



Land to the Rear of 101 – 110 Friargate, Preston, Lancashire

Archaeological Strip, Map and Sample Report



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SUMMARY

A planning application (ref 06/2013/0131) was submitted by Portergate Developments (Preston) Ltd, for the demolition of existing shop buildings 101 to 110 Friargate, Preston, Lancashire (NGR SD 53621 29741). Following demolition, the proposals included the erection of a range of multi-storey buildings along Friargate and on land to the rear. A heritage assessment, carried out in 2013 by Archaeological Services Durham University (ASDU), identified a number of potential heritage assets in the proposed development area that may be affected by the demolition and subsequent development.

In consultation with Lancashire County Archaeological Service (LCAS), Preston City Council granted planning permission for the development subject to a number of conditions including the completion of a programme of archaeological evaluation and building recording. In response, Portergate Developments (Preston) Ltd commissioned Oxford Archaeology North (OA North) to carry out the work in accordance with a written scheme of investigation (WSI) issued by ASDU (RA13.206 and RA13.207). Following a site visit by OA North and in agreement with LCAS, the scope of work specified by ASDU was amended due to various site constraints and concerns with both the remaining upstanding buildings and nature of the cleared land behind the buildings. OA North subsequently produced updated project designs for both the building recording and the implementation of a programme of strip, map and sample, which replaced both of the WSIs issued by ASDU.

The strip, map and sample was undertaken in two stages during March and May 2015 and identified intense commercial and domestic activity within the development area dating from the first quarter of the nineteenth century onwards. This included the rear yards of a row of early-nineteenth century terraced workers housing, uncovered along the southern boundary of the site and a narrow range of adjoining commercial units, which extended across the centre of the area. In addition, a significant and previously unknown phase of industrial activity was uncovered in the northern and eastern portions of the site dating to the second quarter of the nineteenth century. The industrial remains included evidence of a boiler house, multi-phase flue systems and two reservoirs, alongside structural evidence of their associated buildings. Upon the demolition of this industrial building probably in the late nineteenth century, a stable block was erected over the northern half of the site along with an associated cobbled road surface leading towards Friargate. Evidence for post-medieval and earlier activity was limited to a few residual finds perhaps indicating that prior to the nineteenth century, the northern half of Friargate was not as intensively occupied as the ancient established core of Preston along Fishergate, Church Street and the market place.

ACKNOWLEDGEMENTS

OA North would like to thank David Luong of Leach Rhodes Walker for initially commissioning the project on behalf of their client, Portergate Developments (Preston) Ltd. Thanks are due to Anthony Jackson of Portergate Developments for his support and Douglas Moir and Peter Iles of Lancashire County Archaeology Service (LCAS) for providing the verbal specification and advice during the project.

The strip, map and sample was undertaken by Alex Batey, Jeremy Bradley, Steve Clarke, Jon Onraet and Becky Wegiel. The report was written by Andy Phelps and Paul Dunn, with Mark Tidmarsh producing the drawings. The project was managed by Karl Taylor, who also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 A planning application (ref 06/2013/0131) was submitted by Portergate Developments (Preston) Ltd (hereafter the client), for the demolition of existing shop buildings 101 to 110 Friargate, Preston, Lancashire (NGR SD 53621 29741). Following demolition, the proposals included the erection of a range of multi-storey buildings along Friargate and on land to the rear. A heritage assessment, carried out in 2013 by Archaeological Services Durham University (ASDU 2013), identified a number of potential heritage assets in the proposed development area that may be affected by the demolition and subsequent development.
- 1.1.2 Preston City Council granted planning permission for the development subject to a number of conditions, one of which (Condition 16), stated that a programme of archaeological evaluation and building recording be carried out in accordance with a written schemes of investigation (WSI) issued by ASDU (RA13.206 and RA13.207). However, following a site visit by Oxford Archaeology North (OA North), the scope of work specified by ASDU was amended due to various site constraints and concerns with both the remaining upstanding buildings and nature of the cleared land behind the buildings. OA North subsequently produced two separate updated project designs (*Appendix 3*) for both the building recording and the implementation of a programme of strip, map and sample, which replaced both of the WSIs issued by ASDU.
- 1.1.3 Following discussions between OA North and LCAS, a programme of building recording followed by strip, map and sample, was deemed necessary to fulfil the archaeological condition. The building recording was carried out in December 2014 and is the subject of a separate report (OA North forthcoming) The strip, map and sample was undertaken in two stages during March and May 2015. This report sets out the results of the strip, map and sample in the form of a short document, outlining the findings.

2. BACKGROUND

2.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 2.1.1 The site is situated some 600m to the north-west of the centre of Preston, Lancashire and immediately to the east of Friargate and north of Great Shaw Street (NGR SD 53621 29741) (Fig 1). The proposed development area was approximately 1169 square metres in extent; the bulk of the site being unused land on varying levels with mostly disused shops along the Friargate frontage and a disused night-club in the south-east corner. The site lies at 31m Above Ordnance Datum (AOD) in the south-east corner, falling to 26m AOD in the north-west.
- 2.1.2 The solid geology of the site comprises sandstone of the Sherwood Sandstone Group. The overlying drift geology of the site is sand and gravels of the Devensian Glaciofluvial Sheet Deposits (BGS 2015). The soils are classified as freely draining, slightly acid loamy soils (Landis.org.uk, 2015)

2.2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 2.2.1 The following background is drawn in part from the heritage assessment produced by ASDU (ASDU 2013), with additional sources where necessary. While a limited number of isolated Prehistoric and Romano-British finds have been found in Preston, none lie in close proximity to the present development and have not been discussed in the following historical background. For a more detailed historical account of the site's history which includes these periods the heritage assessment produced by ASDU (2013) should be consulted.

Period	Date Range
Palaeolithic	30,000 – 10,000 BC
Mesolithic	10,000 – 4000 BC
Neolithic	4000 – 2400 BC
Bronze Age	2400 – 700 BC
Iron Age	700 BC – AD 43
Romano-British	AD 43 – AD 410
Early Medieval	AD 410 – AD 1066
Late Medieval	AD 1066 – AD 1540
Post-medieval	AD 1540 – c1750
Industrial Period	cAD1750 – 1914
Modern	Post-1914

Table 1: Summary of British archaeological periods and date ranges

- 2.2.2 **Medieval:** the name of Preston was recorded in the Domesday Book as Prestune, probably deriving from ‘preosta tun’ or ‘priests homestead’ (Ekwall 1922) and was founded on a low ridge to the north of the River Ribble. Little is known about the form of the earliest settlement but a pre-Conquest origin has been proposed by Hunt (1992) and the church is recorded in documentary sources in 1094 when it was granted to St Martin of Sees (Clemsha 1912). The presence of the church suggests an initial focus of settlement in this area but by 1179 the borough had been laid out with a double row of burgage plots (Daniels 2002) lining both Church Street and Fishergate. Barrs or gates were subsequently added to define the eastern and western extents of the town. The area purportedly covered around 40 acres (17 hectares) and would have probably accommodated between 150 and 170 burgage plots (Egerton Lea 2002) each at least 12 feet wide to the front.
- 2.2.3 Friargate represents an addition to medieval Preston, extending from the north-western corner of the market and is perhaps a measure of the town’s growth and prosperity (LCC and Egerton Lea 2006). Early post-medieval maps (Plate 1) suggest that it was laid out into burgage plots along either side of the road. It is possible to identify the eastern property boundaries of the burgages on the eastern side of Friargate, following the line of Market Street West. An additional barr was also erected at the northern end of Friargate, at the junction of Moor Lane and Fylde Road (Hunt 1992).
- 2.2.4 **Post-Medieval:** despite emerging as the provincial capital, the development of Preston during the post-medieval period concentrated upon the subdivision of burgage plots within the extent of the medieval town and the creation of courtyards to the rear of the street frontages, rather than expansion (Hunt 1992). Robert Cuerden’s map of 1684 is the earliest detailed map of the town (Plate 1) and depicts street front development along the full length of Friargate.
- 2.2.5 Government forces laid siege to Preston during the first Jacobite rebellion of 1715 and a map produced shortly after as an account of the battle shows the buildings fronting the northern end of Friargate on fire (Plate 2). It is unclear whether this includes the area currently under development and the remainder of the map is not detailed enough to show any greater detail, but it seems likely that the street frontages closer to the market square would have been developed by this time. Lang’s map of 1774 shows a number of buildings situated where Nos. 101 to 110 now stand and a further row of buildings fronting Great Shaw Street to the south (Plate 3).



Plate 3: Lang's map of Preston, 1774, showing the proposed development area at the northern end of Friargate. (Reproduced from ASDU, 2013)

- 2.2.6 **Industrial:** by the late eighteenth century, Preston was recognised as the principal grain milling centre in the area, and the surrounding skyline would have been dotted with windmills (Hunt 1992). A view of the southern aspect of the city appears to show one such windmill at the northern end of Friargate (Plate 4). Textile manufacture also grew during this time, initially with a focus on wool, flax and linen production. Friargate reputedly accommodated 640 residences, which included a provision for handloom weaving (Morgan 1990).
- 2.2.7 The first recorded cotton mill opened on Moor Lane to the north of Friargate in 1777, and by 1802 there were about eight cotton spinning factories in Preston, doubling in number by 1821 (LCC and Egerton Lea 2006). The rapid growth of the cotton industry led to the erection of cheap workers housing, often in the form of rows of terraces with generally only basic provision for sanitation. The timber-framed medieval and earlier post-medieval buildings were cleared away and new structures erected in brick.
- 2.2.8 Almost nothing remains of the pre-1800 building stock in Preston and in this respect Friargate appears to be typical (ibid). The land to the east of Friargate is shown as undeveloped until 1822, with formal gardens depicted in 1824 (Plate 5). Just eight years later however, the area was densely occupied with a court to the rear accessed via Friargate (Plate 6). Two textile mills are identified on the Ordnance Survey map of 1849, Back Lane Mill on Great Shaw Street and Walker Street Mill. Cartographic sources suggest that the former may have already been established by as early as 1808, with Walker Street Mill probably built between 1808 and 1822 (Plates 7 & 8).

2.2.9 Back Lane Mill was identified in Marmaduke Tulket's 1821 *History of Preston* listing 16 factories in full employment (Dickinson 2002). It is referred to as having a steam engine rated at 7hp, making it the smallest factory on the list. The mill went through several changes in ownership during the early part of the nineteenth century (Dickinson 2002). Both mills had possibly gone out of business by 1892 as they are no longer named on the OS map of this date (Plate 9) and their respective reservoirs had been built over by further buildings (ASDU 2013).

2.2.10 **Modern:** following World War II, buildings at the rear of the site were gradually removed or replaced with modern structures, including the premises of Bambers Furniture shop, which occupied the northern and eastern parts of the site. Up until recently, a taxi firm occupied the southern half of the site operating from a single-storey building with an associated car park. Prior to excavations, these buildings were demolished leaving a brown field site covered with areas of demolition rubble and concrete hard standing (Plate 10).

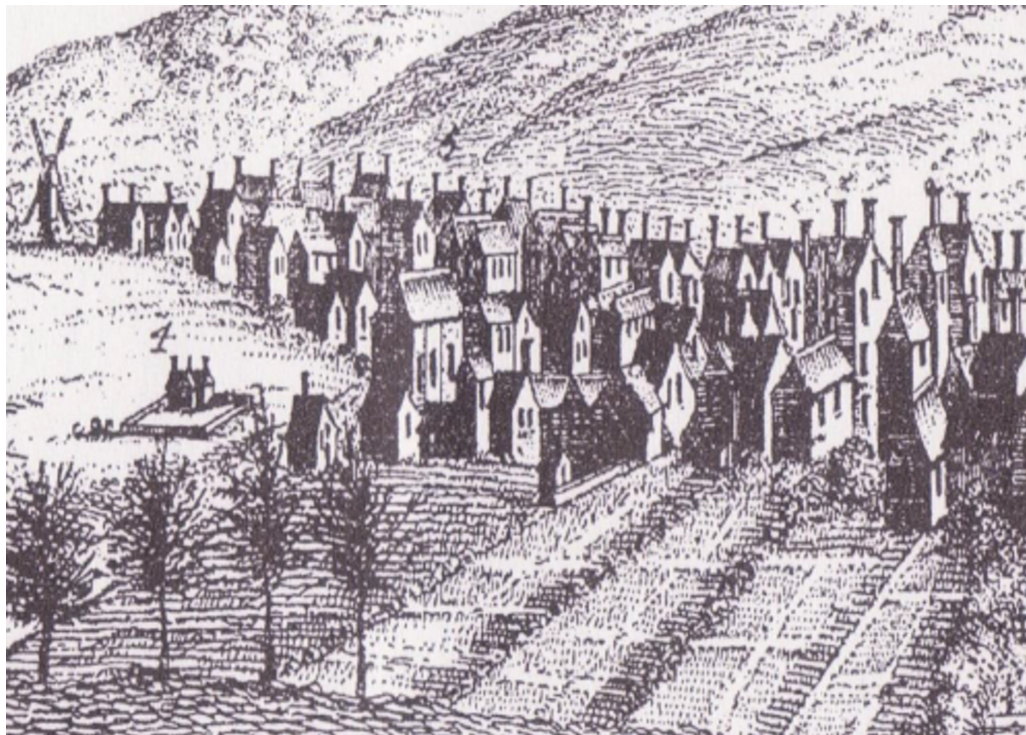


Plate 4: The south prospect of Preston, 1728 in Hunt (1992). Note the windmill to the left, adjacent to Friargate

