



PROPOSED BRUNSWICK PFI REGENERATION SCHEME, MANCHESTER

Archaeological Evaluation and Watching Brief



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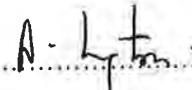
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CONTENTS

PLATES.....	2
SUMMARY	3
ACKNOWLEDGEMENTS.....	4
1. INTRODUCTION	5
1.1 Circumstances of the Project	5
1.2 Site Location, Topography and Geology	5
1.3 Historical and Archaeological Background	6
2. METHODOLOGY.....	10
2.1 Written Scheme of Investigation	10
2.2 Watching Brief.....	10
2.3 Trial Trenching	10
2.4 Archive.....	11
3. RESULTS.....	12
3.1 Watching Brief.....	12
3.2 Trial Trench Evaluation	16
4. CONCLUSION.....	27
4.1 Discussion	27
5. BIBLIOGRAPHY	29
5.1 Primary Sources	29
5.2 Secondary Sources	29
APPENDIX 1: WRITTEN SCHEME OF INVESTIGATION	30
APPENDIX 2: CONTEXT LIST	31
FIGURES.....	33

PLATES

Plate		Page
1	General vies of the development site prior to excavation, showing the landscaped and tarmac area. Viewed facing east	6
2	South-east view of the stripped area for the watching brief	12
3	Drainage Trench 1, showing grave cuts 2009 , 2010 and 2011 , facing south-east	13
4	Drainage Trench 3 facing north-east	13
5	East-facing view of Drainage Trench 7, with grave cuts 2017 , 2018 , and 2019	14
6	South-west view of the manhole, showing grave cuts 2004 and 2005	15
7	Soakaway Trench showing probable intercutting graves, facing south-west	15
8	General view of Trench 1. Viewed facing west	16
9	Sandstone foundation deposit 117 at the base of wall 112 , within the sondag excavated through deposit 113 . Viewed facing north	17
10	Walls 109 and 111 within construction cut 108 with backfill 110 . Viewed facing north	18
11	Pit feature 106 . Viewed facing north	19
12	Wall 105 . Viewed facing north	19
13	Walls 102 and 103 within construction cut 101 with backfill deposit 104 . Viewed facing north	20
14	General shot of Trench 2. Viewed facing east	21
15	Wall 203 . Viewed facing north	21
16	Walls 204 and 205 within construction cut 206 with backfill deposit 207 . Viewed facing north	22
17	Wall 208 within construction cut 209 with backfill deposit 210 . Viewed facing north	23
18	Walls 211 and 212 within construction cut 213 with backfill deposit 214 . Viewed facing north	23
19	The north/south aligned section of Trench 3, featuring walls 304 and 305 (centre left), structures 305 , 306 and 307 (centre right) and backfill deposit 302 (bottom right). Viewed facing south	24
20	Walls 309 and 310 within construction cut 311 with backfill deposit 312 . Viewed facing north	25
21	Linear cut 313 containing fill 314 and truncating wall 310 . Viewed facing south-west	26
22	Wall 315 . Viewed facing north	26

SUMMARY

In May 2014, Oxford Archaeology (OA) North was commissioned by URS (now AECOM) to undertake a programme of archaeological works in association with the Brunswick PFI Regeneration Scheme, central Manchester. The works comprised a watching brief during groundworks associated with the construction of a new sports court at Gartside Gardens (SJ 84788 97074), and a trial-trench evaluation at the junction of Grosvenor Street and Lockton Close/Wadson Road (SJ 848 973).

Gartside Gardens was established in 1954, prior to which the area had been occupied by the former Rusholme Road Cemetery, a non-Conformist burial ground that opened in 1821. The principal aim of the watching brief, which was undertaken in May and June 2014, was to identify the presence of burials within the footprint of a new sports court. A series of eleven drainage trenches, a manhole, and a soakaway pit were excavated under archaeological observation during this phase of works. All of the excavations encountered deposits of made ground, either extending to the full depth of the groundworks, occasionally sealing archaeological remains, and only rarely reaching deposits that were certain to be natural in origin. Evidence of graves cutting the natural geology and likely to contain *in-situ* burials, was identified at depths of *c* 1.2-1.95m below ground level in several drainage trenches, along with the manhole and the soakaway.

The evaluation was undertaken in June 2015 on a site formerly occupied by a Wesleyan Methodist Chapel, built *c* 1820. Documentary evidence indicates that the congregation was disbanded prior to 1924, after which the building was used as commercial and industrial premises, until it was heavily damaged by fire and subsequently demolished during the latter part of the 1970s.

The objective of the evaluation trenching was to identify the presence and state of preservation of any remains relating to the chapel, and of any other archaeological deposits or features. In this regard, the scheme was entirely successful, identifying structural remains probably relating to the foundations of the chapel building in all three of the trenches investigated. However, the remains were extremely truncated, comprising numerous internal and external walls, each with no more than four or five courses surviving. No other archaeological deposits or features were encountered that might be indicative of activity prior to the foundation of the chapel.

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Oxford Archaeology North (OA North) would like to thank Nick Finch of URS (now AECOM) for commissioning the project, and Helen Howard of Galliford Try for her help and support on site during the watching brief. OA North is also grateful to Norman Redhead, the Greater Manchester Archaeologist for his advice during the project

The watching brief was undertaken and written up by Vickie Jamieson, with the evaluation directed and presented by Dr Adam Tinsley, assisted by Amy Revans. The Report was illustrated by Mark Tidmarsh and edited by Stephen Rowland, who also managed the project.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 As part of the Brunswick PFI Regeneration Scheme, Oxford Archaeology North (OA North) was commissioned by URS (now AECOM), on behalf of Galliford Try, to undertake an archaeological watching brief and a trial-trench evaluation in the general area of Brunswick, Manchester (centred SJ 848 973; Fig 1). The works were undertaken in accordance with a Written Scheme of Investigation (WSI) compiled by AECOM/URS, in consultation with Norman Redhead of Great Manchester Archaeological Unit (AECOM/URS 2013c: *Appendix 1*).
- 1.1.2 The watching brief was undertaken in May and June 2014 during groundworks for a new sports pitch within the south-west quadrant of Gartside Gardens (centred on SJ 84788 97074; Fig 1). Gartside Gardens encompasses the area of the former Rusholme Road Cemetery, although twentieth-century changes to the urban landscape mean that the exact extents of that Non-Conformist burial ground have been hard to establish on the basis of historic map regression alone (URS 2013a). A ground-penetrating radar (GPR) survey was undertaken by URS in 2013. The results were interpreted as showing the presence of graves across the majority of the site, and that in places, the upper strata of the graves had been disturbed/remediated in the past (URS 2013b). In order to elucidate the situation, OA North carried out a programme of evaluation in 2013 that recorded the location of human remains in various locations across the site (OA North 2013). Consequently, further works conducted on site associated with the construction of the new sports court required an archaeological watching brief.
- 1.1.3 The northern part of the Brunswick PFI Regeneration Scheme encompasses a small plot of land towards the eastern end of Grosvenor Street and which was formerly occupied by a Wesleyan Methodist Chapel established in 1820. Three trial trenches were excavated in June 2015 order to assess the survival of the building, as well as the potential for other archaeological remains.

1.2 SITE LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The district of Brunswick lies within central Manchester, just to the south-east of the historic city core. It encompasses a flat area of land occupied primarily by residential housing and hi-rise flats serviced by several schools, as well as limited park space, including the site of Gartside Gardens. In addition, limited commercial and industrial premises are scattered throughout the estate while buildings associated with the University of Manchester occur in the vicinity of Oxford Road. The general area roughly extends south-east from the A635(M) and is further bracketed by the A57 to the north and north-east, and Upper Brook Street and Plymouth Grove to the south and south-west.
- 1.2.2 Gartside Gardens occupies a flat, roughly rectangular area of *c* 2 ha bounded by Kincardine Road to the west, and on its other sides by residential

developments. The modern land use comprises areas of maintained grass separated by rows of trees, and several concrete-surfaced sports pitches.

- 1.2.3 The site formerly occupied by the Grosvenor Street Chapel comprises a small plot of land located towards the north-east of the development area and the eastern end of Grosvenor Street, at its junction with Lockton Close and Wadeson Road. At the time of the works, the site was an unevenly landscaped space with small lawns and established tree borders, crossed by several short footpaths. At its centre was a small area with a tarmac surface, formerly used as a playground, but no longer in possession of the playground fixtures and fittings (Plate 1).



Plate 1. General view of the development site prior to excavation, showing the landscaped and tarmacked area. Viewed facing east

- 1.2.4 The solid geology of the site consists of Sherwood Sandstone and Collyhurst Sandstone, which is overlain by Quaternary glacial till and alluvial deposits (URS 2013c; BGS 2015). The natural drift geology is characterised as slowly permeable, seasonally wet, acid loamy and clayey soils (Cranfield 2015).

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 1.3.1 Gartside Gardens has been the subject of a programme of documentary research that has focused on the history of the Rusholme Road Cemetery (URS 2013a). It is not the intention of the following sections to reiterate the data presented in the URS report.
- 1.3.2 Little is documented relating to potential prehistoric activity within the wider development area, with only a single find of a stone axe recorded within the study area (URS 2013c). Evidence for Roman activity relates to the establishment of the Roman fort in AD 79 at Castlefield, some 1.5km to the

west of the development area, and the subsequent development of the associated *vicus* of *Mamucium*. The fort was established at the crossroads of a number of known Roman roads, one or more of which are thought to have passed through the area, one running along the route of the modern A57, Hyde Road, to the north. While no known finds of Roman date have been identified within the development area, the presence of the fort and associated road system, highlight the potential to encounter remains relating to this period.

- 1.3.3 No heritage assets relating to the early medieval period have been identified within the development area (URS 2013c), although the settlement of Manchester was recorded in the Domesday survey of 1086. However, the primary focus of activity within the area appears to have shifted away from the fort and *vicus*, with Manchester recorded within the hundred of Salford, which appears as a much larger and more prominent settlement, both occurring within the lands given to Roger of Poitou. In addition, the area of Chorlton on Medlock, which includes the current development area, is referred to in documents from 1177 as Cherleton in the Pipe Rolls, the name deriving from Old English and the Scandinavian word *ceorl*, meaning a freeman of the lowest rank, together with the 'tun' suffix, possibly indicating an area of dispersed settlement primarily populated by peasants.
- 1.3.4 While the settlement of Manchester remained relatively small during the medieval to post-medieval period, the town was granted a market charter in 1301 and, during the fourteenth century, attracted the settlement of Flemish weavers, the establishment of which laid the foundations for the proliferation of the cloth industry during the industrial revolution of the eighteenth and nineteenth centuries (URS 2013c). The settlement of Chorlton on Medlock also began to expand during this period, driven by the establishment of Chorlton Hall, located within and to the north of the development area, and the subsequent development of its estates, particularly by Roger Aytoun during the eighteenth century. The site of the hall is now demolished. In addition, the area of Ardwick Green also witnessed development during the period, with a number of large, well-spaced residential premises established around a central green by the eighteenth century.
- 1.3.5 The rapid industrialisation of the centre of Manchester during the early modern period, and the proliferation of associated low-grade worker housing, lead to a rapid expansion into and urbanisation of surrounding areas. Ardwick Green offered a focus for the development of middle- and upper-class housing, whilst by contrast the estates of Chorlton Hall were sold off to provide land for a rapid expansion of terrace housing and industrial sites, which continued to develop away from the city centre during the late eighteenth century and into the nineteenth century. During this period, in 1820, the Wesleyan Methodist Chapel was established on Grosvenor Street. This building reportedly was built entirely of brick and incorporated ornamental battlemented parapets, stone pinnacles and four-centred arched windows (URS 2013c). It continued to be used as a chapel until the disbanding of the Methodist society sometime before 1924, after which it was turned over to commercial and industrial use and was structurally modified, with the removal of the western transept, to accommodate an extension to adjacent engineering works.

- 1.3.6 The Rusholme Road Cemetery was a commercial venture by a group of prominent Non-Conformist families, and represents the country's first private burial ground. Recognising the desire for dissenting groups to bury their members outside the auspices of the Anglican Church, the group used the funds from the sale of 600 shares to purchase a plot of land at Cock Meadow. The cemetery opened in 1821, with plots sold at varying rates to those who could afford the subscription fees, irrespective of their denomination. The cemetery hosted some 9000 plots, and, with records of 78-80,000 interments, many of these plots must have seen extensive, multiple usage (URS 2013a).
- 1.3.7 The majority of historic records which make reference to the site of Rusholme Road Cemetery all suggest that the burial records for the site were meticulous and, as such, were frequently used by members of the medical profession for statistical analysis of mortality rates within inner-city areas (such studies having become increasingly common from the 1860's onwards following the establishment of Health Inspectors in Britain's larger cities). For example, such was the clarity of the cemetery records that Pickstone notes "*Between April 1821 and April 1825 at Rusholme Road Cemetery, there were 3670 burials, of which 299 were caused by measles, eight by Scarlet Fever, 150 by Chin-cough and forty-one by croup...*" (Pickstone 1989, 55).
- 1.3.8 Similarly, in his popular history of Manchester, B. Love wrote of Rusholme Road Cemetery that "*Interments to the present time amounts to upwards of 29,000 and the Registry of all essential particulars connected with each is kept with greatest distinctiveness and care.*" (Love 1839, 179). As Love was writing a mere eighteen years after the cemetery opened, it is clear that the cemetery was immediately a success, with an average of 1611 people per year being interred there.
- 1.3.9 By 1854 the cemetery was nearing capacity and, after that date, further interments were subject to various restrictions. By 1863, there were reports that burials were being made as little as 2 feet below ground level in private graves, and a mere 12 inches in public graves. Although small-scale burial activity continued until the cemetery was closed to new burials in 1933, it must be presumed that these were made in family graves with available space (URS 2013a; 2013c).
- 1.3.10 The site became a public park in 1954, and there are documents permitting the gravestones to be removed and the site to be levelled as part of that process (*ibid*). However, it seems that the cemetery may have been encroached upon at an earlier date. Although a lodge and mortuary chapel on Rusholme Road would appear to be part of the original configuration of the northern end of the cemetery, by 1891 several buildings within a defined compound had been added to the burial ground's former north-west corner (Ordnance Survey (OS) 1891). The same source indicates that a substantial tranche of the cemetery's eastern side had been converted to some form of a yard (initially owned by the Corporation and latterly by Pickfords, and hence referred to thus), with a small structure and a crane.
- 1.3.11 Archaeological works undertaken in the area primarily relate to the current scheme of redevelopment, and include a watching brief maintained at several locations due to the possibility of encountering features relating to the residential development of the area during the early modern period and the

possibility of burials associated with the establishment of the Rusholme Cemetery during the same period. A GPR survey was undertaken within Gartside Gardens in 2013, with the results broadly interpreted as showing the presence of *in-situ* burials across large areas of the gardens, albeit that some areas were considered to have been cleared of burials, either completely, or to particular depths. A subsequent archaeological evaluation (OA North 2013) confirmed that *in-situ* burials were still present at various locations across the site, but also identified a number of structural features associated with known buildings relating to the early modern period.

2. METHODOLOGY

2.1 WRITTEN SCHEME OF INVESTIGATION

2.1.1 The URS WSI (2013c), which was approved by the Greater Manchester Archaeologist, was adhered to as fully as possible throughout the programme of investigation. In addition, all work was carried out in accordance with industry guidelines and codes of best practice (ie CifA 2014a; 2014b; EH 1991; 2006).

2.2 WATCHING BRIEF

2.2.1 A permanent archaeological presence was maintained at all times during the groundworks, which were carried out using a 360° mechanical excavator with a toothless bucket. The purpose of the watching brief was to identify, investigate and record any archaeological remains encountered. The groundworks consisted of the excavation of 11 drainage trenches (of varying lengths and depths, but all of a width of 0.4m; Fig 2), along with the excavation of a manhole (1.8m by 1.5m with a depth of 1.9m) and a soakaway pit (5.5m by 1.4m with a depth of 1.95m).

2.2.2 A daily record of the nature, extent, and depths of the groundworks was maintained throughout the duration of the project. All archaeological contexts were recorded on OA North's *pro-forma* sheets, using a system based on that of the English Heritage former Centre for Archaeology. A digital photographic record was maintained throughout.

2.3 TRIAL TRENCHING

2.3.1 **Trench configuration:** in all, three trial trenches were excavated during the programme (Fig 3). Each trench measured approximately 20m x 2m and was positioned within the available space, as dictated by the proximity of, and need to avoid, surrounding tree canopies, as well as obvious areas where made ground had been formed into substantial raised mounds. Their position also attempted to maximise the area of the site sampled during the works, while providing adequate space for the safe excavation of the trenches and bunding of spoil arising from the works. Trench 1, therefore, extended east/west along the northern limit of the tarmac central area, between substantial landscaped mounds topped by several trees at both end, and immediately south of a line of substantial trees established along the northern edge of the site. Trench 2 was established through the centre of the tarmac area, approximately 5m to the south and parallel with Trench 1. Trench 3 extended in an L-shaped configuration, with half the trench extending north/south, appended to the western end of the second half, aligned east/west, this length located approximately 5m south and parallel with Trench 2. The L-shaped configuration of Trench 3 allowed for a bund to be established at its eastern end and avoided needlessly excavating the trench through a substantial landscaped mound, located to its west, and interfering with a large tree canopy, located to its south.

- 2.3.2 **Methodology:** the fieldwork methodology adhered to that presented in the WSI (URS 2013c) and was undertaken following standard OA North systems and in close liaison with the AECOM and Galliford Try on-site representatives. All trenches were opened using a hydraulically powered, mechanical excavator, fitted with a toothless ditching bucket and operating under the direct supervision of an experienced archaeologist. Where possible, overburden was removed in controlled spits, no more than 0.2m thick, down to the first archaeological horizon or natural layers. A single sondage was excavated using the machine within Trench 1, in order to test the nature of deposits encountered within one part of the trench. All other excavations were undertaken by hand after this point, but largely consisted of the removal of excess spoil and cleaning of structural features.
- 2.3.3 **Recording:** findings were recorded stratigraphically on OA North *pro-forma* sheets, using a system adapted from that used by the Centre for Archaeology Service of English Heritage, with suitable accompanying graphic documentation. An indexed photographic record of individual contexts, feature groups, and overall trench shots from standard viewpoints, was maintained using high-resolution digital photography, and the inclusion of a visible, graduated metric scale where safe to do so.

2.4 ARCHIVE

- 2.4.1 The data from the investigation has been collated to form a full archive to professional standards, in accordance with Appendix 3 of Historic England guidelines (*Management of Archaeological Projects*, 2nd edition, English Heritage 1991). OA North will deposit the original record archive (paper, magnetic and plastic media) with the Greater Manchester Record Office. No artefacts or samples were recovered during the works.

3. RESULTS

3.1 WATCHING BRIEF

- 3.1.1 **Introduction:** the following sections present a summary of the stratigraphic sequence encountered during the stripping of topsoil and within each drainage trench (Fig 2). *Appendix 2* provides a catalogue of the deposits recorded. Unless stated otherwise, all of the trenches were 36m long, and 0.4m wide. The whole area was stripped of topsoil (**2000**; 0.3m thick) down onto a layer of black ash made ground (**2002**; 0.12m thick), and orange rubble made ground (**2001**; 0.23-0.7m thick), which can be seen in Plate 2.



Plate 2: south-east view of the stripped area for the watching brief

- 3.1.2 **Drainage Trench 1:** measured 32m long and had a maximum depth of 1.2m. It lay on a north-west/south-east alignment and fed into the manhole at the north-east end of the sports pitch. It interconnected at a 90-degree angle with drainage trenches 2 to 6, 10 and 11.
- 3.1.3 Beneath the topsoil (**2000**) were made ground deposits **2001** and **2003** (0.23m and 0.34m thick, respectively) overlying 0.06m-thick buried soil horizon **2016**. Seven intercutting grave cuts (**2007**; **2008**; **2009**; **2010**; **2011**; **2012** and **2015**; Fig 4; Plate 3), each filled with dark brown clay silt, were observed cutting natural sandy clay **2006** at a depth of c 1m below ground level. A tree throw, **2013**, was also observed at a similar level. Due to the narrow nature of the trench these features were not excavated, but were recorded from the top of the section.
- 3.1.4 **Drainage Trench 2:** had a maximum depth of 0.7m. Removal of topsoil **2000** revealed made ground deposit **2001**, which continued below the depth of investigation.



Plate 3: Drainage Trench 1 showing grave cuts 2009, 2010 and 2011, facing south-east

3.1.5 **Drainage Trench 3:** had a maximum depth of 0.7m. Underneath the topsoil **2000**, made ground layer **2001** was revealed, and overlay made ground **2003** (Plate 4). No evidence of funerary activity was located within this trench and the natural geology was not reached.

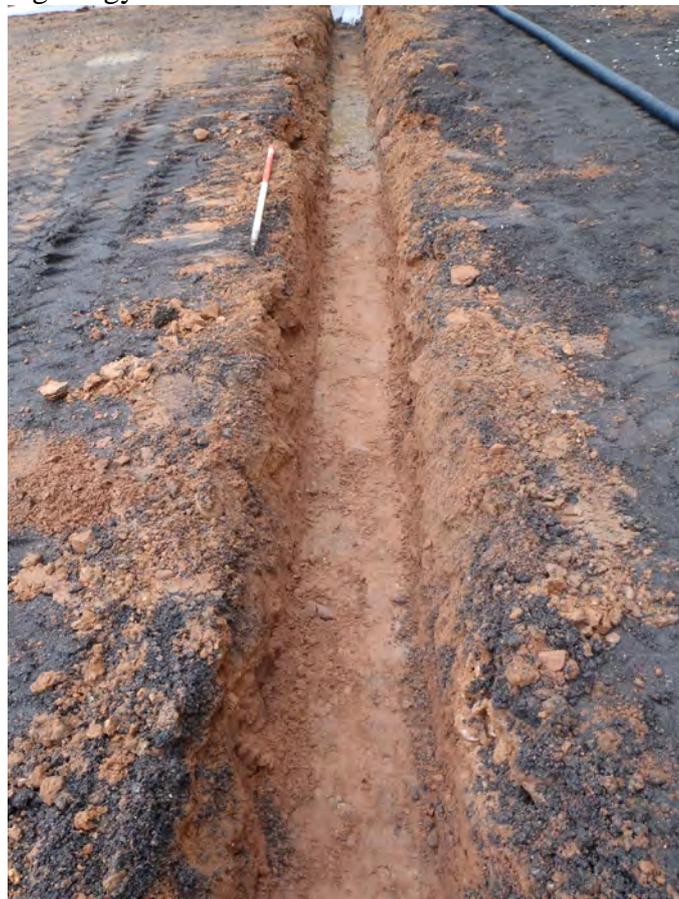


Plate 4: Drainage Trench 3 facing north-east

- 3.1.6 **Drainage Trenches 4-6, 8-11:** had maximum depths of 0.85m, 0.95, 1m, 1.1m, 1.1m, 1.1m and 1.1m respectively, and revealed the same stratigraphic sequence. Topsoil **2000** sealed sequential made ground layers **2001** and **2003**, but no evidence was observed of funerary activity and the natural geology was not reached.
- 3.1.7 **Drainage Trench 7:** adjoined the north-east corner manhole at a 45 degree angle towards the west. It measured 6m by 0.4m and had a maximum depth of 1.2m. The stratigraphy revealed comprised topsoil **2000** overlying made ground layers **2001** and **2003**, which in turn overlay buried soil horizon **2016**. The natural geology **2006** was observed at the base of the trench and had been cut by four possible graves, **2017**, **2018**, **2019**, and **2020** (Fig 4; Plate 5).



Plate 5: East-facing view of Drainage Trench 7, with grave cuts **2017**, **2018**, and **2019**

- 3.1.8 **The manhole:** lay in the north-eastern corner of the watching brief area. It measured 1.8m by 1.5m, with a maximum depth of 1.9m. The observed stratigraphy comprised topsoil **2000**, overlying made ground layers **2001** and **2003**. Within the manhole, two grave cuts were observed (**2004** and **2005**; Fig 4; Plate 6) at a depth of c 1m below ground level. They were cut directly into the natural orange sand (**2006**) and aligned south-east/north-west, with the head to the south-east. No coffins or human remains were uncovered during the watching brief, although it was evident that these burials had not been disturbed.



Plate 6: South-west view of the manhole, showing grave cuts 2004 and 2005

3.1.9 **The Soakaway Trench:** was situated behind the manhole towards the north-east corner of the sports pitch. It measured 5.5m by 1.4m and had a maximum depth of 1.95m. The stratigraphy comprised topsoil **2000** overlying made ground layers **2001** and **2003**. The natural oranges sand (**2006**) was observed to have been cut by a series of intercutting graves (Fig 4; Plate 7).



Plate 7: Soakaway Trench showing probable intercutting graves, facing south-west

3.2 TRIAL TRENCH EVALUATION

- 3.2.1 **Introduction:** the following sections present a summary of the stratigraphic sequence encountered in each of the three evaluation trenches (Fig 3). *Appendix 2* provides a catalogue of the deposits recorded. The stratigraphic sequence is discussed from the latest deposits to the earliest and in order moving from west to east relative to each trench. The programme of work was undertaken between 22nd and 25th June 2015.
- 3.2.2 **Trench 1:** Excavation in Trench 1 required the removal of modern topsoil, forming part of two large landscaped mounds to the east and west of the trench, overlying elements of a modern tarmac surface and a very compact levelling layer of hardcore, collectively identified as context **116**. These deposits formed the uppermost layers across the area of the trench and constitute part of the modern landscaping of the wider area to create a playground. These deposits directly overlay deposits and structural features associated with the demolished chapel, which occurred approximately 0.2-0.3m below the current ground level (Figure 5; Plate 8).



