JOHN MOORE HERITAGE SERVICES

ARCHAEOLOGICAL WATCHING BRIEF

AT

46 HYTHE BRIDGE STREET,

OXFORD

NGR SP 50806 06350

On behalf of

Bluesky Developments

JUNE 2016

REPORT FOR	Bluesky Developments 48 Walton Street Oxford OX2 6AD
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FIELDWORK TEAM	Andrej Čelovský, Simona Denis and David Gilbert
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FIGURES AND PLATES

Summary

John Moore Heritage Services carried out an archaeological watching brief at 46 Hythe Bridge Street in Oxford (NGR SP 50806 06350) (Fig. 1). The aims of investigations were to preserve by record any archaeological remains which would be impacted upon by the development; in particular to record any archaeological remains relating to medieval and post-medieval activity.

The only possible hard standing associated with a quayside was an area of sandy gravel (133) found in the central and northeast portion of the north part of the basement. This was found above the land reclamation/raising of the ground level deposits (see below).

The earliest phase was represented by alluvial deposit (134). Above this were deposits considered to represent land reclamation or raising of the ground level for the river crossing. Finds recovered from these deposits were dated to the period from 14th to mid 16th century and presumably mostly relate to activity where this material originated. Some of the finds may be contemporary with the land reclamation/raising of the ground level. The dating of the finds suggests that this happened on this site during the mid 16th century.

The next phase was represented by deposit (104) and its associated deposits. The finds recovered from these deposits were broadly dated to period from the late 15th to early 17th century. This deposit seems to represent made ground which was presumably formed during the period from the late 16th to early 17th century.

The last phase began with construction of present three storey building in the second half of 19th century, with continued development of site and changes of its use up to present day.

1 INTRODUCTION

1.1 Site location *(Figure 1)*

The development site is located at the junction of Hythe Bridge Street and Upper Fisher Row in Oxford (NGR SP 50806 06350) and lies between Castle Mill Stream and Wareham Stream, at an approximate height of 58 m above Ordnance Datum (OD). The site comprised a three storey brick building, garage and small warehouse, which encompassed a small courtyard measuring approximately 15×15m. The underlying geology is Oxford Clay Formation overlaid by Northmoor Sand and Gravel Member and alluvial deposits (Listers Geotechnical Consultants 2015).

1.2 Planning Background

Oxford City Council approved a planning application for conversion and extension of existing building (involving demolition of extension and outbuilding) to provide seven 1-bedroom flats, cycle parking, bin store and amenity space to serve 2-bedroom flat. A condition of planning approval required a programme of archaeological work to be undertaken during development.

A *Written Scheme of Investigation* (JMHS 2013a) was prepared by John Moore Heritage Services for the archaeological watching brief, proposing a suitable methodology to satisfy the requirements of the City Archaeological Officer (Oxford City Council Heritage and Specialist Services Team 2013).

