NORFOLK ARCHAEOLOGICAL UNIT

Report No. 760

Report on Archaeological Test Pitting at Norwich City Wall, Chapelfield, Norwich, Norfolk

Chris Birks

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Location:	Chapelfield Road, Norwich
Grid Ref:	TG 2262 0820
SMR No:	37405N
SAM No:	Norfolk SAM 10
Date of work:	30th September to 4th October 2002

Summary

A programme of archaeological work resulting from development proposals at the former Nestlé foodstuffs factory was requested by Norfolk Landscape Archaeology. A total of nine test pits were excavated against Norwich city wall and produced evidence relating to the construction of the wall and to the destruction of a number of 18th-century cottages known to have adjoined the wall. A small number of finds dating from the post-medieval period were recovered.

1.0 Introduction

The archaeological work was undertaken in accordance with instructions from CgMs Consulting, a Brief issued by Norfolk Landscape Archaeology (NLA Ref: AH/09/07/02) and a Project Design prepared by Norfolk Archaeological Unit (NAU Ref: AS/1401).

The work was designed to assist in determination of changes of level to Chapelfield Road (Figs 1 and 2). This information was required by Cameron Taylor Bedfords who are working on behalf of Bovis Lend Lease. The archaeological work was generously funded by Bovis Lend Lease. Scheduled Monument Consent to allow these works to take place was granted by the Secretary of State for DCMS.

The site archive is currently held by the Norfolk Museums and Archaeology Service, following the relevant policy on archiving standards.

2.0 Geology and Topography

The site overlies a solid chalk geology (Norwich Crag) with overlying Norwich Brickearth glacial deposits.

The test pits were positioned adjacently to Chapelfield Road, a dualled carriageway, which falls gently from the north-east at c.29m OD to the south-west at c.27m OD.

3.0 Archaeological and Historical Background

Norwich city wall (Scheduled Ancient Monument 10), a late 13th-century municipal fortification, survives to a greater or lesser extent along the complete length of its original circuit. It survives best, however, on the stretch between Grapes Hill and St. Stephen's roundabouts. Here its alignment is paralleled by an arterial road (Chapelfield Road) which is dualled and dates from 1975.

The wall, which is built principally of flint and mortar with brick detailing, is approximately 1.1m wide and 3m high. It displays a great many openings and architectural details, many of which date to when buildings were set against it in

the normal 18th and 19th-century manner. Some stretches have been removed and these now correspond with routes crossing the line of the wall.

It is commonly supposed that the wall sits on a bank, and that a ditch originally lined its southern edge. This was demonstrated in 1948 when excavations at Barn Road (Jope 1952) revealed that the base of the city wall sat on an earthen bank. The bank was identified again at St. Benedict's Gate (Hurst & Golson 1955).

Excavations in 1975 by Norwich Survey along Chapelfield Road (Site 236) showed that the foundations for the wall were very shallow and that they had been cut into sand. Norfolk Archaeological Unit excavated a small trench against the city wall opposite the south-west corner of the Nestlè factory (Penn 1997) and this showed that the wall at this point rested on red-brown sandy clay containing fragments of post-medieval brick.

4.0 Methodology

The object of this exercise was to determine the nature of the footings to the city wall and to determine as far as reasonably possible the presence/absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits adjacent to the wall.

CgMs Consulting required that 7 No. test pits of 1.5m x 1.5m area be excavated by hand. No machine excavation was carried out.

Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

All archaeological features and deposits were recorded using the Norfolk Archaeological Unit's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

The excavation of these test pits was problematical for two reasons. The first related to the proximity of the dual carriageway which, as an arterial road, is exceedingly busy, and the proximity of associated mains services. A safe working environment was maintained during the course of archaeological works through the provision of carriageway closure, signage and the fencing of test pits with anticlimb *Heras* fencing (all by May Gurney Co. Ltd.). The second problem related to overgrowth and each test pit site was, therefore, cut back prior to archaeological work commencing.

The proposed locations of the test pits as chosen by CgMs Consulting were set out by Norfolk Archaeological Unit following checks for service runs and CATscanning prior to excavation. The location of some of the test pits was moved in order to avoid services and/or other obstructions (Fig.2).

The benchmark used for Ordnance Datum was located on Chapelfield Methodist Church, Chapelfield Road (30.08m OD).

General site conditions were good and each member of staff was officially inducted by Bovis Lend Lease prior to the start of excavations. Copies of sitespecific Norfolk Archaeological Unit risk assessments were provided. The test pits lay beyond the main development site at Chapelfield Works and so many of the hazards present on that site, *e.g.* demolition works, did not pose risks relevant to these archaeological works.

The weather remained generally dry with occasional showers.

5.0 Results

A total of nine test pits were excavated (Fig.2). Each is described in turn.

Context numbers were allocated only where archaeological remains were present and are shown in the text within square brackets. Full context descriptions are listed in Appendix 1 in which round-bracketed numbers describe soil type by particle size, *e.g.* silty sand (50/50) = 50% silt-sized particles and 50% sand-sized particles.

5.1 Test Pit 1 (Fig.3)

Test Pit 1 lay at the north-western extreme of the site. Due to the presence of a live electricity cable running parallel to the city wall at a distance of c. 0.35m, excavation or relocation of the test pit was not possible. It is likely this service trench would have removed at least part of the city wall foundations.

No archaeological evidence was revealed.

