



C257 Archaeology Central Interim Statement

Archaeological Excavation and Watching Brief Farringdon (XTE12)

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Contents

| | | |
|----------|--|-----------|
| 1 | Introduction | 4 |
| 2 | Aims and Objectives | 5 |
| 2.1 | Research Aims | 5 |
| 2.2 | Fieldwork Objectives | 5 |
| 3 | Provisional Results | 7 |
| 3.1 | Natural Topography | 7 |
| 3.2 | Roman Remains | 7 |
| 3.3 | Medieval Remains | 7 |
| 3.4 | Post-medieval Remains | 8 |
| 3.5 | Post-medieval – Farringdon Road | 14 |
| 4 | Significance of Results (<i>provisional</i>) | 15 |
| 4.1 | Summary of Fieldwork Results | 15 |
| 4.2 | Importance of Resources (<i>provisional</i>) | 16 |
| 4.3 | <i>Provisional</i> Assessment of Results against Aims and Objectives | 16 |
| 5 | Future Deliverables | 19 |
| 6 | Appendices | 20 |
| 6.1 | Building Materials | 20 |
| 6.2 | Pottery | 23 |
| 6.3 | Accessioned finds | 26 |
| 6.4 | Worked Stone | 27 |
| 6.5 | Evaluation of the organic remains from samples | 29 |
| 6.6 | Animal bone | 31 |
| 6.7 | Conservation | 33 |
| 6.8 | Geoarchaeology | 34 |
| 7 | Figures | 37 |

Figures

(at back of document)

Fig 1 Site Location (including Farringdon Road intervention)

Fig 2 Areas A–C

Fig 3 Late Medieval/early post-medieval features

Fig 4 Post-medieval features

Fig 5 West facing section through ditch [288], [303]

List of Photos

| | |
|---|----|
| Photo 1 Area B/C, one of two barrels, within a larger oval shaped cut [287], possibly related to light industry, looking north | 8 |
| Photo 2 Northern edge of ditch [288] [303], visible in Area A, note change in fills between [242–5] left of picture and [240] right, looking east | 9 |
| Photo 3 Organic fills [294], [274] part of the lower ditch accumulation, note overlying tip/dumped deposits [306–12], looking east | 10 |
| Photo 4 Imported fine ware dated 1550–1580 showing the mythological story of Venus and the judgement of Paris, from dump/tip [295], looking north | 11 |
| Photo 5 Rudimentary culvert [267], formed of 16th to 17th-century bricks, truncating post-medieval ditch fills/dumps, looking south-west | 12 |
| Photo 6 Post-medieval walls in Area A. The earliest roughly aligned N–S [214] (centre) is probably external, with a later addition [233] (right), and internal partitions [216] and [232] (left), looking south | 12 |
| Photo 7 Post-medieval walls in Area B, looking north | 13 |
| Photo 8 Area A, medieval stone reused in post pad [228], looking south | 13 |
| Photo 9 Farringdon Road: mid-18th-century pit, containing large quantities of cattle metacarpals, probably butchery waste from Smithfield Market, looking west | 14 |
| Photo 10 Bed of stone <13>, from context [228], showing the finely worked v-shaped cut | 28 |

List of Tables

| | |
|---|----|
| Table 1 Summary of the building material in each context | 20 |
| Table 2 Summary of accessioned finds by material and period | 26 |
| Table 3 Summary plant remains from samples | 30 |
| Table 4 Contents of animal bone archive | 31 |
| Table 5 Summary of conservation work | 33 |
| Table 6 Section 21 | 34 |
| Table 7 Section 23 | 35 |
| Table 8 Section 26 | 35 |



1 Introduction

This Interim Statement, enhanced with finds and environmental results, covers an archaeological watching brief and excavation carried out in the location of the Farringdon Eastern Ticket Hall by the C257 Museum of London Archaeology (MOLA). The works were carried out between 3/07/13 and 20/11/13 and supervised by MOLA Senior Archaeologists [REDACTED] and [REDACTED].

In addition, it includes a brief note on a call-out under general watching brief provisions to animal bone found in utilities diversion works in Farringdon Road on 01/05/13.

It was recorded under event code (sitecode) XTE12.

This document is an interim statement of the results of the fieldwork, enhanced with the finds information.

All levels in this document are quoted in metres Above Tunnel Datum (m ATD). To convert Tunnel Datum to Ordnance Datum subtract 100m, ie 1m OD = 101m ATD.

The fieldwork was carried out in accordance with:

- A Crossrail **Site-specific Written Scheme of Investigation (SS-WSI): Farringdon Station, Site-specific Written Scheme of Investigation, Doc. No. CR-SD-FAR-EN-SY-0001 Version 6, 20.11.09**
- An **Addendum to the WSI: Package C136 – Farringdon Station, Addendum to Written Scheme of Investigation: Detailed Excavation & Watching Brief – Eastern Ticket Hall (XTE12), Doc. No. C136-SWN-T1-XAP-M123_WS098-00001 Revision 5.0, 03.10.12 [WSI Addendum]**
- **Method Statement, Archaeological Excavation and Watching Brief, Farringdon Eastern Ticket Hall, Doc. No. C257-MLA-X-GMS-M123-50002 Version 2 06.06.13 (MOLA for Crossrail 2013).**

2 Aims and Objectives

2.1 Research Aims

The original aims and objectives were listed in the SS- WSI Farringdon Station (Doc. No. CR-SD-FAR-EN-SY-0001, see section 1) and stated that 'Archaeological investigation and mitigation within the Crossrail worksites for Farringdon Station have the potential to contribute to the research themes (from Museum of London 2002, *A research framework for London archaeology 2002*) set out below':

Evidence for burials and/or features associated with the Charterhouse burial ground may contribute to the following research aims:

- Understanding life expectancy, origins and belief, seen through studying health, diet and disease, and preparing models for future research;
- Considering the relationship between cemeteries and major or minor roads, in terms of symbolism, status, privacy and convenience; and
- Understanding the differences, if any, between burial practices in the city and outlying cemeteries.

Archaeological remains associated with post-medieval extra-mural development may contribute to the following aim:

- Contributing to our understanding of the creation of the London suburbs with direct contribution to today's aspirations for an urban regeneration.

2.2 Fieldwork Objectives

The overall objectives of the investigation are stated in the WSI Addendum:

- To mitigate the impact of Crossrail construction through a programme of archaeological works carried out in accordance with the Crossrail Generic WSI (document number CR-PN-LWS-EN-SY-00001) and the standards listed therein.

The following task-specific research questions were devised by MOLA in the method statement for this work (MOLA 2013), expanding on the recommendations in the Evaluation Report (MOLA for Crossrail 2012, C257 Archaeology Central, Fieldwork Report, Archaeological Evaluation, Farringdon Eastern Ticket Hall (XSF10), Doc. No.: C257-MLA-X-RGN-CRG02-50060 v2 [Evaluation Report]):

1. What is the character and level of the highly variable **natural geology** across the site, and can the cause(s) of these variations be deduced (truncation or topography) ?
2. Does any **brickearth** survive (as recorded in evaluation Trench 2), and if so, what does this indicate about truncation by later activity ?
3. Do the low **levels of natural geology** seen in evaluation Trenches 2 and 3 represent a **palaeochannel** (eg a precursor of the Faggesswell Brook) or other topographic or geological feature ? Is the **brickearth** seen in evaluation Trench 2 lying in such a palaeochannel ?



4. What is the nature and date of any **Roman** extra-mural activity (eg quarrying, farming, burials, etc) ?
5. Are any *in situ* medieval **burials from the Outer Cemetery** of Charterhouse present [*currently considered unlikely*], and if so what is their date ? What does their presence or absence indicate about the **extent** of this burial ground, and how does this compare with the Charterhouse boundaries ?
6. If **redeposited** human remains are present [*again considered unlikely*], what can they contribute to our very limited data about this cemetery ?
7. What is the extent, orientation, dating, and character of the **channel** that may well be the **Faggesswell Brook** (in particular the **stakehole structures** lining the edges), the adjacent **marshy area or pond**, and any associated features such as drainage **ditches**.
8. Do these correspond to the **historic references** to the Faggesswell Brook, swampy ground and pond ?
9. How does the stream/channel correspond to southern **boundary of Charterhouse** at this point ?
10. What is the character of the sequence of 16/17th-century **land reclamation** in preparation for the first, early post-medieval, occupation ? Can it be more closely dated than this, and how does this compare with historic maps and documents ?
11. What is the character, date, and significance (if any) of the **leather objects** recovered from the marshy deposit ? Were they discarded **after use, or unused** from leatherworking – is this associated with nearby Smithfield ?
12. Is **butchery waste** present, eg animal bone, particularly within medieval/post-medieval features, following the establishment of the Smithfield livestock market? What is the character of the assemblage ? Do they reveal any atypical characteristics of animal husbandry in use during this period?

3 Provisional Results

See Fig 1 for site location, and Fig 2 for trench locations

3.1 Natural Topography

Compacted terrace gravels [248], [246], [296] and [305] (Fig 4), (previously observed and recorded during the evaluation: MOLA 2012) were exposed in all areas (A–C). A thin band of redeposited (likely naturally formed) dirty gravel [248] was recorded overlying more compacted deposits in the northern part of A at a maximum height of 114.22m ATD.

What appeared to be brickearth was recorded sealed underneath ditch/channel cut [303] at 111.5m ATD. This ‘brickearth’ was presumably a sandy silty alluvium within a palaeochannel, rather than true Langley Silt Complex, which it resembled. This suggests that a palaeochannel cut into the terrace gravels, and had been recut along the same course by ditch [303].

To the south in Area C, compacted reddish brown gravels were recorded at 113.60m ATD, these had been horizontally truncated by 19th-century basement foundations.

3.2 Roman Remains

No Roman deposits were recorded. Although a small area of heavily truncated pit had been seen in the evaluation (MOLA 2012), if any similar features had been present, they were unlikely to have been observed, due to the scale of the ground works and consequent safety restrictions on close observations.

3.3 Medieval Remains



Photo 1 Area B/C, one of two barrels, within a larger oval shaped cut [287], possibly related to light industry, looking north

The remains of two timber barrels were recorded within a large oval cut in the south of Area B (Photo 1, Fig 3). This feature was truncated by 19th-century building foundations and only survived to a depth of 0.5m. Finds from the backfilled cut included pottery dated 1270–1300 animal bone, and ceramic building material, but provided little insight into the original purpose of the pit and the barrels. Pottery from the backfill of the barrels dates to 1350–1500 and 1400–1500s, and a variety of peg tile to after 1480. These dates suggest that this feature may have gone out of use towards the end of the 15th century, or in the early 16th century.

Ditch/channel [288]/[303] may also have originated in the medieval period (see 3.4). The proximity of the barrels to the ditch (assuming they were contemporary) would have allowed access to water as well as being and provided an ideal dumping ground; the meat market to the west, is possibly significant. This feature is provisionally identified as being associated with light industry, eg dyeing or tanning.

Despite the paucity of clearly datable medieval features, there were a number of medieval finds, mostly residual. Medieval pottery was present in eight contexts, totalling 39 sherds, the majority residual. Ten vessels (21 sherds) are from contexts dated to 1400–1500, but earlier wares are also present, with dates ranging from 1270–1350 to 1350–1500. As a whole, jugs are the main form type; other forms comprise bowls/dishes, cooking pots and jars (see 6.2).