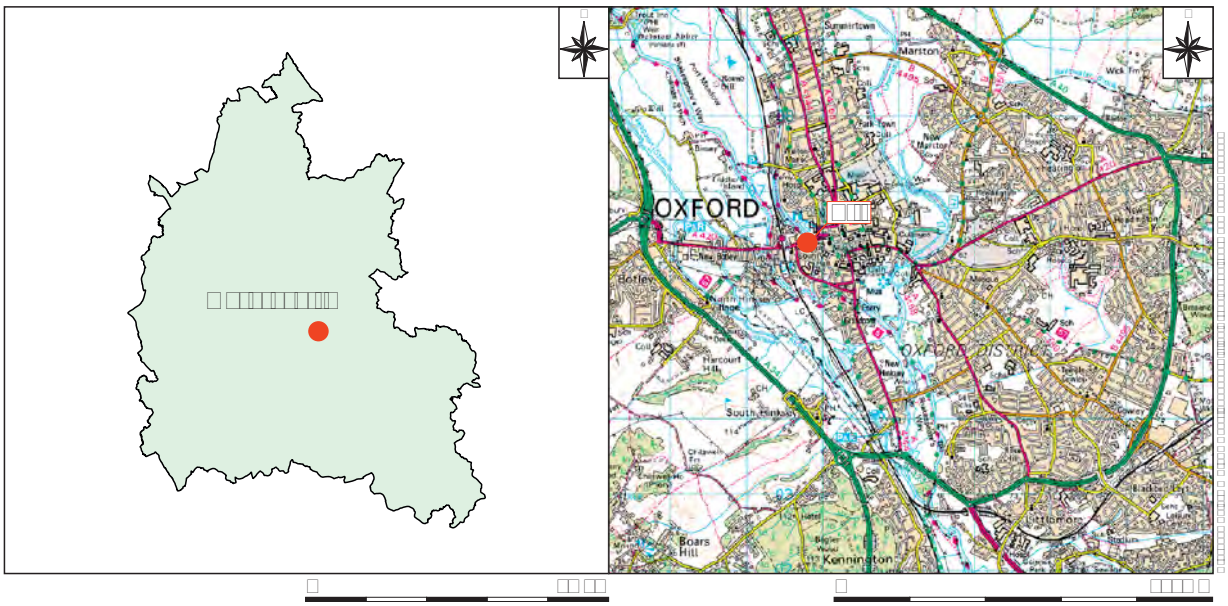
1.3 Archaeological Background

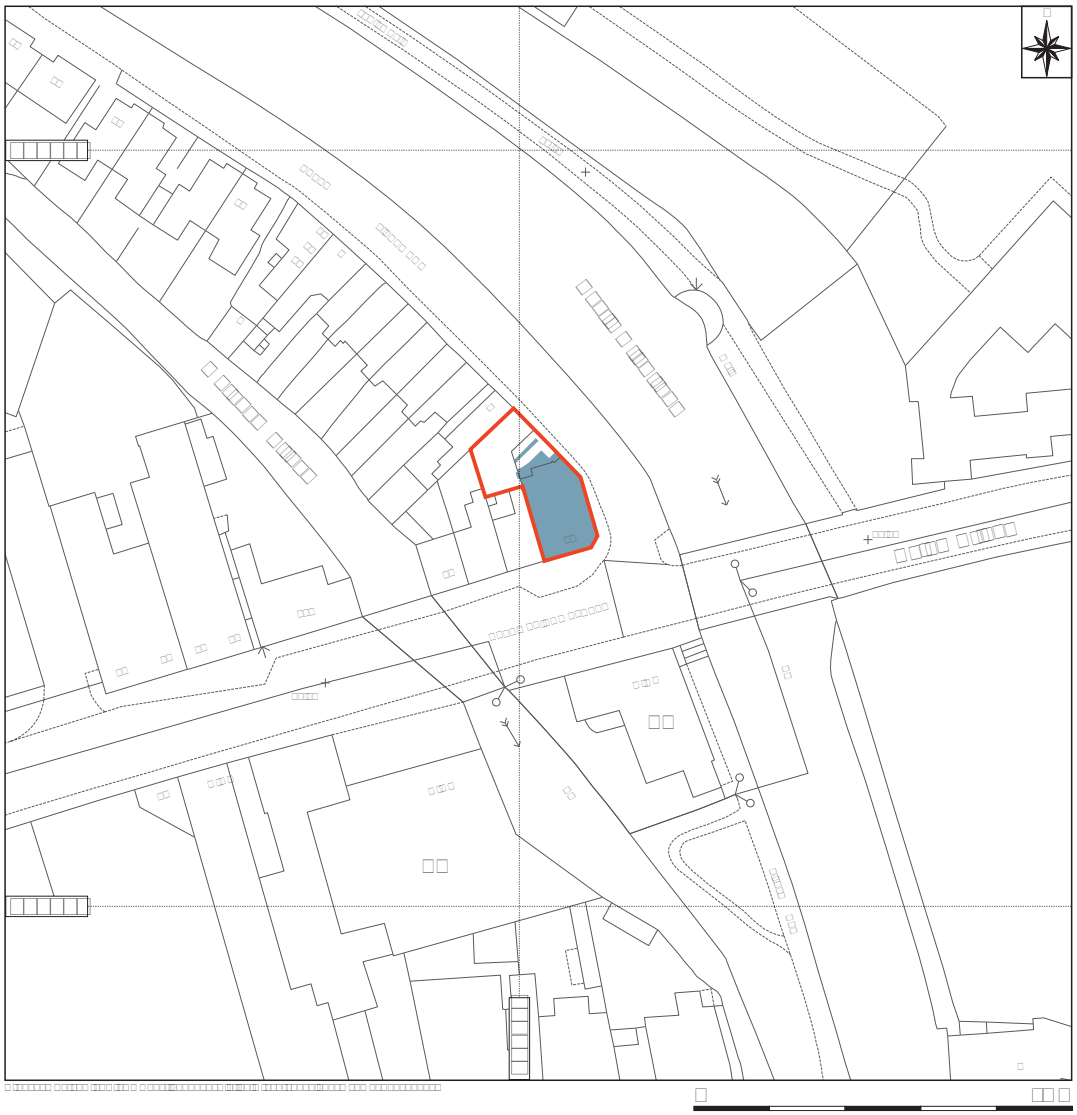
An archaeological desk based assessment had been produced for this site by John Moore Heritage Services (2009). The assessment noted the potential for medieval and post medieval remains in this location relating to the use of the site as a wharf from the medieval period until the construction of the Racing Horses public house in *c*. 1876. The original Hythe Bridge, adjacent to the site, is thought to have been constructed in the 11th century, with the first known reference in 1257. The assessment notes that the application site forms part of 'Upper Fisher Row' and was probably used for the loading/unloading of boats into carts. There was therefore the potential for a succession of surfaces laid down to facilitate these operations to be present (JMHS 2009, 6.1). It was considered possible that the site may also have preserved evidence for the development of land reclamation in this location and for the raising up of the ground level for the river crossing. The assessment also noted 'a small possibility of pre-medieval activity' in this location (JMHS 2013a, b).

2 AIMS OF THE INVESTIGATION

The aims of the investigation as laid out in the Written Scheme of Investigation (WSI) were as follows:

- To preserve by record any archaeological remains which will be impacted upon by the development.


OXFORD
Marston
Botley
Boars Hill
Kennington
OXFORD DISTRICT



Key

- In particular to record any archaeological remains relating to medieval and post-medieval activity.

3 STRATEGY

3.1 Research Design

John Moore Heritage Services carried out an archaeological watching brief in accordance with the WSI (JMHS 2013a). Site procedures for the investigation and recording of potential archaeological deposits and features were defined in the WSI (Sections 3.1 – 3.8).

The recording was carried out in accordance with the standards specified by the Chartered Institute for Archaeologists (2014) and the principles of MoRPHE (Historic England 2015).

3.2 Methodology

The archaeological watching brief was carried out in two stages. The stage 1 was maintained during excavation of a footing trench through the courtyard in 2013. Stage 2 was carried out during the ground reduction, excavation of underpinning pits (UP) and trenches for concrete beams within the basement and footprint of the new extension in the period from December 2015 to the end of March 2016. Due to the fact that repetitive deposits were encountered within the monitored underpinning pits, and slow progress of work, the decision was made to not monitor all underpinning pits.

Standard John Moore Heritage Services techniques were employed throughout, involving the completion of a written record for each deposit encountered, with scale plans and section drawings compiled where appropriate. A photographic record was also produced.

4 RESULTS

All features and deposits were assigned individual context numbers, except for modern features. Context numbers with no brackets indicate feature cuts, numbers in round brackets ( ) show feature fills or deposits of material and numbers in bold indicate any form of masonry. Due to nature of the Stage 2 work it was not possible to take any levels.

4.1 Fieldwork – Stage 1 *by David Gilbert*

A single foundation trench was excavated to a depth of 0.9 m below present ground level (Fig. 2).

The lowest layer revealed was a dark grey silt-clay (7). This was only seen within a small sondage c. 0.3m by 0.2m in plan. This layer appeared similar to the one above

(4) although it seemed more sterile in regards to finds and other inclusions. Above this was a 0.2m thick layer of dark grey silt-clay with sparse sand (4) containing oyster shell and animal bone. It is possible that this represents a buried topsoil.

Overlying this was a 0.4m-0.5m thick layer of mid-dark grey-brown sand-clay flecked with charcoal (3) containing brick fragments, oyster shell, animal bone and clay tobacco pipe stems. The foundation trench for the rear extension (garage) was cut 5 into this layer and back-filled with a dark grey-brown sand-clay (6) containing brick fragments, course sand and concrete.

Above these deposits was a 0.15m-0.2m thick layer of sand, shingle, concrete and brick rubble (2) forming the make-up for the 0.1m thick modern concrete surface (1) (JMHS 2013b)

4.2 Fieldwork – Stage 2 *by Andrej Čelovský*

The lowest deposit encountered during the second stage of archaeological watching brief was mid grey sandy clay (134) encountered in the north part of the basement (Figs. 2, & 4: S. 10; Pl. 1). This deposit represented a natural alluvial deposit and did not contained any finds.

Plate 1: Deposit (134) at north part of basement, looking west

Deposit (134) was overlaid by up to 0.80m thick dark sandy silt with occasional gravel (105) present across the site (Fig. 2, 4: S. 1-5, 7-10; Pl. 2, 3, 4). Although deposit (105) was seemingly homogeneous, slight differences were notable within some areas. In the centre of south part of the basement, deposit (105) was split in to two layers (Fig. 2, 4: 6). The lower layer (129) was described as context (105) with the upper layer (128) contained traces of burning and a high concentration of charcoal. Similar deposit (105) was split in to two contexts during the first stage of watching brief, the lower part was assigned with context number (7) and upper part

with number (4) (Fig. 2). Deposit (105) contended predominantly animal bones, oyster shells, fragments of pottery, peg roof tile, iron object, fragments of leather shoe and additional leather objects dated to the period from 14th to early 16th century (see section 5). This deposit(s) may represent land reclamation or raising of the ground level for the river crossing. The date of the finds suggest that the river crossing was remodelled after the original crossing was formed.

Plate 2: Deposit (105) during ground reduction within the courtyard, looking southwest

Deposit (105) was overlaid by up to 0.40m thick dark greyish brown sandy silt with moderate amount of gravel (104) (Fig. 4: S. 1-4, Pl. 2, 3, 4). Deposit (104) was also assigned context numbers (3) and (127) (Fig. 4: S. 6) and in the northwest area of south part of basement, it was split into two layers (122) and (121) (Fig. 4: S. 8). Layer (122) was described as 0.10m thick dark brown-grey sandy silt with occasional gravel and stones and layer (121) as mid brown-grey sandy silt with gavel and stones. From deposit (104) were recovered pottery sherds, fragments brick and roof tiles, iron objects, fragments of clay tobacco pipes and animal bones dated to the period from late 15th to early 17th century. Deposit (104) represented made ground and was present almost across all monitored areas, apart from north edge of the basement. Although direct stratigraphic relationships between deposit (104) and deposits recorded within this area were absent, they seemed to be contemporary.

