

**ARCHAEOLOGICAL INVESTIGATIONS AT
THE FORMER ATKINSON AND KIRBY PREMISES,
WIGAN ROAD, ORMSKIRK,
LANCASHIRE**

ASSESSMENT REPORT

OCTOBER 2012



PRE-CONSTRUCT ARCHAEOLOGY

DOCUMENT VERIFICATION

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WIGAN ROAD, ORMSKIRK, LANCASHIRE**

ASSESSMENT REPORT

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Northern Regional Office
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**Archaeological Investigations at the Former Atkinson and Kirby Premises on
Wigan Road, Ormskirk, Lancashire**

Assessment Report

Central National Grid Reference: SD 4196 0823

Site Code: WRO 12

Commissioning Client:

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PART A: PROJECT SUMMARY

1. NON-TECHNICAL SUMMARY

- 1.1 Archaeological investigations were undertaken in May-June 2012 by Pre-Construct Archaeology on the north side of Wigan Road, to the east of the historic core of the market town of Ormskirk, Lancashire. The investigations, centred at National Grid Reference SD 4196 0823, were undertaken at a former industrial premises, latterly occupied by the manufacturing firm Atkinson and Kirby. The work was commissioned by Hyder Consulting and undertaken as part of the planning process associated with the re-development of the site for housing by Redrow Homes.
- 1.2 An area of possible archaeological interest was identified by the Archaeological Planning Officer of Lancashire County Council within the south central portion of the overall development site. A small complex of buildings of uncertain function is depicted at this location on mid 19th century mapping; by the late 19th century this had seen some development, while the central portion of the site was by then in use as a stone yard. Thus cartographic evidence suggested that late post-medieval industrial activity was carried out at the site, any evidence of which would be of local interest.
- 1.3 The principle aim of the archaeological project was to determine the location, form, extent, date, character, condition, significance and quality of any archaeological remains at the site and to record those remains ahead of their destruction by the development. This was achieved using a 'strip, map and record' methodology to investigate the area of potential archaeological interest. Two excavation areas were investigated, sited to target building plots within the proposed re-development. These areas, Trenches 1 and 2, were located either side of the vehicular access route into the site and adjacent to the rear boundary of properties on Wigan Road.
- 1.4 No archaeological features or artefacts were discovered during the investigations to indicate structures or habitation prior to the 19th century.
- 1.5 Structural remains of late post-medieval and early modern date were recorded in both trenches. The most substantial building to be recorded was located at the eastern end of Trench 1, the westernmost of the two excavation areas. From the portion of the building exposed, it was observed that this structure was originally built in stone, probably in the first half of the 19th century, and subsequently underwent two stages of extension and modification probably during the second half of the 19th century. The purpose of the structure remains unclear; it may have originally been a farmhouse associated with agricultural land to the north. During this period, two smaller structures recorded in the centre and at the western end of Trench 1 were also built, in stone and red brick, respectively. These may have been associated with industrial use of the site.
- 1.6 Cobbled surfaces exposed at the western end of Trench 1 can confidently be linked to an early 20th-century saw mill and timber yard depicted on mapping of this period in the western part of the overall site, this likely the earliest business premises of the firm Atkinson and Kirby. By the mid-20th century, all previous structures had probably been demolished as Atkinson and Kirby expanded their business with an extensive complex of new structures. Structural remains from this most recent phase of activity included deep foundations and basements exposed at the south-western end of Trench 1. These cut into the natural sub-strata, removing any evidence of previous archaeological remains.

- 1.7 This Assessment Report is divided into three parts. Part A, the Project Summary, begins with an introduction to the site, describing its location, geology and topography, as well summarising the planning and archaeological and historical background to the project. The scope of the work is then set out, followed by full descriptions of the archaeological methodologies employed during both the fieldwork and the subsequent post-excavation work. Part A concludes with an illustrated summary of the recorded archaeological remains, allocated to a series of phases of activity.
- 1.8 Part B, the Data Assessment, quantifies the written, graphic and photographic elements of the Site Archive and contains specialist assessments of all categories of artefactual evidence, with recommendations for any further work in each case. A summary discussion of the archaeological findings is then followed by a summary of the potential of the site data for further analysis.
- 1.9 Part C of the report contains acknowledgements and references. There are three appendices to the report; these include an index of contexts, a stratigraphic matrix of contexts and a selection of photographs to illustrate the text.

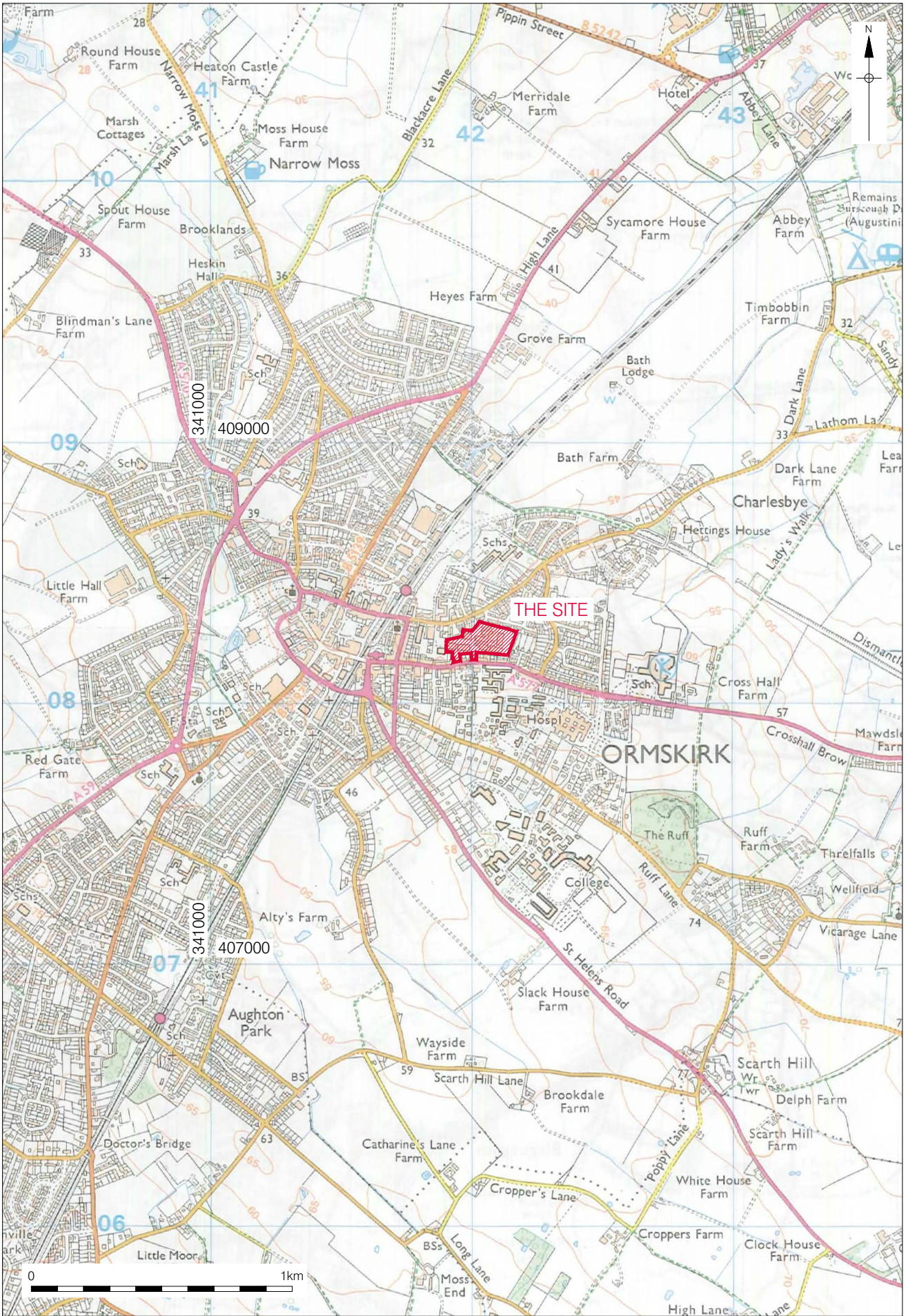
2. INTRODUCTION

2.1 General Background

- 2.1.1 This report details the methodology and results of a programme of archaeological investigations undertaken by Pre-Construct Archaeology Limited (PCA) 17th May-8th June 2012 at Wigan Road, Ormskirk, Lancashire. The site was a former industrial premises, latterly occupied by flooring manufacturer Atkinson and Kirby, and centred at National Grid Reference SD 4196 0823 (Figure 1). The site is located on the north side of Wigan Road and covers a total area of c. 2.47 ha (Figure 2). By the time of the instigation of the archaeological project, all above ground structures on the site had been demolished.
- 2.1.2 The archaeological project was commissioned by Hyder Consulting on behalf of Redrow Homes, prior to re-development of the site, a scheme entailing construction of 71 dwellings and associated road network, with landscaping. The project was undertaken as a condition of planning permission on the recommendation of the Archaeological Planning Officer, Lancashire County Council, to record archaeological remains ahead of their destruction by the scheme.
- 2.1.3 Prior research had identified the south central portion of the overall site as having archaeological potential. A small complex of buildings is depicted in this part of the site on mid 19th-century mapping, although the purpose and precise date of origin of the structures are uncertain. During the second half of the 19th century, the complex saw some development, by which time the central portion of the site was occupied by the 'Local Board Stone Yard'. In the 1920s, the firm of Atkinson and Kirby occupied the westernmost portion of the site, subsequently expanding their concern across the entire site. In sum, cartographic evidence suggested that archaeological remains of late post-medieval and early modern date could be anticipated at the site.
- 2.1.4 Therefore, a particular area of archaeological interest, the south central part of the site where the earliest buildings were situated, was targeted for investigation. Rectangular excavation areas – Trenches 1 and 2 - were investigated either side of the existing site access from Wigan Road (Figure 2). These areas were to be occupied by various building plots in the re-development layout. The archaeological mitigation strategy took the form of a 'strip, map and record' exercise, designed to record archaeological remains within these areas ahead of their destruction.
- 2.1.5 The project was carried out according to a Written Scheme of Investigation (WSI),¹ prepared by PCA and Hyder Consulting and approved by the Archaeological Planning Officer. The project was designed according to the guidelines set out in *Management of Research Projects in the Historic Environment* (MoRPHE).² In line with MoRPHE guidelines, this Assessment Report sets out a formal review of the data collected during the fieldwork.
- 2.1.6 At the time of writing, the Site Archive, comprising written, drawn, and photographic records and all artefactual material recovered during the investigations, is housed at the Northern Office of PCA, Unit N19a Tursdale Business Park, Durham, DH6 5PG. When complete, the Site Archive will be deposited with the Museum of Lancashire, Preston, under the site code WRO 12. The Online Access to the Index of Archaeological Investigations (OASIS) reference number for the project is: preconst1-135458.

¹ PCA 2012.

² English Heritage 2006.



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Figure 1
 Site Location
 1:20,000 at A4



Map Data supplied by Redrow Homes Lancashire

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Figure 2
 Areas of Investigation
 1:1,250 at A4

2.2 Site Location and Description

- 2.2.1 The site lies c. 200m east of the historic market town of Ormskirk, located on the north side of Wigan Road and centred at National Grid Reference SD 4196 0823 (Figure 1). Irregular in shape, measuring a maximum of 250m east-west by 150m north-south and covering a total area of c. 2.47 ha, the site comprises the former premises of timber flooring manufacturer Atkinson and Kirby.
- 2.2.2 The site is bounded to the north by properties on Derby Street, Norfield and Derby Hill Road, to the south by houses facing onto Wigan Road, to the east by houses on Sunnyfields and Oakfields and to the west by offices of West Lancashire Borough Council (Figure 2).
- 2.2.3 Prior to the re-development, all previous structures had been demolished and the site had started to become overgrown.

2.3 Geology and Topography

- 2.3.1 Ormskirk lies within the Lancashire and Amounderness Plain, a generally flat landscape, gradually sloping down to the coast in the west. The countryside surrounding the town is characterised by fertile agricultural land, mainly large fields, mostly devoted to intensive arable farming producing a wide range of crops, but also grassland farming with stands of deciduous woodland.
- 2.3.2 The underlying geology of the wider area consists of Permian and Triassic undifferentiated sandstones, including Bunter and Keuper New Red Sandstone.³ The drift geology comprises reddish coloured till, known as 'Northern Drift', which is overlain to the west by windblown Shirdley Hill Sand.⁴ The soils are mainly those of the Salwick and Astley Hall Associations, with some Sollom Association soils, which are coarse textured and fertile.
- 2.3.3 Ormskirk formed as a nucleated planned settlement on the north-western side of a low sandstone outcrop. The historic core of the town was laid out below the church, which was positioned at the highest point at c. 56m OD, with the nearby market place at a lower level of c. 49m OD. The town lies on the historic main route north from Liverpool that runs across west Lancashire to Preston and Lancaster further north. In the centre of the town this road also branches east toward Wigan, following the course of the Mere Brook, which flowed as an open stream down the centre of the road until the 19th century. It was not until the late 19th century that the settlement spread beyond its historic core, with new developments along the main arterial routes to Liverpool to the south-west and Wigan to the east.
- 2.3.4 The elevations of the main elements of the historic core of the town are described above. On the northern edge of the modern town, ground level lies at c. 40m OD, while to the south-east of the town the land rises to a height of c. 70m OD. Lying to the east of the historic town core, the ground level of the re-development site rises gradually to the east, with existing survey data showing elevations of c. 47m OD at its western end and c. 52m OD at its eastern end. Where the two excavation areas were located, either side of the access road, existing ground level was c. 49m OD.

³ IGS 1979.

⁴ Hall and Folland 1970, 7.

2.4 Planning Background

- 2.4.1 Re-development of the site of the former Atkinson and Kirby premises on Wigan Road by Redrow Homes involves construction of 71 dwellings and road network, with associated landscaping. The site was identified by the Archaeological Planning Officer of Lancashire County Council as having archaeological potential at a local level of interest. Two areas either side of the existing site access to be occupied by building Plots 1-6 and 72 within the re-development layout were specifically identified as being of potential archaeological interest. Mid and late 19th-century mapping depicted buildings in this part of the site, but the precise date of origin, purpose and degree of below ground survival of the structures was uncertain. The Archaeological Planning Officer therefore sought to prevent the unnecessary loss of archaeological remains through development.
- 2.4.2 The requirement to undertake the archaeological investigations was in line with planning policy at a national level which, at the time of the application, was set out in *Planning Policy Statement 5 'Planning for the Historic Environment'* (PPS5).⁵ PPS5, which established that archaeological remains were a material consideration in the planning process, was replaced on March 27 2012 by Section 12, 'Conserving and enhancing the historic environment', of the National Planning Policy Framework (NPPF).⁶
- 2.4.3 Planning permission for the re-development (2011/1179/FUL) had a condition (number 5) to ensure that an appropriate archaeological mitigation strategy – described in the aforementioned WSI - was implemented in association with the scheme. On behalf of Redrow Homes, Hyder Consulting appointed PCA to implement the strategy, namely an archaeological 'strip, map and record' exercise across the areas to be occupied by Plots 1-6 and 72, to record archaeological remains ahead of their destruction. In the event that archaeological remains of particular interest extended beyond these plot limits, then the mitigation strategy allowed for modification to ensure that all archaeological remains of significance within the overall development site were recorded prior to their destruction.
- 2.4.4 The archaeological policies of Lancashire County Council are based on guidance given by national government which at the time of the planning application was, as described above, set out in PPS5, supported by guidance in an accompanying document, the *Historic Environment Planning Practice Guide*.

2.5 Archaeological and Historical Background

No historic environment desk-based assessment was conducted for the site ahead of the archaeological work herein described. The summary of the archaeological and historic background to the site itself and town generally as set out below has been compiled in the main using the 2006 'Ormskirk Historic Town Assessment Report'; the research and writing of those responsible for that report is fully acknowledged. Readily available historic maps were also examined by PCA to inform the background summary.

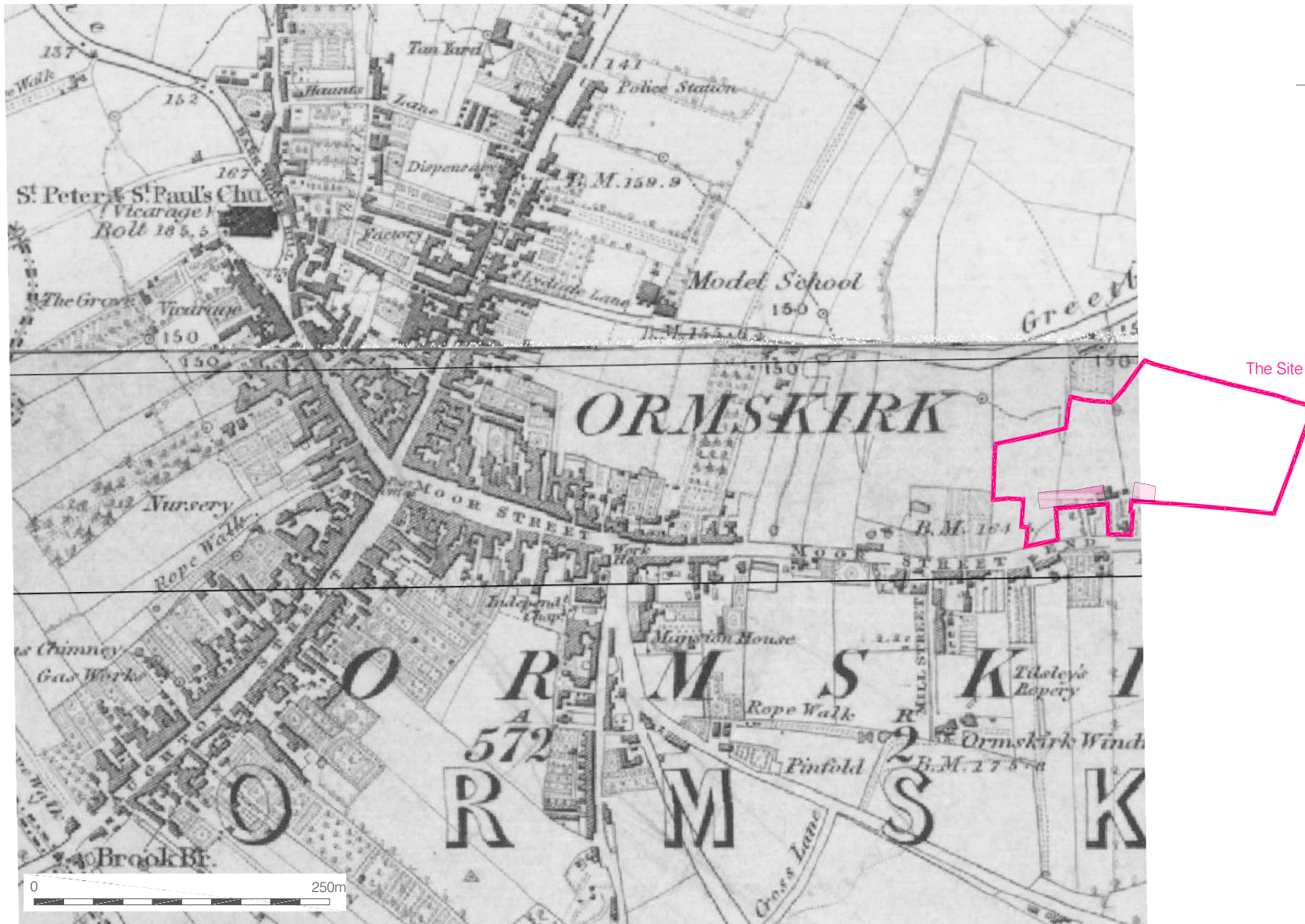
⁵ Department for Communities and Local Government 2010.

⁶ Department for Communities and Local Government 2012.

- 2.5.1 There is little direct evidence of prehistoric or Romano-British activity in the immediate vicinity of the site. The name 'Ormskirk' is Norse in origin and is derived from *Ormr*es *kirkja*, the combination of a Scandinavian personal name, Ormr, and the Norse word for church. The identity of Ormr is not known, but it seems likely that he was responsible for founding a church on the site. The earliest physical evidence for this church dates to c. 1170 and the north wall of the existing chancel.
- 2.5.2 The first documentary reference to the town is in 1189-90 when Robert, Lord of Lathom, confirmed a grant to Burscough Priory of '*the church of Ormskirk with all its appurtenances*', suggesting Ormskirk was a rectory manor. In 1286, Edward I granted the right to hold a market or fair at Ormskirk to the Prior of Burscough and the borough charter is first recorded in 1292.
- 2.5.3 It has been estimated that the town grew slowly between the 14th and 16th centuries, with a population of 290 and 360, respectively. By regional standards, Ormskirk was a significant urban centre in the early post-medieval period. It was a successful market town serving the fertile plain of west Lancashire and at least into the 1700s enjoyed considerable prosperity. During an outbreak of the plague in 1648, a petition recorded a population of 800 and by 1778 the vicar of the parish estimated the population to have risen to 2280.
- 2.5.4 Industry played a minor but important role in the town and during the Tudor and early Stuart period Ormskirk was renowned for its leather trade, being a noted centre of the glove trade in 1635. By the early 18th century, shoemakers in the town appeared to have specialised in single operations such as heel making, while a putting out industry may have developed. Textile manufacture was also significant with linen cloth produced on a commercial scale into the 18th century and sailcloth was supplied to the nearby port of Liverpool. However, by the late 18th century, the success and continuing growth of Liverpool certainly had a detrimental effect on the development and prosperity of Ormskirk.
- 2.5.5 Ormskirk's position away from coal fields and centres of the developing textile industry meant that it was also not subject to the same substantial growth as many east Lancashire settlements from the end of the 18th century. When the first census was taken in 1801, the official population was 2,554. A century later the population had grown to 6,857. The largest increases in population were in the first half of the 19th century, when Ormskirk grew quickly attracting many Irish immigrants, and boasted tradesmen such as flax dressers, fell-mongers, maltsters, millers, tallow chandlers, leather workers, silk weavers and butchers. Improving agricultural production also enhanced its position as a market centre.
- 2.5.6 With this rising population, a number of new houses were built in the centre of the town, representing an intensification of settlement within existing burgage plots rather than extension of the town's limits. On Church Street, three new houses were built in 1799, with several tenanted cottages to the rear. Also on Church Street, a mill and drying kiln were converted into six cottages. With an ever increasing demand for accommodation, town centre houses were also subdivided, courtyard developments were added and by 1849 there were 60 overcrowded lodging houses in the town.