A single decorated medieval floor tile dated to around 1350–90, from Penn in Buckinghamshire, and of unpublished design, was retrieved from the backfill of trench 2 from the 2011 evaluation (roughly approximating to the northern end of Area B). There is also a limited selection of residual building material, in the form of peg roofing tile from contexts [286], [310] and [317], and probable peg tile from context [290]. A medieval brick dated 1300–1480 was recovered from the lower fill of the ditch [274]. This displayed evidence of reuse, possibly as paving (see 6.1).

A single architectural fragment of Reigate stone was recovered from Context [228] (see 6.4) a truncated post-medieval brick wall/post-pad. This type of stone was historically quarried from the North Downs of Surrey until the 1930s. The stone was far too fragmentary to positively identify its original function within a building, and its precise dating is not possible. However the medieval monastic buildings of Charterhouse to the north are a possible point of origin.

3.4 Post-medieval Remains

The vast majority of finds and features have been provisionally dated to this period. The earliest feature is a massive ditch or channel [288] and [303] (Photo 2, Fig 3, Fig 5), 20m+ wide and up to 2.5m deep, aligned approximately south-west–north-east. The northern edge cut through Area A truncating dirty gravels [248], sloping down from north to south, from 114.20m ATD to 112.60m ATD. This confirmed and expanded on the results from evaluation Trench 1 (MOLA 2012) that had tentatively identified the base of a cut in this area. Likewise the southern edge of the ditch recorded between 113.11m ATD and 111.60m ATD in Area B confirmed the evaluation results from Trench 3 (MOLA 2012 [Fig 5]). Primary fills [242–5] (Fig 5), located on the northern bank, appeared to relate to an earlier phase, and although undated may potentially be medieval or earlier. Future analysis of bulk samples and monolith tins from these deposits (in post-excavation assessment) will hopefully refine the chronology and conditions of creation/deposition in this area during this phase of activity.



Photo 2 Northern edge of ditch [288] [303], visible in Area A, note change in fills between [242–5] left of picture and [240] right, looking east

Spread across the base of the ditch was an extensive deposit of soft grey moderately humic silty clay [300] 0.2m thick, that contained pottery and building material dated 1550–1700. This probably represents a period of slack/slow moving water (Fig 5). A highly organic semi-terrestrial waterlain deposit 0.4m thick [294], [274] (Photo 3, Fig 5) sealed this deposit, again filling the ditch, within which roots and textiles were well preserved, as well as animal skulls (horse and dog). A variety of finds from these layers, including a near-complete mid to late 16th-century shoe with slashed decoration (<25>), part of a leather belt (<24>) and a short length of bent copper wire (<17>) are consistent in style and type with that of the pottery assemblage, and help give a tight date for its formation/accumulation of between 1550 and 1600.

A series of deposits [270], [306–12] and [294–298] (below, Fig 4), forming distinct oblique dumps over the marsh, were recorded between 112.14m ATD and 113.05m ATD. These survived to varying degrees across Areas A and B. The upper (later) deposits were machine excavated (for reasons of safety). These layers are all roughly contemporary, formed some time after the mid-1500s. Finds included a selection of mid-16th-century pottery; of note were a fine Cologne-made vessel (Photo 4), and a near complete Surrey-Hampshire border ware pipkin cooking vessel. The majority of the pottery was locally made, and typical of the period 1480–1600. Cooking vessels including cauldrons/pipkins, pots, and chafing dishes, were all found within the dumps filling the ditch (see Fig 5). Other forms comprised flower pots, a watering can, part of an upright candlestick, chamber pots, costrels, moneyboxes, drinking jugs, a goblet, mugs, porringers and possibly a brazier from [275] that is probably the most complete example of its type to date (see 6.2).

The highly organic ditch fills contained diverse food remains, including fig, plum seeds, oyster shell and eggshell fragments. They also contained wild species typical of nitrogenous urban waste and disturbed ground environments, as well as a mix of domestic waste and locally growing weeds. Sample {37} [276] contained a seed assemblage including hemp, flax and pot marigold, possibly originating from a local garden (see 6.5).



Photo 3 Organic fills [294], [274] part of the lower ditch accumulation, note overlying tip/dumped deposits [306–12], looking east

Also of interest is a thimble with stamped triangular pits which probably dates to the 16th or 17th century. Imported wares were relatively common, reflecting the high status of properties in the area during the 16th and 17th centuries.

A shallow pit recorded in plan may actually be one of these tips/dumps, and contained a variety of large animal bones. These included: juvenile cattle, sheep/goat and pig, and together with the animal bone assemblage from the ditch fills as a whole, represent clear evidence of butchery (see 6.6), probably associated with Smithfield Market to the west, given its proximity.

A wide, flat bottomed pit [316] recorded in section in the north of Area B (Fig 5), contained building material, including peg tile dated 1480–1600 (see 6.1). It is likely this represents a construction cut associated with the overlying 17th-century buildings.

In Area B, culvert [267] (Photo 5) was constructed from bricks dated 1500–1600, and truncated the upper ditch fills at 112.90m ATD, and had evidently been repaired or extended during the 17th century. Apparently coincidentally, it shared the same south-west–north-east alignment as ditch [288]/[303] below it.

A variety of heavily truncated post-medieval brick structures (mostly walls and foundations), were recorded in Areas A and B between 114.78m ATD and 113.88m ATD (Photo 6, Photo 7, Photo 8 and Fig 4). The most substantial wall [214] (Photo 6), constructed from bricks dated 1500–1600 and roughly aligned north–south in Area A, shared a similar alignment and construction to [254] in Area B (Photo 7), which was constructed of a slightly later brick type (1550–1666). Their exact relationship is uncertain however, as a series of modern piles and the retaining foundations for the Metropolitan Line (constructed in the 1860s) had formed a large east–west truncation, separating Areas A and B. They are probably the exterior wall remnants/foundations of domestic premises constructed between the 16th and 17th centuries. Some bricks (contexts [215], [254], [255]) had black flecked mortar, possibly

formed during exposure to fire, suggesting they may have been reused after the Great Fire of 1666 from pre-Fire buildings (see 6.1).



Photo 4 Imported fine ware dated 1550–1580 showing the mythological story of Venus and the judgement of Paris, from dump/tip [295], looking north



Photo 5 Rudimentary culvert [267], formed of 16th to 17th-century bricks, truncating post-medieval ditch fills/dumps, looking south-west



Photo 6 Post-medieval walls in Area A. The earliest roughly aligned N-S [214] (centre) is probably external, with a later addition [233] (right), and internal partitions [216] and [232] (left), looking south

In Area A, a later wall [215] (right of picture) abuts [214] and is dated slightly later to 1550–1666 (Photo 6, Fig 5), may be the beginning of the next building to the west (now entirely demolished). There are also the shallow foundations of an internal partition wall [216] to the east that abuts, and therefore post-dates [214]. Tentative evidence for an internal floor survived between partitions [216] and [232], although this was heavily truncated. Demolition layer [221] (Fig 4) overlay internal partition wall [216], and contained pottery dated 1740–1780, suggesting this phase of building was probably demolished in the late 18th-century.



Photo 7 Post-medieval walls in Area B, looking north

A small surviving island of stratigraphy in Area A [Photo 8], is possibly a post pad [228] originally supporting a second storey.



Photo 8 Area A, medieval stone reused in post pad [228], looking south

More recent structures (extensive supporting brick and concrete walls for the retaining wall of the Metropolitan Line, constructed in 1873) truncated to well below natural geology in all Areas of the site.

3.5 Post-medieval – Farringdon Road

On the 1st May 2013 MOLA was asked to investigate (under the general watching brief provisions) an assemblage of animal bone brought up by C435 utilities diversion works in the western half of Farringdon Road, just to the north of the junction of Farringdon Road and Cowcross Street (Fig 1). The shallow pit (Photo 9) was investigated and recorded, and the assemblage was composed of approximately 30 adult cattle fore and hind feet, indicative of primary processing, eg hide removal (not consumption waste), in good enough condition to measure (giving eg animal stature) and to look at butchery marks (6.6). It is likely that they are waste associated with Smithfield meat market, located 50m to the south-east. A selection of tin-glazed pottery and clay pipe bowls roughly dated the deposit to the mid-18th-century.



Photo 9 Farringdon Road: mid-18th-century pit, containing cattle metacarpals, probably butchery waste from Smithfield Market, looking west

4 Significance of Results (*provisional*)

4.1 Summary of Fieldwork Results

- Some variety was observed in natural deposits across the site, terrace gravels [248], [246], [296] and [305], were recorded between 114.22m ATD in Area A and 113.60m ATD in Area C. The brickearth recorded at 111.5m ATD sealed beneath the medieval or later ditch [303] appears strange in comparison to the height of the surrounding terrace gravels. However there was no reason to believe it had been redeposited, or was somehow associated with formation of the ditch itself. It is possible that this is the upper fill of a previously unrecorded palaeochannel. This may be a precursor of the Faggesswell Brook, and its course west of the site is suggested by the gully-like feature seen in a reconstruction of the contours in the Roman period (MOLA, 2011, *Londinium, a new map and guide to Roman London*).
- Ditch/channel cut [288]/[303] (Photo 2, Fig 3, Fig 5) is of an unknown date. Its size suggests it would have been a significant feature in the local landscape. It has been suggested that it may be the Faggesswell Brook that is known to have flowed west of the site down into the Fleet. The potential for this will be explored in post excavation analysis.
- Perhaps significantly the ditch roughly mirrors the south-west–north-east alignment of the gardens and roads in and around Charterhouse Square, which is known to have been laid out during the late medieval period. The ditch may have originally formed the southern boundary to the Black Death cemetery, and/or the medieval precinct of Charterhouse founded in 1371. Any finds dating to this period would have been removed by later activity, ie cleaning out of the ditch and/or erosion by water movement. It is therefore possible, indeed likely, that it is considerably older than the 16th–17th-century material found within it. They could have been continuity from the prehistoric stream represented by the possible palaeochannel filled by brickearth [303], through the historic periods, to what appears to have been a managed channel [288]/[303].
- The silting up and eventual blocking of ditch [288], [303], is catalogued in marsh-like deposits [300], [294–299], and [274] between 112.14m ATD and 113.05m ATD. The blocking of waterways and ditches in and around London with rubbish during the post-medieval period is well catalogued. In this instance it is possible that this process was caused/accelerated by general neglect and decay associated with the closure of the monastery in 1537 to the north. The succession of overlying dumps [270], [306–12] and [294–298] (Fig 4), that finds suggest date to after the 1500s, signify a period of disuse, and support this hypothesis. The gradual dumping sealing these deposits suggests that initially the ditch was used for rubbish disposal, perhaps in some way associated with the oval pit [287] to the south (possibly including primary waste from the meat market), leading to a more concerted attempt at reclamation during the 17th century, to make way for urban expansion.
- The post-medieval culvert [267] and stratigraphically later walls [216–7], [232–3] and [254–5] (Fig 5), as well as the solitary brick and stone foundation pier [228], are interpreted as the foundations of buildings (probably domestic) that correspond with a row of housing set slightly back from the western side of Hayne Street on the Ogilby and Morgan map of 1676. The surviving post pad [228] suggests that this building may originally have had a second storey. Specialist analysis of the medieval worked stone may help to suggest from where it originated.