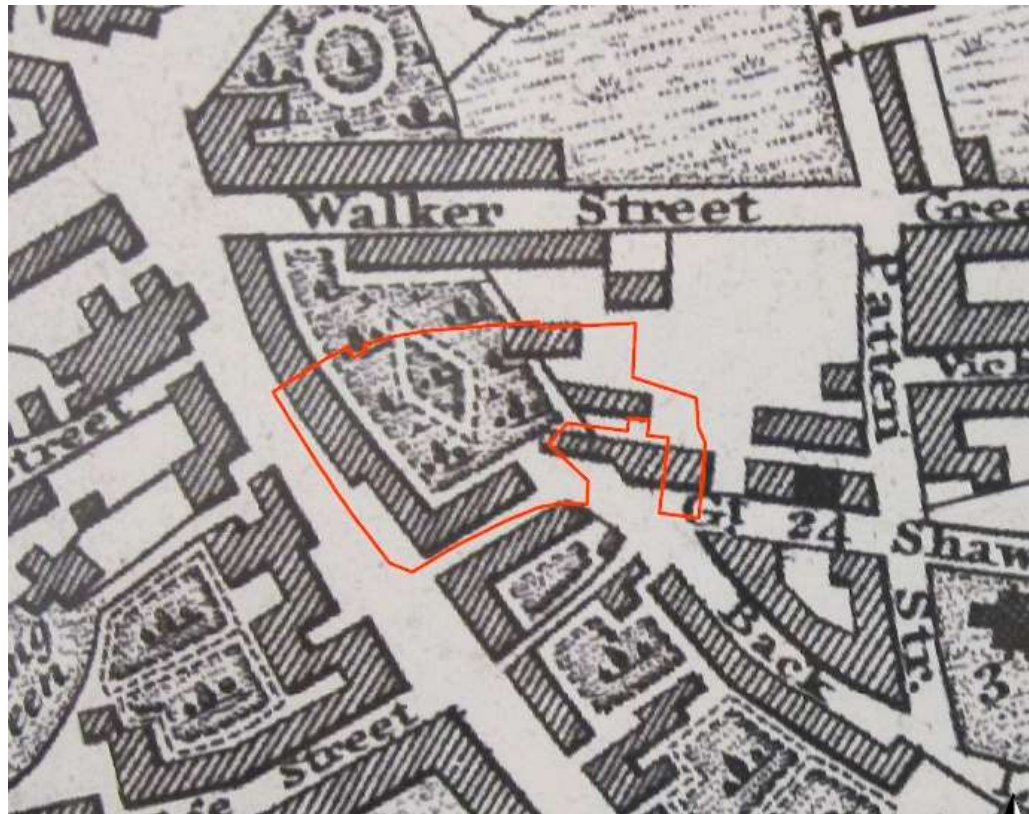


Plate 5: 1824 map showing the formal gardens to the rear of Friargate,
(Reproduced from ASDU 2013)

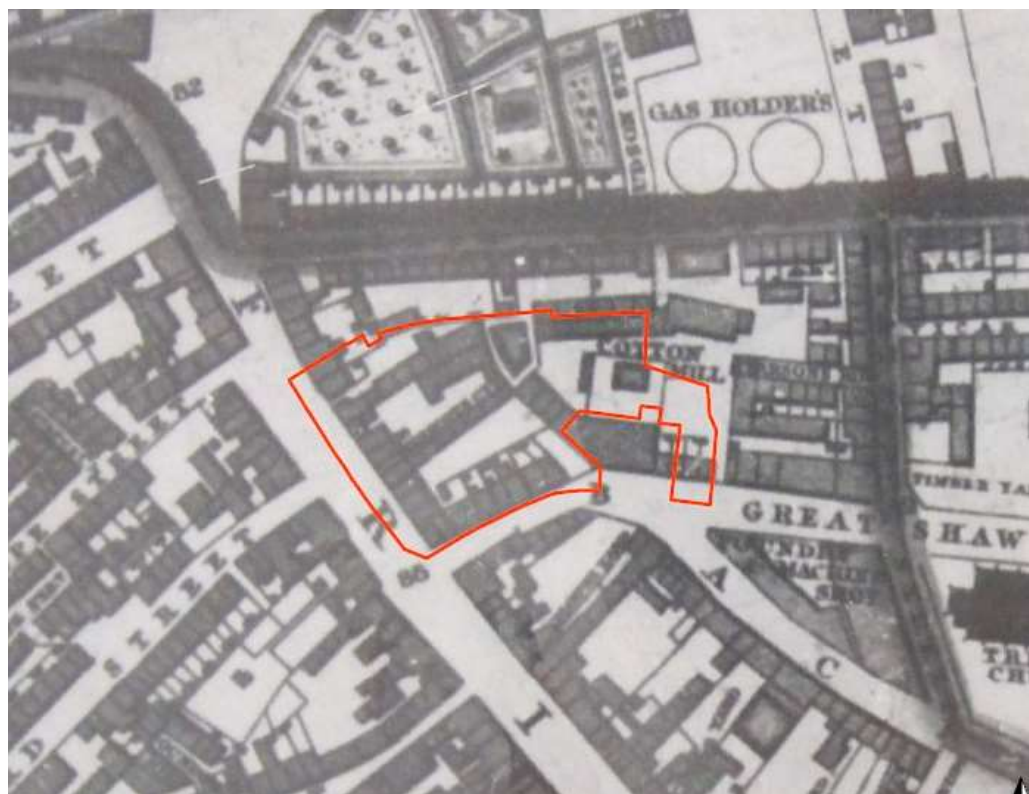


Plate 6: Map of proposed development area 1836
(Reproduced from ASDU 2013)



Plate 7: Map of proposed development area in 1849 (OS)
(Reproduced from ASDU 2013)



Plate 8: Shakeshaft's map of 1808 showing the proposed development area,
(Reproduced from ASDU 2013)



Plate 9: OS map of 1892 showing the proposed development area,
(Reproduced from ASDU 2013)



Plate 10: Aerial view of proposed development area prior to demolition of
building to the rear of Friargate (Bing Maps, circa 2014)

3 METHODOLOGY

3.1 PROJECT DESIGN

- 3.1.1 A project design (*Appendix 3*) was submitted by OA North in response to a request from LCAS in January 2015. The project design was adhered to in full, and the work was consistent with the relevant CIfA and Historic England guidelines (Chartered Institute for Archaeologists 2014a, 2014b, 2014c, 2014d; English Heritage 2006).

3.2 STRIP, MAP AND RECORD

- 3.2.1 A detailed methodology for the strip, map and record is outlined in the project design (*Appendix 3*) and the results are presented in *Section 4*. In total, four areas were stripped comprising approximately 1169 square metres. The final location and dimensions of the areas were determined on site following inspection of service plans and scanning with a cable avoidance tool (Fig 2). In particular, the size of Area 4 was limited to the east because of concerns relating to the undermining of the sites eastern party wall. As well as the stripped areas, two evaluation trenches were excavated in order to evaluate the area between Areas 2 and 3. The locations of these were agreed during a monitoring visit by LCAS.
- 3.2.2 The area was excavated in a stratigraphical manner and planned with the use of a survey grade *Leica 1200 RTK* GPS system. Altitude information was established with respect to Ordnance Survey Datum. The overburden was removed with a 21 tonne 360° excavator, fitted with a toothless ditching bucket, under constant archaeological supervision, to the surface of the first significant archaeological deposit. The area was then cleaned by hand, using hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features. All features of archaeological interest were investigated and recorded above the height of the predetermined site formation level.
- 3.2.3 All information identified in the course of the site works was recorded, using a system adapted from that used by the former English Heritage Centre for Archaeology, with an accompanying pictorial record (plans, sections, and digital photographs). Primary records were available for inspection at all times. Results of all field investigations were recorded on *pro forma* context sheets. The site archive includes both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:50, 1:20 and 1:10). All artefacts were recorded using the same system, and will be handled and stored according to CIfA guidelines (CIfA 2014d).

3.3 FINDS AND PALAEOENVIRONMENTAL SAMPLING

- 3.3.1 The methodology for finds and sample recovery was set out in the project design and was carried out in accordance with current CIfA guidelines (CIfA

2014d), and subject to expert advice in order to minimise deterioration. No environmental samples were taken.

3.4 ARCHIVE

- 3.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 3*), and in accordance with current CIfA guidelines (CIfA 2014c). A digital copy of the report will be sent to the County Historic Environment Record (HER) Office. The paper and digital archive will be deposited with Lancashire County Record Office, Preston, on completion of the project.

4. FIELDWORK RESULTS

4.1 INTRODUCTION

- 4.1.1 The site comprised an area of multi-level disused waste ground to the rear of properties fronting onto Friargate to the west and Walker Street to the north. Great Shaw Street bounded the site to the south with a range of former industrial buildings to the east. As outlined in *section 3.2.1*, four areas were stripped and the following sections outline the nature of the results beginning with Area 1.

4.2 STRIP, MAP AND RECORD RESULTS

- 4.2.1 **Area 1 (Fig 3):** Area 1 lay to the south, extending approximately 24m north of Great Shaw Street and 30m to the west of the Blitz night-club. This part of the site was largely sealed by modern tarmac and concrete surfaces. A modern electricity sub-station occupied the south-western corner of the area. The northern boundary of the area was defined by an east/west aligned brick retaining wall and a drop in the ground surface beyond this from 31m to 29m AOD.
- 4.2.2 The reduction in levels across the northern half of the area identified undisturbed brownish orange natural sands (**16**) at a depth of approximately 29.9m AOD. Into the top of this deposit were cut a series of irregular pits (**27**) (Fig 2), filled with a mid grey-brown silty sand. The pits lay beyond formation levels and were therefore not excavated. They were overlain by a series of laminated bands of light yellowish-brown sand and silty-sand (**10**) between 0.1m and 0.3m thick, increasing in thickness to the north. A layer of redeposited natural (**11**) had then been laid down to a thickness of approximately 0.4m, perhaps to level out the northern half of the area. This had been sealed by a concrete surface (**08**).
- 4.2.3 A sondage was excavated by machine at the western end of the southern half of Area 1, revealing undisturbed natural at a depth of 29.39m AOD. A series of six sub-rectangular pits, ranging in size from 0.7m x 0.4m up to 1.75m x 1.11m had been cut into the natural sands (**16**). Each of the pits contained a dark grey-brown sandy-silt, lay beneath formation level and were consequently not excavated. The pits were sealed by deposit (**10**), which was in turn overlain by a layer of dark brown to black loose sand and clinker (**09**) 0.15m thick.
- 4.2.4 Towards the eastern end of the area another sub-rectangular pit, 0.8m square had been cut into the top of deposit (**09**). It was filled with a dark grey-brown sandy-silt and also lay beneath formation level and was, consequently, not excavated. A small well-like feature (**13**) lay to the east of this pit, also cutting deposit (**09**). It had a diameter of 1.10m and its excavation to a maximum depth of 0.56m did not reveal the base. Its walls were lined with clay and topped with a single course of hand-made unfrosted bricks, measuring 0.12m

x 1.4m x 0.8m high. The well had been backfilled by a mix of demolition rubble (Plate 11).



Plate 11: Well (**13**) after excavation, looking north-east (0.5m scale)

- 4.2.5 A series of north/south aligned brick walls cut into deposit (**09**) (Plate 12), and were clearly identifiable as the backyards of four of the terrace houses, which once fronted onto Great Shaw Street (**03**, **04**, **05** and **06**), although generally only the back walls of the houses survived due to the widening of Great Shaw Street.
- 4.2.6 Backyard (**03**) measured 6.4m long by 3.5m wide and was defined to the east by the surviving lower courses of a double-skinned red brick wall aligned almost north/south. This wall turned unbroken to the west where it continued for a total length of 15.5m beyond the limits of excavation, forming the northern wall of all four backyards. Surviving to a height of up to 0.92m at its eastern end, this wall was the best-preserved part of the backyards.
- 4.2.7 The west wall of yard (**03**) mirrored the alignment and general form of the east wall while the southern end of the yard was defined by a double-skinned red brick wall parallel with the north wall. The yard area had been paved in grey rectangular stone flags of varying sizes and incorporated a section of cast iron guttering in the south-eastern corner, leading to a soak-away drain which probably also once served the down pipe from the roof gutters (Plate 13). An external brick-built privy, 0.8m wide and 1.5m long, was identified in the north-western corner of the yard by its surviving single-skin foundation. It also had a stone-flagged floor, with a threshold denoting the position of the door at the eastern end and its ceramic waste pipe indicating the former position of the toilet.



Plate 12: Backyards (03), (04), (05) and (06), looking south-east

- 4.2.8 At the southern end of the yard, a stone threshold set against the south wall revealed the former position of the backdoor that once led into the house. The northernmost portion of this backroom partially survived, measuring 1.4m by 3.5m, and although most of its flooring had been removed, a single flag in the north-east corner suggested that flagstones had been used internally.



Plate 13: Backyard (03), looking north-west (2 x 1m scales)

- 4.2.9 To the north of building (03), a rectangular brick structure (19) 2.58m long by 4.55m wide had also been cut into deposit (09), and butted onto the north wall of backyard (03) (Plate 14). The structure was roughly built using hand-made bricks two courses wide and survived to a height of six courses on the east wall, and three courses on the north. No floor surface was identified and the structure had been filled with a dark grey-brown sandy-silt (02) containing a large amount of building rubble.



Plate 14: Structure (19) to the north of backyard (03), looking south-west (1m scale)

- 4.2.10 Backyard (04) lay immediately to the west of (03), divided by a shared partition wall (Plate 15). The west wall was of identical construction to the eastern wall. The south wall was only just visible at the limit of excavation, but enabled the yard's dimensions to be defined as 6.28m long by 4.48m wide. The base of a brick threshold near the centre of this wall indicated the position of the back door.
- 4.2.11 Although of similar basic form to backyard (03), backyard (04) was not as well preserved, with stone slabs only present across one third of the area. They survived in the north-east corner, extending across the floor of a privy block which backed on to that described within yard (03). The waste pipe identified the position of the toilet at the east end and the threshold indicated the position of the door at the west end. A short section of cast iron gutter had been set into the floor near the centre of the yard, draining to a soak-away adjacent to the east wall. The well (13) was located just off centre of the southern half of the yard and may possibly have been contemporary; however, the top of the well appeared to be lower than the flags in the northern half of the yard. It is impossible to ascertain if the well was covered by the flagged floor that was probably present here.



Plate 15: Backyard (04), looking north-west (2 x 1m scales)

- 4.2.12 Backyard (05) differs to the other backyards, being L-shaped in plan. It measured a maximum of 5.84m in length and 4.22m in width and was narrower to the south where a probable back room projected into the south-west corner of the yard (Plate 16). The surviving walls of the back room defined an area 2.5m long and 2.17m wide and a large rectangular stone (0.98m long by 0.26m wide) set into the south end of the east wall may indicate the threshold serving the doorway into the back room. A socket set in to the threshold denoted the probable position of a door-post. Inside the back room, two flags survived in the north-west corner. To the east of these, two short stubs of wall extended to the south, which must have either supported a low shelf or possibly the cheeks of a fireplace.
- 4.2.13 The yard area to the north of the back room retained its flagstone floor and there was again evidence for an external privy block in the north-west corner, measuring 1.35m long by 0.82m wide. The floor in the eastern half of the yard had been removed, leaving just a single large flagstone in the south-east corner. A soak-away drain was located adjacent to the east wall of the back room, with another just to the north. Both were encompassed within the cut of an irregular pit, which continued beneath the flagstone floor in the north-west corner of the yard and was filled with a dark grey-brown rubble-silt. The pit was probably the cut for the drains and is likely to be contemporary with the building. To the north of this pit, an L-shaped section of brick wall was present. This continued beneath the flag floor and may have predated the erection of the houses.