- 2.5.7 During the second half of the 19th century the population of Ormskirk actually fell and it remained a provincial market town serving the surrounding agricultural communities. Traditional industries declined and by the end of the century there were a number of market gardens around the town. Middle class residential development was comparatively modest, although by the late 19th century, terraces and detached houses were being built along arterial routes, such as Wigan Road. The large number of 17th- and 18th-century inns and shops which still dominated the town into the early 20th century was a reflection of the town's most prosperous heyday.
- 2.5.8 Only the western portion of the re-development site falls within the part of the Ordnance Survey 1st edition map of 1848 which was available for consultation (Figure 3). At this date, the majority of the site was probably occupied by agricultural fields, with part of three fields aligned north-south visible on the available portion of the map. A north-south access road led from the north side of Moor Street End (later renamed Wigan Road) to a small complex of structures in the south central part of the site. The main elements was a rectangular building with a central projection to the north, forming an inverted T-shape with the frontage on the same alignment as the main road. Its purpose is unclear but originally it may have been a farmhouse associated with the expanse of agricultural land to the north. The western part of this building was targeted for investigation by the eastern end of Trench 1.
- 2.5.9 The c. 1894 Ordnance Survey map shows that, by this date, a row of houses has been built beyond the site along the north side of what was now called Wigan Road, with the site itself subdivided into several distinct areas (Figure 4). The easternmost portion was occupied by two large fields, while the westernmost portion was divided into a long narrow field and a larger trapezoidal field, this evidently occupied by a large rectangular quarry. The large central portion of the site is labelled 'Local Board Stone Yard'. Abutting this to the south-west was an enclosed yard, distinct from the land parcels to the north, associated with a complex of buildings. A row of buildings depicted on the south side of the postulated yard incorporated the T-shaped building on the earlier map. The easternmost element of this row was targeted for investigation by the western end of Trench 2. A number of other structures, probably outbuildings, are located around the perimeter boundary of the yard, mostly to the north.
- 2.5.10 The 1908 Ordnance Survey map shows the majority of the re-development site much altered by this date; most of the internal boundaries have been removed and, with the exception of two parcels of land to the west, the site comprised one large parcel of land, with the small developed area retained to the south (Figure 5). The southernmost structures remained in essentially the same layout as the previous map, although no structure extended into the area targeted by Trench 2 by this date, and some of the ancillary buildings had been removed.

- 2.5.11 By the time of the c. 1928 Ordnance Survey map, the yard had been divided into two areas, a larger portion to the east occupied by the range of buildings targeted by the eastern end of Trench 1 and a smaller western portion with a small structure at its western extent; only one small structure is depicted on the northern perimeter of the enclosure. The majority of the site was open and presumably unoccupied by this date, although the annotation 'Saw Mill' appears to the west in this open area. While this *could* relate to the southern range of buildings, it perhaps more likely relates to a substantial square building in the westernmost portion of the site, below which the annotation 'Timber Yard' also appears (Figure 6). Timber supplier and flooring manufacturer and Atkinson and Kirby are known to have occupied the site since the 1920s, therefore it is assumed that the saw mill and timber yard depicted on this map was their premises.
- 2.5.12 By the time of the c. 1963 Ordnance Survey map, the site as a whole was much altered (Figure 7). The central part was, by this date, occupied by a large complex of buildings, labelled simply 'Works'. The southernmost elements of this complex lie within the area targeted by Trench 2, and while the former buildings within the area targeted by Trench 1 appear to have been demolished, what may have been new structures are depicted occupying the south-easternmost corner of that trench. The westernmost part of the site is shown in developed form from the previous map and the lack of internal sub-division within the site as a whole suggests that the entire site was now under the occupancy of one business, namely Atkinson and Kirby.
- 2.5.13 Further structures had been added to the complex at the site by the time of the 1993 Ordnance Survey map (Figure 8). The annotation 'Timber Yard' appears at two locations, confirming that the entire site was now under the occupancy of Atkinson and Kirby. The westernmost element of the overall complex had, in overall terms, been reduced in scale, while an additional building had been added at the western end of the short range of buildings occupying the south-easternmost corner of Trench 1.



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Figure 3
Ordnance Survey, 1848
1:5,000 at A4

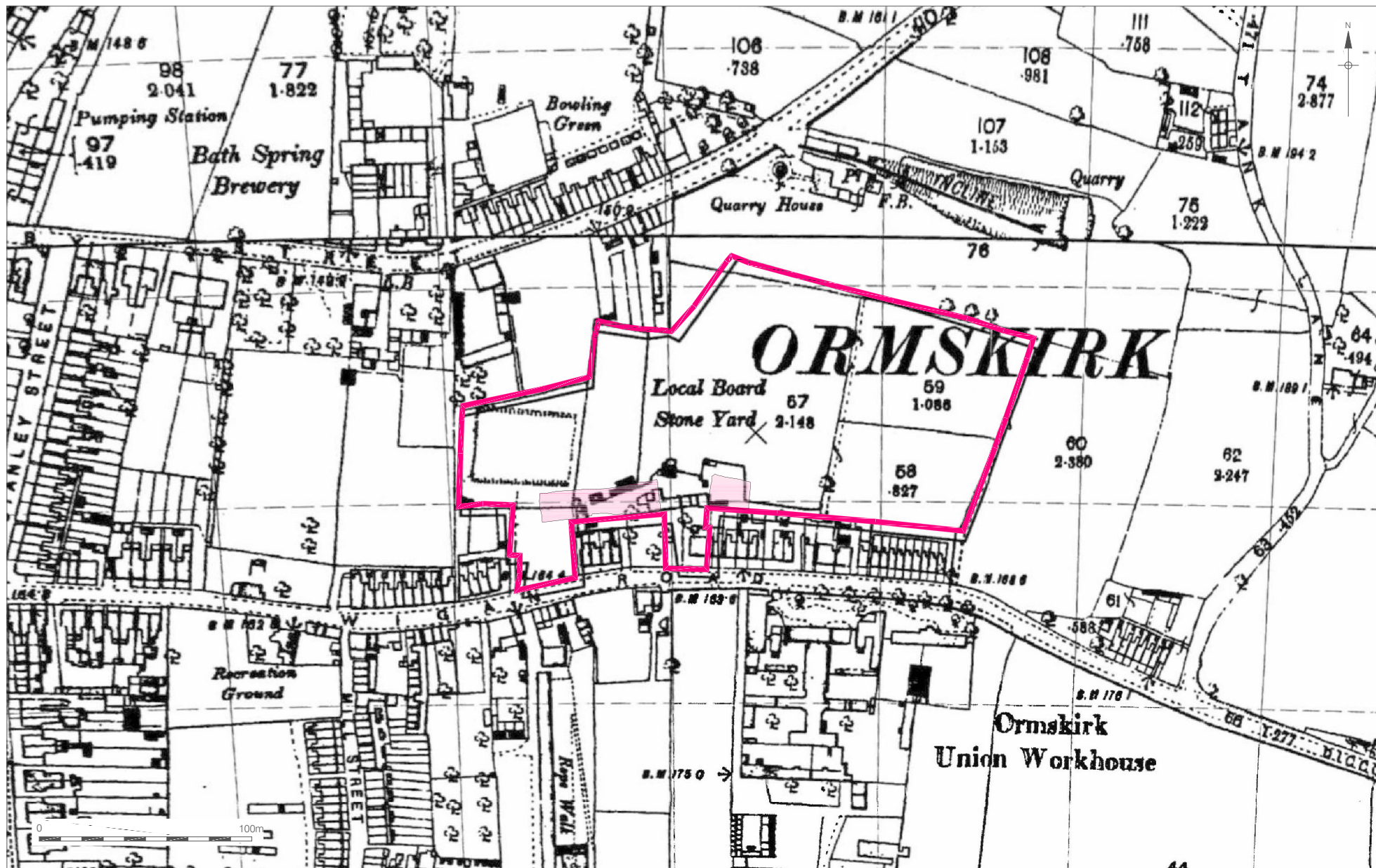
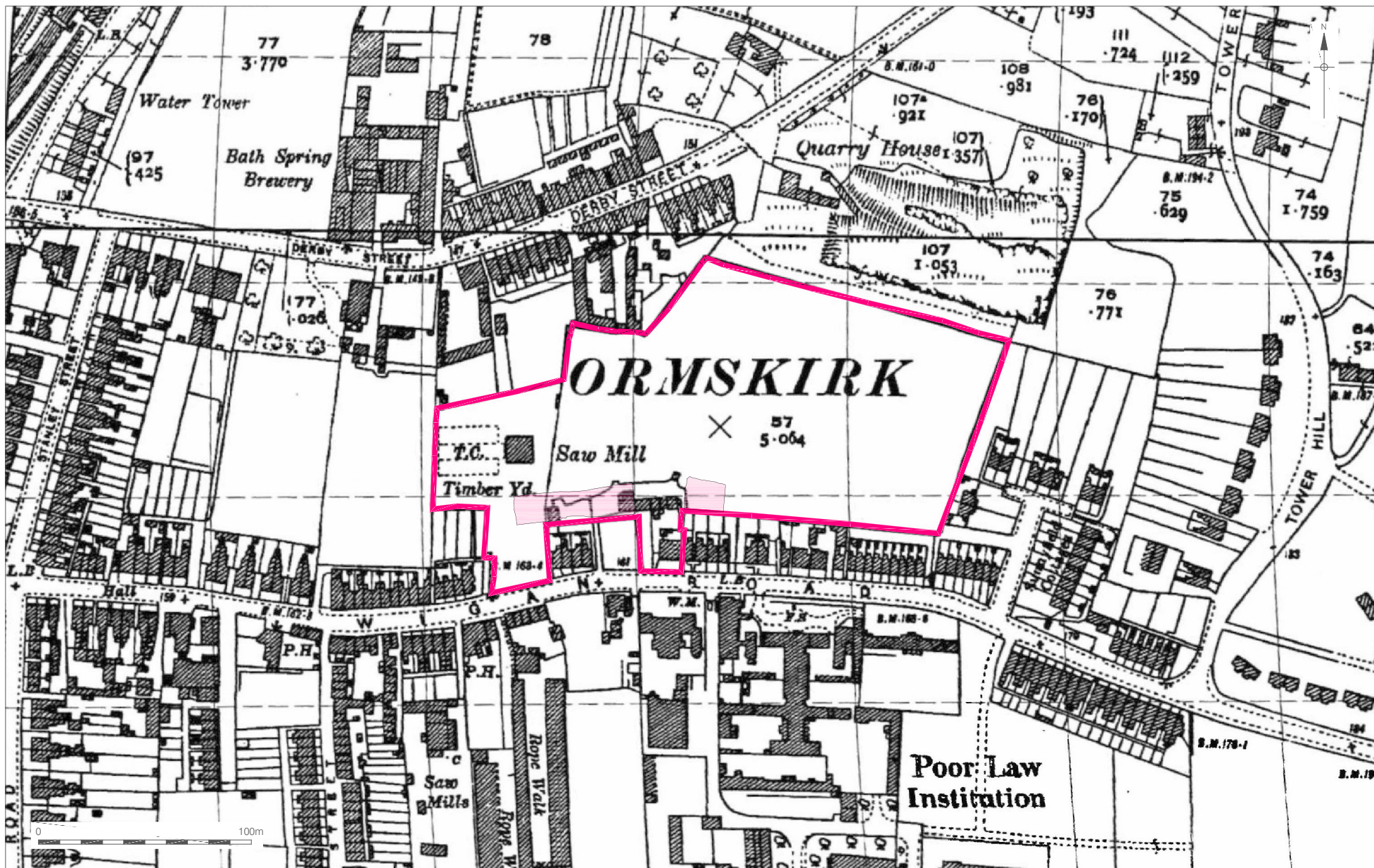
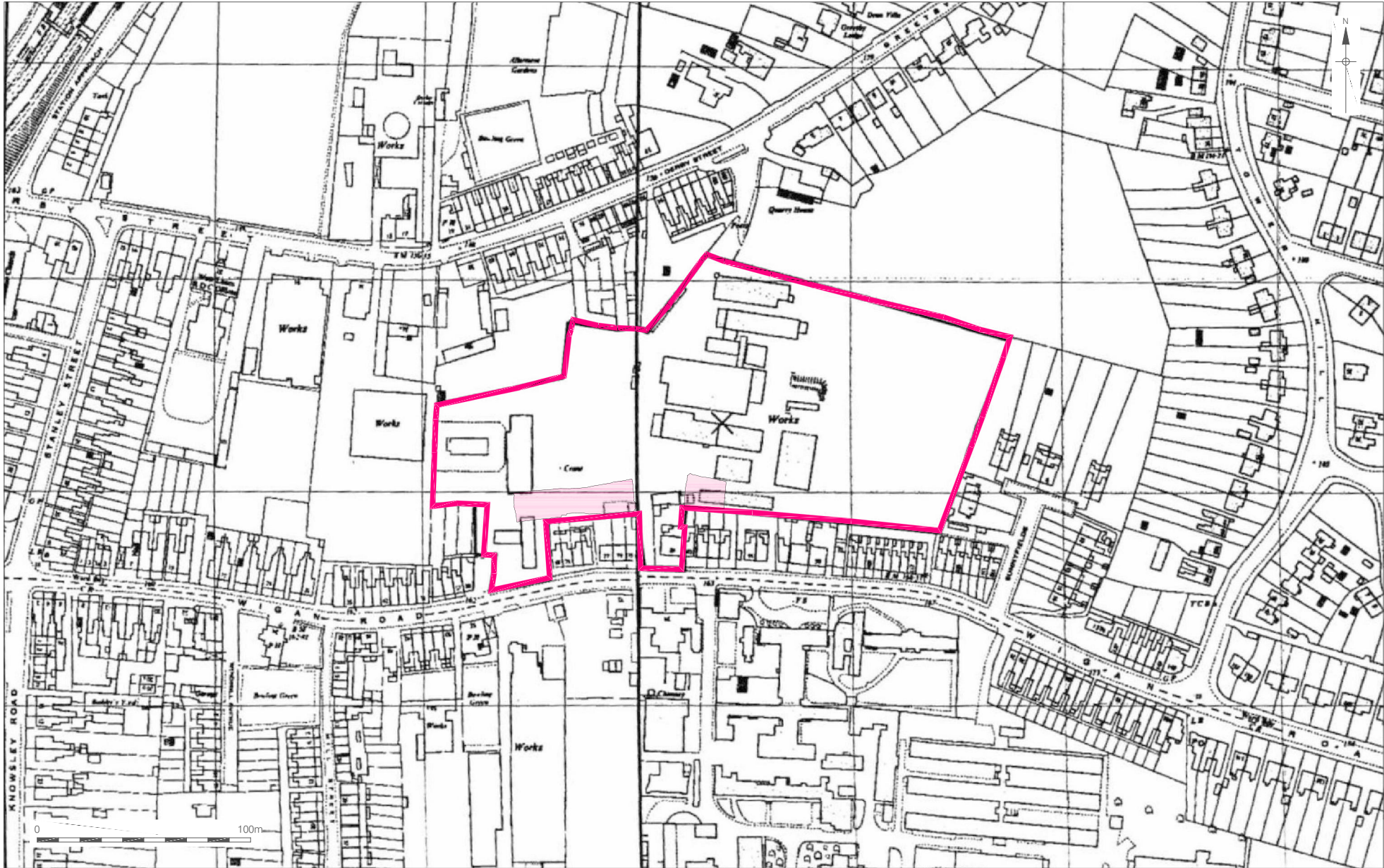


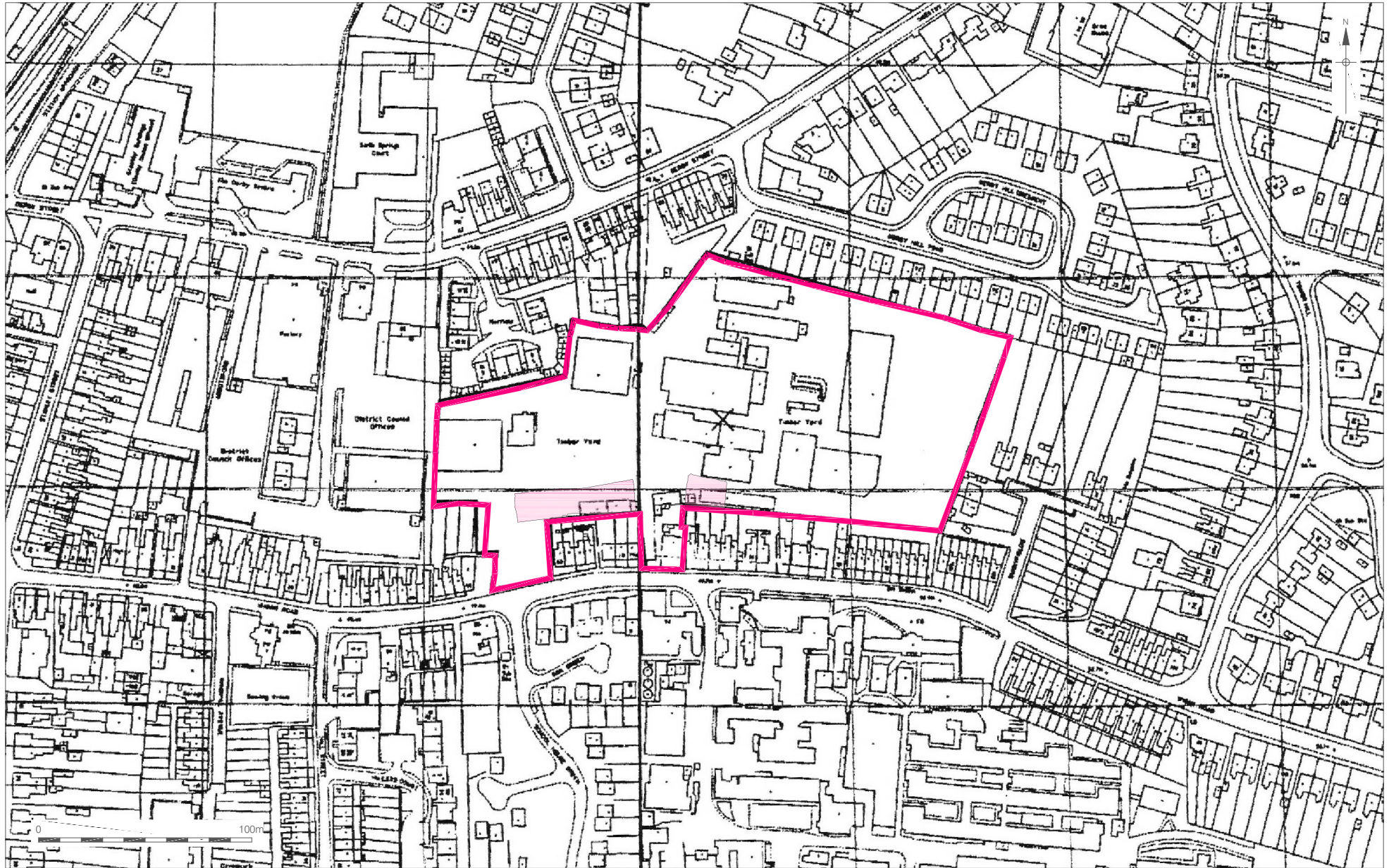
Figure 4
Ordnance Survey, 1893-94
1:2,500 at A4



Figure 5
 Ordnance Survey, 1908
 1:2,500 at A4







3. PROJECT SCOPE

3.1 Broad Aims

3.1.1 The re-development scheme was identified as having the potential to disturb or destroy sub-surface archaeological remains of local importance. Such remains comprise heritage assets, as introduced in Paragraph 5 of PPS5 and defined in Annex 2 of the PPS as '*A building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions. Heritage assets are the valued components of the historic environment. They include designated heritage assets and assets identified by the local planning authority during the process of decision-making or through the plan-making process (including local listing)*'.

3.1.2 Thus, for the purposes of national policy, PPS5 merged all heritage assets designated under any legislation (for example, World Heritage Sites, Scheduled Monuments, Listed Buildings), into one category of 'designated heritage assets', while 19th-century, and possibly earlier, industrial era archaeological remains at the site herein described fall into the lesser, but none-the-less important, category of 'undesigned heritage assets'.

3.1.3 Therefore, the overarching aim of the archaeological project was to undertake a 'strip, map and record' exercise, as detailed in the aforementioned WSI, to determine the location, form, extent, date, character, condition and significance of archaeological remains ahead of their destruction by construction groundworks, such remains being undesigned heritage assets as defined by PPS5.

3.2 Specific Objectives

3.2.1 The archaeological work had the following site specific objectives:

- to expose all archaeological remains within Plots 1-6 and 72 of the re-development layout through a programme of archaeological monitoring of machine removal of overgrowth, hard surfaces and overburden;
- to map the locations of all archaeological remains thus exposed, in order to establish the location and extent of archaeological activity;
- to define and sample excavate all exposed archaeological remains in order to clarify the character, date and extent of archaeological activity.

3.2.2 Additional objectives of the project were:

- to compile a Site Archive consisting of all site and project documentary and photographic records, as well as artefactual material recovered;
- to compile a report that contains an assessment of the nature and significance of all data categories, stratigraphic, artefactual, etc.

4. ARCHAEOLOGICAL METHODOLOGIES

4.1 Fieldwork

- 4.1.1 Fieldwork was undertaken 17 May-8 June 2012. All work was undertaken in accordance with the relevant standard and guidance documents of the Institute for Archaeologists (IfA).⁷ PCA is an IfA-Registered Organisation. The aforementioned WSI out the research aims and objectives of the project and, in a series of detailed method statements for project execution, described the techniques and approaches to be employed to achieve those aims and objectives. The WSI detailed the locations and dimensions of trenches to be investigated, as decided upon through communications between PCA, Hyder Consulting and the Archaeological Planning Officer.
- 4.1.2 Two trenches were investigated, both situated on land cleared of any previous structures. Trench 1 measured c. 65m x c. 15m at ground level and was located along the southern boundary of the site, adjacent to gardens to the rear of properties along Wigan Road (Figure 2). This was sited to examine structures shown in this vicinity on the previously described historic maps. Trench 2 measured c. 20m x c. 15m at ground level and was located c. 25m to the east of Trench 1 and was similarly sited along the southern boundary of the site, adjacent to gardens to the rear of properties along Wigan Road. The area between the two trenches was not excavated, as it was occupied by only vehicular access route into the site. While exposing archaeological remains in the two trenches was considered likely to be sufficient to confirm the location, extent and character of any structures depicted on historic maps, the agreed mitigation strategy allowed for modification to ensure that all archaeological remains of significance within the overall development site were recorded prior to their destruction.
- 4.1.3 In both trenches, overburden was stripped under direct archaeological supervision by a 360° tracked excavator using a wide toothless bucket to reveal archaeologically sensitive remains, where these were present. At the eastern end of Trench 1 such remains constituted structural remains encountered c. 0.20m below the existing ground surface. Further west in Trench 1, stone surfaces were exposed only c. 0.10m below the existing ground surface. Overburden continued to be removed by machine along Trench 1, and subsequently across Trench 2, to expose archaeological remains or the natural sub-stratum, or to the maximum safe depth of excavation.
- 4.1.4 Both trenches were cleaned using appropriate hand tools. Structural remains, deposits and features were subsequently excavated and recorded, to an appropriate level, using a single context recording system utilising *pro forma* context and masonry recording sheets. Plans were drawn at 1:20 and sections at 1:10.
- 4.1.5 A photographic record of the investigations was compiled using SLR cameras loaded with 35mm monochrome print and colour slide film, illustrating in both detail and general context the principal features and finds discovered. Digital photography was used to supplement this film record. The photographic record also included 'working shots' to illustrate more generally the nature of the archaeological operation mounted. Detailed photographs of archaeological remains included a legible graduated metric scale.

⁷ IfA 2008a and 2008b.

- 4.1.6 Two Temporary Bench Marks (TBMs) were established on the site using a GPS instrument. The TBMs were located within Trench 1 and at the western edge of Trench 2 and had values of 47.42 OD and 50.06m OD, respectively. The height of all principal strata and features were calculated relative to Ordnance Datum and indicated on the appropriate plans and sections.