4.2 Importance of Resources (*provisional*)

The archaeological remains identified in the fieldwork are provisionally assessed as being of **low to moderate importance**.

The ditch and associated channel deposits, that expand on the 2011 evaluation records, are of moderate importance, as they have not been previously recorded in the area, and indicate that a tributary to the Fleet river (potentially the Faggesswell Brook) runs across the centre of site. In addition it is possible that this ditch was then utilised as a southern boundary for the medieval Charterhouse. The reclamation dumps and tips overlying and associated with the marsh deposit, potentially offer a tight dating sequence of deposition, representing the abandonment of the channel, and the animal bones and insect remains potentially represent waste from the nearby Smithfield meat market.

The later remains dating from the 16th/17th to 20th centuries are identified as of low importance. The oval pit containing two barrels, whilst intriguing, and implying the existence of low level industry in the area, was not adequately preserved to allow for further archaeological interpretation. Later post-medieval structures (wall and footings, culvert) are all well represented in the archaeological record from this period and represent the creation and expansion of the extra-mural suburbs.

4.3 *Provisional* Assessment of Results against Aims and Objectives

The following task-specific research questions have been devised by MOLA for this work, expanding on the recommendations in the Evaluation Report:

1. What is the character and level of the highly variable **natural geology** across the site, and can the cause(s) of these variations be deduced (truncation or topography) ?

Dirty terrace gravels were recorded overlying more compacted deposits in the north of the site at a maximum height of 114.22m ATD. The ditch/channel truncated these deposits to 111.71m ATD. To the south in Area C, compacted gravels had been horizontally truncated to 113.60m ATD.

2. Does any **brickearth** survive (as recorded in evaluation Trench 2), and if so, what does this indicate about truncation by later activity ?

Weathered natural brickearth was recorded sealed under ditch cut [303] at 111.71m ATD. This suggests that possibly the ditch or brook was following an earlier palaeochannel, although the evidence for this is based mainly on the survival of brickearth in an hypothesised palaeochannel cut below the level of the surface of the gravel, along with the reconstruction of former ground contours (see 3.1 and 4.1).

3. Do the low **levels of natural geology** seen in evaluation Trenches 2 and 3 represent a **palaeochannel** (eg a precursor of the Faggesswell Brook) or other topographic or geological feature? Is the **brickearth** seen in evaluation Trench 2 lying in such a palaeochannel?

See 2 above.

4. What is the nature and date of any **Roman** extra-mural activity (eg quarrying, farming, burials, etc)?

There was no evidence of Roman activity from this phase of work.

5. Are any *in situ* medieval **burials from the Outer Cemetery** of Charterhouse present, and if so what is their date? What does their presence or absence indicate about the **extent** of this burial ground, and how does this compare with the Charterhouse boundaries ?

There was no evidence for burials from the Outer Cemetery of medieval Charterhouse, neither disarticulated or in situ, nor other associated features. This demonstrates that it is unlikely that the medieval burial ground extended this far south. However, if the ditch recorded formed the southern boundary of the medieval precinct of Charterhouse, it is certainly possibly that burials could have been located immediately north of the site. These would have been lost in the construction of the 19th-century railway cutting. Later truncation and/or ditch cleaning may have removed the archaeological evidence for this. Newspaper reports of burials being disturbed during construction of the railway will be investigated at assessment.

6. If **redeposited** human remains are present, what can they contribute to our very limited data about this cemetery ?

See 5 above.

7. What is the extent, orientation, dating, and character of the **channel** that may well be the **Faggesswell Brook** (in particular the **stakehole structures** lining the edges), the adjacent **marshy area or pond**, and any associated features such as drainage **ditches**.

The excavations have refined the topography of the area, particularly the characteristics of ditch cut [288]/[303]. We now know it is approximately 20m wide roughly following a south-west–north-east alignment, and potentially up to 2.5m deep. As already mentioned (see 4.1) the dating of the ditch is more problematic, finds from later dumps only give an indication of when they were deposited, not when the ditch was formed; and even the earliest deposits within the ditch [300], only indicate the last phase of ditch use. As discussed it may be medieval or earlier. Unfortunately modern truncation had removed further evidence for stakeholes along the southern edge of the ditch. Analysis of animal remains from soil samples (such as hair and feather fragments, fly puparia, etc seen in the evaluation samples) is likely to help characterise the relationship of the ditch with animals and activities from the nearby Smithfield Market – such as the dumping of animal waste.

8. Do these correspond to the **historic references** to the Faggesswell Brook, swampy ground and pond ?

Historical sources point to the likely location of the Faggesswell Brook as somewhere immediately north of Charterhouse Street, aligned east–west. However, reconstructed ground contours in the Londinium map (MOLA 2011) would explain a course that originated this small distance further to the south, but moved to the north as it travelled westwards. It has been also been suggested (but not conclusively identified) that the eastern portion ran north to south, following St John Street, based mainly on topography

suggesting a hollow roughly following the street alignment. However it is entirely possible that these relate to a separate feature, and the ditch identified running through Hayne Street is indeed part of the Faggesswell Brook.

9. How does the stream/channel correspond to southern **boundary of Charterhouse** at this point ?

The ditch follows the projected southern boundary of the medieval Charterhouse. The orientation of the northern edge follows that of the reconstruction of the Charterhouse precinct (Barber and Thomas, 2002 The London Charterhouse, MoLAS Mongr 10), and the short length of the southern edge, seen in a trial trench (MOLA 2012), corresponds to the reconstruction of the precinct boundary based on the boundary of the City (Barber and Thomas, 2002).

10. What is the character of the sequence of 16/17th-century **land reclamation** in preparation for the first, early post-medieval occupation ? Can it be more closely dated than this, and how does this compare with historic maps and documents ?

The first deposits sealing the marshy ditch/channel fills show a clear alignment, suggesting they have been tipped from the south (Photo 3), and are probably domestic rubbish from nearby households (supported by finds evidence, see 6.2). Over time these consolidated the ditch. It is hoped that given the marked differences in colour and composition between contexts [306–12] in particular, an accurate chronology for this early phase of dumping will be demonstrated. Finds have provisionally dated the dumping over and in the ditch to the 16th century, this is consistent with the pattern of development documented in this area by contemporary maps (eg Ogilby and Morgan 1676), that depict extensive urbanisation by the 17th century.

11. What is the character, date, and significance (if any) of the **leather objects** recovered from the marshy deposit ? Were they discarded **after use, or unused** from leatherworking – is this associated with nearby Smithfield ?

Provisional analysis of the leather suggests that the majority is general discarded rubbish, including shoes and belts. There is no evidence for leather working or implied association with Smithfield Meat Market.

12. Is **butchery waste** present, eg animal bone, particularly within medieval/post-medieval features, following the establishment of the Smithfield livestock market? What is the character of the assemblage? Do they reveal any atypical characteristics of animal husbandry in use during this period?

The animal bone recovered from the marsh deposits, and overlying dumps, is from a wide selection of species, with some evidence of primary processing suggested by large herbivore skulls as well as intact thigh and leg bones. Specialist analysis of the assemblage, and also of the insect remains, may offer further insight into the environment in which they were deposited, and any associations with butchery, and thus Smithfield market.



5 Future Deliverables

The remaining deliverables for the site, as specified by *Crossrail, Archaeology, Specification for Evaluation & Mitigation (including Watching Brief)*, Doc. No. CR-PN-LWS-EN-SP-00001, v. 0.3, 26.06.09, are:

- **Survey Report**
- **Summary Report**
- **Post-excavation Assessment**, to be combined with Charterhouse Square UPD (Crossrail publication project CRL9)

6 Appendices

6.1 Building Materials



A total of 94 fragments of building material were recovered from 25 contexts at XTE12. These comprise mainly roofing tile and brick. Two glazed floor tiles are also present along with a few pieces of stone.

The building material from XTE12 has been fully recorded and the information added to the Oracle database.

Table 1 Summary of the building material in each context

| Context | Fabric | Type | Context Date |
|---------|------------------------|------------------|----------------|
| [+] | 1810 | Penn floor tile | 1350–1390 |
| [+] (a) | 2276 | Peg roofing | 1480–1800 |
| [214] | 3033 | Brick | 1500–1600 |
| [215] | 3033, 3046 | Brick | 1550–1666 |
| [217] | 3033 | Brick | 1500–1600 |
| [228] | 3033 | Brick | 1600–1700 |
| [254] | 3033 | Brick | 1550–1666 |
| [255] | 3033, 3042, 3046 | Brick | 1500/1550–1666 |
| [262] | 2271 | Peg roofing | 1800/1830–1950 |
| [262] | 3107 (Reigate stone) | ? | |
| [262] | 3135 (Granite) | Curb/cobblestone | |
| [267] | 3033 | Brick | 1500–1600 |
| [272] | 2816 | Peg roofing | 1200–1800 |
| [274] | 3033 | Brick | 1550–1550 |
| [280] | 3033 | Brick | 1450/70–1550 |
| [281] | 2276 | Peg roofing | 1480–1800 |
| [282] | 2276 | Peg roofing | 1480–1800 |
| [283] | 2271, 2276, 2586 | Peg roofing | 1480–1800 |
| [286] | 2271, 2586, 3090, 3216 | Peg roofing | 1480–1800 |
| [290] | 2271, 2276, 2587, 3216 | Peg roofing | 1480–1800 |
| [293] | 2276 | Peg roofing | 1480–1800 |

| | | | |
|-------|------------------|---------------------|--------------|
| [294] | 2276, 3216 | Peg roofing | 1480–1800 |
| [298] | 2276 | Peg roofing | 1480–1550 |
| [298] | 2586 | ? | |
| [298] | 3033 | Brick | |
| [299] | 2276 | Peg roofing | 1480–1550 |
| [299] | 3033 | Brick | |
| [300] | 3033 | Brick | 1450/70–1550 |
| [304] | 2276 | Peg roofing | 1480–1800 |
| [310] | 2271, 3090 | Peg roofing | 1450/70–1550 |
| [310] | 3033, 3046 | Brick | |
| [313] | 2276 | Peg & ridge roofing | 1480–1800 |
| [317] | 2271, 2276, 2587 | Peg roofing | 1480–1600 |
| [317] | 2850 | Floor tile | |
| [317] | 3033 | Brick | |

(a) From backfill N of [235] or [239] deposit (label unclear)

6.1.1 Discussion

With the exception of the floor tiles (contexts [+], [317]) all the ceramic building material probably originates from kiln sites in or close to London. The Reigate stone is from Surrey whilst the granite may come from the West Country or the Lake District.

6.1.2 Medieval

Of particular interest from the site is a Penn floor tile from the village of the same name in Buckinghamshire. This tile, which dates to around 1350–1390, has an unpublished design type never previously recorded in London. Vast numbers of Penn tiles were brought into London, mainly to floor parish churches and domestic buildings.

There are also a few fragments of medieval peg roofing tile from contexts [286], [310] and [317], and probable peg tile of the same date from context [290]. A medieval brick was recovered from context [274]. This brick, which is cream in colour with a red outer fire-skin, was a worn base indicating use as paving. It dates to around 1300–1480.