At the central and northeast portion of the north part of the basement, was a 0.13m thick layer of mid orange brown sandy gravel (133) (Fig. 4: 9). This deposit covered approximately an area 2.10×2.70m. No finds were recovered from deposit (133). It may have been an area of hard standing for the quay activities. The overlying deposit within the same area was 0.15m thick dark grey silty loam (132) (Fig. 4: S. 9, S. 10). At the northwest portion of the north part of the basemen, deposit (104) was entirely absent. Deposit (132) presumably continued along the north edge of the basement.

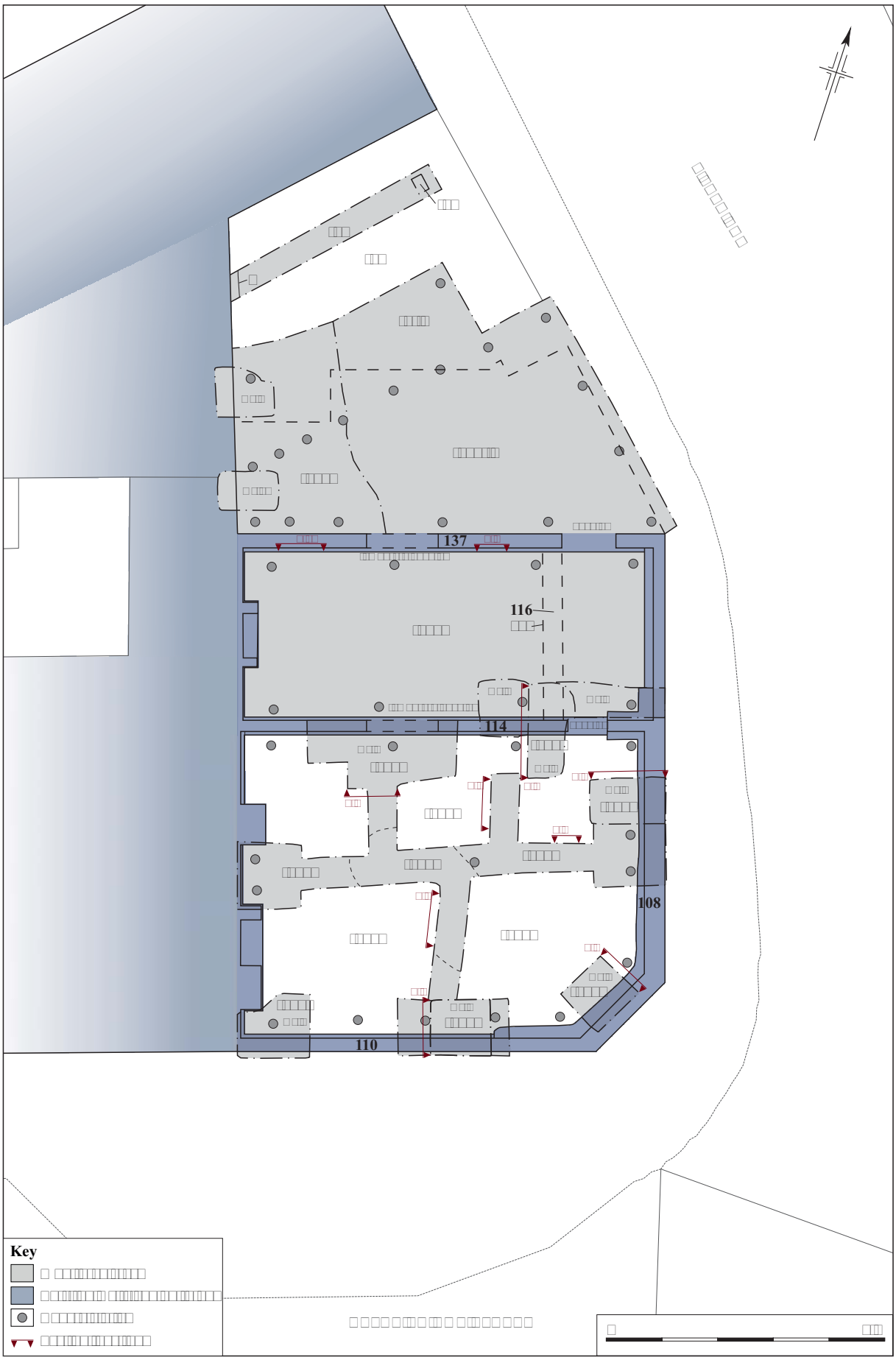

137
116
114
108
110
Key

Plate 3: Section 4, looking west-southwest

Plate 4: Section 1, looking north

Deposits (104) and (132) were cut by construction cuts for wall foundation of the existing building 109, 112, 115 and 135 (Fig. 2, 3). Wall foundations **111**, **112**, **115** and **136** were constructed of sub-angular sandstone of maximum dimension 260×400×320mm, and bonded with sandy lime mortar. The depth of wall foundation was from 0.16m to 0.60m and width from 0.40m to 0.50m (Fig. 4: S. 1, 2, 3, 4, 9, 10, Pl. 1, 3, 4)

The outer walls **110** and dividing wall **114** were built of red bricks (118×223×68mm) in English bond at the basement level. Wall **110**, from the street level up was built in Flemish bond, its thickness from 0.34m at basement level, decreased to 0.23m. The northern outer wall **137** was built in double stretcher form and internal wall **117**, which collapsed during the ground reduction, was built in stretcher form. The internal walls within the south part of basement had one brick wide foundation and were built in stretcher form as well. Three deposits within the south part of basements were associated with construction of walls. Deposit (131) was 0.30m thick brown grey sandy silt (Fig. 4: S. 7). Although, very similar in composition to deposit (104), the finds recovered from it, fragments pottery, bricks and clay tobacco pipes, knife blade were dated to 19th / 20th century (see section 5). Deposit (125), mid brawn greyish sandy silt, and deposit (124), light brown silty sand (Fig. 4: S. 5), contained fragments of post-medieval roof tiles, and seem to be related with an internal wall which was demolished prior the watching brief (Fig. 3).

The following deposit recorded within the east portion of the south part of the basement was 0.07m thick light yellowish grey lime mortar (102) (Fig. 3, 4: S. 1, 4; Pl. 3, 4). It probably represents the remains of the original floor surface within the south part of basement.