4.2 Post-excavation

- 4.2.1 The stratigraphic data generated by the project is represented by the written, drawn and photographic records. In total 112 archaeological contexts were defined during the course of the investigations (Appendix B). The contents of the paper and photographic elements of the Site Archive are quantified in Section 6. Post-excavation work involved checking and collating site records, grouping contexts and phasing the stratigraphic data (Appendix A). A written summary of the archaeological sequence was then compiled, as described below in Section 5.
- 4.2.2 Artefactual material from the investigations comprised assemblages of pottery, ceramic building material, clay tobacco pipe, glass, metallic objects and industrial process residues, leather and animal bone. For each category of material an assessment report has been produced including a basic quantification of the material and a statement of its potential for further analysis. The results are given in Sections 7-13. Aside from the animal bone, no other categories of inorganic artefactual material were represented.
- 4.2.3 No palaeoenvironmental sampling was undertaken.
- 4.2.4 None of the material recovered during the investigations required specialist stabilisation or an assessment of its potential for conservation research.
- 4.2.5 The complete Site Archive, in this case comprising the written, drawn and photographic records generated by the fieldwork (a MoRPHE 'Data Collection' project stage), all materials recovered during the fieldwork and all material generated electronically during post-excavation, will be packaged for long term curation. In line with *MoRPHE, PPN3: Archaeological Excavation. Appendix 1*, the Site Archive will be quantified, ordered, indexed, and internally consistent before transfer to the recipient museum. It will also contain a site matrix, a site summary and brief written observations on the artefactual data and faunal remains.
- 4.2.6 Prior to the MoRPHE 'Closure' project stage, the Site Archive (which by then may comprise an integrated Site and Research Archive) will be deposited with the appropriate body. In this instance the anticipated recipient body is the Museum of Lancashire, Preston, which has been contacted with regard to the project. The archive will be organised as to be compatible with the other archaeological archives produced in the County and will include all artefacts and ecofacts recovered during the project. An accession number for the Site Archive will be assigned in advance of the work, in accordance with the requirements of the recipient body.
- 4.2.7 In preparing the Site Archive for deposition, all relevant standards and guidelines documents referenced in the Archaeological Archives Forum guidelines document⁸ will be adhered to, in particular a well-established United Kingdom Institute for Conservation (UKIC) document⁹ and a more recent IfA publication.¹⁰

⁸ Brown 2007.

⁹ Walker, UKIC 1990.

¹⁰ IfA 2008c.

5. RESULTS: THE ARCHAEOLOGICAL SEQUENCE

During the investigations, separate stratigraphic entities were assigned unique and individual 'context' numbers, which are indicated in the following text as, for example, [101]. In several instances a 'group number' was assigned to a series of similar contexts, such as a group of postholes, that were interpreted as representing the same sequence of activity and that remained unexcavated. Where one context was part of such a series and that was excavated, it was assigned a new and individual context number. The sequence of numbering for both excavation areas began at [1] in Trench 1 and continued sequentially. The archaeological sequence is described by placing stratigraphic sequences within broad phases, assigned on a site-wide basis. An attempt has been made to add interpretation to the data, and correlate these phases with recognised historical and geological periods.

5.1 Phase 1: Natural Sub-stratum

5.1.1 Phase 1 represents natural geological drift material exposed as the basal deposit in both excavation areas.

5.1.2 In Trench 1, the natural sub-stratum, [106], comprised firm, orange brown sandy silt with occasional flint pebbles. This was observed in the south-western corner and central part of the trench at a depth of c. 0.75m below the present ground surface. In the central part of the trench the natural sub-stratum was recorded at a maximum height of 47.09m OD.

5.1.3 In Trench 2, the natural sub-stratum, [100], comprised mottled yellowish brown fine sand, recorded at a maximum height of c. 48m OD. This had few, if any, inclusions at the northern extent of the trench, but occasional small flint pebbles were noted to the south.

5.2 Phase 2: Later Post-Medieval Activity, pre c. 1848

5.2.1 Phase 2, which represents evidence of the earliest human activity recorded during the investigations, dates from the later post-medieval period. Cartographic evidence indicates that, by the mid 19th century, the site was still largely in agricultural use (Figure 3). The only exception was limited development in the south central portion where structures are depicted on the 1848 Ordnance Survey map. One building, shown as an inverted T-shape with its main section aligned east-west parallel with Wigan Road, was targeted by the eastern end of Trench 1 (Plate 1), with the map evidence indicating that the building extended eastward beyond its limit. The function of this building was uncertain in advance of the work, but given the agricultural use of the adjacent land to the north it is possible that it was a farmhouse.

5.2.2 The footprint of the western end of the building shown on the 1848 Ordnance Survey map was recorded in the eastern end of Trench 1 (Figure 8). The north-west corner of the external wall, [4], survived, constructed from roughly squared sandstone blocks (on average 350mm x 250mm x 200mm) (Plate 2). This wall had faced stones on both sides and was bonded with white lime mortar and was laid with horizontal courses. It was recorded at a maximum height of 48.25m OD, which was 0.30m higher than the internal floor surface. The wall was 0.38m wide and was recorded for a distance of 3.80m east-west, continuing beyond the limit of excavation to the east, with a 0.48m-wide return to the south which extended for 2.50m. The southern end of the wall had a terminal and the corner stone incorporated a small rectangular slot, probably the housing for the timber upright of a doorframe. The continuation of the wall or threshold stone had been robbed-out, feature [45], presumably for reuse, but the location of this feature demonstrated where the wall would have continued southward to meet the west wing of the building.

- 5.2.3 In the western part of the building, the external stone wall had been completely robbed-out, feature [10], so that the southern and western external walls did not survive. The position of the robber trench and the surviving internal floor surfaces demonstrated that the west wall of this part of the building was aligned north-south for c. 3m with a return to the east at its southern end which was exposed for a distance of c. 7m east-west. If the 1848 map accurately depicts the building, which exposure of the western portion has effectively confirmed, then it would appear safe to assume that the eastern side originally extended for a similar distance of c. 7m, giving overall dimensions of c. 14m east-west and 10m north-south for the building.
- 5.2.4 Internally, the exposed portion of the building was separated into three areas. To the south, two rooms were divided by a 0.25m-wide north-south aligned partition wall. This did not survive above floor level and was represented as a linear, yellowish brown lime mortar deposit, [12], separated into two sections by a single flagstone representing a doorway threshold. This flagstone was integrated into a larger, grey flagstone floor, [8], east of partition wall footing [12], recorded at a height of 48.13m OD (Plate 3). The exposed area of flagstone floor measured c. 3.55m x 2.30m, extending beyond the eastern limit of excavation. The flagstones were rectangular or almost square (on average 500mm x 400mm x 50mm), and were closely laid in six rows aligned north-south. The surface of the flagstones was smooth, with no sign of any tooling, and several of the narrow joints showed signs of a white lime mortar. There was no indication that either floor [8] or partition wall footing [12], are anything other than original to the construction of the building.
- 5.2.5 Continuing north of wall [12], as represented by its footing, was a short section of wall footing, [111]. This was 0.20m wide x 1.40m long and consisted of sandstone blocks (c. 200mm square); it appeared to be truncated at its northern end. As this less substantial structure differed from wall [12] to the south it may suggest a change in use of the space to the east, which may explain why flagstone floor [8] did not continue further north. This change in flooring was aligned with the east-west aligned external wall to the west, at the place where an internal partition would likely be located in a building of this shape.
- 5.2.6 In the south-western corner of the building, an internal tiled floor surface, [9], is interpreted as being a later addition and therefore is described in Phase 3 below. Precise calculation of the size of this room is not possible as the external walls did not survive, but the aforementioned robber trench indicates that it measured c. 4.80m east-west by 3.80m north-south. At the north-western corner of this room, the angled form of the edge of the tiled floor suggests that there was once a small hearth and chimney breast located there.
- 5.2.7 In the third portion of the building, the north wing appeared to be a single room without division; although a c. 1m long linear alignment of sandstone blocks, [112], identified in the east section of Trench 1, to a maximum width of c. 0.10m, may possibly indicate some internal element. The flooring in this area was a mixture of red brick and flagstones, [6], recorded at a maximum height of 47.95m OD (Plate 2). A narrow gap, at most c. 80mm wide, adjacent to the exterior west wall was presumably due to the wall being plastered or panelled, so that the flooring did not need to be flush with the external wall. The bricks (230mm x 110mm x 70mm) were unfrogged and laid in rows, aligned east-west. The floor was truncated at its southern extent, exposing areas of bedding material, [109] and [33]. These consisted of mixed deposits with crushed ceramic building material, silt, sand and patches of lime mortar recorded.

- 5.2.8 Adjacent to these bedding deposits was another area of brick floor, [7], recorded at a maximum height of 47.88m OD. This was somewhat less regular in its construction, with courses roughly aligned east-west and consisting of broken red bricks (c. 160mm x 110mm x 70mm) (Plates 2 and 3). The surface appeared to be considerably more worn than surface [6] and its southern edge was delineated by two vertically bedded flagstones, creating a step up in height to the level of flagstone floor [8] to south.
- 5.2.9 Without full excavation it was difficult to ascertain if floor [7] was an original surface. The presence of vertical stone edging at its southern extent and the spread of bedding layers to the north suggest that this was an original element, contemporary with the slightly elevated floor [8] to south, but underlying a replacement floor, [6], to north. However, the nature of the materials used in floor [6] were still indicative of a date in the first half of the 19th century, therefore it was possibly added relatively early in the life of the building. Significant wear was noted on the surface of floor [7].
- 5.2.10 The 1848 Ordnance Survey map shows a narrow lane linking the property investigated in Trench 1 to Wigan Road (then Moor Street End), with substantial fields extending to the north, presumably associated with the property. The position of the former lane was still evidenced by a gap in the present housing along Wigan Road. Whilst undertaking the removal of overburden, a compact dark ash and grit layer was observed at the southern boundary of Trench 1 in the approximate location of this lane and the material likely represents a version of the surface of the lane. On the north side of the building, a similar deposit, [27], was recorded, but this was removed to reveal earlier deposits and therefore this surface can more confidently dated to the late 19th century (Phase 3).
- 5.2.11 External to the building in the north-east corner of Trench 1, a gritty ash layer, [27], overlay a surface of granite setts, [3], recorded at a maximum height of 48.11m OD. These were laid in rows aligned east-west with the southernmost three rows closest to the building exhibiting a slightly concave surface, to perhaps function as a gutter (Plate 5). This represents a well-constructed road or yard surface immediately adjacent to the building and probably dates from the first half of the 19th century, contemporary with the construction of the building, as previously described. The setts were truncated further north and here the aforementioned surface deposit [27] had been more thickly deposited. The addition of this very compact gritty ash layer likely represents a resurfacing of the original 19th-century hardstanding adjacent to the building.
- 5.2.12 To the west, was a heavily truncated cobbled surface, [19], which curved around the north-western corner of the building (Figure 8; Plate 5 rearground). It was constructed with sub-rounded cobbles (c. 250mm x 120mm x 100mm), laid on edge with no bonding mortar and was recorded at a maximum height of 47.71m OD. The northern edge had a single linear course where the cobbles were laid end-to-end. The remaining cobbles were laid in rows at a right angle to this. The south, east and west sides of the surface were all truncated and it is surmised that they had been removed for reuse.

- 5.2.13 A curvilinear feature, [44], mirrored the curve of the cobbled surface c. 2m to the south and this was probably related to drainage, demarcating the southern edge of what would have once been an extensive cobbled surface c. 3m wide. This surface constituted a curved road or yard surface adjacent to the building and probably dates from the first half of the 19th century and the construction of the building.
- 5.2.14 Recorded in Trench 2, were two stone-built culverts, [82] and [87] (Plates 8-10). These have been tentatively assigned to Phase 2 (Figure 10) and may have been installed to drain the southern margin of land in agricultural use and were possibly contemporary with the structural remains recorded to the west, as described. Culvert [87] was aligned approximately north-south for a distance of c. 10m, gradually curving to the north-west at its northern end for c. 4m, and extending beyond the limits of excavation to the south and west (Plates 8 and 9). Culvert [82], was aligned NE-SW and was recorded for a distance of 8m, extending beyond the northern limit of excavation (Plate 10). Culvert [82] was trench-built within a construction cut, [83], but no cut was identified for culvert [87]. Both culverts were constructed from irregular sandstone blocks, generally c. 100mm thick and laid vertically in two parallel rows with horizontal slab stones, c. 80mm thick, laid across the top, enclosing a void c. 0.30m wide.
- 5.2.15 In addition to the stone culverts, a field drain, [86], was also exposed in the northernmost portion of Trench 2. This was aligned approximately NW-SE and extended across the trench for a distance of c. 18.50m, continuing beyond the limits of excavation to the east and west. Two spurs extended to the south approximately at right angles to the main drain. The construction cut for the drain was 0.30m wide and was cut into the natural sub-stratum, slightly deeper than the culverts, at a depth of c. 0.70m below the present ground surface. The drain itself, [85], comprised arched sections of terracotta pipe, indicative of a 19th-century date. The drain drained to the west; at its easternmost exposed section it was recorded at a height of 47.96m OD, falling to 47.64m OD on the western side of Trench 2.
- 5.2.16 In the central part of Trench 2 was an extensive irregular linear feature, [99], recorded for a distance for c. 12.50m, continuing to the east beyond the limit of excavation, and up to a maximum of 2.50m wide. The irregular form of the feature indicates that it was probably caused by root action and, therefore, likely represents the former location of a tree/hedge line along a previous field boundary parallel to, and only c. 5m to the north of the present fence line delimiting the southern boundary of the site. It is noteworthy that the aforementioned culverts and field drain respected the position of this feature.
- 5.2.17 Similarly, a possible arrangement of features, group number [108], may have derived from vegetative growth along a boundary along the southern margin side of Trench 1 (Figure 9).

5.3 Phase 3: Late 19th Century

- 5.3.1 Cartographic evidence shows that, by the late 19th century, extensions had been built on both the eastern and western ends of the original T-shaped building in the south central part of the site, as recorded at the eastern end of Trench 1, with additional structures constructed to the north and west (Figure 4). The eastern additions lay beyond the limit of Trench 1, but did not extend sufficiently eastward to be exposed by Trench 2. However, the western editions were revealed within Trench 1. The recorded evidence demonstrated that the modifications undertaken between 1848 and c. 1894 were not carried out as a single phase of construction, with alterations to the overall footprint and to floor surfaces.
- 5.3.2 Three walls, [23], [24] and [25], recorded in Trench 1 represent a western extension to the original T-shaped structure in the south central part of the site, an addition which is depicted on the c. 1894 Ordnance Survey map. These walls, all aligned east-west, were c. 0.30m wide (Figure 8). All were constructed from sandstone blocks, although wall [25] incorporated some red bricks in its construction, but it is considered that these are likely to derive from later alterations. Walls [23] and [24] were c. 1m apart and were both roughly coursed with the north side better faced with larger blocks. Wall [23] was recorded at a maximum height of 47.69m OD, while wall [24] survived to a slightly higher level at 47.80m OD.
- 5.3.3 A short northward return at the east end of wall [24] could indicate that the walls [23] and [24] were originally joined at this point, but the demolition of both walls and the construction of another wall, [21], running diagonally across them both, effectively obscured this relationship. The short return is also likely to have extended further southward, although aforementioned robber trench [10] had seemingly removed it in the area where it would have joined to the north facing exterior wall of the original main building. Overall, therefore, this extension, consisting of walls [23], [24] and [25], is likely to have been rectangular in plan, but the purpose of two-closely set parallel walls on the north side is not clear. It measured c. 4.20m north-south and extended for a distance of c. 3.70m east-west, although as the western wall did not survive, the precise dimensions are not known.
- 5.3.4 No internal floor surfaces were observed associated with walls [23], [24] and [25]. They may have been removed by later alterations, but it is possible that two exterior floor surfaces, [14] and [15], derived from this phase of activity. The more extensive of these surfaces, [15], was located to the west of the building and was constructed with small, tightly packed rounded cobbles in rows aligned north-south (Figure 8; Plate 1). This was recorded at a height of 48.06m OD on its eastern side and 47.86m OD on its western side, presumably to allow rainwater to drain away from the building. The surface was truncated at its northern extent, but its original western edge remained, where it was delineated by a line of larger rounded cobbles (c. 200mm x 100mm). There was also a single row of more rectangular cobbles aligned east-west at right angles to all the other rows, close to the southern edge of the surface. South of this row, the cobbles were slightly smaller and the surface slightly smoother, perhaps indicating a pedestrian route. Indeed, at the eastern end of this area there was a rectangular space where a flagstone may have been located prior to a step-up to the east. Beyond the cobbles to the west, a heavily truncated flagstone surface, [47], was observed and this may represent a path leading west from the building and yard surface [15], although given the limited degree to which this survived this is far from certain.

- 5.3.5 At the southern extent of surface [15], the cobbles ended in a straight line, while the western edging stones continued slightly further south. This, along with the presence of brick fragments just south of surface [15] and the fact that the robber trench [10] for the walls of the main building extended westward for a short distance and in line with the edge of the surface, strongly suggests that a brick wall originally delimited the southern edge of surface [15]. The lack of foundations to this wall would indicate that it was not load-bearing and may not have been full height.
- 5.3.6 A flagstone and cobble surface, [14], was recorded to the west of the main building and the south of west-east wall [25]. This was recorded over an area measuring c. 3m east-west by 3.40m north-south at a maximum height of 48.03m OD, with a very slight fall in height to the west. This was also presumably a yard area and was similar in composition to cobble surface [15]; the cobbles (on average 80mm x 50mm) were laid in north-south aligned rows. However, unlike surface [15] this included three flagstones (measuring up to 400mm x 370mm), positioned in a line adjacent to wall [25]. This would seem to indicate that this wall was in place when the surface was laid, or perhaps that they constructed contemporaneously, demonstrating that surface [14] dates from the second half of the 19th century.
- 5.3.7 Cobbled yard surface [15] was truncated by a NW-SWE aligned linear feature, [39], which was 0.30m to 0.40m wide. This likely represents the construction cut for a drain, but the feature was unexcavated so this was not proven.
- 5.3.8 The rectangular yard area represented by surfaces [15] and [14] was subsequent resurfaced with another surface, [13], which sealed probable drain trench [39]. This surface was more irregularly laid than the earlier surfaces and largely comprised red brick, with two flagstones and an area of cobbles, these probably elements reused from the disturbed structures below. Surface [13] overlay surface [14] and was recorded at a maximum height of 48.09m OD. It was truncated by a construction cut, [18], for a drain, [16], the insertion of which was likely associated with the resurfacing of the yard.
- 5.3.9 From the point at which the construction cut for drain [16] cut into yard surface [14] it extended north-westwards beneath surface [13] and at the same height as this surface a red brick drain gully was recorded, measuring 0.60m x 0.70m, roughly square. This, therefore, was located on the external south-western corner of the extension to the building and would have taken a rainwater downpipe from the extension roof gutter. The bricks used in its construction were of two different types (see Section 9.3). Both were unfrogged and handmade, but differed in size and fabric. The fabric of the thicker bricks (230mm x 110mm x 80mm) indicated that these were poorly-made bricks manufactured from local clay; brickfields are documented on Wigan Road, Ormskirk from 1727 onwards. Amongst the thinner bricks (230mm x 110mm x 50mm), one example had 'J' stamped on the side. Both bricks are likely to be of 19th century date and they were bonded with a shell-rich lime mortar, also typical of the 19th century.
- 5.3.10 Drain [16] ran roughly due northwards from the brick gully and continued beyond the northern edge of Trench 1. The drain itself was an iron pipe, 0.15m in diameter, with bolted collars connecting sections of pipe together. Along its length, construction cut [18] for the pipe truncated surface [19] and service trench [44], demonstrating that it post-dated these elements.

- 5.3.11 In summary, evidence from the exterior yard surfaces west of the main building has shown that cobble and flagstone surfaces [14] and [15] were initially laid prior to services [18] and [39] being installed, with a new, largely brick, surface [13] then laid down. All of this activity potentially occurred during the second half of the 19th century.
- 5.3.12 The footprint of the building extension also underwent some modification during this period. The aforementioned brick wall, [21], was constructed at an angle across the earlier east-west aligned stone walls [23] and [24], using faced sandstone quoins at both ends and bonded with a white lime mortar (Figure 8). This wall, representing a deliberate realignment of the north wall of the extension, ran for a total length of 4.80m, but was truncated and disturbed to the west, and was c. 0.23m wide. There was a gap of c. 2.40m between its eastern end and wall [4] of the main building. This area was occupied by a brick floor, [22], with a flagstone threshold to the north-east, indicating the position of an entrance through the north side of the extension (Plate 2, left rearground). This threshold stone measured c. 1m x 0.30m and had a shallow rectangular slot at its eastern end, to house an element of a timber door frame, and was recorded at a maximum height of 47.93m OD.
- 5.3.13 The red brick floor, [22], surrounding this threshold was edged by a row of headers with patches of white lime adhering to their upper surface, showing that they probably formed the lower course of a brick wall 0.23m thick, probably laid in English bond. Forming an edge to the floor surface were three rows of bricks laid parallel to the wall and threshold, before the rest of the floor was constructed with bricks laid in roughly north-south aligned rows at a right angle to the wall. The southern and western sides of this floor were truncated, but the western end contained several courses that were aligned NW-SE, reflecting the angle of wall [21]. This indicated that the floor was contemporary with, but not earlier than the rebuilt north wall [21], of the extension. The handmade, unfrogged bricks were very similar in size and fabric to those used in the gully of drain [16] and are thought to be of 19th-century date and locally made (see Section 9.3).
- 5.3.14 The interior of the extension was heavily truncated, with a probable north-south internal wall being completely removed by robber trench [10], which had also removed the external southern walls of the building, indicating a single phase of demolition. Apart from surface [22], adjacent to the entrance in the north wall, the only other surviving area of floor surface, [20], was located at the western end of the extension (Figure 8). Surface [20] was recorded at a maximum height of 48.06m OD and consisted of red bricks laid parallel with both realigned north wall [21] and the western end of the extension, *i.e.* north-south. This surface used the same bricks as floor [22] and was probably originally the same surface, laid throughout the extension when wall [21] was erected and the extension modified.
- 5.3.15 Elsewhere in the original building, a tile floor, [9], is also likely not an original feature (Figure 8; Plates 3 and 4). This consisted of red and yellow square terracotta tiles (150mm x 150mm x 23mm) laid in a chessboard style with up to three lines of yellow tiles laid around the edge (Plate 4). The underside of each tile had a machine-stamped recess, suggesting a date of manufacture after c. 1850 and they may have been manufactured in North Staffordshire from the 1880s onwards (see Section 9.4). The tiles were bedded with a fine light grey lime mortar with flecks of clinker, which would confirm a date of installation after c. 1850.