Plate 8: General view of Trench 1. Viewed facing west

- 3.2.3 At the western end of the trench, the modern overburden lay on top of a mixed demolition layer (**113**), which contained whole and fragmentary red bricks (without frogs), slate fragments, and metal debris, obviously relating to the demolition of the chapel. This deposit overlay several partially exposed structures, including a poorly defined red brick structure, initially interpreted as a possible culvert (**114**); and a small circular red-brick post base (**115**). The deposit extended up to and butted wall **112**, located approximately 2.25m from the western end of the trench. Excavation of a sondage revealed that deposit **113** was no more than 0.6m deep and overlay several further structural elements (**117** and **118**; *Section 3.2.5*) associated with wall **112** (*Section 3.2.4*). The presence of these additional structures suggests that deposit **113** probably infilled an external area to the chapel, and that the supposed features (**114** and

115) were probably simply demolition debris rather than *in situ* structural elements.

- 3.2.4 Wall **112** extended across the trench on a north/south axis and was 0.7m wide, with up to five courses of brick preserved to a height of approximately 0.4m (Plate 9). It consisted of three to four skins of unfrosted, handmade red bricks, with the courses set in an English style and bonded with a white lime mortar. The substantial size of this wall, relative to others identified in the trench and across the site, may indicate that it represents an external load-bearing wall, rather than an internal division.



Plate 9: Sandstone foundation deposit 117 at the base of wall 112, within the sondage excavated through deposit 113. Viewed facing north

- 3.2.5 Within the sondage excavated through deposit **113**, the wall was recorded directly surmounting a single course of sandstone blocks (**117**) that extended approximately 0.25m out from the face of the wall and directly overlay natural gravel deposits (Plate 9). The sandstone course clearly formed a foundation deposit for wall **112**, but also incorporated an additional feature, with a round-based, shallow channel carved into the surface of the blocks projecting beyond the wall. This channel probably acted to direct rainwater away from the building and suggests that the feature ran along its exterior, supporting the notion that structure **112** represents an external load-bearing wall. In addition, a sandstone flag surface (**118**) was also recorded butting the foundation course **117** and extending in a westerly direction. This feature may, therefore, have represented an external floor surface of sandstone paving associated with the chapel.
- 3.2.6 Approximately 3.75m to the east of wall **112**, parallel walls **111** and **109** (1m apart) extended on a north/south axis across the trench (Fig 5; Plate 10). Each wall was up to 0.25m wide and comprised up to two skins of unfrosted, handmade red brick, with visible courses set in an English style with a white lime mortar. The comparatively slender nature of the walls, compared to wall

112, for instance, would suggest that the structures represent internal divisions, or else, possible supports for a overlying wooden floor. Both walls appear to have been built within the same construction cut (**108**), which was up to 2.75m wide and, while not excavated, appeared to contain a single relatively homogenous backfill deposit of medium orange brown sandy clay (**110**).



*Plate 10: Walls 109 and 111 within construction cut 108 with backfill 110.
Viewed facing north*

- 3.2.7 Approximately 0.50m further east again, a slightly irregular linear cut feature (**106**), extended across the trench on a north/south axis (Fig 5; Plate 11). This feature was not excavated, but was up to 1m wide and contained a single fill of medium orange/brown sandy clay that contained a large quantity of whole and fragmented handmade red brick (**107**). It is unclear if this feature represents a further construction cut and the demolished remains of a wall, or else a linear pit of some description, but, based upon the red brick inclusions, clearly relates to the same phase of activity as the walls elsewhere in the trench.
- 3.2.8 Moving a further 1.5m eastward, a fourth wall (**105**) extended across the trench on a north/south axis (Fig 5; Plate 12). Like the majority of other walls in the trench, it was up to 0.25m thick and comprised two skins of handmade, unfrogged red brick, with courses set in an English style with a white lime mortar. No construction cut was visible for the wall. As with other walls of a similar size, the structure probably represents an internal dividing wall or floor support.



Plate 11: Pit 106. Viewed facing north.



Plate 12: Wall 105. Viewed facing north

- 3.2.9 A fifth wall (**103**) was recorded approximately 3.75m east of wall **105**, and a sixth and final wall (**102**) 1m further east again (Fig 5; Plate 13). Each of the parallel walls was up to 0.25m wide and comprised up to two skins of unfrogged, handmade red brick, with visible courses set in an English style with a white lime mortar. As per walls **111** and **109**, both walls appear to have been built within the same construction cut (**101**), which was up to 2.75m wide and, whilst not excavated, appeared to contain a single relatively homogenous backfill deposit of medium orange-brown sandy clay (**104**). A similar interpretation as internal dividing walls or floor supports can also be advanced.



Plate 13: Walls 102 and 103 within construction cut 101 with backfill deposit 104. Viewed facing north

- 3.2.10 The construction cuts for each of the walls observed within Trench 1 had been cut directly into natural deposits, which were visible throughout the trench as mixed layers of sandy clays and patches of gravel, collectively identified as context **100**. The surface of these natural deposits routinely occurred at a depth of approximately 0.4m below the current ground level.
- 3.2.11 **Trench 2:** was located approximately 5m to the south of Trench 1 and occupied the same east/west axis (Fig 3). It presented virtually the same array of structural features and deposits as encountered in Trench 1, which clearly relate to a continuation of the same building elements and demolition and landscaping sequence (Fig 5; Plate 14). The modern overburden consisted of modern landscaped topsoil (**200**) and a tarmacked surface with a hardcore levelling deposit (**201**). These extended to a depth of approximately 0.3m below ground level, at which point the archaeological horizon and natural deposits were revealed.
- 3.2.12 The external demolition deposit (**113**) was identified in the western end of the trench as **202**, and was observed to contain several large concrete blocks as well as various other building materials. It extended east for approximately 2m before it was seen to build up against a large red brick wall (**203**), which possessed the same dimensions, and was located in the same position and on the same alignment as **112**, and clearly represents an extension of it (Section 3.2.3-4; Fig 5; Plate 15).
- 3.2.13 Approximately 3.5m further east, two further red brick walls (**204** and **205**), spaced 1m apart, extended north/south across the trench, within a single construction cut (**206**), containing a single backfill deposit of clay (**207**; Fig 4; Plate 10). Wall **205** differed slightly in terms of construction, incorporating a small section extending on an east/west alignment, at its southern end. This detail may represent a post pad incorporated into the structure, potentially

supporting an upright post. This interpretation would dictate that it originally supported a floor, rather than representing an internal dividing wall, for obvious reasons. Collectively, the group clearly represent an extension of walls **109** and **111** and the associated construction cut and backfill deposit identified in Trench 1.



Plate 14: General shot of Trench 2. Viewed facing east

3.2.14 Evidence for a continuation of feature **106** from Trench 1, into Trench 2, was not identified, supporting the suggestion that the feature represents some form of miscellaneous pit rather than a demolished structure. A single red brick wall (**208**; Fig 5; Plate 17) was, however, observed approximately 3m to the east of wall **205**, and represents a continuation of wall **105** (Section 3.2.7). In this instance, a construction cut (**209**) and backfill deposit (**210**) associated with the wall, were evident.



Plate 15: Wall 203. Viewed facing north



Plate 16: Walls 204 and 205 within construction cut 206 with backfill deposit 207. Viewed facing north

3.2.15 Towards the eastern end of the trench, a final pair of red brick walls (**211** and **212**) were recorded spaced approximately 1m apart within a single construction (**213**), containing a single backfill deposit (**214**; Fig 5; Plate 18).

The walls again represent a continuation of structural features recorded in Trench 1 as walls **103** and **104**, cut **101**, and fill **104** (Section 3.2.8).



*Plate 17: Wall **208** within construction cut **209** with backfill deposit **210**.
Viewed facing north*



*Plate 18: Walls **211** and **212** within construction cut **213** with backfill deposit **214**. Viewed facing north*

- 3.2.16 Trench 3 was excavated in an L-shaped configuration, with one half extending on an east/west alignment, 5m south of, and parallel to Trench 2, and a second half extending south from its western end. It revealed an identical depositional sequence to that encountered elsewhere, with a modern landscaped topsoil (300) and tarmacked surface with associated hardcore levelling deposits (301). These deposits extended to an approximate depth of 0.3m or more and directly overlay a similar array of structural features and deposits associated with the former chapel (Fig 5).
- 3.2.17 The demolition deposit encountered in Trenches 1 and 2 (Sections 3.2.2 and 3.2.12 respectively) was again recorded within the north-western corner of the trench (302). To the east it was bounded by a continuation of the principal wall (303) identified in both previous trenches (112 and 203; Sections 3.2.3 and 3.2.12 respectively; Fig 5; Plate 19). At its southern end, this wall butted a further section of red brick wall (304), which extended on the same alignment for a further 4m, before continuing beyond the limit of excavation, but at a slight remove to the west by the span of a single skin of brick (Fig 5; Plate 19). Despite the slight disjuncture between the two sections of wall, their similar alignment and dimensions would suggest that they probably represent the external wall of the same building, perhaps defining separate wings.



Plate 19: The north/south-aligned section of Trench 3, featuring walls 304 and 305 (centre left), structures 305, 306 and 307 (centre right) and backfill deposit 302 (bottom right). Viewed facing south

- 3.2.18 In addition to the two wall sections extending on a north/south axis, a series of smaller structural elements (305, 306, and 307), combining the use of both handmade, unfrogged red brick and well-dressed sandstone blocks, defined the southern limits of demolition deposit 302 (Fig 5; Plate 19). This alignment of features butted against the northern end of wall 304, and extended west, ultimately continuing beyond the limit of excavation in this direction. Whilst

the function of the structures is unclear, the presence, within **306**, of a large sandstone slab, with several facets cut into the upper surface, presumably to house upright fixtures, may suggest a doorway or other form of entrance. To the south of these features, only natural deposits, primarily of gravel and clay, were revealed within the majority of the north/south-aligned trench section, at a depth of little more than 0.3m below current ground level.

- 3.2.19 Approximately 3.5m east of wall **303**, a pair of parallel red brick walls (**309** and **310**), spaced 1m apart, were recorded within a single construction cut (**311**) containing a single backfill deposit (**312**: Fig 5; Plate 20). The features clearly represent a continuation of those encountered in both Trenches 1 and 2 (*Sections 3.2.5 and 3.2.12* respectively). The eastern wall (**310**) of this pair was truncated at its northern extent by a linear, cut feature (**313**), which extended on a north-west/south-east alignment and in plan contained a single homogenous clay fill (**314**; Plate 21). This linear was not observed in previous trenches and was not further investigated within Trench 3, but, given its regularity and late position within the stratigraphic sequence, probably represents a service trench of some kind.



*Plate 20: Walls **309** and **310** within construction cut **311** with backfill deposit **312**. Viewed facing north*

- 3.4.5 Within the eastern end of the east/west-aligned section of the trench, a single red brick wall (**315**; Fig 5; Plate 22) was recorded extending on a north/south alignment. This final feature almost certainly represents a continuation of the single wall recorded towards the centre of the previous two trenches (*Section 3.2.7 and 3.2.14*).



Plate 21: Linear cut 313 containing fill 314 and truncating wall 310. Viewed facing south-west



Plate 22: Wall 315. Viewed facing north

4. CONCLUSION

4.1 DISCUSSION

- 4.1.1 ***Gartside Gardens Watching Brief:*** the watching brief has provided a snapshot of the below-ground deposits within the southern corner of Gartside Gardens, and it is debatable just how representative the results are of the ground conditions across the whole of the proposed development area. It would seem that the state of the cemetery is rather different to that recorded in the mid-nineteenth century (*Section 1.3*), and it is apparent that the site has been subject to considerable landscaping and levelling, with thick deposits of made ground revealed within the watching brief area. The presence of such material is broadly consistent with the interpretation of the upper strata from the GPR results (URS 2013b) and from the evaluation undertaken in 2013 (OA North 2013). It is most likely that much of the demolition debris within the made ground originated from the post-War clearance of Manchester's slums and bomb-damaged neighbourhoods, and that the activity was associated with the conversion of the cemetery to a public park sometime around 1954. The importation and deposition of distinctive layers of sterile crushed sandstone may relate to the promotion of subsoil drainage as part of the conversion process.
- 4.1.2 Due to the shallow formation level for the topsoil strip and drainage, the natural geology was rarely revealed, and was only definitively identified in Drainage Trenches 1 and 7, and within the manhole and soakaway pit. Funerary activity was identified within the same areas, supporting the evaluation results that suggest that human remains may still occupy much of the south-western half of Gartside Gardens, albeit that they were buried at some depth (OA North 2013). The graves that were evident, and the density and intercutting of them, was commensurate with what might be expected from a well-organised but heavily utilised industrial-period urban cemetery.
- 4.1.3 ***Grosvenor Chapel Evaluation:*** the first and only archaeological horizon was consistently encountered at approximately 0.3m below the current ground level, with overburden above this point consisting of a modern landscaped topsoil, tarmac surfaces, and hardcore levelling deposits associated with the late twentieth-century remodelling of the site after demolition of the former Methodist chapel building. The archaeological remains exposed at that level entirely comprised a series of walls, primarily made up of handmade red brick and occasional sandstone blocks, associated construction cuts, and backfill deposits, as well as demolition debris.
- 4.1.4 Given the relatively shallow stratigraphic sequence revealed across the site, together with the known historical context of the site and the general character of the surviving constituent building materials, the walls clearly relate to foundation deposits associated with the chapel. The largest example of these features, located towards the western end of each trench, probably relates to an external and load bearing structure, whilst the remaining features may represent internal dividing walls, or, perhaps more likely, supporting structures for a wooden floor. None of the structures were particularly well preserved, largely consisting of no more than four surviving courses, and had been

erected within construction cuts, excavated directly within natural deposits. These natural deposits consisted of a mix of clay and gravel patches and were exposed in areas between the walls at an average depth of 0.40m below the current ground level.

- 4.1.5 Overall, there is only very limited scope to gain an understanding of the layout and use of the chapel from the surviving structural remains. No additional or earlier archaeological remains were therefore identified across the site.

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APPENDIX 1: WRITTEN SCHEME OF INVESTIGATION

URS

Proposed Brunswick PFI Regeneration Scheme

Written Scheme of
Investigation – Archaeology

January 2014

47065603

Prepared for:
S4B

UNITED
KINGDOM &
IRELAND



REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	October 2013	Draft	Nick Finch Senior Archaeological Consultant	Neil MacNab Principal Archaeological Consultant	Annette Roe Technical Director
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TABLE OF CONTENTS

1	INTRODUCTION	5
2	ARCHAEOLOGICAL BACKGROUND	6
3	PROJECT OBJECTIVES	12
4	SCOPE OF WORKS.....	13
5	WORKS SPECIFICATION	14
6	BUILDING RECORDING.....	19
7	MONITORING, PROGRESS REPORTS & MEETINGS .	21
8	COMPLETION OF FIELDWORK	22
9	REPORTING.....	23
10	RESOURCES AND TIMETABLE.....	25
11	ARCHIVE PREPARATION AND CURATION	26
12	CONFIDENTIALITY AND PUBLICITY.....	28
13	COPYRIGHT.....	29
14	ACCESS ARRANGEMENTS AND SITE INFORMATION	30
15	INSURANCE, HEALTH AND SAFETY	31
16	GENERAL PROVISIONS	32

List of Tables

- Table 1 – Archaeological trial trenching requirements
- Table 2 – Archaeological watching brief requirements
- Table 3 – Historic building recording requirements

Figures

- Figure 1 – Site Location
- Figure 2 - Proposed Brunswick PFI Regeneration Scheme
- Figure 3 – Location of Proposed Archaeological Fieldwork Areas
- Figure 4 – Area of Proposed Trial Trenching (Grosvenor Street Chapel)
- Figure 5 – Area of Proposed Building Recording (Kings Arms Pub)
- Figure 6 – Area of Proposed Watching Brief (Beamish Close)
- Figure 7 – Area of Proposed Watching Brief (Rusholme Cemetery and Anchor Brewery)

Appendices

- Appendix 1 – Archaeological standards and guidelines
- Appendix 2 – Method statement for the removal of human remains within Gartside Gardens

1 INTRODUCTION

1.1 Project background

URS has been appointed by S4Brunswick to design the archaeological mitigation associated with the Brunswick PFI Regeneration Scheme.

The proposals relate to the regeneration of the Brunswick area of Manchester and will involve the refurbishment and renewal of much of the existing built fabric of the site.

This Written Scheme of Investigation has been agreed with Norman Redhead for the Greater Manchester Archaeological Advisory Service. The works will be undertaken in accordance with the methodologies outlined in this specification by Oxford Archaeology Ltd and managed by URS.

The Written Scheme of Investigation has been prepared in response to Planning Conditions that apply to the proposed works within the confines of the Brunswick PFI Regeneration Scheme. Planning application 101664/FO/2013/N2 (Condition 28) requires that:

28) No development shall take place until a Written Scheme of Investigation (WSI) has been submitted to and approved in writing by the local planning authority. The WSI shall cover the following:

a) a phased programme and methodology of investigation and recording to include:

- further historical research on targeted sites*
- a historic building survey (level 2) of the Kings Arms Pub prior to demolition*
- evaluation through trial trenching of identified sites*
- targeted area excavation and recording*

b) A programme for post investigation assessment to include:

- analysis of the site investigation records and finds*
- production of a final report on the significance of the archaeological and historical interest represented.*

c) Provision for publication and dissemination of the analysis and report on the site investigation to include:

- a bound hardcopy and digital copy of the final assessment report with the Greater Manchester Historic Environment Record*
- implementing opportunities for community engagement*
- production of interpretation panels and/or a popular booklet*

d) Provision for archive deposition of the report, finds and records of the site investigation.

e) Nomination of a competent person or persons/organisation to undertake the works set out within the approved WSI.

Reason - In the interests of understanding heritage assets to be lost and to make information about the archaeological heritage interest publicly accessible pursuant to Policies SP1, EN1, EN3 of the Core Strategy and saved policy DC20 within the Unitary Development Plan.

1.2 Site description

The regeneration site (herein referred to as 'the site') is approximately 28.4 hectares (ha) in size and is located in Brunswick, c. 1 kilometre (km) south-east of Manchester city centre (**Figure 1**). It is located entirely within the Manchester City Council (MCC) unitary authority area.

The Brunswick residential neighbourhood is situated in the north of the Ardwick ward which is located within the inner core of suburbs to the south-east of Manchester city centre. The National Grid Reference (NGR) of the centre of the site is SJ849969. The red line boundary for the site and its location within the local setting of Manchester city is shown in **Figure 1**.

In general the site is relatively flat. The lowest levels on site, at the far north-eastern most corner of the site at the junction of Mancunian Way and Downing Street, lie at around 35.0 metres above ordnance datum (mAOD). The highest levels lie at 41.13 mAOD within the parkland area in the south-eastern portion of the site.

There are no surface waters on site. The culverted Corn Brook runs in a westerly direction beneath the site, generally beneath the rear gardens of properties running along the southern side of Brunswick Street. The culvert flows to the Pomona Docks on the Manchester Ship Canal before discharging to the River Irwell.

The site is bounded by the A57(M) Mancunian Way to the north-west, Upper Brook Street and Kincardine Road to the south-west, Plymouth View to the south-east, and Wadeson Road to the north-east.

The site and surrounding area is built up in nature comprising:

- a substantial residential area with associated mixed use amenities and green space to the central core;
- university infrastructure to the west and office developments; and
- small scale retail and light industrial units to the east.

1.3 Geology

The solid geology of the site comprises Sherwood Sandstone and Collyhurst Sandstone. Overlying this is the drift geology comprising glacial till and alluvial drift.

1.4 Regeneration Proposals

The regeneration proposals are summarised as follows:

“Selective demolition and clearance (including a number of residential, retail and other non-residential buildings) to allow the phased redevelopment and refurbishment of the Brunswick Neighbourhood, including the erection of 444 new residential dwellings; the refurbishment of 839 existing homes [including low rise reversals and the refurbishment of Artillery Court, Silkin Court, Lockton Court, Lamport Court, and existing maisonettes and low rise houses]; a new boulevard and new access roads, new car parking and service areas; a new mixed use building comprising of 2 retail units, 1 retail unit, 1 retail unit and a neighbourhood housing office with 18 apartments above; a mixed use residential extra care home with 60 residential units, and a day care centre on part of the ground floor; the upgrading of Gartside Gardens [with new multi-use games area, a new playground, realigned pathways, new entrances and new landscaping]; a new orchard; 25 new allotments; new boundary treatments; new open spaces; with associated infrastructure, landscaping and tree planting.”

2 ARCHAEOLOGICAL BACKGROUND

2.1 Prehistoric (10,000BC - AD43)

One archaeological asset has been identified within the study area dating from the prehistoric period. A stone hatchet was discovered in 1887 in the river gravels between Sidney Street and Grosvenor Street, to the northwest of the proposed site boundary.

This isolated find is not sufficient to indicate prehistoric activity in the development area, however there is evidence for activity in the surrounding area. There is limited evidence for Mesolithic activity within the Greater Manchester area in the form of lithic scatters and tools. There is further evidence from the Neolithic period in the form of a number of axes found in sites of early woodland clearances; however it is likely that settlement activity was focussed towards the east and the limestone hills of the Pennines.

2.2 Roman (AD43 – 410)

There is evidence of Roman activity within the study area associated with the establishment of the fort in AD79 at Castlefield and a later *vicus* with the Latin name of *Mamucium*. Roman

activity continued in this area throughout the 2nd and 3rd centuries with the rebuilding of the fort occurring in AD160 and again in AD200. The fort is located approximately 1.5 km to the west of the site boundary at the junction of a number of roads including the road towards the Roman spa town of Buxton or *Acquae Arnemetiae*. This road has been identified as travelling through the site from northwest to southeast, going from the fort at Castleford and linking with the route of the modern A6 which runs through Stockport. A second Roman road has been identified running along the route of the modern A57 Hyde Road. The route of this does not appear to pass through the site, but the trajectory of the road running to the northwest indicates that it may have joined up with the road running to the fort. The destination of the road appears to be the small garrison fort at *Melandra* or Glossop built in AD78 as part of the Agricola campaign and therefore contemporary with the fort at Castlefield. This road continued in use and was turnpiked in 1818 by the Manchester, Hyde and Mottram Trust Act. The setting of these Roman assets is the fort at Castlefield and the network of Roman roads that run within the area. The expansion of modern Manchester has reduced the setting of these assets so much that the connection between the routes and the fort can no longer be appreciated and the setting no longer contributes to the importance of the assets. The importance of the assets lies in their historical and archaeological value. Where remains survive they have the potential to contribute towards the understanding of the movements of the Roman military in the initial conquest phase of expansion in the 1st century AD. This importance has been reduced by the removal of the route in particular through the site and the massive expansion of Manchester city centre. Another heritage asset dating from the Roman period found within the study area is the isolated findspot of a Greek coin. The coin is described as dating from the Christian period and was found in 1922 during excavations at Weymouth Street. The setting of this asset is the ground within which it was discovered. Its isolated nature means that it has very little importance with the exception of its intrinsic value as a heritage object.

The possible existence of a Roman road within the site boundary and one in close proximity to the northern boundary indicates that there is the potential for the recovery of Roman archaeology. The site is outside the boundary of the Roman town, but there is the potential for isolated road side buildings or Roman cemeteries which were always constructed outside of the town boundary, often adjacent to roads. However, this potential is severely reduced by the sheer volume of construction which the site has experienced in the 19th century to the present day. There are potential pockets of survival where construction of housing, infrastructure, industrial and recreational buildings has been less intense, however, it is unlikely that any substantial or significant level of Roman archaeology remains.

2.3 Early Medieval and Medieval (410 – 1066)

No heritage assets have been identified in the study area dating from the early medieval period. The Roman town and fort had begun to fall into decline even before the departure of the Roman army in AD410 and in the following centuries continued to exist as a small, nucleated village. By the early medieval period, the settlement was split between a number of different kingdoms and was no longer focussed on the Roman vicus, but had moved northwest-wards towards what is now the Cathedral. The area around the vicus became known as Alsport, or Old Town. Manchester is recorded as a settlement in the Domesday survey of 1086 within the hundred of Salford. The Domesday entry records the town as containing two churches; St. Mary and St. Michael and the lands were given to Roger of Poitou. At this time, Salford was much larger and more important town containing 63 households and also belonging to Roger of Poitou.

The site is located within an area named as Chorlton on Medlock, formerly known as Chorlton Row or Roe. The first documented reference was in 1177 where it is referred to as *Cherleton* in the Pipe Rolls. The word has Old English Origins and derives from the Scandanavian word *ceorl* meaning a freeman of the lowest rank, though is the possibility the word had changed to also refer to a villein, also a peasant but one tied to a farm and local lord of the manor. The *-tun* suffix means enclosure or homestead so the name Chorlton can be said to be the homestead of villeins or peasants.

2.4 Medieval and Post-Medieval (1066 - 1750)

Two heritage assets have been identified dating from the medieval period with the asset of the site of Chorlton Hall located within the site footprint at the extreme northern point of the site.

