



Northamptonshire Archaeology

Archaeological excavation and watching brief on land off Bridge Street, Buckingham 2008 & 2011



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OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological Excavation and Watching Brief on land off Bridge Street, Buckingham 2008, 2011	
Short description (250 words maximum)	Northamptonshire Archaeology carried out excavation and a watching brief on land off Bridge Street, Buckingham. An L-shaped trench, 150m long by 5m-wide, had one arm parallel to the River Great Ouse and the Market Square properties and the other aligned parallel to Bridge Street. The watching brief covered the remainder of the site during earth moving prior to development. The evidence from the excavations and watching brief indicate that there was very limited activity in some back-plots and along the river bank from as early as the 12th century, although the main activity was from the 16th century onwards. Evidence for occupation or activity was greatest closer to the rear of the Market Street frontages but was not particularly extensive or intensive. The river bank showed evidence for increased silting and works to alleviate flooding from about the same time. A variable water table and seasonal flooding of the river may have precluded more intensive land-use.	
Project type	Archaeological Excavation and Watching Brief	
Site status	None	
Previous work	Archaeological Trial Trench Evaluation 2006, DBA 2004	
Current Land use	Car parking, landscaping, overgrown waste ground	
Future work	None	
Monument type/ period	None	
Significant finds	Medieval and post-medieval pits and boundaries	
PROJECT LOCATION		
County	Buckinghamshire	
Site address	Bridge Street, Buckingham	
Study area	0.85ha	
OS Easting & Northing	SP 6966 3390	
Height OD	79.5-81.5m OD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	Buckinghamshire County Archaeological Service	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	Danny McAree	
Project Manager	Iain Soden	
Sponsor or funding body	Lagan Homes	
PROJECT DATE		
Start date	May 2008	
End date	March 2011	
ARCHIVES	Location (Accession no.)	Content (eg pottery, animal bone etc)
Physical		Reports, plans, photo, slides, finds.
Paper		Site records. Drawings. Report
Digital		Digital report with illustrations.
BIBLIOGRAPHY		
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**ARCHAEOLOGICAL EXCAVATION AND WATCHING BRIEF
ON LAND OFF BRIDGE STREET, BUCKINGHAM
2008 & 2011**

Abstract

Northamptonshire Archaeology carried out excavation and a watching brief on land off Bridge Street, Buckingham. An L-shaped trench, 150m long and 5m wide, had one arm parallel to the River Great Ouse and the Market Square properties and the other aligned parallel to Bridge Street, joining at the north-west corner of the site. The watching brief covered the remainder of the site during earth moving prior to development. The excavated evidence indicates that there was limited activity in some back-plots and along the river bank from as early as the 12th century, although the main activity was from the 16th century onwards. Evidence for occupation or activity was greatest closer to the rear of the Market Street frontages, but was not particularly extensive or intensive. The river bank showed evidence for increased silting and works to alleviate flooding from about the same time. A variable water table and seasonal flooding of the river may have precluded more intensive land-use.

1 INTRODUCTION

Between May 2008 and March 2011, Northamptonshire Archaeology undertook archaeological excavation on behalf of University of Leicester Archaeological Services (ULAS) acting on behalf of clients, Lagan Homes Limited, on 0.85ha of land off Bridge Street, Buckingham (NGR: SP 697 339; Fig 1). The works comprised a set-piece excavation of two 5m-wide trenches parallel with, and perpendicular to, the main historical axes of the site, one being the river Great Ouse and the rear boundaries of the Market Square properties, the other being the alignment of Bridge Street. They totalled 150m in length and were joined together at the north-west corner of the site. A watching brief during deep excavations for the construction of underground car-parking was maintained across the remainder of the development area. In early 2011, additional excavation was undertaken on an area 28m x 20m in the rear plot of one of the street front properties at the north of the site, identified during the earlier watching brief as containing further potential.

The work was conducted in accordance with a Project Design prepared by Northamptonshire Archaeology (Soden 2008) and approved by Buckinghamshire County Archaeological Services.

2 BACKGROUND

2.1 Planning and archaeological background

The project was initiated as a Planning Brief by Buckinghamshire County Archaeological Services in response to an application for future development of the site (Planning Consent 07/01003APP).

A Desk Based Assessment (Phoenix Archaeology, 2004) and Trial trench Evaluation (Network Archaeology, 2006) were undertaken as part of the initial planning process.

2.2 Topography and geology

The site lies about 250m to the south of the centre of Buckingham within the Buckingham Conservation Area. It is a roughly square area measuring 0.85ha and located on open ground to the east of Bridge Street (Fig 1). To the north it is bounded by the rear of properties along Market Square, to the east by a pedestrian walkway leading to a footbridge that crosses the river Great Ouse which forms the southern boundary of the development area.

The site had been landscaped with terracing, footpaths and shrubbery in the north-west. To the immediate east of Bridge Street there was extensive modern car parking with tarmac surfaces and raised ornamental beds containing shrubbery and lighting. The remainder of the site was overgrown scrub and woodland, extensively littered with modern dumping of demolition and builders waste and general domestic rubbish.

The site is located at 79.5m OD to the south along the river Great Ouse. It rises up the valley side to about 81.5m OD at the rear of the Market Square properties.

The underlying solid geology is Cornbrash and Oolitic limestone (Blisworth Series), covered by drift deposits comprising Sandy Gravels and Silty Alluvium

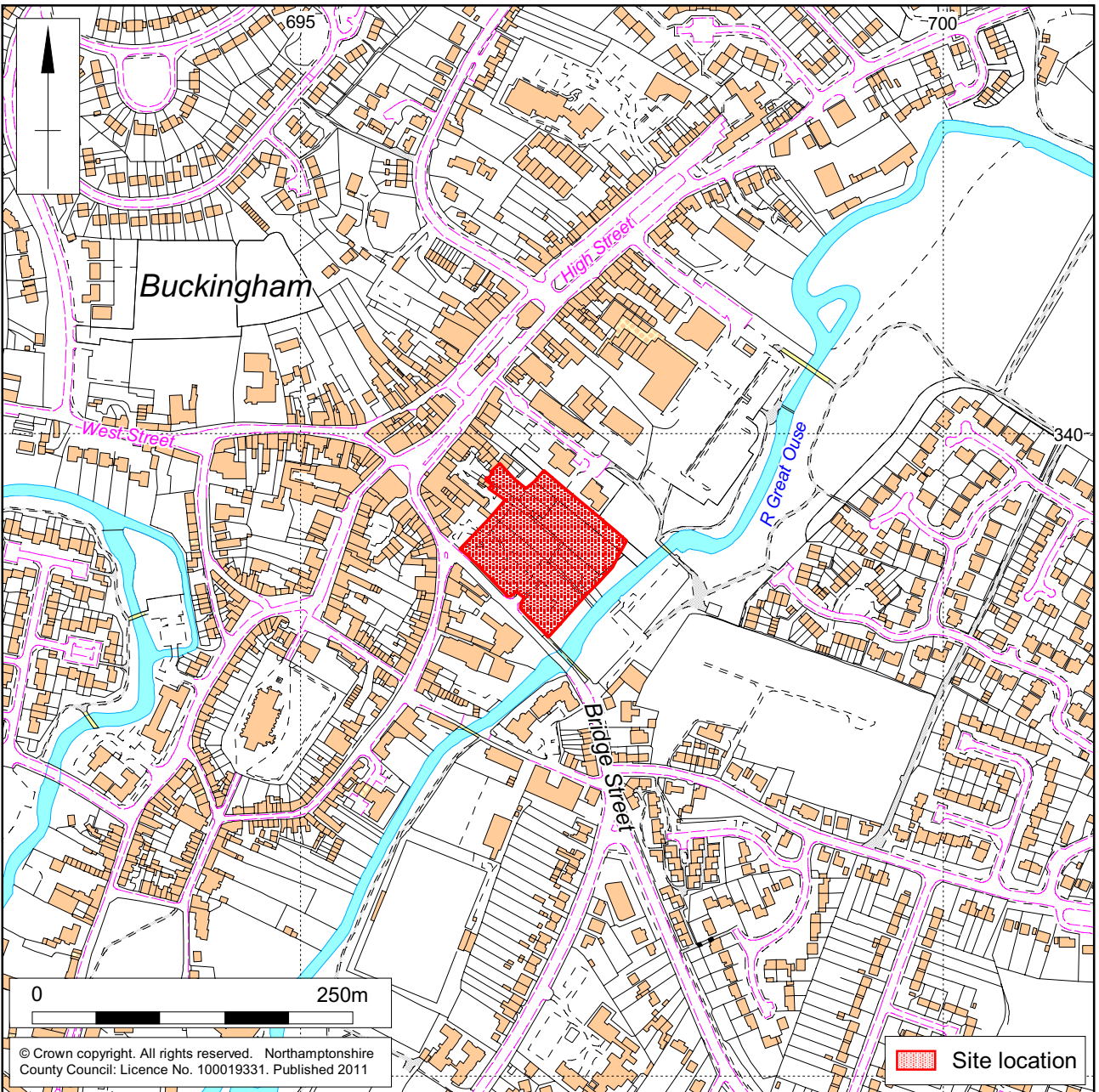
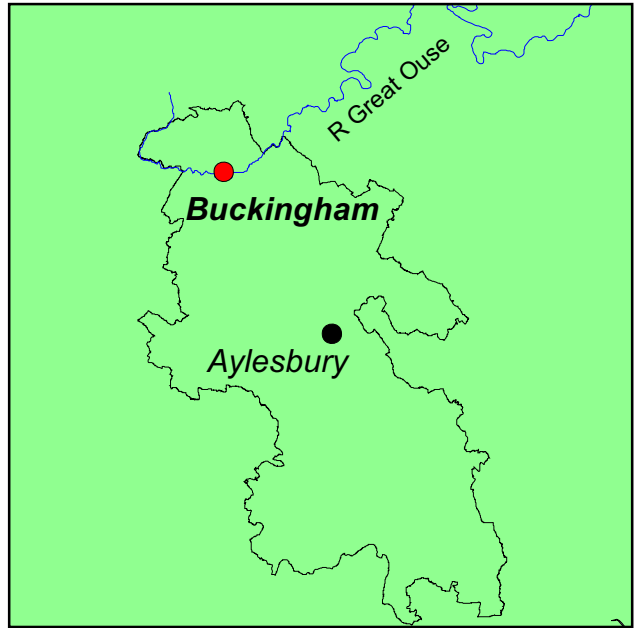
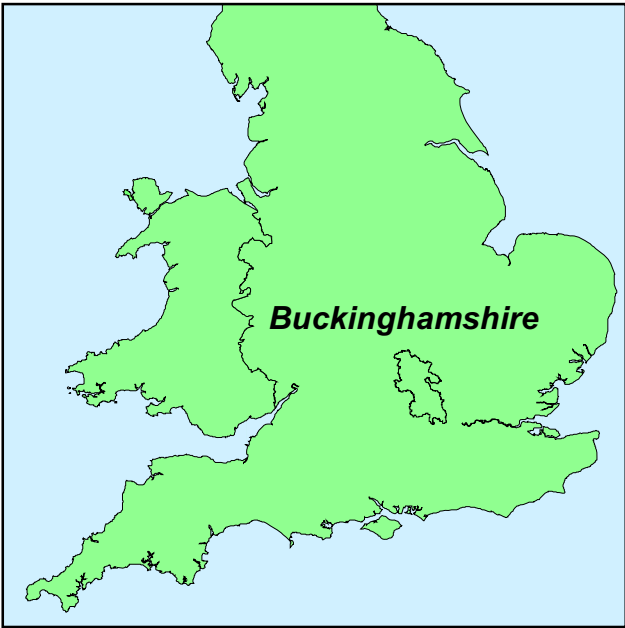
The overlying soils are Stagnogleyic argillic brown earths of the Oxpasture Association (Soil Survey 1983, 572h), while pelo-alluvial gley soils of the Fladbury 1 Association (Soil Survey 1983, 813b) border the River Ouse.

3 OBJECTIVES

The general objective of the work, as defined in a brief prepared by Buckinghamshire County Archaeological Services, was to establish the character and date of any Saxon, medieval or post-medieval settlement activity and relate it to the known topography, history and archaeology of the town, paying particular attention to the evolution of property boundaries and the potential for a 'town ditch', as identified in the evaluation (the large linear feature identified in evaluation Trenches 6 and 3 (Network Archaeology, 2006, 22)).

For the floodplain the specific objectives were to:

- generate a topographical survey of the river channels and adjacent alluvial cover and manmade ground
- record the evolution of the channel of the river Ouse and its relationship to river edge and settlement deposits
- Establish the character and extent of any channel migration for the Ouse and establish the date and character of any human intervention (eg canalisation)
- Establish the date and character of any river-edge structures (including revetments or embankments)
- Undertake environmental sampling to clarify the relationship between the river channel and the development of adjacent settlement.



Scale 1:5000 (A4)

Site Location Fig 1

4 HISTORIC ENVIRONMENT ASSESSMENT

4.1 Historical assessment

The site lies within the historic core of Buckingham. A double-burgh was constructed at Buckingham by Edward the Elder in AD 915. Although the defences of this burgh have yet to be located by excavation it seems most likely that the principal burgh lay in the bend of the river occupied by Castle Hill and the site of the medieval church to the southwest of the hill. The church is believed to have originated as a late Saxon "minster"- it became an important place of pilgrimage associated with the cult of St. Rumbold.

Buckingham acquired a mint in the late 10th-early 11th centuries and was recognised as a borough and the county town at the time of the Domesday survey. A castle was built sometime after the Norman Conquest but it had become ruinous by the early 17th century. Two hospitals were founded in the town. Following the collapse of the medieval church tower, a new church was built on Castle Hill in 1777-81, although the graveyard remained on its medieval site.

The main focus of the medieval town was the market place on the east side of the town, important from at least the mid-14th century. Buckingham was closely connected to the wool trade having a Draper's Hall in the market place. By the 15th and 16th centuries this trade and the town itself were in decline with vacant market stalls and houses fallen into decay.

In 1725 the town was devastated by a major fire that destroyed 138 of its 387 houses. Despite efforts to retain its power and pre-eminence, through the late medieval and post-medieval periods Buckingham slowly relinquished its status of principal county-town to Aylesbury.

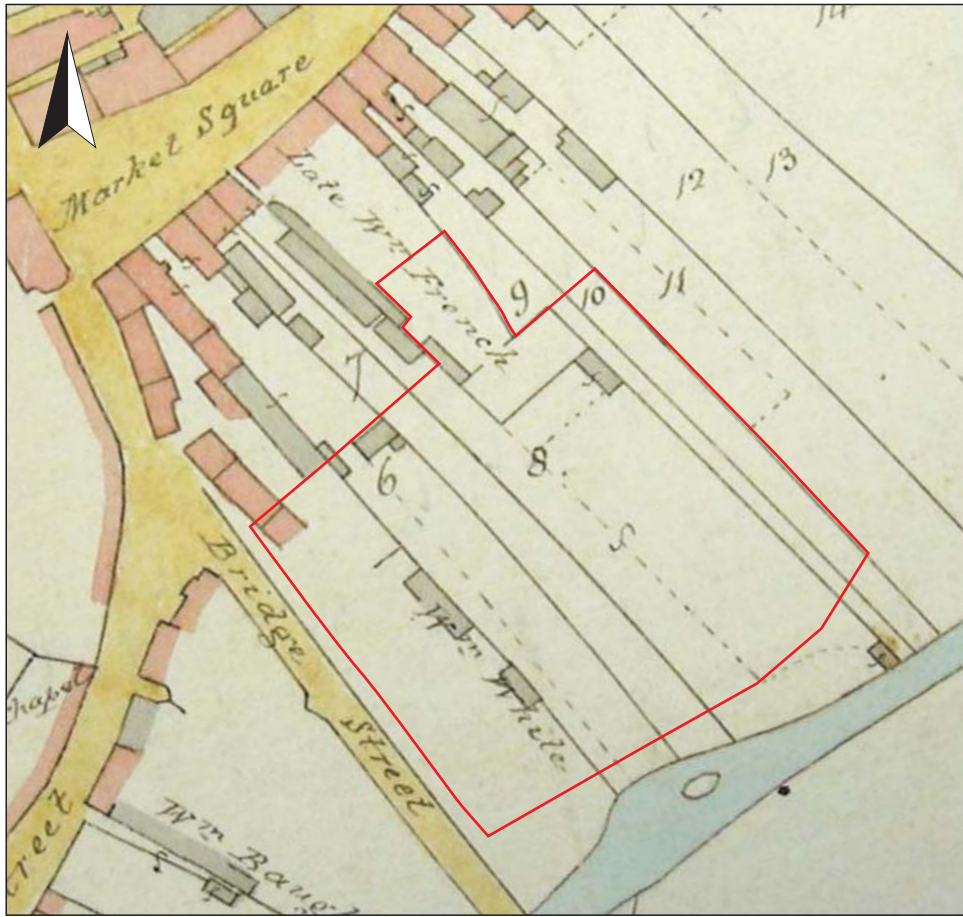
4.2 Historical mapping

The locations of the street frontage buildings on Market Square have changed little, although the individual structures and design have undoubtedly been altered or modified over the years. The early, more schematic mapping from 1610 onward does not allow positive identification of individual buildings but a general perception of the street frontage and road layout is clear.

From 1610 onward, a line of back-plots are shown extending from the rear of the Market Square properties down to the river edge. These are depicted on maps of 1770 and 1788 but it is in 1847 that the first reliable map depicts these in a manner which can be related to the recent (2008) layout before the current development.

The Buckingham Tithe Map of 1847 shows Bridge Street (built in 1805) in its present position with an accurate and fairly detailed depiction of the proposed development area (Fig 2). Almost one third of the site is occupied by the two plots now occupied by the White Hart Inn (the western plot of which is marked 6) with the remaining plots (7, 8, 9, 10) comprising gardens, outbuildings and an orchard, all belonging to the properties fronting onto Market Square.

This numbering of plots (6-10) occurs here for the first and only time on the maps. However, it is so distinctive and can be related to physical remains, so this numbering has been utilised in the current report on the archaeology.



Extract from Buckingham Tithe Award Map 1847 Fig 2



Extract from Ordnance Survey First edition map 1881 Fig 3

At the north-west of the plot, a building thought to be The Three Cups Inn is shown as three linked structures; the southern one is left unfinished and may have been longer than shown on this map.

A pathway from the White Hart Inn extends down the site to the river edge. There are two small buildings shown on the west side of the path and annotated 'William White'. Further east there are two more rectangular structures located on the eastern boundary of the orchard (Plot 8).