5.2 Test Pit 2 (Fig.4)

Test Pit 2 lay *c*. 8m to the south-east of Test Pit 1. It was excavated to a maximum depth of *c*.0.8m (to *c*.29.63m OD) by removing *c*.0.28m of dark brown humic silty sand topsoil containing large amounts of wood bark and *c*.0.52m of mid brown clayey sand containing considerable building rubble. Brick walls lined the south-western and north-eastern sides of the test pit. These probably related to a cellar of an 18th-century cottage known at this location. No further excavation was carried out.

5.3 Test Pit 3 (Fig. 5)

Test Pit 3 lay c.6m to the south-east of Test Pit 2 and was relocated towards the north-west due to the proximity of the dual carriageway and mains services. The new location was at a point where a 1.5m x 1.5m test pit could physically be excavated.

The pit had a maximum depth of c.0.58m (to c.28.78m OD), further excavation being restricted by the presence of a solid flint and mortar foundation [5] that occupied the majority of this pit, and a live electricity cable against the southwestern edge. Approximately 0.15m of overlying topsoil [1] was removed to reveal a rubble layer [2]. A brick cellar wall [4] with a mortar cap [3] was identified. This lay perpendicularly to, and was bonded to, foundation [5] and the city wall foundation [25]. The city wall foundation [25] projected southward by c.0.23m from vertical and was c.0.46m deep (to c.28.90m OD). The area [6] between [5] and [25] was excavated by removing c.0.38m of mid brown silty sand fill [7] that contained a large amount of building rubble. Further excavation was precluded by the presence of foundation wall [5] which would have required machine excavation and hence an alteration to the route of the electricity cable. This was deemed impracticable and no further excavation was carried out.

5.4 Test Pit 4 (Fig.6)

Test Pit 4 lay *c*.9m to the south-east of Test Pit 3 and *c*.3m to the south-east of the present Nestlé site access road. It was excavated to a maximum depth of 1.2m, in the process removing *c*.0.30m of dark brown humic silty sand topsoil [12] containing large amounts of wood bark. Mid orange brown clayey loam deposit [14] lay beneath the topsoil, extended to *c*.0.42m in depth and contained post-medieval pottery finds. The city wall foundations were identified beneath *c*.0.10m of mid yellow sand [13] and these extended southwards by *c*.0.59m from vertical and to a depth of *c*.0.97m from ground level (to *c*.28.76m OD). Mid orange brown silty clayey sand deposit [15] was overlain by [13] and contained a light orange sandy clay deposit [16] which lay against the city wall foundation. The masonry foundation sat on a clayey sand deposit [32].

5.5 Test Pits 5, 6 and 7 (Figs 7 and 8)

Test Pits 5, 6 and 7 lay to the south-east of Test Pit 4 (*i.e.* towards St Stephen's roundabout). All lay adjacent to each other in a north-east-to-south-west orientation, Test Pit 5 was separated from 6 and 7 by a modern brick wall.

Test Pit 5 was excavated to a maximum depth of *c*.0.85m (to *c*.26.25m OD) removing *c*.0.14m of very compacted gravel [8] and an underlying deposit [10] which contained fragments of a post-medieval jar and bowl and was truncated by cut [26] which contained a large amount of building rubble [9]. Deposit [10] sealed mid to dark brown silty sand sub-soil [11] which overlaid a mid orangey brown clayey sand of natural origin

Test Pits 6 and 7 were excavated to a maximum depth of *c*.1.2m (to *c*.26.53m OD), in the process removing *c*.0.20m of dark brown humic silty sand topsoil [18] containing large amounts of wood bark. A mid brown silty sandy clay deposit [19] under the topsoil overlaid mid grey sandy silt deposit [20] that contained a cessy deposit [24] to the south-east. Small quantities of post-medieval pottery, clay tobacco pipe, animal bone and oyster shell were recovered from [20]. A deposit forming a bank [32] was seen to be north-to-south orientated and comprised a mid orange brown silty clayey sand. Deposit [21] overlaid the bank (and may, indeed, have been part of the bank) and was overlaid by [20] in the north-western part of the sondage and by [19] and [24] to the south-east. No evidence for the city wall masonry foundations was present.

Two additional test pits were excavated, after discussion between Andy Shelley (Norfolk Archaeological Unit) and Duncan Hawkins (CgMs Consulting). These were designed to further investigate the extent of the city wall foundations in this area.

Test Pit 8 was located at the base of the city wall to the south-east of Test Pits 5, 6 & 7 and measured approximately $0.8m \times 0.5m$ (Fig.9). It was excavated to a maximum depth of c.0.5m (to c.28.74m OD) by removing c.0.1m of dark brown humic clayey sand topsoil [27]. This contained large amounts of wood bark. The city wall foundations [25] were seen to extend c.0.1m southwards from vertical and to a maximum depth of c.0.25m (to 28.72m OD). The foundations lay on a sandy matrix [28] that overlaid mid to light orangey brown clay [29]. No finds were recovered.

Test Pit 9 (Fig. 10) was located at the base of the main body of the city wall to the north-west of Test Pits 5, 6 & 7 and measured approximately $0.8m \times 0.7m$ in plan. It was excavated to a maximum depth of c.0.55m (to c.28.92m OD) removing in the process c.0.15m of dark brown humic clayey sand topsoil [30] which contained large amounts of wood bark. This overlaid a mid brown silty sand deposit [31] that extended to c.0.4m in depth (to c.28.87m OD). A modern flint and mortar foundation was bonded to the sparse remains of the city wall foundation, most of which survived only as fragments of flint and mortar. The city wall foundation extended to a depth of c.28.87m OD. No further archaeology was revealed in this test pit and no finds were recovered.

