible that feature 18 and its fill were associated with, and possibly part of, feature 33.

Feature 24, was observed in the centre of Trench 6. It appeared to cut context 20. At the south side of the trench it was 0.4m wide at the top and 0.7m wide at the machined level but it was irregular in plan and narrower at the north side of the trench. It was at least 0.95m deep with steeply sloped sides, irregular and undercut on the east side. The main fill, 25, was yellowish brown, slightly stony, silty clay with a few brick fragments. At the south side of the trench, fill 26 was a deposit of very dark greyish brown soil with common very small fragments of charcoal. Feature 24 appeared to cut context 20, the fill of feature 33, but it may have been a variation in this fill, rather than a discrete feature. It was roughly in line with feature 18 in Trench 5 and although much narrower, may have been a continuation of it. Fills 19 and 24 were similar.

6.4. Late 19th century and Modern

Feature 6 was observed in the south side of Trench 1, 0.65m east of feature 8. It was U-shaped in section, 1.6m wide and 0.8m deep, and may have been a pit. The fill, 7, was very dark, greyish brown, silty clay loam with few stones and no visible inclusions.

Feature 10, observed in both sides of Trench 3, was 1.7m wide, and the bottom was 1.2m below ground. The top was truncated by a concrete foundation 0.5m thick but the remaining fill was 0.45m deep. The fill, 11, was very dark grey, slightly stony, silty clay loam with brick inclusions. This may have been a tree hole. Its location corresponds approximately to the position of a tree shown on the 25" OS map of 1933.

Feature 13, at the west end of Trench 5, was a forked linear feature, vertical sided with a flat bottom 0.3m below the top of the gravel, 3. It crossed the end of trench, aligned approximately SSW – NNE, and ran to a brick-filled soakaway, exposed in the south-east corner of Trench 7. The feature divided in the south half of the trench and the second part, 0.6m wide, diverged to the south-east. It cut the fills of feature 17, dated to the mid to late 18th century, and was probably a drain trench, possibly associated with Government House, or the later occupation of the site. The fill, 14, was very dark, greyish brown, slightly stony, silty clay loam with small fragments of brick, charcoal and burnt clay.

Feature 29 was a small feature observed cutting 20 at the south side of Trench 6, near the west end. It extended 0.2m into the trench and was 1.3m wide at the top and 0.8m deep, with steep sides. The fill, 30, was slightly stony, dark greyish brown, silt loam with no finds or inclusions.

Feature 31 was observed at the south side of Trench 7, close to the western boundary of the site. The visible part extended 0.2m into the trench and was roughly rectangular in plan. It was 1.2m wide at the top and at least 0.7m deep, with near vertical sides. The fill, 32, was slightly stony, dark brown, silt loam containing a few brick fragments and a sherd of 19th or early 20th century pottery.

The location of this feature suggests that it was probably a tree hole. It was in line with a row of trees along the western edge of Ravelin Park, to the south of the site, and the 1933 OS map shows a continuous line of trees along the west side of the grounds of Government House.

Context 1 was very stony, sandy clay, c0.3m thick, varying in colour and containing abundant fragments of brick, tile, slate and concrete. It appeared to comprise topsoil mixed with demolition rubble and formed the overburden on the site.

7. Conclusions.

The single dateable find from the fill of the feature 17 suggests a mid to late 18th century date for the filling, with the implication that the feature itself was earlier. Its alignment was similar to that of the outer moat of the Town Mount Bastion as laid out by De Gomme after 1665, and its location is compatible with the position of that moat, based on the published work of Patterson but calculated in relation to the modern Ordnance Survey map (fig 4). It is probable therefore that this was part of the outer moat of the late 17th century. Its location would have been under the glacis of the later, redesigned defences of the mid 17th century. The fills, 15 and 16, and the probably redeposited gravels in the west part of Trench 5 are not incompatible with the fill of “loose orange sandy gravel” noted in Fox’s trenches of 1972 that interpreted as cutting the early moat.