Floor surface (102) was cut by construction cut 106 for 20th century underpinning of original wall 110 at the south east part of the building (Fig. 3). The construction cut 106 was filled with concrete **107** which formed a new foundation for wall **108** (Fig. 4: S. 1, 2 Pl. 4). Wall **108** represents a rebuilt of wall **110,** which was clearly visible on the front façade up to third storey. Presumably with 20th century underpinning and rebuilding of wall **108** was related deposit (103), assigned as well with numbers (123) and (130). It was up to 0.20m thick and a mid to dark brownish grey sandy silt (Fig. 4: S. 1, 7, 8). The uppermost deposited encountered within the south part of basement was up to 0.35m thick light to mid greyish brown sandy silt with moderate amount of

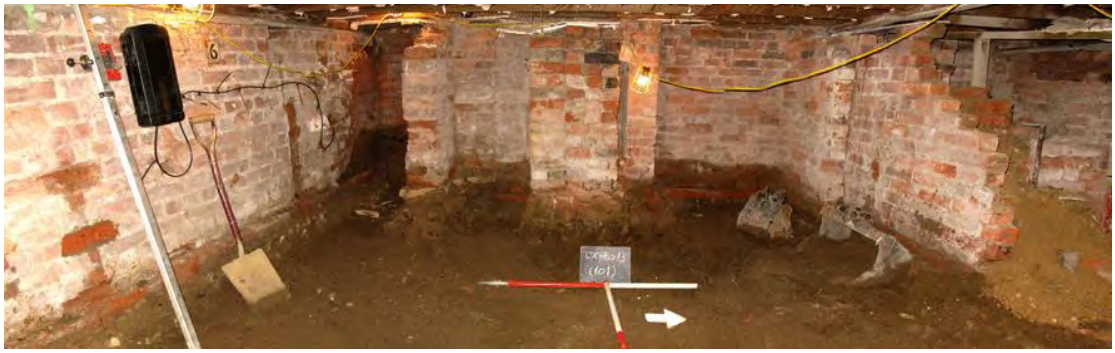


Plate 5: Deposit (101), after initial ground reduction in the south part of the basement, looking west

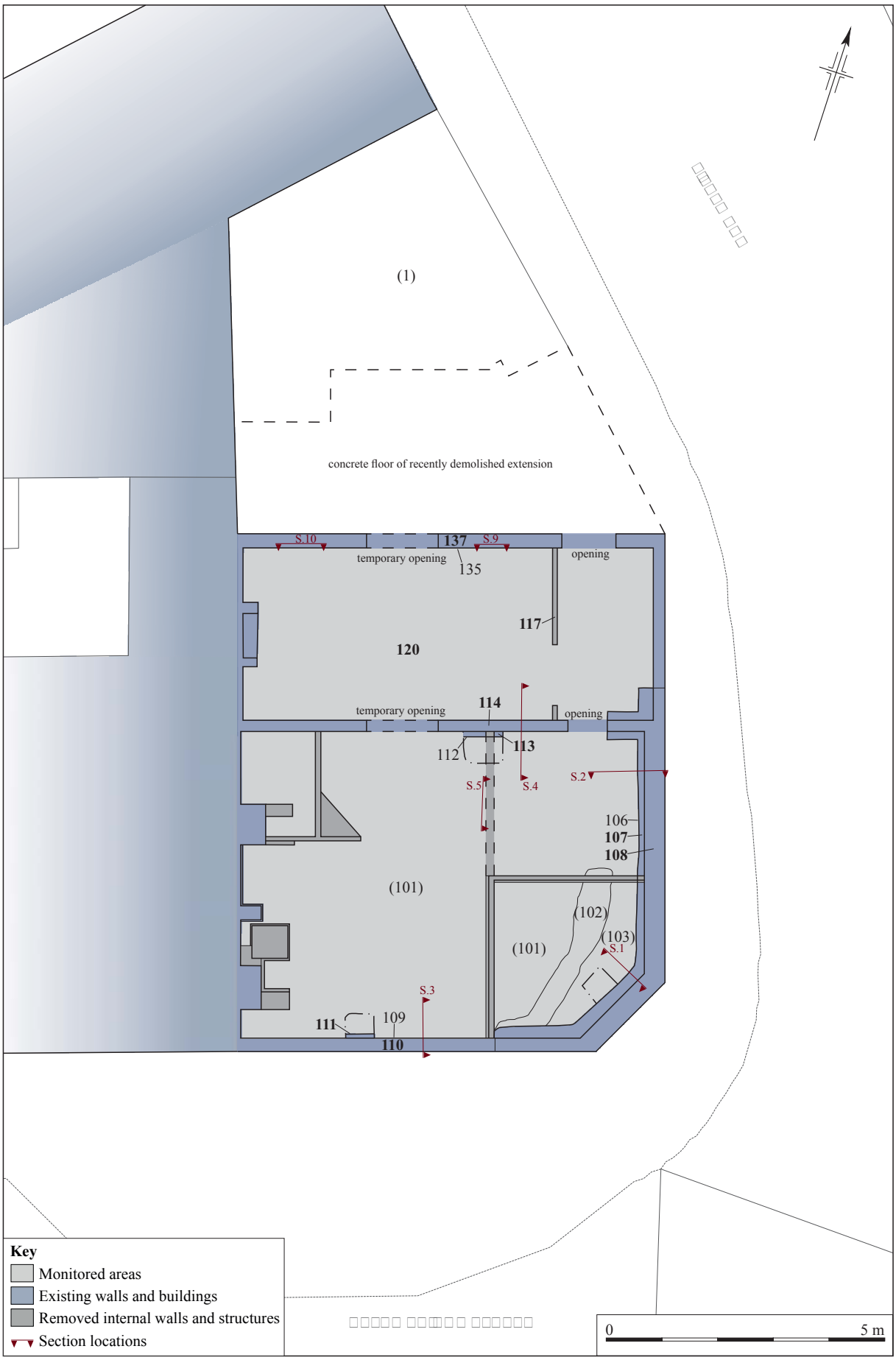
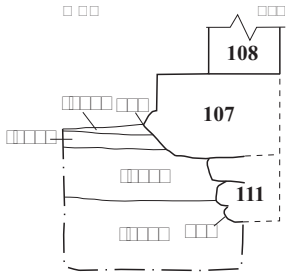


Figure 3: Monitored areas - upper level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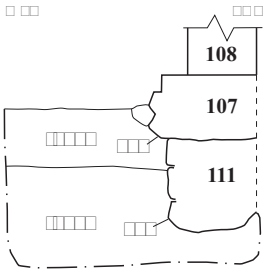
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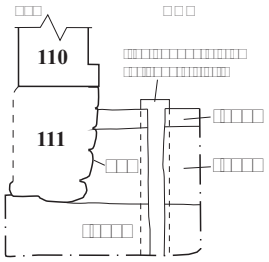
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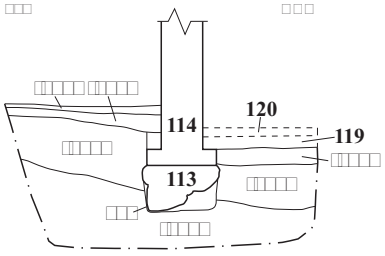
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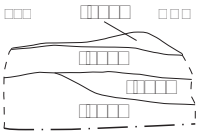

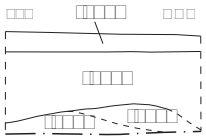

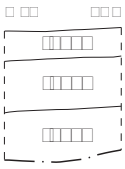

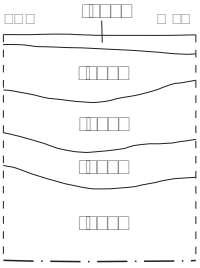

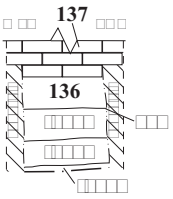
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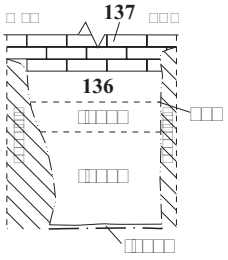
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136

Plate 6: Deposit (101), after initial ground reduction and internal walls demolition, looking east

Fine gravel (101)/(126) (Fig. 3, 4: S. 3, 4, 6, 8; Pl. 5, 6). The finds recovered from this deposit, fragments pottery, glass, clay tobacco pipe, were broadly dated to the period from 18th to 20th century.