- 5.3.16 As well as the extension of the main building recorded at the eastern end of Trench 1, other features and structures have been assigned to this phase of activity in the second half of the 19th century. West of the main building was a rectangular refuse pit, [37], which measured 1.80m x 3.80m x c. 0.22m deep (Figure 8; Figure 11, Section 1). It contained three fills, [34], [35] and [36], which produced a large selection of domestic pottery, several worn-out leather shoes, glass beer and soft drinks bottles and clay tobacco pipe fragments. The pottery included Bristol-glazed stoneware dating to after 1830, while transfer-printed wares included a soup plate with a late 19th-century design. The stoneware forms dated to the late 19th or early 20th centuries and fragments of glass bottles also confirmed this date of deposition toward the end of the 19th century or perhaps very early 20th century. The clay tobacco pipe assemblage from the pit was of particular local interest, as it included an Irish type bowl (see Section 8).
- 5.3.17 Two small, probable ancillary, structures, [52] and [66], were recorded in the western portion of Trench 1 (Figure 9). Both are likely illustrated on the c. 1894 Ordnance Survey map, although no remains of a third, larger structure shown on this map between these structures and the main building at the east end of Trench 1 appeared to survive (Figure 4). A cluster of square cuts and postholes, group numbers [54] and [56], was potentially representative of this structure (Figure 9; Figure 11, Section 2). These were arranged in an irregular grid on the same broad alignment as rectangular structure [66] immediately to the west. Excavation of one of the more prominent square features, probable post-pit [62], revealed it to measure 0.80m x 0.82m x c. 0.15m deep (Figure 11, Section 3). It contained two upper fills, [59] and [61], with a square slate bedded in the base of the feature in a clinker deposit, [60]. This likely acted as a post-pad within a simple structure above and other unexcavated features in this group presumably had a similar function. Pottery recovered from fill [59] was of 19th-century date, although the presence of a Bristol-glazed stoneware jar indicates deposition in the late 19th century or later (see Section 7).
- 5.3.18 Structure [66] was a poorly-built sandstone affair which measured 5.22m x 3.22m, truncated along its northern side (Figure 9; Plate 6). It was probably originally rectangular and internally had a small area of brick surface, [63], recorded at a height of 47.48m OD, and a short section of brick wall footing, [64], surviving against its east wall. The interior of the structure was covered by a compact, black ashy layer, [65], similar to the aforementioned surface deposit [27]. Indeed, this may have been the same industrial by-product, sourced from deposit [65] and spread as deposit [27] over a road surface as a repair. Interestingly, all of the faunal remains recovered from the site came from just these two layers. A single fragment of cattle bone was retrieved from deposit [27], while the remaining 16 finds came from deposit [65]. These were mostly cattle bones, but also with a number of rabbit bones (see Section 11).
- 5.3.19 A slot was hand-excavated through infill [65] to ascertain its depth and examine any potential underlying floor surfaces. This revealed that the deposit was 0.40m thick, but no floor surface was encountered. The deposit was particularly rich in artefactual material with finds of pottery, glass, an incomplete leather shoe with a nailed sole and metalliferous slag. The pottery and glass beer bottles both indicated a date of deposition in the late 19th or early 20th century. The metalliferous slag from fill [65] was a type of fuel ash slag known as clinker, a partially fused fuel ash residue, which is a common by-product of burning fossil fuels such as coal and coke. Clinker may indicate metal production, but it can potentially originate from a wide variety of other sources, such as boiler fireboxes, coal gas production or reheating or drying ovens and kilns (see Section 13).

- 5.3.20 Two terracotta drains, [103], led from the south-western corner of structure [66], draining to the south-west. These had been built through the wall and in the adjacent south wall was a similar small void which aligned with a length of drain, [110], recorded adjacent to the southern limit of excavation in Trench 1. Therefore, drain [110] probably originally connected with the building, but had been removed or truncated by later activity. A small patch of cobbled surface, [67], measuring 1.20m x 1.10m, was recorded to the east of this drain; recorded at a height of 47.74m OD this was also heavily truncated. Although no finds were retrieved from this surface or its bedding layer, [68], it would seem likely that it belongs to the same broad phase of activity as structures [66] and [52], to the north and west, respectively.
- 5.3.21 Structure [52] was a narrow red brick-built structure aligned north-south (Figure 9; Plate 7). It consisted of two parallel outer walls, 1.20m apart, with a brick and cobble surface, [51], laid between. The southern end of the structure was truncated, but appeared to continue beyond the southern limit of Trench 1 and here the bedding layer, [69], for the floor surface was exposed. This dark sandy silt deposit produced a small collection of typical 19th-century pottery types and suggested a broad deposition date of 1805-1900 onwards (see Section 7). This concurs with cartographic evidence which indicates that the structure was erected between 1848 and 1894 (Figures 3 and 4).
- 5.3.22 There was no north wall to structure [52] and the fact that the west wall had a wider and deeper brick footing, showing that this element was more substantial, indicated that the structure was, at least in part, open sided, perhaps a 'lean-to' structure. The purpose of such a narrow structure is not obvious, but it may have been for storage against a tall boundary wall, servicing other more industrial processes, such as that possibly carried out in structure [66]. The nearby presence of a clay extraction pit and the Local Board Stone Yard, both depicted on the c. 1894 Ordnance Survey map (Figure 4) could suggest that these structures were associated with brick manufacture or the construction industry.
- 5.3.23 The excavated evidence indicated that no stone or brick structures were built in the location of Trench 2 during the second half of the 19th century. Recorded in the south-western corner of Trench 2 was a series of small, square and circular postholes, group number [96], which generally measured c. 0.20m x c. 0.30m (Figure 10). These likely represent part of a small structure, as depicted at this location on the c. 1894 Ordnance Survey map (Figure 4). A slightly larger irregularly-shaped feature, [79], recorded to the north, was part of a group of larger and more irregular postholes, group number [94]. Excavation of posthole [79] revealed it to be 0.40m deep (Figure 12, Section 5) with a fill, [78], containing metalliferous slag, along with pottery and clay pipe fragments indicative of a late 19th-century or early 20th-century date.

5.3.24 Two substantial refuse pits, [92] and [81], were recorded within Trench 2 (Figure 10). Both were roughly aligned NW-SE and to the south appeared to respect posthole group [96], suggesting a contemporary above ground presence. Pit [92] was c. 3m wide and was visible for c. 5m continuing beyond the western edge of the trench (Plate 8). Although unexcavated, it contained building debris with fragments of sandstone, broken bricks, fragments of slate, frequent lime mortar flecks and pottery. A sample of pottery was collected from the surface and the assemblage included a transfer-printed ware plate dated c. 1860-71, other late 19th-century transfer-printed designs and a stoneware ink bottle that can be broadly dated to the late 19th or early 20th century. Pit [81] measured 3.60m x 2.48m and was half-sectioned by excavation, revealing it to be 0.74m deep (Figure 12, Section 6). Its single fill, [80], contained significant quantities of pottery fragments, with 89 sherds recovered. This included an English majolica jug, stoneware bottles and transfer printed wares, which as a group could be dated to the late 19th and early 20th century.

5.4 Phase 4: Early Modern - Early 20th Century

5.4.1 Cartographic evidence shows that after c. 1894 there was something of a reduction in activity at the site (Figures 4, 5 & 6). Unidentified structures beyond the limits of both excavation trenches, to the north of the main range of buildings, were demolished, as were structures likely identified by postholes in Trenches 1 and 2. Building [66] in Trench 1 was also demolished although a subsequent boundary wall, most clearly depicted on the c. 1928 Ordnance Survey map evidently retained the angles of the walls of the structure. The c. 1928 map shows the boundary wall returning to the south in the western part of Trench 2 and the fragmentary footing of a degraded red brick structure, [88], recorded running parallel to the earlier stone culvert [87] at this location, likely represents this wall.

5.4.2 By the time of the c. 1928 Ordnance Survey map, a saw mill and timber yard occupied the westernmost portion of the site, this probably the earliest premises of Atkinson and Kirby. The main range of buildings remained in place in the south central part of the site, with a distinct boundary wall enclosing it to the north, east and west, with a sub-division to the west. The western end of Trench 1 extended into the timber yard area depicted on the map at that date, but did not encompass any of the structures shown. However, a large area of cobbled surface was exposed in the western part of Trench 1, just below the present ground surface, at a maximum height of 47.70m OD. The surface was recorded over an area that measured c. 17m x c. 10m, extending beyond the northern and western limits of excavation and truncated to the south. It comprised several distinct surfaces, with two large areas of large (on average 300mm x 200mm) sandstone cobbles, [50] and [75], and smaller areas of brick surfaces, [70], [72] and [75]. While these were seen to be worn exterior yard surfaces, a linear area of red bricks, [74], was noticeably different. This area comprised several unmortared rows of red brick laid on their ends at an angle of 45°; this may represent the base of a brick wall laid in a herringbone style.

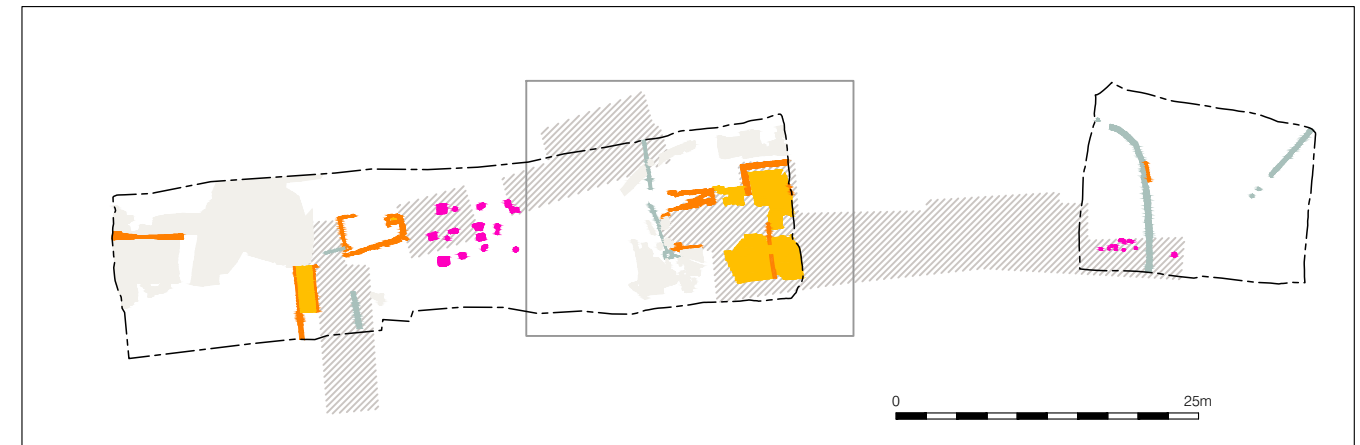
5.5 Phase 5: Modern - Mid 20th Century

5.5.1 By the time of the c. 1963 Ordnance Survey map, the Atkinson and Kirby works had seen significant expansion, with possibly all previous buildings at the site demolished and an extensive complex of new works buildings constructed (Figure 7).

- 5.5.2 The archaeological record reflects demolition of the former main building in the south central portion of the site. Wall [4] was demolished down to the then ground level, as indicated by surfaces [3] and [27], while continuations of this wall to the west and south were robbed-out by features [10] and [45]. Bricks and flagstones from floor surfaces and thresholds were also removed from the building prior to the accumulation of rubble and demolition debris in the interior, this represented by deposits [1], [2], [5], and [48].
- 5.5.3 Within these layers, a number of relatively interesting artefacts were recovered. Notable among them were two coins, an eroded King George V halfpenny that could only be dated between 1910-1936 found within layer [1] above floor [6] and a Queen Victoria penny dated to between 1860-1895 from mortar debris [2]. An enamel sign, measuring 0.33m x 0.53m, was found with demolition layer [5]. This was yellow with large red lettering advertising 'SHELL / MOTOR SPIRIT / SOLD HERE'. A noticeable absence within this deposit were the large sandstone blocks that made up the adjacent wall [4]. This wall had evidently collapsed into the building and onto floor surface [6], as demolition debris did not extend beyond the walls, and the reusable blocks were then removed, leaving a layer of small sandstone rubble, sandy mortar and occasional red bricks.
- 5.5.4 Deep truncation of deposits and natural strata in the south-western corner of Trench 1 dates from mid-20th-century occupation of the site by the Atkinson and Kirby premises, as the building shown at the west end of Trench 1 on the c. 1963 Ordnance Survey map must have had a basement. Demolition of the building and subsequent backfill in the final phase of activity at the site resulted in the very mixed fill of building rubble of 20th-century date within a deep feature.
- 5.5.5 In Trench 2, three large, square equally-spaced postholes, group number [98], aligned east-west appear to align closely with a rectangular structure shown on the c. 1963 Ordnance Survey map (Figure 7). The easternmost posthole, [77], was half-sectioned in an attempt to retrieve datable finds (Figure 12, Section 4). Unfortunately, only a single sherd of refined whiteware was recovered from its fill, [76], which had a date of manufacture sometime after 1805 and is likely to be a residual artefact. Similarly, two fragments of clay tobacco pipe from this fill, one bowl and one stem fragment of indistinct types, are also likely to be residual.
- 5.5.6 A slightly larger rectangular pit, [102], recorded on the north side of Trench 2, may also be associated with mid-20th-century development on the site; however, its fill, [101], contained several distinctly modern artefacts such as blue nylon rope and plastic. These articles may have been deposited when a structural element was removed and the void backfilled in the last phase of activity on the site, when the 20th-century works buildings were demolished.
- 5.5.7 Elsewhere, an oval posthole, [41], measuring 0.60m x 0.30m, was recorded on the east side of Trench 1. This feature was located in the north-western corner of the main building extension and was seen to be cut through layer [48], demolition debris deposited during the levelling of the structure. It must, therefore, post-date this activity and can be dated to the mid to late 20th century.

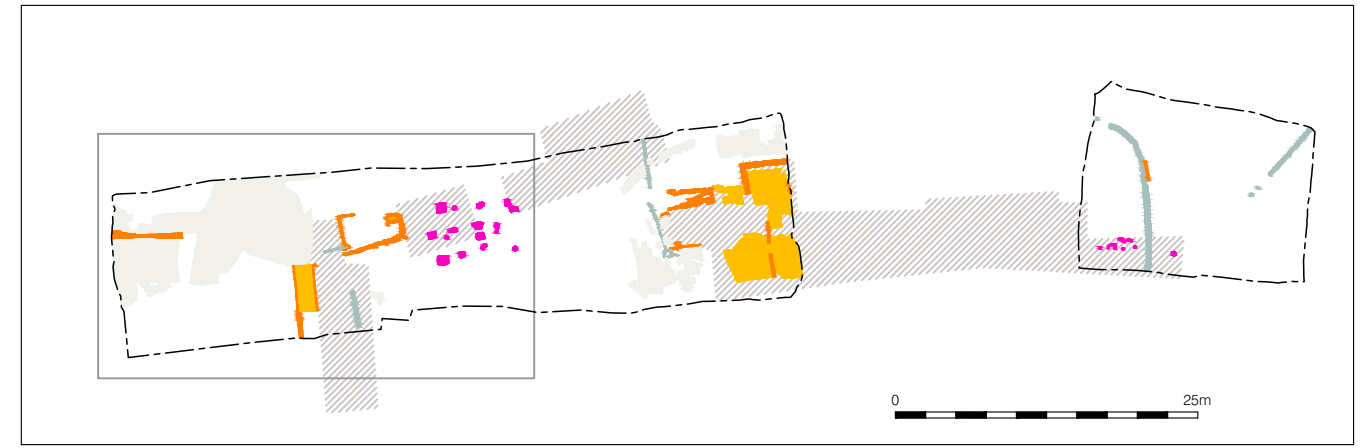
5.6 Phase 6: Modern - Late 20th and Early 21st Century

- 5.6.1 In the most recent phase of activity on the site, dating from the late 20th and early 21st century, all of the former industrial buildings were demolished and the site was levelled in preparation for re-development. In some instances, this involved complete excavation of all building structures and foundations, such as the deep backfilled feature in the south-western corner of Trench 1. In other locations, areas of concrete hardstanding were left *in situ*.
- 5.6.2 For most of Trenches 1 and 2, which were located along the southern boundary of the Atkinson and Kirby works and had therefore not been built upon, this final, modern phase of activity was barely represented archaeologically.
- 5.6.3 A levelling layer of disturbed topsoil was also observed in places across the site during machine removal of overburden and this had recently become overgrown.



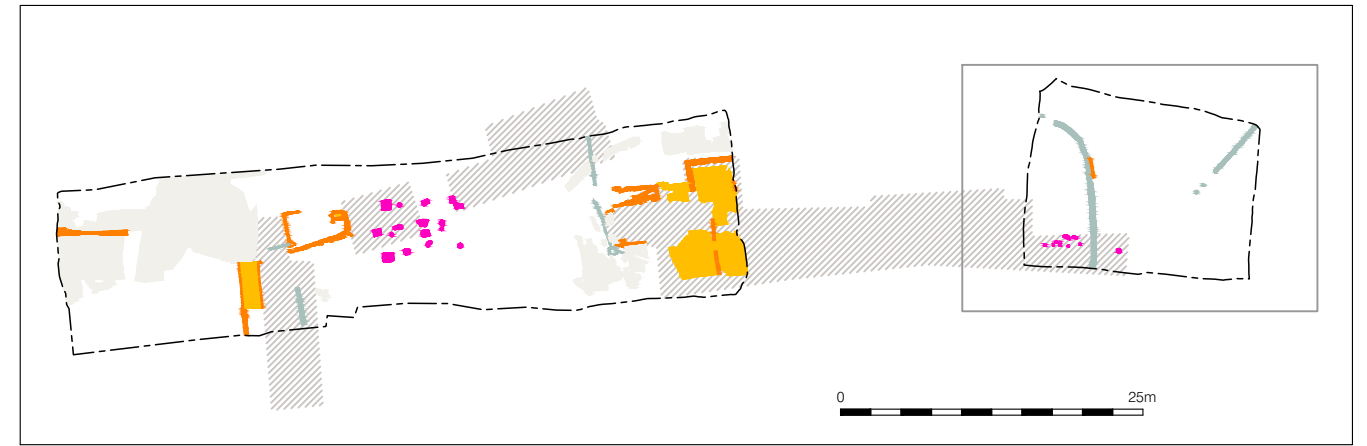
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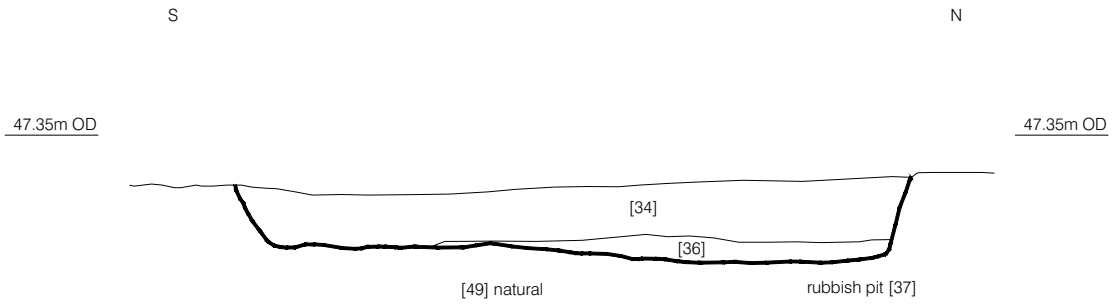
Figure 9
Plan of Trench 1, east side
1:100 at A3



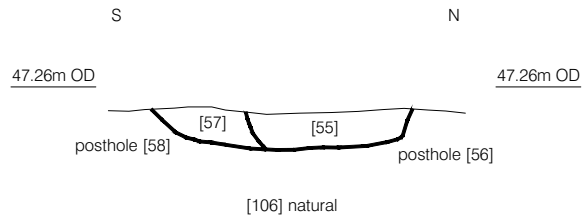
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Figure 10
Plan of Trench 1, west side
1:100 at A3

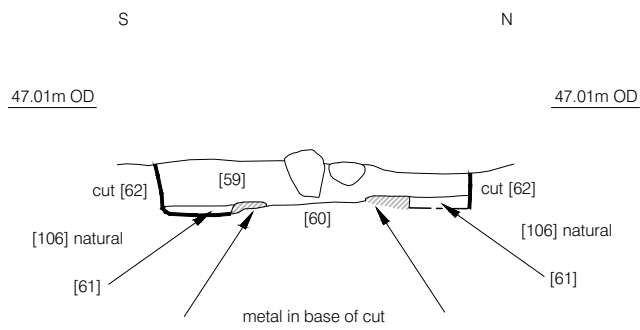




Section 1
East facing
Trench 1, East End

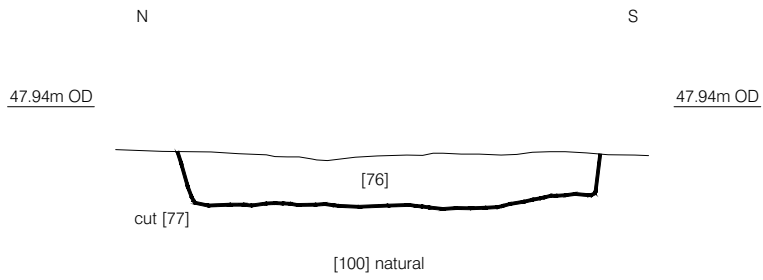


Section 2
East facing
Trench 1, West End

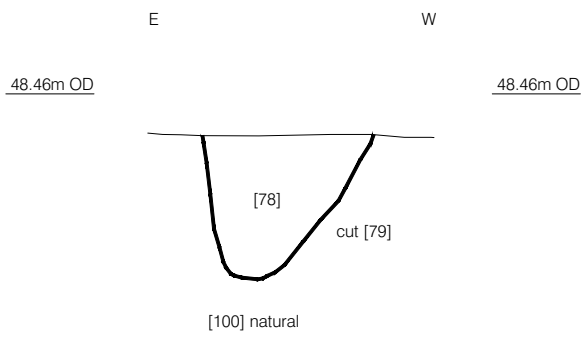


Section 3
East facing
Trench 1, West End

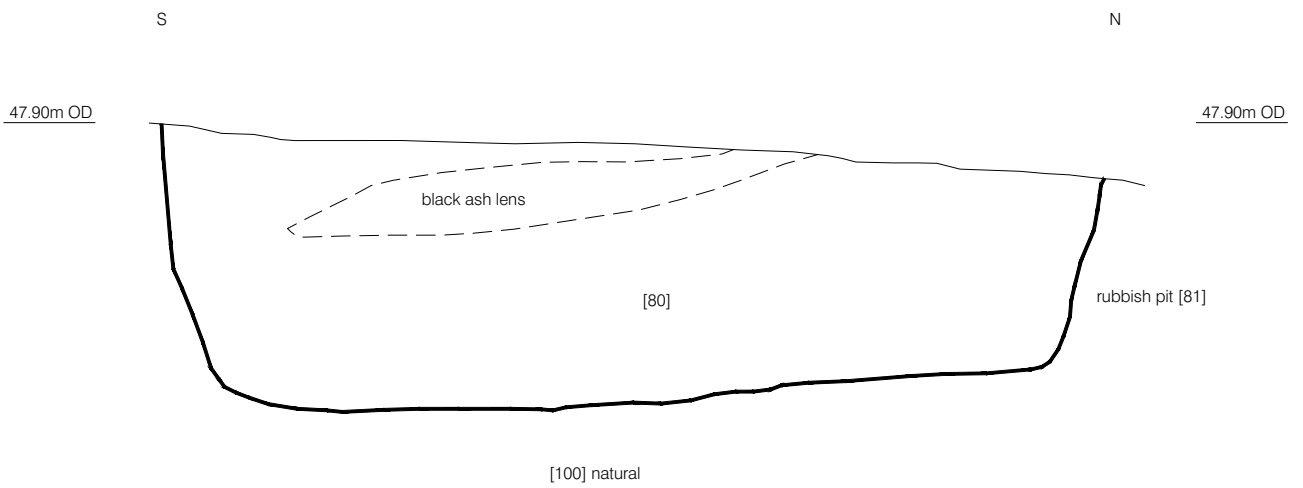




Section 4
West facing
Trench 2



Section 5
North facing
Trench 2



Section 6
East facing
Trench 2



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Figure 13
Sections from Trench 2
1:20 at A4

PART B: DATA ASSESSMENT

6. STRATIGRAPHIC DATA

6.1 Paper Records

6.1.1 The paper element of the Site Archive is as follows:

| <i>Item</i> | <i>No.</i> | <i>Sheets</i> |
|------------------------|------------|---------------|
| Context register | 1 | 3 |
| Context/masonry sheets | 112 | 112 |
| Section register | 1 | 1 |
| Section drawings | 6 | 6 |
| Plan register | 1 | 1 |
| Plans | 4 | 47 |

Table 6.1. Contents of the paper archive

6.2 Photographic Records

6.2.1 The photographic element of the Site Archive is as follows:

| <i>Item</i> | <i>No.</i> | <i>Sheets</i> |
|------------------------------|------------|---------------|
| Monochrome print registers | 3 | 3 |
| Monochrome prints | 41 | 6 |
| Monochrome negatives | 40 | 3 |
| Colour slide registers | 2 | 2 |
| Colour slides | 35 | 3 |
| Colour print registers | 1 | 1 |
| Colour prints | 18 | 3 |
| Colour print negatives | 18 | 1 |
| Digital photograph registers | 1 | 3 |
| Digital photographs | 85 | n/a |

Table 6.2. Contents of the photographic archive

6.3 Site Archive

6.3.1 The complete Site Archive, including the paper and photographic records, is currently housed at the Northern Office of PCA.