6.0 The Finds

by Lucy Talbot

6.1 Ceramic Building Material

The site produced thirty-two fragments of post-medieval ceramic building material (2.181kg, [10] and [20]). The assemblage consists of brick, flat roof tile and pan tile fragments. Although the majority of the material was unglazed, a single piece of pan tile was heavily glazed externally.

6.2 Clay Pipe

Deposit [20] produced two fragments of clay tobacco pipe stem (0.012kg).

6.3 Animal Bone

Mammal bone weighing (0.014kg) was recovered from deposit [20].

6.4 Shell

Oyster shell (0.108kg) was collected from deposit [20].

6.5 Pottery

by Richenda Goffin

6.5.1 Introduction

A total of 11 fragments of pottery weighing 0.169kg was recovered. The ceramics were recovered from 3 contexts and are mainly of 18th-century date.

6.5.2 Methodology

The ceramics were quantified by the number of sherds present in each context, the estimated number of vessels represented and the weight of each fabric. Other characteristics such as condition and decoration were noted, and an overall date range for the pottery in each context was established. The pottery was recorded on proforma sheets by context using letter codes based on fabric and form. The codes used are based mainly on those identified in by Jennings (1981) and supplemented by ones used by the Suffolk Unit (S Anderson, unpublished fabric list).

6.5.3 Results

A fragment of a large Glazed red earthenware vessel was present in [10], which is likely to have been part of a large jar. It was accompanied by the rim of a creamware bowl, dated *c*.1740-1880. Four fragments of pottery from [14] consisted of two fragments of Nottingham stoneware, a fragment from the base of a Red stoneware vessel, and a body sherd of Staffordshire salt-glazed ware. These fabrics are typical of the 18th century, particularly the middle part of that century. A further five fragments from [20] were also mainly of 18th-century date. These included a fragment of a Staffordshire Scratch-blue dish or plate with incised curvilinear decoration around the undulating rim, which dates to 1740-80. In addition fragments from two small tin-glazed teacups or teabowls were present. The better preserved vessel was decorated in an oriental-type landscape which showed plants and birds in blue and white on the outside, with horizontal and wavy blue bands running along the interior of the rim. These two tin-glazed vessels are likely to date to the late 17th to early 18th century.

6.5.4 Conclusion

The small group of pottery from this evaluation is homogenous in date, and includes fabrics which are typical of 18th-century assemblages in Norwich.

7.0 Conclusions

7.1 Test Pit 1

Due to the presence of a live electricity cable running parallel to the city wall at a distance of c. 0.35m from it, excavation or relocation of this test pit was not possible. It is likely that the service trench would have removed at least part of the city wall foundations.

7.2 Test Pit 2

Test Pit 2 revealed evidence of an infilled cellar containing material resulting from demolition of a row of 18th-century cottages during roadworks relating to the dualling of Chapelfield Road in 1975. The northern wall of the cellar underpinned the city wall and the other wall joined this at right angles. The construction of these would have led to some destruction of the city wall foundations.

7.3 Test Pit 3

The excavation of Test Pit 3 was restricted by a solid flint and mortar foundation which occupied most of this pit, and a live electricity cable which lay along the south-western edge of the trench. The city wall foundations were identified and were seen to project southwards c.0.23m from vertical and to a depth of c.0.46m (to c.28.94m OD).

A brick cellar wall and mortar cap was seen to be adjacent to, and to be bonded with, the flint and mortar foundation and the city wall foundation. The void between the foundation walls contained a large amount of building rubble. Further excavation was precluded by the presence of foundation wall [5] which would have required machine excavation and hence an alteration to the route of the present electricity services.

7.4 Test Pit 4

The city wall foundations were identified within Test Pit 4 and were seen to extend southwards by a maximum of c.0.59m from vertical and to a depth of c.0.97m from ground level (to c.28.76m OD).

The city wall foundations appeared to have been sealed by a coarse sandy deposit over which a post-medieval deposit was identified. This deposit contained mid 18th-century pottery and may have been associated with the construction of an 18th-century cottage at this location. The foundations were seen to have been constructed on a mid orange brown silty clayey sand deposit, presumably the bank.

7.5 Test Pits 5, 6 and 7

No evidence of the city wall foundations was recovered within Test Pit 5, probably because of construction of the present brick wall had removed them. The mid brown orangey soil upon which the foundations are believed to have been constructed is of natural origin. The undisturbed silt layer above this represents subsoil. The layer above this subsoil contained post-medieval pottery and ceramic building material and probably relates to building works during this period. It was cut by a further deposit that contained large amounts of brick rubble that may relate to the demolition of this, or a nearby building.

Test Pits 6 and 7 were excavated as one test pit. Once more, no evidence of the city wall foundations was present, although the bank upon which they were thought to have been constructed was identified. It lay at a north-to-south orientation, following the probable route of the city wall at this point.

Test Pit 8 was an additional test pit located against an end of the city wall. The city wall foundations were identified in this trench and seen to extend c.0.1m southward from vertical and to a maximum depth of c.0.25m (to 28.72m OD). The foundations lay on a sandy matrix that overlaid the mid orangey brown clayey sand natural. No finds were recovered.