The right-angled feature (8) in Trench 1 may have been related to part of the late 17th century works outside the outer moat, and was possibly a robbed foundation. Its position, north of feature 17, suggests it may represent a part of the outer defence line, which would have comprised a covered way, firing step and parapet beyond the outer moat, which were probably robbed of stone when the defences were redesigned. Its location in relation to the known site of the Town Mount Bastion is approximately consistent with the position of this outer work on Patterson’s plan of the defences in c1700 (Patterson, *op cit*, p15).

The linear feature 4, in Trench 1, was approximately parallel with the east side of feature 8 and this also may represent an element of the outer defence line, robbed of stone.

The large feature, 33, that cut 17, appears to represent a major disturbance subsequent to the filling of 17 and may be related in some way to the works of c1750, such as the demolition of the defences beyond the outer moat, or to the later 18th century works linking the Amhurst Redoubt with the East Ravelin. However its location was under the glacis, so its nature remains unclear. Alternatively, parts of context 20, dateable by finds to the 19th century, may have been related to the removal of the final demolition of the defences and the levelling of the glacis.

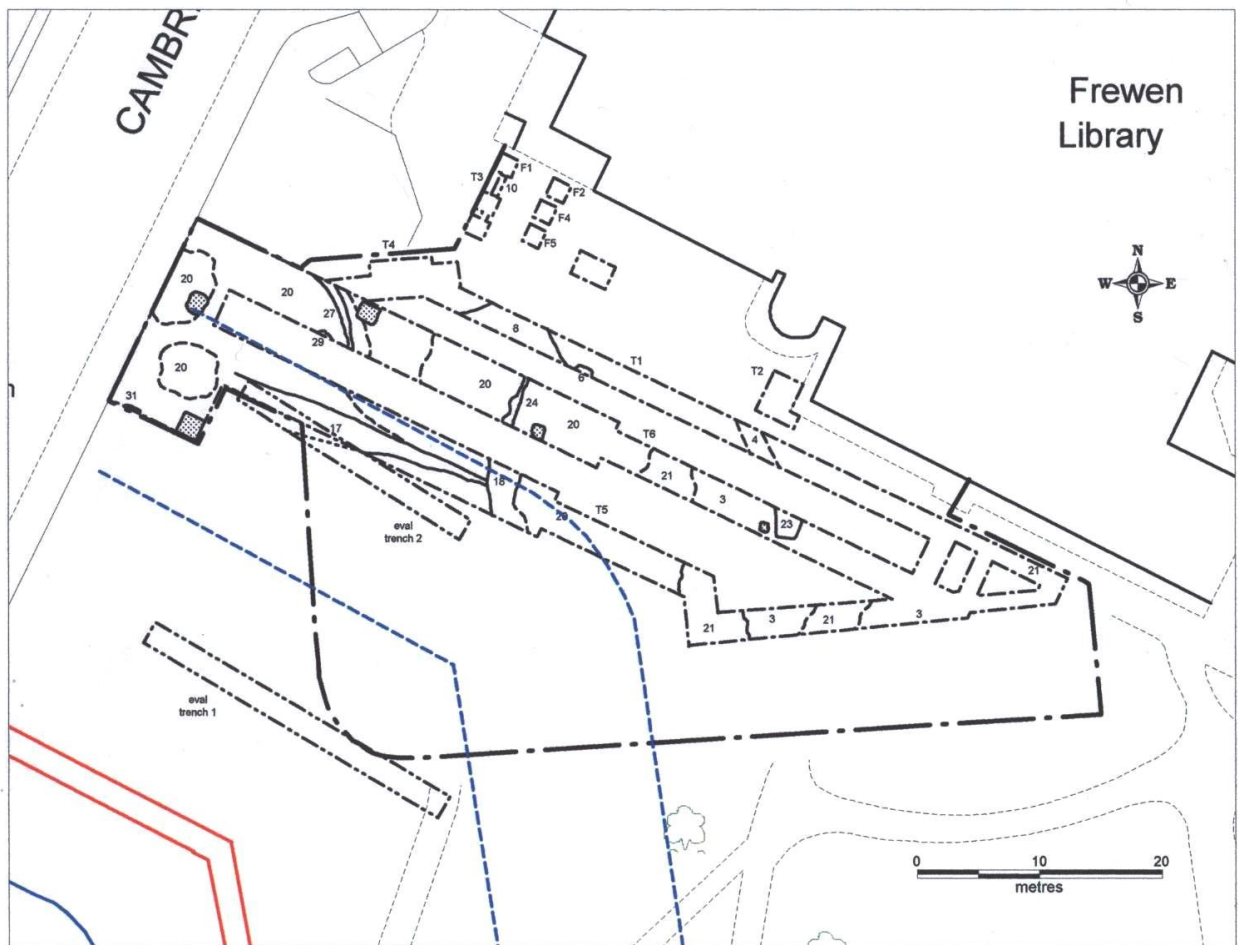


Figure 4. Plan of site related to defensive features. The solid red and blue lines show respectively the outer parapet and the edge of the moat of the Town Mount Bastion after the 1770s. The dotted blue line shows the estimated location of the outer moat of the 1660s defences.

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Appendix 1. Context list.

Number/letter codes (eg 10YR 3/1) = Munsell soil colour codes.

sa = stone abundance – 0 = virtually stone free; 5 = gravel

Context	Type	Description
1	Layer	modern overburden & disturbed topsoil
2	Layer	7.5YR 5/8 silty clay, sa 2