The city of Manchester remained small and was a minor settlement during the first portion of the medieval period. Despite the small size of the settlement, Manchester was granted a charter to hold a market in 1301 and in the 14th century, a group of Flemish weavers settled in the area and started to process wool and linen thus sowing the seeds of the cloth manufacturing industry which came to dominate the city in the 18th and 19th centuries.

The area of the site was probably home to a very small number of houses, possibly isolated farmsteads with the land largely used for agricultural purposes. One of the houses situated within the site boundary during this period was Chorlton Hall. The first documentary reference to Chorlton Hall is in 1590 when the property was mortgaged to Ralph Sorocold of Golbourne but it is likely that the hall was constructed in the preceding centuries for the lords of the manor of Chorlton. The Laurent map of 1793 shows the layout and plan of Chorlton Hall. The layout of the hall stands out on the 1793 map because the alignment is at odds with the layout of the grid pattern of the streets. The hall is shown as a building with three ranges with a rectangular area of formal gardens to the rear. To the northeast or front of the hall is a small area of possible formal gardens or the end of a now defunct driveway giving access to the front of the hall. Another large range of buildings is located to the southwest of the formal gardens adjacent to the access from Brook Street which may possibly be service buildings. The hall and a portion of the formal gardens are located within the site boundary.

No archaeological assets have been recovered from within the study area dating to the post-medieval period. However, it is likely that the settlement within Chorlton on Medlock began to expand during this period. The estate belonging to Chorlton Hall was instrumental in this, especially in the 18th century. The lands belonged to the Minshull family and included land within the site and extending to the southeast of Piccadilly. Roger Aytoun, who had married into the Minshull family, laid out the land in the 1770s probably creating the grided street pattern seen on the 1793 Laurent map, discussed in further detail below. Due to the continued development of the area, the setting of Chorlton Hall is restricted to the land in which the foundations sit and therefore contributes nothing to the importance of the asset. As a demolished asset, its importance lies in its historical and archaeological value and the information it can provide about upper class residences of the time and architecture of the period.

The second asset dating from the medieval period is the site of Ardwick Green located to the north of the site boundary. The first buildings appeared in Ardwick in the medieval period and it was well-established community by the early medieval period, as demonstrated by the depiction on late 18th century mapping. This shows an affluent, rural area with a number of large, well-spaced residences located around a central green or square which on the 1793 Laurent map is shown as containing a very large pool labelled as the Canal of Ardwick Green. The setting of this asset is its current surroundings and the buildings which remain in the area. The setting has been reduced by the expansion of the city during the industrial revolution and the urbanisation of this once rural area. The importance of the asset is linked to the other remaining heritage assets within the Ardwick Green area which together combine to have an additional group value. The importance lies in the historic and archaeological value and the information it can provide about the middle and upper class dwellings in the mid-18th century and social hierarchy.

2.5 Early Modern & Modern (1750 – present)

The majority of archaeological assets from within the study area date from the early modern period. The expansion and growth of the Chorlton on Medlock area which began on the post-medieval period continued and evolved during the early modern period until the area had been transformed from rural settlement with large middle class dwellings to a densely populated area subsumed into the sprawling city centre of Manchester.

The expansion of the city centre and increasing urbanisation of the Chorlton on Medlock and Ardwick area is shown on the 1793 Laurent map. The initial development of this area was not for the working classes of Manchester, but the more wealthy middle classes who wanted to move away from the city centre which by this time was increasingly industrial, densely populated with sub-standard living conditions. The area was attractive to middle class development due to the establishment of Ardwick Green which can be seen to the north of Ardwick Street. The land of Chorlton Hall estate was sold off and streets were laid out in a regular grid pattern. The area to the north of Rusholme Road (no longer present on modern mapping, but vaguely corresponds to the line of Hanworth Drive) was part of the first phase of development with the streets within the site boundary named on the 1793 map as Temple Street, Rutland Street, Grosvenor Street and Russell Street. A grid pattern of streets is shown on the 1793 map to the south of Rusholme Road terminating at the line of the Corn Brook which is shown running across the site in the southeast portion of the site. These streets are not yet named.

In the early modern period, Chorlton Hall experienced major changes. Roger Aytoun had squandered the estate and sold most of it off for development including the hall which was purchased by John Dickenson. He gave the hall to his nephew William Dickenson who in 1793 applied for an Act of Parliament to let the land on building leases. By the mid-19th century, Chorlton Hall is still standing but the gardens to the front, and the formal gardens to the rear of the house have been removed. This process started with the sale of the Chorlton Hall estate by Roger Aytoun for the construction of workers terraced housing. The 1850 Ordnance Survey (OS) map shows Chorlton Hall, but St. Luke's church has been constructed directly to the north of the building and at least one range of buildings has been removed. The hall itself is now surrounded by terraced housing. The 1893 OS map shows that a further range has been removed from the building and it is now functioning as the rectory for St. Luke's church. By the mid-20th century, the rectory is no longer shown on mapping and was probably demolished during the war. Later, all of the surrounding buildings, including the church were also demolished and partially covered by modern flats. Some areas of the former hall remain unoccupied by modern construction with the potential for survival of foundations.

Ardwick Green continued to develop in the early modern period. In the 18th century, it was named as a residential suburb, the first in a rural area which was connected to the city by the turnpike road of Ardwick Street. The suburb was focussed around the garden of Ardwick Green. The open area containing a canal or large lake with a bridge across the western end was created in the 18th century. Its origins may have been as part of the estate of Ardwick Hall, particularly with the large ornamental lake. The green was maintained by the wealthy residents who lived around the periphery of the garden and was the location for many large gatherings. In 1825, an Act of Parliament was granted to protect the green and water pipes were laid to take water from the lake to supply Chorlton and the surrounding areas. The green became a public park in 1867 when it was purchased by the Manchester Corporation. Following this the pond was infilled and the garden was redesigned in the early 1900s and again in 1948.

The creation of Ardwick Green as an area of high-status dwellings is demonstrated by the existence of such properties as Ardwick Hall and its associated lodge which is no longer extant. This is shown on the 1794 Greens map as occupied by Robert Hyde Esq. and in 1822, the property was purchased by John Kennedy. It is uncertain as to whether this hall has become confused with Ardwick House or whether John Kennedy owned both of the buildings. The latter is more likely because by the late 19th century, the hall had been demolished and replaced with a mill with housing constructed within the gardens. The additional buildings constructed around and within Ardwick Green in the early modern period include the site of St. Gregory's Catholic Boys High School constructed in the late 18th century. The school had been demolished by 1999 and site has been redeveloped for housing. Ardwick House, now demolished, was owned by John Kennedy and was shown on the 1844 tithe map of the area. The setting of all of the assets associated with Ardwick Green is the green itself. The creation of the suburban village was enhanced by the green and together they form the setting of one

another. This setting has been reduced by the demolition of many of the higher status residences but the green survives and enough of the original houses surrounding the green remain to allow the understanding of this once rural area to be partially understood. The setting, therefore, contributes a small element to the importance of the assets. Their importance is enhanced by their group value, but they mainly exhibit historic and archaeological values with the potential to provide information on the middle class elite of 18th century Manchester and the establishment of a residential suburb at this time. The assets also have the potential to provide information on the development and evolution from rural to urban as part of the industrial revolution.

The Pigot map of 1821 shows the new burial ground for Dissenters had been laid out to the south of Rusholme Lane, to be known as Rusholme Road cemetery and is located within the boundary of the regeneration proposals. An unlabelled building is shown at the northern end of the cemetery, abutting Rusholme Road on the 1824 map of Manchester by Swire. A further building has been constructed to the east of the original buildings as shown on the 1836 Pigot map. The buildings are labelled on the 1893 OS map as a lodge to the west and a mortuary chapel to the east. The 1893 map also shows a number of other small buildings abutting Rusholme Road but these are located outside the boundary of the cemetery. The last burial within the cemetery was in 1933 and by this time, around 80,000 people had been interred. In 1954, the cemetery was transferred to the ownership of the Manchester Corporation and renamed as Gartside Gardens. It was made into a recreation ground and the 1961 OS map shows that the southwestern portion of the cemetery has been overlaid with a playground, putting green and a bowling green and both the lodge and the mortuary chapel have been demolished. More recently, the southern recreational activities have been removed from the gardens with the exception of the playground but there is now a basketball court and a tennis court to the north within the gardens. It is uncertain as to whether the burials remain within the garden. The head stones have been removed and catalogued and are easily available for research.

A number of buildings have been identified from the Greater Manchester HER which were constructed in the 19th century as part of the expansion of the city and creation of the suburb of Ardwick. All of these buildings have been demolished in the 20th century.

A Wesleyan Methodist Chapel was constructed on Grosvenor Street in 1820. The original chapel was built of brick with battlemented parapets, stone pinnacles and four-centred arched windows. By 1924, the society had been disbanded and the chapel was turned over to commercial use. The historic maps show that by 1955, the chapel was home to an electrical engineering works. The building itself has been slightly altered with the western transept removed by the extension of the adjacent engineering works. The building was badly damaged by fire in 1974 and is no longer shown on the 1978-83 OS mapping. The area today is cleared and very uneven. There is the potential for the foundations of the chapel to survive beneath the ground if the demolition only took place to ground slab level.

The remainder of the buildings identified from the HER are located outside the site boundary but within the study area. These include Hanover Mills located to the north of the site boundary. The site includes a number of mill buildings constructed in the 19th century and on the early 20th century. The majority of the site has been demolished and modern flats constructed on the site. The site of a row of terraces houses were located on the southern side of Downing Street and were first shown on the 1794 Green map of Manchester. The terraces have since been demolished. Just outside the southern extent of the site boundary is the site of St. Saviour's graveyard and crypt and the site of the now demolished St. Saviour's church. The church was erected in 1836 and burials began almost immediately, within two weeks of the consecration. Burials were interred both in a graveyard and in a crypt which ran beneath the entire floor of the church. The number of burials recorded within this graveyard reach at least 1334 but the burials register only records up to 1932. A graveyard survey carried out by the University of Manchester Archaeological Unit in 2003 indicates that a number of gravestones have been identified where the date of death is post-1932. The church had to be demolished in 1960 when the dry rot became a problem. A new church was erected

within the footprint of the original but the church was closed in 1974 and it too has since been demolished. The extent of the graveyard is defined by the current boundary of the churchyard and it is unlikely that any burials will have extended into the proposed site boundary. These assets all lie outside of the development area and as demolished structures their setting and importance is limited.

Analysis of the historic maps shows the complete transformation of the Chorlton on Medlock area which took place in the 19th and 20th centuries. They demonstrate the massive and rapid expansion both in size and population of Manchester that occurred as a result of the Industrial Revolution. It also shows the immediate need for housing for the workers of the city which pushed dense industrial development outwards from the city centre towards the previously more rural suburbs.

Greens 1794 map of Manchester shows a number of buildings around Russell Street which comprised a brewery and another rectangular building on the southern side of the street which was likely, from its form and lack of gardens, to have been industrial in nature. In addition to this, a number of middle class houses were located within the site boundary, in the eastern part of the site to the south of Ardwick Street.

The rise of the industrial revolution is shown not only in the increase in residential development in the Chorlton area, but also in the rise in population. The population of the Chorlton Row area quickly grew from 675 inhabitants in 1801 to more than 8,000 in 1821 and to more than 20,000 in 1831). The impact of this on land within the site boundary was apparent on Banks 1831 map of Manchester where a large number of terraced houses have been constructed within the pre-established grid pattern. This map also shows a female penitentiary to the west of the Rusholme Road burial ground, directly to the south of Rusholme Road.

In contrast to the social conditions in the northern half of the site, the Banks map shows a more prestigious area of housing in the south of the site. This is particularly illustrated by an area of housing in the southeastern portion of the site along a road named Polygon. This area of large, detached houses with large gardens was described by Ashworth as being, for many years, one of the best places to live in Manchester. It appeared from the 1831 Banks map that the Corn Brook, which was aligned along the northern boundary of the Polygon, had been partially culverted.

The 1850 five foot to one mile OS map of Manchester, shows the continued spread of terraced housing southwards with the southwestern area remaining largely development free, preserving the isolation of the grand houses of the Polygon. The female penitentiary is no longer labelled on this map, though the form of the building is largely unchanged.

Another type of building evident within the site boundary on the 1850 map was the public house. These were shown at the corner of Burton Street and Temple Street (The Sherwood Inn), at the corner of William Street and Rusholme Road (The King William the Fourth) and at the corner of Robert Street and Wood Street East (The Kings Arms). These are all demolished with the exception of the Kings Arms. Other additional features shown on this map, all of which were located in the northern half of the site, comprised two coal yards, the Anchor Brewery and a timber yard.

The demand for land created by the population explosion of the Industrial Revolution meant that unoccupied land was quickly being developed for cheap housing and by 1890 the Chorlton on Medlock area was predominantly working class. The 1893 25 inch to one mile OS map shows that almost the entire development area is covered with terraced housing, with the exception of the Polygon which remains fairly open plan. The land surrounding the site is densely covered with terraced housing and the entire character of the area is now urban and working class. The new terraces were laid out along newly laid out streets. Some possible back-to-back housing was also built, but this was extremely limited (located on Homer Street). A new school was shown to have been built on the corner of the newly laid out Frances Street

and Higher Temple Street. Associated with the school was a new church called St Pauls. A chapel was also depicted, located on the corner of the newly laid out Cottenham Street and Higher Temple Street.

In the northern half of the site new features of note on this map included a free library depicted on land previously occupied by the Rusholme St Wesleyan Day school, first depicted in 1850, a school to the west of the area formerly occupied by Chorlton Hall and a smithy.

By 1901 the population of Chorlton upon Medlock had reached 57,894). The 1908 1:2,500 OS map showed little change since 1893 within the site boundary north of Brunswick Street. However, the area previously occupied by the Polygon, in the southern half of the site was shown to have been entirely removed and constructed over with terraced housing.

As a result of the poor living conditions within the 19th century terraces, municipal slum clearance took place in Chorlton on Medlock during the 20th century. The 1952 - 64 1:2,500 OS map showed that some small sections of terraces and back-to-backs within the site had been demolished leaving small, clear areas within the rows of terraces. This may have also been supplemented by bomb damage clearance caused during World War II.

The 1961 – 69 1:2,500 OS map shows a radical transformation from the previous map editions. The northern portion of the site has been entirely cleared with almost every single building demolished. The 1969 edition shows that at this point, the street pattern has also been altered with only Grosvenor Street remaining. New regeneration proposals included low rise flats, high rise flats and social housing comprising short terraced rows and maisonettes. It is also likely that a school currently present within the central area of the site had been constructed by 1972. To the south of Brunswick Street the site appears to have been unchanged. By the time of the production of the 1980-81 OS map, however, the site to the south of Brunswick Street had also been cleared. New regeneration proposals included a school in the area formerly occupied by the polygon and social housing comprising rows and low rise flats.

Other buildings north of Brunswick Road, which were likely to have been built in 1972, were confirmed to be present. These included a new church on the former site of St Pauls Church (built by 1893), a medical complex, a social welfare institution and a commercial retail property. In general by this time the only original roads remaining within the site boundary were Grosvenor Street in the north which was first depicted in 1793 and Brunswick Street in the south which was first depicted in 1893.

Since the time of the production of the 1980-81 OS map the site has remained predominantly unchanged.

3

PROJECT OBJECTIVES

General Objectives

The general cultural heritage objectives are detailed below:

- to mitigate the impacts of the Scheme on archaeological remains at selected locations; and
- to minimise potential risks to the construction programme posed by the requirements for archaeological mitigation.
- the works detailed in this Written Scheme of Investigation will be undertaken in line with the research agendas referred to in Section 3.

In addition to the general objectives there are also specific aims, which are detailed below.

Trial Trenching Objectives

The trial trenching objectives are:

- to establish the level of survival of the archaeological resource; and

- to determine the level of risk that the archaeological resource would present (if found) to the construction programme and aid the determination of any additional mitigation work specification and programme if required.

Watching Brief Objectives

The archaeological watching brief objectives are:

- to identify and record the presence/absence, nature, extent, and date of any archaeological remains during construction activities.

Historic Building Survey Objectives

The Historic Building Survey Objectives are:

- Use of historical survey drawings for comparable investigation relating to building form and function, identification of fixtures and fittings, where visible or accessible;
- Pay particular attention to features relevant to the primary use of the site;
- Provide detailed accounts of fixtures, fittings and architectural features, where visible or accessible; and
- Provide a photographic record of the structures in context.

4 SCOPE OF WORKS

4.1 General

The Archaeological Contractor shall prepare and submit a Risk Assessment and Method Statement for the works prior to commencement of the investigations for approval by the Archaeological Consultant and the Principal Contractor. The Method Statement must make reference to the surveying technique proposed to map the archaeological remains and to locate the areas of archaeological watching brief.

Prior to the start of the archaeological work(s) the Archaeological Contractor will undertake any necessary health and safety training or inductions as required and provided by the Principal Contractor or their agents.

The fieldwork will be undertaken by a suitably qualified and experienced archaeologist. The archaeological recording and investigative techniques will be in line with current industry best practice and shall be clearly understood by all those who undertake the archaeological watching brief.

All paper and digital records made during the course of the fieldwork, and the treatment of artefacts and environmental remains, will be reviewed continuously. Record checking and collation will be completed at regular intervals.

During the course of the investigations the Archaeological Contractor may be required to undertake toolbox talks in order to inform construction supervising staff and site operatives of sensitive remains /areas.

The Principal Contractor or their agents shall be responsible for undertaking pre-condition assessment prior to the start of the ground investigation work and for the rectification of any damage and the backfilling of the investigations.

4.2 Specific Works

One area has been identified for archaeological trial trenching (the former site of Grosvenor Street Chapel).

The indicative locations at which archaeological trial trenching is required at are shown on Figure 3 & 4 and are described in Table 1.

Table 1: Archaeological Trial Trenching Requirements (Grosvenor Street Chapel)

Trial Location	Trench	Number of Trenches	Dim.	Description	Figure No
Grosvenor Street Chapel		3	25x2m	- establish level of survival, followed by further mitigation if required	3 and 4

The indicative locations at which archaeological watching briefs are required at are shown on Figures 5, and are described in Table 2.

Table 2: Archaeological Watching Brief Requirements

Watching Brief Location	Description	Figure No
Beamish Close	Watching brief to be carried out during the demolition works on three dwellings to the north of Beamish Close. The demolition of three dwellings to the north of Beamish Close has the potential to physically impact upon the foundations of middle class housing seen on the 1793 maps.	3 & 6
Gartside Gardens and the former site of Anchor Brewery	Watching brief to be undertaken within the confines of Gartside Gardens. Site was the former location of Rusholme Cemetery and the Anchor Brewery.	3 & 7

The indicative location which the historic building recording is required is shown on Figures 5, and is described in Table 3.

Table 3: Historic Building Recording Requirements

Historic Building Recording Location	Description	Figure No
Kings Arms Pub	Historic building survey (level 2) of the Kings Arms Pub prior to demolition.	3 & 5

5 WORKS SPECIFICATION

5.1 TRIAL TRENCHING AND WATCHING BRIEF

All archaeological works will be carried out in accordance with this Written Scheme of Investigation (and any further instructions from URS). This design takes account of assessment guidance in *Standard and Guidances for Archaeological Excavation, Field Evaluation, and Watching Brief* prepared by the Institute for Archaeologists (IfA 2008); the IfA Code of Conduct (IfA 2010) and other current and relevant best practice and standards and guidance (refer to Appendix 1).

The Sub-contractor shall prepare and submit a Programme, Method Statement and Risk Assessment for the works prior to commencement of fieldwork for approval by the Contractor and URS.

5.1.1 ***Trial Trenching***

Trial trenches will be excavated at the locations indicated by URS and shown on Figure 4. The trenches should be positioned using metric-survey equipment to an accuracy of $\pm 100\text{mm}$ of the specified trench location.

The excavation areas will be subject to a rapid metal detector scan in advance of excavation to identify and recover metal artefacts within the upper topsoil/ subsoil. Scanning will only be undertaken by an experienced operator, under direct archaeological supervision. Unless of relevance to the project objectives, all recent artefacts (later 19th century and modern) will be noted but will not be retained. If a non-professional archaeologist is to carry-out the metal detecting, a formal agreement of their position as a sub-contractor working under direction must be agreed in advance of their start on site. This formal agreement will apply whether they are paid or not.

Each trench will be opened under direct archaeological supervision using an appropriate mechanical excavator fitted with a toothless ditching bucket.

All trenches are to be the stated dimensions at their base as indicated in Table 1.

The arisings from the archaeological works will be stored adjacent to the trench (within a safe working distance) and will be separated according to material (so that topsoil will be separated from subsoil and made ground separated from topsoil).

The arisings from the trenches shall be subject to a rapid metal detector scan, in order to recover metal artefacts not recovered during mechanical excavation of the trench.

The excavation will proceed under direct archaeological supervision, in level spits, until either the top of the first archaeological horizon or undisturbed natural deposits are encountered. Particular attention should be paid to achieving a clean and well-defined horizon with the machine. It is not anticipated that entire trenches will require hand cleaning. Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits. The surface achieved through machine excavation will be inspected for archaeological remains. The mechanical excavator will not traverse any stripped areas.

If important concentrations of artefacts are uncovered during machining and are suggestive of significant activity, these should be left *in situ* in the first instance.

The machined surface will be cleaned by hand, where required, for the acceptable definition of archaeological remains. Following cleaning, all archaeological remains will be planned.

The trial trenches will be clearly demarcated with netlon fencing, supplied by the 'Contractor', to ensure that persons or plant cannot inadvertently traverse across the area of investigation whilst archaeological works are in progress. The netlon fencing will be regularly inspected and maintained until works in the area have been completed, inspected and approved by URS and Greater Manchester Archaeological Advisory Service and the trenches backfilled.

The trial trenches shall not be reinstated without the prior approval of URS and Greater Manchester Archaeological Advisory Service, although in exceptional circumstances some backfilling would be permitted if health and safety or ground stability reasons warrant this.

The trial trenches shall only be backfilled by machine under appropriate conditions and with direct archaeological supervision. Arisings will be returned strictly in the correct sequence and will not be compacted.

Any land drains encountered during the archaeological works will be left *in situ* and upon completion of the works they will be carefully backfilled and covered-over to avoid damage.

5.1.2 **Watching Brief**

A Watching Brief will be undertaken in the locations proposed by URS (Figure 6 & 7 and Table 2). Each area shall be set out using electronic survey equipment to an accuracy of $\pm 100\text{mm}$.

An archaeologist will be present on site as necessary and appropriate to monitor all excavation and/or soil disturbance during groundworks for the defined part of the scheme that require archaeological watching brief. The archaeologist will monitor the areas, where possible and practicable. The defined areas will be stripped using an appropriate mechanical excavator with a back-acting arm fitted with a toothless ditching bucket.

If archaeological remains are identified, construction works will cease in the affected areas and the archaeologists will be given sufficient time to excavate and record the remains as appropriate. The watching brief should not cause undue delay to the works or the main contractors programme.

If extensive or significant archaeological deposits and/or features are identified the archaeologist will notify the URS archaeological consultant immediately.

Additional archaeologists may be deployed, but only with the prior written consent of the URS archaeological consultant.

The archaeologist shall not excavate any area beyond those impacted by the proposed scheme.

A full written, drawn and photographic record will be made of all archaeological features. Hand drawn plans and sections of features will be produced at an appropriate scale (normally 1:20 for plans and 1:10 for sections).

Colour transparency and monochrome negative photographs will be taken at a minimum format of 35mm. Digital photographs will be used to supplement the site archive. In addition to records of archaeological features

5.2 **Hand Excavation Details**

Archaeological features and deposits will be hand excavated in an archaeologically controlled and stratigraphic manner in order to meet the aims and objectives of the investigation.

Machine-assisted excavation may be permissible if large deposits are encountered but only after consultation with the URS archaeological consultant and the County Archaeologist.

All archaeological features and deposits will be investigated and recorded. Hand excavation will initially be targeted to provide information on the form, function and date of the feature.

Stratigraphic relationships between features will be investigated and recorded; except where relationships can clearly be discerned on the surface, and where this has been agreed on site at a monitoring meeting. Sampling strategies for specific feature types are as follows:

Linear features: Segments for hand excavation, each segment not less than 1m long, will be regularly spaced along the visible length of the feature.

10% of the fills of substantial linear features (ditches, etc) are to be excavated (min.). The samples must be representative of the available length of the feature and must take account any variations in the shape or fill of the feature and any concentrations of artefacts. For linear features, 1.00m wide slots (min.) should be excavated across their width.

Additional segments (up to a maximum sample of 20%) may be excavated where good quality artefact/ecofact assemblages have been recovered from initial segments, or where insufficient data to address the project objectives has been recovered.

All pits will be half-sectioned. Where good quality artefact/ecofact assemblages have been recovered, or where understanding of the form and function of the pit may be enhanced, additional excavation will be agreed in consultation with the URS archaeological consultant and the County Archaeological Officer.

All post holes will be half-sectioned. Additional excavation may be required where post-holes are part of a clearly defined structure or where they contain post-packing or evidence of in-situ burning.

Stone structures, hearths, ovens or kilns identified at the pre-excavation planning stage, will be excavated in accordance with methodologies developed with appropriate specialists. Particular care should be taken that no areas of in-situ burning are excavated or disturbed before the possibility of scientific dating has been considered.