Test Pit 9 was located at the base of the main body of the city wall. Here a modern flint and mortar foundation was bonded to the sparse remains of the city wall foundation, which survived only as fragments of flint and mortar. The modern foundation may represent the underpinning of the city wall. The city wall foundation extended *c*.0.15m from vertical to a depth of *c*.28.87m OD. No further archaeology was revealed in this test pit and no finds were recovered.

7.6 Discussion

The below-ground foundations of the city wall were seen to be present in four of the nine test pits (Test Pits 3, 4, 8 and 9). On average they were very shallow at c.0.29m OD, and did not project outwards by more than 0.23m from vertical.

A bank upon which the foundations were constructed was seen in several Test Pits, especially Test Pits 6 and 7. This confirms similar results from earlier excavations (Jope 1952, Hurst & Golson 1955). Of particular interest was the fact that the silty clayey sand from which the bank is comprised appeared undisturbed since its construction in the 13th century. Conversely, the parts of the bank on which the wall rests which were seen during earlier excavations (Penn 1997, Whitmore 2000) contained fragments of post-medieval brick and may indicate a

period of rebuilding of the wall during the post-medieval period. Whether this relates to the documented episode of major repair to the city wall that took place in 1727 (Whitmore 2000, pp.3) remains unanswered.

No evidence of a ditch to the southern side of the city wall was identified, unsurprisingly considering the small dimensions of these test pits. Building works along the line of Chapelfield Road, Coburg Street and Malthouse Road during the 18th, 19th and 20th centuries and construction of the dual carriageway in 1975 would have had considerable impact on the integrity of a ditch. Cellars, foundations and deposits relating to the construction and demolition of 18th-century buildings against the southern side of the city wall were present.

The construction of a modern brick walled area close to where Test Pits 5, 6 and 7 were located probably removed much of the city wall foundations at this point.

Acknowledgements

This archaeological work was funded by Bovis Land Lease.

The excavations were undertaken by Chris Birks, Mick Boyle, Rebecca Crawford and Richard Jackson. The project was managed by Chris Birks. Additional metal detecting was by Andy Barnett. Finds were processed by Lucy Talbot, analysed and reported upon by Richenda Goffin. Digitising was by Chris Birks. Graphics and report production was by David Dobson and editing by Andy Shelley. Traffic management was provided by May Gurney Co. Ltd.

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Appendix 1: Context Summary

Contex t No.	Test Pit	Category	Description/interpretation	Period				
1	3	D	Dark brown humic silty sand (30/70) topsoil	Modern				
2	3	D	Brick rubble					
3	3	D	Mortar cap to [4]	18th c				
4	3	С	Brick cellar wall	18th c				
5	3	С	Foundation wall					
6	3	С	Void between [5] and [25]					
7	3	D	Mid brown silty sand (30/70) fill of [6]					
8	5	D	Compacted flint gravel layer	Modern				
9	5	D	Brick rubble layer					
10	5	D	Mid brownish orange silty clayey sand (30/40/30)	post-med				
11	5	D	Mid to dark brown silty sand (50/50) deposit					
12	4	D	Dark brown humic silty sand (30/70) topsoil					
13	4	D	Mid yellow sand					
14	4	D	Mid orange brown clayey loam (70/30)	post-med				
15	4	D	Mid brownish orange silty clayey sand (30/40/30)					
16	4	D	Light orange sandy clay (40/60) fill of [17]					
17	4	С	Foundation trench					
18	6, 7	D	Dark brown humic silty sand (30/70) topsoil					
19	6, 7	D	Mid brown silty sandy clay (20/20/60)					
20	6, 7	D	Mid grey sandy silt (30/70)	post-med				
21	6,7	D	Pale to mid brown sandy clay (25/75)					
22	n/a	n/a	Not allocated					
23	6, 7	С	Foundation 'bank'	?13th c				
24	6, 7	С	Mid brown/green cessy deposit					
25	All	С	City wall foundation – Master Number					
26	5	С	?Dump	Modern				
27	8	D	Dark brown humic silty sand (30/70) topsoil					
28	8	D	Mid brown slightly silty sand (10/90)					
29	8	D	Mid to light brown orangey clayey sand (70/30)					
30	9	D	Dark brown humic silty sand (30/70) topsoil					
31	9	D	Mid brown silty sand (60/40)					
32	6, 7	D	Mid orange brown silty clayey sand (30/30/40) f.o. ?13 [23]					

Appendix 2: Finds

Context No.	Material	Quantity	Weight (g)
10	PPOT	2	119
10	PCBM	1	378
14	PPOT	4	33
20	PPOT	5	19
20	PCBM	31	2181
20	CPIPE	2	12
20	ABONE	-	14
20	SHELL	-	108

Key:

PPOT	Post medieval pottery
РСВМ	Post medieval ceramic building material
CPIPE	Ceramic tobacco pipe
ABONE	Animal bone
SHELL	Shell

Appendix 3: The Pottery

Context	Ceramic Period	Fabric	Form	Dec	Sherd No	ENV	Condition	Weight (Gms)	Overall Date Range	Comments
10	PM	GRE	JAR		1	1		112		Large base, prob from jar
10	PM	CREA	BOWL		1	1		7	1740-1880	
14	PM	NOTS	BODY		2	2		20		
14	PM	REST	BASE		1	1		9		
14	PM	SWSG	BODY		1	1		3	18th C	
20	PM	SWSG SCRB	DISH		1	1	A	7		
20	PM	REST	BODY		1	1		2		
20	PM	TGE	TCUP	BW	2	1		8		2 joining, foliate dec ext w birds
20	PM	TGE	TCUP?		1	1		1	18th C	