Plate 16: Backyard (05), looking north-west (2 x 1m scales)

- 4.2.14 Backyard (06) lay at the western end of the exposed terraces (Plate 17). The west wall of this yard was double-skinned and extended northwards from the southern edge of the excavation for a distance of 3.30m. The northern part of the wall was 2.13m in length and was roughly-constructed in red brick and rubble stone work.
- 4.2.15 Backyard (06) measures 5.82m long by 4.30m wide, and the flagstone floor in this yard had been almost completely removed. The identification of *in situ* flagstones in the southern part of the yard demonstrated that the floor had once been at the same height as backyard (05). The only other remnant of flagstone flooring lay within a rectangular brick privy situated in the north-east corner. This structure was a reflection of the privy described within yard (05) and retained evidence of internal plasterwork. In addition, a short section of double-skinned brick wall extended westwards from the south-western corner of the privy for a distance of 1.06m. The sondage revealed that the north back wall of the yard continued below the surface of the original floor level by at least 10 courses, giving it a total height of at least 1.34m.
- 4.2.16 Towards the north-eastern part of Area 1, a small square structure (18) was revealed cutting into the redeposited natural levelling layer (11) (Figs 2 & 4) (Plate 18). The structure measured 1.83m long by 1.40m wide and was composed of a single skin of hand-made bricks laid on edge surviving to a height of three courses. The bricks were laid in stretcher courses and included a stone slab along the north-western edge. The centre of the structure had been filled with an off-white lime mortar.
- 4.2.17 The area had been sealed by a layer of concrete (08) which had then been overlain by a sequence of demolition rubble (02) followed by a modern tarmac and concrete surface (01), which extended from the electrical substation to the

west to the former mill building to the east and then north to the brick retaining wall.



Plate 17: Backyard (**06**), looking north-west (2 x 1m scales)



Plate 18: Possible base (**18**), looking north-west (2 x 1m scales)

- 4.2.18 **Area 2 (Fig 5):** Area 2 was situated immediately to the north of Area 1 and covered a narrow strip of land 5m wide by 21m long and was sealed by hard standing (Fig 2).
- 4.2.19 Exposed natural sands (**16**) were encountered at an average height of 28.00m AOD, and into this deposit a linear building aligned north-east/south-west containing four rooms (**31**), (**32**) (**33**) and (**34**) had been cut. The south wall of the building was four courses wide, of substantial construction and extended to a length of nearly 21m. The wall retained the higher ground to the south upon which the terraced houses in Area 1 had once stood.
- 4.2.20 The north wall was shorter and was not present to the north of room (**31**). It survived only as a foundation, 0.55m thick and 12.5m long, and was truncated at the western end. The cross walls were generally less substantial, reflecting their use as internal partitions. Room (**31**) measured 5.93m by in excess of 3.46m, although the absence of the north wall suggests it may have been larger. A small brick-lined rectangular feature at the centre of the room, filled with a dump of loose demolition rubble, may have once served as a vehicle inspection pit, but was not excavated (Plate 19). The south and east walls of the room retained some plaster and a ceramic waste pipe was present in the south-eastern corner below ground level.
- 4.2.21 Room (**32**) measured 4.48m by 3.07m and lay immediately to the west of room (**31**). The two rooms were separated by a brick cross-wall two skins wide to the south, and four wide at the northern end. The west cross-wall was just two skins wide across its entire length but incorporated a flagstone step at the northern end, suggesting a rise in floor height between room (**32**) and (**33**). The remainder of the floor within room (**32**) had been removed, but a layer of compact black brown sand (**35**) 0.10m thick, survived in places and may have been a bedding material for the floor. There were two ceramic waste pipes encased in concrete in the north-east corner of the room.
- 4.2.22 Room (**33**) lay to the west of room (**32**), was 6.14m long and just over 3m wide. Only the lowest course of the west wall survived, which had been laid directly on top of the flagstone floor that survived across much of this room. Across the centre of the room, three rows of engineering bricks had been incorporated into the floor, perhaps to form some kind of equipment stand. The northern end of these had subsequently been partially mortared over (Plate 20). There was some evidence to suggest an earlier phase of brick flooring at the western end of the room, where a red brick surface was recorded beneath the present flagstone floor.
- 4.2.23 Room (**34**) lay at the western end of Area 2 and was only partly exposed. The north and west walls had been heavily truncated by modern disturbance. From the remnants of the north wall, it is probable that the room was 3m wide, consistent with the previous two rooms, and of in-excess of 3.2m in length. Very little of the flagstone floor remained but the fragments that did suggested the surface was slightly lower than that in room (**33**). The absence of the floor, however, revealed the construction cut for the south wall, (**37**), which had

been backfilled with (36) a loose mid-brown sand and rubble backfill once the wall had been constructed.

- 4.2.24 All structures and deposits were sealed by a yellow brown to dark brown silty sand deposit (26) containing abundant quantities of demolition rubble, which had been used to level the site.



Plate 19: Room (31) facing east, with inspection pit to left of frame centre (2 x 1m scales)



Plate 20: Room (33) showing flagstone floor and engineering bricks across the centre (2 x 1m scales)

- 4.2.25 **Area 3:** Area 3 lay to the north of Area 2, beyond a steeply descending bank. It encompassed an area of mainly hard standing 20m wide by 35m long at an average height of 27.90m AOD, gradually lowering to the north. It was limited to the north by a modern boundary wall, and to the west by the buildings facing Friargate. A landscaped bank covered the eastern third of Area 3, with the ground rising steeply up to a height of 31m AOD.
- 4.2.26 Area 3 consisted of two distinct phases that for the purposes of the following descriptions have been divided into a Primary Phase and Secondary Phase. More detailed phasing is reserved for the discussion (*See Section 5*).
- 4.2.27 Undisturbed natural sands (**16**) were encountered across the area at an average height of 26.88m AOD. Although substantial quantities of overburden were removed from across the eastern third of Area 3 to a depth of up to 3m, to the west, significant archaeological deposits of the secondary phase were encountered immediately beneath the present hard standing (Plate 21).



Plate 21: Industrial remains within Area 3, primary phase, facing west (2 x 1m scales)

- 4.2.28 **Primary Phase (Fig 6):** in the eastern quarter of the site an irregular trapezoidal reservoir (**20**) was observed, 6.45m long by 6.00m wide. The sides of the reservoir had been cut into the natural sands (**16**) at a 45 degree angle and lined with a firm clean reddish-brown clay up to 0.9m thick. There was evidence for a hand-made red brick retaining wall on the western side of the reservoir, two courses wide and bonded with lime mortar. After falling out of use, the reservoir had become filled with a dark, almost black, organic silt. Later activity had destroyed the upper portions of the reservoir, leaving just the base intact.

- 4.2.29 Across the majority of the land to the west of the reservoir the natural sands (16) were overlain by an amorphous spread of light orange-mottled brown soft sand (48) up to 0.5m thick. This deposit was in turn overlain in places with discontinuous and irregular patches of a dark blackish brown, very firm sandy-silt industrial residue (47) up to 0.8m thick in places.
- 4.2.30 On the southern edge of Area 3 however, a small isolated ovoid pit (25), had been cut directly into the natural sands with a broadly north/south alignment (Plate 22). In plan, it measured 0.64m long by 0.42m wide and its excavation revealed moderate concave sides leading to a rounded base at a maximum depth of 0.12m. The pit had been backfilled with a loose dark grey-black mixture of sand and clinker (23) and contained numerous fragments of clay tobacco pipe stem.
- 4.2.31 Just to the west of this pit, a spread of mid grey-brown sandy-silt midden material (24) overlay layer (16) and was bound to the east by a short section of stone wall (66) assembled using reused sandstone architectural fragments. The wall measured 1.4m in length and was 0.43m in width and stood to a single course high, incorporating a fragment of reused stone window mullion (Plate 23). The midden spread (24) extended in patches for approximately 2.14m to the west of the wall and had a maximum depth of 0.2m. It contained large quantities of eighteenth and nineteenth century pottery fragments.



Plate 22: Pit (25), facing south (1 x 0.2m scale)



Plate 23: Wall (66) with reused window mullion to centre. The wall appears to retain midden heap (24) to the east (1 x 0.5m scale)

- 4.2.32 To the north, several features had been cut directly into deposit (48), the most substantial feature being a sunken brick-built flue (51), which extended north/south across the eastern half of the area for a length of 8.27m. The structure had a typical width of 1.5m and was constructed of hand-made red brick with a lime mortar to a height of 0.96m (Plate 24). Its northern half had a shallow brick capping arch but this had been lost from the southern portion of the flue. At the southern end, the flue turned east, before being truncated almost immediately by later activity, while at the northern end it appeared to have been cut by the construction of a later flue (29).
- 4.2.33 A group of three structures with brick floors were situated in the north-east corner of the area. One was rectangular, 2.8m long by 2.63m wide, defined to the south by a single skin of east/west aligned red brick wall, and lay adjacent to the northern end of the eastern side of flue (51). A second rectangular floor surface, 1m wide and 2.63m long, enclosed to the south, east and west within a double-skin brick wall, adjoined it to the east, together forming an L-shaped feature (53) (Plate 25). The latter floor had been sunk into the ground by 0.3m. A third and similar north/south aligned sunken brick-lined rectangular floor lay less than half a metre to the east (53). It had similar dimensions to the last and appeared to have been truncated to the east by the later flue (29). The base of a wooden barrel (55) had been inserted into the south end (Plate 26). The floors of all three features were heavily sooted, suggesting intensive industrial use.
- 4.2.34 To the south of these features, a small sub-circular pit (45) cut into deposit (48) and measured 1.3m long by 1m wide. It was filled with a dark blackish grey sandy ash (44) and its excavation to a depth of 0.36m revealed steep, near vertical sides and a concave base (Plate 27).

- 4.2.35 Immediately to the south of pit (45), a sub-rectangular pit (43) was cut into the natural sands (16), and measured 1.3m x 1.3m. It was filled with a homogenous black sandy-ash, similar in appearance to that typically used in an iron foundry and upon excavation was found to extend 0.2m to the base of the cut. Inserted into this cut was a cast iron frame consisting of two side rails joined towards either end by a pair of cross pieces. The frame had been lain flat in the base of the cut, perhaps as a support for a haystack boiler (Plate 27).
- 4.2.36 A second sub-rectangular pit (41), was situated at the western end of the area, in close proximity to the boiler house and also cut into deposit (48) (Plate 28). This pit was approximately 1.3m square and 0.8m deep, had vertical sides with a flat base and had been partially backfilled with a light pinkish-brown soft sand (42). Part way through backfilling, a circular barrel, 0.8m in diameter, appeared to have been placed within the north-east corner of the cut. Only the outline and decayed remains of the barrel where the *in situ* iron bands remained, survived (40). The lower portion of the barrel had been filled with a mottled dark brownish-black and greyish-white sand (39) containing clinker, mortar and brick fragments to a depth of 0.15m. Above this was a 0.22m thick layer of dark blackish-grey firm silty-sand (38).
- 4.2.37 Towards the centre of the area and to the west of (51) were two brick drains or flues, (52), that cut layer (48). Both were 0.43m wide, had flagstone bases, and walls a single brick thick and high. The eastern example curved gently from west to north over a length of 2m, while the western one curved from south to north-east over a distance of 1.4m. Although not directly connected, their identical construction suggests they are contemporary and the eastern one appeared to respect a wall associated with flue (51). An area of red brick floor, 1.5m by 2m abutting the southern end of this wall lies at the same height as the drains and may also be contemporary. The function of the two curving channels is uncertain as little of them survives, but they did contain a black sandy-silt, almost ash-like deposit, perhaps suggesting that they formed part of a flue system.
- 4.2.38 A rectangular red brick structure (29) with an apsidal end in the north-western corner of the area is almost certainly the foundations of a boiler house (Plate 29). The structure's exterior walls were typically 0.35m wide, although the western wall was nearly 0.55m wide. The overall dimensions of the structure measured 8.10m by 3.5m. The south wall had been partially disturbed by later activity but the foundations were generally well preserved. At the centre of the west wall, the northern jamb of a possible doorway was preserved, indicating a likely access door in to the boiler house (Plate 30). The remnants of a flagstone floor at this end of the building once served the charging platform, while the eastern two thirds of the structure still contained its parallel brick-lined flues along with the dwarf walls upon which the cylindrical boiler would have sat. The length of these dwarf walls suggest the boiler could have been no more than around 4.2m in length. A third, central flue, which would have sat beneath the boiler was also preserved, suggesting that a small Cornish boiler had been fitted.

- 4.2.39 At the eastern end of the boiler house a brick-lined flue (29) extended to the north-east for a length of 4.91m, before turning to the south-east where it continued for a further 6.5m (Plate 31). The flue then turned sharply to the south for 5.3m before terminating at a chimney base. All three sections of the flue had an external width of approximately 0.9m and double-skin brick walls 0.23m wide. Where excavated, the base of the flue was formed in red bricks and the central section retained three of its rectangular capping stones. At the eastern end of the middle section a fragment of brick capping (49) survived, resting upon several iron bars that spanned the width of the flue. The bars appeared to have been reused, possibly from an earlier boiler grating. After falling out of use the flue had been filled with a dark grey brown silty-sand (54).
- 4.2.40 In the south-east corner of the area, a pair of small elongated rectangular brick structures (46) were recorded in close proximity and abutting the western side of flue (29) (Plate 27). Both were cut into deposit (48), constructed in red brick and extended to the west for a length of nearly 1.5m and standing to a maximum height of 0.4m. The northern structure was 0.4m wide with a central channel 0.2m wide between single skin brick walls. The southern example had double-skinned walls making it 0.7m wide externally with a central channel 0.3m wide. The bases of both central channels were curved as if designed to house the lower half of a revolving wheel.
- 4.2.41 A short section of brick-lined drain or flue (67) was present at the western end of the area, running parallel to the line of the south wall of the boiler house. The feature was 2.7m long and 0.27m wide and its construction was similar to the channel features described to the east (52). It included a short spur at its western end, which curved from north to south-east cutting the fill (42) of pit (41) as it did so. Small portions of its slate capping survived on both the main channel and its spur.



Plate 24: Flue (51), showing brick arch, facing north (0.5m scale)



Plate 25: Rectangular brick floors (53) to centre of frame abutting flue (51) to right (2 x 1m scale)



Plate 26: Sunken rectangular brick floors (53) with base of *in situ* barrel (55) at the southern end (1m scale)



Plate 27: Subcircular pit (45) to left of frame with pit (43) to centre. Brick structures (46) lie behind abutting flue (29) beyond that, facing east



Plate 28: Pit (4I), facing east (1 x 0.5m scale)



Plate 29: Boiler House, with charging platform nearest to camera. Facing east
(1 x 1m scale)



Plate 30: Western end of Boiler House showing threshold to right of frame



Plate 31: Flue (29), looking west towards Boiler House with flue (51) to left of frame (1m scale)

4.2.42 **Secondary Phase (Fig 7):** the industrial features of the primary phase were directly overlain by the foundations and surviving floor of a later, rectangular stable block (21), with associated cobble road surface to the north (22) (Plate

32). The stable block was aligned almost east/west and measured 14.9m long by 5.4m wide. The walls of the building were constructed from hand-made bricks bonded with friable lime mortar. The north and south walls were three courses wide, while the east and west walls were two courses wide. The walls generally only survived to floor level, apart from a small remnant in the south-east corner of the building which survived to five courses. Within the building the majority of the cobble sets were granite and measured 0.18m by 0.08m.