Burials see section 5.6.

If deep features, such as shafts or wells, are encountered hand-excavation will not proceed below a depth of 1.2m from the machined surface. Appropriate methodology for achieving full excavation below this depth will be agreed in consultation with the Main Contractor, URS archaeological consultant and the County Archaeological Officer.

A separate method statement for excavation of deep features would be prepared by the URS archaeological consultant, if required in consultation with the CDM Co-ordinator.

5.3 Recording

All archaeological features, deposits and layers (contexts) will be assigned an individual number in a unique sequence.

A full written, drawn and photographic record will be made of the excavated area.

All archaeological remains will be recorded in plan and section or profile. Composite plans will be drawn at a scale of 1:20 or 1:50 as appropriate. Individual feature plans, such as burials, hearths or ovens, will be drawn at a scale of 1:10 or 1:20 as appropriate.

All plans and sections will include spot heights relative to Ordnance Datum in metres, correct to two decimal places.

Colour transparency and monochrome negative photographs will be taken at a minimum format of 35mm. In addition to records of archaeological features, a number of general site photographs, which may be in digital format, will also be taken to give an overview of the site.

Particular attention should be paid to obtaining shots suitable for displays, exhibitions and other publicity.

5.4 Artefact Recovery

All artefacts will be collected, stored and processed in accordance with standard methodologies and national guidelines (refer to Appendix A). All non-modern artefacts will be collected and retained. Each 'significant find' will be recorded three dimensionally. Similarly, if artefact scatters are encountered these should also be recorded three dimensionally. Bulk finds will be collected and recorded by context.

Where necessary the artefacts will be stabilised, conserved and stored in accordance with the guidelines of the United Kingdom Institution of Conservators (UKIC). Artefacts will be properly conserved after excavation and will be stabilised for storage. If necessary, a conservator will visit the site to undertake 'first aid' conservation treatment.

Artefacts will be stored in appropriate materials and conditions, and monitored to minimise further deterioration.

5.5 Environmental sampling

The Method Statement will outline an appropriate environmental sampling strategy that conforms to this specification. If important archaeological remains are encountered then the English Heritage Regional Science Advisor (RSA) will be notified and will be consulted regarding the sampling strategy proposed by the Contractor. In addition, the Archaeological Contractor's environmental specialist will visit the site to ensure that the agreed sampling strategy is appropriately implemented and to offer specialist advice whenever required. Appropriate provision will also be made for the recovery of material suitable for scientific dating.

Any samples taken must come from appropriately cleaned surfaces, and will be collected with clean tools and will be placed in clean containers. They will be adequately recorded and labelled and a register of all samples will be kept. Once the samples have been obtained they will be stored appropriately in a secure location prior to being sent to the appropriate specialist.

5.6 Human remains

Should human remains be discovered during the course of the excavations, the remains will be covered and protected and left *in-situ* in the first instance, in accordance with current best practice. The removal of human remains will only take place in accordance with a licence from the Ministry of Justice and under the appropriate Environmental Health regulations and the Burial Act 1857. In the event of the discovery of human remains the archaeological contractor will notify the Consultant immediately, who will contact the Greater Manchester Archaeological Advisory Service to establish whether it is necessary to contact the office of H.M. Coroner. A method statement regarding the removal of human remains is attached as Appendix 2.

5.7 Treasure Trove

Any recovered artefacts that fall within the scope of the Treasure Act 1996 and Treasure (Designation) Order 2002 will be reported to the Consultant, Greater Manchester Archaeological Advisory Service and H.M. Coroner immediately, and will ensure that the Treasure regulations are enforced and that all the relevant parties are kept informed. In addition the Contractor shall maintain a list of finds that have been collected that fall under the Treasure Act and related legislation and this list shall be included in the fieldwork report.

Artefacts that are classified as 'treasure' will be removed to a safe place but where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from damage or unauthorised removal.

5.8 Finds processing

Initial processing of finds (and if appropriate other samples) will be carried-out concurrently with the fieldwork. The processing of finds will be finished shortly after completion of the investigations. The finds will be retained (according to the Collection Policy), washed, marked, bagged and logged on a MS Access or GIS database (or equivalent), together with their locations (if applicable) according to the National Grid (eastings, northings) and Ordnance Datum (height), accurate to two decimal places.

The finds assemblage will be treated, labelled and stored in accordance with the appropriate English Heritage guidance documents and the Institute of Conservation guidelines (refer to Appendix 1). At all times the Contractor shall ensure that the processing of the assemblage is in accordance with the requirements of the recipient repository.

If appropriate, each category of find or each material type will be examined by a suitably qualified archaeologist or specialist and the results incorporated into the report.

6 BUILDING RECORDING

The record will consist primarily of a detailed photographic record of the site, complemented with a report including a written description and analysis of phasing. The field data will be analysed in the context of a review and examination of cartographic, documentary and other historic sources. Historic photographs and plans will be reproduced within the report for illustrative purposes.

The results of the fieldwork will be documented both in the form of an ordered archive and written account. The project is to be undertaken according to standards and guidance set out by both the IfA and English Heritage, particularly English Heritage's 2006 publication: 'Understanding Historic Buildings: A guide to good practice', and will be carried out in accordance to the detailed requirements of this specification.

6.1 Site Photography

A detailed photographic survey will be undertaken, recording the building in its current condition.

The photographic coverage will encompass as a minimum:

- The buildings' external appearance;
- The overall appearance of principal rooms and circulation areas, where visible or accessible;
- Any external or internal detail which is relevant to the buildings' design, development and use and which does not show adequately on general photographs and which is visible or accessible;
- For the interior, detailed views of features of especial architectural interest, fixtures and fittings, associated machinery, blockings or jointing relevant to phasing the building, where visible or safely accessible; and
- Selected views which place the building within its wider context.

The record will comprise black and white digital photography with a resolution of at least 10 mega pixels. This will be complimented by digital colour images which will duplicate those undertaken in black and white. The black and white photographs will be reproduced on archive quality photographic paper for submission to the Greater Manchester Archives. The colour photographs will also be reproduced for submission to the Greater Manchester Historic Environment Record.

A register of photographs will be maintained to relate the record to the written description. Viewpoint directions will also be located on a plan of the site alongside frame numbers. All photographs will include an appropriate scale, where possible. When employed, the scale will be positioned so as not to be intrusive.

6.2 Drawn Record

The drawn record will be limited to examination of existing plans and elevations. It is not intended to undertake a new survey of the structures. Existing building plans will be reproduced as part of the report.

The written description of the buildings will comprise a description of each individual structure and grouping. The buildings' plan, form, fabric, function, age and development sequence will be analysed, and evidence provided to support this analysis, alongside an account of the buildings' past and present use. An account will also be given of any fixtures, fittings, plant or machinery associated with the buildings, and its purpose.

6.3 Documentary and Historical Research

This will comprise an examination and review of documentary, pictorial and cartographic evidence, including the results of previous investigations. The sources consulted will include as a minimum:

- Information held on the Greater Manchester Historic Environment Record;
- Collections held by Greater Manchester Archives;
- Collections held at the local studies section of Manchester Central Library;
- VCH, Pevsner, RCHME and other County surveys; and
- Historic maps.

These documents are to be critically examined, catalogued, collated and reproduced where possible. The data retrieved from these records will be integrated into the overall site interpretation and understanding.

6.4 Resources

The project manager will be Amy Jones, Principal Built Heritage Consultant at URS. She will be responsible for monitoring all stages of the project. All fieldwork and collation of historical data will be undertaken by URS staff fully qualified and experienced in the recording and analysis of historic structures.

The works shall be monitored by the Archaeological Officer at Greater Manchester Archaeological Advisory Service who shall be notified of the commencement of site works.

The buildings investigation work is to be undertaken in advance of all site works and will record the buildings as existing.

6.5 Health and Safety

URS will undertake the site work with due regard to health and safety. A Risk Assessment will be completed prior to any works commencing on site. This will be compiled using national guidelines and in accordance with all health and safety legislation. Health and Safety will take priority over archaeological issues.

Areas identified as being dangerous will be surveyed from a safe place, such as door openings and/ or windows. Where no such place exists, the area will not be surveyed and the record will rely on historic information. Similarly, if asbestos is identified these areas will not be entered as part of this survey.

6.6 Dissemination of Results

A fully illustrated analytical report will be submitted to the Great Manchester Historic Environment Record upon completion of the fieldwork. The report will include, as a minimum:

- A non-technical summary of the survey's findings;
- The aims and methods adopted in the course of recording;
- Background information to the site, including the site's topography and location details;
- A detailed and illustrated description of the fabric;
- A full and illustrated analysis of the data, complimented by other historical sources as appropriate;
- An assessment of the phasing, dating and development of the buildings on the basis of information collected;
- An annotated site plan indicating the position, which the photos were taken from with frame numbers.
- A summary of results;

MONITORING, PROGRESS REPORTS & MEETINGS

The fieldwork shall be subject to monitoring visits by the Consultant, who will have unrestricted access to the site, site records or any other information. The work will be inspected to ensure that it is being carried out to the required standards and that it will achieve the stated objectives.

Weekly written progress reports (via e-mail each Monday to be received no later than 09:30 hrs) will be provided to the Consultant by the Contractor during each phase of fieldwork. In addition, the Contractor will inform the Consultant on the progress of the fieldwork verbally upon request.

Progress meetings between the Consultant and the Contractor will be held on site during the course of the fieldwork. The Greater Manchester Archaeological Advisory Service and, if appropriate the English Heritage Regional Science Advisor shall be invited to attend. These meetings will be arranged by the Consultant; monitoring meetings will also be held during the post-excavation phase of the project if appropriate.

The Contractor will only accept instruction from the Consultant.

8 COMPLETION OF FIELDWORK

The Contractor shall prepare and submit a Completion Statement to the Consultant within one working day of completing the fieldwork.

The site will be left in a tidy and workman-like condition, and the Archaeological Contractor will ensure that all materials brought onto site are removed.

As a minimum, an Online Access to the Index of archaeological investigations (OASIS) entry shall be completed at the end of the fieldwork, irrespective of whether a formal report is required (<http://ads.ahds.ac.uk/project/oasis/>). If appropriate the entry should include caveats about conclusions drawn in advance of analysis. The OASIS entry may be updated and re-submitted not later than three months after the completion of a report. The Contractor is advised to ensure that adequate time and costings are built into their tenders to complete the form to a satisfactory standard.

REPORTING

An interim statement will be prepared and submitted to the Consultant within one week of the completion works. The interim statement will include:

- a brief summary of the results;
- a draft or sketch plan of each archaeological area or site; and
- a quantification of the primary archive including finds and samples.

The finds and samples will be processed (cleaned and marked) as appropriate. Each category of find or environmental/ industrial material will be examined by a suitably qualified archaeologist or specialist and the results incorporated into the fieldwork report. The archive will be quantified, ordered, indexed and internally consistent. Provisional site matrices and a short summary of the findings (including the artefactual and environmental data) will be prepared.

Reporting will be undertaken within four weeks following the completion of the fieldwork. The preparation of the site archive and the final report will be undertaken in accordance with current good practice (English Heritage 1991, 2006, 2008) and the relevant archaeological standards and national guidelines (Appendix 1). The precise format of the fieldwork report is dependant upon the findings of the investigations, but it will include:

- a QA sheet detailing as a minimum (title, author, version, date, checked by, approved by);
- a non-technical summary;
- site location details;
- a brief archaeological, historical and project background;
- a description of the methodology followed;
- aims and objectives;
- results of the trial trenching (to include full descriptions, assessment of condition, quality and significance of the remains);
- an appendix containing specialist artefact reports;
- a list of all finds that fall within the scope of the Treasure Act and associated legislation;
- an appendix containing plates illustrating specific finds, working shots and portraits of specific features or structures or important remains;
- a stratigraphic matrix (if appropriate);
- an assessment section and, if appropriate a statement of potential with recommendations for further work and analysis;
- statements regarding immediate and long-term storage and curation;
- statement of the significance of the results in their local, regional and national context;
- publication proposals (if warranted);
- general and detailed plans showing the location of the investigation areas accurately positioned on an OS basemap with grid co-ordinates and a plan of the identified archaeological remains (to a known scale);

- detailed plans and sections illustrating archaeological features and / relationships between features (at an appropriate and recognised scale); and
- a cross-referenced index to the project archive.

The fieldwork report will specifically comment on the level of preservation and will comment on the character of the overlying deposits and on the potential for extrapolating the results into adjacent areas.

Two bound hard copies and a digital PDF copy (complete with illustrations and plates) of the completed report will be submitted to the Consultant as a draft for comment. The Consultant will submit a copy of the draft report to the Great Manchester Archaeology Service for comment and if appropriate English Heritage. In finalising the report the comments of the Consultant and Great Manchester Archaeology Service will be taken into account.

Six bound copies (together with one unbound master-copy and digital versions in both Word and PDF format) of the final report will be submitted to the Consultant within two weeks of the receipt of comments on the draft report.

A copy of all reports will be submitted to Greater Manchester Archaeological Advisory Service for inclusion on the County Historic Environment Records.

A project CD shall be submitted containing image files in JPEG or TIFF format, digital text files shall be submitted in Microsoft Word format, and illustrations in AutoCAD format or ArcView shapefile format. A fully collated version of the report shall be included in PDF format.

RESOURCES AND TIMETABLE

The Contractor must ensure that they have adequate and appropriate management procedures in place to ensure that risks to the programme timetable (more extensive remains, better preserved deposits, exceptional finds and interruptions from periods of prolonged inclement weather or restrictions caused by animal disease) can be identified at an early stage. These risks will be kept under constant review by the Contractor to ensure that the aims and objectives are met within the agreed budget. The Consultant will be notified at the earliest opportunity of any changes to the methodology or programme of work that arise from review. Changes/ variation to the programme will only be accepted after they have been agreed in writing with the Consultant. The Contractor shall give immediate warning to URS should any agreed programme date not be achievable.

An experienced archaeologist familiar with monitoring heavy plant during archaeological work shall be deployed with each mechanical excavator. During archaeological excavation and recording, additional manpower resources may be deployed to deal archaeological remains, but only with the agreement of URS and after the archaeological strategy has been agreed with URS and approved by the Greater Manchester Archaeological Advisory Service.

All archaeological personnel involved in the project should be suitably qualified and experienced professionals and hold valid Construction Skills Certification Scheme (CSCS) cards for a Construction Related Occupation. The Contractor shall provide the Consultant with staff CVs of the Project Manager, Site Supervisor and any proposed specialists that might be involved in the post-excavation work. Site assistants' CVs will not be required, but all site assistants should have an appropriate understanding of excavation procedures.

All staff will be fully briefed and aware of the work required under this specification and will understand the objectives of the investigation and methodologies to be employed.

The Consultant will notify Greater Manchester Archaeological Advisory Service of the commencement of the fieldwork at least one week prior to the start of the investigations.

POST-EXCAVATION ANALYSIS AND PUBLICATION

The post-excavation analysis and preparation of final reports will be undertaken in accordance with MoRPHE, the Post-excavation Assessment Report and Updated Archaeological Design and the relevant archaeological standards and national guidelines (Appendix 1). The scope of the required analysis and the content of the final reports are both dependent upon the findings of the investigations. This will be reviewed and finalised in the Post-excavation Assessment Report and Updated Archaeological Design. The timetable for issuing this is 3 months, comments from URS will be sent following a review period of 2 weeks after completion of the fieldwork.

The analysis stage will be undertaken in accordance with the approved Updated Archaeological Design. It will lead to the compilation of a research archive and the production of integrated report texts and illustrations for publication.

Depending on the significance of the artefactual material recovered and the archaeological remains identified, a report may need to be submitted for inclusion in an appropriate local, regional or national journal.

The completed texts (and illustrations) will be submitted to URS in the first instance for review and comment. Following receipt of any comments the Archaeological Contractor will provide URS with the updated report. This will then be submitted to the County Archaeologist for review and comment. Any comments will be provided within 1 month of submission. The Archaeological Contractor will be required to address any comments within 2 weeks.

The format of any publication shall be commensurate with the importance of the results and be agreed with URS, the County Archaeological Officer and the Sub-contractor (Oxford Archaeology).

The publication of the results are to encompass the results referred to in the Written Scheme of Investigation. If additional fieldwork is required during the life of the project, the aforementioned publication will be delayed to take account of any significant results from such work.

Interpretation Boards and/or Popular Booklets

Interpretation boards to explain and illustrate the site shall be displayed on the site in a position readily accessible to the public. Details of the interpretation board including its dimensions, its position on the site and its written and illustrative content shall be agreed in writing by the Local Planning Authority before it is displayed.

A popular booklet to explain and illustrate the site shall be made in the GM Past Revealed series.

ARCHIVE PREPARATION AND CURATION

The Contractor will, prior to the start of fieldwork, liaise with The Museum of Science and Industry, Manchester (MOSI) to obtain agreement in principle to accept the documentary, digital and photographic archive for long-term storage. The Contractor will be responsible for identifying at the initial project set-up stage any specific requirements or policies of the recipient repository in respect of the archive (for example, the discard policy for retained finds), and for adhering to those requirements. The Archaeological Contractor shall immediately inform the Consultant of the policies adopted, who shall in turn inform the Greater Manchester Archaeological Advisory Service.

The Museum of Science and Industry, Manchester (MOSI) accepts selected archaeological material from post-Medieval and Industrial sites within the City of Manchester. All acquisitions are evaluated by the Museum's Collections Development Group with reference to MOSI's *Acquisition and Disposal Policy*. MOSI reserves the right to refuse any archive that is not in line with this policy or fails to meet the minimum conditions for acquisition as laid out in the *Guidelines for the Transfer of Archaeological Archives*.

In order to assist the acquisition process, MOSI must be informed of a project at the earliest opportunity in the planning process and a site visit should be arranged. Initial contact should be made by emailing the Collections Department at collections@mosi.org.uk.

Any charges levied by the repository for the long term storage of the archive will be met by the Contractor.

The site records and assemblages (list of fieldwork interventions, notebooks/ diaries, context records, feature records, structure records, site geometry (drawings), photographs and films, finds records and associated datafiles) will constitute the primary Site Archive. This is the key archive of the fieldwork project and the raw data upon which all subsequent assessment and analysis and future interpretation will be based. The archive will therefore not be altered or compromised. It will remain the original record of the fieldwork. The site archive will be kept secure at all times and should be quantified, ordered, indexed and made internally consistent in line with current good practice (Brown 2007, English Heritage 2011). All finds and coarse-sieved and flotation samples will have been processed and stored under appropriate conditions. The archive will also contain a site matrix, a summary of key findings and descriptions of artefactual and environmental assemblages. Arrangements should be made for the proper cataloguing and storage of the archive during the project life-cycle (it may be appropriate to liaise with an archive specialist).

The archive of finds and records generated during the fieldwork will be removed from site at the end of each day and kept secure at all stages of the project until it is deposited in the agreed repository. The archive will be produced to current national standards (refer to Appendix 1).

The deposition of the archive forms the final stage for each phase of development at the application site. The Contractor shall provide the Consultant with copies of communication with the accredited repository and written confirmation of the deposition of the archive. The Consultant will deal with the transfer of ownership and copyright issues and will inform the Greater Manchester Archaeological Advisory Service once the archive has been transferred to the recipient repository.

13**CONFIDENTIALITY AND PUBLICITY**

The archaeological works may attract the interest of the public and the press. All communication regarding this project is to be directed through the Consultant. The Contractor will refer all inquiries to the Consultant without making any unauthorised statements or comments.

The Contractor will not disseminate information or images associated with the project for publicity or information purposes without the prior written consent of the Consultant.

Provision shall be made for publicising the results of the investigations locally.

COPYRIGHT

The Archaeological Contractor shall assign copyright in all reports, documentation and images produced as part of this project to the Client. The Contractor shall retain the right to be identified as the author or originator of the material. This applies to all aspects of the project. It is the responsibility of the Contractor to obtain such rights from sub-contracted specialists.

The Contractor may apply in writing to use or disseminate any of the project archive or documentation (including images). Such permission will not be unreasonably withheld.

The results of the archaeological works shall be submitted to the client via URS, the Greater Manchester Archaeological Advisory Service and if required to English Heritage by the Consultant, and will ultimately be made available for public access.

ACCESS ARRANGEMENTS AND SITE INFORMATION

Access to the application site to carry-out the archaeological investigations will be arranged/organised by the Consultant subject to the Client's programme. Designated routes into and out of the area(s) will be identified and will be adhered to at all times.

The schedule for the archaeological will be agreed in advance with the Consultant.

The archaeological works shall not extend beyond the specified extent shown on Figure 2 without the agreement of the Consultant and the approval of the Greater Manchester Archaeological Advisory Service, prior to its implementation.

The Contractor will notify the Consultant immediately of any areas that cannot be opened and will provide a clear explanation for the situation.

The Contractor will record photographically (digital photographs) ground conditions within the targeted area before the start of ground works and also at completion.

INSURANCE, HEALTH AND SAFETY

The Contractor will provide the Consultant with details of their public and professional indemnity insurance cover.

The Contractor will have their own Health and Safety policies compiled using national guidelines, which conform to all relevant Health and Safety legislation and best practice. A copy of the Contractors Health and Safety policy will be submitted to the Consultant with their tender who will forward on to the Client and, if required, their Principal Contractor.

The Contractor shall prepare a Risk Assessment and if appropriate a project specific Health and Safety Plan and submit these to the Consultant for approval prior to the commencement of the fieldwork. If amendments are required to the Risk Assessment during the works the Consultant and any other interested party must be provided with the revised document at the earliest opportunity.

All staff involved in the fieldwork should be CSCS qualified to a minimum standard as an 'Archaeologist Technician'. Staff CVs will include CSCS qualifications.

If appropriate the Contractor will also liaise closely with the Principal Contractor and comply with their specified site rules, health and safety policy and the site health and safety plan.

The Principal Contractor shall be responsible for identifying any buried or overhead services and for instructing the Contractor as to the correct and necessary precautions and appropriate safe working procedures in order to avoid damage to such services prior to the start of the targeted watching brief. In the event of damage to a utility service or their equivalent the Principal Contractor shall be liable for their prompt repair or replacement.

All site personnel will familiarise themselves with the following:

- site emergency and evacuation procedures;
- the sites health and safety coordinator;
- the first aider;
- the location of the nearest hospital and doctors surgery.

The supervisor will maintain a record of site attendance for each day that there is a team in the field.

All site personnel will wear full PPE (in accordance with the requirements at the site). As a minimum it shall consist of hardhat, steel toe-capped boots with mid-sole protection and high-visibility vest or jacket and shall be worn at all times. Additional PPE will be issued by the Archaeological Contractor as required, i.e. goggles, ear defenders, masks, gloves etc. In addition, site personnel will ensure that any visitors to the excavation are equipped with suitable PPE prior to entry to the site.

As photographs taken as part of this project may be used for publicity or for publication purposes, it is essential that all personnel photographed within any working shot are wearing the specified PPE.

All equipment must be 'fit for purpose' and be maintained in a sound working condition that complies with all relevant Health and Safety regulations and recommendations.

GENERAL PROVISIONS

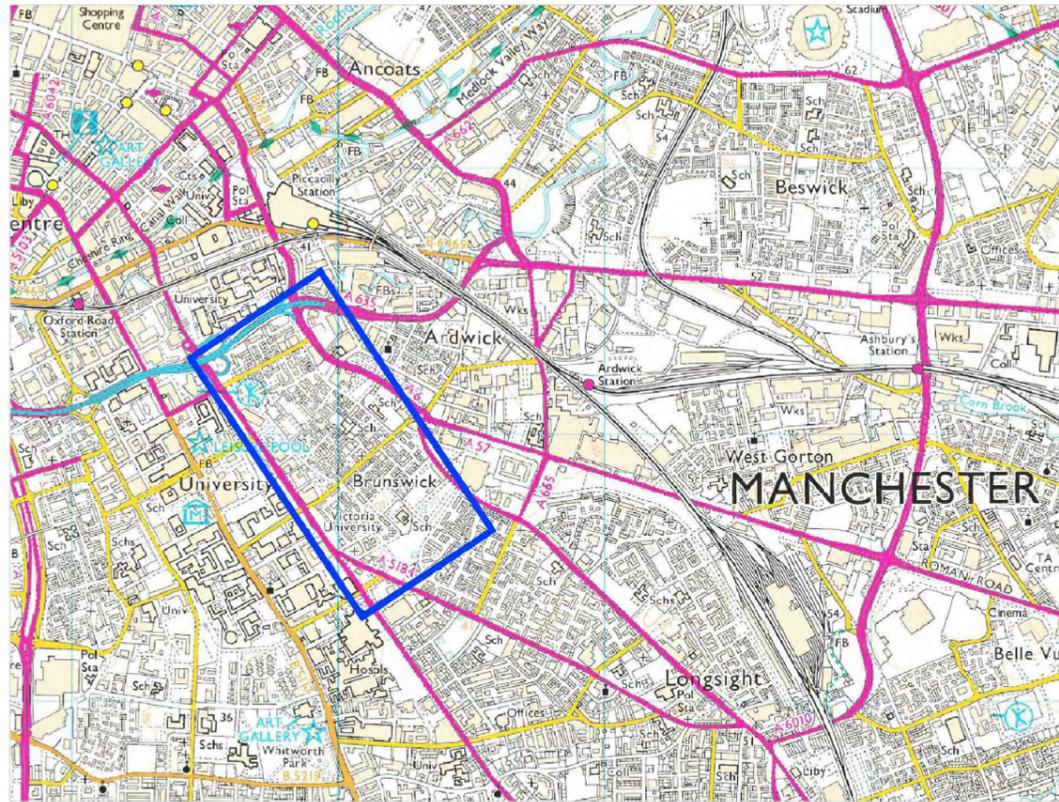
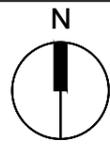
No variation from, or changes to, the WSI will occur except by prior agreement with the URS' archaeological representative (where appropriate in consultation with the Contractor, and Greater Manchester Archaeological Advisory Service).