6.1.3 Post-medieval

The majority of post-medieval building material is peg roofing tile with two round nail holes near the top edge. A more square shaped hole was present in a tile from context [304]. Ridge tile is also present, together with a slightly curved tile (context [298]) which could be either a ridge or hip tile.

The majority of bricks can be dated to the period 1450–1666, although major structural use of brick in London does not begin until the late 15th century. One brick (context [298] <42>) is very unusual in having been cut to a chamfer along both ends. Presumably this formed some sort of decorative brick feature. Some bricks (contexts [215], [228], [254], [255]), have



black flecked mortar suggesting they may have been used (reused) after the Great Fire of 1666. A brick with a worn header end (context [272]) would appear to have been reused as paving.

A glazed, but worn, floor tile is a Low Countries import dated to around 1480–1600. This probably came from the floor of a parish church or monastic building. Vast numbers of Low Countries floor tiles were brought into London during the late 15th–16th centuries.

A wedge shaped piece of Reigate stone, probably medieval or early post-medieval in date, was recovered from context [262] <22>. The purpose of this stone is uncertain. It was found with a partly smoothed fragment of white and black granite ([262] <21>, possibly a curb stone. Granite was rarely used in London before the expanding railway network allowed ease of movement in the mid-19th century.

6.2 Pottery



6.2.1 Introduction

The post-Roman pottery assemblage derived from 40 contexts ([221]–[315]) and amounts to 618 sherds from 424 vessels (27.946kg); 38 sherds are from sieved samples. The finds were recorded on paper and computer using standard Museum of London codes for fabrics, forms and decoration, noting sherd count, estimated number of vessels (ENV) and weight. The data can be accessed on the Oracle database and in an Excel spreadsheet. No attempt has been made at this early stage to relate the finds to the stratigraphic information.

6.2.2 Medieval fabrics and forms

Medieval pottery was present in eight contexts, totalling 39 sherds (21 ENV, 983g); the main concentrations are in [298] (14 sherds) and [240] (6 sherds). In three cases the finds are residual ([274], [298], [304]), but from the lack of other dating evidence, the others could be stratified ([235], [240], [286], [290], [292]). Ten vessels (21 sherds) are from contexts dated to 1400–1500, but earlier wares are also present, with dates ranging from 1270–1350 to 1350–1500. Local fabrics are the most common, with two sherds of coarse London-type ware (LCOAR), two of London-type ware (LOND), 20 of the later equivalent late London-type ware (LLON, four vessels) and one of the slip-coated variant (LLSL). Surrey whitewares comprise nine sherds of coarse Surrey-Hampshire border ware (CBW) and one of Cheam ware (CHEA); there are no Kingston-type wares. One reduced sherd is probably of Limpsfield ware (LIMP). Also present are two small sherds of Mill Green ware and Mill Green coarseware. As a whole jugs are the main form type; other forms comprise bowls/dishes, cooking pots and jars.

6.2.3 Post-medieval fabrics and forms

Post-medieval pottery was present in 32 contexts, totalling 581 sherds (403 ENV, 27.205kg); the main concentrations are in [262] (64 sherds) and [270] (55 sherds); contexts [272] and [298] have 45 and 44 sherds respectively, while [227] has 41 sherds.

London-area redwares are the dominant category, with 274 sherds (180 ENV, 15.870kg). Most are in early post-medieval redware (PMRE, 119 sherds), with a few in the related calcareous redware (PMREC) and redware with a metallic glaze (PMREM), all of which are typical of the period 1480–1600. Slipped redwares with a clear or green glaze (PMSRG/PMSRY), dated from 1480–1650, are also well-represented (126 sherds), but only 18 sherds are in the later London-area post-medieval redware (PMR). Cooking vessels are the main functional group, with sherds from up to 62 cauldrons/pipkins and cooking pots. In addition there are sherds from four chafing dishes, used for keeping food warm at the table, and 32 jars, some of which may also have been used for cooking. Related to these are fragments of up to six lids, one of which has incised decoration and merits illustration ([310], PMSRG). Forms used for food preparation or serving are the second most common, with sherds from up to 40 dishes and five bowls. Up to 14 jugs are represented, along with an unusual small, unglazed jug/bottle in PMRE ([264]; height 105mm, base diameter 50mm; to draw). and one or more industrial vessels in a redware fabric with organic inclusions, found in [257], [275] and [311]. Other forms comprise flower pots and a watering can. Of particular

note are six sherds from one or more 'industrial' forms in a redware fabric with organic inclusions (PMRO), including a very large pedestal form from [275], with opposed handles and a vent in the base; possibly a brazier. Such forms are rare in London and this is probably the most complete example of its type to date and should be illustrated; the best parallel is from Lambeth Hill (Moorhouse 1972, 120, fig 33.13); other finds from Moor House (Blackmore 2006, 80; Sudds 2006, 95, fig 75) and from New Street Square (Telfer and Blackmore in prep) are much more fragmented. In addition there are 20 sherds of fine post-medieval redware and post-medieval black-glazed ware from Essex.

Surrey-Hampshire border wares amount to 176 sherds (136 ENV, 5.542kg); only six of these are in the redware fabric. Pipkins are the dominant form (75 sherds from up to 42 examples), including one near complete example from [270] (to draw). Dishes are the second most common form, with sherds from up to 21 examples. Ten probable bowls are also present, one with the letter 'E' incised at the centre of the underside and a radial tool mark at the edge. Other forms comprise part of an upright candlestick, chamber pots, costrels, moneyboxes, drinking jugs, a goblet, mugs and porringers.

Tin-glazed wares are rare, with only 20 sherds from up to 14 vessels (461g). Most are of late 16th-/early 17th-century date (fabric codes TGW A, TGW D), including five albarelli, four with expanded and bevelled base angles in the Antwerp/Aldgate style (Blackmore 2005, 239, fig 202) and a dish and saucer with polychrome decoration. The latest finds are two 18th-century plates from [221] and [265]. Other English fabrics include Cistercian ware and Midlands purple butterpots; the latest finds are six sherds from an English stoneware tankard with excise stamp and two of English white salt-glazed stoneware, all from [221].

Imports are relatively common on the site, with 73 sherds from 50 vessels (3.82kg), of which roughly half (46 sherds, 26 vessels) are Frechen stonewares. The best group is from [295], which contained three high quality globular jugs with inscribed/floral bands around the girth and portrait medallions and acanthus leaves and sherds from other jugs; these, a sherd from [279] reused as a counter (to accession) and a miniature globular jug from [297] merit illustration. Also from [297] is part of a rare tankard (*Pinte*), probably from Cologne, with part of one of three panels showing what appears to be Venus and the judgement of Paris (Gaimster 1995, 147, 236, col pl 18). Single sherds of probable Cologne stoneware were found in three other contexts, with four sherds of Raeren stoneware from four contexts. Other imports include Dutch redwares (both plain and slipped), part of a South Netherlands maiolica Malling jug with all over blue glaze, Martincamp stonewares from France, the complete rim of Spanish olive jar and one or two large Spanish green-glazed *lebrillo* dishes, a rare find in London. From Italy are part of a Ligurian tin-glazed dish and a Montelupo tazza. The one sherd of Chinese porcelain, from [258] is in an unusual darker fabric with floral decoration in olive-green/brown outlined in brown.

6.2.4 The clay pipes

In all 31 pipe fragments were recovered from six contexts, of which 10 are bowls. The finds were recorded directly onto the Museum of London Archaeology Oracle database using standard codes for type (based on Atkinson and Oswald 1969), decoration and surface treatment and noting fragment count. The earliest bowl fragment is of AO8, dated to 1610–40 from [227]; four examples from [210] and [270] are of type AO10, dating from 1640–60. Three bowls are dated to 1680–1710, two from [225] (type AO20) and one from [265] (type AO21). The latest finds are from [221] and from [227] (<13>), which contained a bowl of type AO26 (1740–80). The former is a large bowl similar in form to type AO25 has the initials NA on the spur (<15>, while the latter has the initials IH. No pipes have any other form of decoration.

6.2.5 Discussion

The medieval pottery probably derives from the Charterhouse monastery. Some post-medieval groups are typical of the Dissolution period, but most probably date to the later 16th and early 17th centuries when former monastic buildings were converted for private use and new buildings began to be built outside the monastic precincts in the Smithfield area. The only real evidence for 18th-century activity is from contexts [221] and [265]. Most of the pottery is entirely domestic in character and while the crucible and unusual brazier-type forms hint at technological processes, the rarity of these finds suggests that these too may have been carried out within a household, rather than reflect industry as such. The high status of the property/properties is reflected by the range of imported wares, which include some fine German stonewares. Several finds merit illustration.

6.2.6 References

- Atkinson, D R, and Oswald, A, 1969 London clay tobacco pipes, *J. Brit. Archaeol. Assoc.* 32, 171–227
- Blackmore, L, 2005 The pottery, in *Holy Trinity Priory Aldgate, City of London: an archaeological reconstruction and history* (eds J Schofield and R Lea), MoLAS Monogr Ser 24, 227–47, London
- Blackmore, L, 2006 The medieval and post-medieval pottery, in Butler, J, *Reclaiming the marsh: archaeological excavations at Moor House, City of London*, PCA Monogr 6, 72–83, London
- Gaimster D M, 1997 *German stoneware*, London
- Moorhouse, S, 1972 Medieval distilling-apparatus of glass and pottery, *Medieval Archaeol* 16, 79–121
- Sudds, B 2006 Post-medieval pottery production, in Butler, J, *Reclaiming the marsh: archaeological excavations at Moor House, City of London*, PCA Monogr 6, 83–100, London
- Telfer, A, and Blackmore, L, in prep In the path of the flames: evidence for daily life before and after the Great Fire, from excavations at 11–23 New Fetter Lane, 25 New Street Square, 11 Bartlett Court, 1 and 8–9 East Harding Street, London, EC4, for *Trans London and Middlesex Archaeol Soc*

6.3 Accessioned finds



| Material | Roman | Medieval | Post-med | Not known | Total | Comment |
|---------------|----------|----------|-----------|-----------|-----------|-----------------|
| Copper alloy | 0 | 0 | 7 | 0 | 7 | |
| Iron | 0 | 0 | 5 | 0 | 5 | |
| Bone | 0 | 0 | 1 | 0 | 1 | |
| Glass | 0 | 0 | 1 | 0 | 1 | |
| Leather | 0 | 0 | 6 | 0 | 6 | In Conservation |
| Fibre | 0 | 0 | 1 | 0 | 1 | In Conservation |
| Totals | 0 | 0 | 21 | 0 | 21 | |

Table 2 Summary of accessioned finds by material and period

6.3.1 Introduction/methodology

There are 21 non-ceramic accessioned finds, seven copper-alloy, five iron, six leather, one fibre, one bone and one glass. The finds have been accessioned in accordance with MOLA procedures and the digitised records are held on the Oracle database. All metal, bone and glass objects were examined individually, with the aid of x-rays where appropriate and archive catalogue entries entered on to the database.

There are also non-accessioned finds: four iron nails, three small bags of slag and two small bags of bulk glass.