6.3.2 The Site Archive will eventually be deposited with the Museum of Lancashire, Preston, for permanent storage and the detailed requirements of the repository will be met prior to deposition.

7. POTTERY (Chris Jarrett)

7.1 Introduction

7.1.1 A relatively small assemblage of pottery was recovered from the site. The pottery dates from the late 19th and early 20th centuries. Very few sherds show evidence for abrasion and were probably deposited fairly rapidly after breakage. The fragmentation of the pottery ranges from sherd material to vessels with complete profiles as well as a number of intact items. The pottery was quantified by sherd count and estimated number of vessels (ENV's), besides weight measured in grams. Pottery was recovered from nine contexts and individual deposits produced small (fewer than 30 sherds) to medium (less than 100 sherds) groups of pottery.

7.1.2 All of the pottery, 186 sherds equalling 136 ENV, weighing 12.56kg, was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an ACCESS database, by fabric, form and decoration. The classification of the pottery types are given an alphabetical coding system and where possible referenced to nomenclature as used by the Potteries Museum, Stoke-on-Trent, or when this was not applicable, then common names for late post-medieval pottery types are given. The pottery is discussed by types and its distribution.

7.2 The Pottery Types

Red earthenwares

7.2.1 The forms present in these types of pottery are mostly bowls in glazed redware and Sunderland-type ware, contexts [34], [65] and [80], while a chamber pot is noted also in Sunderland type ware and found in context [80] (Table 7.1). Flower pots are restricted to PMRED H and found in contexts [34], [65] and [80]. The glazed redware occurs in two fabric types. One fabric, in the form of the flared bowl, context [34], is coarse with ill-sorted, white and grey, moderate, sub-angular quartzes and occasional red iron ores. The latter gives a brown mottled/streaky appearance when in contact with the clear glaze.

7.2.2 The second fabric occurs in the form of the wide bowl, from context [65] and it is a finer sandy type with occasional white quartzite and a clear glaze. The wide bowl additionally has an external red wash. These wares could be from Lancashire sources; in 1900, seven earthenware manufacturers are recorded for Liverpool, although they were not necessarily making coarse redwares, while a pottery at Hall Lane, Huyton was probably making redwares.¹¹

¹¹ Gore's *Directory of Liverpool and Birkenhead 1900*.

| Type | Code | Date | Sherd Count | ENV | Weight (g) | Forms |
|--------------------------------------|---------|--------------|-------------|-----|------------|---|
| Black-glazed wares | BLACK | 1600-1900 | 4 | 4 | 479 | Unidentified, probably open |
| Glazed post-medieval redware | GRE | 1600-1950 | 64 | 3 | 1179 | Bowls; flared and wide |
| Post-medieval horticultural redwares | PMRED H | 1650-onwards | 4 | 4 | 154 | Flowerpots |
| Sunderland-type coarseware | SUND | 1800-1900 | 6 | 6 | 739 | Bowl; medium rounded Bowl or dish Chamber Pot |

Table 7.1: Catalogue of red earthenwares

Industrial finewares

- 7.2.3 A wide range of functions are provided by the industrial finewares (see Table 7.2). Food consumption wares are more frequent, as 50 sherds/31 ENV/1742g, and are more so as plates in a range of sizes and shapes. Decoration on plates is frequently as the transfer printed whiteware and includes the ubiquitous Willow pattern, contexts [59], [69], [80] and [91] and dating from c. 1830-1910, the Asiatic Pheasant design, contexts [34] and [80], besides the occasional example with mid-19th-century 'Romantic period designs', contexts [34] and [91], and later 19th to early 20th-century geometrical and floral designs, contexts [34] and [80]. A mid-19th-century nursery ware tea plate has a brown transfer (TPW3) featuring a 'Dr Franklin's maxim: '[D]r Franklin's... may keep his nose all his life...' context [34].
- 7.2.4 Some of the plates show evidence for the design and makers mark on the underside of the base, but the crucial initials of the factory is nearly always missing. The exception is a plate from context [91] with a landscape design and the initials 'C E & M' for Cork, Edge and Malkin, Burslem, operating c. 1860-71. There are a small number of plain refined whiteware plates and additionally one has 'chrome colour' painted decoration, context [34], and another has sponge-printed blue flowers clustered at the centre of the base, also context [34]. An eggcup in bone china was recovered from context [80].
- 7.2.5 Tea wares are represented as 16 sherds/13 ENV/683g. Tea cups are represented in Bone china and in refined whiteware and the only identifiable sub-division of this shape is the large breakfast type, a late 19th-century introduction. These forms are restricted to context [65] as a single example and the others are from context [80]. Saucers are in Bone china, context [34], decorated with either gilded lines or enamelled flowers and transfer-printed ware with the 'Stone China' Willow pattern variant design, found in context [80]. Teapots, contexts [34] and [80] and their lids, contexts [34] and [65], were noted, mostly in Rockingham-type ware, although another teapot from context [65] is in late 19th-century refined redware.
- 7.2.6 Presumed pharmaceutical wares are noted as 10 sherds/6 ENV/360g and these are in the form of refined whiteware 'bear's grease' type pots for ointments, contexts [65] and [80], and an associated dish shaped lid came from context [80].

- 7.2.7 Food serving wares, 8 sherds/6 ENV/678g, are as bowls and dishes in slip decorated refined whiteware and transfer-printed ware, contexts [34] and [80]. Of note is a REFW SLIP oval dish with a simple rim, the base would have had up to six 'stumpy' feet, three survive, the interior has an internal blue slip coating, context [80]. There are also two lids, probably for tureens in TPW and TPW4, context [80]. Sanitary forms, 8 sherds/3 ENV/336g, were exclusively in the form of chamber pots, mostly in plain white ware, contexts [59], [65] and [80], or additionally with chrome colour glazes and blue banded decoration, context [34], one of which unusually appears to have a 'flow blue' firing: an alkaline added to the kiln to cause the designs to blur.
- 7.2.8 Storage forms, 7 sherds/5 ENV/547g, and all as cylindrical jars, probably for food stuffs, are as three examples in refined whiteware, contexts [34] and [80]. One is additionally black transfer-printed (TPW3) and was for James Keiller & Sons Dundee marmalade and professes medals awarded in 1862 and 1873. This jar was recovered from context [34]. A single example of a yellow ware cylindrical jar came from context [80].
- 7.2.9 Drink consumption wares are also as 7 sherds and 5 ENV, but weigh 134g. All the forms are as cylindrical mugs/tankards and are in refined whiteware, with either with/slip decoration, usually as blue banding, or are transfer-printed. An example from context [34] has a small piercing between the rim and handle and its exterior is decorated with blue bands with a central 'diced' pattern of bead borders sandwiching a cable, infilled with black slip. The piercing may be for suspension from a hook in a tap room of a public house. Most notable is a REFW SLIP tankard from context [65] which has a broad blue band around the rim with a tan/brown transfer or rubber stamp motif with 'LANCASHIRE' around the top of a circle containing 'PINT' above a crown, which in turn is over 'G . R/105'. This refers to Weights and Measures regulations and GEORGE V/VI and so dates the vessel to between 1910-1952.¹²
- 7.2.10 A brown-transfer printed (TPW3) mug from context [78] has a roundel featuring part of a female's bust, facing to the right. It is quite possibly a royal personage; unlikely to be Queen Victoria (1837-1901) and more likely to be her daughter-in-law Princess/Queen Alexandra and therefore dates to the late 19th/early 20th century. From context [80] is a robust mug with a purple design (TR4) and an internal cable border and heart-shaped motifs, while the exterior has a floral design incorporating poppies. It is most likely to be late 19th-early 20th century in date. Some of these vessels, if not all of them, were derived from a drinking establishment, either located on the site or in the vicinity.
- 7.2.11 Drink serving vessels are as 7 sherds/4 ENV/133g and generic sherds are in refined whiteware and transfer-printed ware, the latter decorated with a purple transfer dog rose pattern, with under-glaze red and yellow painting and external green and yellow enamelling (TPW 6) and was noted in context [91]. Barrel-shaped jugs, all from context [80], are in the form of an English majolica example, moulded in the form of a corn on the cob and glazed yellow and green, with a pink interior and a REFW SLIP example is decorated with brown and blue lines.
- 7.2.12 Singular food preparation serving forms occur as a medium rounded bowl in REFW and from, context [34], which also produced a REFW door knob, with a metal bolt/spindle still attached. A singular display item is a vase rim in English yellow-glazed refined earthenware, from context [38].

¹² Rock 2006.

| Type | Code | Date | Sherd Count | ENV | Weight (g) | Forms |
|--|------------|------------------|-------------|-----|------------|--|
| Bone china | BONE | 1794 onward | 6 | 6 | 162 | Eggcup, saucer Tea cup; breakfast |
| English yellow-glazed refined earthenware | EYGE | 1785-1835 | 1 | 1 | 9 | Vase |
| Majolica | MAJO | 1850 onward | 1 | 1 | 37 | Jug: barrel-shape, vase |
| 19th-century glazed –refined redware | REFR L | c. 1870 onward | 1 | 1 | 48 | Teapot |
| Plain refined white earthenware | REFW | 1805 onward | 35 | 27 | 1490 | 'Bears grease' type pots and their lids Bowl; medium rounded Chamber pot Doorknobs Jar; cylindrical Jug Plates; dinner, oval and tea sizes/shapes Tea cups; breakfast shape |
| Refined white earthenware with under glaze-painted decoration (chrome colours) | REFW CHROM | 1830-1900 onward | 4 | 3 | 280 | Chamber pot Plate; soup |
| Refined white earthenware with industrial slip decoration | REFW SLIP | 1805-1900 onward | 11 | 9 | 700 | Bowl; carinated Dish; oval Jug; barrel-shaped Mug; cylindrical Tankard |
| Refined white earthenware with cut-out sponged decoration | REFW SPON1 | 1830 onward | 1 | 1 | 72 | Plate; dinner size |
| Rockingham mottled brown-glazed ware | ROCK | 1800 onward | 5 | 4 | 357 | Teapots and their lids |
| Blue transfer-printed refined whiteware | TPW | 1780 onward | 36 | 22 | 1002 | Bowl; deep Dish; rounded Lid; tureen Plate; dinner, oval, rectangular and tea sizes and shapes besides saucers |
| Brown or black transfer-printed refined whiteware (type 3) | TPW3 | 1810 onward | 6 | 5 | 190 | Jar; cylindrical Plate; tea size |
| Transfer-printed refined whiteware with green, red and purple decoration (type 4) | TPW4 | 1825 onward | 14 | 5 | 405 | Lid; domed Mug; cylindrical Plate; rectangular |
| Transfer-printed refined whiteware with under-glaze printed and over-glaze painted decoration (type 6) | TPW6 | 1840 onward | 4 | 1 | 48 | Jug |
| Plain Yellow ware | YELL | 1820-1930 | 2 | 1 | 127 | Jar; cylindrical, small |

Table 7.2: Catalogue of industrial finewares

British stonewares

- 7.2.13 The forms represented in the British stonewares are mostly concerned with liquid storage (see Table 7.3), 15 sherds/12 ENV/2,495g, mainly as bottles for blacking in STON form, context [80], besides cylindrical bottles in STON and STON BRST, some of which are almost intact. A salt glazed example, context [34], is stamped near its base 'STEPHENS/ALDERSGATE/LONDON', this refers to Henry Stephens, an ink manufacturer, also noted later as a chemist, whose premises were located at 191 Aldersgate Street in 1884¹³ and at nos. 57 and 59 in 1915.¹⁴ There are also single examples of tall, cylindrical ink bottles, context [80] STON BRST, and context [91] STON, and an almost intact STON blacking paste pot made in the Derbyshire area, context [34].
- 7.2.14 The stoneware jars largely represent food storage items, 12 sherds/10 ENV/1,962g, and these are mostly represented by cylindrical jars, with moulded lines creating a panel design, sometimes with additional fine fluting and mostly with a clear Bristol glaze (post c. 1850), except for two examples from context [65] with a tan-glaze around the rim and these may date to the late 19th-early 20th century. These cylindrical jars come in small and medium sizes and are often associated with containing jam, although other commodities could have been sold in them. They were found in contexts [34], [59], [65] and [80].
- 7.2.15 A deep rounded jar with an undercut, straight-sided, flat-topped rim is in a dense brown fabric, which has not been completely vitrified and still contains iron ores and white quartzes. It was recovered from context [34] and may have been a kitchen storage vessel.
- 7.2.16 Four Derby stoneware bowls are recorded and two are flared in profile: a medium-sized example comes from context [80] and a deep example was found in context [34] - both have rouletted decoration. Two medium rounded examples were also noted in context [80]. These forms may have been used for serving food. A single sherd of a jug in white stoneware, WHIST, with a moulded vine pattern, from context [80], represents a stoneware drinking serving form. A very fine bodied, light brown stoneware in the form of a cylindrical vessel with a splayed base, is decorated in the Jasper ware style with applied, sprig moulded white clay classical motifs (a female figure, a dog, a tree, a smoking altar and a lyre). The form is probably for display and its incompleteness is difficult to assign to an actual vessel shape, possibly it is either a cylindrical jar, mug or vase. It is 19th or 20th century in date and was derived from context [34].

¹³ *Business Directory of London 1884.*

¹⁴ *Post Office London Directory 1915.*

| Type | Code | Date | Sherd Count | ENV | Weight (g) | Forms |
|--------------------------------------|-----------|--------------------|-------------|-----|------------|--|
| Derbyshire stoneware | DERBS | 1700-1900 | 8 | 6 | 469 | Bowls: flared; medium, rounded; medium Jar; rounded |
| British stoneware | STON | 1700-1900 | 9 | 8 | 2584 | Blacking paste pot Bottles; blacking, cylindrical, ink Jar; rounded, tall |
| British stoneware with Bristol glaze | STON BRST | 1830-1900 onward | 17 | 13 | 1858 | Bottles; cylindrical, ink Jars; cylindrical (jam), medium and small |
| Midlands purple ware | MPUR | 1400-1750 | 1 | 1 | 15 | Unidentified |
| Miscellaneous stoneware | MISC STON | 19th/ 20th century | 1 | 1 | 98 | ?Jar; cylindrical, small |
| White stoneware | WHIST | 1790-1900 onward | 1 | 1 | 34 | Jug |

Table 7.3: Catalogue of British stonewares

Porcelain

- 7.2.17 This ware was solely recovered from context [65] as two items. Firstly as a solid female dolls head with 'rouged' cheeks and lips and secondly as a figurine, surviving only as a base with a moulded wavy finish and this was in a burnt condition.

| Type | Code | Date | Sherd Count | ENV | Weight (g) | Forms |
|-----------------------|------|------------------|-------------|-----|------------|-------------------|
| Continental porcelain | CONP | 1710-1900 onward | 2 | 1 | 12 | Doll and figurine |

Table 7.4: Catalogue of porcelain

7.3 Distribution

- 7.3.1 Table 7.5 shows the contexts containing pottery, the number of sherds, the ENV and weight in grams, the date range of the latest pottery type, the pottery types in the deposit and a spot date for the group.

| Context | Trench | Sherd Count | ENV | Weight (g) | Pottery Types | Date range, latest pottery type | Spot date |
|---------|--------|-------------|-----|------------|---|---------------------------------|---------------------------|
| [34] | 1 | 43 | 33 | 5636 | BONE, DERBS, ENGS, ENGS BRST, GRE, MISC STON, PMRED H, REFW, REFW CHROM, REFW SLIP, REFW SPON1, ROCK, SUND, TPW, TPW3 | 1830-1900 | 1873 onwards |
| [38] | 1 | 1 | 1 | 9 | EYGE | 1785-1835 | 1785-1835 onwards |
| [59] | 1 | 5 | 4 | 72 | ENGS BRST, REFW, TPW | 1830-1900 | 1850 onwards |
| [65] | 1 | 25 | 22 | 1371 | CONP, ENGS BRST, GRE, PMRED H, REFR L, REFW, REFW SLIP, ROCK, SUND, TPW4 | 1830-1900 | 1910-1952 |
| [69] | 1 | 6 | 4 | 129 | REFW, REFW SLIP, TPW | 1805-1900 | 1805-1900 onwards |
| [76] | 2 | 1 | 1 | 7 | REFW | 1805-1900 | 1805-1900 onwards |
| [78] | 2 | 3 | 3 | 17 | MPUR, REFW, TPW3 | 1805-1900 | L 19th early-20th century |
| [80] | 2 | 89 | 58 | 4815 | BLACK, BONE, DERBS, ENGS, ENGS BRST, MAJO, PMRED H, REFW, REFW SLIP, ROCK, SUND, TPW, TPW3, TPW4, WHIST, YELL | 1850-1900 | L 19th-early 20th century |
| [91] | 2 | 13 | 10 | 499 | BLACK, DERBS, ENGS, REFW, TPW, TPW3, TPW6 | 1830-1900 | Late 19th century |

Table 7.5: Distribution of pottery types

7.4 Dating

7.4.1 The distribution of the various pottery types and their forms has been discussed above and what follows concentrates upon the dating of the features containing pottery.

Trench 1

7.4.2 Fill [34] of refuse pit [37] contained a large collection of domestic wares, the latest pottery type includes Bristol-glazed stoneware dating to after 1830, while the transfer-printed wares include a soup plate with a late 19th-century design and a James Keiller and Sons marmalade jar, post-dating 1873. Additionally the stoneware forms date to the late 19th and early 20th centuries and include a bottle stamped with 'STEPHENS/ALDERSGATE/LONDON', a company operating in the late 19th century and early 20th centuries.

7.4.3 A deposit [69], situated beneath cobble surface [51], produced a small collection of typical 19th-century pottery types and with refined whitewares present, this suggests a broad deposition date of 1805-1900 onwards, although the absence of Cream wares and Pearl wares may indicate a late 19th-century date to the deposit.

- 7.4.4 Deposit [65] internal to sandstone structure [66] contained 19th-century pottery types, which continued production into the 20th century. The most datable forms are the late 19th-early 20th-century stoneware bottles, besides the refined whiteware tankard with slip decoration and a GR measurement mark, dating to between 1910-1952.
- 7.4.5 Fill [59] of posthole [62] produced 19th-century pottery types, although the presence of a clear Bristol-glazed stoneware cylindrical jar indicates deposition in the late 19th century or later.

Trench 2

- 7.4.6 Fill [76] of pit [77] produced only a sherd of refined whiteware indicating a date after 1805.
- 7.4.7 Fill [78] of posthole [79] produced a small quantity of pottery (three sherds), the latest ceramic consisting of a mug sherd in TPW3, featuring possibly Princess/Queen Alexandria in a roundel and indicating a late 19th-early 20th century date.
- 7.4.8 Fill [80] of refuse pit [81] produced the English majolica jug as the latest pottery type and indicating deposition after 1850. The stoneware bottles are also of a late 19th and early 20th-century date. Additionally, the transfer-printed wares from this feature also contain late 19th to early 20th-century designs and one sherd from an indeterminate vessel, not previously mentioned, also has an art nouveau style geometrical design.
- 7.4.9 Fill [91] of refuse pit [92] produced pottery and the most datable wares are the transfer-printed ware plate with the CE & M makers' mark, dated c. 1860-71, besides other late 19th-century transfer-printed designs. A stoneware ink bottle is also broadly dated to the late 19th or early 20th century.

7.5 Significance of the Assemblage

- 7.5.1 The pottery has significance at a local level. The assemblage reflects activity on the site during the late 19th and early 20th century. The pottery is in keeping with a national ceramic profile for this period, with the addition of some regional pottery types, *i.e.* the red earthenwares. Late 19th to early 20th-century archaeologically excavated groups are rarely encountered and therefore the assemblage is important for understanding the ceramic profiles of towns during this period.
- 7.5.2 The majority of the pottery, if not all of it, appears to be contemporary and reflects development of the site in the mid-19th century and none of the pottery is apparently associated with land use prior to this date. The pottery appears to be mainly domestic in character, although it is not impossible that some of the stoneware bottles contained 'chemicals' associated with industrial activity documented on the site. A number of the refined whiteware slip-decorated jugs are almost certainly associated with a public house, *etc.*, either located on the site or nearby.

7.6 Potential of the Assemblage

- 7.6.1 The pottery has the potential to date the features in which it was found and to provide a sequence for them. The pottery also has great potential for informing on site activities.

7.7 Recommendations for Further Work

- 7.7.1 The pottery has the potential to date the features in which it was found and to provide a sequence for them. The pottery also has great potential for informing on site activities. The assemblage from this excavation should be published and up to seven pottery illustrations/photographs are required to supplement the text.

8. CLAY TOBACCO PIPES (*Chris Jarrett*)

8.1 Introduction

8.1.1 A small assemblage of tobacco pipes was recovered from the site. Most fragments are in a good condition, indicating that they had been deposited soon after breakage. Clay tobacco pipes occur in four contexts, as small (under 30 fragments) groups.

8.1.2 All the clay tobacco pipes (ten fragments, two of which were unstratified) were recorded in an ACCESS database and classified by Atkinson and Oswald's typology.¹⁵ The clay tobacco pipes are quantified using fragment counts and minimum numbers were assigned to the bowls. The tobacco pipes are discussed by their types and distribution.

8.2 Clay Tobacco Pipe Types

8.2.1 The clay tobacco pipe assemblage from the site consists of five bowls, three fragments of which could not be confidently assigned to a type, and five stems and date to the late 19th and early 20th century.

Bowl types 1840-1910 onwards

8.2.2 AO30: one bowl defined as having no spur or heel. The example is fragmentary and survives mostly as the stem and lower half of the bowl. It is decorated with bold bead borders on the front and back of the bowl and there are fainter curving bead borders on the sides. The stem has a slight cordon. The two halves of the mould which made this pipe matched inadequately. Further to this, the pipe was poorly handled when it was removed from the mould as part of the top bead border is squashed, context [80].

8.2.3 AO31: One example of an Irish type bowl, with relief decoration as a debased leaf and grass border, while on the left side of the bowl is the 'Red Hand of Ulster' and the right side is a heart above a shamrock. The two part mould for this pipe appears to have been badly fitting as the seams on the bowl are uneven, context [34].

Bowl fragments

8.2.4 Of the three fragmentary bowls, two survive as mostly stems and the start of the bowl, although an unstratified example maybe of the AO30 type. Another unstratified bowl fragment, made in a poorly matching two part mould, is most likely to date to the late 19th or early 20th century.

Stems

8.2.5 Of the five stems recorded from context [80] two are worthy of comment. The first has a cordon similar to that found on the AO30 bowl found in the same context. The second has a linear impressed stamp as incuse, sans serif writing: 'W. SOUTHORN & Co/BROSELEY 8". This type of stamping dates from c. 1870 onwards while the Shropshire pipe making company was operating from c. 1802-1924.