GRE Glazed red earthenware 16th-18th C

CREA Creamware

NOTS Notttingham Stoneware 1700-1800

- REST Red stoneware 1730-1780
- SWSG Staffordshire salt-glazed ware

SWSG SCRB

TGE

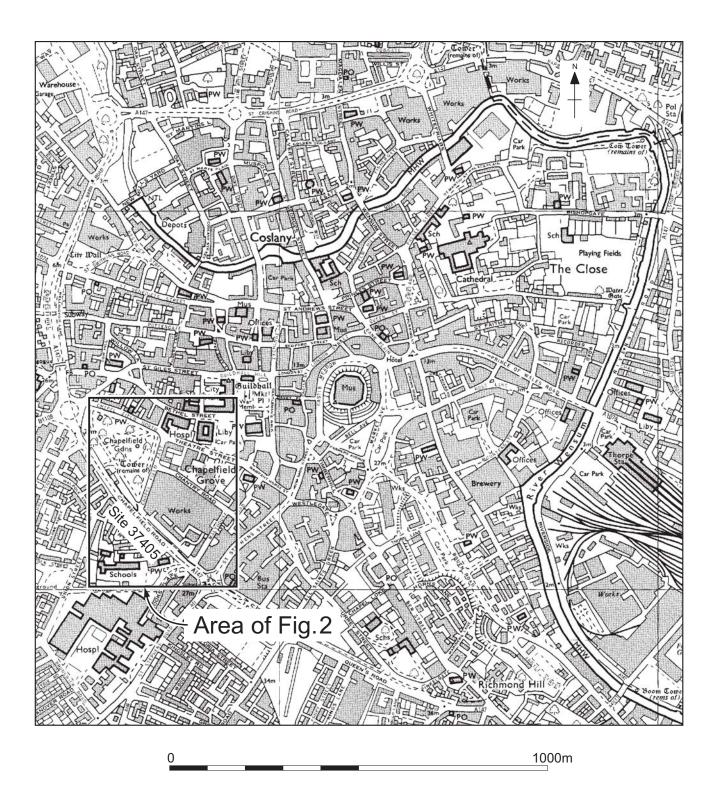


Fig. 1 Site location within Norwich. Scale 1:10000

Local Authority No. 076759

Fig. 1 is based upon the Ordnance Survey 1:10,000 map with the permission of the Controller of H.M. Stationery Office © Crown Copyright 'Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings' Norfolk County Council County Hall Norwich 04.11.02 Reference copy: no further copies to be made.