After construction of walls within north part of basements, floor surfaces were liad down. The lowest layer related with the floor surfaces was 0.09m thick compact light yellowish brown sandy gravely motor (118) which may represent the earliest floor surface or bedding for floor surface within this area (Fig 4: S. 4). The following context (119) was a brick floor built of red bricks (see section 5.3), highly likely to be the original floor related with the construction of the build in second half of 19th century. Floor (119) was overlaid by second brick floor 120 constructed of modern engineering bricks (Fig. 3, 4: S.4; Pl. 7).

Plate 7: Brick floors 119, 120 and deposit (118), looking north-northwest

4.2 Reliability of Results

The reliability of results is considered to be good. The first stage of watching brief took place during clement conditions on 3rd July 2013. The second stage was carried out during the period from December 2015 to the end of March 2016, in changeable and cold weather conditions with poor light and visibility. However excellent co-operation from the ground workers ensured sufficient time to investigate and record the archaeological deposits to the appropriate standards.

5 FINDS

5.1 Pottery

5.1.1 Pottery (Stage 1) *by David Gilbert*

Sherds of post medieval pottery were noted from context (3). The pottery was recorded utilising the coding system and chronology of the Oxfordshire County type-series (Mellor 1989, 1994) and not retained.

The fabric present: Red Earthenware (REW) *c*. 1550+
Red Earthenware Slipware (REWSL) *c*.1650-1800

5.1.2 Pottery (Stage 2) *by Paul Blinkhorn*

The pottery assemblage comprised 56 sherds with a total weight of 1651g. It was largely later medieval and early post-medieval, and recorded using the conventions of the Oxfordshire County type-series (Mellor 1984; 1994), as follows:

OXAM: **Brill/Boarstall Ware**, AD1200 – 1600. 13 sherds, 325g.
OXBC: **Brill/Boarstall 'Tudor Green' Wares** , 1475-1600. 2 sherds, 3g
OXBN: **Tudor Green Ware**, late 14th – 16th century. 1 sherd, 2g.
OXBX: **Late Medieval Brill/Boarstall Ware**, 15th – early 17th century. 21 sherds, 984g.
OXCL: **Cistercian Ware**, 1475-1700. 69 sherds, 580g. 1 sherd, 17g.
OXDR: **Red Earthenwares**, 1550+. 2 sherds, 59g.
OXFH: **Border Wares**, 1550 - 1700. 2 sherds, 79g.
OXFM: **Staffordshire White Salt-glazed Stoneware**, 1720–1800. 1 sherd, 11g.
OXST: **Rhenish Stoneware**, AD1480 – 1700. 1 sherd, 6g.
WHEW: **Mass-produced White Earthenwares**, 19th-20th century. 12 sherds, 144g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 1. Each date should be regarded as a *terminus post quem*. The range of fabric types is typical of sites in the city.

The OXBX assemblage from context (105) includes rimsherds from a glazed jar and a large glazed bowl, which are typical products of that phase of the industry, but there is also a fragment of a very unusual condiment or sweet-meat dish, in the form of one of two conjoined small bowls. A parallel from the Brill/Boarstall industry cannot be

found, but it appears to have originally been of an almost identical form to a post-medieval Border Ware example found in London (Pearce 1988, Fig. 43 no. 390). A large unstratified fragment of an OXBX jar with a bifid rim-form was also noted. The rest of the OXBX assemblage was largely fragments of glazed jugs, which is fairly typical.

The sherd of Border Ware from context 104 has a brown glaze, which dates the vessel to after AD1620, when such glazes were first used (ibid. 127)

	OXAM		OXBN		OXBX		OXBC		OXCL		OXDR		OXFH		OXST		OXFM		WHEW		
Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date
U/S					1	121					1	15					1	11			U/S
101																			8	64	MOD
102																			3	66	MOD
104	2	38	1	2	2	153			1	17											L15thC
1/104					2	47															15thC
104 N Area A	2	58																			14thC
104 up 3							1	1			1	44	1	51							E17thC
104 up 4	1	10			1	164															15thC
105	1	53			9	391															15thC
105 N Area B	5	151																			14thC
105 up 4	2	15			1	70															15thC
105 up 5					1	4									1	6					M16thC
105 up 9					3	31															15thC
121													1	28							M16thC
122					1	3	1	2													L15thC
131																			1	14	MOD
Total	13	325	1	2	21	984	2	3	1	17	2	59	2	79	1	6	1	11	12	144	

Table 1: Pottery occurrence by number and weight (in g) of sherds per context by fabric type

5.2 Faunal Remains *by Simona Denis*

5.2.1 Animal Bone

An assemblage of 217 animal bone fragments, of a combined weight of 8283.3g, was recovered from 4 different contexts. The state of preservation of the items is generally good, although very fragmentary: only 16 examples (7.3% of the collection) were found complete, and the limited size and the lack of diagnostic features prevented from any identification attempt for 12 of the fragments, representing 5.5% of the assemblage.

- Species identification

Four *taxa* were recorded, the most represented being sheep/goat, with a total of 105 examples (48.3% of the assemblage); 85 items (39.1%) were attributed to cow, while 10 fragments, representing 4.6% of the collection, was identified as belonging to various species of birds. A minor part (4 items, or 1.8% of the total) was positively identified as pig, while deer was represented by a single fragment.

Due to the variable sizes and robustness of animal bones taphonomic factors may favour preservation of certain species, resulting in the under-representation of other, smaller animals (Kasumally 2002).

85 items, representing 39.1% of the assemblage, preserved diagnostic features and were positively attributed to a specific *taxon*; 10 examples (2.3%) were positively identified as *avian*, although, with the exception of a single duck bone recovered from context (105), the exact bird species couldn't be positively identified. Small and undiagnostic mammal fragments were, when possible, divided by size range and attributed to small (*ovis*) or large (*bos*) mammals.