The First Edition Ordnance Survey map of 1881 shows many of the same Plot boundaries as well as a series of garden paths and small structures, most probably representing horticultural sheds or stores (Fig 3). The Three Cups buildings remain but immediately to their south-east, a compound with buildings along the east and west sides, has been constructed.

A third structure is shown at the north-west of the compound adjacent to an access from Bridge Street. The Plot boundary between the land along Bridge Street and Plot 6 to the east still survives with the newly built compound aligned along the western edge. The path from the White Hart Inn is still shown extending to the river edge where a 'Private ford' is marked. The coach entrance of the White Hart Inn was closed to traffic in 1871 (Hunt 1994) but the footpath continued in use.

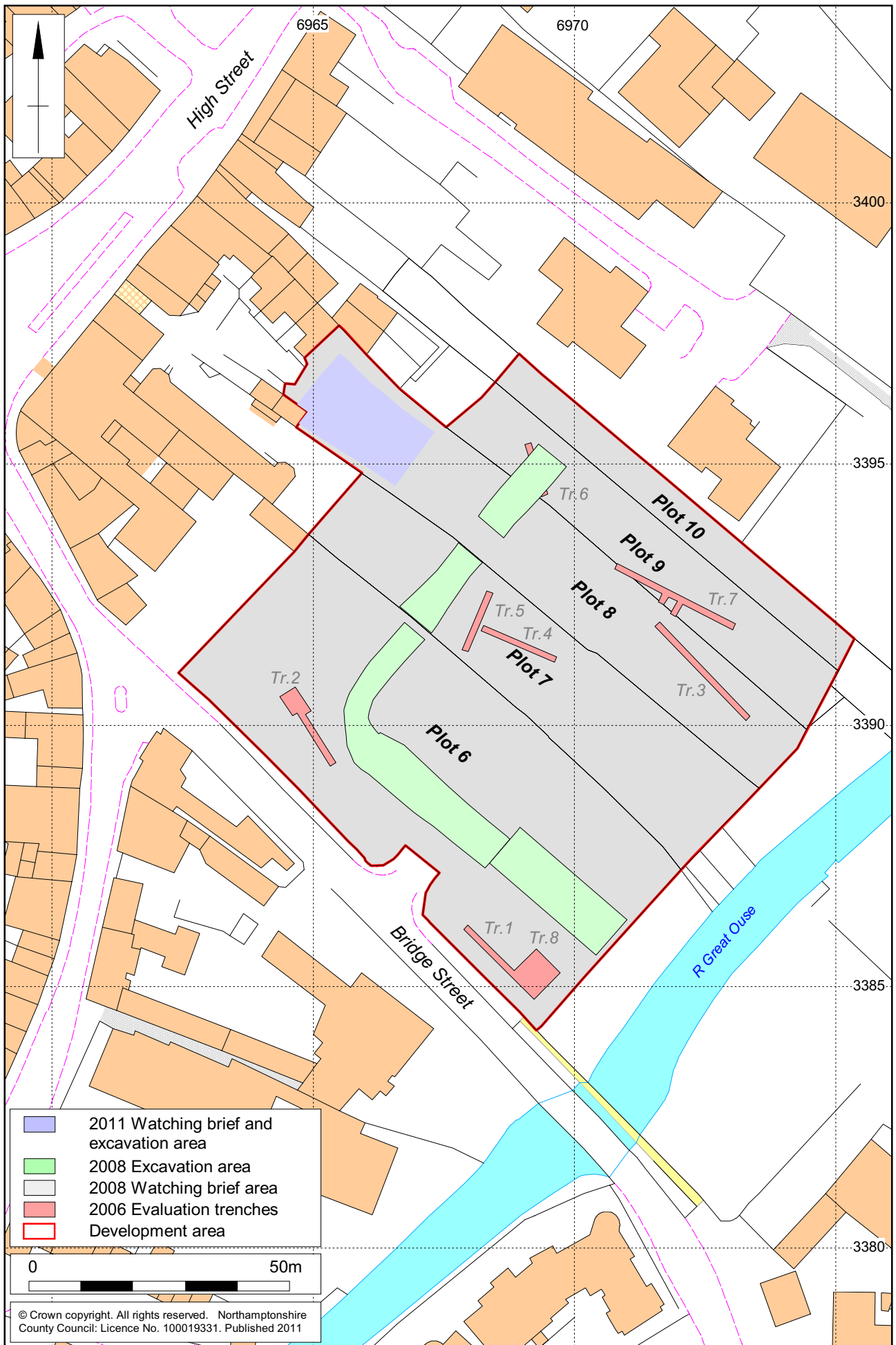
Further east the Plot boundaries have been altered since 1847 with a rectangular plot inserted across the river edge of Plots 8, 9 and 10 forming a new garden or orchard. Plots 7 and 8 have largely been amalgamated except in the south-east, closer to the river, where the narrow plot boundary of Plot 7 can still be traced. Two new structures are shown, one in Plot 7 and one in Plot 8, probably garden sheds.

The 1881 Ordnance Survey and the plots it set out formed the basis of excavation, since after that date 20th century development only served to break down the layout and denude any earlier horizons. On the edge of Plot 6 was set out a modern car park extending almost to the river, while the adjacent garden plots were left to go to ruin.

4.3 Previous archaeological and historical assessment

A desk based assessment for this site was produced by Phoenix Consulting (2004).

Archaeological evaluation undertaken by Network Archaeology (2006) at this site identified river channel deposits, alluvial layers, and a possible embankment. There was also evidence suggested for late medieval and post medieval features (pits, wall footings, demolition spreads, property boundaries). No positive evidence of Saxon activity was recorded. However one feature was suggested as a potential town ditch or flood alleviation feature warranting further investigation (Network Archaeology, 2006, Feature 704 in Trench 7). Waterlogged conditions were noted in parts of the site and finds included a piece of undated leather and two pieces of wood. The depth of archaeological deposits varied considerably across the site, from 0.5m to 2m below current surface levels. The former trench locations are shown in Figure 4.



Scale 1:1000 (A4)

Site plan showing the phases of works Fig 4

5 ARCHAEOLOGICAL EXCAVATION

5.1 Methodology

Excavation comprised two trenches, each 5m wide, parallel with and perpendicular to the main historical axes of the site, one being the river Great Ouse and the Market Square properties, the other being the alignment of Bridge Street. They totalled 150m in length and joined together at the north-west corner of the site to form an L-shape (Fig 6).

The trenches were located following on-site discussion and agreement between David Radford, Planning Archaeologist, Buckinghamshire County Council, Patrick Clay, University of Leicester Archaeology Services, Consultant, acting on behalf of clients, Lagan Homes Limited, and Iain Soden, Senior Project Officer, Northamptonshire Archaeology. Minor alterations to the original design took place when the excavators were alerted to the presence of live mains services exposed during excavation.

Archaeological trenches were excavated using a 360° tracked excavator fitted with a 1.7m-wide toothless ditching bucket. Car parks, landscaping surfaces and levelling layers together with topsoil and subsoil, were removed to expose archaeological features or the upper strata of undisturbed geology. Trench positions were surveyed and related to Ordnance Survey coordinates using a Leica GPS survey instrument.

Once opened, hand excavation and recording of trenches progressed in accordance with the 'Brief for Archaeological Excavation: Land at Bridge Street, Buckingham' (Radford 2008) and the approved 'Project design for archaeological excavation, recording, analysis and publication' prepared by Northamptonshire Archaeology (NA 2008).

Limitations of the evidence

Prior to commencement of the archaeological excavation, contractors were allowed access to the site to remove trees, undergrowth and modern dumping. This activity resulted in the loss of mapped surface indicators of boundaries, walls and structures identified in the Desk Based Assessment and the Trial Trench Evaluation. Trees and surface turf and undergrowth were mechanically removed. In addition, seventeen test-pits were machine-excavated to depths of up to 7m in search of hard geology across the development area. Each intervention was monitored but with a caution appropriate to the extreme depths encountered.

Following the completion of recording work within the archaeological trench, the entire development area was excavated to a depth of about 4m below the modern ground surface to allow the construction of foundations for a basement car park. This phase of activity was subject to ongoing archaeological watching brief.

During the watching brief phase, up to four machines were working at any one time, cutting trenches for the diversion of mains services and sewers, or involved in the rapid, wholesale removal of soil to tip (see back cover photograph and Fig 5). Given the initial disturbance and the speed of excavation, usually working a face (in the style of a quarry), observation of individual new archaeological features proved extremely challenging and a great deal of caution was required.



Development site during watching brief, looking west Fig 5

As part of the watching brief, the area within the street front curtilage of Plot 8 was stripped of topsoil exposing the natural subsoil at the north of the site. This area was designated as the site for the offices and compound during the initial phases of development. The stripped area was covered with geotechnical fabric and protected with a layer of crushed demolition rubble. This area was subject of further archaeological investigation in 2011 when the compound and offices were cleared to allow the final phase of development on the site (Fig 4). To avoid duplication with the works of 2008, contexts in this location were numbered from 1001.

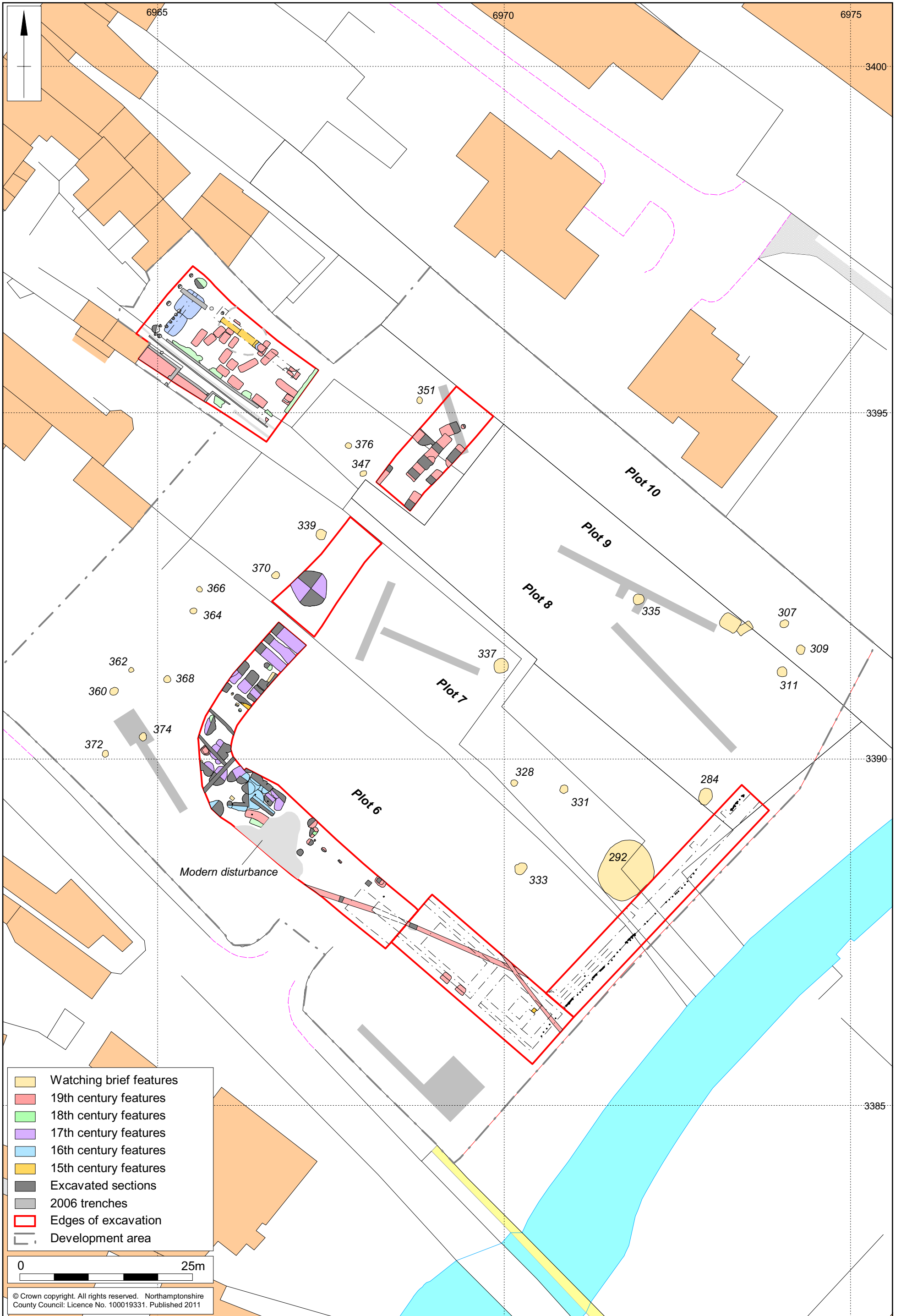
5.2 The excavated evidence

The natural substrate exposed varied across the site with location and depth. At the north of the site and extending down the valley side towards the river, compact orange-brown sands and gravels (15) were exposed across the whole site.

Along the margin of the river Great Ouse, these sands and gravels were sealed below a layer of soft to firm grey silty clay (14) with occasional fine to medium sub-angular flint and limestone gravel. This was exposed up to 1.2m deep at the southern limit of the excavation and tapered out at about 20m further north at the west of the site and at about 12m to the north at the east of the site.

To the north of the river margins, the sand and gravel was sealed below a layer of orange-brown, sandy clay with fine to medium rounded to sub-angular flint gravels. This varied in thickness from 1m-2m deep being deeper towards the north of the site.

During the excavations for the underground car park, the underlying Oolitic limestone bedrock was exposed at between 3m and 5m below the modern ground surface and seen as irregular outcrops of fractured rock.



General plan of excavated features Fig 6

For ease of understanding, the evidence is considered in two parts:

The valley slope, Plots 6-10 on the slope of the river valley exposed in the L-shaped trench and during the subsequent watching brief. This is set out by plot and by broad chronological phase.

The river edge at the south of the site.

5.3 The valley slope

The valley slope extends from the rear of the properties fronting Market Square and extends to the south of the site where it meets the silted edge of a palaeochannel of the River Great Ouse, about 20m north of the present river bed.

For continuity and ease of understanding and interpretation. the plot immediately east of Bridge Street has been labelled as Plot 6, following the 1847 map. The plots further east are numbered sequentially thereafter (7-10).

Plot 6 (Fig 7)

The western boundary of this plot is marked by Bridge Street, the eastern boundary survived as a 19th century brick wall at the north of the site and continued as a concrete kerb along the eastern edge of the car park. The plot was 37m wide at the north, widening to 40m wide at the south of the development area. This plot was characterised by a loose concentration of rubbish pits. To the west, these were cut by and a series of postholes and stake holes associated with the foundations of 18th-19th century buildings.

Medieval

Many of the features recorded on site contained medieval pottery, albeit in small quantities of small, abraded fragments. There is clearly a high degree of residuality across the whole site. Overall medieval pottery quantities are more indicative of low level domestic disposal and manuring scatters rather than of industrial or occupation activity within the excavated area.

There were a few features that contained only medieval pottery. Even where this was the only dating evidence, it remains highly likely that these isolated sherds are residual and the pits belong to the post-medieval activity of the site.

16th century

The east boundary of Plot 6 was marked by a linear ditch [184] up to 1.45m wide and 0.5m deep, with a stepped western edge incorporating at least two re-cuts. The lower fill was red-brown sandy clay loam (185) containing fragments of limestone. A single sherd of un-diagnostic medieval pottery was recovered from this fill together with a copper alloy pin (SF 22) that dates from the late 15th or early 16th century. The later re-cuts were both filled with undifferentiated grey-brown sandy clay loam (186) containing fragments of limestone, broken brick, roof tile and pottery.

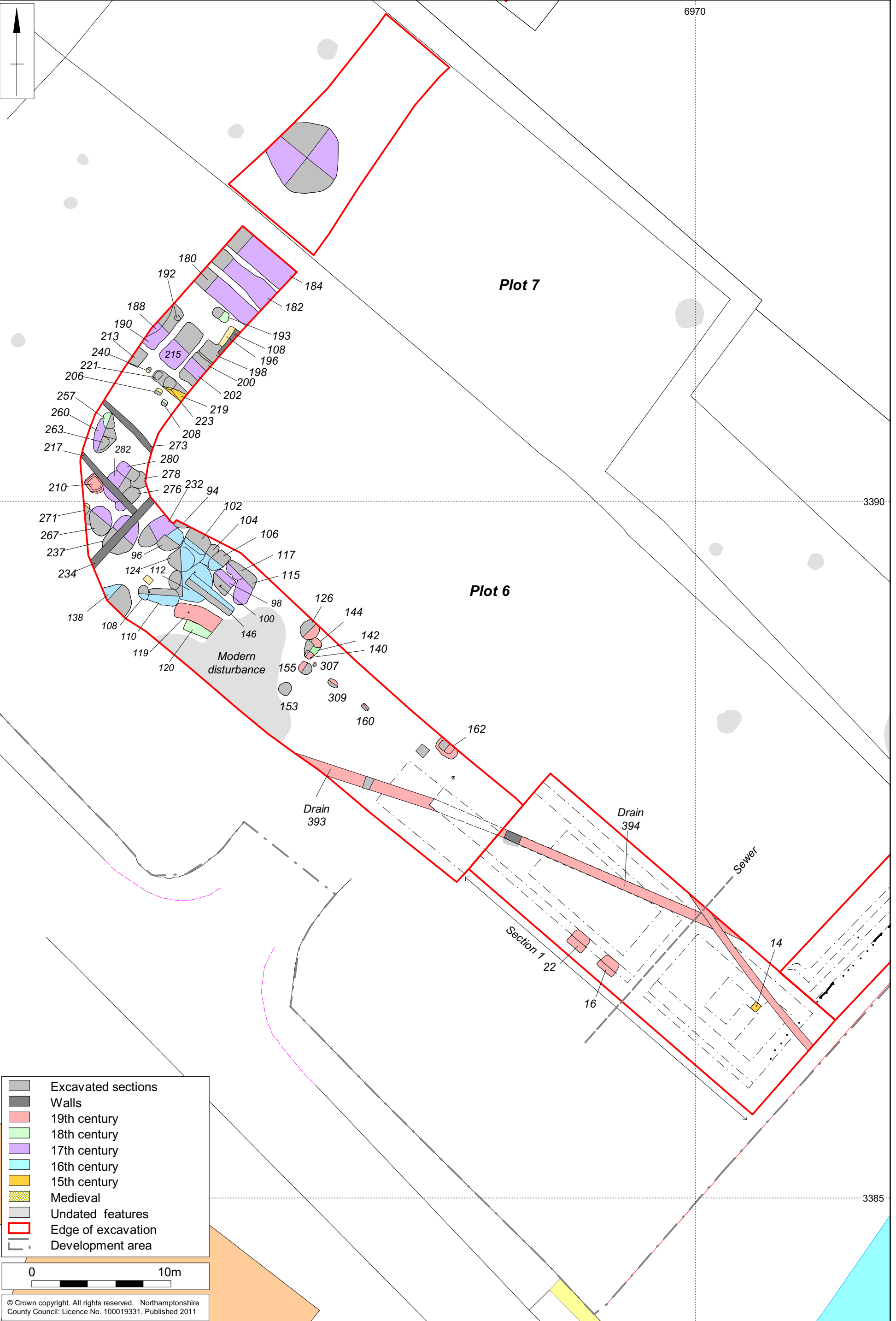
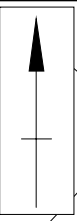
Extending to the west was a series of rubbish pits. Oval pit [193] and sub-rectangular pits [206], [208] were up to 1.3m long, 1.6m wide and 0.9m deep. They had steeply sloping sides and flat bases. They contained similar grey-brown sandy clays (194), (195), (201), (207) and (208) containing fragments of limestone, occasional charcoal flecks, animal bone, broken brick roof tile and pottery.