6.3.2 The registered finds

Most of the registered finds from this phase of the site appear to be early post-medieval (16th- or 17th-century). Where identifiable they are all standard dress fittings and domestic items. A near-complete shoe (<25>) and two small mounts (<47>) and <16>) are in good condition and require further research. Three finds from organic ditch filling (sgp 160 [274], [275]) can be particularly closely dated by a near-complete mid to late 16th-century high shoe with slashed decoration (<25>) from [275]. There is also part of a leather belt (<24>) from the same context and a short length of bent copper wire (<17>) from [274].

Several finds from filling or levelling dumps for a ditch (subgroup 172, context [298]) are also early post-medieval (16th- or 17th-century). They include a small arrow-shaped copper-alloy mount (<47>), a small pin with a flat wound wire head (<44>), a short length of twisted copper wire (<39>), part of a thin iron spike (<35>), two small fragments of naturally coloured light blue and green vessel glass (<46>) and pieces from a leather belt and straps (<29>, <31> and <32>).

Other ditch fill finds (sgps 176, 179, 180) include a bone used for sharpening pins (<38> [297]), and part of a copper-alloy thimble rim (<38>, [297]). The thimble is not machine-made (it has stamped triangular pits) and probably dates to the 16th or 17th century. There are also part of a knife or tool (<33>) and a piece of leather strap (<30>) from context [217].

Finds from an extensive pre-building dump across the site (sgp 133, [231]) consist of a small rectangular bone mount (<16>) and a copper-alloy pin shaft. They are post-medieval, but not intrinsically datable.

6.3.3 Bulk glass, nails and slag

There is a very small amount of bulk glass. Four fragments of 16th- or 17th-century natural green window glass were found in dumped ditch fill context [310] (sgp 179). A high domed base from a pharmaceutical phial (discoloured, but originally natural green glass) is 17th-century.

There are four nails. Three, from [272], [279] and [298] appear to be broadly the same type: 55–65mm long, with square shafts and circular or polygonal heads. One (from [262]) is very corroded.

Slag from contexts [227], [262] and [270] weighs approximately 650 grams. It should be seen by an external specialist.

A single accessioned fragment of lead sheet and an iron nail were recovered from the excavations. The sheet <1>, [16] is corroded and relatively undiagnostic. Similar fragments are often associated with demolition and destruction layers. The single iron nail comes from context [47]. Handmade nails of this sort are ubiquitous and are found in contexts of Roman to post medieval date in London, only comparatively recently being replaced as the most common type by the modern wire drawn nail. This example is associated with Roman pottery and although rather corroded can probably be assigned to Manning's type 1b (1985) a common all-purpose type.

This small assemblage of finds is of very limited interpretative value. As evidence for the character of construction in the area, they may contribute a little to our understanding of the immediate stratigraphic environment. They should be included in any wider studies of the area, but they do not merit publication in their own right and require no further work at this stage.

6.4 Worked Stone

All of the worked stone has been recorded using the standard worked stone recording forms used by MOLA. The stones were photographed and where appropriate a 1:1 or 1:2 profile drawing was made; or 1:1 rubbing or a scaled plan drawing was made. Fabric analysis was undertaken with a x10 binocular microscope and a comparison was made with the MOLA stone library. The information on the recording forms has been added to an Oracle database.

A single architectural fragment of stone accessioned as <13> was recovered from Context [228] which was a post-medieval brick wall. The stone measured 280 x 100 x 340mm. Its petrology is Reigate Upper Greensand, which is a Late Cretaceous sandstone. The stone was historically been quarried until the 1930s from an outcrop running from Godstone to Brockham, near the North Downs in Surrey.

The moulding is extremely fragmentary, weathered and covered in secondary use mortar; however it seems to be an ovolo with some possible recutting. There is some evidence that the moulding was originally limewashed,

The stone is far too fragmentary to positively identify its original function within a building, and it is entirely possible that it could be part of an architrave, a window head, a mullion, a cornice or a string course.

The precise dating of this simple moulding is not possible as it is found in Classical, medieval and post-medieval architecture. However the proximity of the stone to the medieval monastic foundation of Charterhouse makes that a possible point of origin. A narrow v-shaped groove has been let into the bed of the stone 145 x 30mm in dimension. This does not seem to be a grout or glazing channel. The fact that one end of the channel is very finely worked with strong mitre-lines and flared corners suggests that it may have been part of a tutorial in letter-cutting by masons prior to laying the stone.

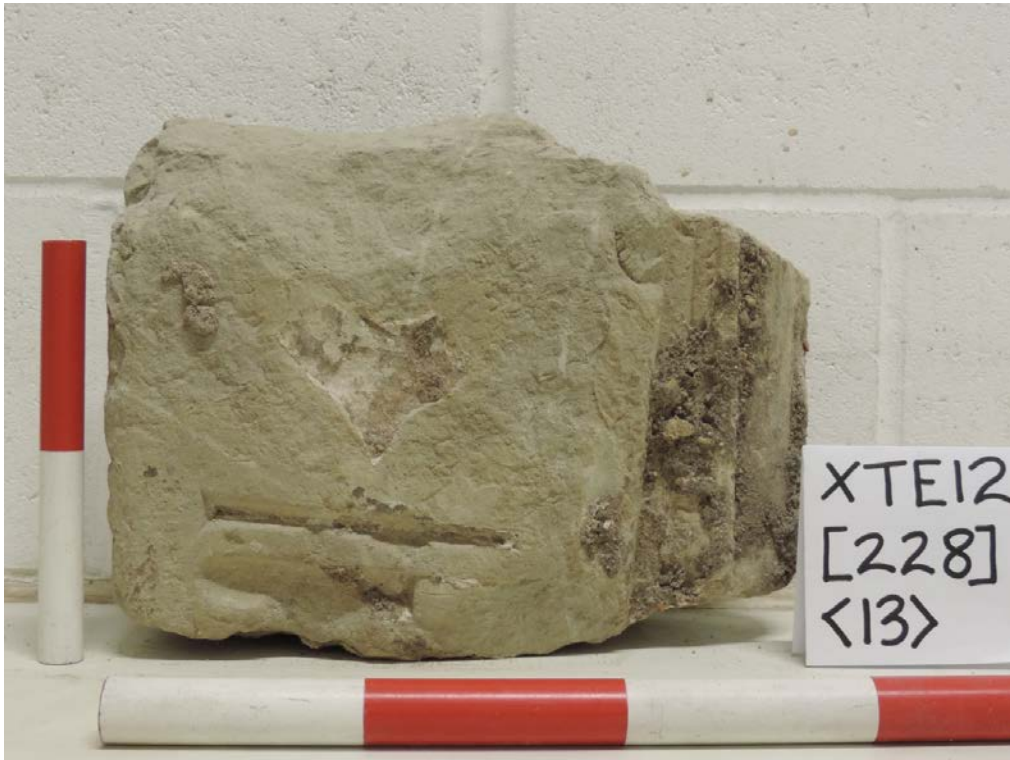


Photo 10 Bed of stone <13>, from context [228], showing the finely worked v-shaped cut

6.5 Evaluation of the organic remains from samples

This evaluation report presents the details of the organic remains from samples {24} to {45}. The samples were processed by flotation, and the flots assessed to determine the presence and nature of any plant remains and other biological material present. The remains are summarised below in Table 5. There was very good waterlogged preservation in a number of these samples, preserving a rich and diverse range of organic remains.

Samples {24}, {29} and {34} are all taken from [231], a dump deposit provisionally dated to the late 16th century. These samples contained moderate amounts of diverse food remains, including fig (*Ficus carica*) and plum (*Prunus domestica*) seeds, oyster shell fragments and eggshell fragments. They also contained wild species typical of nitrogenous urban waste and disturbed ground environments, such as black nightshade (*Solanum nigrum*), and white horehound (*Marrubium vulgare*). Samples {44} [293] and {45} [298] were also taken from extensive dumps, and date to the late 15th/early 16th centuries. {44} and {45} also contain a mix of domestic waste and locally growing weeds.

Samples {30} and {31} were taken from [240], also a dump deposit, dated slightly earlier than [231]. These likewise contained a mix of food and waste ground taxa.

Samples {35} [274] and {36} [275] were taken from ditch fills. Both contained very rich waterlogged deposits dominated by reeds, but also containing domestic waste material including foods and fragments of textiles and leather. Sample {38} [278] was also taken from a ditch deposit and likewise contained rich waterlogged material dominated by reeds, but also containing a variety of food and other domestic waste material.

Sample {37} [276] contained a seeds assemblage which may indicate a local garden, with hemp (*Cannabis sativa*), flax (*Linum usitatissimum*) and pot marigold (*Calendula officinalis*) all present in the assemblage.

Insects were noted in many of the samples in moderate amounts, as were fish and bird bones. Many of the samples contain rich and diverse organic remains that can potentially add considerably to the discussion of the activities at the site.

| Sample | Context | Flot. Volume | Process | Charred grain | | Charred chaff | | Charred seeds | | Charred wood | | W'logged seeds | | W'logged misc | |
|--------|---------|--------------|---------|---------------|-----|---------------|-----|---------------|-----|--------------|-----|----------------|-----|---------------|-----|
| | | | | Abu | Div | Abu | Div | Abu | Div | Abu | Div | Abu | Div | Abu | Div |
| 24 | 231 | 20 | F | | | | | 1 | 1 | 1 | 1 | 1 | 2 | | |
| 29 | 231 | 40 | F | 1 | 1 | | | 1 | 1 | 3 | 1 | 2 | 1 | | |
| 30 | 240 | 40 | F | | | 2 | 1 | | | 2 | 1 | 2 | 2 | | |
| 30 | 240 | 40 | W | | | | | | | 1 | 1 | | | | |
| 31 | 240 | 20 | F | | | | | | | 1 | 1 | 2 | 2 | | |
| 33 | 243 | 5 | F | | | | | | | 1 | 1 | 1 | 1 | | |
| 34 | 231 | 100 | F | 1 | 1 | | | | | 2 | 1 | 2 | 2 | | |
| 35 | 274 | 1500 | F | | | | | | | 1 | 1 | 3 | 1 | 3 | 1 |
| 35 | 274 | 1500 | W | | | | | 1 | 1 | | | | | | |
| 36 | 275 | 400 | F | | | | | | | 1 | 1 | 3 | 3 | 3 | 2 |
| 36 | 275 | 400 | W | | | | | | | 1 | 1 | | | | |
| 37 | 276 | 1200 | F | | | | | | | 1 | 1 | 3 | 3 | 3 | 1 |
| 38 | 278 | 500 | F | | | | | | | 1 | 1 | 2 | 2 | 3 | 1 |
| 39 | 283 | 800 | F | | | | | | | 1 | 1 | 3 | 3 | 3 | 1 |
| 39 | 283 | 800 | W | | | | | | | 1 | 1 | | | | |
| 44 | 293 | 50 | F | 1 | 1 | | | | | 1 | 1 | 2 | 1 | | |
| 45 | 298 | 300 | F | | | | | | | 1 | 1 | 2 | 2 | 3 | 1 |
| 45 | 298 | 300 | W | | | | | | | | | 1 | 1 | | |

Table 3 Summary plant remains from samples

6.6 Animal bone



| | Weight (g) | Fragments | Boxes |
|------------------------------|------------|-----------|--|
| Animal bone (hand-collected) | 63000 | 5400 | 36 standard archive boxes 1 large archive box |
| Animal bone (wet-sieved) | 2000 | 175 | 1 standard archive box |

Table 4 Contents of animal bone archive

6.6.1 Introduction/methodology

This report identifies, quantifies and interprets the animal bone from 37 archive boxes of hand-collected context groups and one standard archive box of wet-sieved sample groups. The hand-collected and wet-sieved assemblages were assessed in terms of preservation, weight (kg) and estimated fragment count and species. The assemblage was not recorded as individual fragments or identified to skeletal element. All identifications referred to the MOLA reference collection; and Schmid 1972. Fragments not identifiable to species or genus level were generally allocated to an approximate category; particularly unidentified fish, 'cattle-sized mammal' and 'sheep-sized mammal' as appropriate.