Context	Identification	Type	No. of items	Weight (g)	Marks	Comments
U/S	?Sheep/Goat	Mandible	1	52.2	?Scoop	
		Scapula	1	49.3	?Chop	
104	Sheep/Goat	Distal radius	2	51		
		Distal humerus	1	24.1		
		Distal metatarsus	1	14.9		Young individual
	?Sheep/Goat	Costal groove	1	2.3		
	Cow	Metacarpus	1	215.9		Complete
	?Cow	Costal groove	1	20.6	?Fine slice	
			1	10.1		
		Scapula	1	55.3	?Chop	
		Radius diaphysis	1	81.8		
	Mammal	Long bone cortex	1	7.3	?Chop	
			1	8.8		
105	Sheep	Radius	1	24.7		Complete
		Radius	2	48.3		Pair 1 complete
		Proximal radius	3	65.1		
		Distal humerus	1	20.8	Fine slice, ?Point insertion	
	?Sheep	Proximal tibia	1	29	?Chop	
		Radius	5	157		5 complete
	Goat	Humerus	1	48.9		Complete
		Distal humerus	1	63.7		
	Sheep/Goat	Calcaneous	1	7.6		Complete Young individual
		Cranium with horn	2	85		Pair Young individual
		Distal metatarsus	1	41		Young individual
		Distal radius	1	14.2		
		Distal tibia	1	25.7	?Point insertion	Young individual
		Horn	1	23.2	Fine slice	
			1	5.2		
		Mandible	1	23.1		
		Mandible with molar	1	15.9		
		Mandible with premolar	1	23.2		
		Mandible with	1	29.1		

		P2, P3, P4				
		Metacarpus	1	63.8		Complete
		Metatarsus	1	39.8		Complete
			1	41.3		Young individual
		Proximal femur	1	38.6	?Point insertion	Young individual
		Proximal metacarpus	1	41.2	?Chop	
		Proximal tibia	1	7.6		Young individual
		Scapula	4	74		
		Tibia diaphysis	1	27.9		
		Ulna	1	8.7		Young individual
	?Sheep/Goat	Costal groove	1	7.1	?Point insertion	
			18	126		
		Costal groove with head	12	49		
		Distal radius	1	8.6		Young individual
		?Distal radius	1	14.8		
		Femur head	1	23.1		
		Innominate	1	19.2		Young individual
		Mandible	1	14.1		
		?Mandible	1	14.3		Young individual
		Scapula	2	12.6		
		Scapula	1	11.7		
		Vertebrae	1	14.7		
		Thoracic vertebrae	1	4.6	Saw	
			1	7.3		
		?Ulna	1	3.4	Chop	
		Long bone cortex	1	5.5	Chop	
			1	14.1		
		Long bone diaphysis	1	9.5	Chop, ?Point insertion	Burnt
	Cow	Calcaneous	1	107.9	?Saw	
		Costal groove	1	57.6		
		Costal groove with head	1	72.2	Fine slice	
		Cranium with horn	1	154		
		Horn	1	116	?Chop	
		Distal femur	1	486	Chop	
		Distal humerus	1	192	Chop, Point insertion	
			1	210	Chop	
		Distal metacarpus	1	116.8	?Chop, ?Point insertion	
		Distal radius	1	182.4	?Chop	Young individual
			1	215	?Chop	
			1	141.2		
		Proximal radius	1	189	Chop	
		Proximal radius	1	189	Chop	
		Femur diaphysis	1	205	Chop	
		Mandible	1	171		
		Incisor	1	3.5		

		Metacarpus	1	165.8		Young individual
		Proximal metacarpus	1	203.3	?Chop	
		Proximal metatarsus	1	205.1	Chop	
			2	327		
		Scapula	1	93.3	?Chop	
		Tibia diaphysis	1	155	Chop	
		Vertebrae	1	67.3	Saw	
		Thoracic vertebrae	1	59.4	?Fine slice	
			1	73.8	?Chop	
			2	66.3		
	?Cow	Costal groove	3	114.9	Chop	
			1	25.3	?Chop, ?Fine slice	
			17	357.5		
		Costal groove with head	1	32.9	Chop	
			1	27.7	?Chop	
			1	38.2	?Blade insertion	
			11	302.3		
		Mandible	1	53.3	?Chop	
		Scapula	1	52.3	?Blade insertion	
			2	90.2		
		Vertebrae	4	118.9	Saw, Chop	
		?Innominate	1	78.3	Chop	
		?Proximal radius	1	45.7	Chop	Young individual
		Long bone cortex	1	12.6	?Chop	
			1	38.5	Chop, Fine slice	
			2	103.5		
	Duck	Carpometacarpus	1	5.3		
	?Chicken	Distal femur	1	5.6		
		Distal tibia	1	5.9		
		?Tibia	1	6.1		Young individual
		?Femur diaphysis	1	4.3		
	Undetermined bird	Lombosacrale vertebrae	1	4.6		
		Humerus	1	3.1		
		Long bone diaphysis	1	18.3		
	Pig	Mandible with P2, P3	1	102	Chop	
		Mandible with DP2, DP3, DP4, M1	1	47		Young individual
		Mandible with P4, M1, M2, M3	1	84.3		
		Metacarpus	1	8.6		
	Deer	Distal humerus	1	37.2	?Knick	
	Undetermined mammal	Orbit	1	2.6		
		Scapula	1	2.2		Young individual
		?Scapula	1	14.1	?Fine slice	

		?Mandible	1	16	?Chop	
			1	5		
		?Mandible cortex	2	11.2		
		Undetermined bone cortex	1	3.3		

Table 2: Animal bone occurrence by context

- Cut Marks

58 animal bone fragments, representing 26.7% of the assemblage, showed possible evidence of butchering; of these, 25 were positively recognised, while the remaining 33 examples were tentatively identified. Recorded marks include impact marks, cut marks and fracture patterns relative to both primary and secondary butchering. Primary butchering consists of hide removal, joint dismemberment and meat removal, whereas secondary butchering involves detailed meat and smashing the bone into smaller portions for marrow extraction and grease rendering (Watts 2004).

Chop marks, produced by large blades, are the most represented (39 occurrences, or 67.2% of the observed cut marks); fine slices and point insertions are equally represented, with 8 examples (15.5% of the group) each. 8 saw marks were also recorded, representing 13.7% of the group. Blade insertions were observed on two items; a single possible knick mark was also recorded.

11 of the butchered bone fragments showed a combination of two types of cut marks. In most cases (of the examples), a chop mark is associated with other marks: saw (4 examples), point insertion (3 examples) and fine slice (2 examples), as result of carcass disarticulation or portioning activities. On the remaining two bones, the association of point insertion and fine slice was recorded, indicating meat removal.

The vast majority (38 examples, or 65.5%) of the cut marks were recorded on cow bones, particularly on long bones (14 cases) and ribs (10 examples). 7 vertebrae were also butchered; of these, 5 examples showed clear saw marks connected to portioning activities.

24.1% of cut marks (14 examples) were found on sheep/goat bones; long bones are again the most affected, with 9 recorded marks. The single thoracic vertebrae collected from context (105) showed a clear saw mark, splitting the bone in two, produced by the splitting of the animal carcass into sides, a practice that tends to become common in the post-medieval period (Klemperer 2005).

A single pig mandible fragment and the deer humerus found in context (105) represent minor parts of the butchered bones assemblage.

- Distribution

Context (105) contained the vast majority of the animal bones recovered during the excavations: 199, or 91.7% were collected from this context. All of the recorded *taxa* were present, with a predominance of sheep/goat (97 items), followed by cow (78 fragments). All of the pig bones, as well as the only example of deer, were also found in context (105).

Naturally, context (105) also yielded the largest amount of butchered bones, with 52 examples. Most of the fragments (164 items, or 82.4%) of the group recovered in context (105) showed extensive black to dark brown staining, affecting the entirety of the exposed bone surface, including fractured edges. This is the result of a chemical process triggered by organically bonded iron in highly organic deposits (O'Connor 2000).

The second richest deposit was context (104), yielding a total of 12 fragments (5.5% of the assemblage). Sheep/goat and cow are equally represented, with 5 items each, the remaining two belonging to mammal of undetermined species.

4 fragments, including cow, sheep/goat and bird, and representing only 1.8% of the assemblage, were found in context (131).