Plate 32: Stable block, facing west (2 x 1m scales)

4.2.43 The western end of the building had been heavily truncated by modern disturbance, leaving only 1.86m of the western wall remaining. Despite this, however, an area of smaller floor cobbles parallel with the western end of the south wall suggested there may have been an entrance and walkway in the south-west corner. Similarly, a deliberate break towards the east end of the north wall with a cobbled threshold also indicated the position of an entranceway.

4.2.44 The stable floor was constructed from cobbles of varying sizes laid in differing directions. From this pattern it was possible to infer the use of different parts of the building (Plate 33). There appeared to be four stalls arranged along the east end of the south side of the building, each measuring 1.70m wide by 3.50m long. A line of bricks laid on edge incorporated into the floor marked the boundary of each stall, and a large square socketed stone would presumably have housed a wooden post to denote the stall partitions above ground (Plate 34). The cobbles within each bay were cambered towards a row of larger cobbles in the centre of each stall, presumably to aid drainage. In addition to this, a continuous line of stone gutters ran across the floor at the northern end of the stable partitions. The gutters were punctuated by a pair of stone drains at the western end and again towards the east end.

- 4.2.45 The stone gutter formed the southern edge of an internal access passage 1.2m wide, which ran along the north side of the building, leading to what appeared to be a more open area in the north-west corner of the structure. The cobbles in this area were more irregularly laid and variable in size, with larger cobbles across the centre diminishing to smaller ones to the north. The floor in the south-west corner used regularly laid smaller cobbles, leading up to the hypothesised entrance to the west. The centre of the floor had been disturbed by a modern intrusion.
- 4.2.46 Immediately to the north of the structure's northern wall there was an external walkway, 1.32m wide and laid in large flagstones. The walkway's northern edge was defined by a stone kerb, beyond which an area 3.5m wide had been cobbled (22) using sandstone blocks typically 0.26m by 0.20m, although here too there was some variation in size and direction (Plate 35). A second stone kerb, defined the northern edge of the cobbled area. Both the flagstoned and cobbled area were bound to the west by an iron rail, 7.4m long and 50mm wide, which had been incorporated into the floor. This probably served as a runner for a sliding door.
- 4.2.47 Beyond the iron rail, a large open area of sandstone cobbles, perhaps serving as a yard or roadway, was present. A possible drain defined the southern extent of this area. To the east, the cobbles were defined by the iron rail, while to the north and west they extended beyond the limits of the excavation. This defined an area 8.30m wide and 6.5m long, which, from the alignment of the cobbles and drain probably continued west towards Friargate. Just to the south of this cobbled surface lay the fragmentary remains of a flagstone and cobble surface 1.8m wide by 5.7m long.
- 4.2.48 A yellow-brown to dark brown silty-sand (26) sealed the external cobbled floor surface (22) and the stable floor (21), as well as the reservoir to the east and pit deposits (23), (24) and layer (47) to the south. The area was then topped with a modern hardcore and concrete surface (01).



Plate 33: Stable block (2I), facing west (2 x 1m scales)



Plate 34: Stable bay, with partitions defined by the lines of brick and empty post sockets (2 x 1m scales)



Plate 35: Cobbled area to north of stable block, facing east (2 x 1m scales)

4.2.49 **Area 4 (Fig 8):** Area 4 was located on the higher ground to the east of a bank that crossed the eastern side of Area 3. It was an L-shaped area that measured 23m by 20m (Plate 36). Undisturbed natural sands (**16**) were encountered at a height of 29.90m AOD with archaeological deposits revealed from 30.5m AOD onwards.



Plate 36: Area 4, looking north-west (2 x 1m scales)

- 4.2.50 A reservoir (**63**) had been cut into the natural sands (**16**), measuring 9.10m long by 8.50m wide (Plate 37). It was defined to the south by a stone wall and to the north and west by brick walls.
- 4.2.51 The south wall measured 9.1m in length, was typically 0.36m wide and stood to a height of 0.4m. It was made of roughly-hewn sandstone blocks varying in size, bonded with lime mortar and had a slight curve at its western end where it abutted the western brick wall, suggesting that it may once have continued to the north. The western wall measured 8.17m long, was a single brick wide, and survived to a height of four courses. The northern wall was similarly constructed but measured just 3.44m in length, with the remainder beyond the limits of excavation. Neither of the brick walls appeared to employ any formal bonding material. The base of the reservoir was lined with heavy clay and a clay bund, 0.4m wide, had been erected around the exterior of all three perimeter walls.
- 4.2.52 To the west of the reservoir, lay a linear brick flue (**56**), also cut into the natural and aligned north/south for most of its length before curving slightly at the northern end (Plate 38). At the southern end, the flue turned to the south-east where a second flue branched off at 45 degrees (Plate 39). The main flue had a depth of 1.45m, measured 22m in length by 1.15m in width and was spanned by a two-course brick arch, sections of which had collapsed. It had been built with a rectangular access hatch towards its northern end. The subsidiary branch flue at the south end was of similar construction to the primary flue but lacked an arch and was 0.85m wide. This flue had been blocked off from the main flue (Plate 40) by a rough brick wall and extended to the south-east for a distance of 4m, before entering a small rectangular brick chamber at the eastern end. Another flue (**57**) of identical width and construction extended east from this chamber for approximately 4.3m before being truncated.
- 4.2.53 Immediately to the east of flue (**56**) and to the west of the reservoir (**63**), lay a further narrow flue (**58**) on the same alignment as flue (**56**) (Plate 41). This flue had a length of 14.7m and was 0.45m wide, with single skin brick walls laid in lime mortar. The flue had no formal base but the southern end preserved some of its original flagstone capping, although this was missing from the remainder of the structure. The flue had been truncated at the northern end and it turned sharply to the south-east at the southern end, leading into a small square double-skinned brick structure (**59**) which may have been the base of a chimney (Plate 42). This feature measured 1.2m by 1.3m and was excavated to a depth of 0.6m.
- 4.2.54 In the north-western corner of the site, a short length of curving drain (**64**) was exposed, cutting the natural sands (**16**) and extending from south-west to north-east, beyond the limit of excavation in both directions (Plate 43). It measured 4.8m long by 0.4m wide by 0.25m deep and was constructed from hand-made bricks two courses wide with a slate base and cap, all bonded with lime mortar. The remnants of a subsidiary drain of identical construction lay immediately to the east but only survived to a length of 1.2m.

- 4.2.55 In the south-eastern corner of the area a pair of north/south aligned walls (**60**) (**61**) were present, constructed of angular sandstone blocks with occasional use of brick and slate, laid in lime mortar (Plate 44). The space between walls (**60**) and (**61**) formed a channel 1m wide which had been filled with a dark brown black silt. The south end of the channel had then been overlain by stone flags, some of which had sunk into the underlying deposit (Plate 44).
- 4.2.56 The walls had been cut into deposit (**16**) and measured approximately 4m in length, had a width of 0.37m and survived to a height of 0.9m. At the south end of wall (**60**) it turned sharply to the west where it continued for another 1.2m before terminating. A fragment of red brick wall then extended from the south face for 0.43m before disappearing beneath the limit of the excavation. Wall (**61**) appeared to incorporate a possible threshold at the southern end, demarcated by a quoin stone on the northern side and in-filled by a course of red brick to the south (Plate 45). At the southern end wall (**61**) appeared to turn to the east just before disappearing beneath the limit of excavation.
- 4.2.57 To the west of wall (**60**) a further wall was observed, on the same alignment but was constructed of red brick in a lime mortar (**62**) (Plate 46). This wall was constructed on a brick plinth and measured 4.88m long by 0.52m wide and survived to a maximum height of 0.4m. There was a break in the wall 0.78m wide towards the northern end, but it could not be determined if it represented a formal opening. At the northern end the wall appeared to turn to the west for a length of 2.3m but the width could not be determined due to it being on the limit of the excavation. The top of this wall sloped significantly to the west, presumably as a result of subsidence and the western end was topped with flagstones. To the west of wall (**62**) a modern manhole had been inserted.
- 4.2.58 In the far south-east corner of the area lay a brick floor enclosed to the north-east and west by three walls that defined the very northern edge of a small room (**65**) 4m wide and in excess of 1.2m long (Plate 47). Each of the walls was 0.4m wide and constructed of roughly-hewn sandstone blocks to a maximum height of 1.1m. The two east/west aligned walls continued beyond the limit of the excavation. The north-west corner of the structure had been lined with red brick, which over-lay the brick floor and must presumably therefore have been a later addition.
- 4.2.59 All deposits were sealed by a layer of mixed sand and rubble make up, varying between a metre in depth to the east and as little as 100mm to the north.



Plate 37: Clay-lined reservoir (63) facing west



Plate 38: Brick-lined flue (56) facing south-west



Plate 39: Southern end of flue (56) facing north-east, with branch flue above and flue (57) to top right of frame



Plate 40: Blocking between flue (56) and its subsidiary flue, looking south-east (0.4m scale)



Plate 41: Flue (58) facing south-east, with flue (56) running parallel below



Plate 42: Possible chimney base (59), with flue (58) connected to the right hand face as viewed, facing south



Plate 43: Drain (64) facing west



Plate 44: Walls (60) and (61) at the east end of Area 4, looking north (1 x 1m scale)



Plate 45: Possible threshold at southern end of wall (61) facing north-east



Plate 46: Brick wall (62) to centre of frame with manhole immediately to the right



Plate 47: Structure (65) facing south (1m scale)

4.2.60 **Evaluation Trenches (Fig 2):** in addition, two 15m by 2m evaluation trenches were excavated in the area between Areas 2 and 3. Both trenches were excavated to a maximum depth of 0.9m to reveal natural sands identical to those found across the rest of the site at a height of 28.00m AOD. The natural was sealed by a layer of mid brown sandy-silt 0.85m thick, containing a large amount of demolition rubble. No archaeological remains were observed in either trench.

5. FINDS

5.1 INTRODUCTION

- 5.1.1 A relatively large assemblage (*Appendix 3*) was recovered from the four areas excavated, comprising 1348 fragments of artefacts and ecofacts (Table 1). Most of the finds were in good to excellent condition, with little abrasion or surface deterioration. The metalwork was the only exception, with the ironwork and one copper alloy coin being highly corroded.

Animal bone	26
Clay tobacco pipe	91
Ceramic vessel	1210
Copper alloy	4
Glass	4
Industrial debris	6
Iron	5
Stone	1
Wood	1
<i>Total</i>	<i>1348</i>

Table 1: the range of finds from the site, by fragment count

5.2 FINDS REPORT

- 5.2.1 **Pottery:** by far the largest element of the assemblage was pottery dating largely to the mid-nineteenth century. As it comprised a range of industrially-produced fabrics, many of them originating in Staffordshire, detailed analysis was not regarded as justified at this stage in the project. A gross approximation of general fabric-types present is given in Table 3.
- 5.2.2 There was however, an unstratified fragment of later medieval pottery (the strap handle from a green-glazed jug), and a single fragment of reduced green-glazed ware (probably a Silverdale-type fabric), from the fill (39) of barrel (40), in cut (41). Although their origins lie in the late medieval period (Edwards 1974), there is strong evidence to show that Silverdale-type wares remained in production into the seventeenth century, and it could thus be contemporary with a clay pipe bowl of this date (also unstratified).

Context	Quantity	%age pottery assemblage	Date range
2	10	0.82	Mid-late nineteenth century
3	24	2	Mid-late nineteenth century
7	40	3.3	Late eighteenth – early nineteenth century; after 1837
9	91	7.5	Mid-late nineteenth century
17	18	1.48	Mid-late nineteenth century
23	2	0.16	Mid-late nineteenth century
24	1005	83.05	Late eighteenth – early nineteenth century; Mid-late nineteenth century; after 1830; after 1865
39	8	0.66	Fifteenth-seventeenth century, early- mid nineteenth century
54	11	0.9	Mid-late nineteenth century
Unstrat	1	0.08	Medieval
<i>Total</i>	<i>1210</i>		

Table 2: distribution and dating of pottery

- 5.2.3 The majority of the pottery (83.05%), came from a single context, a midden deposit (**24**) associated with wall (**66**); Table 2, Table 3). The range of fabrics present in that context is markedly different from others on the site, in that it is the only context to produce Rockingham-type wares (popular from the 1830s to the 1880s; Cox and Cox 1983), and so-called Egyptian Black wares (listed under ‘Other’), the glazed surfaces of this ware point to a date after the 1830s.
- 5.2.4 Apart from the two unstratified medieval sherds (*Section 5.2.2*) from the backfill (**39**), of the barrel (**40**) in pit (**41**), there is very little in the assemblage to suggest that deposition started before the second quarter of the nineteenth century. Fabrics typical of the mid-late-eighteenth century (tin-glazed wares or white salt-glazed stonewares for example) are completely absent, and there are only a few fragments of creamwares or Pearlwares present. Creamware, developed in the late eighteenth century, continued in production in a number of potteries, well into the nineteenth century, whilst Pearlwares have a slightly later date-range, being more-or-less replaced by refined white earthenwares by the 1840s (Howard-Davis 2014, 190).
- 5.2.5 Whitewares have not been differentiated for the purposes of this report and can be taken to include occasional fragments of porcelain and white bone china (developed *c* 1800; <http://www.thepotteries.org/types/bonechina.htm>), as well as ironstone china, (patented in 1813 (Coysh and Henrywood 1982, 239) and produced until the present day). Much of this group comprises fragments of plain and under-glaze transfer-printed tablewares, but there are also occasional fragments of chamber pots (including one with the initials VR (Victoria; reigned 1837 1901, from machine clearance 7) and other bedroom wares. As is to be expected, the transfer-printed designs are predominantly in blue, but other colours are present, pointing towards a deposition date after about 1830 when other print colours were being developed and used. The

designs are dominated by Chinoiserie, but include ‘Asiatic Pheasants’ a design extremely popular in the mid-nineteenth century (Coysh and Henrywood 1982, 29). Occasional fragments are in ‘Flow Blue’ a technique developed in the second quarter of the nineteenth century (Snyder nd). Makers marks are almost absent, with the exception of a plate from layer (24), bearing a partial backstamp UM & [T] probably that of Staffordshire producer Unwin, Mountford and Taylor, and only used in the year 1864 (www.the-potteries.org).