6.6.2 The assemblage

This assemblage provided an estimated 65.000 kg, estimated maximum count of 5575 fragments, of well-preserved hand-collected and wet-sieved animal bone in good surface condition, with a maximum fragment size generally between 25 and at least 75 mm. The hand-collected bone produced 63.000 kg, estimated 54000 fragments; the wet-sieved assemblage produced 2.000 kg, estimated 175 fragments.

The bulk of the hand-collected bone derived from adult and juvenile cattle *Bos taurus*, sheep/goat *Ovis aries/Capra hircus* and pig *Sus scrofa* including substantial components of 'cattle- and sheep-sized' vertebra, rib and long bone fragments, with smaller quantities of adult horse *Equus caballus* and adult and juvenile dog *Canis lupus familiaris*.

Wet-sieved samples produced small fragment counts of fish, but no obvious recovery of other wild species such as 'game', scavengers, small mammals or amphibians. No human bone was noted on preliminary inspection.

There was no significant recovery of foetal, neonate or infant animals.

Clear evidence of butchery was seen on the major domesticates, but there was no significant recovery of evidence for working, burning, gnawing, pathological change or any other modification.

6.6.3 Assessment work outstanding

This assemblage has not been recorded onto the MOLA Oracle animal bone assessment database and has not been assessed with regard to detailed quantification, carcass-part, age-representation or modification.

6.6.4 Analysis of potential

The hand-collected and wet-sieved assemblage has some definite potential for further study of the local meat diet and patterns of waste disposal, particularly with reference to carcass-part selection, age at death and butchery of the major domesticates; cattle, sheep/goat and pig; and disposal of horse and dog carcasses. A small assemblage of fish from the wet-sieved samples has limited potential for analysis of species, size and skeletal representation.

In view of the apparent absence of amphibians and small mammals from the samples, there is no potential for interpretation of local habitats or conditions.

6.6.5 Farringdon road watching brief 01/05/2013

(see Fig 1 for location)

In addition to the main works at the Farringdon Eastern Ticket Hall, MOLA recorded a shallow pit dated to the mid-18th century (Photo 9) in Farringdon Road (see 3.5). Approximately 30 cattle metacarpals (fore-feet) were recovered; they were fully-fused and therefore from adult animals in at least the third year of life. They probably represent primary carcass preparation of cattle, probably also hide removal. Metacarpals are often split to allow removal of the marrow, although this has not happened with these examples. It is likely that they are waste associated with Smithfield meat market, located 50m to the south-east. The animal bones will be further examined in post-excavation analysis, where they can be compared with other butchery waste probably from Smithfield from the Crossrail Farringdon fieldwork.

6.7 Conservation

| | Material | No. registered | No. conserved | No. to be treated |
|------------|--------------|----------------|--------------------|-------------------|
| Inorganics | Ceramic | 5 | 0 | |
| | Glass | 1 | 0 | |
| | Stone | 5 | 0 | |
| Metals | Copper alloy | 7 | 0 | |
| | Iron | 5 | 0 | |
| Organics | Bone | 3 | 0 | |
| | Fibre | 3 | 3 (ongoing) | |
| | Leather | 6 | 6 + bulk (ongoing) | |

Table 5 Summary of conservation work

6.7.1 Introduction

The following assessment of conservation needs for the accessioned and bulk finds from the excavations at the Crossrail Farringdon Ticket Hall and encompasses the requirements for finds analysis, illustration, analytical conservation and long term curation. Work outlined in this document is needed to produce a stable archive in accordance with MAP2 (English Heritage 1992) and the Museum of London's Standards for archive preparation (Museum of London 1999).

6.7.2 Finds investigation

All the registered finds were from XTE12 were assessed by visual examination. The accessioned and general finds were reviewed with reference to the finds assessments by Beth Richardson (Reg finds, leather and glass), Lyn Blackmore (Pot and CTP) and Ian Betts (CBM). No analytical work was identified by the small finds specialists.

6.7.3 Preparation for deposition in the archive

The finds from this site are appropriately packed for the archive. No further packaging is necessary for transfer into the archive.

6.7.4 Bibliography

English Heritage 1992 *Management of Archaeological Projects II*

Museum of London 2009 *General standards for the preparation of archaeological archives deposited with the Museum of London*

<http://www.museumoflondon.org.uk/collections-research/laarc/standards-deposition/>

6.8 Geoarchaeology



6.8.1 Introduction

During 2013, three sections (21, 23 and 26) from a channel feature at XTE12 were sampled with monolith tins and bulk samples for geoarchaeological assessment. A preliminary note on the results is presented in this interim statement. Full assessment of the monoliths will take place at post-excavation assessment.

The channel was thought to represent a former tributary of the River Fleet flowing in a westerly direction. Section 21 and section 26 were taken through separate west facing sections and section 23 was taken from an east facing section.

6.8.2 Methodology

All geoarchaeological on-site sampling and off-site work during the evaluation was carried out in accordance with standard geoarchaeological practice and where appropriate the MoL Archaeological Site Manual (MoL 1994).

On site, monolith tins were placed vertically into the side of sections exposed during the excavation to retrieve continuous stratigraphic samples. The number of tins used was dependent upon the depth and/or significance of the stratigraphic sequence and the suitability of the stratigraphy for sampling. Each monolith tin was plotted on the section drawing and related to Tunnel Datum (ATD). The monolith tins were then sealed and together with the bulk samples were transported to the MOLA Environmental laboratories where sediments were recorded in the laboratory. All the monolith samples were described using standard sedimentary criteria (relating to colour, compaction, texture, structure, bedding, inclusions, and clast-size).

6.8.3 Results

The results for the sections are as follows.

| Elevation (ATD) | Description | Monolith (see Fig 5) |
|-----------------|--|---|
| 113.60-113.02m | Context [240] (renumbered from 230): light mid brown grey soft slightly sandy clay with frequent gravels and CBM fragments | Mono {26} (renumbered from {21}) |
| 113.42-113.26m | Context [243] (renumbered from 233): Soft mid pinkish orange silt. With occasional pebbles | Mono {27}{28} (renumbered from {22}{23}) |
| 113.22-112.88m | Contexts [244] & [245] (renumbered from 234 and 235): Predominantly light pinkish orange sandy silt with occasional fine to medium gravel. | Mono {25}{27}{28} (renumbered from {20} {22} {23}) |
| 112.88-112.82m | Context [246] (renumbered from 236): Well compacted light mid yellow orange coarse sand with frequent medium to coarse gravels | Mono {26} (renumbered from {21}) |

Table 6 Section 21

| Elevation (ATD) | Description | Monolith |
|-----------------|---|---------------------|
| 113.45-112.95m | Context 279 Friable mid orange brown sandy silt with charcoal, shell and CBM, animal bone. | None |
| 113.05-112.85m | Context 280 Mid brown peaty silt | Mono {42}{40} |
| 113.35-113.22m | Context 282: Firm light brown silty clay with animal bone and oysters | Mono {42} {43} {40} |
| 113.22-112.65m | Context 283: Dark organic brown black organic sandy silt with animal bone oysters mussels, CBM and pot fragments. | Mono {43} {40} |
| 112.65-112.55m | Context 285: Mid to light grey sandy silt. | Monolith {41} |

Table 7 Section 23

| Elevation (ATD) | Description | Monolith (see Fig 5) |
|-----------------|--|-------------------------|
| 112.34-112.01m | Context 293 Loose brown sandy silt clay with frequent mussels and oyster shell and fine to medium gravels. | Mono {47} |
| 112.01-111.82m | Context 299: Soft mid reddish brown slightly silty peat, no inclusions | Mono {46}{47} |
| 111.82-111.59m | Context 300: Firm mid-dark blue grey highly organic silty clay , no inclusions | Mono {46} |
| 111.59-111.39m | No context Light brownish grey stiff mottled brownish orange clay (weathered London Clay) | Mono {46} |

Table 8 Section 26

6.8.4 Discussion

Section 21 was taken from the edge of the ditch/channel feature and essentially sampled layers of silts and sands representing floodplain overbank deposits [234] [235] [233] [230] which had been managed or recut during the medieval period and later. The environment seemed to be one of quite fluvial conditions, predominantly interspersed with flood deposits, and intermixed with anthropogenic dumped material.

Section 23, which lay at a slightly lower elevation than section 20, revealed organic silts or clays representative of slow flowing or possibly stagnant waters [285] [283] [282] [280] [279]. These deposits contained evidence of early post-medieval dumping, typically animal bones, oysters, ceramic building material, and pot.

Section 26 was at a lower elevation than section 21 and 23 and represented the fill of ditch [303] which was cut into the London Clay. The organic basal fills of the cut



feature [300] [299] appeared to be indicative of a marginal waterlogged feature which is rapidly becoming more marshy and semi-terrestrial as it silts up before it is sealed by historic dump deposits [293].

6.8.5 Conclusions

The samples from section 23 have the greatest potential to reconstruct the depositional environment of the channel feature and the environment of the surrounding area as a whole, given its organic nature. It is recommended that the monoliths from this section are sub-sampled for pollen and diatoms in order to assess whether there is survival of palaeo-ecological remains. The deposits observed should also be entered into the MOLA deposit model for the City, as it would help elucidate the buried topography of the Fleet Valley and surrounding area.