To the south was a cluster of intercutting pits [94], [96], [102], [104], [106], [108], [110], [112], [124] and [138]. These varied from sub-rectangular to sub circular, up to 2.1m long by 1.8m wide and 0.4m deep. They had steeply sloping sides and dished bases. They were filled with relatively undifferentiated dark brown sandy clays (95), (97), (103), (105), (109), (111), (113) and (125) containing fragments of limestone, broken brick, roof tile, occasional animal bone, oyster shell, and pottery from the 16th century.

Cutting pit [112] to the south was pit [146], an elongated pit aligned north-west to south-east, 3.7m long by 1.0m wide and 0.65m deep, with near vertical sides and a flat base. The sides and base were lined with stiff orange-grey silt clay (152), up to 70mm thick across the base and 50mm thick on the sides.

The primary fill was pale grey silt clay (151), up to 0.5m deep and slumping to 0.3m deep along the central axis of the pit. This was covered by a layer of black, fibrous, decayed sawdust (150) up to 0.05m thick, soft and slimy to the touch containing a single piece of scrap leather (SF 20). This layer abutted a dump of red-brown soft and silty organic material (149) up to 0.1m deep at the north of the pit with no inclusions or finds. A 100mm-thick layer of brown-grey silt clay (148) formed a deliberate seal over the two organic layers. This was covered by a dump of red-brown silt clay (147) up to 300mm thick and containing broken roof tile and occasional flecks of charcoal.

There was no dating evidence from this feature, but stratigraphically it post-dated a 16th-century pit [112], but had clearly been filled and abandoned before the construction of the 18th to 19th-century building to the east. A late 16th or 17th century date seems most probable. It may have been a saw-pit.



- Excavated sections
- Walls
- 19th century
- 18th century
- 17th century
- 16th century
- 15th century
- Medieval
- Undated features
- Edge of excavation
- Development area



17th century

To the west and parallel to the east boundary ditch [184], there were two shallow linear features, [180] and [182], each about 1.8m wide and surviving up to 0.2m deep. They had shallow sloping sides with broad dished bases. Both had fills of identical brown sandy clay (181) and (183) containing limestone, broken brick, tile and occasional fragments of oyster shell and animal bone. A fragment of Mesolithic worked flint and two small sherds of medieval pottery were recovered from the fill of [180], all residual. In the fill of [182], a small post-medieval copper alloy pin (SF 23) was recovered with pottery from the 17th century.

Only partially exposed along the northern edge of the archaeological excavation trench was the edge of pit [188], 2.7m long and 0.2m wide. The exposed side was steeply sloping and excavated up to 0.4m deep but not bottomed. It was filled with grey-brown silt clay (187) containing occasional flecks of charcoal, animal bone, a corroded iron nail (SF 33) and a copper alloy chape (SF 21).



Pits [196] and [227] being recorded, re-cut ditch [223], [219] and pits [206], [208] in the foreground, looking east Fig 8

Only partially exposed along the southern side of the archaeological trench, were two intercutting pits. Pit [196] was 1.4m wide and 0.6m deep, with only the northern edge lying within the excavation; it had a steeply sloping side and appeared to contain mid grey/brown sandy-silt clay (197) with fragments of angular limestone.

Pit [196] was truncated by sub-rectangular pit [227], 2.0m long by 1.4m wide and 0.9m deep, with near vertical sides and a flat base. Pit [227] was filled with layers of dark brown silty loam (228), (229), (230), and (231) containing decayed organic residues, broken brick, roof tile, limestone, oyster and mussel shell, animal bone, flecks of charcoal, a piece of corroded iron (SF 30) and pottery from the 17th century.

There were three parallel sub-rectangular pits [190], [215] and [202], aligned north-east to south-west. They were all about 3.6m long, 1.3m wide and up to 0.2m deep, with shallow sloping sides and slightly dished bases. They were filled with similar grey-brown silt clay (189), (216), (203) containing flecks of charcoal, animal bone, broken brick and roof tile.

Pit [190] truncated pit [188] to the north and was in turn cut to the south-east by a small sub rectangular pit [192], 0.65m long, 0.35m wide and 0.1m deep, with steeply sloping sides to a rounded base. It was filled with grey-brown silt clay (191) containing pottery from the 17th century.

To the south and lying parallel, was pit [215] with pit [202] aligned along the southern limit of excavation truncating pits [196], [227] and [200]. Pottery from pits [192], [202] and [215] is dated to the 17th century.

Aligned north-west to south-east across the width of the trench were a series of pits and ditches [213], [219], [221], [223] and [240]. Extending beyond the limit of excavation to the south was ditch [223] and re-cut [219], up to 2.4m long by 0.7m wide and 0.65m deep. Both had sloping sides and a flat base and were filled with varying combinations of mottled orange-grey and grey brown silt clay (224), (225), (226), (220) containing broken brick, tile, lime mortar and pottery from the 17th century.

Two postholes [221] and [240] continued the alignment to the north. Both were up to 0.5m square by 0.2m deep, with vertical sides and flat bases. Posthole [221] cut (220) and was packed with limestone (222) bonded with lime mortar forming a solid post pad or base, posthole [240] was filled with grey-brown silt clay (241) containing fragments of limestone packing and a single larger fragment forming a post pad.

A further 0.7m north, sub rectangular pit [213] continued the alignment and extended beyond the north baulk of the excavation trench. It was 1.2m long by 0.8m wide and 1.2m deep, with near vertical sides and a flat base. It was filled with yellow-brown sandy clay (214) containing limestone, broken brick, roof tile, lime mortar, window glass, occasional bone and fragments of clay pipe. Pottery from this pit is dated to the 17th century.

To the west, pit [260] was 2.0m long, 1.7m wide and 1.0m deep, with steep near vertical sides and a rounded base. It was filled with deposits of mixed re-deposited grey brown silty clay, (261) and (262), containing fragments of brick and tile. The only dating comes from a single sherd of 13th century pottery, almost certainly residual. It was truncated by pit [263], which was up to 1.35m long, 1.38m wide and 1.0m deep, with near vertical sides and a slightly dished base. It contained an articulated burial of a dog sealed below layers of re-deposited mixed grey silt clay, (266), (265) and (264), containing broken brick, tile and flecks of charcoal. Pottery from the fill dates to the 17th century.

Further to the west and extending south, lay a loose concentration of sub circular and inter-cutting pits [232], [237], [267], [271], [276], [278], [280] and [282], up to 3.0m long by 2.0m wide and up to 0.7m deep with steeply sloping sides and dished bases.

They were filled with brown sandy clay (233), (238), (239), (268), (269), (270), (272), (277), (279), (281) and (283) containing fragments of limestone, broken brick, roof tile,

occasional animal bone and pottery from the 17th century.

Immediately to the south, three closely clustered pits [98], [115] and [117] were sub-rectangular or oval, up to 2.5m long by 1.3m wide and 0.2m deep with shallow sloping sides and dished bases. They were filled with undifferentiated greenish-grey silty clay (99), (116) and (118) containing fragments of limestone, broken brick, roof tile, occasional animal bone and pottery from the 17th century.



Pits [98], [115], [117], [146] and well [126], looking east Fig 9

18th century

Pit [260] was truncated by another pit [257], roughly 2m long by 1.2m wide and 1.1m deep. It had steep to near vertical sides and had a fill of construction/demolition debris (258, 259) containing coarse sandy lime mortar, limestone, broken brick, roof tile, window glass and pottery of the late 18th century.

Further south was a rectangular pit [120] aligned roughly north-west to south east, about 2.2m long, 1.0m wide and 0.65m deep, with vertical sides and a flat base. It contained a 100mm-thick layer of black, peaty, organic material (122) covered by a dump of shattered and heat damaged window glass (121) up to 250mm thick. This contained fragments of lead window came (SF 15 and 17) and 18th century pottery. It was covered with decayed wood shavings, bark and sawdust (123) up to 200mm deep and sealed below alternating sealing layers of grey silt (130 and 132) up to 100mm thick, interspersed with dark brown fibrous peaty material (131) also up to 100mm thick.

The upper fill of the pit was orange-brown sandy clay (133) containing fragments of limestone, roof tile, animal bone and a corroded iron window latch (SF 16). Pottery from this layer is dated to the 18th century.

Located along the south-east balk of the excavation, was oval pit [142], 1.0m long, 0.8m wide and 0.15m deep, with shallow sloping sides and a dished base. It was filled with dark brown silt clay (143) containing occasional charcoal and lime mortar. A copper pin is probably of 17th century date, but the pottery is dated to the 18th century.

At the south-east of the plot, exposed after removal of the car park surface, pit [333] was 2.0m in diameter and 1.1m deep. It had near vertical sides and a flat base. It was filled with dark grey-brown sandy clay loam (334) containing 18th century pottery, burnt limestone, burnt and heat cracked roof tile and occasional fragments of shattered brick.



Pit [120] during excavation, some glass in-situ, looking south Fig 10

19th century

Outside the trench and seen during excavations to divert services and drains at the north of the plot, a spread of sub-circular pits [360], [362], [364], [366], [368], [372], and [374] were observed in watching brief and sampled (Fig 6). They varied in diameter from 0.8m to 1.2m and were up to 0.8m deep. They all had similar steeply sloping sides with dished bases. They were filled with re-deposited dark brown sandy clay loam with frequent gravel inclusions. All contained varying quantities of limestone, broken brick, roof tile, animal bone, glass and pottery.

Pit [372] was filled with a dump broken glass bottles containing only occasional sherds of pottery. Pit [374] was packed with fragments of broken window glass. The glass was sampled and was found to be about 1mm thick and of 18th- to 19th-century date.

Much of it had been heat-affected. Amongst the glass, the press moulded metal alloy bowl of a spoon in the form of a stylised scallop was recovered (SF 36). The design and manufacture show it to be a 19th-century sugar spoon.

Within the excavation trench at the north-west of the excavation, forming a linear alignment north-west to south-east, four wooden stakes (100), (101) (396), (397) each with a 100mm-square profile with a sawn, four sided point, had been driven up to 300mm into the ground. Stake (100) was located to the north-west corner of pit [124], stake (101) was adjacent to the north-east corner of pit [146], stake (396) was cut through pit [98] and stake (397) lay at the south-west of pit [115] (Fig 7). Although these produced no dating evidence, the alignment matches the western side of the mapped structure at this location in 1881 and shown as being open-sided. Almost certainly these posts supported this structure.

To the west of pit [146] there was a sub rectangular area of extremely soft waterlogged sub soil (119) that was 2.5m long and 1.4m wide. There was no evidence for a cut feature but the ground had been rammed with assorted fragments of limestone up to 0.25m diameter to firm up the surface. The layer contained broken roof tile, clay pipe fragments, a copper alloy coin (SF 14) and pottery dated to the 19th century.

Extending across the northern part of the trench was a series of foundation trenches. Aligned north-east to south-west were foundation trenches [234] and [198]. Cutting the upper fill of pit [237] foundation trench [234] was 6.5m long, 0.4m wide and 0.2m deep. It was filled with roughly coursed angular limestone fragments (235) packed with brown sandy clay loam (236) with no other bonding, forming a foundation for a 0.25m wide (9") solid brick wall bonded with grey cement mortar. Only the stone foundation and the imprint of the brickwork in the cement bedding survived. The wall extended beyond the limit of excavation to both east and west.

Further east, truncating pit [202] and further truncating the three underlying pits [196], [227] and [200] was foundation cut [198] 5.0m long, 0.45m wide and 0.3m deep. It contained five courses of roughly coursed and irregular limestone fragments (199) bonded with yellow sandy lime mortar and extending beyond the limit of excavation to the west.

Aligned roughly north-west to south-east were foundation trenches [217] and [273]. Foundation trench [217] was 6.0m long, 0.4m wide and 0.2m deep with vertical sides with a flat base. It contained re-deposited, irregular, angular limestone fragments (218) mixed with broken brick and decayed coarse white lime mortar. It cut pits [275] and [282] and had originally been abutted to wall foundation [234] to the south.

To the east, foundation trench [273] was 4.5m long, 0.4m wide and 0.2m deep. It had near vertical sides and a flat base. It was filled with random limestone fragments (274) up to 0.25m long bonded with creamy-white lime mortar. Most of the foundation wall had been truncated by demolition and landscaping during the modifications to create the modern car park. Only about 1.4m of the wall survived as anything more substantial than a shallow scrape at the lower limit of excavation.

To the west and cutting into the side of foundation trench [217] was foundation trench [210] with a 'D' shaped plan, 1.4m long, 1.0m wide and 0.4m deep. It had vertical sides and a flat base. It was lined with regularly coursed brickwork (211) bonded with grey cement mortar. The base was formed of bricks laid on face and bedded on cement mortar. The brick-lined pit had been filled with re-deposited dark grey-brown sandy clay loam (212) containing mixed demolition debris including fragments of limestone, broken brick, cement mortar, animal bone, clay pipes, iron nails (SF 27, 34, 38 and 40) and pottery dating from the 19th century.



Wall [234] cutting pit [237], looking north-east Fig 11



Wall foundation [217] and brick-lined pit [210], looking south-east Fig 12

To the south of clay-lined pit [146] services, foundation trenches, previous groundwork, site clearance and a geological test pit had disturbed or removed any evidence of earlier activity for about 12m, particularly along the west side of the excavation.

Located on the south-east of the disturbed area, 18th-century pit [142] was cut by post-pits [140] and [144], up to 0.8m long by 0.55m wide and 0.35m deep. Both contained orange-brown silt clay, (141) and (145), containing limestone, broken brick and roof tile forming packing for now lost timber posts up to 250mm diameter. Pit [140] contained a single residual sherd of medieval pottery.

Both pit [142] and posthole [144] were truncated to the north by the cut for a stone-lined well [126]. It was 1.35m in diameter and was excavated to a depth of 0.6m. It had vertical sides but was not bottomed. It was lined with roughly-shaped and irregularly-coursed limestone (127) forming a single lining course of stone up to the original ground level where the lining was widened to two blocks (0.35m) thickness and survived up to four courses high. The well fill comprised two distinct layers. The lower was dark brown-grey sandy clay (129) containing limestone, broken brick, roof tile and flecks of charcoal. It was covered by a loose mixed layer of yellow-brown coarse sand and gravel (128) up to 0.45m deep, containing the demolished limestone of the upper well structure, broken brick, tile, mortar, and glass. Pottery from this layer is dated to the 19th century.

To the south of post-pit [140], there was a cluster of postholes [387], [389], [153], [155], [157] and [160]. All had been severely truncated in the demolition, clearance and levelling of the site for the car park area in the 1990s. All were roughly oval, varying between 0.4m-0.6m long, 0.4m-0.5m wide and averaging about 0.3m deep. They all had near vertical sides and flat bases. They were each filled with undifferentiated, grey-brown sandy clay, (388, 390, 154, 156, 158 & 161). They each had a post-pipe or a decayed soft wood post, 200-250mm square, rough sawn, with a flat base and packed in place with angular fragments of limestone, broken brick and roof tile.

Posthole [153] contained a piece of shaped and carved limestone (SF 19) packed round with roof tile and clearly used a post pad at the base of the pit. The pit fill contained a damaged flint barbed and tagged arrowhead (SF 18) and a single, residual, fragment of 12th-century pottery.

The construction of the well must post-date pit [142], which contains pottery of the late 18th century. The post-pits and postholes almost certainly relate to the development of buildings on this part of the site in the second half of the 19th century.

Further south and located along the east limit of excavation, sub-rectangular pit [162] 1.7m long, exposed 1.1m wide and 0.4m deep. It had near vertical sides and a flat base and was lined around the sides with stiff, sticky blue-grey silt clay (165) up to 0.1m thick. There was no lining to the base of the pit. The pit was filled with dark grey silt clay (163) mottled and stained black from decayed organic material containing patches and lenses of white lime (164) up to 75mm thick and occasional animal bone. There was no dating material from this pit.

Aligned north-west to south-east and across the full width of the excavation was a service trench [393] up to 1.0m wide and 1.0m deep, with steep sides sloping to a flat base. It contained a square built-brick and stone-lined drain (394) bonded with coarse yellow lime mortar. The internal channel was filled up to 0.1m deep with orange-brown soft silt sand (397) containing coarse gritty sands and gravel. This was covered by brown silt (398) up to 0.15m deep and containing occasional flecks of charcoal, brick, tile. The drain was sealed below a dump of builders or demolition waste (11) containing limestone, brick, tile, and glass forming a soakaway above the drain cap. Pottery from both the channel fill and the soakaway dates from the 19th century.