All communications on archaeological matters will be directed through the URS' archaeological representative.

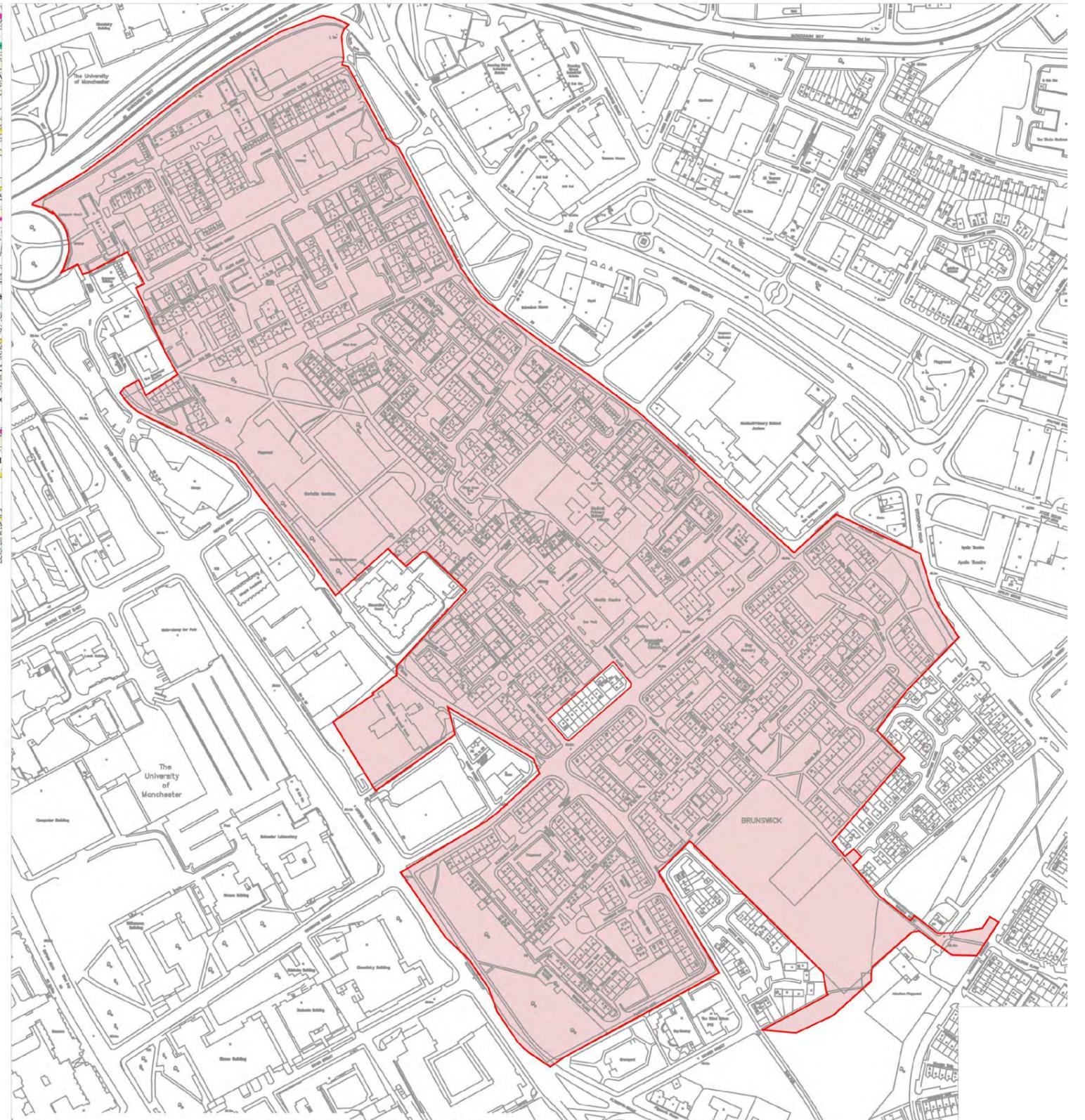
The Sub-contractor shall leave all sites in a tidy and workmanlike condition and remove all materials brought onto the site.

Access for plant and temporary parking and site welfare facilities shall be agreed with the Contractor prior to entering the site.

Provision should be made by the Sub-contractor for fencing (Heras fencing or similar) to prevent access to deep excavations.



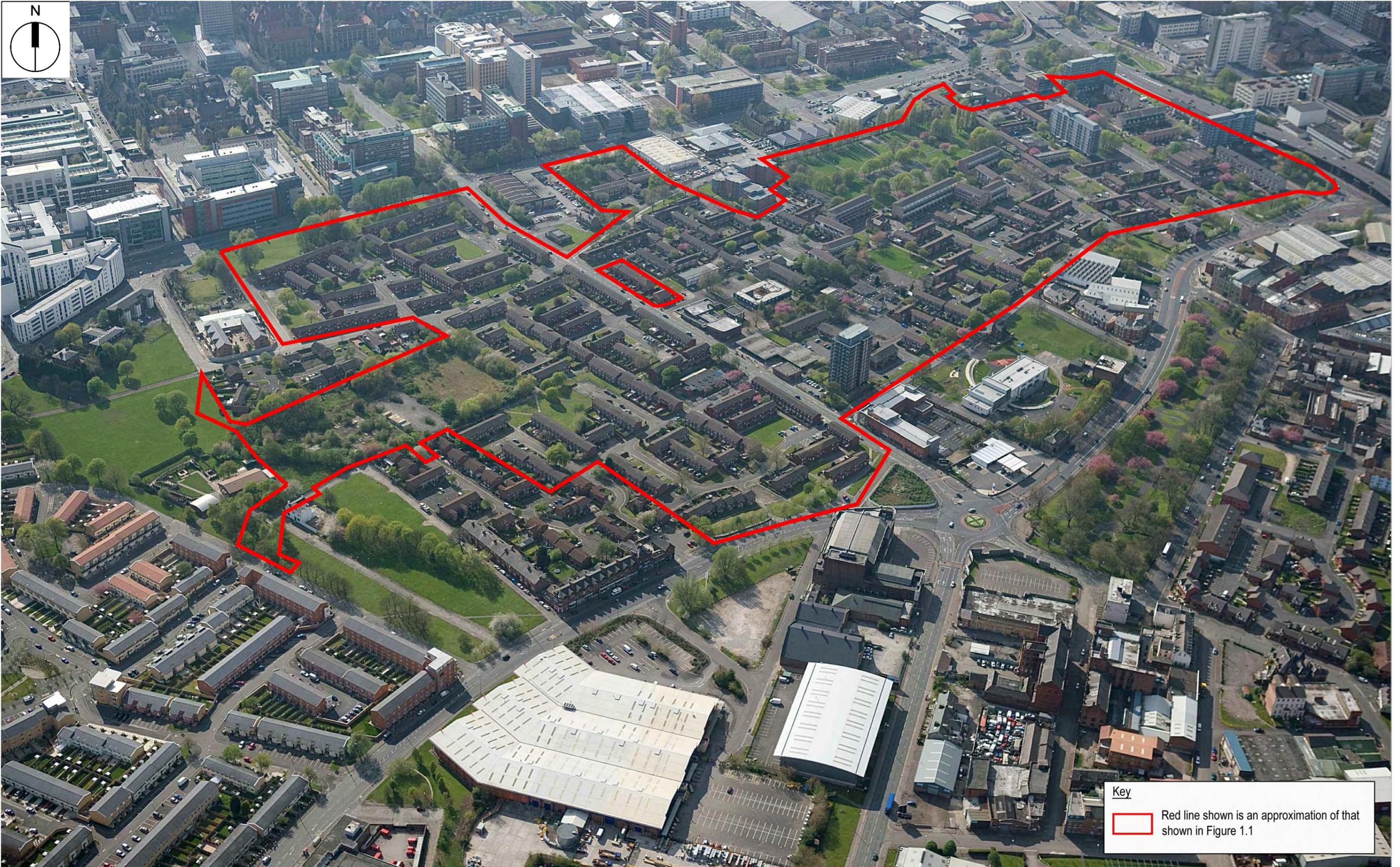
Site Location
Scale 1:25,000



Application Boundary
Scale 1:4,000

- Key**
- Site Location
 - Application Boundary

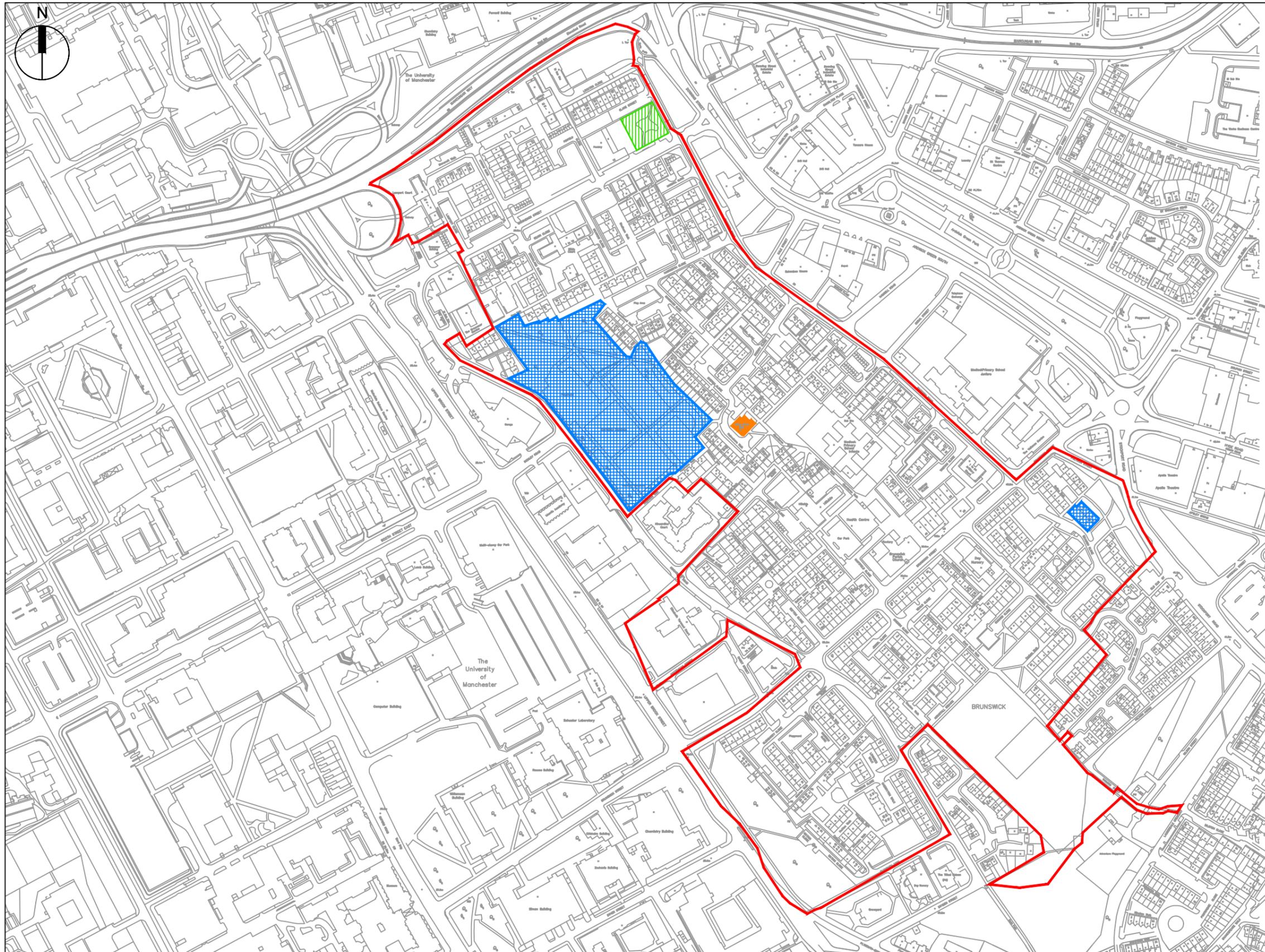
				Project Title Proposed Brunswick PFI Regeneration Scheme				Drawing Title Figure 1				Purpose of issue Final				This document has been prepared in accordance with the scope of URS' appointment with its client and is subject to the terms of that appointment. URS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided. Only written dimensions shall be used. © URS Infrastructure & Environment UK Limited					
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Key
 Red line shown is an approximation of that shown in Figure 1.1

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				Proposed Brunswick PFI Regeneration Scheme		Figure 2	Final	Designed PB	Drawn PB	Checked NF		
				Client		URS Internal Project No. 47065603	Suitability -		Zone / Mileage -			





Key

- Site Boundary
- Area of Proposed Watching Brief
- Area of Proposed Trial Trench
- Site requiring photographic building recording

Revision Details	By Check	Date	Suffix

Project Title Proposed Brunswick PFI Regeneration Scheme
Client -

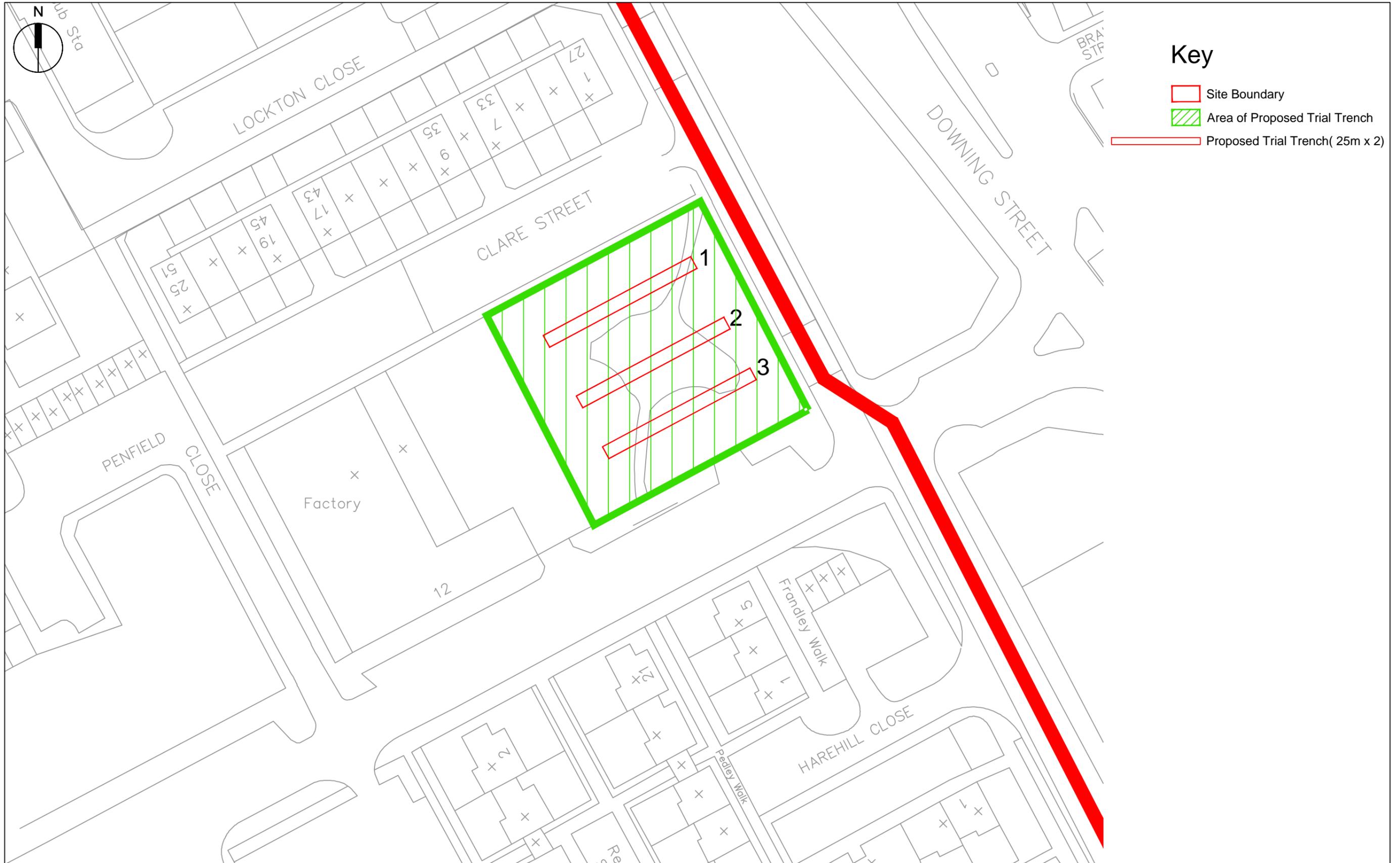
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Purpose of issue				
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URS Internal Project No. 47065603		Suitability -		
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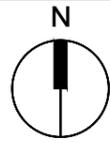
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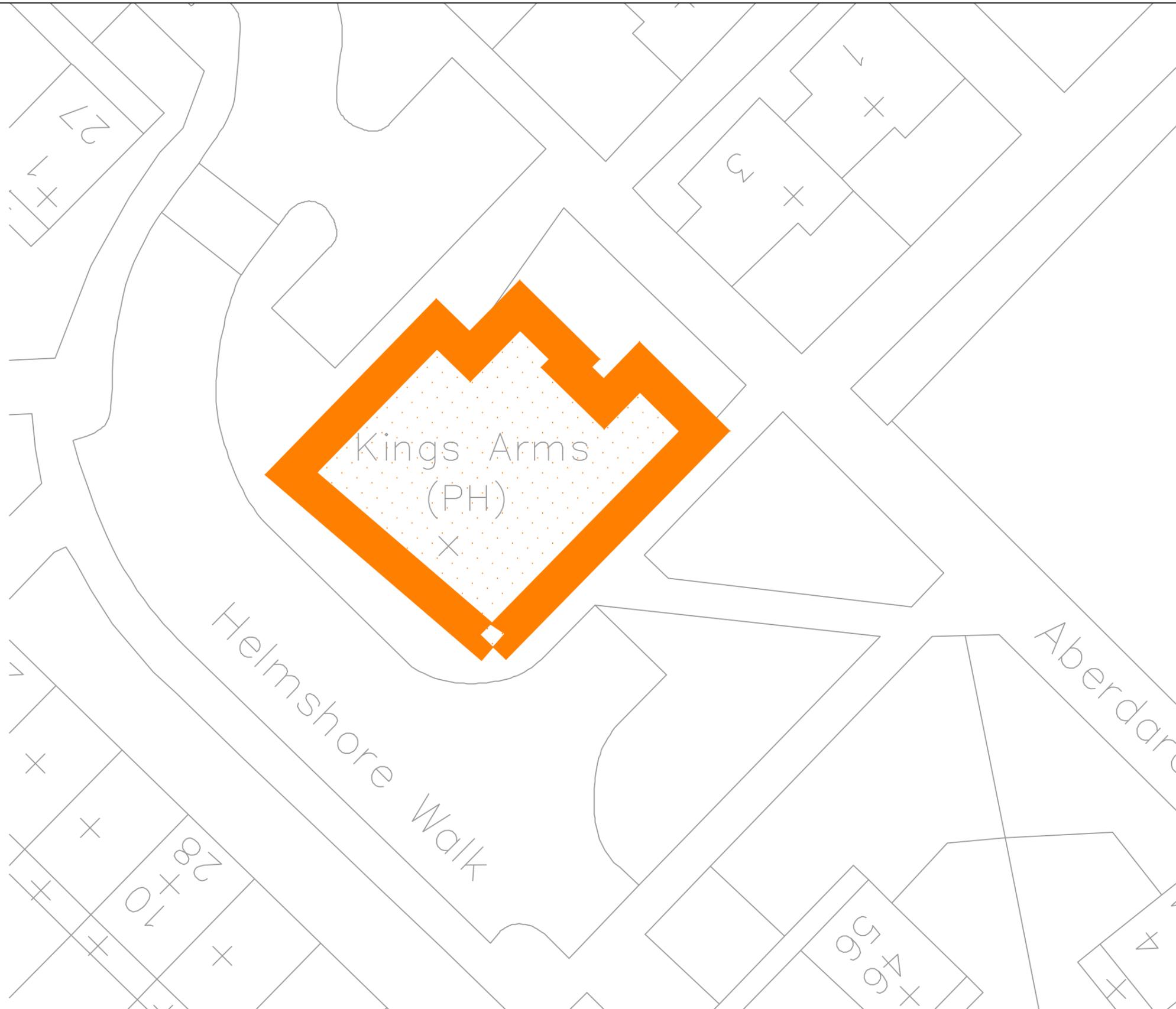


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					Proposed Brunswick PFI Regeneration Scheme	Figure 4	Designed	Drawn	Checked	Approved	Date				URS Internal Project No. 47065603	
					Client								47065603/AR/003	-		

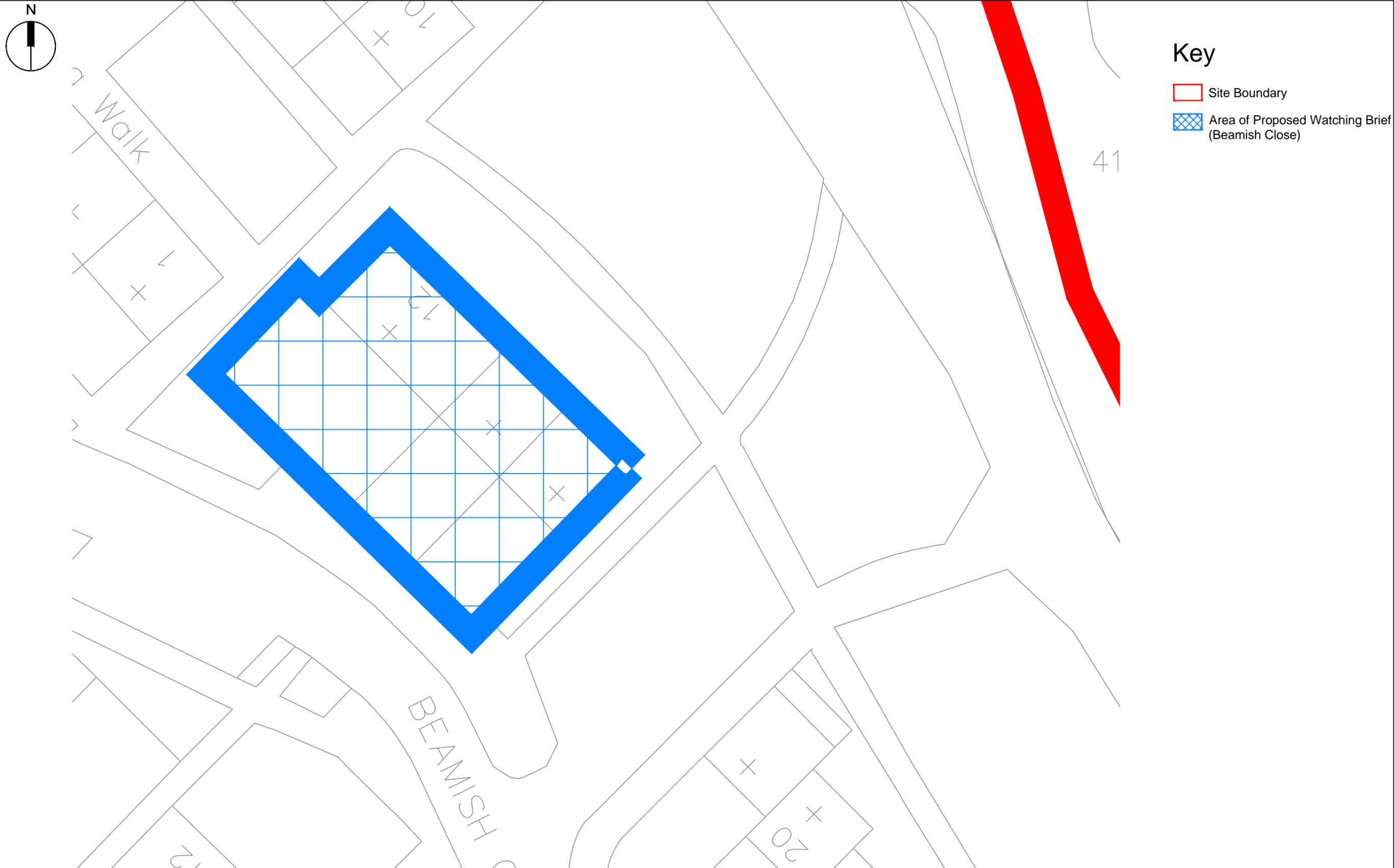


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 Site requiring photographic building recording