- 5.2.6 Industrial Slipwares or Annular wares, which appeared in the late-eighteenth century, were most popular in the nineteenth and early-twentieth century, providing utilitarian tablewares such as jugs and bowls, along with tankards. Fill (24) also produced a few fragments of lustrewares, with at least one hand-painted saucer with a design identical to that seen on a cup from Liverpool Docks, probably dated c 1815-1860 (Hughes 1968; Howard-Davis 2014, pl 182).
- 5.2.7 Kitchen/storage wares are represented by Derbyshire-type brown stonewares, made from c 1820 until c 1950 (Hildyard 1985). Interestingly, grey stoneware jars, often ubiquitous in domestic assemblages of this date, are completely absent, and only two or three of the small bottles used for a range of liquids, from ginger beer to ink and boot-blackening, were recovered. Locally-made dark-glazed redwares, occasionally with a white internal glaze, such as pancheons and large storage vessels, provided the heavier-duty element required of kitchenwares, along with occasional bowls, dishes, and jugs. These are part of a tradition stretching back to the early post-medieval period, and continued to be made by small local potteries, and larger producers, such as those of Prescott, to within living memory. As a result, they are particularly difficult to date with any precision.
- 5.2.8 The assemblage from layer (24) stands out in being the only one to produce Rockingham-type wares, moulded or sprigged vessels with a rich and lustrous streaky brown glaze. These were made from c 1830, falling out of popularity towards the end of the nineteenth century. What is of interest, is that they appear to be almost entirely from teapots, a spout count suggesting between 18 and 20 vessels, most of which were complete, if broken on deposition. There is a range of decorative styles and body shapes, but the presence of so many might suggest some localised activity which needed or generated large numbers of teapots. The teapot in its present shape emerged in the early nineteenth century as tea became cheaper and more freely available (Everage 2006). One obvious suggestion is that there was a potter in the close vicinity or the site was used as a dump for wasters from elsewhere.
- 5.2.9 There are no obvious wasters amongst the teapots, but the presence of a dark-glazed redware waster from fill (23), in a nearby pit, and a single fragment of kiln furniture from layer (24), might help reinforce this suggestion, especially if considered alongside the slight evidence for clay pipe production, also from fill (23). One other teapot was recovered from layer (24), its fabric being the glossy version of ‘Egyptian Black’ or Black Basalt which was also popular from the early-nineteenth century. (www.woolhopeclub.org.uk)

Context	Dark-glazed redwares	Rockingham-type wares	Refined whitewares (undiff)	Industrial Slipwares	Derbyshire-type stonewares	Other	Totals
2	2	0	2	6	0	0	10
3	3	0	14	7	0	0	24
7	12	0	27	1	0	0	40
9	28	0	38	10	9	6	91
17	6	0	11	1	0	0	18
23	2	0	0	0	0	0	2
24	75	380	390	31	115	14	1005
39	0	0	3	0	4	1	8
54	6	0	3	1	1	0	11
Us	0	0	0	0	0	1	1
Totals	134	380	488	57	129	22	1210

Table 3: gross fabric groupings

- 5.2.10 **Tobacco Pipe Fragments:** clay tobacco pipe fragments from the site range in date from the seventeenth to the nineteenth centuries, with the earliest (OR no 1017) being found unstratified. The material is notable for its concentration in pit (25), fill (23), which produced not only stem fragments, several of which are badly overfired or sintered, but also small thin sheet-like fragments of fired clay, which are associated with the production of pipes (Higgins *pers comm*). Both suggest that the group originates in discarded kiln waste, and by extension that a nineteenth-century pipe kiln could have been situated on or close to the site.
- 5.2.11 **Glass:** there was surprisingly little glass recovered. Two milk bottles from backyard (3) are both of mid-twentieth-century date, one is a plain sterilised milk bottle, typically holding two pints, and with a crown cork closure, embossed Smith's Hygienic Dairies, based in Ince, near Warrington (still working in 2005). The other is a small (third of a pint) bottle.
- 5.2.12 The base of a dark olive green wine/beer bottle, probably of early nineteenth-century date, came from Backyard (4). A very small fragment of colourless pressed flint glass came from layer (24); developed in America in the 1820s (Matsumura 1983) it was being produced in England by c 1830, and popular from c 1850 to the present day (Notley 1986), although after c 1880 much of it was imported.
- 5.2.13 **Coins:** there were two coins, both low denomination copper alloy issues. The best preserved, from room (33), is a 'bun' halfpenny dated 1890. The second, part of a small group of finds recovered from 'mixed layers under stable and road (21) and (22)', is too badly corroded for identification.
- 5.2.14 **Metal Finds:** a single dress-making pin, from layer (24) has a stamped head, and can be dated to the later nineteenth or twentieth century. Object OR 1037 from the late fill (54) of flue (29) is clearly intended as a bag-shaped container, and bears a reasonable resemblance to a mid-nineteenth-century powder flask. Ferrous objects from cobbles (22) are clearly tools, one resembling pliers. A

white enamelled mug, from Backyard (3), can be dated to the third quarter of the nineteenth-century or more recent, such mugs remaining in use to the present day. A ferrous barrel hoop came from late fill (54), in flue (29), and an unstratified enamel sign, advertising Park Drive cigarettes was recovered.

- 5.2.15 **Stonework:** a single architectural fragment came from wall (66). Although badly worn, it appears to be part of a window mullion, with a lozenge-shaped cross-section and distinctive grooves to accommodate leaded lights. Whilst no precise date can be offered, it seems most likely that it derives from a late medieval or early post-medieval structure originally standing on or near the site. It must, however, be borne in mind that there is some evidence to suggest that some of the pottery from this context was dumped from elsewhere, and thus it cannot be discounted that this fragment was imported.
- 5.2.16 **Bone:** there were 26 fragments of animal bone, 22 of which were recovered from layer (24), and seem most likely to be food waste. Four fragments, all sawn longbone fragments, came from the 'mixed layers under stable and road (21) and (22) and again seem most likely to be food waste.
- 5.2.17 **Other Finds:** there were also a few fragments of largely undiagnostic industrial debris, and a large wooden object, likely to be of relatively recent date.

6. CONCLUSION

6.1 INTRODUCTION

- 6.1.1 The present excavation accompanied by the documentary research has illustrated the industrial, commercial and residential history of the proposed development area and contributed to both our understanding of the growth of Preston and urban settlement in the north-west. The following section will discuss the phases of this development in sequence, from the medieval/pre-industrial era through to the twentieth century, before concluding with an overview and a brief discussion upon further potential archaeological survival within the area.

6.2 DISCUSSION

- 6.2.1 **Medieval – Early Post-Medieval Period:** the evidence suggests that although development probably extended along Friargate during the medieval period, it appears to have been concentrated along the frontages and did not extend to the rear of the burgage plots. Although there is likely to have been significant landscaping across the area, the near total absence of earlier dating material in the form of residual finds suggests that the area to the rear of Friargate and Great Shaw Street was largely undeveloped prior to the nineteenth century. This pattern of development accords with the available documentary evidence that suggest that Preston did not expand beyond its medieval boundary until after the post-medieval period, although land pressure was probably more keenly felt in the ancient core of Fishergate, Church Street and the market place. The handful of finds retrieved from the late-medieval/early post-medieval period include the fragment of reused sandstone window mullion associated with the midden pit, and is illustrative of the processes of rebuilding in more permanent materials that occurred in Preston from the early post-medieval period onwards.
- 6.2.2 **Mid-Nineteenth Century:** the buildings facing Friargate are likely to have been rebuilt in more permanent materials after 1800. Their reconstruction was part of a rapid expansion in the town, which resulted in intensive occupation of previously undeveloped land to the rear of the ancient burgage plots. Broadly, the evidence retrieved during excavation points to intensive use of the land to the rear of Friargate from the first quarter of the nineteenth century. This activity included at least two distinct phases of industrial development to the north, and the erection of residential properties along the southern boundary fronting onto Great Shaw Street.
- 6.2.3 The earliest industrial phase is represented by the substantial north/south aligned brick flue in Area 2 along with several associated platforms and the possible remains of the base of a haystack boiler. These features can be dated by cartographic sources to after 1824 and may have been associated with a boiler shown on the 1836 map to the north-east (Plate 6). The presence of a reservoir immediately to the east, further confirms the existence of a steam engine on site from at least this date. No direct evidence survives to indicate

the specific function of these industrial features but the proximity of two contemporary cotton mills maybe indicative.

- 6.2.4 At some point, probably prior to 1844, a new boiler house (29) was erected at the western end of the site and a three-part brick flue built to serve it. The original flue and its associated features appear to have remained in use, however, as the new flue is designed to avoid these features. The design of the new boiler house suggests it was built to house a small Cornish boiler, with its loading platform at the western end. Cornish boilers were in common use from the early nineteenth century up to the 1840 s after which, they were phased out in favour of the Lancashire boiler, which was patented in 1844. There is evidence to suggest a doorway at the centre of the west wall of the boiler house to indicate a former entrance.
- 6.2.5 In addition to these features, there was some limited evidence to suggest clay pipe manufacture may have been taken place on the site from the early-nineteenth century onwards. Principally, this evidence was confined to the retrieval of significant quantities of clay pipe and associated waste material from the manufacturing process from one single pit near the centre of the site. The absence of other associated features might be explained by subsequent terracing activity, although, similarly, the material may have been imported from elsewhere. In particular, the sharp drop in ground levels between the northern and southern half of the site suggests that the former had been terraced, perhaps to facilitate the erection of the linear range of buildings across the centre of the site (Area 2).
- 6.2.6 Cartographic evidence demonstrates that this narrow linear range was also erected between 1824 and 1836, crossing the centre of the site perpendicular to the line of Friargate and effectively creating courtyards to the north and south. The structure uncovered within Area 2 broadly matches the location and general dimensions of this range but could also be it predecessor. The engineering brick incorporated into the floor of this building must be of late-nineteenth century date and clearly the inspection pit identified within the easternmost room of the range, suggests the building was being used as light industrial premises at least by the twentieth century. In 1849, the yard was known as Prescott's Court and is typical of the in-filling and sub-division of former burgage plots in towns expanding from an original medieval layout. Subsequently, the court was renamed after the Tommony family, who according to local knowledge, rented out units in the yard.
- 6.2.7 The eastern portion of the site was occupied by a rectangular reservoir from before 1836, which it appears from cartographic evidence, belonged to Back Lane Mill. This is presumably the same reservoir partly identified during excavation, and may be associated with the pair of flues running along the western side. The flues appear to be venting to the north from an origin within the mill, although prior to its demolition the mill showed no obvious signs of having an internal engine house in this location. Both flues continue for some distance and suggest that the chimney was located at least 20m to the north of the mill. The function of the structure located to the south-east of the reservoir

cannot be identified from cartographic sources but its proximity to Back Lane Mill suggests it too may have been associated with this building.

- 6.2.8 Along the southern boundary of the site, a row of terraces was erected, perhaps to provide accommodation for factory workers in one of the factories that occupied the site. Buildings appear in this location from Lang's 1774 map onwards, although it is difficult to establish for certain if these are the same as those identified during excavation or are earlier and subsequently replaced structures. The greater detail of the 1836 map however confirms that they have certainly been built by this date complete with rear yards, and therefore predate the housing reforms carried out in the 1880 s.
- 6.2.9 Only the yards of these buildings were recovered during excavation and each appears to have been fitted with an external toilet and, perhaps at a later date connected up to a sewage system. The footprint of each building and its yard suggests these houses would have been small and either one or two rooms deep. An early-twentieth century photograph shows the terraces as two-storey structures with variable height gabled roofs and a window in the centre of their south elevations on each floor. Each building had a transverse chimney-stack at the centre of its party wall.
- 6.2.10 **Late-Nineteenth Century:** by 1892, both Walker Street and Back Lane Mills are no longer mentioned on the OS map and may have gone out of business. Although the buildings still stand, their reservoirs are no longer visible and have presumably been in-filled. A large irregular north-light-style structure had been erected on the land to the north of Back Lane Mill. The reservoir associated with the mill located to the north of Prescott's Court also appears to have been built over and the finds retrieved from the fill of the later flue which served its engine house, indicate it had also fallen out of use by the later nineteenth century. It is probable that land pressure and economy of scale had either forced the smaller cotton mills out of business or to relocate onto the cheaper land on the margins of town.
- 6.2.11 The demolition of this mill appears to have been followed by the erection of a brick-built stable block to the north of the courtyard (Area 3). This building is shown on the 1892 map and based upon the surviving divisions would have provided accommodation for five horses or more, which up until the early years of the twentieth century was the principal mode of transport.
- 6.2.12 **Twentieth Century:** the stable building is still visible on the 1938 maps but changing transport needs meant that they had been replaced by 1958 by Bambers furniture store which has subsumed much of the northern and eastern portions of the development site, including the north-light shed. The building to the south is recorded as a works and probably represents the central range of buildings identified in Area 2. The terraces were demolished some time between 1958 and 1966 when Great Shaw Street was widened.

6.3 CONCLUSION

- 6.3.1 The picture that emerges from the excavated and documentary evidence is that during the medieval period, and probably after the establishment of the market, a series of burgage plots were laid out on both sides of Friargate as an extension to the developing market town. The frontages appear to have been well developed by the late seventeenth century and may have been damaged by military action during the early eighteenth. Land pressure, however, does not seem to have been intense enough to result in the development and subdivision of the rear of the plots during this period, suggesting that this area lay on the edge of the town.
- 6.3.2 The intensive development of the plots from the early-nineteenth century coincided with a period of massive expansion in Preston, stimulated in part by the pace of the industrial revolution. The land appears to have been occupied by a mixture of industrial, commercial and residential developments during the first half of the century but by the latter half, the industrial operations had been forced to relocate or close, perhaps due to the pressure on land. The land to the north was subsequently redeveloped and, in part, used for stabling up until the early-twentieth century before being incorporated into commercial premises. The southern half of the site continued to be used for residential and commercial purposes up until the mid-twentieth century before the widening of Great Shaw Street led to the demolition of the terraces that lined the southern boundary.
- 6.3.3 Archaeological deposits across the northern and eastern portions of the site have been removed by the present development, however the use of piling over the southern half of the site has preserved much of the remains associated with the yards to the rear of the early-nineteenth century terraces. Documentary sources suggest there may have been an earlier phase of buildings fronting Shaw Street to the south and across this area the potential remains for earlier archaeological deposits to survive beneath the level of the yards of the nineteenth century terraces.