Drain [393], looking north-east Fig 13

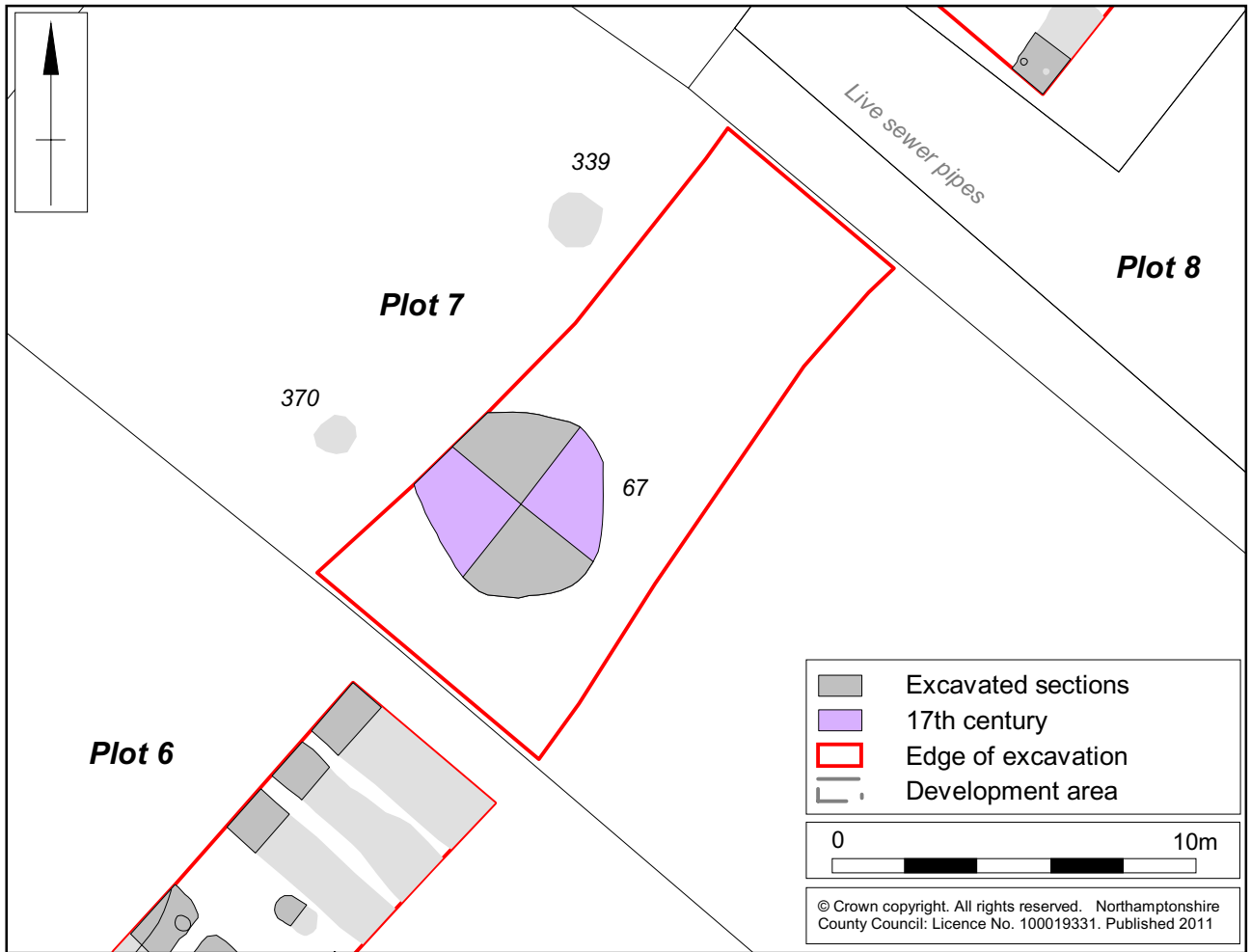
At the extreme south-west of the excavation trench, two sub rectangular pits [16] and [22], were both 1.5m long, 1m wide and up to 0.9m deep with steeply sloping sides and flat bases. Pit [16] was filled with grey silt clay (17), soft yellow sandy clay (18) and grey-brown sandy clay (19) containing broken brick, roof tile, broken bottles and pottery dated from the 19th century. Pit [22] was filled with soft yellow sandy clay (23) containing decayed yellow lime mortar, limestone, broken brick and tile. Both were cut from the same height through a build-up and levelling layer of orange-brown sandy clay (5) up to 1.8m deep and containing broken brick, tile, glass, clay pipe and pottery from the 19th century.

Plot 7 (Fig 14)

This plot is located immediately east of Plot 6, with which it shared a boundary. The plot, where excavated some 20m from the rear of the frontage, was roughly 16m wide, widening to almost 18m at the south end of the development. The northern part of the plot was cut by a series of storm drains and sewers, all aligned north-west to south-east.

17th century

A single huge circular pit [67] lay fully within the trench. It was 5.0m in diameter and cut 0.6m into the undisturbed subsoil (31), with near vertical sides and a flat base. Around the edge of the base and visible in patches along the sides was a thin residue of white lime mortar (71) extending up to 0.3m into the interior of the pit and about 0.4m high around the edges of the pit. This appears to be the remnant of bedding for a lost brick or stone lining, removed prior to backfill.



Scale 1:200 (A4)

Plot 7, phase plan Fig 14

The primary fill of the pit was orange-brown sandy clay (70), up to 120mm thick and containing fragments of broken brick, tile, limestone, occasional animal bone and flecks of charcoal. This layer produced pottery from the 16th century. It was covered with dark grey to orange-brown sandy clay (69) up to 0.2m deep, containing demolition debris, limestone, brick, tile, glass, clay pipe and occasional animal bone. The upper fill of the pit was grey-brown sandy clay (68) containing much the same mix of detritus including a horseshoe and corroded fragments of iron (SF 28, 31, 32). Pottery from this layer is dated to the 17th century.



Quarter sections through pit [67], looking north-west

Fig 15

Far to the south-east and noted in watching brief, pit [331] was roughly circular, 1.5m in diameter, 0.6m deep with near vertical sides and a dished base (Fig 6). It was filled with dark brown sandy clay loam (332) containing a dump of fire blackened and cracked blue slate, roof tile, and heat twisted window glass. Pottery from this fill is dated to the 17th century.

19th century

Remnants of all the internal divisions within the plot were observed and recorded during watching brief. These brick foundations match the mapped boundaries on the Ordnance Survey First Edition mapping of the site [313, 391]. They appeared to be of late 18th- or early 19th-century origin.

At the north of the plot, watching brief recorded two sub-circular pits [339], [370] in section, recorded and sampled. Pit [339] was 2.2m in diameter, 1.0m deep with near vertical sides and a flat base. It was filled with dark grey-brown sandy clay loam (340) containing limestone, broken brick, tile and glass. Pit [370] was 0.9m in diameter, 0.3m deep with steeply sloping sides and a dished base. It was filled with dark brown sandy clay loam (371) containing limestone, broken brick and tile, lime mortar and pottery. Pottery from these pits is dated to the 19th century.

About 30m to the south and located in the corner of the west return of the plot boundary wall (Fig 6), sub circular pit [337] was 1.6m in diameter, 0.3m deep with steep sides and a dished base. It was filled with dark grey-brown sandy clay (338) containing broken limestone, brick, tile, clay pipe, animal bone and pottery dated to the 19th century.



Barrel-lined pit [328] exposed in watching brief, looking north

Fig 16

In the narrow southern section of the plot, pit [328] was circular, 1.0m in diameter and 2.4m deep, with vertical sides and a flat base. It contained two decayed wooden barrels without bases forming a timber-lined shaft extending 0.6m into the modern water-table of the site. The base of the pit was filled with dark brown-black silt clay (329). It contained occasional brick, tile, animal bone and 19th century pottery. It was sealed by a homogenous dump of re-deposited orange-brown sandy clay and gravelly subsoil (330). This was a deliberate backfill of the feature.

To the south and east of the plot, circular pit [284] was 2.6m in diameter and 0.6m deep with vertical sides and a flat base. It was filled with dark brown sandy clay loam (285) containing a dump of limestone, broken brick, tile and glass. To plot 8

At the south and west of the plot, there was a large oval pit [292] 7.8m long by 5.6m wide and 0.5m deep, with steep sloping sides and a flat base. It was filled with mixed re-deposited topsoil, sub soil and gravel (293) containing fragments of limestone, broken brick, tile and occasional fragments of animal bone. Pottery from this fill is dated to the 19th century.

The pit was truncated to the west by foundation trench [294] to a former plot brick boundary wall extending beyond the southern limit of excavation. Between this and an adjacent wall foundation were layers of builder's debris of the 19th century (296, 300).

Plot 8 (Fig 18)

Plot 8 shares its western boundary with Plot 7 and extends to the east. This is the only part of the development area that extended into the rear plot of a Market Square property. For ease of understanding, the archaeology is dealt with separately; the back yard of the plot first, and then the remainder.

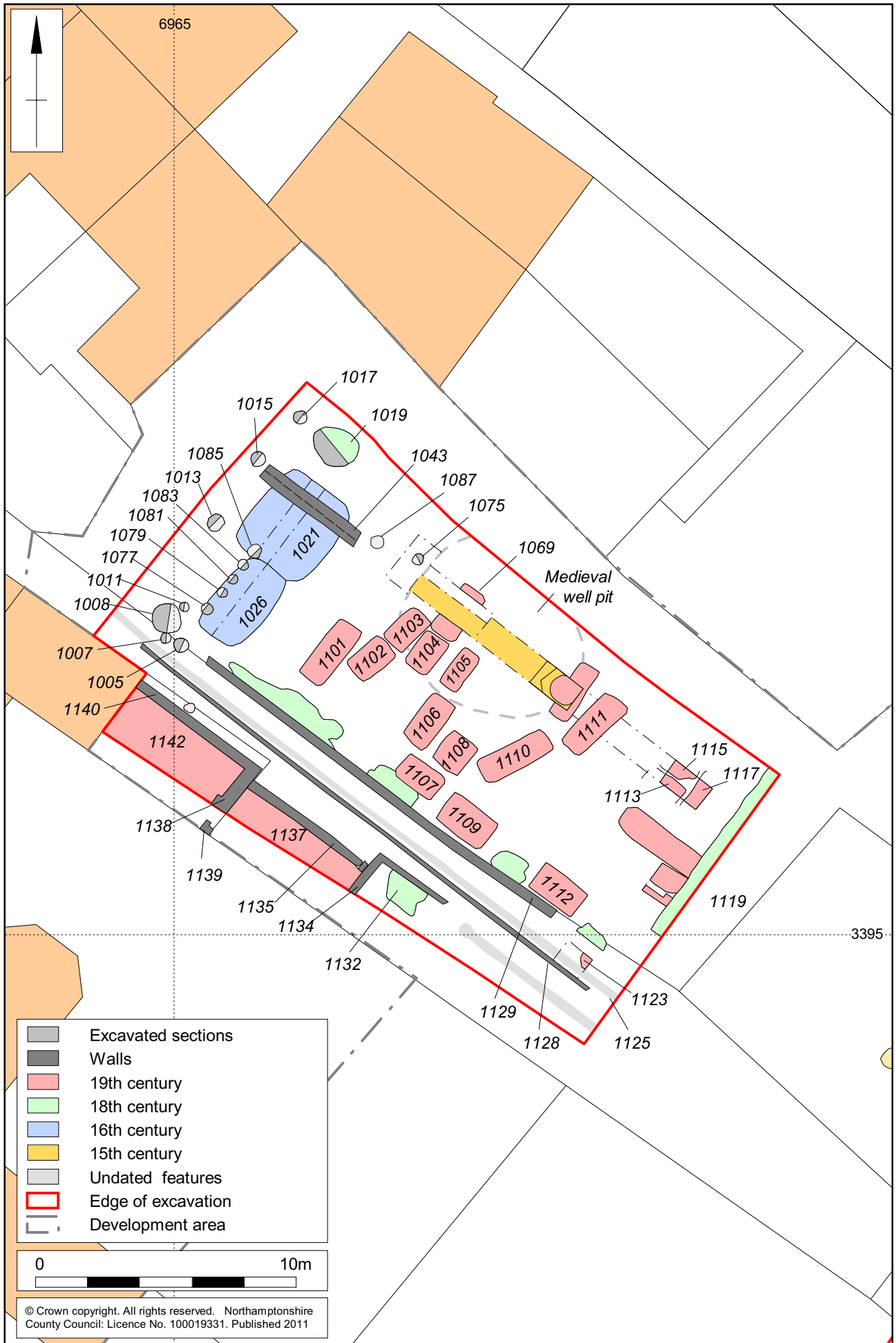
The back yard

The excavation in the back yard measured 28m long and 20m wide at the north-west tapering to 16m wide to the south-east. The ground surface sloped from 81.5m OD at the rear of the buildings in the north-west to 80.5m OD at the south-east boundary of the site. As part of the development, the area was stripped of overburden and topsoil creating an exposed area 25m long and 15m wide allowing for a substantial safety baulk and step along the high brick boundary walls to the east and west and a house to the north.



Plot 8, back yard plot, looking north-west Fig 17

At the north-west of the area, undisturbed orange-brown, sandy clay natural geology (1001) was exposed for the full width of the excavation at 80.2m OD. It extended up to 9m to the south-east where it was overlain by dark brown-black sandy clay loam (1002) formed of an homogenous mix of topsoil, re-deposited subsoil and varying amounts of dumped materials forming an irregular layer up to 1.5m deep tapering to 0.5m deep at the south-eastern boundary of the back plot.



Scale 1:200 (A4)

Plot 8, the backyard, phase plan Fig 18

Medieval to 16th century

To the east of the back plot area, the natural was cut by a large pit [1069], 1.7m wide and 1.2m deep, with a stepped profile to the north-west. This pit had been backfilled from the north-west, with tip lines clearly delineating the various deposits of backfill material, which comprised mixed layers of re-deposited blue-grey silty clays (68), orange-brown clay with limestone gravel (1067, 1065, 1063, 1062), grey-yellow clay with frequent soft chalk fragments (1066, 1064) and grey-brown silt clay with occasional limestone gravel (1061). All the fills contained small fragments of broken brick, roof tile, occasional animal bone and oyster shell. Pottery from fill layers (1063) and (1062) is dated to the end of the medieval period. Occasional fragments of 19th-century pottery from the surface cover (1061) are clearly intrusive.

To establish the nature of this pit, which had little to indicate its south eastern extent; an archaeological test trench was excavated parallel to the east boundary from pit [1069] and extending 13m to the south-east. The trench was excavated to a depth of 1.2m with a sondage at the end 1.8m deep. The lowest layer exposed was mixed dark greenish-brown silty clay (1073) containing occasional gravel and flecks of charcoal.



Pit [1069], looking south-west

Fig 19

Pottery from this lowest layer is dated to the medieval period. This was covered by a 50mm-thick layer of grey-white silt clay (1072) clean and sterile, seemingly put down as a seal. Overlaying this sterile clay cap were layers of similar mixed deposits of grey-brown silty clay (1071) and (1070) containing fragments of limestone, broken brick, roof tile, occasional animal bone, oyster shell and pottery from the medieval period.

This huge and very deep feature was almost certainly the pit dug for the construction of a well shaft lying 3.5m south-east. Originally, it would probably have been something like a tear-drop shape in plan. The well itself [1045] was 1.8m wide with a lining of clay [1046] narrowing the shaft to 1.0m wide. The shaft was backfilled in the 19th century.

The whole well structure had been covered with a 200mm-thick layer of mixed re-deposited dark brown/black clay loam (1051).

A sondage 1.8m deep was excavated down the north side of the well lining but failed to find undisturbed geology.



Well [1045], clay lining (1046) and later pit [1050], looking south-east Fig 20

17th century

Cutting the silty clay natural (1001) at the north of the site was sub-rectangular pit [1021] 4m long, 3m wide and up to 0.9m deep with steeply sloping sides and a flat base. The initial fill was dark orange-brown sandy clay (1022) up to 0.6m deep containing limestone, flecks of charcoal and pottery dating from the 15th-17th centuries. This was covered by a layer of orange-brown silt clay (1023) up to 0.3m thick, containing occasional animal bone, oyster shell, broken brick, roof tile and charcoal flecks.

Over this was a 0.15m thick layer of clean re-deposited subsoil (1024) sealed below a layer of dark orange-brown sandy clay loam (1025) up to 0.6m deep and containing broken brick, roof tile, occasional animal bone and charcoal flecks. The only pottery from these upper fills is medieval and therefore was residual.

To the west, pit [1021] was cut by pit [1026], which was 3.5m long by 2.2m wide and 0.8m deep with steeply sloping sides and a flat base. It was filled with three layers of dark orange-brown sandy clay (1027), (1028) and (1029) up to 400mm thick, containing broken brick, roof tile, animal bone, oyster shell, flecks of charcoal, small fragments of thin, heavily corroded window glass and pottery dated to the 16th-17th centuries.

The upper fills of pit [1021] were cut by pit [1030] 2.3m long, 1.3m wide and 0.9m deep with a near vertical sides and a flat base. Tip lines indicate it was backfilled from the

south with two dumps of orange-brown sandy clay (1031) and (1032) containing broken brick, roof tile, fragments of limestone, occasional fragmented animal bone and oyster shell. Not on plan

Pit [1030] was truncated by pit [1036] 1.3m long by 1.1m wide and 0.4m deep with near vertical sides and a flat base. It was filled with sterile blue-grey silt clay (1037) 0.07m deep and covered by dark brown clay loam (1038) up to 0.4m deep, containing fragments of limestone, broken brick, roof tile and pottery from the 16th and 17th centuries.

Pit fill (1038) was cut through at the west by pit [1039] 1.3m long, 0.9m wide and up to 0.4m deep. It had steeply sloping sides and a dished base. It was filled with a dump of orange-brown silt clay (040) containing broken brick, roof tile, limestone and flecks of charcoal. Not on plan

Cutting through the upper fill layers of this pit and into the subsoil along the north-west edge of the pit were four circular postholes, [1077], [1079], [1081] and [1083] with a fifth posthole [1085] just to the north-east of the pit edge, They were each up to 0.35m diameter and 0.4m deep. They each contained limestone pads at the base and fragments of limestone packing to support now lost timber posts.

There was no dating in any of the posthole fills within the pit; the fifth posthole [1085] contained pottery from the 16th-17th centuries.

18th century

At the north-east of the site, oval pit [1019] was 1.75m long, 1.5m wide and 0.15m deep. It was filled with dark orange-brown sandy clay (1020) containing fragments of ceramic building material and pottery from the 17th-18th centuries.

Medieval pit [1069] was cut to the south-east by pit [1060] 1.3m wide and 1.8m deep (in sondage) with steep near vertical sides. It was not bottomed. It was filled with a 0.7m deep layer of grey-yellow/brown clay (1059) containing broken brick and roof tile. Not on plan

This was covered by a layer of dark brown sandy clay loam (1058), up to 0.75m deep and containing fragments of broken brick, roof tile, limestone, flecks of charcoal and occasional sherds of medieval pottery. This was sealed below a 0.34m deep layer of yellow-brown silt clay (1057) containing occasional limestone fragments, flecks of charcoal and pottery from the 18th century.