7 Figures

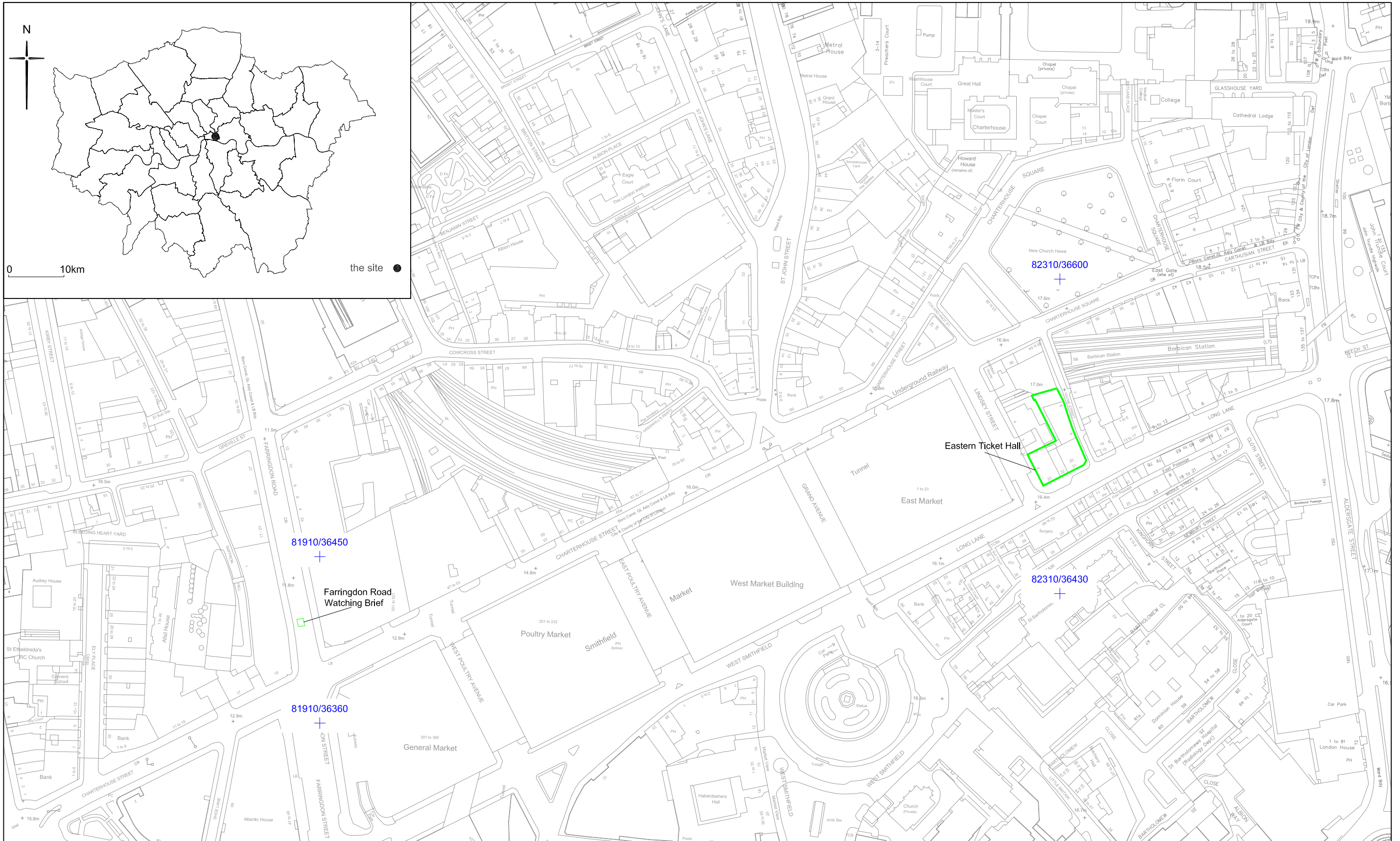


Fig 1 Site locations

Site Code: XTE12

 Site outline

1:2000 @ A3



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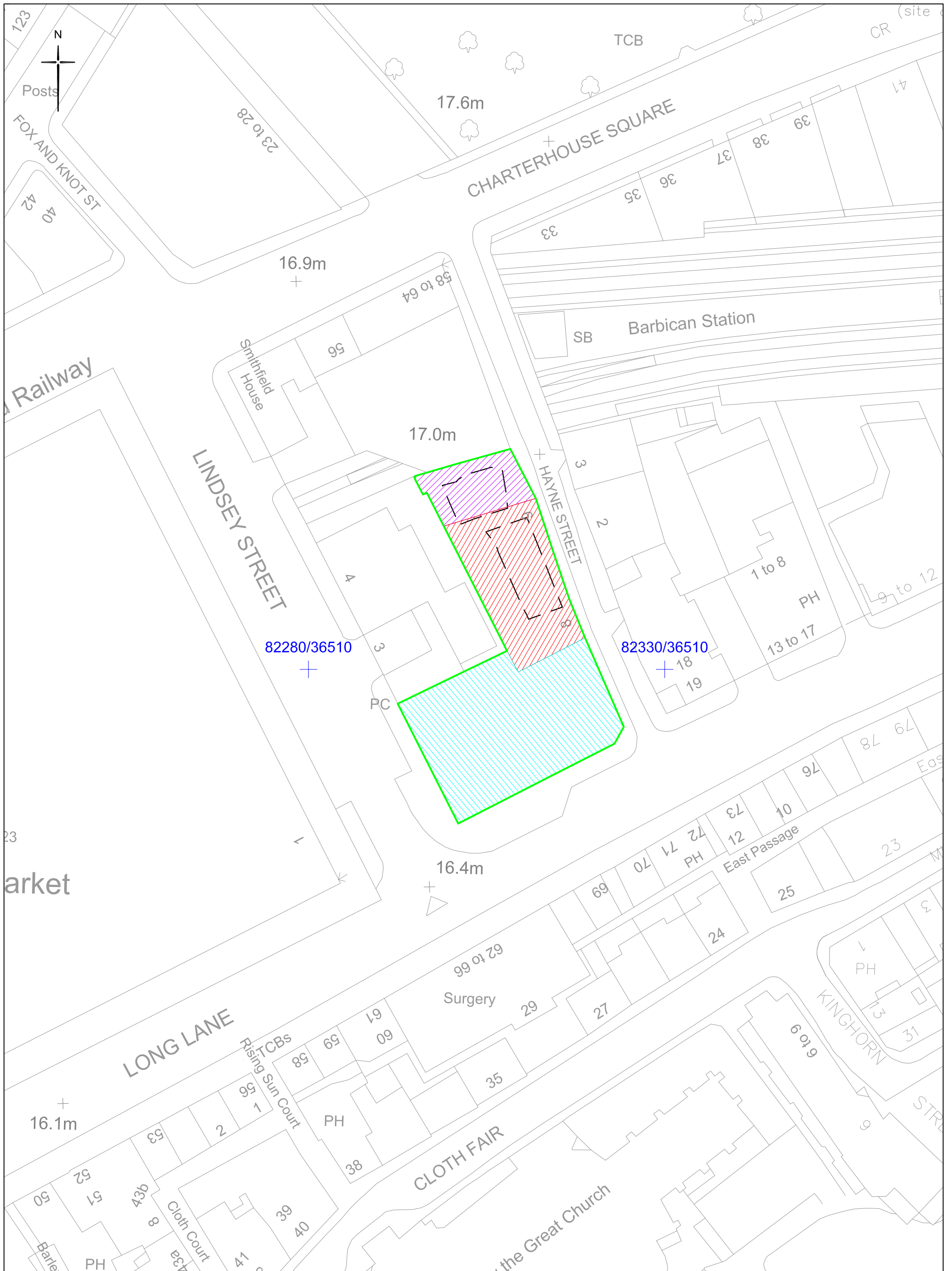


Fig 2 Interventions

Site Code: XTE12

- Site outline
- Trench edge
- Area A
- Area B
- Area C

0 1:500 @ A3 35m

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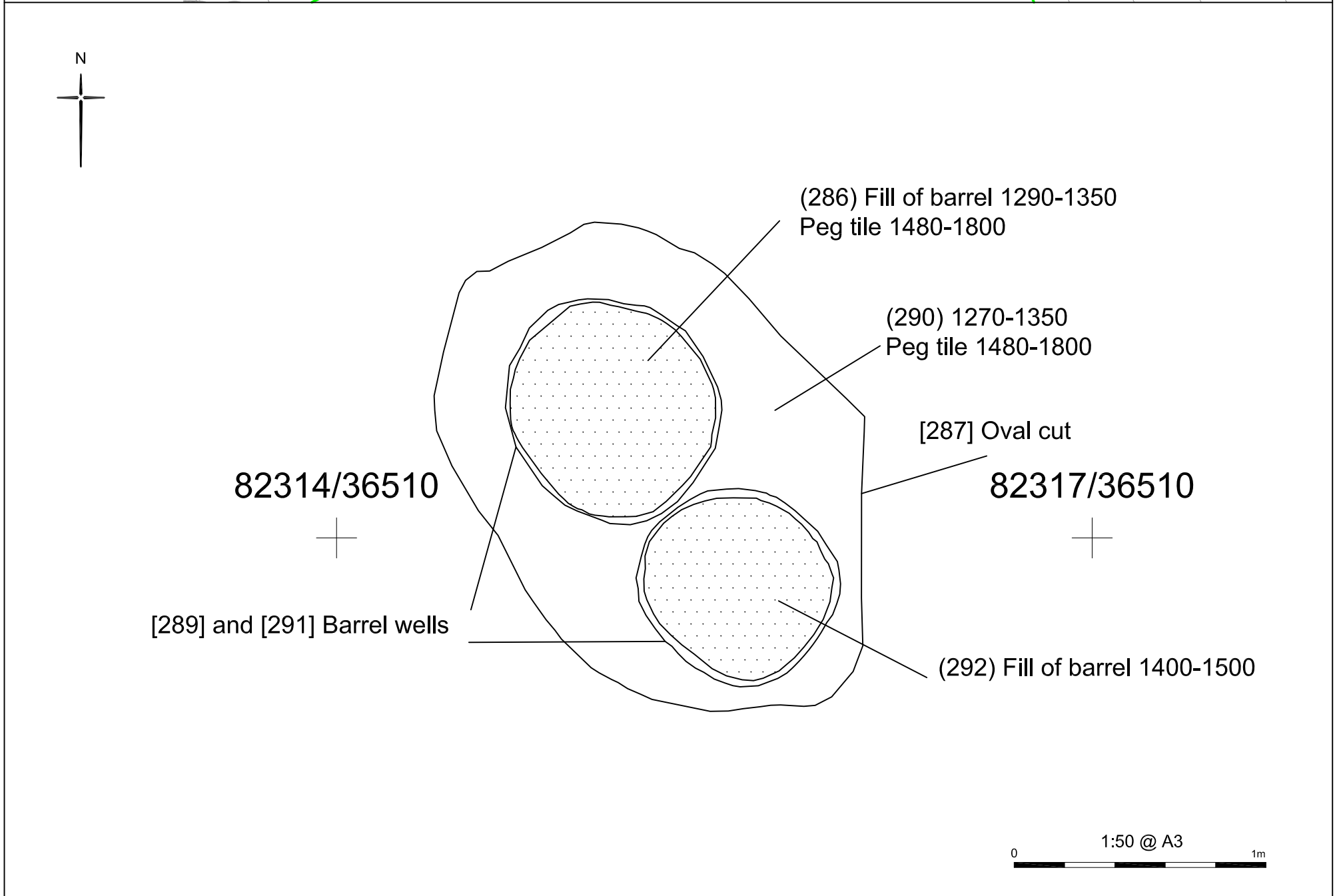
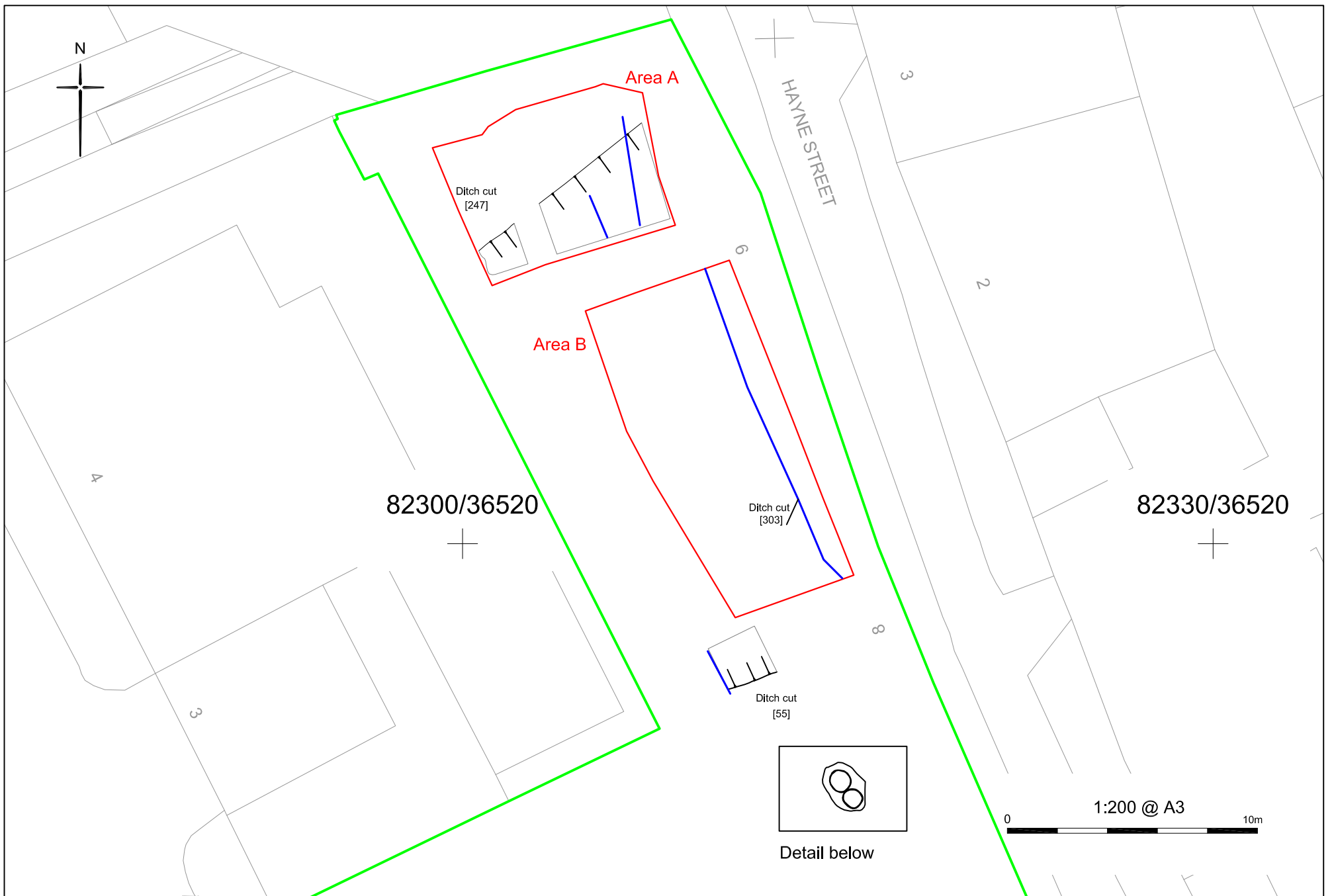