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8. ILLUSTRATIONS

8.1 FIGURES

Figure 1: Site Location

Figure 2: Site Plan

Figure 3: Plan of Backyards **03-06** in Area 1

Figure 4: Plan of Lime Base **18** in Area 1

Figure 5: Plan of Rooms **31-34** in Area 2

Figure 6: Boiler House in Area 3

Figure 7: Stable yard in Area 3

Figure 8: Flues and Reservoir in Area 4

8.2 PLATES

Plate 1: Robert Cuerden's map of Preston 1684. Site lies within the top left hand corner

Plate 2: Government map showing details of the battle including the buildings on fire at the northern end of Friargate (circa 1715) (reproduced from ASDU 2013)

Plate 3: Lang's map of Preston, 1774, showing the proposed development area at the northern end of Friargate. (Reproduced from ASDU 2013)

Plate 4: The south prospect of Preston, 1728 in Hunt (1992). Note the windmill to the left, adjacent to Friargate

Plate 5: 1824 map showing the formal gardens to the rear of Friargate, (Reproduced from ASDU 2013)

Plate 6: Map of proposed development area 1836 (Reproduced from ASDU 2013)

Plate 7: Map of proposed development area in 1849 (OS) (Reproduced from ASDU 2013)

Plate 8: Shakeshaft's map of 1808 showing the proposed development area, (Reproduced from ASDU 2013)

Plate 9: OS map of 1892 showing the proposed development area, (Reproduced from ASDU 2013)

Plate 10: Aerial view of proposed development area prior to demolition of building to the rear of Friargate (Bing Maps, circa 2014)

- Plate 11: Well (**13**) after excavation, looking north-east (0.5m scale)
- Plate 12: Backyards (**03**), (**04**), (**05**) and (**06**), looking south-east
- Plate 13: Backyard (**03**), looking north-west (2 x 1m scales)
- Plate 14: Structure (**19**) to the north of backyard (**03**), looking south-west (1m scale)
- Plate 15: Backyard (**04**), looking north-west (2 x 1m scales)
- Plate 16: Backyard (**05**), looking north-west (2 x 1m scales)
- Plate 17: Backyard (**06**), looking north-west (2 x 1m scales)
- Plate 18: Possible base (**18**), looking north-west (2 x 1m scales)
- Plate 19: Room (**31**) facing east, with inspection pit to left of frame centre (2 x 1m scales)
- Plate 20: Room (**33**) showing flagstone floor and engineering bricks across the centre (2 x 1m scales)
- Plate 21: Industrial remains within Area 3, primary phase, facing west (2 x 1m scales)
- Plate 22: Pit (**25**), facing south (1 x 0.2m scale)
- Plate 23: Wall (**66**) with reused window mullion to centre. The wall appears to retain midden heap (**24**) to the east (1 x 0.5m scale)
- Plate 24: Flue (**51**), showing brick arch facing north (0.5m scale)
- Plate 25: Rectangular brick floors (**53**) to centre of frame abutting flue (**51**) to right
- Plate 26: Sunken rectangular brick floors (**53**) with base of *in situ* barrel (**55**) at the southern end (1m scale)
- Plate 27: Subcircular pit (**45**) to left of frame with pit (**43**) to centre. Brick structures (**46**) lie behind abutting flue (**29**) beyond that. Facing east
- Plate 28: Pit (**41**), facing east (1 x 0.5m scale)
- Plate 29: Boiler House, with charging platform nearest to camera. Facing east (1 x 1m scale)
- Plate 30: Western end of Boiler House showing threshold to right of frame
- Plate 31: Flue (**29**), looking west towards Boiler House with flue (**51**) to left of frame (1m scale)
- Plate 32: Stable block, facing west (2 x 1m scales)
- Plate 33: Stable block (**21**), facing west (2 x 1m scales)

Plate 34: Stable bay, with partitions defined by the lines of brick and empty post sockets (2 x 1m scales)

Plate 35: Cobbled area to north of stable block, facing east (2 x 1m scales)

Plate 36: Area 4, looking north-west (2 x 1m scales)

Plate 37: Clay-lined reservoir (**63**) facing west

Plate 38: Brick-lined flue (**56**) facing south-west

Plate 39: Southern end of flue (**56**) facing north-east, with branch flue above and flue (**57**) to top right of frame

Plate 40: Blocking between flue (**56**) and its subsidiary flue, looking south-east (0.4m scale)

Plate 41: Flue (**58**) facing south-east, with flue (**56**) running parallel below

Plate 42: Possible chimney base (**59**), with flue (**58**) connected to the right hand face as viewed, facing south

Plate 43: Drain (**64**) facing west

Plate 44: Walls (**60**) and (**61**) at the east end of Area 4, looking north (1 x 1m scale)

Plate 45: Possible threshold at southern end of wall (**61**) facing north-east

Plate 46: Brick wall (**62**) to centre of frame with manhole immediately to the right

Plate 47: Structure (**65**) facing south (1m scale)

APPENDIX 1: CONTEXT LIST

Area	Context No.	Description
1	01	Tarmac, 70mm thick
1	02	Sandy-silt/clinker, 100-300mm thick
1	03	Backyard, 6.4 x 3.5m fronting on to Great Shaw Street
1	04	Backyard, 6.28 x 4.48m fronting on to Great Shaw Street
1	05	Backyard, 5.84m x 4.22m fronting on to Great Shaw Street
1	06	Backyard, 5.82m x 4.30m fronting on to Great Shaw Street
1	07	Number issued for finds retrieved from layers (9), (10) and (11)
1	08	Concrete Surface
1	09	Dark brown/black loose sand and clinker, 150-200mm thick
1	10	Light yellowish-brown silty-sand, 100-300mm thick
1	11	Brownish-orange fine silty-sand
1	12	Mixed silts and sands, same as (17)
1	13	Well, 1.13m by 1.10m, with brick lining
-	14	Void
-	15	Void
1-4	16	Natural, fine brownish orange sand
1	17	Dump deposit
1	18	Rectangular brick mortar pit, 1.83m x 1.40m
1	19	Rectangular brick structure, 2.58 x 4.55m
3	20	Clay lined reservoir, 6m x 6.45m
3	21	Group number for stable block
3	22	Group number for cobbled road
3	23	Dark grey-black, loose clinker-sand/mix, 0.12m thick FO (25)

3	24	Midden deposit, mid-grey-brown sandy-silt
3	25	Cut of ovoid pit, 0.64m x 0.42m FW (23)
2	26	Yellow-brown to dark-brown sandy-silt
1	27	Area of pits, unexcavated
-	28	Void
3	29	Boiler House and Flue
-	30	Void
2	31	Room 5.93m by in excess of 3.46m
2	32	Room 4.48m x 3.07m
2	33	Room, 6.14m x 3m
2	34	Room 3m x 3.2m
2	35	Blackish brown, compact sand layer
2	36	Mid-brown, loose sand and rubble
2	37	Foundation cut, 0.3m wide, 1.15m + long
3	38	Dark blackish-grey firm silt/sand
3	39	Mottled dark brown/black loose sand with clinker
3	40	Orangey-yellow, decayed wood remains of barrel
3	41	Cut of sub-rectangular pit FW (40)
3	42	Light pinkish-brown soft sand FO (41)
3	43	Group number for pit, 1.3m square
3	44	Dark blackish-grey sand and ash, 0.36m thick, FO (45)
3	45	Pit, subcircular, 1.3m x 1m FW (44)
3	46	Brick structure, 1.44m x 0.43m x 0.47m
3	47	Dark blackish-brown very firm sand and silt, 0.8m thick
3	48	Light orange/mottled-brown soft sand, 0.5m thick
3	49	Reused iron bars supporting red brick capping of flue (29)
3	50	Building under concrete in west corner

3	51	Brick-lined flue, 8.27m long, 0.5m wide x 0.76m deep
3	52	Curving drains/flues, 1.45m x 0.45m x 0.24m
3	53	Rectangular brick structures typically 4.83m x 3.77m x 0.69m
3	54	Group number for finds retrieved from fill of flue (29)
3	55	Base of sunken barrel
4	56	Brick flue, 22m x 1.15m x 1.45m
4	57	Short section of brick-lined flue, 4.6m x 0.7m x 0.45m
4	58	Flue structure, 14.7m x 0.15m x 0.5m
4	59	Rectangular brick chimney base, 1.3m x 1.2m
4	60	Sandstone wall, 3.9m x 0.37m x 0.9m
4	61	Sandstone wall, 3.9m x 0.35m x 0.9m
4	62	Red brick wall, 4.88m long 0.52m wide x 0.4m
4	63	Reservoir, 9.1m x 8.5m x 0.3m
4	64	Curving drain, 5.4m x 0.4m x 0.25m
4	65	Rectangular stone structure, 4m x 1.2m + x 1.1m
4	66	Sandstone wall, 1.4m x 0.43m
4	67	Brick-lined drain

APPENDIX 2: FINDS

Cxt	OR no	Material	Category	Qty	Description	Date
us	1017	Ceramic	Tobacco pipe	1	Bowl	1640-70?
us	1018	Ceramic	Vessel	1	Not described in detail	
2	1011	Ceramic	Vessel	10	Not described in detail	
3	1023	Ceramic	Tobacco pipe	3	Stem fragments	
3	1002	Ceramic	Vessel	24	Not described in detail	
3	1004	Glass	Vessel	2	Two complete milk bottles, one small (1/3 pint), one sterilised milk, Smiths Hygienic Dairies	C20
3	1003	Iron	Mug	1	Complete enamelled mug	C19+
4	1006	Glass	Vessel	1	Dark olive green bottle, base.	LC19?
7	1000	Ceramic	Vessel	40	Not described in detail	LC18-C19
9	1001	Ceramic	Vessel	91	Not described in detail	
17	1012	Ceramic	Vessel	18	Not described in detail	
21	1022	Iron	Tool	2	pliers	C20?
23	1014	Ceramic	Tobacco pipe	80	Predominantly stems, with only two fragments of bowls. Notable for the presence of waster stem fragments and other industrial debris from pipe production.	EC19?
23	1020	Ceramic	Vessel	2	Not described in detail	
23	1019	Ind debris	?Waster?	1	Over-fired pot?	
24	1027	Bone	Animal	19		
24	1036	Bone	Animal	1		
24	1037	Bone	Animal	1		
24	1038	Bone	Animal	1		
24	1029	Ceramic	Tobacco pipe	2	One stem, one small bowl fragment	C19
24	1023	Ceramic	Vessel	900	Not described in detail	mid-C19?
24	1031	Ceramic	Vessel	80	Not described in detail	
24	1035	Ceramic	Vessel	8	Not described in detail	
24	1026	Copper alloy	Pin	1	Dress-making pin, stamped head	mid-C19?or later
24	1039	Glass	Vessel	1	Small fragment of colourless pressed flint glass dish	1830 and later
24	1028	Ind debris		2		
24	1024	Ind debris	Stilt	2		

24		Stone	Architectural	1		
28	1030	Organic	Worked wood	1		
33	1008	Copper alloy	Coin	1	Victoria, half-penny	1890
39	1015	Ceramic	Tobacco pipe	1	Bowl	1780-1820, probably after 1800
39	1013	Ceramic	Vessel	6	Not described in detail	
39	1016	Ceramic	Vessel	2	Not described in detail	
39	1009	Ind debris		1		
54	1010	Ceramic	Tobacco pipe	3	Stem fragments	
54	1005	Ceramic	Vessel	11	Not described in detail	
54	1007	Copper alloy	Vessel	1	Pocket-shaped vessel made from sheet metal. Shape is reminiscent of a mid-nineteenth-century powder flask	mid-C19?

APPENDIX 3: PROJECT DESIGN

1. INTRODUCTION

1.2 PROJECT BACKGROUND

- 1.2.1 A planning application (ref 06/2013/0131) was submitted by Portergate Developments (Preston) Ltd, for the demolition of existing shop buildings 101 to 110 Friargate, Preston, Lancashire (NGR SD 53610 29729). Following demolition, the proposals include the erection of three to four storey buildings along Friargate and attached six to seven storey buildings and detached four to five storey buildings on land to the rear. A heritage assessment, carried out in 2013 by Archaeological Services Durham University (ASDU), had identified a number of potential heritage assets fronting and behind Friargate that will be affected by the demolition and ground clearance works as part of the development.
- 1.2.2 Preston City Council have granted planning permission for the development subject to a number of conditions one of which (Condition 16) states that a programme of archaeological evaluation and building recording be carried out in accordance with written schemes of investigation (WSI) issued by ASDU (RA13.206 and RA13.207). However, following a site visit by Oxford Archaeology North (OA North), the scope of the work specified by ASDU was amended due to various site constraints and concerns with both the remaining upstanding buildings and nature of the cleared land behind the buildings. This project design, together with a separate project design outlining the building recording proposals, replace both WSIs issued by ASDU. The amended project designs must be accepted and agreed by the Planning Officer (Archaeology) from Lancashire County Council Archaeology Service (LCAS).
- 1.2.3 Following discussions between OA North and LCAS, a programme of strip, map and sample followed by possible further excavation/investigation, is required to fulfil part of the archaeological condition. This is required following a programme of building recording of 101 to 110 Friargate prior to demolition and watching brief during demolition.
- 1.2.4 The following project design has been compiled in accordance with discussions with LCAS, and to meet all the requirements and standards of the Institute for Archaeologists (IfA) and generally accepted best practice. Should significant archaeological remains be identified during the programme of strip, map and sample, it will be necessary to produce an updated project design for a programme of detailed archaeological excavation, archive processing, and post-excavation assessment, making allowance for any appropriate analysis and publication.

1.3 HISTORICAL BACKGROUND

- 1.3.1 The following background is a précis extract from the heritage assessment concerning the area proposed for archaeological investigation produced by ASDU (ASDU 2013).
- 1.3.2 In general, the proposed development appears to have been used for both domestic and commercial use since at least the medieval period with the areas below the Friargate frontage of buildings likely to contain the earliest evidence of use (ASDU 2013). The remainder of the site (the area of land behind the current upstanding buildings) was probably occupied by yards of the buildings on Friargate and, as such, would have been used for a variety of purposes. The name of Preston was recorded in Domesday Book as Prestune and is probably derived from ‘preosta tun’ or ‘priests homestead’ (*ibid*) and was founded on a low ridge to the north of the River Ribble. It had become a borough by at least 1179 and the eastern and western extents of the town were marked by ‘barrs’ or gates (*ibid*). The area covered around 40 acres (17 hectares) and would have accommodated between 150 and 170 burgage plots (*ibid*). Friargate was a medieval extension of the borough (there was a further barr at the northern end of Friargate) and there is the potential for below ground remains from this period to survive within the site boundary.