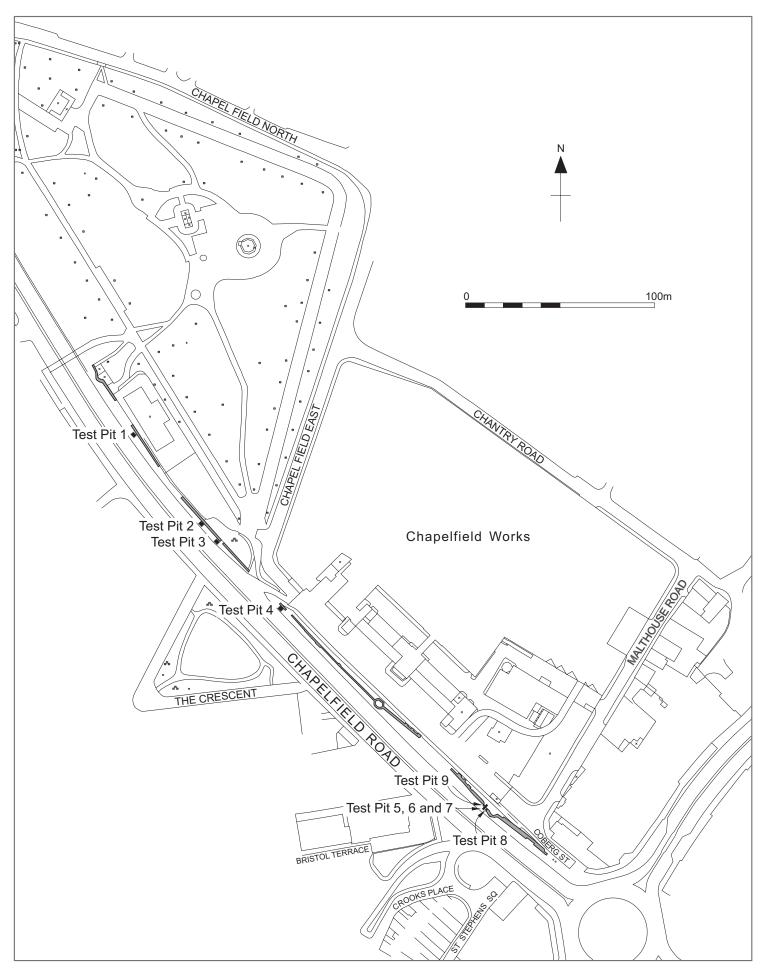
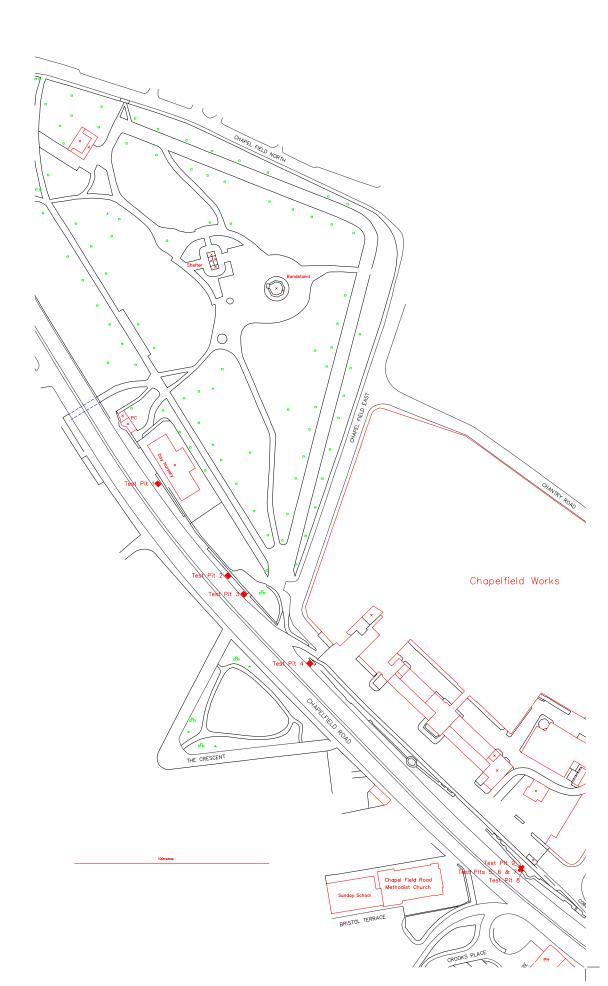
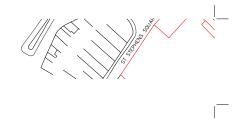
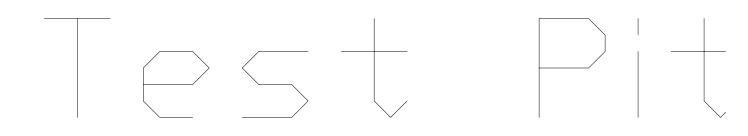
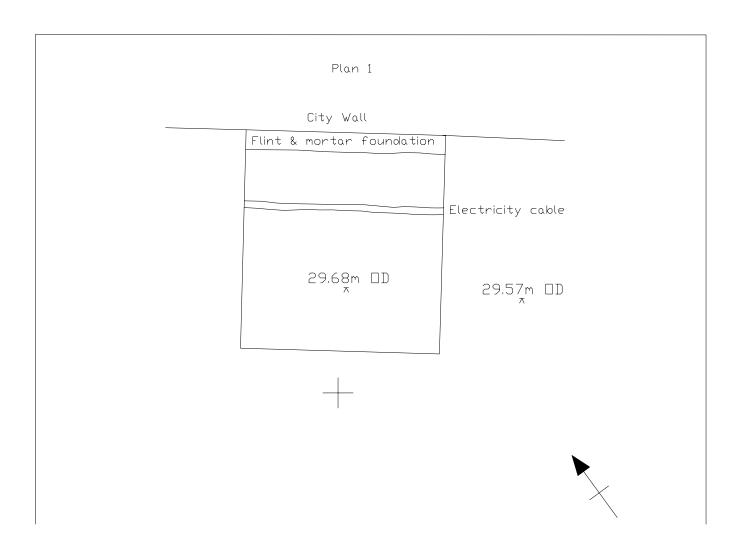


Fig. 2 Location of Test Pits 1-9. Scale 1:2000









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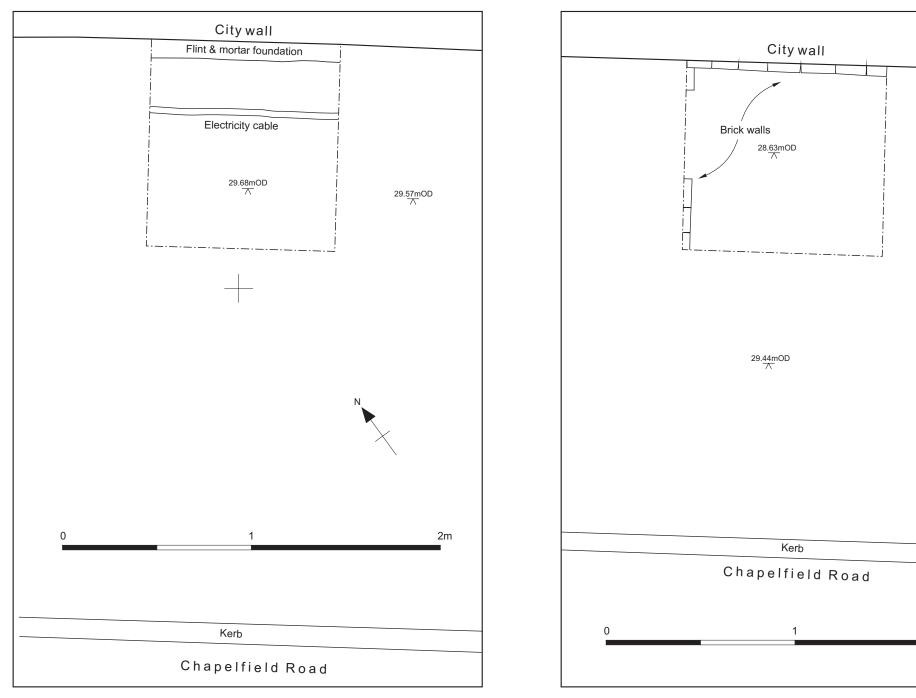
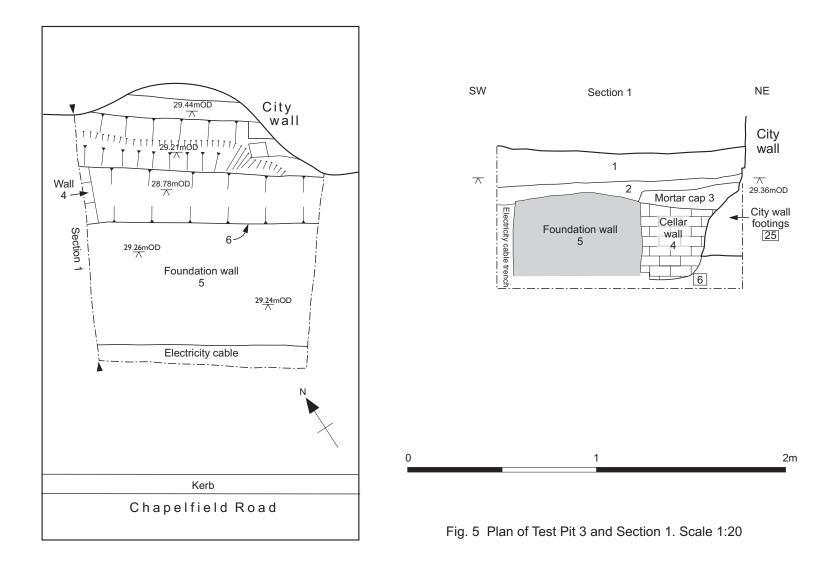