Pits [1021], [1026], [1030], [1036], [1039] and wall [1043], looking south-east Fig 21



Pit [1026] and postholes [1077], [1079], [1081], [1083] & [1085], looking north-west
Fig 22

19th century

Along the west of the site, the subsoil was cut by the remains of limestone foundations and brick walls that mark a series of rectangular buildings built against the west boundary wall of the plot. Walls [1133], [1135], [1138] & [1140] all survived as irregularly coursed, roughly dressed limestone fragments set in shallow linear trenches. They were bonded with soft yellow lime mortar, much of which had weathered away. Hard white lime mortar marked where upper walls of red brick had been removed in late 20th century demolition and clearance of the site.

To the north-west, red brick wall (1144) survived up to 1.0m high. It was laid in an irregular pattern of alternating stretchers and headers forming a solid wall 0.25m (9") thick. The brickwork was bonded with hard grey lime mortar. All these walls match the structures mapped in these locations on the 1881 Ordnance Survey mapping of the area.

Immediately to the east of this line of buildings there was a spread of coarse yellow sand bounded to the east by another brick wall (1128) located within construction trench [1127], 0.15m wide and 0.10m deep. This wall was aligned north-west to south-east and parallel to the west boundary wall and the line of demolished buildings. It comprised a single course of bricks laid as stretchers and bonded with grey lime mortar.

Demolition and subsequent site stripping had removed much of this wall along the length of the excavation.

Immediately to the east, wall (1128), was flanked by a modern service trench [1125] 0.3m wide by 0.5m deep, and containing a salt-glaze 0.1m (4") sewer pipe. Only a further 0.7m to the east there was a second parallel foundation (1129) up to 0.6m wide and 0.15m deep, surviving as a discontinuous layer of irregular shaped and coursed limestone fragments bonded with yellow lime mortar. A boundary is marked at this location on the 1881 detailed mapping of the site.

At the north-west, and located exactly on the main axis of this wall, was a cluster of postholes [1005], [1007], [1009] & [1011] from 0.25m to 0.7m diameter and up to 0.3m deep, filled with grey-brown clay (1006), (1008), (1010) & (1012) containing broken brick, roof tile and fragments of limestone forming post-pads or packing for lost timber posts. A single sherd of medieval pottery was recovered from fill (1010).

To the north and east, three more postholes [1013], [1015] & [1017] appeared to form a linear alignment north-east to south-west. They were all circular, roughly 0.55m in diameter and between 0.15m to 0.25m deep, and were filled with orange-brown clay (1014), (1016) and (1018) containing broken brick, roof tile and fragments of limestone used as packing for timber posts, now lost.

Foundation trench [1043] 0.75m wide, 0.5m deep, 4.2m long was aligned north-west to south-east and cuts through the upper fill of pit [1021], tapering out within a metre or so either side of the pit. It was filled with limestone rubble forming an irregular packing or foundation across the soft fill of the pit.

Cutting into this packing to the south of pit [1021] was posthole [1087] with another posthole [1075] further to the south-east. Both were 0.3m diameter and 0.3m deep filled with dark brown sandy loam (1086), (1074) containing limestone post packing.

To the south east of the well, the former test trench was reduced in depth where it exposed mixed grey-brown silty clay (1048), (1051) containing limestone, broken brick, roof tile, animal bone, oyster shell and pottery identical to layers (1071), (1070) to the north of the well. Further south this was covered with up to 0.25m of dark brown/black clay loam (1049) containing fragments of limestone, broken brick, roof tile, occasional animal bone, oyster shell, glass and pottery from the 19th century.



Walls [1133], [1135], [1138] and [1140], looking north-west

Fig 23

Extending across the remainder of the site was a layer of dark brown sandy clay loam (1048) formed from mixed re-deposited topsoil, subsoil and dumped up-cast soils containing limestone fragments, loose gravel, broken brick, roof tile, glass, animal bone, oyster shell and charcoal. It was covered by and blends with darker brown sandy clay loam (1049) containing much the same material as (1048) and forming the upper level of the machined surface of this part of the site.

Both layers were cut through by a series of consistent, sub-rectangular pits, [1050], [1056], [1101], [1102], [1103], [1104], [1105], [1106], [1107], [1108], [1109], [1110], [1111], [1112], [1113], [1115], [1117], [1119] & [1123]. These were all between 1.5m to 2.8m long, 1.0m to 1.2m wide and up to 0.7m deep.

They were all sampled to establish the nature and date of the fills. All were filled with varying concentrations of grey-yellow sandy clay containing broken brick, roof tile, window and vessel glass, occasional animal bone, limestone fragments, decayed lime mortar/plaster and pottery dating from the 19th century.

At the south of the well [1045] below the surface layer (1049), the outline of three further sub-rectangular pits, [1013], [1015] and [1017] were partially exposed. All produced clay pipe, glass or pottery dating from the 19th century.

A sondage at the centre of the south-east boundary of the excavation revealed another sub-rectangular pit [1019]. Further west, another sondage partially exposed yet another such pit [1123], both identical in form and fill to the scatter of similar pits across the site. All date to the 19th century.



Scale 1:200 (A4)

Plot 8, phase plan Fig 24

Towards the rear of Plot 8 and 9 (Fig 24)

The area to the south of the 2011 back plot boundary was badly disturbed by demolition, site clearance and levelling, the earlier insertion of sewer and service trenches. A series of 19th- and 20th-century sewers and storm drains were aligned north-east to south-west, parallel to the back plot boundaries of the Market Square properties which they served.

This excavation area is south east of that above and continued the line of the 2008 excavation across the plots. This plot was 16.5m wide and shared its western boundary with Plot 7, a brick wall on a foundation of limestone fragments.

This wall location matches mapped plot divisions shown on the First Edition Ordnance Survey, where it seems to imply a long path from the property all the way to the river.

The recent plot boundary to the east was similarly marked by a brick wall, limestone footing in a foundation trench. The furthest and identical plot boundary, east of Plot 9 survives.

17th century

Exposed during the watching brief for diverting sewers, pit [376] was 0.95m in diameter, 0.3m deep, with steep sides and a flat base. It was filled with yellow-brown sandy clay (377) containing a dump of angular limestone, lime mortar and broken roof tile. Pottery from this pit is dated to the 17th century.

19th century

Pit [347] was also revealed at the north of the site. It was 1.2m in diameter and 0.4m deep, with steeply sloping sides and a dished base. It was filled with grey-brown sandy clay loam (348) containing broken brick, tile, limestone, gravel and occasional flecks of charcoal. Pottery from this pit is dated to the 19th century.

The archaeological excavation trench extended south-west to north-east across the plot and revealed a series of very carefully and deliberately-dug rectangular pits [60], [65], [33], [42], [62], [76], [81], [83], [85], [87], [89] (Figs 25 and 28).

While these were of different sizes, up to 4.5m long and 1.8m wide, they all had vertical sides, flat bases and were teeming with late 19th century pottery, clay tobacco pipe fragments, glass and demolition debris, in some cases in deposits 600mm thick. Only a selection was kept, so numerous were they. All seem to have had a similar purpose of rubbish disposal.

Cutting through these pit fills were two postholes, [35] and [53]. Both were up to 0.3m diameter and 0.3m deep. Both had near vertical sides and flat bases. Posthole [35] contained a limestone post-pad (36) and limestone post-packing. Posthole [53] contained a brown sandy clay post-pipe (55) 0.2m wide and packed around with broken limestone (54) post packing. Both postholes and the upper part of pit [33] were sealed below sterile grey-brown sandy silt (36) up to 0.1m deep.



Recording pits [88], [81], [62] [83], [85] [87], looking north-west

Fig 25

Cutting through the upper fill of pit [33] at the extreme west, boundary ditch [391] was 0.9m wide and 0.8m deep, with steep sides and a slightly dished base. It contained a limestone foundation supporting three courses of brickwork (32) all bonded with yellow lime mortar.

About 1.5m to the east, extending across the full width of the archaeological trench and cutting the upper fills of pits [65] and [33] was the continuation of an internal plot division wall [341]. This had been truncated in site clearance but survived as a three-course foundation of irregularly coursed limestone supporting three courses of red brick wall (350) laid in alternating courses of headers and stretchers and bonded with yellow mortar.

About 8m to the east and aligned north-west to south-east across the archaeological excavation trench was pit [27], 0.9m wide and 0.55m deep with sloping sides and a rounded base (Fig 26). It was filled with orange-brown sandy clay loam (28) containing occasional gravel and flecks of charcoal. It was re-cut to the north by pit [25] 2.5m long, 1.8m wide by 0.95m deep, tapering out to the south-east. It had near vertical sides and a flat base. It was filled with orange-brown sandy silt (26) containing fragments of limestone and a single residual sherd of 15th century pottery.

At the north of the archaeological trench, circular pit [57] was 1.0m in diameter and 0.15m deep, with vertical sides and a flat base with a deep groove around the outer circumference (Fig 27). It contained the decayed base and lower timbers of a wooden barrel, filled with grey-brown silt clay (58) containing occasional animal bone and pottery. Seven corroded iron nails (SF 5-11) were recovered from the base of the pit.



Pit [27] and re-cut [25], looking north-west

Fig 26



Pit [57], looking south-east Fig 27

Cutting the fills of pit [42] and foundation trench [48], pit [56] was 0.6m square and 0.2m deep. It was filled compact yellow sand [55] packed with limestone forming a flat post pad or base. Its use is unknown (Fig 28).



Pit [76] and [79] in foreground, post-pad [56] and pit [42] at the rear Fig 28

Plots 9 and 10 (Fig 6)

Plots 9 and 10 lay at the east of the development area, bounded to the east by a double thickness brick wall built onto limestone foundations. The wall is of regularly coursed red brick interspersed with blue bricks to form a chequerboard type pattern. Further south it has been replaced by a modern chain-link fence supported on concrete posts.

To the west, the boundary with Plot 8 survived in places as a limestone foundation layer aligned roughly north-west to south-east and matching the boundary line shown from the earliest mapping of the site. The plot is 11m wide at the rear of the street front plot tapering slightly to 10m wide at the south-east at the limit of development.

This plot was cut through by modern service trenches parallel to the rear of the street front Plot boundary and by two sewer trenches extending the full length of the plot to the river in the south-east. Excavation ended at this point due to this disturbance.

5.4 The river margin (Figs 29 & 30)

At the south-west of the site, the southern end of the archaeological excavation trench was widened to 10m, stepped and deepened to establish the depth of overburden and silting and to try to locate the upper surface of the river gravel terrace at this location.

Naturally deposited orange-grey silts, sands and flint rich gravels (15) were exposed at about 3.0m below the modern ground surface (74.75m aOD). The gravels showed clear signs of braiding with lenses and ribbons of fine and coarse sands and gravel mixed with ribbons of grey, yellow and blue-grey silt clays. These were covered with a layer of orange-grey coarse sands and flint gravel (14) up to 0.3m deep, containing fine grey silts, occasional animal bone and a small flint blade. Pottery from this fill is dated from the 13th to 15th centuries.

Sealing this was a layer of dark brown organic peaty material (13) up to 400mm thick and extending up the valley slope to the north before tapering out at about 17m from the southern limit of excavation. This layer contained animal bone, fragments of tile, charcoal, a fragment of leather (SF 43) and pottery dated to the 16th century. Above this had accumulated a series of homogenous grey-grey/blue silts and sands (12) up to 1.2m thick containing occasional fragments of limestone, flint gravel, tile, animal bone, a fragment of vessel glass (SF 1), a copper alloy ring (SF 2), a metal spur (SF 3) and pottery from the 17th century.

This had been covered with a deliberate dump of orange-brown sandy clay (5) up to 1m thick, mixed with re-deposited subsoil, topsoil, broken brick, tile, limestone, mortar, glass, animal bone, clay pipe. Pottery from this deposit is dated to the 19th century.

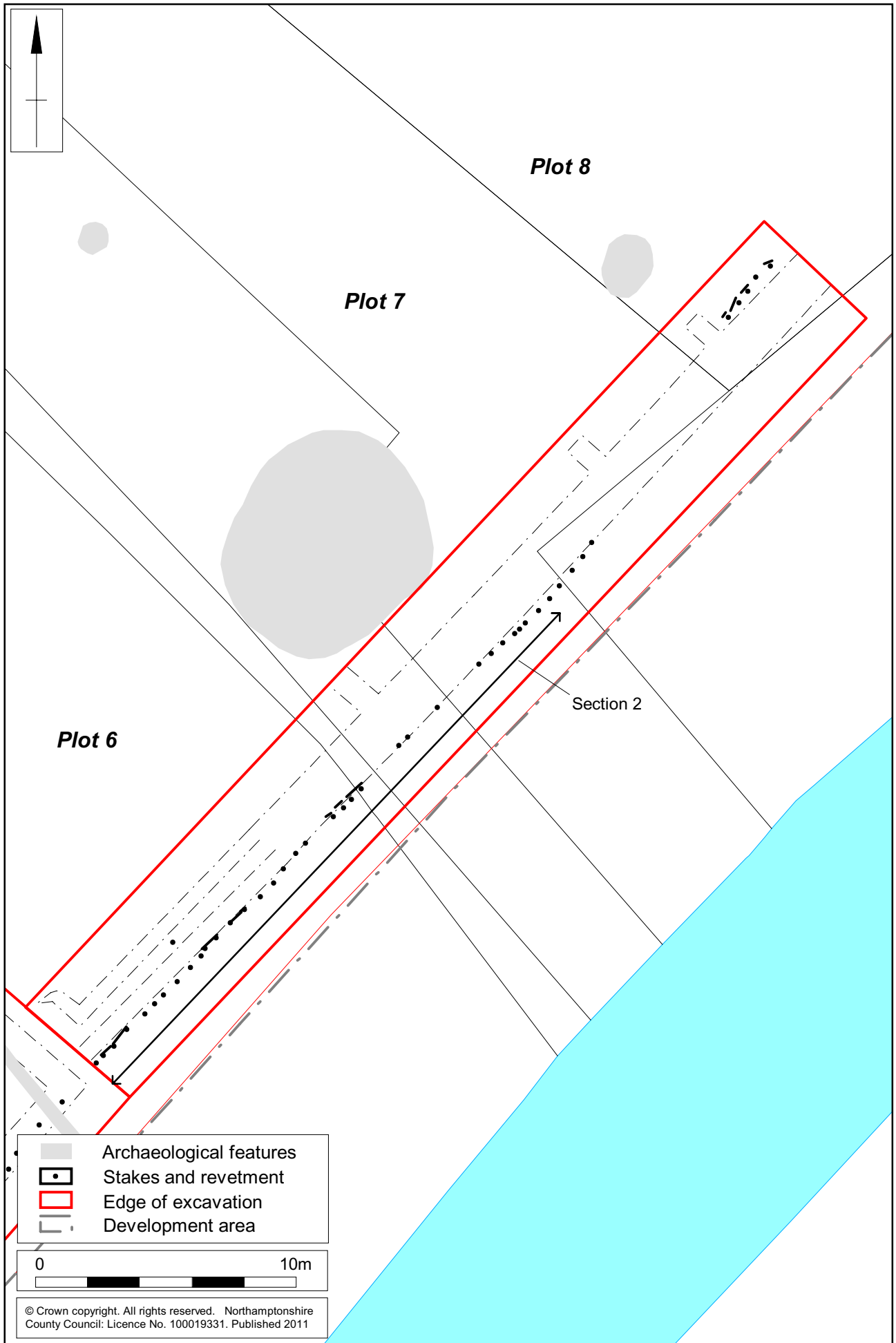
The whole area had then been covered by a layer of grey-brown sandy clay topsoil (4) up to 300mm thick and containing small fragments of broken brick, tile, glass and clay pipe. It had been levelled and truncated by the application of up to 400mm of 'hoggin' (3) forming a sub-base for a layer of orange-yellow/brown coarse gritty sand and 200mm of gravel (2) forming the bedding layer for a modern tarmac surface (1). This had up to five layers in places indicating heavy wear and repair since it was originally laid out in the 1980s.

To the west of the car park, excavations for a new sewer revealed the river terrace gravels (15) sealed by the same discontinuous ribbons and lenses of silts (14) and peat (13) separated by braided channels of fine silts and sands (12) formed by seasonal fluctuations and changes in the river currents.

During watching brief of the excavation for the diverted main sewer across the south-east of the site, a line of timber posts and stakes were exposed, aligned roughly parallel to the River Great Ouse.

The timbers were driven down through the silts (12), peat (13) and gravels (14) and proved almost impossible to remove without machine assistance. There was no consistency in size, shape or length. Some timbers were round, others roughly shaped and others clearly re-used, one exhibiting a mortice and tenon joint with a projecting square lug.

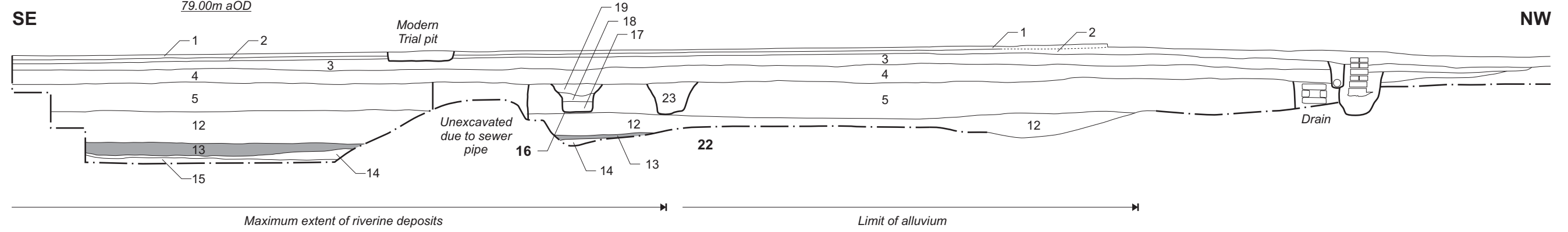
The timbers were at about 0.5m intervals and in places, split round 'laths' up to 60mm wide were woven between the posts forming either a form of fencing or more likely, a revetment, probably to support and consolidate the river bank. At one point, the excavation revealed three lengths of timber planking, slightly over-lapped and driven end on into the silt forming a short (600mm wide) section of boarded 'solid' protection to the river bank.