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				Proposed Brunswick PFI Regeneration Scheme		Figure 5	Designed PB	Drawn PB	Checked NF	Approved NF			
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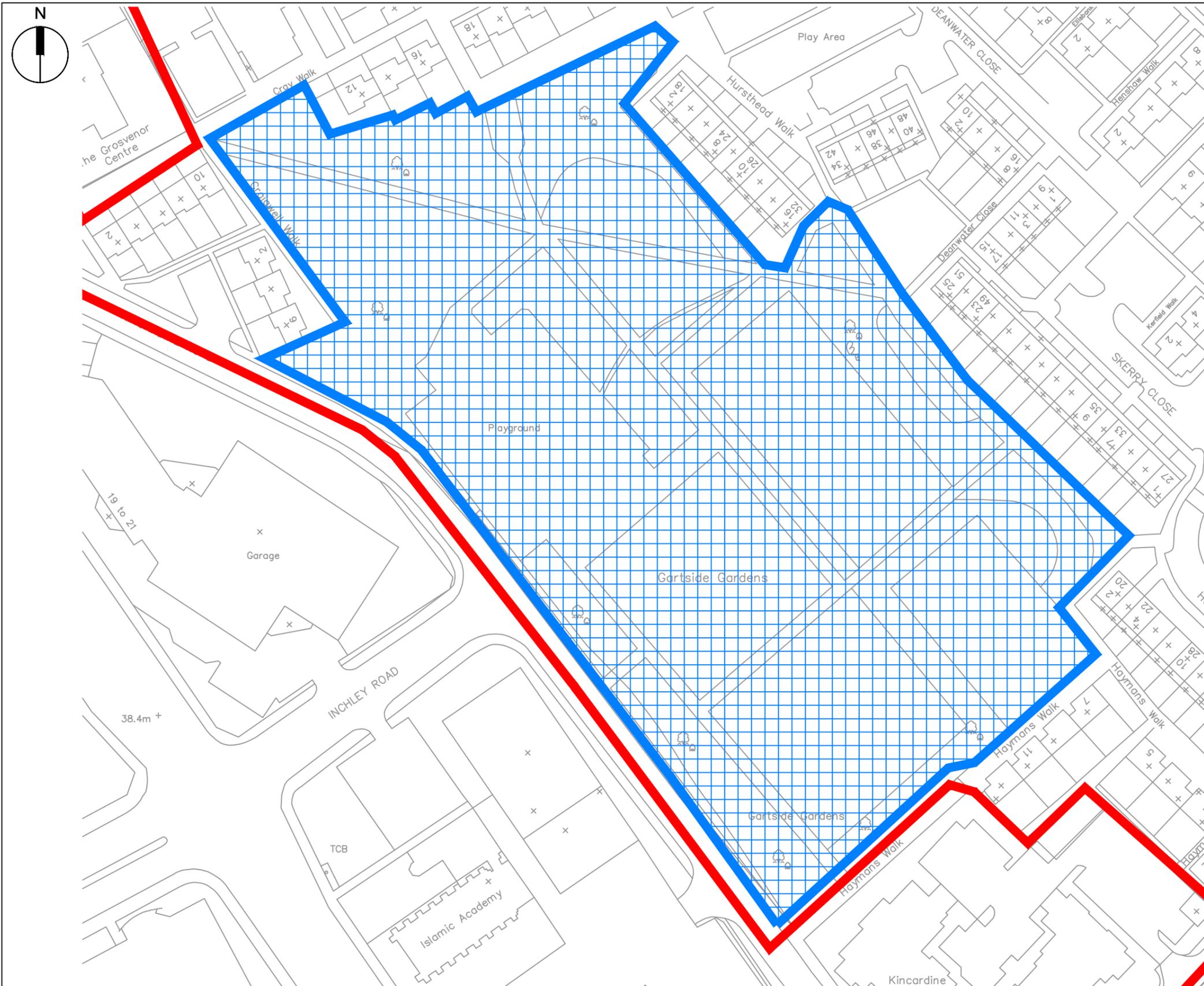


Key

- Site Boundary
- Area of Proposed Watching Brief (Beamish Close)

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				Proposed Brunswick PFI Regeneration Scheme		Figure 6	Designed PB	Drawn PB	Checked NF	Approved NF		
				Client		URS Internal Project No. 47065603		Zone / Mileage -				





Key

- Site Boundary
- Area of Proposed Watching Brief (Rusholme Cemetry and Anchor Brewery)

Revision Details	By	Date	Suffix
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Project Title	Proposed Brunswick PFI Regeneration Scheme
Client	

Drawing Title	Figure 7
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Purpose of issue				
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APPENDIX 1: Archaeological Standards and Guidelines

- AAF, 2007, Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation. Archaeological Archives Forum
- AAI&S 1988, The Illustration of Lithic Artifacts: A guide to drawing stone tools for specialist reports. Association of Archaeological Illustrators and Surveyors Paper 9
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APPENDIX 2: Method Statement for the Removal of Human Remains



GARTSIDE GARDENS, MANCHESTER

DRAFT Project Design for Archaeological Works



Oxford Archaeology North

February 2014

URS and Galliford Try

OA North Ref: L10661

CONTENTS

1. Introduction.....	3
1.1 Project Background.....	3
1.2 Key Roles, Responsibilities, and Interfaces.....	3
1.3 A Brief Background to Rusholme Road Cemetery.....	4
1.4 Aims and Objectives of the Archaeological Programme.....	6
2. BASIC CONSIDERATIONS AND SITE SET-UP	11
2.1 Legal Considerations	11
2.2 Ethical and Religious Considerations	11
2.3 Site Set-up and Attendances	12
2.4 Health and Safety	12
3. METHODOLOGIES FOR ARCHAEOLOGICAL WORKS	15
3.1 Introduction.....	15
3.2 Watching Brief.....	15
3.3 Funerary Remains	16
3.4 Communication and Project Monitoring	21
3.5 Post-excavation Works	21
3.6 Insurance	21
3.7 Copyright and Confidentiality	22
4. BIBLIOGRAPHY	23
4.1 Primary and Cartographic Sources	23
4.2 Secondary Sources	23

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Elements of the Brunswick Development, Manchester, will impact upon part of the historic Industrial-Period Rusholme Road Cemetery (now Gartside Gardens), Kincardine Road, Manchester (NGR centred on SJ 84788 97074). The following document has been produced by Oxford Archaeology (OA) North at the request of URS, archaeological consultant to Galliford Try, and represents a basic project design for the fieldwork component of a programme of archaeological mitigation within the affected parts of Gartside Gardens. That mitigation will comprise an archaeological watching brief within four areas of the Gardens, together with the archaeological recovery of suitable funerary remains (ie, all those elements of burials, including grave monuments, human remains, personal items and coffins, together with their fittings and appurtenances). Such works are necessary to meet the Development Consent Order (DCO) and the planning requirements of the Greater Manchester Archaeological Advisory Service (GMAAS, who will be advised by the English Heritage Regional Science Advisor), plus the requirements of the Ministry of Justice (MoJ) licence under the Burial Act 1857 (Section 25). This project design has been compiled in accordance with the standards and guidance of EH (MAP2, 1991; MoRPHE; 2006), the Institute for Archaeologist's (IfA 2009a-d), and the British Association for Biological Anthropology and Osteology (BABAO)

1.2 KEY ROLES, RESPONSIBILITIES, AND INTERFACES

1.2.1 Although this project design focuses on archaeological mitigation, it is an important document to be read by all of the project's stakeholders. In particular, it is recommended that an exhumation contractor (EC) should be sought, if not necessarily actively engaged, during the programming of the fieldwork, so that any (for example, fleshed) remains unsuitable for archaeological recovery can be quickly removed. Stakeholders must understand their responsibilities, and the manner in which they need to integrate with one another, to ensure that the operation is completed efficiently and safely. These roles and responsibilities are summarised in Table 1.

Stakeholder	Key Responsibilities with regard to the archaeological mitigation
Galliford Try (GT)	The Client: fund a programme of works that meets the requirements of the DCO, GMAAS, EH, and MoJ licence
GT Liaison Officer	Appointed by the Client, the Liaison Officer will approve and disseminate information to the public and media, and will be the contact point for all enquiries from the public and the media
URS: Archaeological Advisor to GT	Monitor the archaeological works on behalf of GT, to ensure that they are appropriate, efficient, and meet the requirements of the DCO, GMAAS, EH, as well as any MoJ and Environmental Health directions
Ministry of Justice (MoJ)	Issue of legal documentation permitting the removal of funerary remains from the zone of impact, and their subsequent reburial at an appropriate location
Greater Manchester Metropolitan Council (GMMC; including	Various departments to organise and undertake monitoring of environmental health and associated environmental matters; traffic management; remove vegetation and waste from the site prior to archaeological mitigation; cremate funerary remains where required; where appropriate undertake/oversee reburial of funerary remains

Bereavement Service)	
Principal Contractor (PC)	Integrate traffic management, water management, spoil removal, and storage into existing schemes for the wider development. Ensure a safe and secure working environment in accordance with stakeholder requirements. Monitor levels of contamination, groundwater movement, settlement, etc;
OA North	Undertake programme of archaeological mitigation in accordance with this project design, including the excavation, recovery, processing, and analysis of an appropriate sample of funerary remains, plus preparation for reburial
Exhumation Contractor (EC)	Remove all funerary remains unsuitable for archaeological investigation; ensure that the zone of impact is free of funerary remains prior to redevelopment; in consultation with HCC Bereavement Services, rebury any remains unsuitable for archaeological works
English Heritage (EH) and GMAAS	Monitor the archaeological works to ensure that they are enacted in accordance with the approved WSI.
Other Stakeholders	During the course of the works it is expected that other stakeholders will become involved with the project. These are likely to include various local history and archaeology groups, as well as local 'friends' groups specifically set up to raise interest, and concerns, over Gartside Gardens.

Table 1: Summary of Key Stakeholders, Roles and Responsibilities

1.3 A BRIEF BACKGROUND TO RUSHOLME ROAD CEMETERY

- 1.3.1 Gartside Gardens has been the subject of a programme of documentary research that has focused on the history of the Rusholme Road Cemetery (URS 2013a). It is not the intention of the following sections to reiterate data presented in the URS report.
- 1.3.2 The Rusholme Road Cemetery was a commercial venture by a group of prominent Non-Conformist families, and represents the country's first private burial ground. Recognising the desire for dissenting groups to bury their members outside the auspices of the Anglican Church, the group used the funds from the sale of 600 shares to purchase a plot of land at Cock Meadow. The cemetery opened in 1821, with plots sold at varying rates to those who could afford the subscription fees, irrespective of their denomination. The cemetery hosted some 9000 plots, and, with records of 78-80,000 interments, many of those plots must have seen extensive, multiple, usage (URS 2013a).
- 1.3.3 The majority of historic records which make reference to the site of Rusholme Road Cemetery all suggest that the burial records for the site were meticulous and, as such, were frequently used by members of the medical profession for statistical analysis of mortality rates within inner-city areas (such studies having become increasingly common from the 1860s onwards following the establishment of Health Inspectors in Britain's larger cities). For example, such was the clarity of the cemetery records that Pickstone notes "*Between April 1821 and April 1825 at Rusholme Road Cemetery, there were 3670 burials, of which 299 were caused by measles, eight by Scarlet Fever, 150 by Chin-cough and forty-one by croup...*" (Pickstone 1989, 55).
- 1.3.4 Similarly, in his popular history of Manchester, B. Love wrote of Rusholme Road Cemetery that "*Interments to the present time amounts to upwards of 29,000 and the Registry of all essential particulars connected with each is kept with greatest distinctiveness and care.*" (Love 1839, 179). As Love was writing a mere eighteen years after the cemetery opened, it is clear that the

cemetery was immediately a success, with an average of 1611 people per year being interred there.

- 1.3.5 By 1854 the cemetery was nearing capacity and, after that date, further interments were subject to various restrictions. By 1863, there were reports that burials were being made as little as 2 feet below ground level in private graves, and a mere 12 inches in public graves. Although small-scale burial activity continued until the cemetery was closed to new burials in 1933, it must be presumed that these were made in family graves with available space (URS 2013a; 2013c).
- 1.3.6 The site became a public park in 1954, and there are documents permitting the gravestones to be removed and the site to be levelled as part of that process (*ibid*). However, it seems that the cemetery may have been encroached upon at an earlier date. Although a lodge and a mortuary chapel on Rusholme Road would appear to be part of the original configuration of the northern end of the cemetery, by 1891 several buildings within a defined compound had been added to the burial ground's former north-west corner (Ordnance Survey (OS) 1891). The same source indicates that a substantial tranche of the cemetery's eastern side had been converted to some form a yard (initially owned by the Corporation and latterly by Pickfords, and hence referred to thus), with a small structure and a crane.
- 1.3.7 Only two pieces of archaeological fieldwork within Gartside Gardens have been documented. The first comprises a GPR survey (URS 2013b). Broadly, the survey results were interpreted as showing the presence of *in-situ* burials across large areas of the gardens, albeit that some areas were considered to have been cleared of burials, either completely, or to particular depths.
- 1.3.8 The second, undertaken in the autumn of 2013, comprised a trial-trench evaluation (OA North 2013). The principal aim of the evaluation was to identify the presence of burials within areas of future development. Accordingly, fourteen trenches of various (but generally small) sizes were excavated at locations and to depths that were considered appropriate by the on-site representatives of Galliford Try and URS. All of the trenches encountered deposits of made ground, either extending to the full depth of investigation, occasionally sealing archaeological remains, and only rarely reaching deposits that were certain to be natural in origin.
- 1.3.9 Evidence of graves cutting the natural geology were identified at depths of c 1.1-1.4m below ground level (bgl) in two trenches close to the southern and western edges of the garden. The remains of what appeared to be *in-situ* coffins, likely to contain articulated human remains, were found at c 1.7m bgl (beyond the safe limit of hand investigation) at both locations, as were disarticulated human bones. Whilst the latter are indicative of disturbance, such activity could relate as much to the intensive usage of the cemetery as to an otherwise undocumented clearance. Both trenches lay close to, or within, areas that are proposed for domestic or recreational development.
- 1.3.10 No evidence for funerary activity was identified within any of the other twelve trenches. Of three trenches excavated within an area that, during the second half of the nineteenth century, had changed use from the eastern part of the burial ground to a yard (and which corresponds with a proposed area for

housing), only one reached natural deposits. There, the apparently modified bedrock was sealed by some 4m of made ground deposits. Both of the two adjacent trenches revealed intact cobbled surfaces *c* 0.5m bgl; these were left *in situ* in one of the trenches, whilst in the other, excavation below the level of the cobbles to a depth of 1.67m bgl, encountered only made ground. Three more trenches revealed structures, with the remains of the Registrar's Office identified in a trench at the northern edge of the former burial ground, whilst those in the two most easterly trenches pertained to activity to the rear of Maskell Street, just outside the former burial ground.

- 1.3.11 Of the remaining six trenches, natural geology was possibly, but not definitively, identified at a depth of 0.8m bgl within one trench close to the north-east corner of the garden (again, lying within a proposed area for housing). The remainder generally revealed what was interpreted as made ground deposits to their limits of investigation that ranged from 1.3m to 3m bgl.
- 1.3.12 It would appear that *in-situ* human burials remain within Gartside Gardens, and there is a very strong likelihood that burials do lie within areas proposed for development, albeit that they may well be sealed by later surfaces and deposits of more modern made ground.
- 1.3.13 ***Character of the funerary remains:*** no information on the size of plots within the cemetery has been identified and, they could vary from area to area, and between public and private graves. It must, however, be assumed that the graves are both closely packed, and that, in common with contemporary burial grounds, contain stacked burials. If, for example, all of the graves were relatively well spaced, each covering an area of 1.7m², burials would need to be stacked six or seven deep. Such deposition would not be unprecedented, nor, indeed, particularly unusual.
- 1.3.14 On the basis of previous experience of contemporary burial grounds, burials can be encountered down to depths of 4-5m below the modern ground level (bgl), and sometimes deeper, particularly where a lot of stacking has taken place, or where additional material was distributed across the graveyard in order to raise the ground level and allow further interments to be made within each grave.
- 1.3.15 The cemetery potentially includes plain earth-cut graves, brick shaft graves, and vaults. These may contain single burials or multiple burials, stacked vertically, and burials of double width. Brick shaft graves and vaults may be associated with bearers (bricks or plinths), capping stones, and ledger stones, as well as above-ground structures; they may, or may not, have been backfilled with soil. Preservation of funerary remains (coffins, their fittings, and human remains together with clothing and other appurtenances) is expected to vary, depending on the type of grave and whether lead coffins are encountered, but also as a result of local variations in the natural geology and the burial substrate. The water table is also likely to influence the preservation of organic material. Nonetheless, all remains identified during the evaluation (OA North 2013) appeared fully skeletonised.

1.4 AIMS AND OBJECTIVES OF THE ARCHAEOLOGICAL PROGRAMME

- 1.4.1 **Introduction:** to have any validity, the archaeological project must have clear aims and objectives that allow the investigation to be focussed and efficient, as it seeks to maximise the understanding of the sample. The following section presents a synthesis of the research potential of the site and the aims and objectives of the project; should human remains be identified during the works, it may be necessary to revisit this section to ensure that it is appropriate to the findings.
- 1.4.2 **Research Framework:** archaeologically excavated post-medieval and industrial-period burials from Britain are rare, and, in the recent past, many such sites have been cleared of burials without archaeological work. Since the 1980s, however, the value of such material in the understanding of the past, and to scientific enquiry in general, has been recognised (EH 2011; ADCA 2010, 7-10). Nonetheless, there has been very little study of working-class populations from sites outside of London, and the need to examine post-medieval and industrial-period assemblages of funerary remains is a key element of the *Archaeological Research Framework for North West England* (Brennand 2006; 2007; Newman and McNeil 2007a; Newman and McNeil 2007b).
- 1.4.3 Unlike so many cemeteries where burials span several centuries, or can only be vaguely dated, the main period of inhumation at Rusholme Road spans less than 50 years. Moreover, those 50 years relate to a period of rapid industrialisation, urbanisation, and population growth. The intensification of settlement, inadequate public health amenities, poor air and water quality, potentially contaminated food, and dangerous working conditions in local industries during the burial ground's period of use, may have increased the prevalence of infectious diseases and work-related injuries (Roberts and Cox 2003). The working classes (who must have represented a significant proportion of those interred at Rusholme Road, in stark contrast to many of the middling to upper-class crypt assemblages published to date), and their children, in particular, could have been subject to high rates of mortality and morbidity. Such conditions may have reached their nadir, before seeing some improvement, during the use of the burial ground, and the assemblage thus offers an opportunity to trace physical anthropological evidence for such changes.
- 1.4.4 The site provides a rare, and highly significant, opportunity to explore a temporal 'snapshot' of the former lives of Georgian and Victorian Manchester's population in terms of its composition, social demography, health, and mortality, as well as evidence for a more diverse population that might be expected in such a major city. These statistics can be used in several ways, and can be couched within the demographic framework provided by the complete burial register. The data can be compared with studies of contemporary assemblages from other areas (including the few examples of more northerly working-class assemblages at Redearth Road, Darwen; and the Swinton Unitarian Burial Ground; OA North 2011; forthcoming) (Brickley *et al* 2006; Nolan 1997; McIntyre and Wilmott 2003; OA 2011; Boyle *et al* 2005; Rowland and Loe in prep).
- 1.4.5 Further, there is some scope for identifying individuals and family groups where ground conditions have permitted the preservation of legible coffin

plates. The exact scale of, and potential for, such survival is currently unknown, but, where present, the osteological analysis of such individuals could be integrated with specific historical documents and biographical data, particularly in the examination of physical evidence of lifestyles, medical conditions, and even for causes of death. Moreover, data for any named individuals can be used to test the validity of osteological techniques, particularly those relating to age and sex estimation, and the reconstruction of mortality profiles.

- 1.4.6 *Funerary practice*: the most obvious relics of post-medieval funerary activity are grave markers, and recent work by Mytum (2002) and Tarlow (1999) has traced changing traditions in the shapes, iconography and text inscribed on these memorials. As well as useful biographical information, there is scope to recover valuable stylistic information to contribute to a growing body of knowledge. Moreover, the fact that monuments could be tallied with specific families, who might be traceable in terms of their occupations, places of residence, and social positions, means that it may be possible to closely contextualise aspects of monument style and decoration.
- 1.4.7 Coffins, including their form, materials, motifs, decoration and fittings, are also important indicators of social status, identity and beliefs. Whilst there is a growing understanding of the burial accoutrements of the wealthy, many questions remain unanswered regarding changing burial fashions and practices amongst the less affluent. Coffin materials (such as the timbers), may also reveal aspects of trade.
- 1.4.8 ***Summary of potential***: a complete appreciation of the significance of the assemblage is impossible without the basic understanding of the remains that might be afforded by intrusive investigation; however, its potential can be summarised thus:
- The Rusholme Road assemblage has the potential to be the largest archaeologically excavated post-medieval/industrial-period assemblage from North West England;
 - Knowledge of contemporary funerary practice, skeletal health, and skeletal variation is virtually absent for this part of the country;
 - Across Britain, few industrialised working-class populations have been studied;
 - There is potential for finding legible coffin plates in direct association with human remains, which could allow the collation of biographical information for named individuals;
 - Any identification of a significant number of named individuals presents the rare opportunity to test osteological methods for sex and age estimation. Any named juvenile skeletons (<18 years) will be very important in this respect, because there are still no accepted methods for estimating the sex of juveniles from their bones;
 - Further, the possibility that a proportion of the juveniles might be identified by name may permit the exploration of differential treatment of boys and girls, as reflected in demography and disease;

- The presence of neonates and infants presents an opportunity to explore weaning, maternal health, infant health and burial rites afforded to these individuals;
- The results of the osteological study can be interpreted in the light of rich historical documentation of the Victorian period, alternative disciplines that complement and inform one another.

1.4.9 ***Aims and Objectives:*** the overarching aim of the archaeological programme is to obtain a holistic understanding of the lives, identities, beliefs, and funerary culture of a representative cross-section of those buried at Rusholme Road, that can be interpreted within a temporal, economic, geographic and social context. The following objectives, which have been compiled in consideration of the foregoing research framework, can be modified and developed to meet the requirements of the project and the confines of the available data.

- a) Undertake a watching brief during all intrusive site preparation works, and development groundworks within and immediately around the burial ground, and during any exhumation works that could reveal pre-cemetery archaeological remains;
- b) Undertake an appropriate level of archaeological investigation, observation, and recovery of all appropriate funerary remains from the site, thus allowing the definition, characterisation, comprehension and interpretation of all observed deposits and features, their basic preservation by record through the textual, graphical and electronic techniques;
- c) Identify, investigate, record and sample, as appropriate, any remains associated with the pre-cemetery use of the site, together with the remains of any archaeological features and structures contemporary with the use of the burial ground;
- d) Monitor the exhumation works to record significant or unique funerary remains that otherwise fall outside the archaeological sample;
- e) Produce a complete, collated and interrogatable archive of documentary, photographic and digital data;
- f) Process and catalogue those human remains recovered from the excavation that will undergo post-excavation study;
- g) Process and catalogue the artefacts recovered from the excavation that will undergo post-excavation study, submitting suitable metalwork for x-ray, as appropriate;
- h) Undertake an appropriate programme of analysis of all archaeologically recovered funerary remains (and if, identified and appropriate to do so, of pre-cemetery archaeological remains), ensuring that the techniques utilised enable comparison with other assemblages, and, as far as the data allows, statistical validity. The analysis should involve the synthesis of all relevant forms of data from the site, and will be firmly couched within a socio-economic historical context at local, regional, and national levels;

- i) Prepare for public dissemination the results of the fieldwork and post-excavation programme;
- j) Prepare the entire assemblage of material recovered from the cemetery for appropriate reburial and the original records and non-funerary finds for archiving.

2. BASIC CONSIDERATIONS AND SITE SET-UP

2.1 LEGAL CONSIDERATIONS

- 2.1.1 **MoJ Licence:** under Section 25 of the Burial Act (1857), a Ministry of Justice (MoJ) Licence will be required before any development groundworks can take place within the former cemetery. All MoJ directions, together with any from the GMMC Environmental Health Officer (EHO), should be included within the basic site induction for all on-site contractors. The directions, which should be displayed in an appropriate location (ie, site offices and welfare cabins), will be adhered to by all on-site contractors throughout all stages of the project. Where requested, OA North and the EC will provide information (risk assessments and methodologies, as appropriate), to the relevant statutory bodies and advisors (such as the local EHO).
- 2.1.2 **The Human Tissues Act (HTA; 2004):** under the HTA (2004) a licence is required to handle any human remains that are less than a hundred years old. If burials clearly interred within the last 100 years are identified, these will be handled only by the EC with an HTA licence in place.