5.2.2 Marine Shell

A small group of 4 marine shells, weighing 19.1g in total, was recovered from context (105).
Two different species of marine molluscs were identified: oyster and mussel, both cheap and easily obtainable shellfish varieties.

Context	Type	No. of items	Weight (g)
105	Oyster right valve	1	10.6
	Oyster left valve	1	7
	Mussel	2	1.5

Table 3: Marine shell occurrence by type

The two oyster shell valves were identified on the basis of the aspect of the surfaces; the lower tends to be shallowly concave, while the upper valve is usually flat (Winder 2011). The two items found in context (105) belong to the same individual.

It is not recommended to retain the marine shells due to their very limited potential for further analysis.

5.3 Ceramic Building Material (CBM) *by Simona Denis*

A very limited assemblage of 11 ceramic building material fragments, of a total weight of 5655g, was collected from 6 individual contexts. The material was recorded by context, divided by type and fabric, counted, measured and weighed.
The state of preservation of the items is generally fair, although extremely fragmentary, the only complete objects being two bricks found in contexts (119) and (120).

Six different fabrics were recorded:

1. Orange-pink sandy, rare small inclusions
2. Dark pink gritty, rare small to medium inclusions
3. Orange-pink gritty, rare medium inclusions
4. Dark orange sandy, rare small to medium inclusions
5. Dark pink sandy, frequent small to medium inclusions

6. Dark grey sandy, frequent small inclusions

Context	Type	No. of items	Weight (g)	Fabric	Complete dimensions (mm)	Comments	Date range
104	Brick	3	156.4	5	None		Undetermined
	Roof tile	1	76.3	4	T: 15		13th-17th C
	Peg tile	1	61.9	3	T: 12	Partial round peg hole near corner	
	Ridge tile	1	137.4	4	T: 15		
105	Peg tile	1	94.1	2	T: 10	Complete round peg hole near corner	
119	Brick	1	2000	4	L: 228 W: 112 T: 65	Complete	Victorian
120	Brick	1	3000	6	L: 225 W: 132 T: 44	Complete engineering brick	Modern
124	Roof tile	1	50.6	1	T:12		13th-17th C
131	Roof tile	1	78.3	1	T:17		

Table 4: Ceramic building material occurrence by context

The most represented type is roof tile, with 6 items (55% of the assemblage) while the remaining 45% of the group is composed by brick.

5.3.1 Roof Tile

Clay plain tiles were developed in the 13th century to replace shingles and thatch in the roofing of domestic buildings. Handmade peg tiles were commonly used until the 19th century, when machine-made tiles became popular, with little variation in the manufacturing technique. Also, good quality roof tiles were reused over long period of times; therefore, the potential for dating evidence of plain roof tiles remains limited.

2 of the examples found during the excavation preserved evidence of circular peg holes, complete in the example found in context (105), and partial in the item recovered from context (104). Both fragments show the peg hole close to one of the corners, proving that it was originally held in place by two pegs (http://www.iadb.co.uk/).

The single curved fragment collected from context (104) was positively identified as ridge tile.

The remaining 3 roof tiles showed no evidence of peg holes or nibs, preventing from a positive identification of the type.

It is not recommended to retain undiagnostic roof tile fragments.

5.3.2 Brick

Two complete bricks were recovered during the excavation.

The example from context (119), measuring 228x112x65mm, was dated to the Victorian period.

The object recovered from context (120), measuring 225x132x44mm, was severely overfired; the exposed fabric, visible in one of the corners, showed the overfiring extends to the entirety of the brick. The brick was identified as modern engineering brick.

5.4 Metalwork *by Simona Denis*

5.4.1 Iron

A small group of 6 iron objects, weighing 565.6g in total, was found in 3 individual contexts. The entirety of the group showed advanced oxidation and a severe built-up of iron oxide, affecting the observation and the quantification of the weight of the objects.

Context	Type	No. of items	Weight (g)	Comments	Date range
104	?Fitting	1	98.6		?Post-medieval
	?Spur	1	51		
	Tongue horseshoe	1	98.6	Bent	
105	?Nail	1	11.1		
	?Joiner's dog	1	137.2	Rectangular cross-section	
131	Knife blade	1	9.7		

The horseshoe from context (104), although deformed, vase positively identified as a tongue horseshoe, with U- shaped frog and caulkins, and stamped, square nail holes. One of the nails, with a rectangular cross-section, was found embedded in the horseshoe. Tongue horseshoes are commonly produced throughout the post-medieval period.
A second item from the same context was tentatively identified as a spur. It is composed by a curved strip of iron, with a single central hole for the attachment of a second, straight strip of metal through a rivet. A second slot on the same strip was also observed, possibly a slot for a rowel.
Context (104) also yielded an incomplete, curved iron strip, tentatively identified as a fitting element for a pipe, and dated to the post-medieval period.

The iron knife blade found in context (131) has a triangular section, a very common feature in medieval and post-medieval periods (Margeson 1993).
The iron items were not retained due to their extremely unstable condition and the very limited potential for further analysis.

5.5 Miscellaneous *by Simona Denis*

5.5.1 Leather

A group of 10 leather objects, of a combined weight of 186g, was found in context (105). The items are in a very good state of preservation.

Context	Type	No. of items	Weight (g)	Comments	Date range
105	Shoe quarter	2	73	Pair	E16th C
	Insole	1	19		
	Welt	1	10		
	Outsole	2	31		
	Strip	1	29		Post-Medieval
	?Belt strap end	1	11		
	?Decorative strip	1	5		
	Undetermined	1	8		

Five of the items were positively identified as parts of a single, incomplete welted shoe. The preserved elements include both quarters, with latchets attached to the front and meeting at vamp throat, part of the insole, with visible edge stiches, two layers of the outsole with wide seat, whit grain stitches, and the welt (Mould 2005).

The object was positively identified as an ankle-fastening shoe, very similar to one example found in Southwark (GAS88 <71>, Egan 2005) dated c. 1480-c 1550.

Plate 8: Parts of early 16th century shoe

The remaining items include a possible belt strap measuring 120mm in length, preserving the pointed end, a strip of unidentified function, and a small, possible decorative strip, with one undulated edge. A broad dating to the post-medieval period is suggested for these items.

5.5.2 Glass

A single glass fragment, weighing 15.3g, was found in context (101). The item is a machine made curved, aqua fragment of a bottle or vessel, bearing the embossed writing […]NGT[…], dating to the 20th C.

It is not recommended to retain the modern glass fragment.

5.5.3 Clay Tobacco Pipe

A very limited group of 5 moulded clay tobacco pipe fragments, of a combined weight of 19.6g, was collected from 4 different contexts. The state of preservation of the items is very good, although extremely fragmentary.

Context	Type	No. of items	Weight (g)	Date range
101	Stem	1	6.3	17th-18th C
102	Stem	1	5.3	
104	Stem	2	5.3	
131	Stem	1	2.7	1620-1680

Table 5: Clay tobacco pipe occurrence by context

All of the items were positively identified as stem fragments. None of the stem fragments recovered included a mouthpiece. Plain stem fragments without diagnostic features or decorations have very little dating value; however, a slightly earlier dating to the 17th century is generally suggested for stems with an off-centre bore hole (Ayto 1994). Also, according to Harrington's charts (Harrington 1954), bore holes of an average diameter of 3.1mm were common between 1620 and 1680, as recorded for the stem fragment found in context (131).