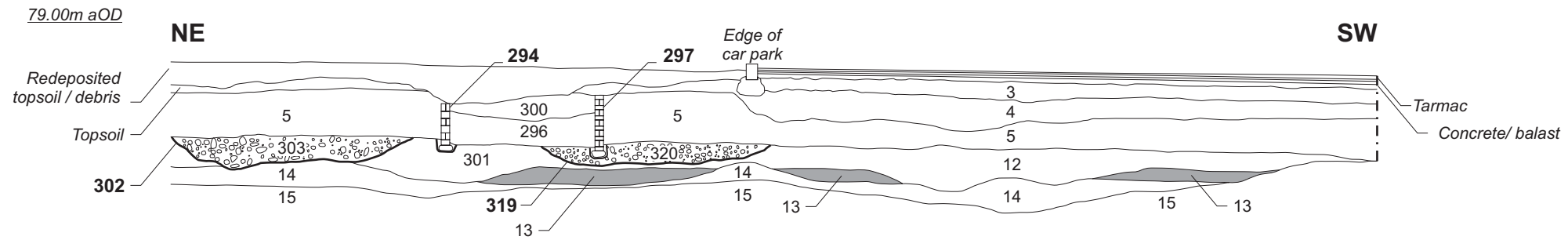
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Plan of river edge excavation and post alignment Fig 29

Section 1



Section 2





River edge, post and plank alignment, looking south-west Fig 31



Re-used timber with mortice and tenon joint and lug Fig 32

All of the timbers and the alluvial silt (12) had been truncated and then covered with an homogenous layer of dark grey-brown sandy clay loam (5), up to 1.6m deep and containing angular limestone, broken brick, roof tile, clay pipe, glass and 19th-century pottery. This was sealed by dark brown sandy clay topsoil (4) up to 700mm deep, containing limestone, broken brick, roof tile and lime mortar.

Beyond the development site, the river bank is thickly wooded with mature trees and heavy shrubbery. Aligned parallel to the river and winding between the trees was a low earth bank, 2m wide at the base and up to 1m high. It is probable that this marks an earlier levee or flood defence along the side of the river. The bank had been cut through in the past to allow surface water to drain from the development site into the river. Examination of the soil each side of the drainage channels revealed broken brick, roof tile, bottle tops, bottle glass and white glazed wares of the 19th and 20th centuries.

During the watching brief, the line of excavation cut through the timber revetment only at the west of the site. Further east, the respective alignments diverged, preventing further sight of the timber supports and any certain assessment of how far they extended along the river bank.



Lower alluvial river deposits, looking south Fig 33

6 THE FINDS

6.1 Pottery by Iain Soden

A total of 932 sherds of pottery were recovered, weighing 26.86kg. Of these, 705 (21.33kg) derive from the set-piece excavations and the follow-up watching brief of 2008, while the remaining 227 (5.53kg) were excavated during the 2011 watching brief contingency area. The pottery comes in 37 different traditions or types (rarely distinguishable by fabric alone) and spans the period c1200-c1900.

The dates of the production ranges relevant to this site have been checked against definitive studies, where these have been previously carried out. For the best overviews, see Barker (1986 a & b), Barker and Halfpenny (1990), Hildyard (2005), Hurst et al (1986), McCarthy and Brooks (1988), Mellor (1994), together with Pearce and Vince (1988)

The average sherd weight overall was 28g, with little more than 1g difference between the average from the trench of 2008 and the watching brief contingency area of 2011. This suggests that patterns of dumping and, perhaps more importantly, land use affecting deposits, differed little across the site or the individual plots. Being principally pit-based deposits a long way back from the domestic and commercial frontages, they were not further disturbed, except for the excavation of additional pits. Land was clearly not at a premium.

Medieval beginnings

The earliest pottery on the main 2008 site was medieval, but was found almost exclusively in the former Great Ouse river bed mud/peat (13) and its subsequent silting (12). The sequence suggests that the muddy peat which formed over the gravels in the 16th century was sealed probably by a substantial and prolonged period of silting which lasted in excess of a century, the latest inclusions being Frechen stoneware and feathered slipware of the later 17th century.

A few medieval sherds derive from two pits in Plot 8, namely pits ([21] producing 48 sherds] and, cut into it, ([26] producing 6 sherds]. Their latest pottery in both cases puts their infilling into the 16th century. A later pit cut into 26 produced 16th-17th century Martincamp stoneware in quantity [30]. Similarly, in the same plot a huge well-pit [69] cut into the natural geology for a clay-lined well was backfilled with layers of soil containing exclusively medieval sherds (6 of them and in their own right residual inclusions). These are the only features of probable (late) medieval date anywhere on the site. All other medieval pottery was residual in later features and layers.

As might be anticipated the medieval material, whether stratified or residual, was primarily of Potterspury or Brill/Boarstall manufacturing traditions, the two principal closest regional production centres. Utilitarian coarsewares were also present, from as far away as (possibly) Wiltshire. This is not unusual as Wiltshire flint-tempered pottery is known all over Oxfordshire and well up into Warwickshire and Coventry, probably as a result of the known principal wool and woollen cloth carriage routes from the port of Southampton to the Midlands from c1300-1500.

Overall, of 932 sherds, 240 were medieval, by which is meant pre-1500, not including late-medieval finewares such as Cistercian and continental stoneware imports. This equates to 25% of the assemblage as a whole. However, with only 60 of these being likely inclusions in features of the medieval period, residuality at the site is running at a very high level indeed. Only 6% of the medieval pottery was definitely in-period.

The pottery recovered comprises the following types and fabrics:

Table 1: Pottery types present with production range

Type	Production range
Shelly Coarseware	c1200-1500
Sandy Coarsewares	c 1200-1500
Flint tempered ware (?Wiltshire)	c 1200-1500
Oxford-type ware	c 1200-1300
Brill/Boarstall Ware	c 1250-1500
Potterspury Ware	c 1250-1500
Late medieval reduced wares	c 1400-1500
Tudor Green ware	c 1400-1500
Midland Purple Ware	c 1450-1700
Cistercian Ware	c 1450-1580
Langewehe Stoneware	c 1450-1550
Raeren Ware	c 1475-1550
Midland Yellow Ware	c 1500-1700
Glazed red earthenware	c 1550-1650
Martincamp stoneware (type II/III flask)	c 1550-1650
Frechen Ware	c 1550-1675
Midland Black Ware	c 1580-1700
Westerwald Stoneware	c 1600-1725
Tin Glazed Earthenware	c 1620-80
English brown stoneware	c 1680-1700
Feathered Slipware	c 1680-1740
Manganese-glazed earthenware	c 1680-1740
Nottingham Stoneware	c 1700-1800
White salt-glazed stoneware	c 1720-80
Tortoiseshell creamware	c 1740-60
Creamware	c 1740-80
Black Basalt Ware	c 1770-1830
Blue shell-edged Pearlware	c 1780-1820
Mocha	c 1790-1850
Lustreware	c 1805-40
White glazed earthenware	19th-20th century
Bone china	18th-20th century
Blackware Pancheons	19th-20th century
English Stoneware	19th-20th century
Underglaze transfer-printed earthenware	19th-20th century
Church Gresley-type wares	19th-20th century
Unglazed earthenware (flower pot)	19th-20th century

Imported pottery and the end of the medieval period

A small group of pottery types form type-fossils for the end of the medieval period. These are the fine ware drinking vessels which began to be introduced from the late 15th century. Presaged by the success of Tudor Green c1400, which was still in essence a medieval tradition, changes in practices at table, including a gradual growth in beer-drinking, spread from the Continent generally and the low-countries in particular. Raeren, Frechen, Langerwehe and eventually Westerwald stonewares, principally distinctive drinking tankards, became (and remained) popular, alongside Cistercian wares. None is unusual in an urban context across England in the period c1500-1650. Nor is the Martincamp flask unusual, but is a type-fossil for the later 16th and early 17th centuries.

Here at Bridge Street, there is a widespread but low incidence of these types, suggesting that the town's drinking habits may not have been much different from those of any other county town. Forty sherds of imported stonewares is not an atypical occurrence in an assemblage of this size (4% -although 21 sherds derive from a single Martincamp flask) while 53 sherds of Cistercian ware (6%) may seem a lot but it must be remembered that this thin-walled brittle type, shatters into smaller sherds than most other kinds of pottery. These probably represent a dozen or so vessels over a period of a century or more and spread between three plots. Most were residual.

At this period too are seen numerous sherds which fall under the general heading of Glazed Red Earthenwares. Initially these were imported from the Low Countries through the east coast ports, where they can be seen in ships' manifests in huge numbers, generally for cooking purposes, notably at Boston for which the Port Books are published. However, they were soon copied by English potters, probably including those at Potterspurty and it is not possible to separate the English from the continental this far in land. They are type fossils for the 16th and early 17th centuries. Here there were 88 sherds (9%) although most were residual in later contexts.

Pottery and changes in Buckingham's fortunes

It might be expected that the Great Fire of Buckingham in 1723 would have resulted in some archaeological manifestation. On these plots, however, the pottery shows no break in occupation. If anything the level of discard increases in the 18th to 19th centuries, at a time when the county town is traditionally held to have lost out economically to its growing neighbour, Aylesbury. Twenty eight separate contexts are dated to the 18th century or 18th to 19th century, with a further 75 securely in the 19th century alone. Clearly the plots represented here remained unaffected by the fire and neither abandonment nor economic stagnation is the case. The nature of the pits in which the 18th and 19th-century material was largely deposited, suggests, however, that there was no collection of rubbish at any time during that period, unlike some towns from the 16th century onwards, such as Coventry. It is possible, however, that the growing deposition of rubbish in this period may reflect a shift in economic focus because of the fire's effects elsewhere in Buckingham. A dearth of similar sites excavated in the town leaves no room for comparison.

Eighteenth-century wares include the type fossils of the immediate post-fire period, such as White salt-glazed stonewares and Creamwares, both plain and coloured. Together these three suggest a level of sophisticated dining which was aware of the latest fashions in ceramics. While these were not uncommon, they were prized materials at table in their day, despite them being mass-produced, often using Plaster-of Paris moulds for their detailing, a new innovation in the middle of the 18th century.

Nineteenth century mass-produced types show, as with much of the Midlands, the final death of the old country potteries, subsumed in the national and regional centres producing high-quality table wares in extraordinary numbers for consumption at home and across the British Empire.

The ubiquity of underglaze transfer-printed earthenwares, is a story seen in every town and city of England in which 19th-century archaeology is excavated. Dominated by Staffordshire products since about 1770, the archaeological record, at least in domestic ceramic terms, has ceased to be distinctive.

Conclusions

This is a relatively large assemblage of pottery, spread over three domestic plots. None of the plots in ceramic terms reflect specialist use or occupation, and certainly no industry is suspected.

Growing numbers of pits dug in the 18th and 19th centuries mean that few earlier post-medieval, and very few medieval features survived intact. Residuality of medieval ceramic material ran at levels of 75%, extraordinarily high. While this decreases with time, only the 19th century material ends up as largely undisturbed, once deposited. Unfortunately this is relatively mundane and not distinctive; being the range of table wares Buckingham shares in common with large numbers of towns and cities. Thus in ceramic terms the material is of little intrinsic interest and useful only for dating the archaeology, which sadly lacks obvious focus until the 19th century. Since the front part of the three plots already contains large rear extensions to the market place buildings, it is unlikely that these plots will ever produce comparable material to further understanding of the plot uses. The ceramics excavated in 2008 and 2011 are unlikely ever to achieve any greater significance for the plots since there will be nothing more to compare it with. Since this trench took such a narrow snapshot of three plots and is therefore incomplete and is unlikely to be expanded, there is no way ever to now whether the story told as a result of this excavation is typical of Buckingham's plot development or not.

6.2 Ceramic building materials by Pat Chapman

Ceramic roof tile

This assemblage of 335 tile sherds, weighing 24.57kg, comes from 64 contexts. It comprises virtually all flat plain roof tile, some with nibs and some with round pegholes, but not both together; a few ridge tile sherds; one green-glazed crest fragment and one hip tile..

Table 2: Tile dimensions

Context / feature	Dimensions (mm)	Dimensions (inches)
<i>Parliament 1477</i>	265 x 165 x 13	10½ x 6½ x ½
212 / pit 210	270 x 160 x 13	10 ⁵ / ₈ x 6¼ x ½
181 / pit180	290 x --- x 14	11½ x -- x ½
12/ river margin	--- x 150 x 13	-- x 6 x ½
47/	--- x 153 x 13	-- x 6 ¹ / ₈ x ½
212/ pit 210	--- x 153 x 15	-- x 6 ¹ / ₈ x ⁵ / ₈
43 /	--- x 155 x 13	-- x 6 ¹ / ₈ x ½
2x 43 /	--- x 168 x 13	-- x 6 ⁵ / ₈ x ½
49 /	--- x 168 x 13	-- x 6 ⁵ / ₈ x ½

The roof tile fabric is chiefly hard coarse sandy clay in shades from orange-brown to red-orange and a few dark red. There are a few tiles made from fine sandy orange, and a few others made from fine silty sand with an orange surface and wide black core, two sherds made from fine brown silty clay, including the hip tile and one fine silty pinkish-orange sherd. One tile has white lime mortar, up to 12mm thick, on both surfaces.

The only complete tile, which has a broken nib, is 270mm x 160mm and 13mm thick

(10⁵/₈ x 6¹/₄ x 1¹/₂ inches), which is a close match for the standard size established by Parliament in 1477 (Table *, Brunskill 1978, 90). However, another sherd surviving as a complete length is 290mm long (11¹/₂ inches) and so slightly longer. Seven tile sherds with a complete width survive, detailed in Table * below. The thickness of the tiles is typically 12-15mm with a few thinner at 11mm or thicker up to 18mm.

These flat tiles have either centrally placed nibs, or pegholes in the corners. Twenty nibs survive, nearly always pulled up and so leaving an indentation in the top of the tile. The 13 pegholes surviving, all round, are 11-15mm in diameter. The nibs and pegholes are not found together, which can happen, although both types of suspension come from the same contexts. One sherd has both pegholes surviving, 43mm apart but at an angle, one 10mm below the top, the other 25mm below. One sherd, from context (262), still has a light green glaze on the surface, another from context (47) has a dark green glaze, the only two examples of glazed flat tiles.

A large sherd from the side of a ridge tile comes from context (92), 25mm thick, and two other small curved sherds could also be from ridge tiles. The remnant of a green-glazed crest from a ridge tile, comes from context (266).

The bonnet tile hip, from context (12), is 15mm thick, the narrow end c 60mm widening to 140 before the broken end and a surviving length of 193mm, the curve has an angle of 130°. There is one modern 9mm thick machine-made tile context (239).

Although the size of ceramic tiles became fairly standardised in the 15th century, and were rarely much bigger, smaller tiles remained quite common up to the modern period, whether hand made or machine-made. Pegholes and nibs have a wide datable range, but the green-glazed ridge tile crest fragment is probably medieval. This assemblage contains tiles from the early post-medieval to the early 20th century. However, the lack of pantile sherds, which became increasingly popular from the late 17th century onwards, suggests that the majority of the building debris is earlier rather than later.

Stone roof tile

This is a small assemblage of 13 stone tile fragments, comprising eight of limestone and five of Welsh slate (Table 3). The limestone tiles are 12-18mm thick, one 25mm thick. There is one surviving peghole, 8mm in diameter. The thicker tile could be from nearer the eaves as stone tiles decrease in size from eaves to ridge, while slate tiles are uniform in size.

The Welsh slate tiles are 5-6mm thick. Welsh slate became very common from the mid 19th century thanks to the railways, probably replacing the local limestone tiles as required.

Table 3: Quantification of stone tile

Context/feature	No	Wt (g)	Description
12/ river margin	1	200	Limestone
43/	2	1364	Limestone
49/	1	118	Welsh slate
58/	1	13	Welsh slate fragment
68/ pit 67	1	250	Limestone
118/ pit 117	3	945	Limestone
183/ pit 182	1	57	Limestone, peghole
308/	3	180	Welsh slate
Totals	13	3127	

Brick

This collection comprises one complete and one damaged but almost complete brick, together with the remains of 13 others (Table 4).

Most of the bricks are 100-112mm wide and 60-65mm thick. One brick is unusually narrow, 43mm thick, from context (47). They are made from fairly coarse sandy clay with gravel inclusions, from orange-brown to dark red-brown in colour, and cindery to the touch as the majority seem to have been overfired to some extent. A few bricks have a skin of glassy green vitrification on some surfaces, indicative of exposure to intense or prolonged heat.

Three bricks, from contexts (212) and (258) are only 30-40mm thick, almost tile-like, and made from hard fine silty red-brown clay streaked cream with one smooth surface. These were probably made for floors rather than walls.

Two bricks have horizontal skintlings, raised ridges along the stretcher caused by the pressure from bricks stacked for drying. These bricks would probably be 19th century in date as the horizontal, rather than the diagonal skintling, is a feature of the increased mechanisation of the brick making process.

These bricks are locally-made, probably from the 18th century to the early 20th centuries. The vitrification could be the by-product of some industrial use, or the result of random fires since demolition. Those bricks which were overfired but not vitrified could have been used for decorative purposes, such as diaper patterns, as is seen in many of the boundary walls around the site. Most of the bricks have traces of white mortar, which is also adhering to the damaged surfaces.

Table 4: Brick dimensions

Context/feature	No	Dimensions (mm)	Dimensions (inches)	Comment
34/	1	-- x 108 x 50	--- x 4¼ x 2	Red-black, overfired, slight green vitrification, mortar
43/	1	--- x 100 x 62	-- x 4 x 2½	Dark red-brown, overfired, green vitrified skin
47/	1	-- x 110 x 43	--- x 4¾ x 1¾	Dark red-brown, overfired
49/	1	--- x 110 x 65	--- x 4¾ x 2½	Orange-brown, poorly mixed, horizontal skintling
92/	1	--- x ---- x 60	--- x --- x 2¾	Dark red black, overfired, green vitrification
211/ pit 210	1	223 x 102 x 65	8¾ x 4 x 2½	Reddish-pink, horizontal skintling
212/ pit 210	2	--- x ---- x 40	--- x --- x 1⅝	Red-brown streaked cream, smooth top
	1	---- x 105 x 62	--- x 4⅞ x 2¾	Dark orange, overfired
	1	--- x 108 x 65	--- x 4¼ x 2½	Dark orange, overfired
258/ pit 260	1	-- x 105 x 30	--- x 4⅞ x 1¼	Red-brown streaked cream, smooth top
	1	---- x ---- x 62	--- x --- x 2½	Orange-brown
259/ pit 260	1	230 x 112 x 70	9 x 4½ x 2¾	Red, overfired
	1	---- x 120 x --	--- x 4¾ x --	Orange-brown
	1	--	--	Red-orange
329/ pit 328	1	--- x 68 x 50	--- x 2⅝ x 2	Red-brown overfired

Floor and wall tiles

The floor tile sherd, from context (239), is plain and made of fine hard red-brown clay, 18mm thick, with a smooth/worn top. It could be medieval or early post-medieval in date.