2.2 ETHICAL AND RELIGIOUS CONSIDERATIONS

- 2.2.1 All staff involved in the excavation, exhumation, and recording of human remains will behave with due care and attention, showing respect for the dead at all times. OA North will observe the BABAO code of Ethics and will have, and must adhere to, the OA protocol for working with human remains.
- 2.2.2 The excavation and osteological analysis of human remains will be screened from the public at all times. No access would be permitted to members of the public during any works where human remains might be exposed. The media would only be admitted to specific, pre-defined, parts of the site by pre-arrangement and with the specific permission of the Client. Photographs will be for archaeological purposes only.
- 2.2.3 **Liaison with the public:** a Liaison Officer shall be appointed by the Client to act as the primary point of contact for all enquiries from the public, including descendants and special interest groups. The Liaison Officer will deal with all enquiries, and will disseminate approved information as appropriate. Whilst only the Liaison Officer should provide information to the public, all site contractors have a duty to the public and to the Client to ensure that public concerns are met. Accordingly, contact details for the Liaison Officer will be placed at the site and at the on-site and off-site facilities of all site contractors, so that queries can be redirected.
- 2.2.4 Where appropriate, representatives from OA North can be involved with liaison with representatives from local interest groups. Such meetings will be approved, arranged and supervised by the Client's Liaison Officer, and would be held in a secure, controlled environment.
- 2.2.5 **Excluded burials:** some descendants may request that the remains of their ancestors should not be included within any programme of archaeological

analysis. The Client's Liaison Officer will maintain a list of any such individuals, and of the descendants concerned. Ideally, the Liaison Officer would have a databased version of the Rusholme Road Burial Register against which to check any enquiries. A copy of the list will be provided to OA North and to the EC. Where it is possible to identify excluded individuals positively during fieldwork (for example from *in-situ* grave markers or from coffin plates), those remains will be removed by the EC, with OA North undertaking any required stratigraphic recording. The EC will be responsible for curating such remains pending their removal from site/reburial.

2.2.6 Storage of remains for analysis and subsequent re-interment: OA North will be responsible for the individual bagging or boxing of those skeletons to be removed from site for analysis and subsequent reburial. Throughout the fieldwork, the excavated assemblage will be transported to an appropriate, secure storage, processing and analysis facility. It is anticipated that, following osteological analysis, all human remains, together with their personal effects, and associated funerary furniture, will be reburied in an appropriate manner in accordance with the MoJ licence and stakeholder liaison (*Section 3.5.1*).

2.2.7 Storage and reburial of remains that will not be analysed: these comprise all excavated/exhumed human remains and disarticulated bones that fall outside the sample for archaeological analysis. All will be placed in appropriate containers on site. Unless immediate reburial/cremation is required (for example, of occupied lead coffins or part-/fleshed remains) remains will be periodically removed in an appropriate vehicle, either for cremation, or to the designated place of reburial. All human remains (both disarticulated and articulated), personal effects, and associated funerary furniture from those individuals will be reburied in an appropriate manner in accordance with the MoJ licence and with stakeholder liaison.

2.3 SITE SET-UP AND ATTENDANCES

2.3.1 The PC will be responsible for setting up and maintaining the site, and for meeting all welfare (divided between clean office space, mess areas, and dirty areas, for washing and drying), attendance, security, and support requirements, including site security, access, perimeter hoardings, drainage, spoil management, decontamination, and activity areas.

2.4 HEALTH AND SAFETY

2.4.1 Throughout the works, CDM Regulations will apply, and it is expected that the site would be notifiable to the HSE. The PC will produce the site Health, Safety and Environmental Management Plan (HASEMP), will appoint a CDM co-ordinator and will monitor works through their H+S Officer. The Client will provide all available service plans and the PC would be responsible for undertaking any service scans and for issuing permits to dig within shored interventions. All health and safety procedures, including those of BABAO, the PC, and the policies and H+S manuals of OA North and the EC, will be followed throughout the works, as appropriate. These will include formulation and maintenance of method statements and risk assessments and adherence to the guidance of the SCAUM H+S Manual, the Health and Safety at Work Act

(1974), the Management of Health and Safety at Work Regulations (1999), the Public Health (Control of Diseases) Act (1984), the Manual Handling Operations Regulations (1992), and lifting operations (LOLER; 1998).

- 2.4.2 OA North will maintain a register of all staff and visitors on site, and a diary that summarises the day's working areas, progress, and weather, as well as significant deliveries, collections and the removal of human remains from site. An indexed photographic record in digital format will be regularly maintained to record general working shots, progress, and the condition of the site.
- 2.4.3 **Staff training and PPE:** all project staff must be CSCS qualified. All staff engaged with the removal of human remains from narrow shored trenches will also have confined space training in advance of the works. All project staff will wear full basic PPE whilst on site, to include safety helmets, safety boots and high-visibility jackets. Protective suits, face masks, noise defenders, gloves and eye protection will be made available to staff as necessary, as will disposable gloves and suits. Additional PPE will be dependent on weather conditions, but could include specialist inner clothing that retains manoeuvrability and warmth whilst reducing bulk.
- 2.4.4 **Deep excavations and shoring:** it is likely that any funerary remains will be present at a significant depth below the modern ground surface. The PC will need to step, batter, or shore excavations appropriately. In accordance with CDM regulations, any shoring would be installed and subject to regular documented inspections by an appropriately qualified engineer commissioned by the client.
- 2.4.5 **Contamination:** the PC should make OA North aware of the presence and location of any known contamination issues or any specific health and safety requirements. Should any previously unknown contamination be discovered during the mitigation, it may be necessary to halt the works and review the risk assessment. A contingency sum will allow for the supply of additional PPE or other contamination avoidance equipment.
- 2.4.6 **Infectious diseases:** all staff involved with the project should have an up to date tetanus jab and should present a list of any salient allergies and medical issues that they might have to the Acs site director and H+S Officer. Skeletonised burials in earth graves should not present any particular risk to health according to the BABA0 (nd, 7) *Code of Practice*: 'Human remains pose little or no risk as far as infection hazards are concerned because harmful micro-organisms do not survive beyond a few months following death'. The BABA0 *Code of Practice* attributes a greater, 'although believed to be remote' (*op cit*), risk of infection from smallpox and anthrax when remains (including the soft fittings for coffins) are soaked in body liquor, or where horsehair stuffing is present. Nonetheless, the OA risk assessment will give due consideration to such risks, including, where considered appropriate, vaccinations for smallpox, and anthrax (Public Health Laboratory Service (PHLS); Tel: (+44) 020 8200 4400).
- 2.4.7 Where remains are identified that are considered, on the basis of the above criteria, to present a health risk, the following should be observed:
- All staff within the area will wear protective clothing including disposable masks, suits and gloves and will remove themselves to a safe distance; such PPE should not be removed from site other than as waste;

- All such remains, just like those that are completely or partially fleshed, and/or within sealed lead coffins, will be handled and lifted, together with all their associated funerary furniture, by the EC, and will be removed for immediate disposal.
- 2.4.8 Where, despite these precautions, staff have managed to come into direct contact with such remains, or to have been splashed by their liquor, all affected clothing and PPE will be sealed in opaque plastic bags and disposed of in accordance with statutory requirements.
- 2.4.9 **Counselling:** all staff involved with the project will be fully briefed and vetted by their employers to ensure that they are informed, willing, and appropriate for their designated roles and responsibilities. All staff should have unrestricted access to a mental counsellor, during and after the project.

3. METHODOLOGIES FOR ARCHAEOLOGICAL WORKS

3.1 INTRODUCTION

3.1.1 The following sections outline a scheme for undertaking a programme of archaeological works within Gartside Gardens. These works comprise an archaeological watching brief, together with the generation of a fieldwork archive, and an appropriate programme of post-excavation assessment, analysis, and reporting. Given the former use of the site, there is a possibility that funerary remains may be encountered during the works. Accordingly, a basic methodology for investigating, recording and recovering such remains is included. Whilst it would be possible to undertake such works as part of the watching brief (and without significantly affecting the PCs groundworks schedule) where small, or scattered, amounts funerary remains were identified, the discovery of more significant amounts of funerary remains would necessitate a review of the wider approach, methodology, and archaeological staffing levels. The full programme of fieldwork and post-excavation works will thus be iterative, and will be reviewed and revised throughout the works in close liaison with the Stakeholders.

3.2 WATCHING BRIEF

3.2.1 A programme of field observation will accurately record the location, extent, and character of any surviving archaeological features and/or deposits within the designated four areas of proposed ground disturbance. These comprise shallow groundworks (ie, 0.4-0.6m depth) in three locations:

- a small area of housing at the north-west corner of the gardens;
- the triangular multi-use games area towards the centre of the western half of the gardens;
- the rectangular sports pitches at the southern end of the western half of the gardens;

Deeper groundworks, comprising the removal of all deposits down to a level within the natural geology that is free of archaeological remains (a depth of around 3m below the current ground level), will be undertaken within much of the eastern half of the gardens.

3.2.2 The watching brief will comprise observation during all ground reduction and excavations for the proposed development, the systematic examination of any subsoil horizons exposed during the course of the groundworks, and the accurate recording of all archaeological features and horizons, and any artefacts, identified during observation. An appropriate number of archaeologists will be deployed to directly monitor the works of the groundworks contractors, and, if necessary, would stop the contractor at a point where archaeological remains were identified. As far as possible, the archaeologist will work with the contractor to minimise delays, and additional staff will be deployed either to excavate archaeological remains revealed, or to continue monitoring the groundworks where they can be moved to a different location. In order to maximise visibility of archaeological remains and to

reduce the issue of digging into burials, ideally, the groundworks contractor should utilise a methodology that:

- Utilises a 360 mechanical excavator fitted with a toothless ditching bucket;
- Removes uncharacterised material in fairly shallow spits (ie no more than 0.1m thick) across a wide area;
- Does not allow the edges of excavation to become too deep or unstable;
- Involves a programme of spoil removal that does not impact upon areas of potential, or recognised, human remains.

3.2.3 Putative archaeological features and/or deposits identified during the observation of groundworks, together with the immediate vicinity of any such features, will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions and, where appropriate, sections will be studied and drawn. Any such features will be sample excavated (ie, selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal).

3.2.4 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid co-ordinates where appropriate). Features will be planned accurately at appropriate scales and annotated on to a large-scale plan of the groundworks provided by the Client. An indexed digital photographic record will be undertaken simultaneously. One or more dimensioned sections will be produced.

3.3 FUNERARY REMAINS

3.3.1 Should any funerary remains be identified during the watching brief, they will be dealt with in an appropriate manner, as outlined in the following sections.

3.3.2 **Ground reduction:** removal of the overburden (which can be defined as the material between the base of the topsoil and the uppermost burials), and the burial horizon (literally the soil that contains the funerary remains) will be undertaken incrementally and under the supervision of a suitably experienced archaeologist. Hand excavation will be used where necessary, but it is otherwise intended to maximise the use of the mechanical excavator. All ground reduction would be undertaken by a machine with a toothless ditching bucket, operating under the supervision of an experienced archaeologist:

- a. all spoil will be checked for disarticulated bone, which will be collected for reinterment;
- b. excavation will proceed down to the point at which grave cuts, coffin tops, or human remains (whichever is encountered first) are clearly visible;
- c. the outline and location of the area containing funerary remains, and of all grave cuts, whether to be investigated archaeologically or by exhumers, would be mapped using instrument survey;

- d. The ground would be further reduced by machine under archaeological supervision until the coffin stain, human remains or burial structure (which ever appears first) is revealed,
- 3.3.3 Spoil will be stockpiled in local areas where there is space, and where it is safe to do so. Otherwise it will need to be removed by appropriate-sized dumpers utilising approved routes.
- 3.3.4 **Survey:** accurate survey of all archaeological remains is critical to the success of the project: it is likely that H+S considerations will preclude the complete excavation of individual graves in a single episode. A series of survey base stations will be established on suitable ground that will not be reduced and will not be affected by plant or vehicle movement. A site location plan indicating the site north and based on current Ordnance Survey (OS) mapping provided by the Client will be prepared (reproduced with permission of the Controller of HMSO). This will be supplemented by plans of the working area at appropriate scales. The location and dimensions of the investigation and sampling areas, and the location, orientation and OD height of each burial, will be recorded by EDM or dGPS, and a plan generated using a CAD or GIS package. Survey data generated during the fieldwork will be processed and amalgamated into a single file and plotted out in CAD/GIS format on a regular basis.
- 3.3.5 **Numbering:** where it is possible to identify individual grave plots, all grave plots will be issued a single unique context number from a running sequence. Where practicable, grave plots can be labelled with their numbers on the ground. In the interests of examining spatial characteristics of the burial ground, all plots, whether to be excavated or exhumed, will be surveyed and numbered.
- 3.3.6 Irrespective of whether characterisation (*Section 3.3.8*) reveals that the funerary remains should be lifted archaeologically or by the exhumation contractor, below, all remains relating to a single burial event (*ie*, coffin (including all fittings), human remains and backfill), will be issued with a single unique two-part number as follows:
- the first part will be that of the grave plot, as described above;
 - the second part will represent the stratigraphic position of the burial within the grave, counting from the top down. So, for example, the uppermost burial in plot 3 would be number **1003.1**, whilst the third burial in plot 26 would be numbered **1026.3**.
 - The use of such a system will facilitate the identification of individuals, the cross-correlation with and will help to ensure that all human remains are accounted for.
- 3.3.7 **Recording:** A fully integrated, indexed archive will be generated during the fieldwork, with data accurately recorded on *pro-forma* that are either specific to, or sufficiently versatile to allow the treatment of, the range of archaeological remains on site. Full use will be made of instrument survey, whilst the use of digital photography will be maximised (provided that it is sufficiently backed up), with the use of monochrome photographs used only

for the most important record shots. Plans and sections will be drawn as and where appropriate.

- 3.3.8 **Characterisation within archaeological sampling areas:** to determine whether they are appropriate for archaeological investigation, funerary remains exposed by the machine will be rapidly excavated by hand by archaeologists with experience of human burials, or by an osteoarchaeologist, in accordance with IfA guidelines (Roberts and McKinley 1993; Brickley and McKinley 2004). In particular, the archaeologists will seek to reveal forms of identification, such as coffin plates (and speedily record them where deterioration may be rapid following exposure to the air).
- a. Burials will be very rapidly cleaned by hand in a manner that is sufficient to determine burial position, orientation, relationship to other features, and to identify associated coffin remains. Their positions and orientations will be recorded in three dimensions by instrument survey. Very detailed instrument survey is not required except in those (currently unexpected) cases where such data can be used to separate individuals from mass graves. Atypical burial positions will be planned in more detail, or recorded by rectified photography, as appropriate, but such techniques are not required for the majority of interments.
 - b. All recording will utilise specially designed *pro-forma* indices and recording sheets for skeletons and for coffins. Each burial will be recorded in terms of position, orientation, grave goods, burial dress and fastenings. An indexed photographic record using monochrome contact prints and high-quality digital imagery will be used for recording a selection of typical burials, as appropriate, plus any burials and funerary remains that are anomalous or unusual.
 - c. Coffins and any associated fittings, including fixing nails, will be recorded on specific *pro-forma* which will include details of dimensions, materials, construction technique, decoration, and fittings. All surviving coffin fittings will be recorded by reference to Reeve and Adams (1993) and the unpublished master catalogue that is being compiled by Oxford Archaeology. Where individual types cannot be paralleled, they will be drawn and/ or photographed and assigned a style number. Biographical details obtained from legible *departum* plate inscriptions will be recorded. Timber and fabric samples will be taken where appropriate. After recording coffins that fall within the archaeological sample, they will be broken up in the ground and passed to the PC or the EC for disposal.
 - d. *Textiles:* any burial garments, coffin linings or other fabrics directly associated with skeletonised burials will be recorded *in situ*. Complete garments would only be retained where they were of intrinsic research interest. Otherwise, fabric samples would be taken, and all such remains would be passed to the PC or the EC for cremation.
 - e. Skeletons and associated coffin remains will be recovered by OA North with the PC in attendance to assist with heavy lifting, and to ensure any associated structures do not collapse.
 - f. Provided the remains are skeletal, and any associated coffins have survived as remains only, these will be placed within opaque, burial sacks (colour-

coded to differentiate them from those of the EC), or boxes, as appropriate, with attached identification/location tags. They will be removed from the immediate vicinity for storage prior to transfer to the laboratory.

- g. *Bisected burials*: where individuals lie partially outside the area of mitigation, in accordance with EH and CoE guidance (2005), elements of a skeleton that extend beyond the limits of safe recovery will not be removed. Consultation with URS will establish whether it is appropriate to extend the mitigation area to avoid such a situation.
- h. *Sealed coffins*: should any completely sealed coffins be encountered, these will not be opened, but will be assigned context numbers, recorded on *pro-forma* coffin sheets (including survey) and assigned to the EC to recover under an archaeological watching brief.
- i. *Incomplete Skeletonisation*: human remains that are mostly skeletonised (ie, they have a bit of skin, some hair, a few toenails, a little adipocere, but no flesh), require slightly different treatment. They will be investigated archaeologically using the methods described above. However, rather than removing such remains to the off-site laboratory, they will instead either be rapidly osteologically recorded *in situ*, or, where appropriate, rapidly examined in an on-site osteology laboratory. Following recording, the remains will be passed to the EC for removal and cremation/reburial.
- j. Burials that have been disturbed prior to the investigation, either with elements *in situ*, or with the bones found as charnel deposits, will be recorded on site, as above. Bones will only be removed from site for processing and analysis where they can be confidently identified as representing one or more distinct and separable individuals and there are sufficient elements present to contribute to analysis; burials that do not meet these criteria will be passed to the EC for reburial.

3.3.9 ***Burials to be recovered by the EC***: interments that are unsuitable for archaeological investigation will be recovered by the EC. OA North will make a count of those burials that the EC recovers, together with whatever basic spatial information can be safely recovered. As far as possible, and particularly where to do otherwise would impact on archaeological remains, exhumation should be by hand. The EC's groundworks, particularly in areas/at depths where they could impact upon archaeological remains below the burial horizon, will be monitored by a watching brief.

3.3.10 ***Excluded burials***: these comprise burials that can be positively characterised as belonging to families who have specifically requested that the remains of their relatives will not form part of the required archaeological works (*Section 2.2.5*). All excluded funerary remains will be handled by the EC. Where this might disturb archaeological remains, the recovery would take place under an archaeological watching brief to ensure that other burials and related features are not disturbed before they can be investigated and recorded.

3.3.11 ***Disarticulated Bones***: individual disarticulated bones found within the cemetery deposits and which cannot be immediately attributed to a more complete individual burial will be passed to the EC for reburial. Such remains should not be recorded or retained except for any elements that are of high scientific interest.

3.3.12 **Memorials:** any memorials identified during the groundworks, whether complete or fragmentary (and which display decoration or inscriptions) will be surveyed as appropriate and allocated a context number. Once recorded, the stones will be stockpiled. Where the position of buried memorials would impede progress (*ie*, there is a layer of damaged memorials), these will be surveyed, labelled, and moved to one side by the machine so that they can be recorded without impeding the progress of the excavation. All gravestones will be recorded, provided that they display clear evidence of decoration or inscription. The accurate surveying and numbering of monuments will be critical, particularly where they are deemed to remain *in situ*, and would be used as a potential means of identifying individuals or family groups in the associated grave plot. The stones will be recorded on *pro-forma* sheets based on, and following, the guidelines set out by Mytum (2002), and will include details of:

- Shape;
- Dimensions;
- Type of stone used;
- Iconography (an illustration may best describe these features);
- Inscription (*verbatim* record of inscription; font of the lettering);
- Stylistic type.

3.3.13 **Burial structures:** any brick shaft or vaulted structures identified on site will be recorded by OA North, and will be dismantled by a qualified operative of the PC under archaeological watching brief. Recording will comprise the three-dimensional record of the feature's location using instrument survey and an appropriate photographic and written record, including measured and annotated drawings where appropriate (*ie*, the nature and structural complexity/composition of the structure cannot be captured through other means). It may be necessary to dismantle these structures incrementally in order to maintain a safe working environment. Where safe to do so, a measured cross section of the structure's vault may be produced. Burials within these structures will be treated in accordance with *Section 3.3.8*.

3.3.14 **Associated personal items/artefacts:** personal items within plots but which cannot be directly associated with an individual will be surveyed where appropriate. Those, together with all items that are associated with individuals in the archaeological assemblage, will be packaged and removed for processing and an appropriate level of recording and analysis by a suitable specialist. All artefacts that can be associated with an individual burial will be placed with that individual prior to reburial. Artefacts that are not associated with funerary activity will be collected in accordance with standard OA practice.

3.3.15 **Storage:** funerary remains will be kept temporarily in a secure lockable store. Care will be taken to keep delicate and more robust items separate and to organise the space to ensure that access is safely maintained and that the stability and integrity of the bagged-up remains are not compromised.

3.3.16 **Transfer:** periodically, archaeological burials will be removed from site and taken to the laboratory for processing and analysis. Other burials will be removed from site by the EC for reburial.

3.4 COMMUNICATION AND PROJECT MONITORING

3.4.1 URS will be responsible for monitoring the archaeological works on behalf of the Client. Monitoring of the archaeological investigations will also be undertaken by GMAS and the EH Regional Science Advisor, who will be afforded access to the site at all times. OA North will ensure that any significant results are brought to the attention of URS as soon as is practically possible.

3.5 POST-EXCAVATION WORKS

3.5.1 The scope of the post-excavation works will depend on the scale and nature of the findings, and it may be necessary to update this project design accordingly. Reburial/deposition of any recovered funeral remains will be a particular issue to deal with. In essence, all the elements of the project archive will need to be processed, collated, catalogued and appropriately analysed, before dissemination in the form of a report, or, where appropriate, one or more publications. As a minimum, a client report will be issued that will be a fully quality assured, illustrated, and internally consistent document prepared for submission to URS. It will present:

- a front cover and inside sheet with details of the location of the project, planning references, and quality assurance;
- a non-technical summary;
- an introduction, detailing the contract background, site location and historical context;
- a section dealing with the methodologies employed on site, as well as those of the specialist analyses;
- the results of all analyses, including an examination of the spatial and temporal patterning of data;
- synthetic discussion of the results of the work within a local, regional and national framework, to include:
- bibliography;
- appendices of raw data, together with key documents (such as project designs);
- selected illustrative plates and plans;

3.5.2 *Archive (Task 11)*: the site archive (paper and photographic record) will be prepared for long-term storage with the Greater Manchester Archive Service or an appropriate alternative repository, in accordance with standard guidelines (Walker 1990). No artefacts associated with burials will be retained for archiving. The detailed report of the results will be part of this archive.

3.6 INSURANCE

3.6.1 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 £10,000,000. Written details of insurance cover will be provided on request.

3.7 COPYRIGHT AND CONFIDENTIALITY

3.7.1 The Client holds copyright of all drawings and other records that they provide to OA North as part of this work. OA north will retain full copyright of all generated original records and primary data, and any commissioned reports, publication texts, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved. OA North will undertake to respect all requirements for confidentiality about the Client's proposals provided that these are clearly stated. It is expected that such conditions shall not unreasonably impede the satisfactory performance of the services required.

3.8 STAFFING

3.8.1 The project will be managed by Stephen Rowland (BSc, MSc), OA North Senior Project Manager. Stephen has nine years experience as a project manager, and has managed numerous projects of all sizes, including watching briefs, evaluations and excavations within burial grounds, from inception through fieldwork, assessment, analysis, reburial and publication. Particularly relevant are the projects he has managed at Coronation Street, South Shields, St Paul's Church, Liverpool, Redearth Road, Darwen, Swinton Unitarian Burial Ground, Greater Manchester, and the evaluation at Gartside Gardens in 2013.

3.8.2 Fieldwork will be directed by Caroline Raynor (BA), OA North Project Officer and Health and Safety Advisor. Caroline has an extensive burials portfolio, including directing the excavation of 240 burials from Coronation Street, South Shields, 120 burials from the Swinton Unitarian Burial Ground, Greater Manchester, and the evaluation at Gartside Gardens in 2013.

3.8.3 OA North has a team of archaeologists, including osteologists, with the experience required to undertake both the watching brief, and any mitigation required. CVs for all key staff can be supplied on request.

3.9 TIMETABLE

3.9.1 As a watching brief, the timetable for the works is largely dependent on the groundworks programme. The post-excavation programme will be dependent on the findings, and the requirements of GMAAS and EH, and will be established/updated at the completion of the fieldwork/each project stage.