Fig. 3 Plan of Test Pit 1. Scale 1:20

Fig. 4 Plan of Test Pit 2. Scale 1:20

29.<u>43m</u>OD

2m



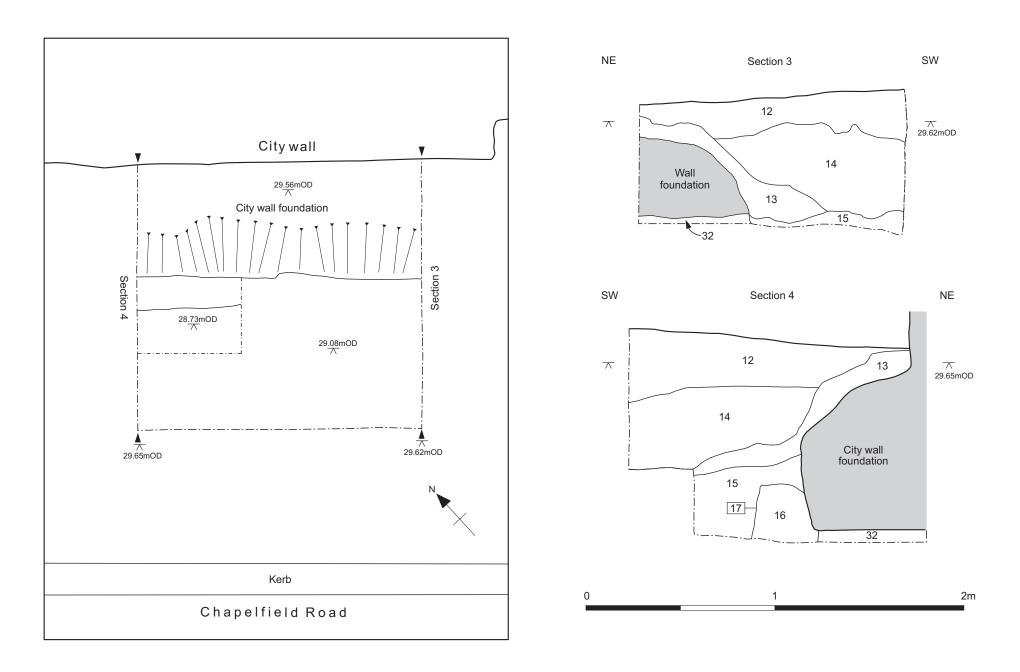
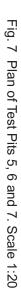
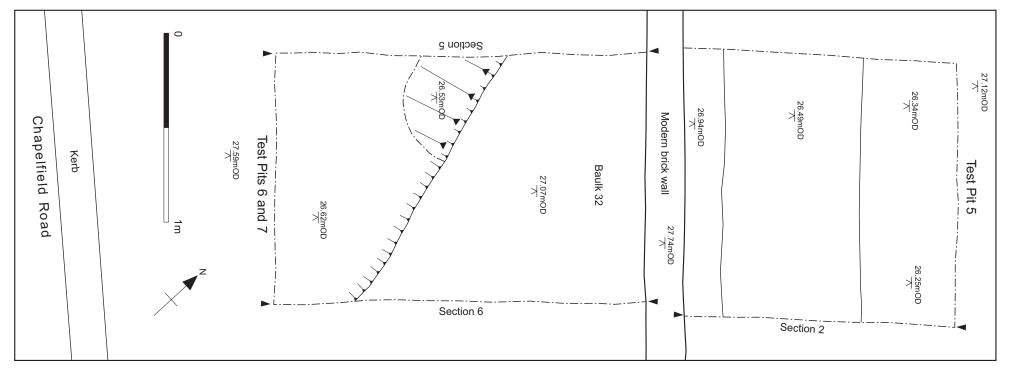
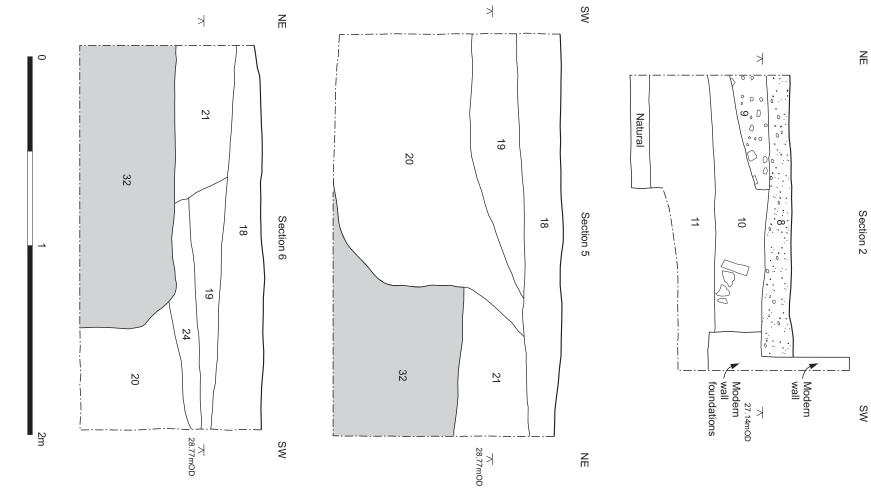
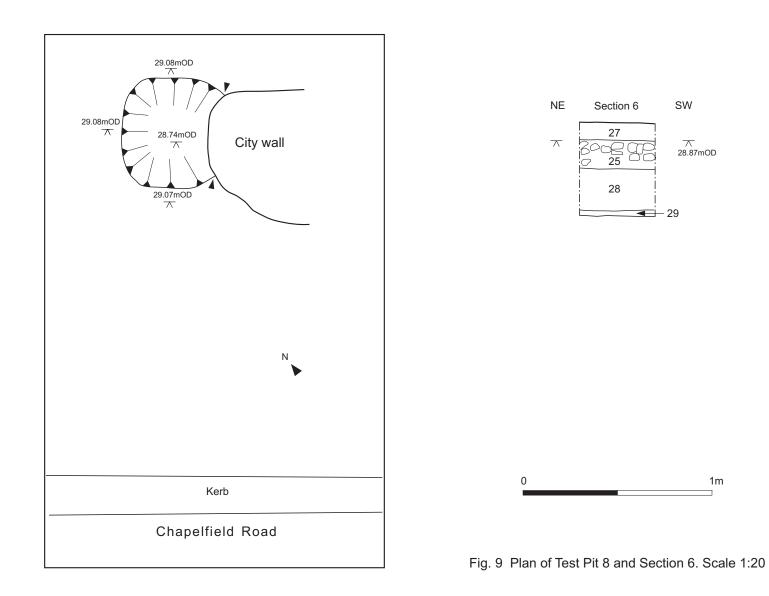