¹⁵ Atkinson and Oswald 1969.

8.3 Distribution

8.3.1 The distribution of the clay tobacco pipes is shown in Table 8.1.

| Context | Trench | No. | Size | Date range of bowl types | Context ED | Context LD | Bowl type | Context considered date |
|---------|--------|-----|------|--------------------------|------------|------------|------------------------------|-------------------------|
| 34 | 1 | 1 | S | 1840-1910 onwards | 1840 | 1910+ | x1 AO31 | 1840-1910 onwards |
| 76 | 2 | 2 | S | | 1580 | 1910+ | x1 bowl fragment x1 stems | Post-medieval |
| 78 | 2 | 2 | S | | 1580 | 1910+ | x2 stems | Post-medieval |
| 80 | 2 | 3 | S | 1840-1910 onwards | 1840 | 1910+ | x1 AO30, x2 stems | c. 1870-1924 |

Table 8.1: Distribution of tobacco pipes

8.4 Significance of the Assemblage

8.4.1 The clay tobacco pipes have some significance at a local level and it is assumed that the assemblage is derived from sources on the site. The bowl types present on the site fit within the typology for Britain during the late 19th and early 20th century. Of interest is the fact that the bowls are of a poor production quality, indicating possibly low socio economic groups as the end users, although it is not impossible that the standard of the pipes represent that of the local clay tobacco pipe manufacturing industry.

8.4.2 The presence of the Irish-type pipe is of some interest, although this was a standard type made by English and Scottish pipe manufactures in the late 19th century, originally marketed at the Irish migrant population. The Red Hand of Ulster and the shamrock were symbols shared by both catholic and protestant Irishmen in the late 19th and early 20th century and so relate more to national identity rather than a political or religious division. It is possible that this pipe was owned by someone from Ireland or of Irish descent.

8.5 Potential of the Assemblage

8.5.1 The main potential for the tobacco pipes is as an aide to dating the contexts in which they were found. The absence of clay tobacco pipes in some finds groups may be a reflection of their dating, i.e. clay tobacco pipes become rarer after the First World War, rather than the people associated with certain finds groups being non smokers. A small number of pipes merit illustration. The documentary evidence of the inhabitants, their professions and socio-economic status may complement the interpretation of the clay tobacco pipe assemblage.

8.6 Recommendations for Further Work

- 8.6.1 A publication report should be written for the clay tobacco pipes from the site, relating them where possible to activities on the site and if there are correlations to documented activities. The Irish-type pipe and the 'W. SOUTHORN & Co/BROSELEY' marked stem require illustrating to supplement the text.

9. BRICKS AND RELATED FINDS (Kevin Haywood)

9.1 Introduction

9.1.1 Two large boxes of ceramic building material were retained from the investigations. This small sized assemblage (11 examples, weighing 15,443g) was assessed in order to:

- Identify (under binocular microscope) the fabric and forms of the post-medieval whole brick samples, floor tile and mortar from fill and structures from the site.
- Make recommendations for further study.

9.2 Methodology

9.2.1 Whole brick samples and tile samples were taken from structures in order to determine their construction date.

9.2.2 The application of a 1kg masons hammer and sharp chisel to each example ensured that a small fresh fabric surface was exposed. The fabric was examined at x20 magnification using a long arm stereomicroscope or hand lens (Gowland x10). Different fabric types are pre-fixed by a local code *ORMS* (*Ormskirk*). Thus *ORMS* 1-6.

9.3 Ceramic Building Material

Post-Medieval

Brick (4 examples, 12.8 kg)

9.3.1 On the basis of historical evidence, mortar type and brick shape and fabric, all the bricks from this assemblage can be assigned to the very late 18th to 20th century.

Fabrics ORMS 2

9.3.2 A feature of the bricks from Ormskirk is their large size. One unfrosted handmade example, from brick surface [22], weighs 4kg and measures 240mm x 120mm x 80mm, whilst another from the brick drain [16] is 72mm thick. A third example was retained from a demolition deposit from sandstone wall [5]. The fabric, *ORMS* 2 a red-maroon/purple clinker type fabric with scattered quartz and quartzite comparable somewhat to the mass produced post-Great Fire clinker bricks of London. It is almost certain that this poorly made brick was manufactured from the local Triassic deposits that underlie Ormskirk, and brickfields are documented as being present on Wigan Road from 1727 onwards.

Fabric ORMS 6

9.3.3 A much smaller brick, stamped *J* on the long side, from brick drain [16] had a fabric *ORMS* 6 containing quartzite fragments up to 5mm with possible *blaes* (burnt clay), very different to that of *ORMS* 2. The brick has shrink cracks on two sides and appears on first inspection to resemble a Tudor brick. However, the matrix including coal measure *blaes* would suggest that it is of 19th-century date.

9.4 Mortar and Concrete

9.4.1 A summary of mortar types and concrete as well as their period of use are given in Table 9.1 and provide a chronological framework, which along with the brick, help decipher the date of some of the structures.

| Mortar/Concrete Type | Description | Use at Wigan Road |
|---|--|--|
| <i>Grey clinker brick mortar</i> | Soft light grey fine mortar with flecks of clinker, possible tiny metal flecks and vague red brick | Used to adhere the red terracotta tile to floor [9], 1850-1950 |
| <i>Cream-grey quartz rich mortar with shell</i> | Pale cream white quartz rich mortar with shell and rare clinker | Adhered to large local bricks [22] and [5], suggested date 1750-1900 |

Table 9.1: Summary of mortar and concrete types

9.5 Floor Tile

Yellow Wall Tile ORMS 1; Red Tile Terracotta; ORMS 2; ORMS 5 (5 examples, 6.5kg)

9.5.1 Complete, thick (23mm) floor tile 150mm x 150mm, with an impressed four-petalled rosette design on its underside recovered from the red and yellow surface [9]. The fabric *ORMS 1* is a condensed, very fine yellow material with intermittent flecks (0.5mm) of vitrified clinker and a fine scattering of small (0.1-0.2mm) quartz. This may have come from clays further afield but without a stamp one cannot be sure of where it was actually manufactured. These machined stamp designs suggest that it was manufactured at least after 1850.

9.5.2 Also present and alternating with the yellow floor tile on surface [9] is a complete red tile of identical dimensions, 150mm x 150mm x 23mm. This is made out of two conjoined red triangular tiles, the underside, mounted with a grey clinker mortar is keyed on to four rectangular recesses. The tile consists of two components – an upper very fine condensed layer that is reminiscent of terracotta and a lower layer of slightly coarser terracotta. It is possible that these came from the North Staffordshire, where Eturia marls from the Upper Carboniferous were used to manufacture high density bricks and tiles from the 1880s onwards.

9.5.3 A second red floor tile, again with four rectangular recesses, of comparable size from a levelling layer below cobbled surface [69] is a more condensed version *ORMS 3* of the fabric *ORMS 2* used in brick [22]. This is likely to have come from a local brickfield and these are documented as being present in Wigan Street. Again this is likely to have been manufactured after 1850.

9.5.4 A much thicker (40mm), but more poorly made, unglazed floor tile in a sandy fabric, with occasional flecks of red iron oxide *ORMS 5* from the fill of pit [76], lacks the stamped, machined, recesses and is likely to predate the mid 19th century.

9.6 Peg Tile 1; example 5g

ORMS 4

- 9.6.1 A small broken fragment of a roofing peg tile in a fine sandy fabric *ORMS 4* somewhat similar to the London 2276 group was recovered from fill of pit [34]. It has fine moulding sand and is almost certainly later post-medieval in date.

9.7 Daub 1; example 10g

3102

- 9.7.1 A small fragment of red daub with occasional chaff fragments from the fill of posthole [78], attests to the presence of wattle and daub structures in the vicinity.

9.8 Summary

- 9.8.1 Most of the ceramic building material from the site was recovered from the largest stone built structure recorded in Trench 1. Whole bricks recovered from the demolition deposit of sandstone wall [5], floor [22], and brick-built drain [16], were all of poorly made maroon-red unfrosted *ORMS 2* fabric. What set them apart was the size of the bricks – between 70mm and 80mm thick and all over 3kg. It seems likely that they were all manufactured very locally from the Triassic deposits that underlie Ormskirk, and brickfields are documented as being present on Wigan Road.¹⁶
- 9.8.2 Brick production peaked in Ormskirk at 1769 with over 400,000 bricks produced¹⁷ and a brick field and drying shed were still extant in 1851. The bricks used at the site are bonded by a typical 19th century shell-rich lime mortar (T2) and it would seem reasonable to date these structures to between 1800-1850. There is evidence for later additions, including a Coal Measure type brick *ORMS 6*, stamped J, from context [16], and locally Terracotta and yellow machined stamped floor tiles from surface [9], that may have come from the Eturia marls of Staffordshire, these tend to be produced after 1880. Furthermore, they are bonded by a harder (T1) grey-clinker mortar typical of the late 19th to 20th century.
- 9.8.3 Flooring material recovered from adjacent stone structure [69] also consisted of machine pressed floor tiles which may suggest that it was contemporary with the main building in Trench 1.
- 9.8.4 Finally, the fill [76] of a square pit [77] in Trench 2, also had a fragment of floor tile but this was thicker (45mm) and of a poorly made fabric – which may indicate that this was earlier flooring.
- 9.8.5 Taken together, it would seem likely that this group of structures, identified at the rear of mid 19th century street frontage properties, were at some stage small-scale commercial/industrial/trade premises, perhaps associated with one of the local industries. The presence of robust yet worn terracotta floor materials could be taken as being indicative of being required to support machinery or provide a surface for some chemical process, for example associated with tanning/fell-mongering.

¹⁶ LCAS 2006.

¹⁷ *ibid.*

9.9 Distribution

| Context | Fabric | Form | Size | Date range of material | | Latest dated material | | Spot date |
|---------|--|--|------|------------------------|------|-----------------------|------|----------------|
| | | | | | | | | |
| 5 | ORMS2 3101 | Large stock brick mortar type 2 | 1 | 1727 | 1900 | 1727 | 1900 | 1750- 1900 |
| 9 | Yellow ORMS1 and Red Terracotta 3101 | Floor Tile machine pressed with mortar type 1 | 3 | 1850 | 1950 | 1850 | 1950 | 1850- 1950 |
| 16 | ORMS2 and ORMS 6 | Large stock brick and thinner heavier bricks | 2 | 1727 | 1900 | 1750 | 1900 | 1850- 1900+ |
| 22 | ORMS2 | Large stock brick | 1 | 1727 | 1900 | 1727 | 1900 | 1750- 1900 |
| 34 | ORMS4 | Peg Tile fragment | 1 | 1480 | 1900 | 1480 | 1900 | 1700- 1900 |
| 69 | ORMS3 | Floor Tile machine impressed | 1 | 1850 | 1950 | 1850 | 1950 | 1850- 1950 |
| 76 | ORMS5 | Thicker poorly made floor tile | 1 | 1700 | 1900 | 1700 | 1900 | 1700- 1900 |
| 78 | 3102 | Daub | 1 | 1500bc | 1666 | 1500bc | 1666 | 100- 1800 |

Table 9.2: Catalogue of mortar and concrete

9.10 Recommendations

- 9.10.1 This small assemblage of building material provides some idea of the use of different types of building material fabric in this part of Lancashire during the 19th and 20th century. The assemblage does not, however, warrant further investigation and only a passing mention needs to be made of it in any future publication work.

10. GLASS (*Chris Jarrett*)

10.1 Introduction

10.1.1 A small sized assemblage of glass was recovered from the site. The glass dates to the 19th and 20th century. None of the fragments show evidence for abrasion or 'weathering' and were probably deposited fairly rapidly after breakage. The state of fragmentation for the assemblage is variable, ranging from single fragments to a notable proportion of intact items. Usually one fragment represents a single vessel and therefore the assemblage is good for calculating estimated number of vessels (ENV). The glass was quantified by the number of fragments, the estimated number of vessels and weight. The glass was recovered from seven contexts and individual deposits produced small, fewer than 30 fragments, groups.

10.1.2 All of the glass, 37 fragments, 32 ENV, weighing 6,510kg (of which eight fragments, 8 ENV and 988g are unstratified) was recorded in an ACCESS database, by type, colour and form. The assemblage is discussed by the vessel shapes, *etc.* and its distribution. The assemblage is notable for containing small, closed groups of material.

10.2 Forms

10.2.1 All of the forms are dated to the late post-medieval or early modern period and are mainly discussed according to their functions and by the number of fragments and ENV. A breakdown of the basic shapes or types is shown in Table 10.1.

| Type | Description | No. of Fragments | ENV | Weight (g) |
|--------------|--------------------------|------------------|-----|------------|
| Bottle | Generic | 1 | 1 | 18 |
| Bottle | Cylindrical (generic) | 8 | 8 | 940 |
| Bottle | Cylindrical, beer | 6 | 6 | 2,095 |
| Bottle | Cylindrical, Codd type | 3 | 3 | 1,042 |
| Bottle | Cylindrical, ginger beer | 3 | 3 | 700 |
| Bottle | Cylindrical, spirit | 1 | 1 | 674 |
| Bottle | Late Hamilton type | 1 | 1 | 452 |
| Bottle | Oval | 4 | 2 | 277 |
| Jar | Shouldered | 1 | 1 | 16 |
| Marble | Stopper | 2 | 2 | 16 |
| Stopper | - | 1 | 1 | 25 |
| Vase | - | 1 | 1 | 60 |
| Vessel glass | - | 2 | 2 | 50 |
| Window pane | - | 3 | 3 | 145 |

Table 10.1: Catalogue of glass types

10.3 Storage Forms

Generic Bottle Fragments

- 10.3.1 Aquamarine soda glass with bubbles, probably mould made, 18g. Survives as part of a collared rim with a steep conical neck, 19th-20th century, context [9].

Cylindrical Bottles

- 10.3.2 All of the fragments of glass cylindrical bottles that could not be assigned to a specific shape are made in soda glass.
- 10.3.3 Dark green, moulded glass bottle wall fragment, embossed '...STONE...', one fragment, 17g, c. 1830+, unstratified.
- 10.3.4 Dark green, moulded glass bottle surviving as a conical neck, one fragment, 17g, c. 1830+, unstratified.
- 10.3.5 Two fragmentary bottles, 181g and 401g, were made in a three-piece mould and are in dark green glass and both vessels have in common a concave base with a central raised dimple and a spike on one side. This feature was noted on a Charles Mason ginger beer bottle and may be the glass maker's mark, see below. One of these vessels has a flared neck and rounded shoulder made in a two piece mould and joined separately to the cylindrical body. The shoulder is embossed 'IMPERIAL 1/2 PINT' which probably relates to a measures and weight regulation, rather than a brand name. Both bottles were derived from context [34] and date to after c. 1830.
- 10.3.6 Pale green bottle shoulder, one fragment, 34g, 19th/20th century, context [80],
- 10.3.7 Pale green base with concave underside, embossed on the side, just above the base 'KILNER . BROTHERS · DEWSBURY' and '983' on the base underside, one fragment, 173g, context [34]. The Kilner glass making company was established at Dewsbury in 1848 and continued in production until 1922.¹⁸
- 10.3.8 Pale olive green wall fragment, 467g, 19th-20th century, context [80].
- 10.3.9 Very dark olive green/black neck and shoulder showing evidence of twisting on the neck. Poorly manufactured in a two-part mould with one seam raised above the other. Possible wine bottle. One fragment, 71g, 1830 onwards, context [80].

Cylindrical Codd Bottles

- 10.3.10 All of the Codd bottles are made in soda glass and formed in a two-part mould. None are intact and two have had their rims broken to remove the 'marble'. This bottle type was first patented in England in 1870.
- 10.3.11 Green-blue glass, survives as one fragment, 500g, from the neck to the concave base. Embossed 'J CAMMACK & Co. ST HELENS' on one side and the glass makers' name is on the reverse: 'CODD'S PATENT//MAKERS/RYLANDS & CODD/BARNSLEY', context [34]. Further research is required on the soft drink maker J. Cammack & CO. to establish the date of the bottle.

¹⁸ *The Brothers Five*, online article.

- 10.3.12 Pale green, one fragment, 102g, applied rim with a deep, straight sided collar above the chamber holding the missing marble, context [34].
- 10.3.13 Pale green, survives as one fragment, 440g, from the neck, rounded shoulder to the concave base. Embossed 'CHARLES MASON/C M/SKELMERSDALE', on the reverse side of the bottle 'NUTTAL & C^o/MAKER/S^r HELENS' and on the base underside '3503, context [65]. The mineral and soda water manufacturing firm of Charles Mason was established in c. 1900 at Barnes Road, Skelmersdale and the company was liquidated in 1968.¹⁹ The glass making company Nuttal & Co. were active from at least 1870 and in 1913 this company was renamed United Glass Bottle Manufacturers Limited when it merged with another glass making concern, although products were still made under the former companies names.²⁰

Beer Bottles

- 10.3.14 All of the beer bottles appear to be made in soda glass and are mostly made in a two-part mould.
- 10.3.15 Dark green bottle surviving as a concave base and embossed on the wall, 'ELLIS W[ARDE... &] C^o L^d-ORMSKIRK' around an uncertain symbol and 'BREWERY', one fragment, 277g., 1830 onwards, unstratified. The Bath Springs Brewery, Derby Street, Ormskirk, was operating under the name Ellis, Warde (Webster) & Co. Ltd. from 1892 until 1929 and changed operating names several times.²¹ The damaged state of the bottle, *i.e.* the company name does not survive in full, prevents its closer dating.
- 10.3.16 Dark green glass rim with a wine bottle finish and an internal thread, above a deep neck, one fragment, 561g, 1880 onwards, unstratified.
- 10.3.17 Dark green glass with a crown rim finish and a short horizontal groove below it to accommodate a bottle opener, above a rounded cordon. The neck is flaring and has embossed on it an arrow pointing to the rim. One fragment covered in mortar, 63g, 1890 onwards, context [5].
- 10.3.18 Three bottles that appear to be of the same type. Two are intact, 448g and 469g, and both contain part or whole of a plain hardened rubber stopper. Straight, brandy/wine rim finish with a cordon below it and an internal screw fitting, slightly conical neck, rounded shoulder and the vessel walls are embossed 'R. KNOWLES & SONS/BREWERS/ ORMSKIRK'. The undersides of bases are embossed '8599 .S & C^o L^d'. The third bottle, 277g, is in pale green glass and it is intact from the neck downwards and it is embossed exactly in the same way as the two other complete examples. Date 1880 onwards, all from context [65].

Ginger Beer-Type Bottles

- 10.3.19 There are three ginger beer bottles all made for the same company and manufactured in two-part moulds.
- 10.3.20 Intact bottle, 561g, in aquamarine coloured glass with a blob rim and a collar below it, while the rim additionally has an internal screw thread, the neck is conical above a rounded shoulder and on the wall is embossed 'CHARLES MASON/C M/SKELMERSDALE', while on the underside of the base is embossed 'N & C^o LD 7270'. Date 1880 onwards, unstratified.

¹⁹ *The London Gazette*, 23rd January 1968.

²⁰ Wainwright 2011.

²¹ Richmond and Turton 1990.

10.3.21 Dark green glass bottle, 126g, surviving as a concave base and embossed on the wall 'is CHARLES MASON/C M/SKELMERSDALE' and on the underside of the base 'C . & C^o LD 323, one fragment, dated 1830 onwards, context [2].

10.3.22 Dark green glass bottle, 13g, wall fragment, embossed '... [SKELME]RSDALE', dated 1830 onwards, context [5].

10.3.23 For an historical note on Charles Mason's mineral and soda water manufacturing firm see the Codd bottle entry above. The glass bottle maker 'N & Co' may be Nuttal & Co., St Helens.

Spirit Bottle

10.3.24 Intact, two-part moulded, clear glass vessel, 674g. Straight sided brandy or wine type finish rim above a bevelled cordon below a cigar/bulged shaped neck, rounded shoulder and a concave base. There is evidence for a now heavily degraded paper label, mid-19th century onwards, context [33].

Hamilton Bottle, Late Type

10.3.25 Two-part moulded, blue-green soda glass, rim missing otherwise this plain, long, narrow vessel with a rounded base is intact, 452g, 1890 onwards, context [80].

Other Liquid Storage Bottles

10.3.26 The two oval bottles are both mould made.

10.3.27 Pale green, base sherd with a central oval panel on the underside, three fragments: 233g, date: 19th-20th century, context [34].

10.3.28 Pale green, base sherd, 44g, 19th-20th century, context [80].

Food Storage

10.3.29 Clear glass, two-part moulded vessel with a rounded rim and a very narrow internal ledge, short neck and a rounded, narrow shoulder, 16g. Probably a food jar, 19th/20th century, unstratified.

'Marbles'

10.3.30 There are two very similar marbles, both made in a two-part mould, 18mm in diameter and made of aquamarine coloured glass and both weigh 8g. They almost certainly represent stoppers from Codd bottles and may have been deliberately removed from these bottles to be used as marbles, unstratified and context [2].

Stopper

10.3.31 Intact, rounded topped disc with a ground plug, the latter having a concave underside, made in pale green soda glass, 25g, 19th-20th century, context [80].

Display

10.3.32 Made in tan coloured opaque glass, the vase takes the form of a vessel with a simple rim, deep cylindrical neck, narrow, bevelled shoulder and cylindrical body, 60g, late 19th-20th century, context [34].

Unidentified

- 10.3.33 Two fragments of soda glass come from vessels whose forms are uncertain.
- 10.3.34 Neck and shoulder of a possible jar, 8g, 19th-20th century, unstratified.
- 10.3.35 Free blown concave base sherd with a pontil scar, 42g, 19th-20th century, context [34].

Window Glass

- 10.3.36 All of the window pane fragments were made in soda glass and date to the late 19th-20th century and are all derived from context [80].
- 10.3.37 Clear, thin walled fragment, 9g.
- 10.3.38 Green-blue, thin walled fragment, 22g.
- 10.3.39 Very pale green, thick walled (9mm) with one even surface: probably polished plate glass manufacture, 114g.

10.4 Distribution

- 10.4.1 The distribution of the glass is shown in Table 10.2.

| Context | Trench | No. of frags. | ENV | Weight (g) | Forms | Latest dated form | Considered deposition date |
|----------------|---------------|----------------------|------------|-------------------|--|--------------------------|-----------------------------------|
| 2 | TR1 | 2 | 2 | 134 | Bottle: cylindrical; ginger beer, marble | 1830+ | ?20th century |
| 5 | TR1 | 2 | 2 | 76 | Bottle: cylindrical; beer and ginger beer, | 1890 onwards | ?20th century |
| 9 | TR1 | 1 | 1 | 18 | Bottle (generic) | 19th/20th century | 19th/20th century |
| 33 | TR1 | 1 | 1 | 674 | Bottle: cylindrical: wine or spirit | Mid-19th century onwards | Mid-19th century onwards |
| 34 | TR1 | 10 | 8 | 1692 | Bottle, cylindrical: Codd; oval, vase., vessel | 1870+ | 1870 onwards |
| 65 | TR1 | 4 | 4 | 1634 | Bottle; cylindrical; Codd, beer | 1880+ | ?20th century |
| 80 | TR2 | 9 | 9 | 817 | Bottle; cylindrical; Codd, Hamilton, late type, oval, oval, stopper, window panes. | 1890+ | 1890 onwards |

Table 10.2: Glass distribution

10.5 Significance of the Assemblage

10.5.1 The glass has some significance at a local level. The types and forms are those expected nationally for the late 19th and early 20th century. There is a good collection of bottles, which contained either beer or ginger beer/soda/mineral waters and the names of local Ormskirk businesses, or those from the Merseyside area are represented. A sole bottle probably for holding a spirit is represented, while wine bottles are almost entirely absent from the assemblage, except for a single possible example. There are also a small number of food storage items and a vase. The assemblage is good for showing the material culture and drinking habits of the people living or working on the site in the late 19th to early 20th century.