3	Layer	7.5YR 5/6, sandy clay, sa 5, natural gravel
4	Feature	linear, ditch?
5	Fill	10YR 4/4 loam, sa 3-4, fill of 4
6	Feature	Pit?
7	Fill	10YR 3/2 silty clay loam, sa 1, fill of 6
8	Feature	angular
9	Fill	10YR 3/2 silty clay loam, sa 2, fill of 6
10	Feature	pit
11	Fill	10YR 3/1 silty clay loam, sa 1, fill of 10
12	unstratified	finds from overburden 1 and spoil
13	Feature	linear, service trench
14	Fill	10YR 3/2 silty clay loam, sa 2, fill of 13
15	Fill	10YR 5/4 silty sand, sa 3, fill of 17
16	Fill	10YR 7/4 sandy silt, sa 3, fill of 17
17	Feature	linear
18	Feature	linear, ditch
19	Fill	10YR 4/6 silty clay, sa 3, fill of 18
20	Fill	gravel (7.5YR 5/6) and clay loam (10YR 4/6), fill of 33
21	Layer	mixed 10YR 5/6 and 10YR 7/2 clay, sa 1, natural
22	Feature	linear, ditch?
23	Fill	10YR 3/3 sandy loam, sa 3, fill of 22
24	Feature	
25	Fill	10YR 5/4 silty clay, sa 2, fill of 24
26	Fill	10YR 3/2 silty clay, sa 1, fill of 24
27	Feature	linear, curved
28	Fill	10YR 4/6 sandy clay, sa 4, fill of 27

29	Feature	pit
30	Fill	10YR 4/2 silt loam, sa 2, fill of 29
31	Feature	pit
32	Fill	10YR 3/3 silt loam, sa 2, fill of 31
33	Feature	large, extent unknown

Appendix 2. Finds list.

Context no	Mat Type	Find Type	Wgt (gm)	No of frags	Description
12	IRON	HSHO	148	1	Horseshoe
12	CRMC	TILR	25	1	Roof tile, sandy fabric
12	CRMC	TILR	51	1	Roof tile
12	STON	RUBL	15	1	limestone
12	CUAL	BUTN	3	1	military brass button
12	POT	VSSL	3	1	
16	SHEL	OYST	7	1	oyster
16	SHEL	COCL	6	2	cockle
16	PCLY	TPIP	11	1	bowl, plain, with spur, mid-late 18th cent
19	CRMC	BRIC	31		brick fragment
20	POT	VSSL	26	1	frag of a charger? Brown & buff glaze with stamped & rouletted design, 17th cent.
20	POT	VSSL	205	1	light grey stoneware, base sherd of ? Jar
20	GLAS	BOTL	91	1	base frag of dark green bottle
20	CRMC	TILF	20	2	fragments streaked with dark glaze, possibly wasters
20	CRMC	TILF	14	1	part green glazed
25	CRMC	BRIC	1273	1	brick fragment
28	POT	VSSL	21	1	greenish brown glaze
32	POT	VSSL	8	1	base sherd of white glazed jar
32	CRMC	BRIC	223	1	brick fragment, possible sgraffito