Fig 3 Late medieval/early post-medieval features

Site Code: XTE12

- Site outline
- Trench edge
- Section line -- See Fig 5

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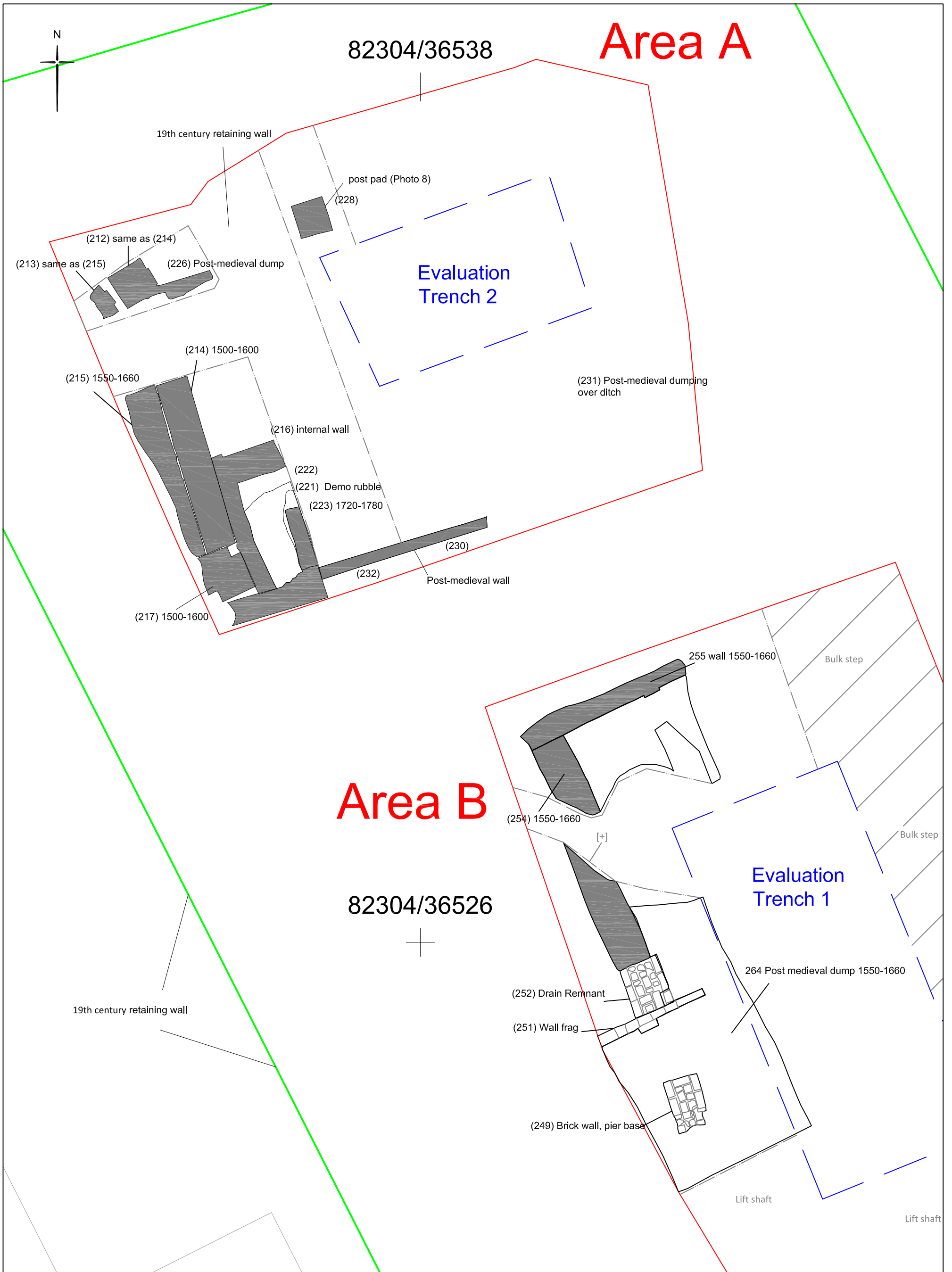


Fig 4 Post-medieval wall/deposits.
Areas A and B

Site Code: XTE12

- Site outline
- Trench edge
- - - 2011 Evaluation trenches
- Wall

0 1:50 @ A3 3.5m

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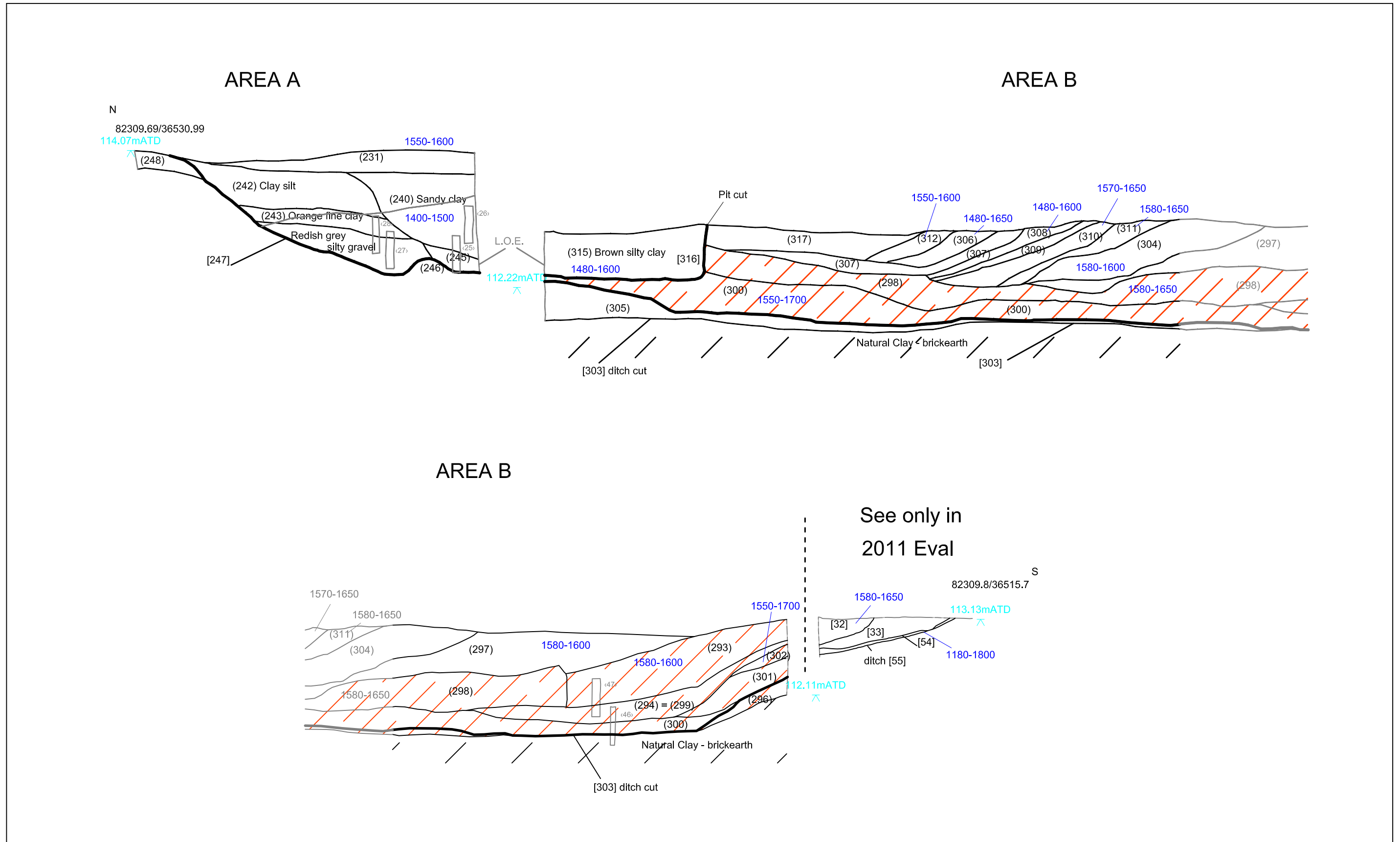


Fig 5 West facing section through ditch cut [247] = [303]
(Refer to Fig 3 for location)

Site Code: XTE12

- [T1] Archaeological features
- 1500-1600 Dates
- (12) Samples
- Marsh-like channel fills
- 112.22mATD Height Above Tunnel Datum (mATD)

1:50 @ A3
0 2.5m

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