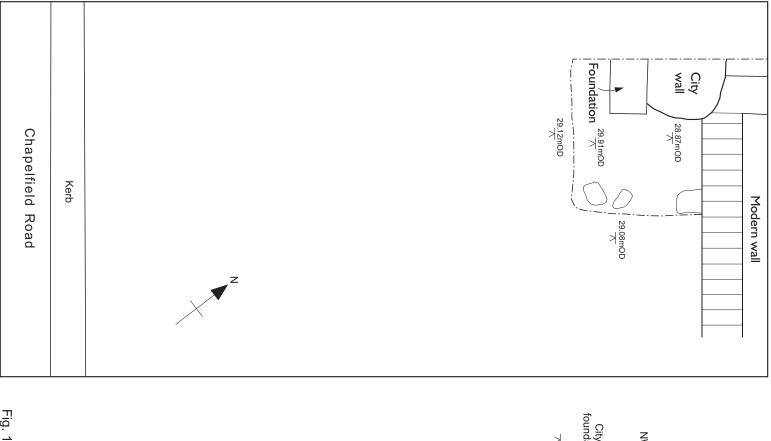
Fig. 6 Plan of Test Pit 4 and sections 3 and 4. Scale 1:20

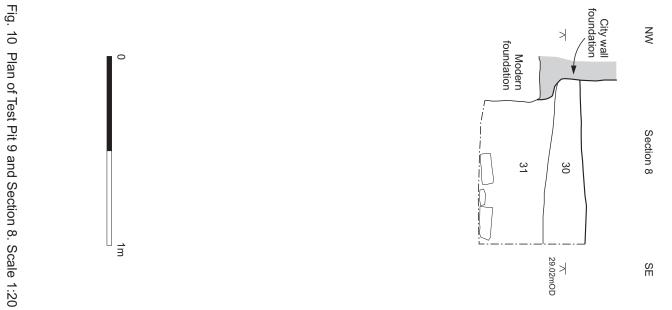


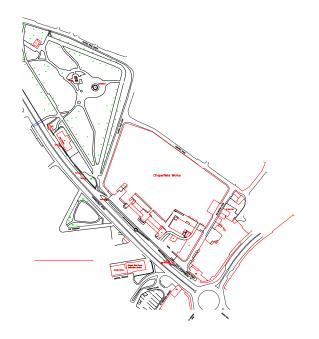












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