The wall tile fragment, from context (68), comes from a Delftware-type tile made from fine white clay, 15mm thick, a corner with the remains of a blue and white fleur-de-lys on a white background with a yellow infill in the corner between the 'stems'. The tile could be 17th or 18th century in date.

Two small fragments, from context (104), are thin wall tiles. One tile is made from a pale buff fabric, 7mm thick, with a glazed white and yellow marbled surface, with only . . . AND . . . surviving on the back. The other is white glazed and 6mm thick. Both are 19th to 20th century in date.

Plaster

White wall plaster came from one context, (214). It appears to be one fragment broken into five pieces together c155mm long and c 10mm thick. There are the impressions of the laths on one side and straight deep combing with adjacent flat spaces on the other side.

Worked stone

There are four small pieces of stone, one broken, but only two are worked. A fragment of white marble, now burnt, in two joining pieces, comes from context (336). It comprises the corner fragment from a mantelpiece, 25mm thick, with a cyma reversa (reverse 's') moulding, and is probably Georgian (Joe Prentice pers comm).

One small fragment of granite from context (62), 14mm thick, has a polished surface and a worked edge with a ridge down the middle. This probably comes from a slab, such as were used for wash-stands, and so is probably Victorian.

The remaining fragments comprise an irregular lump of possible limestone, from context (92) and a small piece of sandstone with a naturally smoothed surface, from context (216).

6.3 The flint by Yvonne Wolfram- Murray

Eight pieces of worked flint were recovered as residual finds from medieval and post-medieval contexts. The artefacts comprise one core fragment, three flakes, two blades, one scraper fragment, and one barbed-and-tanged arrowhead.

Post-depositional edge damage was present on all artefacts consisting of occasional irregular nicks on one or both lateral edges. The scraper fragment was burnt, which was evident through patination, thermal crazing and pottlidding. The raw material was a vitreous flint ranging from mid to dark grey and honey coloured. Dark brown and grey cortex present on the dorsal surfaces of three pieces. The flints were probably locally procured gravel flints.

The core fragment had one visible platform for the removals of flakes. One surface was removed through a thermal fracture. There were three flakes, of which two were broken, and two blade fragments. One flake was squat and one other flake had a broad striking platform. The distal fragment of a scraper has abrupt and semi-abrupt retouch on the distal end and part up a lateral edge. The barbed and tanged arrowhead, 26mm long and 17mm wide, had invasive retouch on the dorsal surface with some cortex remaining.

A small amount of retouch was on the ventral surface on the proximal end, with the bulb of percussion largely remaining, and around the distal end to shape the barb-and-tang. It is likely that the arrowhead remained unfinished. The barbed and tanged arrowhead is indicative of the Late Neolithic/Early Bronze Age. The remainder of the worked flint is not directly dateable but the technological characteristics suggest broadly a Neolithic date.

Table 5: Summary of worked flint

Context	Type	Portion	Tool	Period	Material	Cortex	Comments
154 SF 18	Flake	Whole	Arrowhead barbed and tanged	Late Neolithic/ Early Bronze Age	vitreous light brown		post- depositional edge damage; one barb missing
178	Flake	Distal	Scraper, fragment	Neolithic	vitreous mid grey		thermal fracturing and pot-lidding, patination
28	Flake	Proximal			vitreous mid grey		slight post- depositional edge damage
183	Blade	Distal			vitreous mid honey	dark brown	post- depositional damage
183			Core, fragment	Neolithic	vitreous mid brown- grey	dark brown	one platform present, thermal
82	Flake	Whole			vitreous mid grey		hinge termination
61	Blade	Proximal			vitreous dark honey		post- depositional damage
14	Flake	Whole			Vitreous dark grey	Mid grey	Post- depositional edge damage



Barbed and tanged flint arrowhead (Scale 20mm) Fig 34

6.4 The clay tobacco-pipes by Tim Upson-Smith

A group of 206 clay tobacco-pipe fragments were recovered during the excavation. These comprised 28 bowl fragments, 174 stem fragments and four mouth pieces. The assemblage dates to between the early 17th century and the mid- to late 19th century. Of the bowl fragments all were complete enough to be datable using Oswald's simplified typology using bowl, foot/spur form (Oswald 1975, 37-41). Fourteen of the bowls had makers marks, split between five different manufactures.

The earliest pipes represented were six incomplete bowls and four complete bowls of Oswald G4's these date to between 1600 and 1640. All of these bowls, two mouth pieces and 50 stem fragments derive from a 5m wide pit [67] excavated in Plot 7. The pit had clearly been lined with brick or limestone walling but both wall and floor cladding had been removed before backfill removing all evidence for its original use. Pottery from the back-fill is dated to the 17th century. Two of the bowls have makers' marks, on the heel, one is incomplete and shows a star the other is complete but faintly stamped and possibly is marked RW with a star over.

A quantity of pipe fragments were recovered from the fill of a D-shaped brick-built structure [210] at the north of Plot 6. This had been within the foundation walls of buildings recorded at this location of the First Edition Ordnance Survey mapping of 1880. Pottery from the fill contained pottery from the 19th century. Recovered from this context were ten complete bowls, a bowl fragment and a single mouth piece, all of early to mid 19th century date.

Of the complete bowls one was a plain smooth bowl with no spur or mark, the second was marked 'CARTER BANBURY' in a circle on the stem side of the bowl (Another bowl with the same stamp was found in context (352). There were three Carters working in Banbury during the mid 19th century, but as there is no initial it is not possible to assign the pipe to a particular one. The remaining bowls from context (212), pit [210], are all marked RR in relief on the spur and are the product of three different moulds. There are five examples with the top of the bowl parallel to the stem, with a slightly longer spur, two complete bowls and one incomplete bowl with forward drooping bowls and short spurs. The incomplete bowl is a second as the hole is blocked with pipe clay where it enters the bowl, so was therefore un-smokeable. The other pipes from this context have been smoked so it would suggest that this 'second' got through the manufactures quality control process and no doubt its purchaser was not happy! The final bowl from this context is a decorated example with nine ribs on either side with an oak leaf design on the front and back of the bowl. The initials RR may be R Roberts of Northampton as examples of his pipes have been found in north Buckinghamshire (Moore 1980, 11). All of the bowls from this context were in particularly good condition with 4½" of stem surviving on one example.

The remaining clay pipe fragments are spread across several contexts with mainly odd stem fragments which serve to refine the pottery dating, or in some cases demonstrate the residuality present on the site.

6.5 The glass by Tim Upson-Smith

Bottle, window and vessel glass was recovered from a number of contexts during the excavation. Of the glass the bulk came from 19th-century deposits and was too fragmented to identify, material from 19th-century deposits which had been securely dated by pottery has been discarded.

Vessel Glass

Two fragments of what are probably wine glass were recovered from separate contexts. Both contexts have been dated by pottery to the 17th century.

The piece from context (12) is a fragment of wine glass base in clear glass (1.5mm thick), the edge of the base has been neatly folded over. The outer surface of the glass has a pearlescent effect and is starting to flake. The other fragment, from context (68), is part of the body of the glass. This fragment has the same finish as the other and is 1mm thick, although thin the glass does have an air bubble suggesting that it was not of the finest quality. A further almost complete glass pot was recovered from context 296, which was dated by pottery to the 19th century. The pot is in milky white translucent glass and is marked 'Boots' on its base, the style of the logo would suggest a 1930s date as it matches that of the 'Boots No 7' brand which was launched in 1935.

Window glass

Early glass made before the late 17th century was generally blown and swung to create a cylindrical form. The cylinder had the ends cut off and was then cut along its length before being re-heated, opened and flattened into sheets before being laid on a bed of sand and polished. This type of glass has a distorted ripple effect with a greenish tint, often with air bubbles or other imperfections. It tends to be 3mm-5mm thick. It is known as Cylinder, Broad or Muff Glass.

From 1674 onwards, Crown Glass was developed and became the norm until the 1830s. The molten glass was blown, the resultant glass bubble then being opened and spun into a disk up to 1.3m (4 feet) in diameter. The cooled glass could be cut into panes, with the rounded edges and central bullion where the rod had been attached being discarded. This produced a clearer glass but still retained some ripples and distortion. Often the waste pieces were used in lower quality buildings giving a distinctive 'bulls eye' effect from the bullion or severely distorted vision through the panes incorporating the spun edges.

Early Crown glass was extremely fine, often barely 1mm thick. As it became established as the norm, there was increasing demand for larger windows, and with the move from leaded glass in mullioned windows to larger sash type windows, there was a matching demand for larger sheets of glass. These demands required the spun glass to be produced in thicker sheets to provide the tensile strength to survive in the larger window frames. From the early 18th century onwards, Crown glass tended to get thicker as windows and pane sizes grew larger.

Bulk samples of the glass recovered from the site at Bridge Street, Buckingham were examined for distinctive features. The vast majority was undifferentiated fragments of window glass with no diagnostic features. This was discarded.

Edge pieces, those with distinctive twisting, warping or other features were recorded in the table below. All of the glass examined exhibits clear indications of being Crown glass. It has a slight greenish tinge, the edges have distinctive curved profiles and while clear and transparent, there is still a slight ripple and distortion effect when viewed obliquely.

The table below indicates a mean sherd thickness of about 1mm except where the edges have curled when it is a double thickness.

It is highly probable that the glass recovered at Bridge Street dates from the late 17th or early 18th century. Later glass would tend to be progressively thicker. It is probable that these dumps represent the replacement of the earlier thin glass with newer, thicker and larger sheets of glass as the street front buildings were replaced or refurbished. It remains an outside possibility that this glass could represent clearance following the great fire of Buckingham in 1725 when 137 of the 358 buildings in the town were destroyed. This may further supported by the presence of glass fragments within the sample that are sooted, twisted and warped from being exposed to heat and fire. Smaller domestic fires are a more probable source as is destruction of timber framing by burning following removal or demolition.

Table 6: Window Glass

<i>Context/feature</i>	<i>Weight (g)</i>	<i>Number</i>	<i>Colour</i>	<i>Thickness</i>
68/ pit 67	10.4	3 other	Pale green	1-1.75mm thick
121/ pit 120	507.7	29 edge pieces 12 other	Pale green	Up to 1.7mm thick
214/ pit 213	6.3	2	Pale green	1mm thick
246/	365.9	23 edge pieces 8 other	Pale, green, clear	1-1.75mm thick
334/ pit 333	61.7	2 edge pieces 1 edge folded over and fused	Pale green	1mm thick fold 2mm thick
375 pit	538.7	18 edge pieces, 4 other	Pale green	1-1.75 mm thick

6.6 Other Finds

by Tora Hylton

Introduction

The excavations at Bridge Street, Buckingham produced a group of 45 medieval and post-medieval small finds. The majority were recovered from Plot 6, with smaller numbers recovered from Plots 7 and 8. In common with the pottery assemblage, successive soil disturbances have resulted in a high level of residuality. The assemblage is dominated by iron nails, but other finds include items for domestic use, dress and the use of horses. A knife handle and a possible 19th-century chemist's mortar are worthy of illustration (Figs 35, 36).

Medieval finds

Finds of medieval date comprise a silver coin and a copper alloy pin, both were from Plot 6. The silver coin is illegible and its oval shape suggests that it may have been clipped, it was recovered from fill (1061) in medieval pit [1069]. The pin was recovered from the base of boundary ditch fill (185), together with an assemblage of 16th and 17th century pottery. Typologically it represents a Margeson Type 1 pin with a wound wire head (1993, fig 31), and dates from the late 15th or early 16th centuries.

Post-medieval finds

Post-medieval finds were recovered from Plots 6, 7 and 8. With the exception of a small number of finds recovered from an alluvial silty layer (12), all the finds were recovered from pits dating from the 16th-19th centuries and foundation trench [210].

Dress and accessories

There is a small group of finds which may be classed as dress and dress accessories. They include two pins, a lace tag end and a shoe. The pins could have had any number of uses, one both examples were recovered from 17th century deposits in Plot 6, linear feature [182] and pit [142].

They have circular-sectioned shanks and wound wire heads, patches of a white metal coating is visible on the shank of one of the pins.

Tag ends or chapes, were used to secure the ends of laces and prevent them from fraying. One complete example was recovered from pit [188]. It has been manufactured from a strip of copper alloy sheet, which has been rolled to form a tapered cylinder and has a small perforation at one end for securing the lace.

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Tag ends or chapes, were used to secure the ends of laces and prevent them from fraying. One complete example was recovered from pit [188]. It has been manufactured from a strip of copper alloy sheet, which has been rolled to form a tapered cylinder and has a small perforation at one end for securing the lace.

A fragmentary shoe was recovered in numerous pressure-distorted pieces from peaty alluvial layer (13), part of the silt infilling the wider river channel at the south of the site. It is tempting to see it as having been lost by a careless wearer stepping deeply into wet silt. The shoe is a round-toe turnshoe of the early 16th century. The fragments represent parts of the upper, the rand/welt and the sole. It is an adult shoe but it is not possible to state its modern size equivalent. Very similar and complete comparative examples are known, particularly from medieval Coventry where there are large museum collections amassed since the 1920s (Thomas 1980). More recently (2005) well-dated similar examples were recovered in large numbers (121) from Coventry's town ditch, which was in-filled and the subject of cleaning-out orders during the 16th century (Mould in Mason et al, forthcoming).

Other small leather fragments were present in a variety of riparian contexts but none is worthy of specific comment and none have distinguishing features.

Coins

There are two post-medieval coins. One, (SF14) from context (119) is illegible. The other is a coin of Napoleon III (SF 24) and was recovered from deposit (320) it dates to the 19th century. The coin is perforated (through the third digit of the date), suggesting that it had been reused as a pendant for suspension.

Obv: Napoleon Empereur III, dated 18_6

Rev: Empire France cinq centimes

SF 24, Context 320

Household equipment

Items for domestic use include two spoons, a candle holder and a bone handle from an item of cutlery.

The candle holder was residual within a 19th-century deposit in Plot 8, pit [62]. Although incomplete, the base and much of the cup is missing, enough survives to indicate that it is a shaft fragment from a type of candle holder which dates from the 16th/17th century. A vestige of the cup survives at the top of the shaft and there is an angled collar just above the socket for fixing into a basal tray. Candle holders of this type are not uncommon and similar examples have been recovered from London (Egan 1998, fig 69, 338) and Norwich (Margeson 1993, fig 49, 537, 539).

Two spoon bowls were recovered from 18th/19th century deposits in Plot 6. One is made from pewter and was recovered from context 310. The bowl of the spoon is 'fig-shaped' and it still retains a vestige of the handle, which has a lozenge-shaped cross-section. Stylistically it dates to the 16th century and it may be paralleled by examples from London (Egan 2005, fig 101) and Coventry (Muldoon and Brownsword 1984, 9-18). A metal alloy press-moulded bowl from a 19th century sugar-spoon bowl in the form of a stylised scallop was recovered from pit [375].



Bone knife handle (Scale 20mm) Fig 35

Part of a bone handle for a scale-tang knife or similar item of cutlery was recovered from the fill of a 19th-century boundary wall (1129) (Fig 35). The handle-terminal is missing, but what remains, comprises two adjoining scales attached to the remains of a flat-sectioned iron tang by means of three iron rivets. The scales have D-shaped cross-sections and they expanded slightly towards the terminal (now missing). The exterior surfaces of the scales are furnished with a crudely incised cross-hatched motif, a feature which was not only decorative but would also have acted as a grip. This fine handle probably dates to the 19th century.

Building Equipment

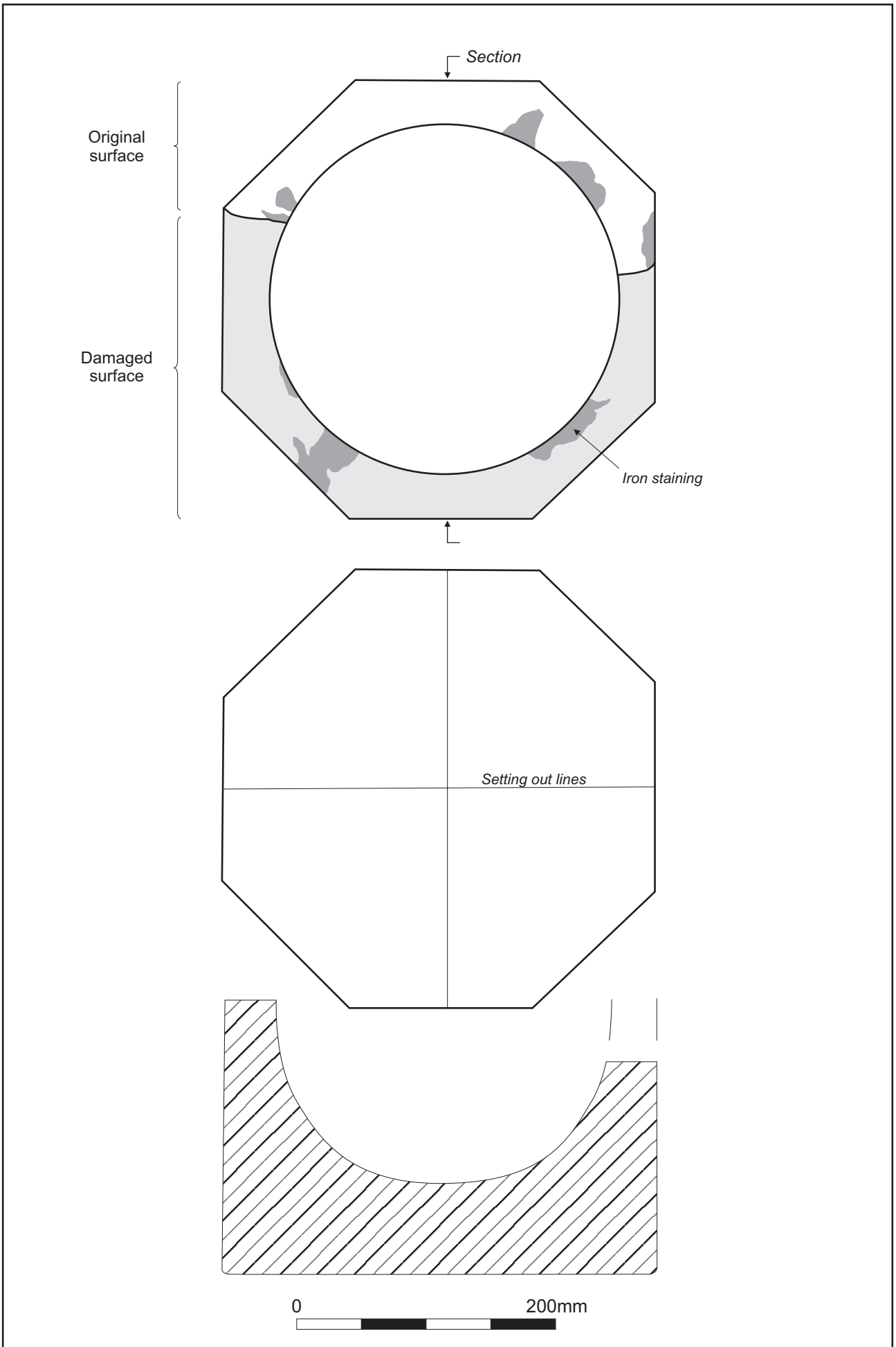
Building equipment is represented by fragments of window came, lead waste and 19 iron nails. The fragments of lead window came and lead waste were recovered from an 18th century pit [120] in Plot 6 and from 19th century pit [300] in Plot 7. The pieces are H-sectioned, milled and measure up to 140mm in length; two sizes are represented, measuring 8mm and 12mm wide, presumably reflecting stylistic differences in fenestration.