4. BIBLIOGRAPHY

4.1 PRIMARY AND CARTOGRAPHIC SOURCES

Banks, 1831 Map of Manchester

M74/3/17 Plan of Rusholme Road Cemetery 1822 (Greater Manchester County Record Office)

Ordnance Survey 1851 Lancashire and Furness (Manchester and Chorlton), 6":1mile town plan

Ordnance Survey 1891 Lancashire and Furness (Manchester and Chorlton), 1:500 town plan

Ordnance Survey 1893 Lancashire and Furness (Manchester and Chorlton), 6":1 mile

Pigot, 1824 Map of Manchester

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APPENDIX 2: CONTEXT LIST

Context	Intervention	Description
2000	WB	Modern turf and topsoil
2001	WB	Mid orange firm sandy made ground
2002	WB	Black ash made ground
2003	WB	Black ash and clinker made ground
2004	WB	Cut of grave within manhole trench
2005	WB	Cut of grave within manhole trench
2006	WB	Natural dark orange sand
2007	WB	Grave cut in drainage trench 1
2008	WB	Grave cut in drainage trench 1
2009	WB	Grave cut in drainage trench 1
2010	WB	Grave cut in drainage trench 1
2011	WB	Grave cut in drainage trench 1
2012	WB	Grave cut in drainage trench 1
2013	WB	Cut of tree throw
2014	WB	Dark brown sandy silt fill of tree throw 2013
2015	WB	Grave cut in drainage trench 1
2016	WB	Mid brown clay silt buried soil horizon
2017	WB	Grave cut in drainage trench 7
2018	WB	Grave cut in drainage trench 7
2019	WB	Cut of feature in drainage trench 7
2020	WB	Cut of feature in drainage trench 7
100	Evaluation Trench 1	Natural clay and gravel deposits
101	Evaluation Trench 1	Construction cut for walls 102 and 103 . Same as 213
102	Evaluation Trench 1	Red brick wall (eastern pair) Same as 212
103	Evaluation Trench 1	Red brick wall (eastern pair) Same as 211
104	Evaluation Trench 1	Backfill deposit of 101 Same as 214
105	Evaluation Trench 1	Red brick wall (single) Same as 208 and 315
106	Evaluation Trench 1	Cut of linear pit
107	Evaluation Trench 1	Fill of 106
108	Evaluation Trench 1	Construction cut for walls 109 and 111 Same as 206 and 311
109	Evaluation Trench 1	Red brick wall (western pair) Same as 205 and 310
110	Evaluation Trench 1	Backfill of 108 Same as 207 and 312
111	Evaluation Trench 1	Red brick wall (western pair) Same as 204 and 309
112	Evaluation Trench 1	Large western red brick wall Same as 203 and 303
113	Evaluation Trench 1	Demolition deposit
114	Evaluation Trench 1	Possible red brick structure within 113
115	Evaluation Trench 1	Possible column base within 113
116	Evaluation Trench 1	Modern overburden including topsoil, tarmac and hardcore levelling deposits
117	Evaluation Trench 1	Sandstone foundation deposit for wall 112
118	Evaluation Trench 1	Sandstone flag surface
200	Evaluation Trench 2	Topsoil
201	Evaluation Trench 2	Modern tarmac surface and hardcore levelling deposit
202	Evaluation Trench 2	Demolition deposit (same as 113 and 303)
203	Evaluation Trench 2	Large western red brick wall Same as 112 and 303
204	Evaluation Trench 2	Red brick wall (western pair) Same as 111 and 309
205	Evaluation Trench 2	Red brick wall (western pair) Same as 109 and 310
206	Evaluation Trench 2	Construction cut for walls 204 and 205 Same as 108 and 311
207	Evaluation Trench 2	Backfill of 206 Same as 110 and 312
208	Evaluation Trench 2	Red brick wall (single) Same as 105 and 315
209	Evaluation Trench 2	Construction cut for 208

210	Evaluation Trench 2	Backfill of 209
211	Evaluation Trench 2	Red brick wall (eastern pair) Same as 103
212	Evaluation Trench 2	Red brick wall (eastern pair) Same as 102
213	Evaluation Trench 2	Construction cut for 211 and 212 Same as 101
214	Evaluation Trench 2	Backfill of 213
215	Evaluation Trench 2	Natural clay, sand and gravel deposits
300	Evaluation Trench 3	Topsoil
301	Evaluation Trench 3	Modern tarmac and hardcore levelling deposits
302	Evaluation Trench 3	Demolition deposit Same as 202
303	Evaluation Trench 3	Large western red brick wall Same as 112 and 203
304	Evaluation Trench 3	Large red brick wall continuing from 303
305	Evaluation Trench 3	East/west aligned red brick wall section
306	Evaluation Trench 3	East/west aligned red brick and sandstone structure
307	Evaluation Trench 3	North/south aligned north/south aligned structure
308	Evaluation Trench 3	VOID
309	Evaluation Trench 3	Red brick wall (western pair) Same as 111 and 204
310	Evaluation Trench 3	Red brick wall (western pair) Same as 109 and 205
311	Evaluation Trench 3	Construction cut for walls 309 and 310 Same as 108 and 206
312	Evaluation Trench 3	Backfill of 311 Same as 207 and 110
313	Evaluation Trench 3	Modern linear cut
314	Evaluation Trench 3	Fill of 313
315	Evaluation Trench 3	Red brick wall (single) Same as 105 and 208

FIGURES

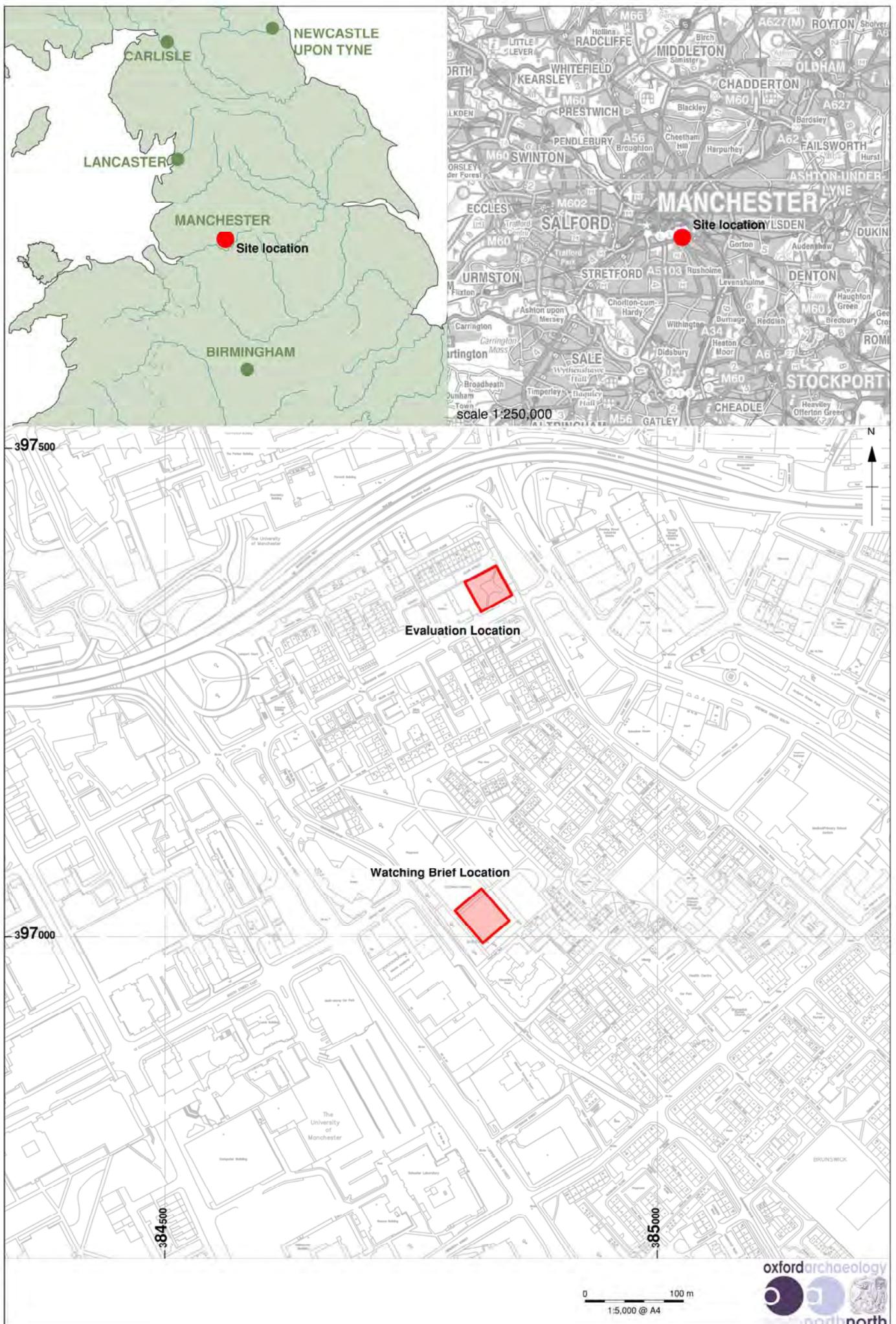
Figure 1: Site location

Figure 2: Location of drainage trenches observed during the watching brief

Figure 3: Location of evaluation trenches

Figure 4: Features observed during the watching brief

Figure 5: Evaluation trench plans



SP1/L10661/MAT*Oct 2013



Figure 1: Site location

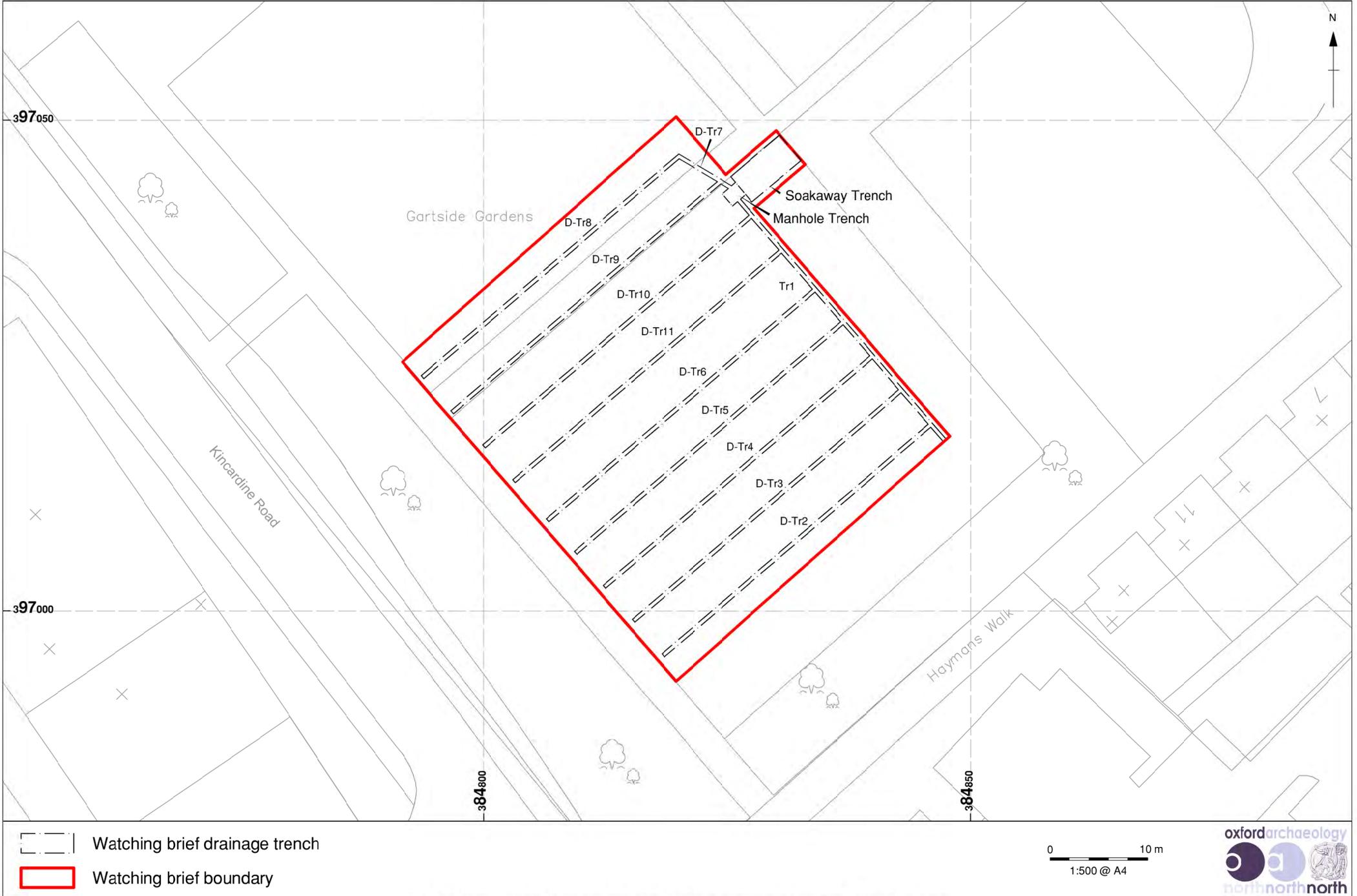


Figure 2: Location of drainage trenches observed during the watching brief

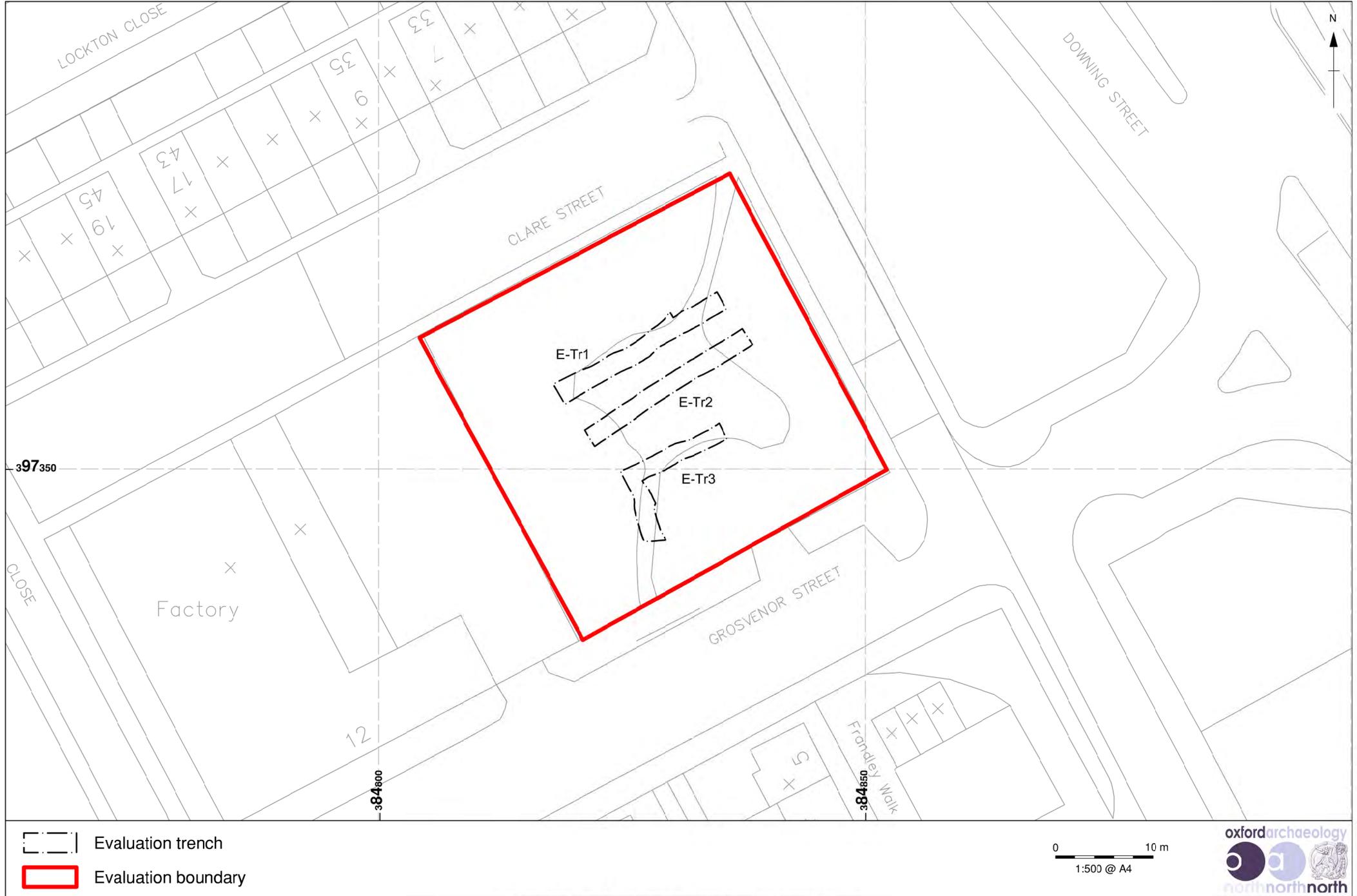


Figure 3: Location of evaluation trenches

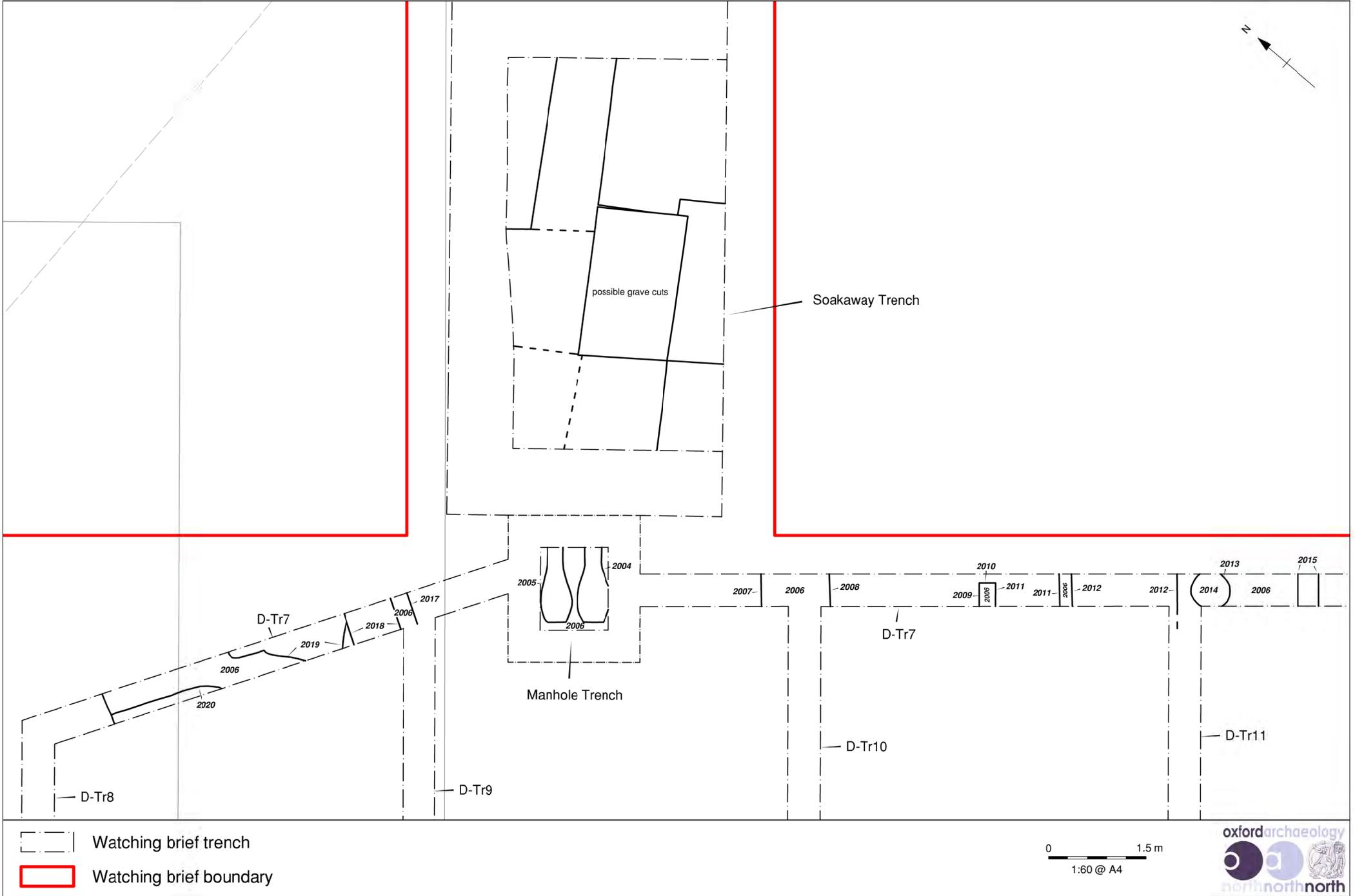
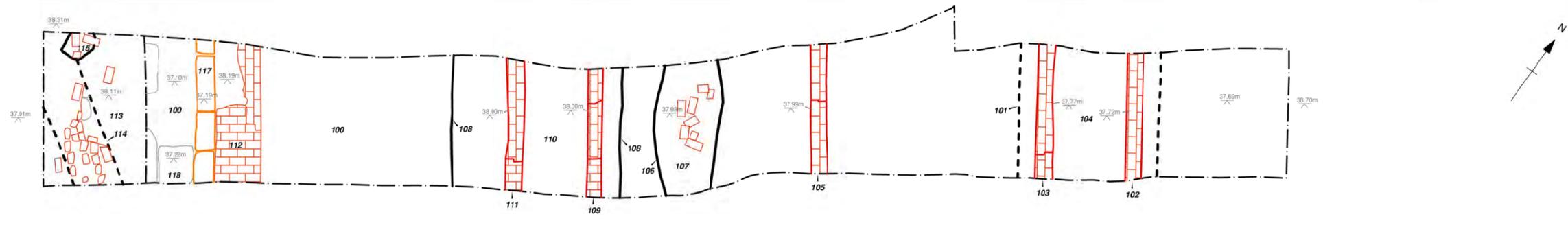
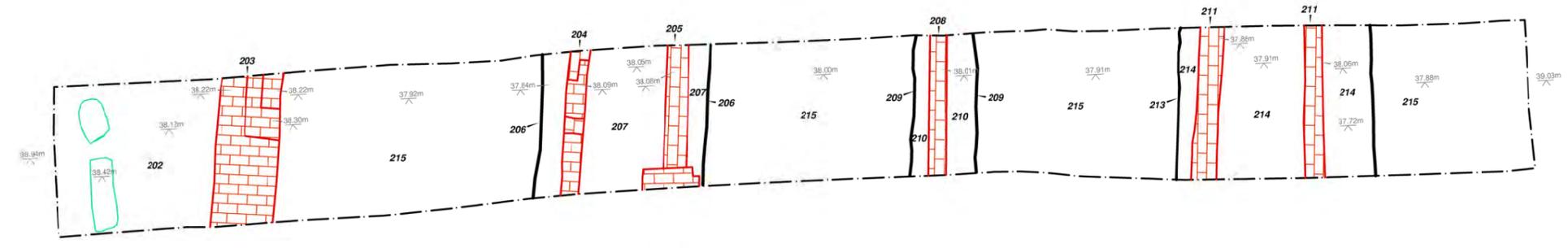


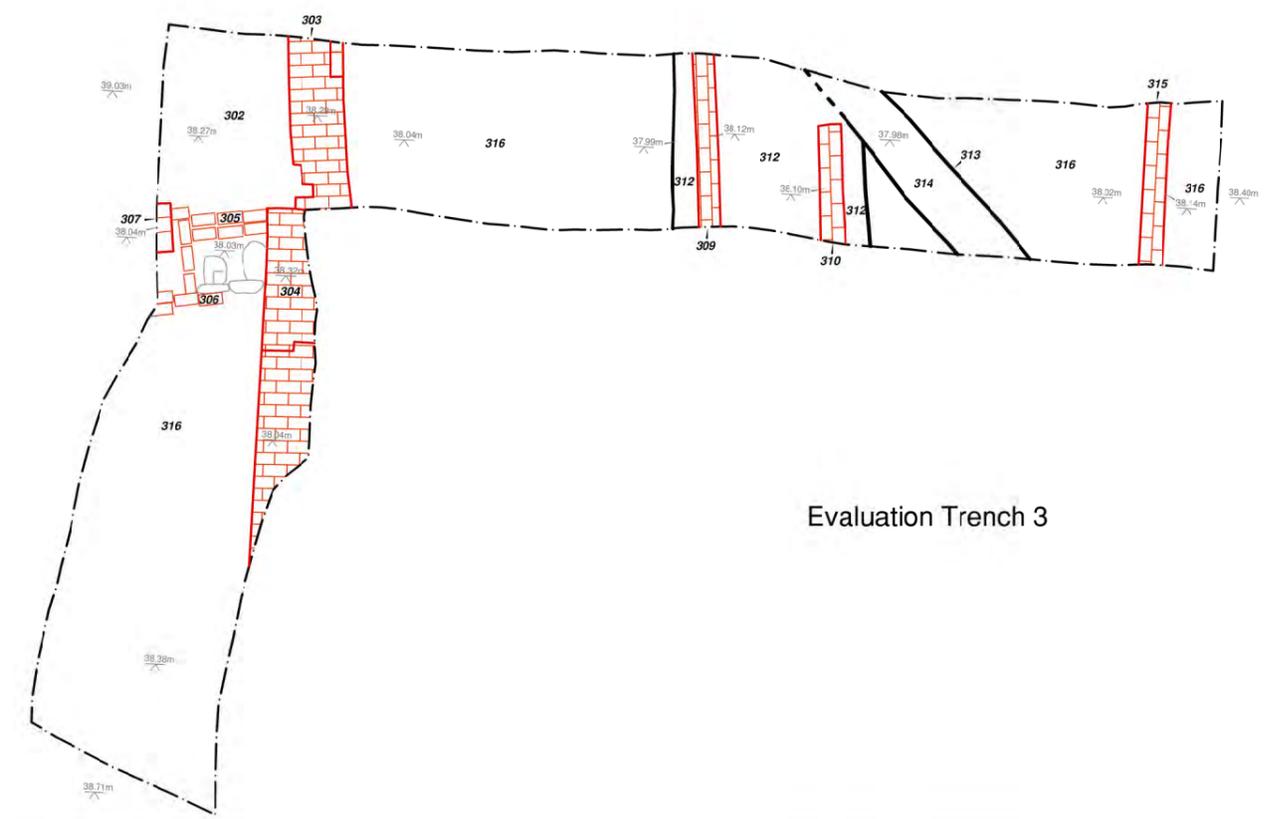
Figure 4: Features observed during the watching brief



Evaluation Trench 1

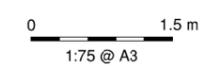


Evaluation Trench 2



Evaluation Trench 3

- Trench
- Brick
- Stone
- Concrete
- Drain
- Cut



SR*L10752*IMAT*Sept 2015

Figure 5: Evaluation trench plans