The stem fragments were not retained due to their extremely limited potential for further analysis.

6 DISCUSSION

The archaeological watching brief was successful and met the aims of the investigations, which were laid out in the WSI.

The only possible hard standing associated with a quayside was an area of sandy gravel (133) found in the central and northeast portion of the north part of the basement. This was found above the land reclamation/raising of the ground level deposits (see below).

The earliest phase was represented by alluvial deposit (134). Above this were deposits considered to represent land reclamation or raising of the ground level for the river crossing. Finds recovered from these deposits were dated to the period from 14th to mid 16th century and presumably mostly relate to activity where this material originated. Some of the finds may be contemporary with the land reclamation/raising

of the ground level. The dating of the finds suggests that this happened on this site during the mid 16th century.

The next phase was represented by deposit (104) and its associated deposits. The finds recovered from these deposits were broadly dated to period from the late 15th to early 17th century. This deposit seems to represent made ground which was presumably formed during the period from the late 16th to early 17th century.

The last phase began with construction of present three storey building in the second half of 19th century, with continued development of site and changes of its use up to present day.

7 BIBLIOGRAPHY

Adams, B. J. and Crabtree, P. J., 2008 *Comparative Skeletal Anatomy. A Photographic Atlas for Medical Examiners, Coroners, Forensic Anthropologists, and. Archaeologists*. Humana Press, Totowa, NJ

Aultman J, Bon-Harper N, Grillo K, and Sawyer J 2014, *DAACS Cataloging Manual: tobacco pipes* (http://www.daacs.org/wp-content/uploads/2015/06/tobacco-pipes2.pdf, accessed 30/06/2015)

Aultman J, Galle J, 2014 DAACS *Cataloging Manual: Faunal* (http://www.daacs.org/wp-content/uploads/2015/06/faunal1.pdf accessed 09/07/2015)

Ayto, E. G. 1994 *Clay Tobacco Pipes*. Princes Risborough, *Shire* Album no.37

Bricks and Tiles, 2014 (http://www.hungerfordvirtualmuseum.co.uk/Themes/Bricks_and_Tiles/bricks_and_tiles.html, accessed 18/08/2015)

Chartered Institute for Archaeologists 2014 *Standard and Guidance for Archaeological Watching Brief*. Reading.

Colley S 2006, A preliminary beef meat cuts typology for nineteenth-century Sydney and some methodological issues. *Australian Historical Archaeology* 24

Crabtree P J, Campana D V, Traces of Butchery and Bone Working, in Adams, B A, Crabtree, P J, 2008 *Comparative skeletal anatomy. A photographic atlas for medical examiners, coroners, forensic anthropologists and archaeologists*. Humana Press, Totowa, NJ

Egan, G. 2005 *Material Culture in London in an age of transition. Tudor and Stuart period finds c 1450-c 1700 from excavations at riverside sites in Southwark*. MoLAS Monograph 19

Grew, F., De Neergaard, M, 1988 *Shoes and Pattens*. Medieval finds from excavations in London: 2. The Boydell Press

Hammond, M. 1990, Bricks and Brickmaking, Shire Album 75

Hare J N, 1991 The Growth of the Roof-tile Industry in Later Medieval Wessex, *Medieval Archaeology*, 35

Harrington J C, 1954 Dating Stem Fragments of Seventeenth and Eighteenth Century Clay Tobacco Pipes. Quarterly Bulletin of the Archaeological Society of Virginia (Richmond) 9, no. 1.

Heritage Directory 2010, Handmade Clay Plain Tiles including Peg Tiles. Heritage Directory Note. (http://www.theheritagedirectory.co.uk/uploads/articles/Peg%20Tiles.pdf accessed 19/08/2015)

Historic England 2015 *Management of Research Projects in the Historic Environment*. London.

John Moore Heritage Services 2009 *An Archaeological Desk-Based Assessment 46 Hythe Bridge Street, Oxford*. Unpublished report.

John Moore Heritage Services 2013a *46 Hythe Bridge Street, Oxford. Archaeological Watching Brief. Written Scheme of Investigation.* Unpublished document.

John Moore Heritage Services 2013b 4*6 Hythe Bridge Street, Oxford, NGR SP 50806 06350, Archaeological Watching Brief.* Prepared by D. Gilbert. Unpublished report.

Kausmally T, Western A G, 2002: Excavation of Faunal Skeletal Remains from Archaeological Sites. BAJR Practical Guide 4.

Listers Geotechnical Consultants 2015 *Blue Sky Sustainable Developments UK. Geotechnical Investigation. 46 Hythe Bridge Street, Oxford, OxfordshireOX1 1HH.* Report No. 15.02.006. Prepared by D. Webster. Unpublished report.

Lynch, G. Brickwork: Historic Development, Decay, Conservation and Repair, http://www.buildingconservation.com/articles/brick/brickwork.html (accessed 25/06/2015)

Margeson, S. 1993, *Norwich Households; Medieval and Post Medieval Finds from Norwich Survey Excavations 1971-78*. East Anglian Archaeology Report No. 58

McComish J M, 2015 A guide to ceramic building materials. York Archaeological Trust (http://www.yorkarchaeology.co.uk/wp-content/uploads/2015/05/A-guide-to-ceramic-building-material.pdf accessed 04/12/15)

Mellor, M, 1984 A summary of the key assemblages. A study of pottery, clay pipes, glass and other finds from fourteen pits, dating from the 16th to the 19th century in TG Hassall, CE Halpin and M Mellor, Excavations at St Ebbe's *Oxoniensia* **49**, 181-219.

Mellor, M, 1994 Oxford Pottery: A Synthesis of middle and late Saxon, medieval and early post-medieval pottery in the Oxford Region *Oxoniensia* **59**, 17-217

Mould, Q., Carlisle, I, Cameron, E. 2003 *Leather and Leatherworking in Anglo-Scandinavian and Medieval York*. The Archaeology of York. Volume 17: The Small Finds. York Archaeological Trust for Excavation and Research

O'Connor, T. 2000 *The Archaeology of Animal Bones*. Sutton Publishing Limited, Stroud

Oxford City Council Heritage and Specialist Services Team 2013 *46 Hythe Bridge Street, Oxford. Brief for an Archaeological Watching Brief.* Prepared by D. Radford. Unpublished document.

Pearce, J, 1988 Border Wares HMSO

Seetah K, 2009 The importance of cut placement and implement signatures to butchery interpretation

University of Tulsa. *General Glossary of Shoe Types* (http://www.personal.utulsa.edu/~marc-carlson/shoe/RESEARCH/GLOSSARY/define.htm (accessed 13/05/2016)

Watts, F. 2004, A comprehensive analysis of the butchering activities performed at the Fincastle Bison Kill Site (DIOx5). Unpublished MS Thesis

Weldrake, D. *First Steps in Identifying and Dating Clay Tobacco Pipes*. Identifying Your Finds: A Beginner's Guide to What to Look for. West Yorkshire Archaeology Advisory Service (http://www.archaeology.wyjs.org.uk/documents/archaeology/identifying/Clay.pdf accessed 28/04/2016)

Winder, J. M. 2011 *Oyster shells from archaeological sites: a brief illustrated guide to basic processing* (https://oystersetcetera.files.wordpress.com/2011/03/oystershellmethodsmanualversion11.pdf accessed 17/07/2015)