A large mortar

An almost-complete, fine-grained limestone, stone mortar was recovered from Plot 8, where it was stood upright in a 19th-century pit (Fig 36). It may have been an item for show purposes, possibly from a chemist's shop or druggist's business. If used it would have needed a huge pestle to go with it and would have been far too large to tip up or otherwise empty effectively.

It has a smooth, deep, concave interior with a cylindrical form and was polygonal on the exterior. The rim has been damaged.

During the 2011 watching brief, a few examples of small domestic-scale modern mortar fragments were also seen amongst (uncollected) surface material in association with 19th-century pits in Plot 8. These might lend weight to the presence nearby of a chemist or druggist business during the 19th century.



Scale 1:4 (A4)

Stone mortar, 19th century Fig 36

Horse equipment

Finds relating to the use of horses include, a rowel spur and a complete horseshoe. The spur was recovered from a 17th century peaty alluvial layer (13) along the river edge in Plot 6. The spur has a rectangular cross-section and straight sides, which taper towards the terminals (now missing). The back of the heel is decorated with a motif of incised lines radiating from just above the neck. The neck is short and straight with a curved down box, which is split into two and still retains a 16-point rowel with conical bosses. A complete horseshoe was recovered from a large 17th century circular pit [67] in Plot 7.

6.7 Environmental analysis

by Rob Scaife

Introduction

A peat layer intercalated between humic, minerogenic alluvial sediments was discovered during excavations of this site, at the southern end of Plot 6 where a former river channel was located (Contexts 12, 13, 15). This medieval to Tudor sequence had clear potential for pollen analysis and thus, for providing data on the local vegetation and environment. This proved to be the case with well-preserved and diverse pollen assemblages recovered. This report details the results of this investigation.

Palynological techniques

Standard pollen extraction techniques were used on samples of 2ml volume (Moore and Webb 1978; Moore et al. 1992). A pollen sum of 300 grains was counted for each level plus marsh/aquatic, spores and miscellaneous elements. Calculations are given as percentage of the pollen sum (dry-land taxa) and for autochthonous taxa as a percentage of the sum plus the aquatic/mire category.

Spores are similarly dealt with. Pollen diagrams (figures 1-2) have been constructed and plotted using Tilia and Tilia Graph. These procedures were carried out in the Palaeoecology Laboratory of the School of Geography, University of Southampton.

The pollen data

Overall, the pollen assemblages contain only small numbers of tree and shrub pollen when compared with the herbaceous elements which are present. However, the diversity of trees, shrubs and herbs taxa is high. There is little stratigraphical variation in the profiles and, as such, no local pollen zonation has been carried out. The principal characteristics of the assemblages are as follows.

Trees and shrubs

As noted, the absolute numbers of tree and shrub pollen is small although there is a moderately diverse range of taxa present. Only *Quercus* (oak), *Corylus avellana* type (hazel but may include bog myrtle) and *Fraxinus* (ash) have more or less continuous presence, albeit in small numbers. *Betula* (birch), *Pinus* (pine), *Ulmus* (elm) and *Alnus* (alder) occur sporadically. Shrubs also include occasional *Sambucus* (elderberry), possibly *Rubus* (bramble), *Sorbus/Crataegus* (hawthorn), *Prunus/Malus* (apple/plum group) and *Salix* (willow).

Herbs

Herbs are dominant throughout (90-99% of total pollen). Poaceae are most important comprising non-cereal (to 68%) and cereal pollen (to 29%). Other continuous records include *Ranunculus* type (buttercups; 1-3%), *Sinapis* type (charlocks; 3-4%), various Fabaceae including *Lathyrus* (pea; to 3%), *Plantago lanceolata*; to 8%), and Asteraceae (dandelion and daisy family (including *Anthemis* type, *Centaurea* spp. and Lactucoideae). Of note also is *Cannabis sativa* type (hop and hemp).

Marsh and aquatic

Although this appears to have been a wetland habitat (river floodplain?), there are few pollen taxa present from this group. Only small numbers of Cyperaceae (sedges), *Myriophyllum spicatum* (water-milfoil), *Potamogeton* type (pondweed) and *Sparganium* type (bur-reed and reedmace) are present.

Fern spores

There are few with occasional *Pteridium aquilinum* (bracken) and *Dryopteris* type (typical ferns).

Miscellaneous

Cysts of the intestinal parasites, *Trichuris* (whip worm) and *Ascaris* (round worm) are present.

Interpretation

The diverse, herbaceous pollen assemblages here are typical of those obtained from medieval and later urban locations. Here, the preservation and diversity of pollen types has occurred due to the waterlogged character of the site/sediments. Small numbers pollen of aquatic (water-milfoil, pondweed) and marginal aquatic plants (sedges, reedmace, bur-reed) suggest some standing water.

The diversity reflects the diverse habitats present but more importantly, the complex taphonomy of the pollen which may derive from a great range of sources. This complexity has previously been discussed by Greig (1989) and Scaife (1984). Pollen may derive directly from the local vegetation growing in proximity to the sample site; such as waste ground, gardens, horticulture and food processing activities etc. Of often greater importance is the presence of secondary pollen components coming from thatching and especially dumped/waste material.

This latter may include dumped food waste, floor sweepings, animal bedding, offal and human and animal faecal material. The latter as probably the case here, often contains significant quantities of cereal pollen and associated weeds of cultivation.

Pollen incorporated in food (probably bread and porridge) readily passes its way through the stomach and intestines with only minor changes (often a wrinkled appearance) ending up in cesspits/latrines, pits, ditches and moats (Greig 1979; Scaife, 1984, 2004). Presence, as here, of intestinal parasites attest to the presence of such material whether directly from faeces or animal offal.

Bridge Street contains all of the typical urban pollen assemblage components. It is probable that the on-site habitat was a polluted river channel in which domestic waste was dumped. The very substantial numbers of cereal pollen (wheat/barley and oat) with blue cornflower (*Centaurea cyanus*) are the most obvious agricultural elements and are thought to derive largely from faecal waste as also indicated by whip and round worm eggs. It is not possible to designate specifically from which habitats the other, numerous herbs, come from.

Clearly, grasses are most important and it is probable that direct input from local pasture/grassland (river bank?) as well as secondary sources such as from thatched roofs, floor sweepings and animal bedding or from animal dung (via horse, cow fodder).

Other than cereals, *Cannabis sativa* type is the only other cultigen present. This pollen taxon includes both hop (*Humulus*) and hemp (*Cannabis sativa*). Unfortunately, in the sub-fossil state it is not possible to separate these almost identical pollen types. Thus, it is possible that the former may be from natural growth, although hop is more typical of fen carr woodland or from secondary sources (beer brewing and consumption). However, there is probably a stronger likelihood that hemp is represented as a cultigen for production of hemp fibre. This is also a particular characteristic of the Saxon and medieval periods.

The small numbers of tree and shrub pollen is in part due to the swamping effect of the herb pollen noted above but, however, is typical of urban pollen assemblages of this period. Oak and hazel are ubiquitous and probably reflect the more regional remaining woodland along with occasional occurrences of other anemophilous taxa (birch, elm, alder and pine). In contrast, the small numbers of ash (*Fraxinus*) and beech (*Fagus*) are usually under represented in pollen spectra and as such were possibly growing in proximity to the site. There is also a range of shrubs, including elderberry (*Sambucus*) which are probably also from growth/sources close to the site.

Summary and conclusions

A typically diverse pollen flora has been obtained from these sediments. The taphonomy is complex with pollen coming from a range of sources both directly and from secondary sources. The following principal points have been made in this analysis.

The site was wet with some standing water. This produced the (anaerobic) conditions suited to pollen preservation.

The small numbers of tree pollen (although diversity of types is moderately high) are largely attributed to more regional vegetation (especially oak, elm and hazel) whilst some ash and beech may have been growing in proximity to the site.

The diverse range of herb pollen recorded comes from the diversity of habitats present in the medieval urban environment. It is not possible to define the habitats but waste ground, gardens and horticultural plots in gardens are likely sources. As with many urban pollen assemblages, grass pollen is the most important constituent coming from a range of such sources.

A major component is pollen from secondary sources including human and animal faecal material, waste food, domestic refuse, floor sweepings, animal bedding and roof material (thatch).

Cereal pollen is an especially important component of the pollen assemblages. Along with a range of associated weeds of arable ground (e.g. blue cornflower) this element probably comes from faecal material. That is the pollen incorporated into bread and other farinaceous food. This is also indicated by the eggs of intestinal parasites also recovered.

6.8 Seeds by Karen Deighton

During discussions with specialists on site during the excavations of 2008, it was decided that the majority of the pits and cut features, being of later post-medieval date, did not warrant sampling for seeds. However, in 2011, the discovery of two large, much earlier pits in Plot 8 [1021 and 1026] led to 40-litre samples being taken from each. These samples were sieved through 1mm and 500-micron sieves and floated and the flots assessed. They were found to contain no seeds and only small amounts of charcoal. As a result no further analysis was deemed appropriate.

6.9 **Animal bone** by Karen Deighton

Introduction

A total of 12.5 kg of animal bone were collected by hand from a range of contexts during the course of excavation and watching brief. This material was analysed to determine the taxa present, state of preservation and its potential to provide evidence on the function and economy of the site.

Method

Bones were separated into identifiable and unidentifiable fragments and the following were recorded for each identified bone: context, anatomical element, taxa, distal fusion, proximal fusion, side, modification, fragmentation, cut and sex. Ribs and vertebra were counted and classified as large or small ungulate, to avoid over quantification. Partial skeletons were not included in quantification.

Ageable and measurable bone elements were noted. Ageable elements were cheek tooth rows where tooth eruption and wear were observable (Payne 1972, Halstead 1985, Payne and Bull 1982) bones where epiphyseal fusion (Silver 1969) was discernable and neonatal bones (Amorosi 1989). Data for sexing included the morphology of cattle and sheep/goat pelves (Grigson 1982) and the size and morphology of pig mandibular canines (Schmid 1972). Measurements are after Von den Driesch (1976).

Results

Preservation

Fragmentation was fairly heavy and varied with context and was largely the result of old breaks.

Table 7: fragmentation

Fragmentation	Numbers	Percentage
Whole	58	25.7
Some shaft missing	58	25.7
End+shaft	49	21.7
Cylinder	37	16.4
Splinter	11	4.8
End	5	2.2
End splinter	2	0.8
Fresh break	5	2.2

Surface abrasion was moderate. Canid gnawing was noted on 55 bones which attests to the presence of dogs on site. Evidence for butchery was noted on 24 bones, this was predominantly evidence of chopping, but evidence of filleting was also noted. Evidence for burning was seen in only one context, suggesting that this was not a preferred method of disposal.

*Taxonomic distribution**Table 8: Taxa by phase*

Taxa	Medieval	Medieval & early post-medieval	16th century	16th-17th century	17th century	19th century
Cattle	4	5	20	5	59	
Sheep or Goat	12	25	28	13	67	25
Pig	1	2	2	7	18	
Horse	2		3	2	13	
Dog					2	
Deer	1				1	
Chicken		2			1	
Goose					2	
Small mammal				2		
Totals	20	34	53	29	163	25

Material is spread thinly across several phases, with a small concentration in the C17th century which could suggest an increase in activity. The assemblage consists largely of common domesticates with the addition of deer in the C17th.

Ageing

Toothwear evidence was restricted to a sheep/goat third molar indicating an animal of 8-10years old.

A juvenile cattle metatarsal was noted in context 68, a humerus in context 13 (the river silt) and a neonatal sheep/goat metatarsal in context 97- of the 17th century.

Sexing

Data were restricted to 1 male pig tusk and 1 female cattle pelvis

Pathology

Context 266 C17th contained 6 horse lumbar and caudal vertebra with heavy exotosis. The condition suggests old age and/or use for traction. Context 269 C17th produced 3 articulated horse phalanges all with exotosis. A sheep/goat metacarpal with exotosis at the distal articulation was noted in context (195) medieval-early post-medieval.

Partial skeleton

A partial articulated dog skeleton was noted in context 272 including pelvis, tibiae, fibulae, metatarsals and calcanea.

Discussion

The lack of secure ageing and sexing data precludes any discussion on animal husbandry, which is not unusual for an urban site. Although livestock, particularly pigs, was kept in the urban environment, the data available were insufficient to prove that this was the case here. However the assemblage does provide some information of dietary preferences.

Although not enough material is available for conclusive body-part analysis, the bone appears to represent kitchen waste. The exception is possibly the presence of dog, which is also represented as canid gnawing on bones of other taxa, and horse. Although dogs played a number of roles (e.g. guarding) their presence is just as likely to be as strays scavenging waste. Horse was not generally eaten, but was "knackered" for dog meat and its hide and bones were utilised, which possibly explains its presence here.

The small amounts of bone seen in each phase are consistent with the archaeological evidence of backplots established in the medieval period and gradually developing from the 16th century onwards. The nature of the assemblage is also consistent with dumping into the river channel.

7 CONCLUSIONS

It serves firstly to revisit the aims and objectives of the work.

Establish the character and date of any Saxon, medieval or post medieval settlement activity and relate it to the known topography, history and archaeology of the town, paying particular attention to the evolution of property boundaries and the potential for a 'town ditch' identified in the evaluation (the large linear features identified in previous evaluation Trenches 6 and 3 (Network Archaeology, 2006, page 22).

Prehistoric occupation in Buckingham is seen only through the occurrence of residual flints.

It can be seen that there was neither evidence of Saxon occupation on the site, nor indeed any systematic use of the site until (in places) the 15th or (more widespread) the 16th century. The linear features (possible town defences) described in evaluation had no equivalent in the wider excavations and so are seen as anomalous and probably misunderstood in the relative confines of evaluation trenches. The current excavations contained nothing that might contribute to their further discussion.

The property boundaries which comprised mainly brick walls on stone foundations, were of mainly late 18th or 19th century date and matched well with the 1847 mapping. Precursors may have existed, such as a (possibly 16th-17th century) ditch separating Plots 6 and 7, re-cut several times, but this is a single occurrence and none of the other wall foundation trenches have any great longevity. South of this the post-medieval property boundaries could be traced on the ground as occasional post-holes towards the current river bank.

During the 16th-19th centuries, a series of pits were dug. Related finds were largely confined to post-medieval ceramics (especially 19th century), bottle glass, clay pipe and ceramic building materials. A very large post-medieval stone mortar was also recovered, perhaps suggestive of a former chemist's shop. Good dating throughout was provided by distinctive, but very fragmentary ceramics and clay tobacco pipes.

At the north-west corner of the site, where the trenches joined, there was a concentration of structural remains, including brick buildings, along with evidence of back-plot agriculture. This concentration spread south parallel with Bridge Street into the southern arm of the trench. Here a dense concentration of pits included a possible carpenter's saw-pit. Ceramics dated these to the post-medieval period. A succession of brick buildings, their locations already known from historic maps, had caused widespread damage to levels in parts of this trench and had overlain the pits with foundations.

For the floodplain it was asked that the work should:

- Generate a topographical survey of the river channels and adjacent alluvial cover and man made ground.
- Record the evolution of the channel of the river Ouse and its relationship to river edge and settlement deposits.
- Establish the character and extent of any channel migration for the Ouse and establish the date and character of any human intervention (eg canalisation).

- Establish the date and character of any river-edge structures (including revetments or embankments).
- Undertake environmental sampling to clarify the relationship between the river channel and the development of adjacent settlement.

It is clear that the fieldwork has found a sequence that is far more simple and straightforward than might have been the case based upon evaluation and previous surmise.

The River Great Ouse on its north side hereabouts appears in historic or even prehistoric times only to have flowed through a single wider channel, which was current throughout the medieval period, carrying along contemporary pottery and residual earlier material along its bottom on the gravels until perhaps c1600 (Fig 37). Its course has otherwise apparently been relatively static. The edge of this channel was located at the far south edge of the site and picked up for some tens of metres. Alluvial silts seem then to have built up through the medieval period. An attempt was made to give these silts (which may have otherwise eroded) a formal edge by the insertion of a post and rail or wattle revetment, sometime between the 16th and the 19th centuries. The silts were then smothered by deliberate dumping in the 19th century. The channel can be reconstructed by recourse to all the excavation levels data and the borehole information amassed throughout the project. This closely mirrors the mapped topography of 1847 (Compare Figs 5 and 37)

Pollen analysis shows that the silts carried along a mixture of material which indicates the nature of the trees and flora lining the river banks and throws light on a culture of sewage-disposal among the plots up-river. This, mixed with a very variable water-table, ensured that the southernmost two-thirds of the plots supported no occupation and only general agricultural/horticultural uses and rubbish disposal until the owners of the later 19th century slowly but perhaps in places deliberately, raised the ground level.



- Boreholes
- ⋯ 2008 surface contours (0.5m intervals)
- 80m Contours at the natural/archaeology boundary (0.5m intervals)



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