10.6 Potential of the Assemblage

10.6.1 The potential of the glass is to date the features it occurs in. A number of vessels require photographing. The glass assemblage is certainly important for studying the life styles of the inhabitants or workers on the site and it may also allude to activities associated with other professions documented in the vicinity.

10.7 Recommendations for Further Work

10.7.1 A publication report is suggested for the glass from this site. It should concentrate on how the glass assemblage compliments the information from the other finds in defining activities on the site. A group photograph of the more intact bottles would complement the publication report. Further research is required for the dating of the company names embossed on the bottles and the manufacturers of the glass ware.

11. ANIMAL BONE (Kevin Rielly)

11.1 Introduction

11.1.1 A small number of bones, amounting to just 17 fragments, were hand collected from two Trench 1 deposits.

11.2 Methodology

11.2.1 Each of the contexts assemblages was sorted by species, attempting to refit as many bones as possible. Following refitting, each bone was recording onto an animal bone database using Microsoft Access. This database is divided into various headings, as follows: - species, skeletal part, fragmentation (the proportion of the skeletal part represented), sex, age (a general age if possible, as well as teeth eruption/wear and epiphyses fusion), size and various modifications as butchery, burning, gnawing, preservation (see below), working and pathology.

11.3 Description of the Bones

11.3.1 Animal bones were found in two layers in Trench 1; from deposit [27], overlying an external surface on the north side of a stone building, and from deposit [65], located inside structure [66], assigned to Phase 3. The collection from deposit [27] was confined to a single cattle second phalange from a typically large 'modern' animal. Cattle had dramatically increased in size following the late 18th-century improvements based on better husbandry and breeding.²² The assemblage from deposit [65] included 10 cattle bones, again all from large animals, plus a small collection of rabbit bones, a distal tibia and five metatarsals, 3 left and 2 right, which are undoubtedly from the same adult individual.

11.3.2 Details concerning the cattle skeletal parts from this deposit are shown in Table 11.1. These have been divided according to modern butchery practices,²³ following the initial halving, chopping down through the vertebrae, and quartering, occurring approximately just below the ribcage. Each of the vertebrae represented have indeed been halved using a cleaver. The various parts are all within the dressed carcass i.e. following removal of the head and the feet at the carpal and tarsal joints. Several sections of the fore and hindquarters are represented showing a wide array of various quality cuts. However, it should be pointed out that the presence of the bones does not necessarily suggest the purchase of the described meat cuts. A bought sirloin will not include any bones, while the saw marks noticed on the possible leg of beef pieces is unlikely to have been used to produce this joint. This would involve the use of a knife and a cleaver to separate the femur and tibia, unlike in these examples where the femur has been sawn through close to the distal end. These bones, and possibly the lumbar vertebra, are likely to represent 'soup bones' *i.e.* bones set aside for sale to add flavour to various meals.

²² Rixson 2000.

²³ Rixson 1969.

11.3.3 In contrast, the butchery removing the proximal femur is clearly an integral part of the aitch cut, as indeed is the axis with the sticking bones, the neck comprising the cervical vertebrae, the radius with the shin and the ribs in relation to a variety of forequarter cuts. All of these bones clearly derive from relatively young animals, certainly less than 3.5 to 4 years, shown by the unfused distal radius, proximal femur and distal femur,²⁴ and more likely no older than 2 years. This is in sharp contrast to the slower maturation rates of the unimproved stock, where culling of beef animals at 3 or 4 years old was quite common.²⁵

| Part of carcass | Meat cut | Bone | N | Butchery |
|-----------------|----------------------|----------------------|---|----------------------------------|
| Forequarter | Shin | Radius distal end | 1 | |
| | Sticking bones | Axis | 2 | Halving cuts |
| | Top side or Fore-rib | Rib proximal end | 1 | Sawn through shaft |
| | ?Flank or brisket | Rib shaft | 2 | sawn through shaft twice |
| Hindquarter | Aitch bone | Femur proximal end | 1 | Chop through shaft adjacent prox |
| | Leg of beef | Femur dist and shaft | 2 | Sawn through shaft |
| | | Tarsal | 1 | |
| | Sirloin | Lumbar vertebra | 1 | Halving cut |

Table 11.1: Description of cattle skeletal parts from deposit [65]

11.4 Conclusions

11.4.1 This small collection of bones offers a brief insight into the meat eating habits of an early 20th century community living in this part of Ormskirk. It can be suggested that this diet chiefly consisted of beef, although with the proviso that a proportion of this assemblage may in fact represent purchased bones, intended for stews or soups, rather than meat cuts. The absence of sheep and pig bones is difficult to explain, where mutton/lamb and pork joints are far more likely to have a bone attached than the equivalent beef cuts. Their absence cannot be related to differential preservation/fragmentation, here related to the greater size and robustness of cattle bones compared to those of sheep or pig, as clearly shown by the recovery of rabbit bones. These clearly represent dressing waste, where the head and feet, here including the distal tibia, would be excluded in the preparation of the carcass for roasting or boiling. It can be assumed that the rest of the carcass, following cooking and eating, would have been deposited elsewhere.

11.5 Recommendations for Further Work

11.5.1 No further work is recommended on the assemblage of animal bone. A short description of the material should be prepared for inclusion with any publication report.

²⁴ Schmid 1972.

²⁵ Davis 2002.

12. METAL, LEATHER AND SMALL FINDS (*Märit Gaimster*)

12.1 Introduction

12.1.1 An assemblage of 20 individual non-bulk finds was retrieved; they are listed in Table 12.1 below. They represent mostly domestic material, but also the presence of small-scale industry, probably in the form of a garage or motor-related workshop.

12.2 The Finds

12.2.1 The finds came almost exclusively from Trench 1, where they can be associated with a demolished building; structural iron fittings are represented by a nail, a bolt and a flat iron spike. Two coins, SFs 1 and 2, retrieved from occupation and/or demolition layers, correspond well with a date for the building and activities on site in the late 19th and early 20th centuries. Some of the finds from Trench 1 are domestic items, notably worn-out and discarded leather shoes and a piece of shaped felted wool, possibly the remnants of a hat or a pouch, along with a plastic nit comb and a lathe-turned object that may be part of a woodwind instrument. The iron vessel base from context [34] may be remnants of a kettle or small pan.

12.2.2 Two enamel signs advertise the Shell company and other oil products, indicating the presence of a garage or shop on or near the site; both signs are likely to date from around the 1920s. The single find from Trench 2 consisted of another discarded leather shoe, possibly a clog-type shoe with a wooden heel.

12.3 Recommendations for Further Work

12.3.1 The metal, leather and small finds from Wigan Road form an integral part of the material recovered during the work and should, where relevant, be included in any further publication of the site. A selection should include the enamel signs, the two coins and the domestic or personal objects; further analysis of the leather shoes by a specialist would be useful. The possible woodwind instrument would also require further identification.

| Context no. | Area | SF no. | Description | Pottery date |
|-------------|------|--------|--|--------------------------------|
| 0 | Tr 1 | | enamel sign; dark green with white lettering; PURE OIL / AND / WHITE __ _A_ / AMERICAN / LAMP OILS; 280mm x 330 mm; probably 1920s | n/a |
| | Tr 1 | | lathe-turned bone object; central barrel-shaped section with horizontal perforation, ?secondary adaption for square bar/peg; concave end sections, one with a plain and straight opening, the other flared with false threading; L 82mm; diam. 25mm; component of woodwind instrument? | n/a |
| | Tr 1 | | leather 'straight' shoe; two ?conjoining parts of multi-layer nailed sole with small heel and rectangular rounded toe: L c. 250mm | n/a |
| | Tr 1 | | iron nail; cut with flat head; L 105mm | n/a |
| | Tr 1 | | iron pin or bolt with domed circular head; diam. 10mm; incomplete | n/a |
| 1 | Tr 1 | 1 | George V halfpenny; date illegible (1910-1936) | n/a |
| 2 | Tr 1 | 2 | Victoria penny; 'bun head' issue (1860-1895); 187? | n/a |
| 5 | Tr 1 | | enamel sign; yellow with red lettering; "SHELL" / MOTOR SPIRIT / SOLD HERE / PERMANENT DECORATIVE GLASS C_____ON; 330mm x 530mm; probably 1920s | n/a |
| 27 | Tr 1 | | plastic comb; double-sided 'nit comb' type; convex ends; W 75mm | n/a |
| 34 | Tr 1 | | flat iron spike ; extended head/angle strap with circular perforation for fixing; L 300mm; head/strap L 60mm+; architectural fitting | 1873+ |
| | Tr 1 | | iron circular-section bucket handle with looped terminals; W 355mm | 1873+ |
| | Tr 1 | | small iron vessel; flat sooted base only; diam. 115mm | 1873+ |
| | Tr 1 | | leather right-foot shoe; complete multi-layer sole with heel and rounded toe; L 260mm | 1873+ |
| | Tr 1 | | leather right-foot shoe; complete multi-layer sole with heel and rounded toe; L 230mm; heel heavily worn down on outer side | 1873+ |
| | Tr 1 | | leather 'straight' shoe; complete multi-layer sole with heel and rectangular rounded toe: L 210mm | 1873+ |
| | Tr 1 | | leather shoe; multi-layer heel and part of sole only | 1873+ |
| | Tr 1 | | leather shoe; multi-layer heel and part of sole only; heel heavily worn down on outer side | 1873+ |
| | Tr 1 | | substantial shaped piece of felted wool ; possibly a hat or pouch or similar | 1873+ |
| 65 | Tr 1 | | leather left-foot shoe; incomplete multi-layer nailed sole with pointed toe: L 195mm+ | 1910-1952 |
| 80 | Tr 2 | | leather right-foot shoe; incomplete; multi-layer sole with ?wooden heel and rectangular rounded toe; L c. 250mm | late 19th - early 20th century |

Table 12.1: Description of leather, metal and small finds.

13. POSSIBLE METALLIFEROUS SLAG AND INDUSTRIAL PROCESS RESIDUES (*Rod Mackenzie*)

13.1 Introduction

13.1.1 Archaeometallurgical assessment of possible metalliferous slag and industrial process residues was undertaken on material recovered from the site. The aim of the assessment has been to identify the slag and residues, and determine whether further analysis could provide additional information about the site, or specific processes carried out there. The slag and residues have been visually examined and the results of the assessment are described below.

13.2 Results

| Context | No. of pieces | Weight | Description |
|---------|---------------|--------|---|
| 27 | 1 | 249g | Piece of compacted earth and coal dust with embedded fragments of coal - possible compacted floor or path surface |
| 59 | 1 | 49g | Piece of coke |
| 65 | 2 | 386g | Fuel ash slag with embedded shards of glass |
| 65 | 2 | 45g | Fuel ash slag |
| 69 | 1 | 53g | Fuel ash slag |
| 69 | 1 | 109g | Undiagnostic slag/possible fuel ash slag |
| 78 | 1 | 78g | Fuel ash slag |

Table 13.1: Slag and possible industrial process residues

13.3 Discussion and Interpretation

13.3.1 The majority of the slag in the assemblage appears to be a type of fuel ash slag known as clinker. Clinker is a partially fused fuel ash residue, which is a common by-product of burning fossil fuels such as coal and coke. Clinker is a relatively common archaeological find on post-medieval urban sites; although its presence may indicate metal production, it can potentially originate from a wide variety of other sources, such as boiler fireboxes, coal gas production or reheating or drying ovens and kilns.

13.3.2 Two fragments of fuel ash slag have small pieces of window glass embedded within them. Some of the glass appears to be from the edge of the pane of glass, where it adjoined a wooden window frame. From the other material in the assemblage, it is unclear whether the possible window frame and glass had been burnt accidentally, or disposed of intentionally. The only other item of note is the small fragment of coke from context [59].

13.3.3 Coke is a by-product of coal-gas production and it was, and still is, used as fuel in the production of metal and as smokeless domestic fuel. The presence of a single fragment of coke is difficult to draw an interpretation from without supporting material or local historical evidence.

13.3.4 If further material or documentary evidence is found relating to industrial activities at or close to the site, this may reveal more about the likely source of the fuel ash slag and coke found during this phase of archaeological fieldwork.

13.4 Recommendations

- 13.4.1 The material in the assemblage offers very limited scope for further analysis, and none is recommended. The assemblage can be disposed of in the normal manner. The potential presence of metal production in the area of the site should be noted in the relevant archive, in case of future archaeological fieldwork within the area.

14. SUMMARY DISCUSSION OF THE ARCHAEOLOGICAL FINDINGS

14.1 Phase 1: Natural Sub-stratum

14.1.1 Phase 1 represents natural geological drift material exposed as the basal deposit in both excavation areas. The maximum height recorded on natural material during the work was c. 48m OD, this in Trench 2 on a fine sand deposit, representing the Shirdley Hill Sands, exposed across the trench.

14.2 Phase 2: Later Post-Medieval Activity, pre c. 1848

14.2.1 Phase 2 represents evidence of the earliest human activity recorded at the site, this being of later post-medieval date, probably within the first half of the 19th century, a period when the wider growth of Ormskirk is well documented. Being positioned on good road links to the north and east of Lancashire, the town benefited from the industrial developments in these areas and the thriving success of the port of Liverpool, just 13 miles away. The population of the town was also swelled by many Irish immigrants and improving agricultural production enhanced its position as a market centre. Cartographic evidence shows that, by 1848, with relatively little development along this part of Wigan Road (or Moor Street End as it was then known), the site itself remained largely undeveloped, most of it being in agricultural use. However, the westernmost portion of a building depicted in the south central portion of the site on the 1848 Ordnance Survey map was recorded in the eastern end of Trench 1. Drainage revealed features in Trench 2 could also potentially date from this earliest activity.

14.2.2 Walls and cobbled yard surfaces exposed in Trench 1 confirmed the location and western part of the footprint of the building shown on the 1848 Ordnance Survey map; the overall dimensions of the building, including the portion lying beyond the eastern limit of Trench 1, are estimated as c. 14m east-west and c. 10m north-south. The original purpose of the structure remains uncertain; it may have had an industrial purpose or, given the swathe of agricultural land immediately to the north, it may have been a farmhouse. There was evidence for a lane connecting the property with Wigan Road to the south.

14.2.3 The external walls of the building were constructed using roughly coursed sandstone blocks with lime mortar; there was evidence for a doorway in the west wall. Internally, the building was probably originally separated into three areas. To the south, were two rooms divided by a north-south aligned partition wall, which did not survive above floor level. The wall had a doorway in the centre and a flagstone floor to the east, this likely an original element, extended into the doorway to provide a threshold. Brick used to form a distinct area of flooring in this eastern room indicate a date of construction in the first half of the 19th century. West of the partition wall, the floor surface was terracotta tiles, these clearly a later addition. In the northern part of the building, the flooring was a mixture of unfrogged red bricks and flagstones, with a mixed bedding material. Part of a glass bottle, possibly a wine or spirit bottle, recovered from the bedding material dates to the mid-19th century.

14.3 Phase 3: Late 19th-Century Activity

- 14.3.1 Phase 3 reflects activity undertaken during the second half of the 19th century, a period in which the population of Ormskirk is documented as actually having fallen, perhaps as a result of the growth of Liverpool. In this period the town remained a provincial market town, serving the surrounding agricultural communities and larger local towns as suggested by the decline of traditional industries and the growth of market gardens in the near vicinity. Middle class residential development was comparatively modest, but by the late 19th century terraces and detached houses were being built along the town's arterial routes. By the time of the c. 1894 Ordnance Survey map, housing extended along Wigan Road adjacent to the site while the central part of the site itself was occupied by a stone yard, with what appeared to be a large quarry pit to the west.
- 14.3.2 Later 19th century development of the building in the south central part of the site, as exposed in the eastern end of Trench 1, was demonstrated by the archaeological record, thereby confirming cartographic evidence provided by the c. 1894 Ordnance Survey map. The building evidently underwent two phases of extension and modification during the second half of the 19th century. Westward extension to the main building was initially undertaken, with a group of east-west aligned stone walls recorded and, while no visible evidence remained of an enclosing western wall for the extension, there were some indications of internal partition. No interior floor surfaces associated with these walls survived, although two exterior yard surfaces were likely contemporary elements. The most extensive of these surfaces lay to the west of the building, this a well-made cobbled affair with the remains of a flagstone floor to the west, this possibly a former path. A small area of flagstone and cobble yard was recorded on the south side of the building extension, with remains of drainage arrangements surviving, these using bricks typical of the 19th century; the drainage installations pre-dated piecemeal re-surfacing of the yard in brick, flagstones and cobbles.
- 14.3.3 The western building extension subsequently underwent modification with its north wall being realigned through the erection of a brick and sandstone wall running SW-NE. A new internal brick floor was laid with a flagstone door threshold at its eastern end. The aforementioned internal tiled floor – red and yellow square terracotta tiles laid in a chessboard pattern - in the southern part of the original building also likely dates from this phase of modifications. The underside of the tiles had machine-stamped recesses and these potentially came from North Staffordshire where high density bricks and tiles were manufactured from local material from the 1880s onwards.

- 14.3.4 Other features and structures assigned to Phase 3 included a rectangular rubbish pit west of the building in Trench 1, this notable for the quantity of artefactual material it produced, including a large quantity of domestic pottery, several worn out leather shoes, glass beer and soft drinks bottles and clay tobacco pipe fragments. The pottery included Bristol-glazed stoneware dating to after 1830, while transfer-printed wares included a soup plate with a late 19th-century design and a 'James Keiller and Sons' marmalade jar, post-dating 1873. A stoneware bottle stamped 'STEPHENS/ALDERSGATE/LONDON', dates from the late 19th or early 20th century. A clay tobacco pipe from the pit was of particular local interest as it included an Irish type bowl depicting the 'Red Hand of Ulster' and a heart above a shamrock. Although this was a standard type of pipe made by English and Scottish pipe manufacturers in the late 19th century, marketed at the Irish migrant population, it does suggest that someone Irish or of Irish decent might have once owned it and so reflects the broader picture of Irish immigration into the region at this time.
- 14.3.5 Two small structures recorded in the western part of Trench 1 correlate closely with structures illustrated on the c. 1894 Ordnance Survey map. A third, larger structure shown on that map between these structures and the main building did not leave a similar trace in the archaeological record, although it is possible that a group of square pits and postholes recorded in this area represent the structure. The first of these ancillary structures was a rectangular affair filled with an ashy deposit rich in artefactual material, including pottery and glass beer bottles of late 19th or early 20th-century date, with the overall matrix producing metalliferous fuel ash slag known as clinker. The majority of the animal bone recovered during the work came from this feature, these mostly cattle bones with some rabbit bones with the recorded treatments indicating that this was unlikely to be a dwelling. The other structure may have been, at least in part, open sided, possibly a lean-to structure against a boundary wall.
- 14.3.6 Trench 2 contained two large rubbish pits from this period. The larger pit yielded building debris and fragments of pottery, including a transfer-printed ware plate with the mark 'CE & M makers', dated c. 1860-71, other late 19th-century transfer-printed designs and a stoneware ink bottle broadly dated to the late 19th and early 20th centuries. The second pit contained significant quantities of pottery including an English majolica jug, stoneware bottles and transfer printed wares, with one example exhibiting an art nouveau geometrical design, which as a group date to the late 19th and early 20th centuries.

14.4 Phase 4: Early 20th-Century Activity

- 14.4.1 Phase 4 reflects activity undertaken during the first half of the 20th century, a period which includes acquisition of the site in the 1920s by flooring manufacturer Atkinson and Kirby. By the time of the c. 1928 Ordnance Survey map, the western part of the overall re-development site was occupied by a saw mill and timber yard, these probably the aforementioned Atkinson and Kirby premises. The western end of Trench 1 extended into the timber yard and a large area of worn hardstanding was exposed at this location, mostly cobbled with smaller areas of brick surfaces. The existing developed area in the south central portion of the site remained at this time, still enclosed by a boundary wall, although most of the former ancillary buildings associated with the wall had been demolished. The fragmentary remains of the boundary wall were probably recorded in the south-western corner of Trench 2.

14.5 Phase 5: Mid 20th-Century Activity

- 14.5.1 This period probably saw the majority, if not all, existing buildings demolished across the overall site and an extensive complex of new buildings established as the Atkinson and Kirby premises saw significant expansion. Archaeological evidence in the former developed area in the south central portion of the site revealed some removal of building material as demolition took place, prior to the accumulation of rubble and demolition debris. From these layers a number of residual, yet none-the-less interesting, artefacts were recovered, notably two coins, an eroded King George V halfpenny and a Queen Victoria penny.

14.6 Phase 6: Late 20th- and Early 21st-Century Activity

- 14.6.1 The most recent phase of activity at the site takes in demolition of all mid-20th century industrial buildings on the site and levelling of the site in preparation for redevelopment; Atkinson and Kirby are known to have vacated the site in 2005. In some instances demolition involved complete excavation of all building structures and foundations, for example as represented by a deep backfilled feature in the south-western corner of Trench 1. In other locations, areas of concrete hardstanding had been left *in situ*. A levelling layer of disturbed topsoil was observed in places, which, by the instigation of the project herein described, had become overgrown.

15. SUMMARY OF POTENTIAL FOR FURTHER ANALYSIS

- 15.1 The archaeological work at the Redrow Homes Wigan Road re-development site recorded archaeological remains of the later post-medieval period, the earliest probably dating to the first half of the 19th century, with evidence of limited subsequent development since then, until flooring manufacturer Atkinson and Kirby vacated the site in c. 2005 and all existing structures were demolished.
- 15.2 The archaeological data which represent 19th century and early 20th century activity are of importance at a local level. Therefore, it is considered that the findings require further analysis and publication of a short final report/paper in an appropriate outlet, to form a permanent record of the investigations. Due to the generally fragmentary nature of the remains, only limited further analytical work is considered necessary on the relevant archaeological data, as discussed below. However, the final report/paper is required to place the findings in a broader archaeological context.
- 15.3 Only limited further analysis is required for the stratigraphic data. However, further examination of historic mapping is recommended, along with additional documentary research into local trades, practises and industry, with the specific aim of clarifying the function of the recorded buildings, the remains of which form the majority of the archaeological record.
- 15.4 Specialist assessment of the various artefactual and ecofactual assemblages have concluded that further analytical work, with report, is warranted for the following: pottery, with illustration of key components of the assemblage; glass, with illustration of key components of the assemblage; metal, leather and other small finds, with photographs of key components of the assemblage. For the clay tobacco pipes, no further analysis is required, and just one item requires illustration. For the building material, bone and metalliferous residues, no further analytical work is required, but as a minimum, a brief summary of each category of material is required to form part of the final publication report/paper.
- 15.5 The proposed method for dissemination of the final publication report/paper is within a web-based outlet. The publication report/paper would, as a minimum, contain the following:
- **Abstract:** an introductory paragraph summarising the publication, particularly the main archaeological periods represented and the main findings and their significance.
 - **Introduction:** the introduction will include the site location, and will set out the overall background to the investigations and outline the main methodologies employed.
 - **Geological and topographical background:** this section will detail the geology and topography of the site.
 - **Archaeological background:** this section will set the archaeological results in local and regional context, with particular focus on local trades, practises and industry, conducted on the margins of smaller towns in the county during the 19th century.
 - **Excavated evidence:** this core section of the paper will detail the results of the investigations and will include a brief synthesised description of the recorded evidence, including the artefactual material recovered.