- 1.3.3 In the post-medieval and modern periods the buildings along Friargate were rebuilt, possibly due to civil war damage. Lang's map of 1774 shows a number of buildings situated where Nos. 101 to 110 now stand and formal gardens and other buildings were erected during the course of the nineteenth century, including a cotton mill on the east end of the site. By the time of Myres' map of 1836, development of the site was largely complete, with buildings taking the place of the gardens. Further, generally less extensive changes occurred through the nineteenth century.
- 1.3.4 Following World War II buildings at the rear of the site have gradually been removed leaving a brown field site covered with areas of demolition rubble and concrete. Landscaping, building and excavation of cellars and other early modern developments have largely removed earlier deposits and features and evidence of earlier use may only survive in isolated areas of the site (ASDU 2013). The surviving Friargate streetscape is typical of the appearance of this part of this part of Preston in the nineteenth and twentieth centuries.
- 1.4 OXFORD ARCHAEOLOGY NORTH**
- 1.4.1 Oxford Archaeology is an educational charity under the guidance of a board of trustees with over 35 years of experience in archaeology, and can provide a professional and cost-effective service. We are the largest employer of archaeologists in the country (we currently have more than 300 members of staff throughout three regional offices in Oxford, Cambridge and Lancaster), and can thus deploy considerable resources with extensive experience to deal with any archaeological obligations you or your clients may have.
- 1.4.2 Oxford Archaeology North has considerable experience of sites of all periods, having undertaken a great number of small and large scale projects throughout Northern England during the past three decades. Evaluations, assessments, watching briefs and excavations have taken place within the planning process, to fulfil the requirements of Clients and planning authorities, to very rigorous timetables.
- 1.4.3 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an Institute for Archaeologists (IfA) registered organisation, registration number 17, and all staff operate subject to the IfA *Code of Conduct* (2012).

2 AIMS AND OBJECTIVES

2.1 ACADEMIC AIMS

- 2.1.1 The main research aim of the investigation, given the nature of the development, will be to establish the presence or absence of buried archaeological remains on the site and, if present, compile a detailed record to mitigate their removal during the course of the development in accordance with the National Planning Policy Framework (NPPF, DCLG 2012).

2.2 OBJECTIVES

- 2.2.1 The objectives of the project may be summarised as follows:
- the main objective of the archaeological investigation is to determine the presence or absence of any buried remains of archaeological interest within the proposed development area;
 - to investigate the nature, extent and significance of the remains of any buildings known on the site from the mid-late eighteenth and nineteenth centuries;
 - to determine the presence or absence of any earlier remains (medieval possibly) within the development area;
 - to compile an archival record of any archaeological remains within the proposed development area.
- 2.2.2 To these ends, the following programme of archaeological work has been designed, in accordance with English Heritage (1991) and the Institute for Archaeologists (IfA) (2008a, b and 2012) standards and guidelines. The results will provide information as to whether more detailed works are required during the fieldwork or post-excavation stages of the project.

3 HEALTH AND SAFETY

- 3.1 **Risk Assessment:** OA North provides a Health and Safety Statement for all projects and maintains a Company Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- 3.2 **Services and other constraints:** full regard will, of course, be given to all constraints (services etc) during the investigation, as well as to all Health and Safety considerations. As a matter of course, the field team will use a Cable Avoidance Tool (CAT) and Signal Generator prior to any excavation by OA North to test for services, although during the monitoring of the slab and overburden removal by the demolition contractor it is assumed that services will have been located prior to OA North's attendance. However, this is only an approximate location tool. Any **information regarding services**, i.e. drawings or knowledge of live cables or services, within the study area and held with the client should be made known to the OA North project manager prior to the commencement of the investigation. If the client does not hold the remaining service drawings, OA North can purchase these at cost on behalf of the client, although this is likely to delay the commencement of the site work.
- 3.3 **Contamination:** any known contamination issues or any specific health and safety requirements on site should be made known to OA North by the client to ensure all procedures can be met, and that the risk is dealt with appropriately. Should any presently unknown contamination be discovered during excavation, it may be necessary to halt the works and reassess the risk assessment. Should it be necessary to supply additional PPE or other contamination avoidance equipment this will be costed as a variation.
- 3.4 **Staff issues:** all project staff will be CSCS qualified, proof of which can be provided in the form of CSCS cards.
- 3.5 A toilet and hand washing facilities is required and can be provided and positioned on or adjacent to the site, although the client may prefer to arrange alternative facilities. Therefore, the cost would be agreed as a variation.
- 3.6 **Fencing requirements:** due to the ongoing demolition works prior to OA North's attendance, it is assumed that hoarding or security fencing will have been erected around the whole proposed construction site. However, once the archaeological investigation is underway, this will not only require protection from public access, but also separation (to be provided by the client) from other construction groundworks taking place on the northern part of the site. Any other requirements for fencing at the client's request may be charged as a variation should it be necessary that OA North arrange supply.
- 3.7 **Insurance:** OA North has professional indemnity to a value of £5,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.

4 METHOD STATEMENT

4.1 INTRODUCTION

- 4.1.1 The following methodology is to archaeologically supervise the stripping of ground slabs and modern overburden deposits down to the underlying natural or archaeological deposits, whichever is encountered first, to survey-in any archaeological features and deposits revealed, and then sample-excavate a proportion of these deposits so that their nature, quality, extent

and importance can be established, and an appropriate programme of detailed investigation devised. The area is shown on Figure A. This methodology will provide a flexible, iterative approach, to allow the implementation of an appropriate strategy for dealing with the remains. The strip and map investigations will be undertaken in two stages:

- 4.1.2 **Stage 1:** comprises the removal of the overlying overburden material to expose the first archaeological horizon under archaeological supervision using a mechanical excavator fitted with a toothless bucket. This is designed to expose the character and nature of the archaeological remains, and assess their potential research value. It will not be necessary for this exercise to include groundworks continuing below the surface of the underlying natural geology once this has been demonstrated to be barren of archaeological remains.
- 4.1.3 This stage will be carried out following demolition of the building frontage along Friargate (Nos. 101 to 110, Figure A), which will have been subject to prior building recording, as outlined in a separate project design. Potentially, a number of cellars may be present below some or all of Nos. 101 to 110 Friargate. Immediately following demolition of the buildings, any cellars/earlier building foundations present will be recorded according to the Stage 1 methodology with a view to further investigation during Stage 2 if required.
- 4.1.4 All archaeological features thus exposed will be sufficiently cleaned to allow a pre-excavation plan to be produced. This will be used in consultation with LCAS to agree a strategy for the next stage; Stage 2, which comprises the sample excavation and recording of any archaeology revealed in the Stage 1. The sample will be appropriate and proportional to the importance, quantity and complexity of the archaeology exposed, as well as its perceived research value.
- 4.1.5 The primary aims of Stage 1 will be:
- to expose archaeological remains across the site both below and to the rear of the buildings fronting onto Friargate, by the mechanical removal of topsoil and any masking subsoil;
 - to create a pre-excavation plan of exposed deposits;
 - to collect datable/activity specific material from the surface of exposed deposits;
 - to confirm the priorities for and level of further archaeological investigation.
- 4.1.6 **Stage 2:** further archaeological investigations will be designed to recover data sufficient to allow for “preservation by record” as a form of mitigation, and establish the extent, date, character and significance of the archaeological remains. The primary aims will be:
- to characterise the overall nature of the archaeological resource and to understand the process of its formation;
 - to create a detailed plan of all archaeological features;
 - to establish the character of those features in terms of cuts, soil matrices and interfaces;
 - to recover, where appropriate, across the archaeological site representative ecofactual and palaeoenvironmental samples to provide evidence of function and past landuse;
 - to establish in outline a dated sequence of structures and/or deposits and thus to define changes in site organisation over time.

4.2 STRIPPING (STAGE 1)

- 4.2.1 This will be undertaken by a team of two archaeologists per mechanical excavator: one to machine watch and one to clean and plan. The length of time on site will be dictated by the demolition contractor's schedule.
- 4.2.2 During the investigation, a mechanical 360 excavator or equivalent, fitted with a toothless ditching bucket will be required (to be provided by the client) to remove the overburden under archaeological supervision over the area shown on Figure A; no intrusive machine work will be carried out in the absence of an archaeologist. The top/subsoil will be stripped in a systematic and logical manner, to ensure that where practicable the excavator does not rut, compact or otherwise damage buried or exposed archaeological features and deposits by crossing previously stripped areas. Areas of concrete are present on site, therefore a pecker must be available if required.
- 4.2.3 Stripping will proceed in successive spits until the uppermost horizons of significant archaeological remains have been revealed or, where these are absent, the natural substrate. All machine stripping will be carried out at a speed which will leave a good standard of finished surface, i.e. a smooth, even and clean surface, with a minimum of smearing, polishing and rutting. The stripped areas, including the edges if necessary, will be cleaned sufficiently to enhance the definition of features. The surface of the exposed natural deposits will be inspected for archaeological finds. Mechanically-excavated spoil will be monitored in order to recover artefacts that will assist in meeting the aims of the project, before being removed to a designated storage area (see 4.2.5, below).
- 4.2.4 If appropriate, further machine excavation will be carried out after hand- excavation and recording of deposits has been completed. Such techniques are only appropriate for the removal of homogenous low-grade deposits, which may give a "window" into underlying levels; or for characterising features where there is no danger of removing important stratigraphic relationships and sufficient stratigraphy will remain to allow the excavation of hand-excavated samples.
- 4.2.5 It is assumed that the topsoil/modern overburden and any subsoil will need to be kept separate, therefore a significant proportion of the site, if not all, will be stripped of topsoil/modern overburden before subsoil is removed. Spoil will be tamped down by the mechanical excavator.
- 4.2.6 **Significant archaeological discoveries:** during supervision of the machining, should archaeological remains be identified, the archaeologist will stop the machine so that they can examine what has been revealed. In the very rare event that the findings are extremely fragile, the archaeologist may cease excavation within that part of the site. The archaeological features or deposits will be demarcated with netlon fencing or candy tape. LCAS will be informed of the discovery of the features, and will be kept abreast of the results of subsequent exploratory investigations. Ordinarily, the archaeologist will utilise the machine to strip the soil from around the feature of archaeological interest, gradually expanding this area until the limits of the archaeological find are defined.

4.3 MAPPING (STAGE 1)

- 4.3.1 The stripping team will pay close attention to achieving a clean-stripped surface, using the mechanical plant under close archaeological supervision, to reduce the need for extensive hand-cleaning, which uses either hoes, shovel scraping, and/or trowels depending on the soil conditions. Limited areas may still require hand-cleaning, to clarify complex feature intersections. The principal aim of the initial work will be to produce a plan of the revealed features that can be used to define and quantify the second stage of formal and detailed excavation. Plans will be maintained as stripping progresses and features will be defined on the ground by a process of scoring around the feature, or other such methods. A general site plan will be produced at an appropriate scale to map the exposed features. The plan will be

presented to LCAS and the level of Stage 2 works agreed. This consultation normally causes a short delay in the progress of the fieldwork.

- 4.3.2 It should be borne in mind that over the course of several days, archaeological features can ‘weather-out’ and become visible as the minerals within their fills oxidise (i.e. rust) upon exposure to the air. This means that features such as ditches and pits may only be visible after several days. For these reasons, it may be some days before an archaeologist is able to sign-off seemingly archaeologically blank areas of the site.
- 4.3.3 The area will be planned digitally by experienced surveyors utilising GPS to record the sites according to Ordnance Survey (OS) coordinates. A Leica 1200 Series GPS will be employed that uses real-time (RTK) corrections using mobile SmartNet technology to achieve an accuracy of $\pm 0.01\text{m}$. The accuracy of the OA North GPS system provides for a quick and effective means of recording the position and extent of sites. The digital survey data will be transferred, via Leica Geo Office (V.4), as shp files into a CAD system (AutoCAD Map 2004), and superimposed onto the embedded digital OS data. Should coverage prevent the use of GPS, a EDM Total Station will be used, based on a site grid related to the national grid obtained from client base mapping.

4.4 SAMPLE EXCAVATION (STAGE 2)

- 4.4.1 This stage would follow a consultation period with LCAS. The number of archaeologists on site may increase, depending on the complexity of features requiring excavation. The research value of the archaeology and the necessity to achieve “preservation by record” in advance of the development will inform the second stage excavation sampling strategies. The exact sampling levels will be determined by the nature of the remains uncovered.
- 4.4.2 Any archaeological deposits will be excavated to the extent that they are sufficiently characterised and understood, this will involve excavating a representative range of elements, such as postholes, ditches etc. Some sufficiently important features, e.g. hearths or burials, require 100% samples.
- 4.4.3 A selection of the features will be sample-excavated in order to ascertain depths, state of preservation, complexity, function, date and significance. All such investigation of intact archaeological deposits will be exclusively manual. Selected discrete features, such as pits and postholes, would be subject to 50% examination (i.e. half-sectioned), linear features will be subject to a 25% sample where the fill is found to be non-uniform, and 10% where the fill is uniform, and extensive layers will, where possible, be sampled by partial rather than complete removal. It is hoped that in terms of the vertical stratigraphy, maximum information retrieval will be achieved through the examination of sections of cut features. All excavation will be undertaken with a view to avoiding damage to any archaeological features, which appear worthy of preservation *in situ*.
- 4.4.4 For other features, such as working hollows, quarry pits, etc, all relationships will be ascertained. Further investigation will be a matter of on-site judgement, but should seek to define their extent, date and function. If features/deposits are revealed which need to be removed and which are suitable for machine excavation, such as large-scale dump deposits, rubble infill of cellars, large areas of cultivation soil, or substantial linear cut features, then they would be sample-excavated to confirm their homogeneity before being removed by machine. Large post-medieval deposits/features will be fully recorded, such as cobbled or flagged surfaces, and machine-removed.
- 4.4.5 Cut features identified against the edges of the excavation will not be excavated below a safe working limit unless it is confirmed by LCAS that they are of exceptional importance.
- 4.4.6 Should any particularly deep-cut feature, such as a well pit, be revealed this will be manually excavated to a safe working limit. Thereafter, if LCAS wishes to see the further excavation of

any such feature, this could be achieved by reducing the general area of the feature (i.e. a 1m 'cordon') using a machine to allow further safe manual excavation.

- 4.4.7 **Significant Archaeological findings:** should, following the exploratory investigation of the features, it be found that the archaeological remains are highly significant, it is likely that LCAS would recommend a more formal process of excavation and a revision to the present 'sampling' project design, more accurately reflecting the nature of the discovery, and the attendant academic aims and objectives, both in terms of the fieldwork requirements, and of the post-excavation programme, which may include detailed analysis and publication. All such works would be submitted to the client as a resource variation to the present scope of works.
- 4.4.8 **Recording Strategy:** all information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by Centre for Archaeology Service of English Heritage, and in accordance with IfA standards (2008b), with sufficient pictorial record (plans, sections, and photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times. Results, comprising a full description and preliminary classification of features or materials revealed, will be recorded on *pro-forma* context sheets, and will be accompanied with sufficient pictorial record to identify and illustrate individual features. Sections will be generated and features will be planned accurately at appropriate scales. An indexed photographic record, utilising digital imaging (subject to LCAS data capture and storage requirements), will be undertaken simultaneously and all frames will include a visible, graduated metric scale. The site archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20 and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current IfA guidelines (2008a)) in order to minimise deterioration.
- 4.4.9 **Treatment of finds:** all finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines, likely to be the Museum of Lancashire. All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator.
- 4.4.10 **Treasure:** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.
- 4.4.11 **Human Remains:** any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. LCAS and the local Coroner will be informed immediately. If removal is essential, the exhumation of any funerary remains will require the provision of a Ministry of Justice licence, under section 25 of the Burial Act of 1857. It is likely that the discovery of human remains will necessitate a revision to this project design and to the present agreed resources. The removal of human remains will be carried out with due care and sensitivity under the environmental health regulations.
- 4.4.12 **Environmental sampling for plants, faunal remains, technological remains and artefacts:** the recovery of adequate samples of environmental material can provide useful information for an understanding of processes acting upon the site and for placing the site within a wider ecological context. Bulk sediment samples of c 40 litres will be collected from any suitable (undisturbed, uncontaminated and of non-modern origin) deposits or features of demonstrable anthropological origin for the recovery of plant and faunal remains.
- 4.4.13 **Samples for absolute dating:** should deposits, or material within deposits, suitable for radiocarbon assay be encountered, samples will be taken wherever possible. These would

include well-stratified artefacts and ecofacts, but also suitable material collected from environmental samples through flotation and, in the case of ceramics, from any bulk sieving, wet-sieving and hand-collection.

- 4.4.14 **Contingency plan:** in the event of significant archaeological features being encountered, discussions will take place with the Planning Archaeologist or his representative, as to the extent of further works to be carried out. All further works would be subject to a variation to this project design. In the event of environmental/organic deposits being present on site, it would be necessary to discuss and agree a programme of palaeoenvironmental sampling and or dating with the Planning Archaeologist.

4.5 REPORT

- 4.5.1 Unless there is a requirement for more detailed excavation and subsequent programme of post-excavation work, which is beyond the scope of this project design, a digital copy of a report will be submitted to the client within approximately eight weeks of the completion of the fieldwork, depending on any outstanding specialist reports (should any hardcopies be required, these can be requested). One digital copy will be forwarded as a pdf to LCAS for reference purposes. The report will include:

- a site location plan related to the national grid;
- a front cover to include the planning application number and the NGR;
- a concise, non-technical summary of the results;
- the dates on which each phase of the programme of work was undertaken;
- an explanation to any agreed variations to the brief, including any justification for any analyses not undertaken;
- a description of the methodology employed, work undertaken and results obtained;
- plans and sections at an appropriate scale showing the location and position of deposits and finds located;
- photographs as appropriate;
- a list of and dates for any finds recovered and a description and interpretation of the deposits identified;
- a description of any the results obtained;
- a summary of the impact of the development on any archaeological remains and, where possible, a model of potential archaeological deposits within as-yet unexplored environmental or other specialist work undertaken and areas of the development site;
- a copy of this project design, and indications of any agreed departure from that design;
- the report will also include a complete bibliography of sources from which data has been derived;
- a summary of the archive.

- 4.5.2 This report will be in the same basic format as this project design; a copy of the report can be provided on CD, if required. Recommendations concerning any subsequent mitigation

strategies and/or further archaeological work following the results of the field evaluation will be provided in a separate communication.

- 4.5.3 **Confidentiality:** all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

4.6 ARCHIVE

- 4.6.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (1991). The project archive will include summary processing and analysis of all features, finds, which will be catalogued by context.
- 4.6.2 The deposition of a properly ordered and indexed project archive in an appropriate repository is essential and archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Lancashire HER, Preston (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects with the appropriate Record Office (in this instance, that at Preston).
- 4.6.3 All artefacts will be processed to MAP2 standards and will be assessed by our in-house finds specialists. The deposition and disposal of any artefacts recovered in the evaluation will be agreed with the legal owner and an appropriate recipient museum. Discussion regarding the museum's requirement for the transfer and storage of finds will be conducted prior to the commencement of the project, and LCAS will be notified of the arrangements made.
- 4.6.4 **OASIS:** an OASIS form will be completed as part of the works.

5 WORK TIMETABLE

5.1 STAGE 1

- 5.1.1 **Strip and map fieldwork:** the duration of the first phase of site work will be dictated by the schedule of the on-site demolition contractor. This will however, take place following demolition of Nos. 101 to 110 Friargate.
- 5.1.2 **Consultation:** following the strip and map fieldwork, approximately one week will be required to a) draw up the digital plan of the archaeological features, which will be used during b) consultation with LCAS as to the second phase of site work, recording the necessary features. The requirement for monitoring meetings will be established with the Client and the archaeological curator at the outset of the project. Monitoring of the project will be undertaken by LCAS, who will be afforded access to the site at all times.

5.2 STAGE 2

- 5.2.1 **Sample excavation and recording of features:** the time required to investigate any archaeological features is not possible to predict presently, given that the quantity and nature of any below ground remains is not currently known.
- 5.2.2 **Reinstatement:** it is assumed that reinstatement of the area covered of archaeological fieldwork will not be required given the ongoing construction works.

5.2.3 Report and archive: approximately eight weeks will be required for the compilation of the report and archive following the completion of the fieldwork, unless more detailed excavation has been undertaken and a more formal post-excavation process is required. In which case a programme of post-excavation will be necessary. An interim statement on any salient results can be produced sooner, if required. The archive will be submitted within approximately six months.

5.2.4 Lead-in time and mobilisation: OA North can execute projects at very short notice once an agreement has been signed with the Client.

6 STAFFING PROPOSALS

6.1 OA NORTH STAFF

6.1.1 The project will be under the overall charge of **Dr Alan Lupton BA (Hons) MA MIFA** (OA North Operations Manager) to whom all correspondence should be addressed. The fieldwork will be undertaken under the direction of an OA North project officer who will be a highly experienced field archaeologist, used to working within on-site plant, and capable of running sites of all sizes. Due to scheduling requirements it is not possible to provide these details at the present time. All OA North field staff hold CSCS cards and the vast majority are qualified to degree and often, to post-graduate level.

6.1.2 Health and Safety advice will be provided by **Caroline Raynor** (OA North Project Officer), and **Dan Poore** (OA South Senior Project Manager).

6.1.3 Assessment of any finds from the excavation will be undertaken by OA North's in-house finds specialist **Christine Howard-Davis** (OA North Finds Manager). Christine has extensive knowledge of all finds of all periods from archaeological sites in northern England, and is a recognised expert in the study of post-medieval artefacts.

6.1.4 Any palaeoenvironmental assessment will be carried out under the auspices of OA North's palaeoenvironmental manager, **Elizabeth Huckerby MSc**. Elizabeth has extensive knowledge of the North West through her work on the English Heritage-funded North West Wetlands Survey.

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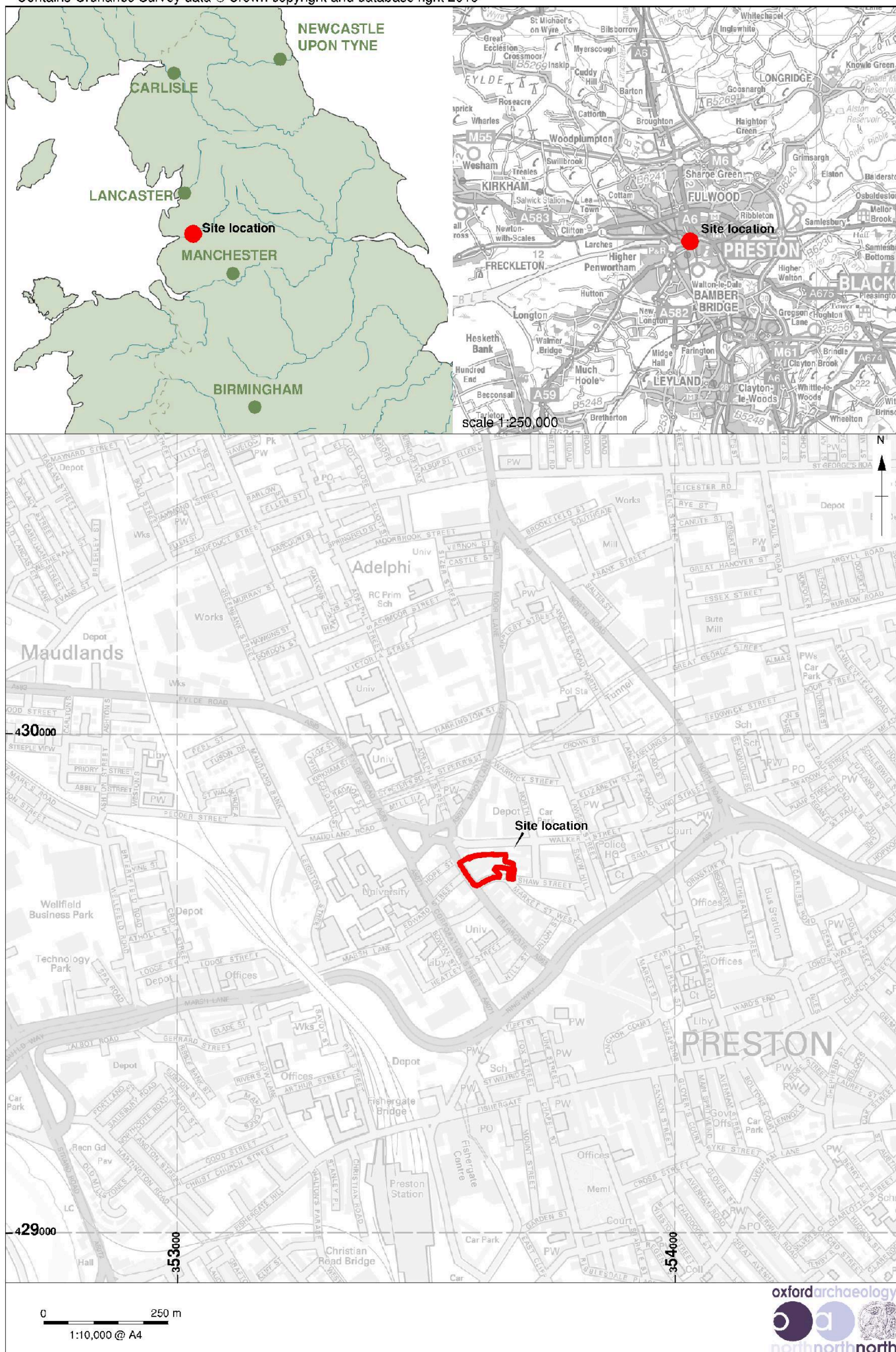


Figure 1: Site location

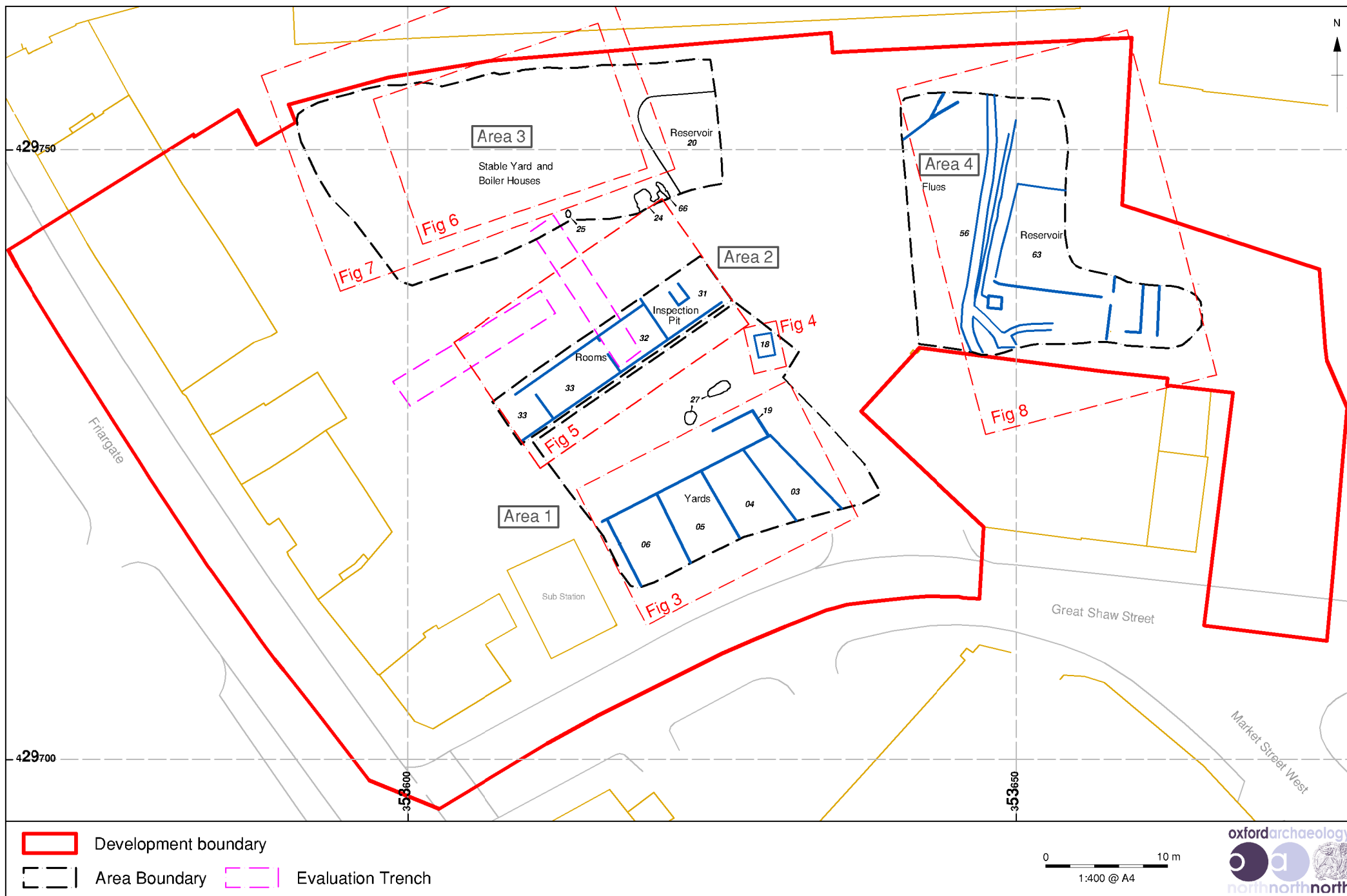


Figure 2: Site plan



Figure 3: Plan of Backyards **03-06** in Area 1



0 0.5 m
1:15 @ A4

Figure 4: Plan of Lime Base **18** in Area 1



Figure 5: Plan of Rooms **31-34** in Area 2



Figure 6: Boiler House in Area 3



0 2.5 m
1:75 @ A4

Figure 7: Stable yard in Area 3



Figure 8: Flues and Reservoir in Area 4