- **Discussion:** the discussion will propose an interpretation of the archaeological remains based on the excavated features and the artefactual evidence.
- **Illustrations:** the paper will be illustrated, including: site location plan; location plan of the excavated areas; plans (and sections if appropriate) of recorded remains; interpretative plans; photographs; line drawings of key components of the artefactual assemblages.

15.4 A draft of the proposed final report would be sent to Hyder Consulting and the Lancashire Archaeological Planning Officer for comment prior to publication in the proposed web-based form.

PART C: REFERENCES AND ACKNOWLEDGEMENTS

15. REFERENCES

Bibliography

- Atkinson D. and Oswald. A., 1969. 'London clay tobacco pipes', *Journal of British Archaeology Association*, 3rd series, Vol. 32, 171-227.
- Brown, D.H. 2007. *Archaeological Archives. A guide to best practice in creation, compilation transfer and curation*, Archaeological Archives Forum.
- Brunskill, R.W. 1990. *Brick Building in Britain*, Victor Gollancz Limited.
- Davis, S.J.M. 2002. *British agriculture: Texts for the zoo-archaeologist. Environmental Archaeology*. The Journal of Human Palaeoecology 7. Oxbow Books. Association for Environmental Archaeology, 47-60.
- Department for Communities and Local Government 2010. *Planning Policy Statement 5, 'Planning for the Historic Environment'*, HMSO.
- Dobson, E., 1850. *A Rudimentary Treatise on the Manufacture of Bricks and Tiles*, John Weale.
- English Heritage, 2006. *Management of Research Projects in the Historic Environment*, English Heritage.
- Hall, B.R. and Folland, C.J. 1970. 'Soils of Lancashire', Soil Survey of Great Britain Bulletin No. 5, Harpenden.
- Institute for Archaeologists, 2008a. *Standard and guidance for archaeological field evaluation*, IfA.
- Institute for Archaeologists, 2008b. *Standard and guidance for archaeological excavation*, IfA.
- Institute for Archaeologists, 2008c. *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*, IfA.
- Jones, W., 1996. *Dictionary of Industrial Archaeology*, Sutton Publishing Limited.
- Lancashire County Archaeological Service and Egerton Lea Consultancy, 2006. *Ormskirk Historic Town Assessment Report*, Lancashire Historic Town Survey Programme, Lancashire County Council.
- Palmer, M. and Neaverson, P., 1994. *Industry in the Landscape 1700-1900*, Routledge.
- Pre-Construct Archaeology Limited, 2012. *Written Scheme of Investigation for an Archaeological Strip, Map and Record Exercise at Wigan Road, Ormskirk, Lancashire*, unpublished.
- Richmond, L. and Turton, A. (eds.), 1990. *The Brewing Industry; A Guide to Historical Records*, Manchester University Press.
- Rixson, D., 1969. *Beef Cutting*, *Meat Trades Journal*, Northwood Publications.
- Rixson, D., 2000. *The History of Meat Trading*, Nottingham University Press.
- Rock. H. 2006. *Pub beer mugs and glasses*, Shire Album 458, Shire Publications.

Schmid, E., 1972. *Atlas of animal bones for prehistorians, archaeologists and Quaternary geologists*, Elsevier.

Walker, K., 1990. *Guidelines for the Preparation of Excavation Archives for Long-term Storage*, Archaeology Section, United Kingdom Institute for Conservation.

Online Sources

British Geological Survey website, at: <http://www.bgs.ac.uk>

Business Directory of London, 1884, Part 1, at: <http://www.historicaldirectories.org>

Gore's Directory of Liverpool & Birkenhead 1900, at: <http://www.historicaldirectories.org>

Post Office London Directory, 1915, at: <http://www.historicaldirectories.org>

The Brothers Five: Providence Bottle Works, at: http://brothersfive.ca/sb_kilner_brothers.html

The London Gazette, 23rd January 1968, at:

<http://www.london-gazette.co.uk/issues/44509/pages/934/page.pdf>

Wainwright, S. 2011. An Illustrated History of Old Sutton in St. Helens, at:

<http://www.suttonbeauty.org.uk/suttonhistory/industry.html#glass>

Maps Consulted (other than Ordnance Survey maps)

IGS 1979 Geological Map of the British Islands, 5th edition

16. ACKNOWLEDGEMENTS AND CREDITS

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PCA Credits

Project management: Robin Taylor-Wilson

Post-excavation management: Jenny Proctor

Fieldwork: Malcolm Gould (Site Supervisor), Sophie Laidler and Scott Vance

Report: Malcolm Gould

Illustrations: Hayley Baxter

Animal bone: Kevin Rielly

Bricks and related finds: Kevin Haywood

Pottery, clay tobacco pipes and glass: Chris Jarrett

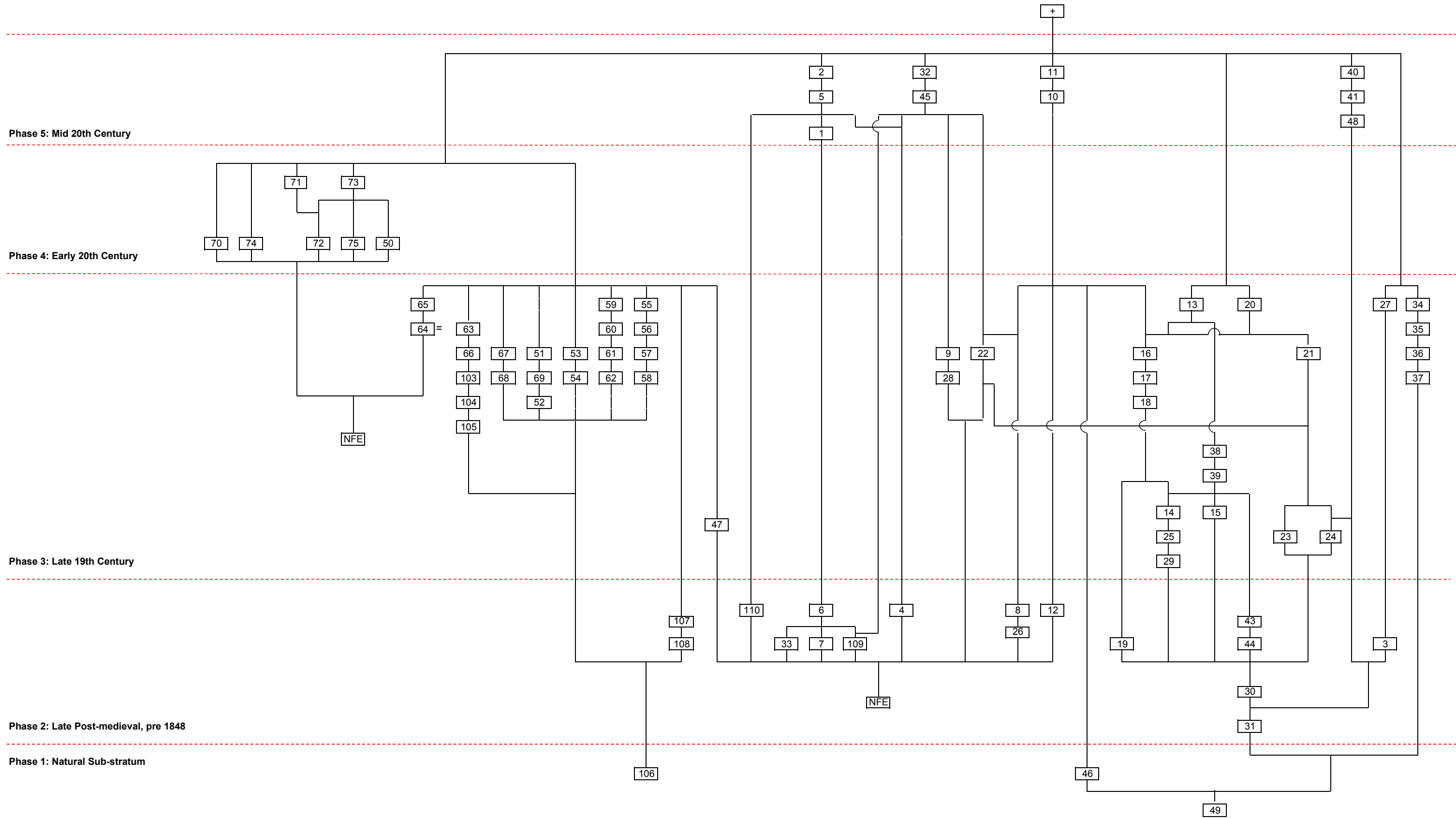
Metal, leather and small finds: Märit Gaimster

Other Credits

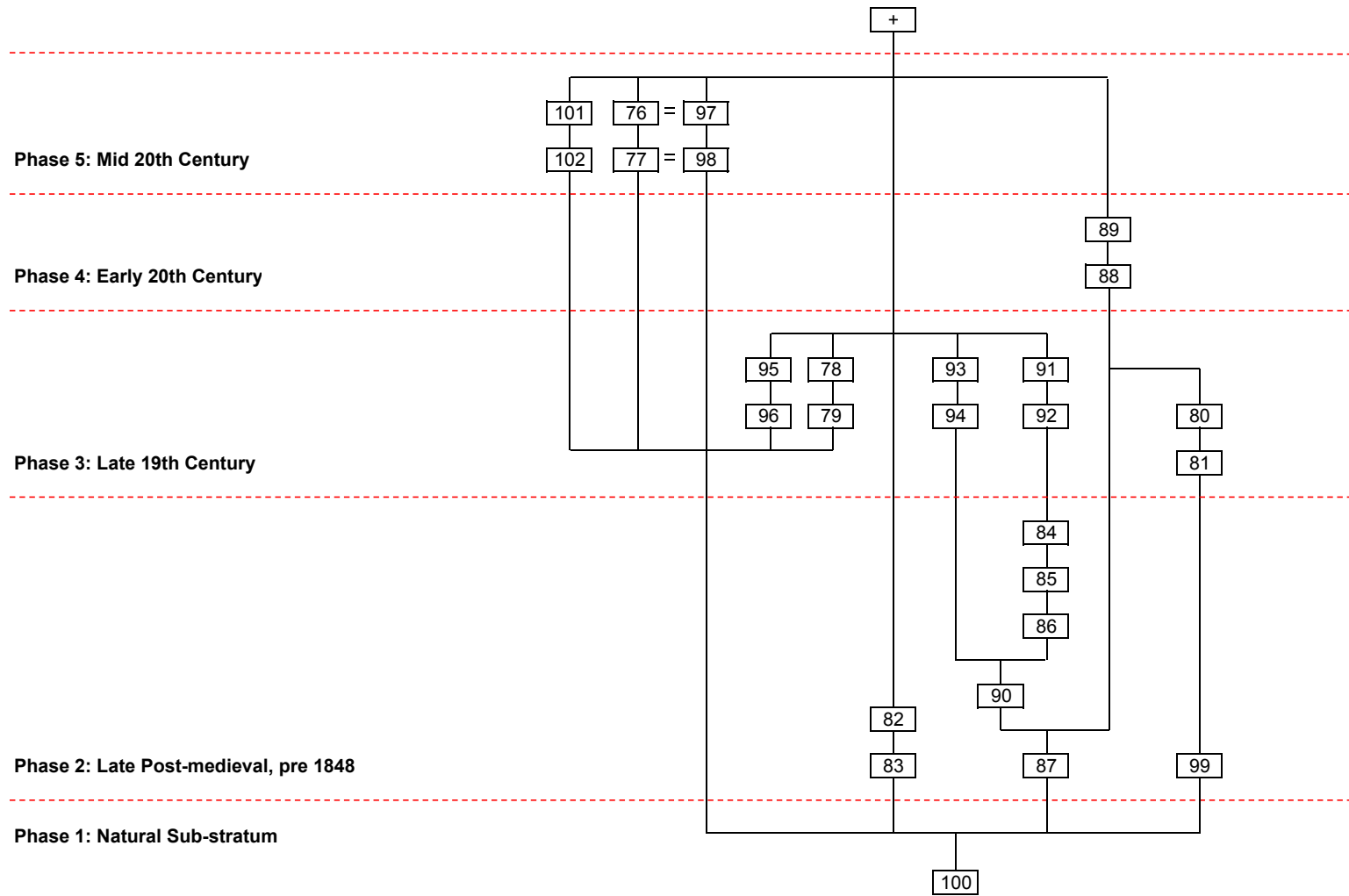
Industrial residues: Rod Mackenzie

APPENDIX 1
STRATIGRAPHIC MATRICES

WRO 12: TRENCH 1 STRATIGRAPHIC MATRIX



WRO 12: TRENCH 2 STRATIGRAPHIC MATRIX



APPENDIX 2
CONTEXT INDEX

WRO 12: CONTEXT INDEX

| Context | Area | Phase | Type 1 | Type 2 | Interpretation |
|----------------|-------------|--------------|---------------|---------------|---|
| 1 | T1 | 5 | Deposit | Layer | Dump layer above surface [6] |
| 2 | T1 | 5 | Deposit | Layer | Demolition rubble |
| 3 | T1 | 2 | Masonry | Surface | External surface, granite setts |
| 4 | T1 | 2 | Masonry | Structure | External stone wall, NW corner angle |
| 5 | T1 | 5 | Deposit | Layer | Demolition rubble layer, wall [4] |
| 6 | T1 | 2 | Masonry | Surface | Internal brick and flagstone floor surface |
| 7 | T1 | 2 | Masonry | Surface | Internal brick floor surface |
| 8 | T1 | 2 | Masonry | Surface | Internal flagstone floor surface |
| 9 | T1 | 3 | Masonry | Surface | Internal tiled surface, red and yellow chessboard pattern |
| 10 | T1 | 5 | Cut | Linear | Robber trench |
| 11 | T1 | 5 | Deposit | Fill | Fill of robber trench [10] |
| 12 | T1 | 2 | Deposit | Layer | Bedding layer for internal wall |
| 13 | T1 | 3 | Masonry | Surface | External surface, cobble, brick and flagstone |
| 14 | T1 | 3 | Masonry | Surface | External surface, cobbled |
| 15 | T1 | 3 | Masonry | Surface | External surface, cobbled with edging stones |
| 16 | T1 | 3 | Object | Pipework | Large bore ceramic drain, service trench [18] |
| 17 | T1 | 3 | Deposit | Fill | Backfill of service trench [18] |
| 18 | T1 | 3 | Cut | Linear | Service trench, large bore ceramic drain, aligned N-S |
| 19 | T1 | 2 | Masonry | Surface | Cobbled surface edging |
| 20 | T1 | 3 | Masonry | Surface | Internal brick surface, associated with wall [21] |
| 21 | T1 | 3 | Masonry | Structure | External brick and stone wall, aligned SW-NE |
| 22 | T1 | 3 | Masonry | Surface | Internal brick surface with flagstone threshold |
| 23 | T1 | 3 | Masonry | Structure | External stone wall, aligned E-W |
| 24 | T1 | 3 | Masonry | Structure | Internal? stone wall, aligned E-W |
| 25 | T1 | 3 | Masonry | Structure | External stone wall, aligned E-W |
| 26 | T1 | 2 | Deposit | Layer | Dump layer, below floor [8] |
| 27 | T1 | 3 | Deposit | Layer | Re-surfacing of surface [3], similar to [73] |
| 28 | T1 | 3 | Deposit | Layer | Demolition rubble |
| 29 | T1 | 3 | Masonry | Structure | Fragment of brick wall, aligned E-W |
| 30 | T1 | 2 | Deposit | Layer | Mixed occupation layer |
| 31 | T1 | 2 | Deposit | Layer | Mixed occupation layer |
| 32 | T1 | 5 | Deposit | Fill | Fill of robber trench [45] |
| 33 | T1 | 2 | Deposit | Layer | Levelling/bedding layer for floor [6] |
| 34 | T1 | 3 | Deposit | Fill | Fill of refuse pit [37] |
| 35 | T1 | 3 | Deposit | Fill | Fill of refuse pit [37] |
| 36 | T1 | 3 | Deposit | Fill | Fill of refuse pit [37] |
| 37 | T1 | 3 | Cut | Discrete | Refuse pit |
| 38 | T1 | 3 | Deposit | Fill | Fill of service trench [39] |
| 39 | T1 | 3 | Cut | Linear | Service trench, aligned NW-SE |
| 40 | T1 | 5 | Deposit | Fill | Fill of posthole [41] |
| 41 | T1 | 5 | Cut | Discrete | Posthole |
| 42 | VOID | | | | |
| 43 | T1 | 2 | Deposit | Fill | Fill of service trench [44] |
| 44 | T1 | 2 | Cut | Linear | Service trench, aligned NE-SW |
| 45 | T1 | 5 | Cut | Discrete | Robber trench, for southern extent of wall [4] |
| 46 | T1 | 1 | Deposit | Layer | Natural sandy silt deposit |
| 47 | T1 | 3 | Masonry | Surface | Flagstone floor surface |
| 48 | T1 | 5 | Deposit | Layer | Rubble layer |

WRO 12: CONTEXT INDEX

| | | | | | |
|----|----|---|---------|-----------|--|
| 49 | T1 | 1 | Deposit | Layer | Natural silty sand deposit |
| 50 | T1 | 4 | Masonry | Surface | External cobbled yard surface |
| 51 | T1 | 3 | Masonry | Surface | Internal? brick and cobble surface |
| 52 | T1 | 3 | Masonry | Structure | Narrow brick structure |
| 53 | T1 | 3 | Deposit | Fill | Fills of group no. [54] |
| 54 | T1 | 3 | Cut | Group no. | Group of postholes |
| 55 | T1 | 3 | Deposit | Fill | Fills of group no. [56] |
| 56 | T1 | 3 | Cut | Group no. | Group of postholes |
| 57 | T1 | 3 | Deposit | Fill | Fill of posthole [58] |
| 58 | T1 | 3 | Cut | Discrete | Posthole |
| 59 | T1 | 3 | Deposit | Fill | Fill of posthole [62] |
| 60 | T1 | 3 | Masonry | Fill | Fill of posthole [62] |
| 61 | T1 | 3 | Deposit | Fill | Fill of posthole [62] |
| 62 | T1 | 3 | Cut | Discrete | Posthole |
| 63 | T1 | 3 | Masonry | Surface | Internal brick surface, structure [66] |
| 64 | T1 | 3 | Masonry | Surface | Brick wall/threshold, structure [66] |
| 65 | T1 | 3 | Deposit | Layer | Backfill of structure [66] |
| 66 | T1 | 3 | Masonry | Structure | Rectangular stone structure |
| 67 | T1 | 3 | Masonry | Surface | External? cobbled surface |
| 68 | T1 | 3 | Deposit | Layer | Bedding layer for surface [67] |
| 69 | T1 | 3 | Deposit | Layer | Layer underlying surface [51] |
| 70 | T1 | 4 | Masonry | Surface | External brick surface |
| 71 | T1 | 4 | Masonry | Surface | External brick surface |
| 72 | T1 | 4 | Masonry | Surface | External brick surface |
| 73 | T1 | 4 | Deposit | Layer | Re-surfacing deposit?, similar to [27] |
| 74 | T1 | 4 | Masonry | Linear | Brick wall? |
| 75 | T1 | 4 | Masonry | Surface | External cobbled surface |
| 76 | T2 | 5 | Deposit | Fill | Fill of pit [77] |
| 77 | T2 | 5 | Cut | Discrete | ?Post-pit, aligned with [98] |
| 78 | T2 | 3 | Deposit | Fill | Fill of posthole [79] |
| 79 | T2 | 3 | Cut | Discrete | Posthole |
| 80 | T2 | 3 | Deposit | Fill | Fill of pit [81] |
| 81 | T2 | 3 | Cut | Discrete | Refuse pit |
| 82 | T2 | 2 | Masonry | Structure | Stone culvert, aligned NE-SW |
| 83 | T2 | 2 | Cut | Linear | Construction cut for culvert [82] |
| 84 | T2 | 2 | Deposit | Fill | Backfill of service trench [86] |
| 85 | T2 | 2 | Deposit | Fill | Backfill of service trench [86], with terracotta field drain |
| 86 | T2 | 2 | Cut | Linear | Field drain network |
| 87 | T2 | 2 | Masonry | Structure | Stone culvert, curving to NW |
| 88 | T2 | 4 | Masonry | Structure | Brick wall fragment, aligned N-S |
| 89 | T2 | 4 | Deposit | Layer | Demolition rubble, wall [88] |
| 90 | T2 | 3 | Deposit | Layer | Dump deposit, over culvert [87] |
| 91 | T2 | 3 | Deposit | Fill | Fill of pit [92] |
| 92 | T2 | 3 | Cut | Discrete | Refuse pit |
| 93 | T2 | 3 | Deposit | Fill | Fills of group no. [94] |
| 94 | T2 | 3 | Cut | Group no. | Irregular shaped pits/postholes |
| 95 | T2 | 3 | Deposit | Fill | Fill of postholes [96] |
| 96 | T2 | 3 | Cut | Group no. | Group of postholes |
| 97 | T2 | 5 | Deposit | Fill | Fills of group no. [98] |
| 98 | T2 | 5 | Cut | Group no. | Group of post-pits? |
| 99 | T2 | 2 | Deposit | Layer | Probable natural layer, root action |

WRO 12: CONTEXT INDEX

| | | | | | |
|-----|----|----|---------|-----------|--|
| 100 | T2 | 1 | Deposit | Layer | Natural sand deposit |
| 101 | T2 | 5 | Deposit | Structure | Fill of pit [102] |
| 102 | T2 | 5 | Cut | Discrete | Refuse pit |
| 103 | T1 | 3 | Object | Pipework | Double line of terracotta drainpipes, service trench [104] |
| 104 | T1 | 3 | Cut | Linear | Service trench, with ceramic drains [103] |
| 105 | T1 | 3 | Cut | Linear | Construction cut for wall [66] |
| 106 | T1 | 1 | Deposit | Layer | Natural sand deposit |
| 107 | T1 | 2? | Deposit | Fills | Fills of group no. [108] |
| 108 | T1 | 2? | Cuts | Linear | Group of linear features, aligned E-W |
| 109 | T1 | 2 | Deposit | Layer | Bedding layer, internal floor [6] |
| 110 | T1 | 2 | Object | Pipework | Large bore drain pipe, aligned N-S |
| 111 | T1 | 2 | Masonry | Structure | Internal stone wall, aligned N-S |
| 112 | T1 | 2 | Masonry | Structure | Internal stone wall, aligned N-S |
| 113 | T1 | 2? | Deposit | Fills | Fills of group no. [108] |

APPENDIX 3
PHOTOGRAPHIC PLATES



Plate 1: Trench 1, overview with cobbled yard surface [15] in foreground, looking north-east



Plate 2: Trench 1, stone wall [4] with interior floor surface [6], looking NNW (scale 1m)



Plate 3: Trench 1, interior floor surfaces [8] and [9], looking north-west (*scale 1m*)



Plate 4: Trench 1, detail of interior floor surface [9], looking NNW (*scale 1m*)



Plate 5: Trench 1, granite sett surface [3], looking west (*scale 1m*)



Plate 6: Trench 1, structure [66] with internal fill [65], looking ENE (*scale 1m*)



Plate 7: Trench 1, structure [52] with brick and cobble surface [51], looking north-east (*scale 1m*)



Plate 8: Trench 2 overview, looking north-east (*scale 1m*)



Plate 9: Trench 2, culvert [87], looking SSE (scale 1m)



Plate 10: Trench 2, culvert [82], looking south-west (scale 1m)

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