



University of
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MANCHESTER

Post-Excavation Assessment

**Grasmere Avenue,
Farington,
South Ribble,
Lancashire**

Client:

Caddick Developments Ltd

Planning Ref:

07/2020/00781/OUT


Technical Report:

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SUMMARY

This report details the results of an archaeological excavation at the site of Lower Farington Hall, Farington, South Ribble, Lancashire (centred at NGR: 353658 423521). The work was undertaken by Salford Archaeology and was commissioned by Caddick Developments Ltd which intends to develop part of the site and surrounding area as an industrial estate (planning reference: 07/2020/00781/OUT). As such, the construction works will cause damage to potential buried archaeological remains existing on the site.

The site has been the subject of an archaeological desk-based assessment (Brogan, 2019) which identified that the site contained potential for medieval and post-medieval remains. Specifically, it was stated that there was potential for remains including a corn mill, the moated site of Lower Farington Hall together with later farm buildings established on the site of the hall.

An archaeological evaluation, completed in 2021 demonstrated the survival of the moat and a suite of structural remains belonging to later agricultural buildings (Cook, 2021). As these remains were deemed to be of local or even regional significance the Lancashire County Council Historic Environment Team recommended that two adjoining open-area excavations – targeted on the footprint the projected arm of the moat and on specific buildings visible on historic mapping – should be undertaken before development of the site.

The excavation commenced in September 2021 and comprised two open areas revealing seven main archaeological phases. The earliest deposits recorded represented natural till. This was followed by a phase of late medieval/early post-medieval activity, which witnessed the creation of the moat of Lower Farington Hall. Maintenance to the moat in the form of clearing out the accumulated fills was represented by several moat recuts.

A masonry bridge abutment was recorded on the eastern bank of the western arm of the moat. This feature was post-dated by a further instance of moat recutting and the construction of a timber bridge base frame, discovered *in situ*. Around this time the sides of the moat close to the bridge were stabilised with the installation of wattle revetments. The bridge appears to have been superseded in the later post-medieval period by the creation of a causeway which involved building a masonry abutment on the western side of the moat and the alteration of the eastern bridge abutment. During this period the moat was gradually filled by deposits accumulating there.

In the late 18th century a new farm complex was established to the west of the moat. This was followed by more building across the infilled moat to the south of the causeway plus extensions and additions to the pre-existing farm complexes. Development and occupation of the farm

complexes continued into the late 20th century. Modern topsoil post-dating demolition of the farm complexes in the 1980s was recorded sealing the entire site.

No further on-site work is merited, however to fulfil the demands of the planning condition a scheme of post-excavation analysis, reporting and publication must proceed together with future provision for the installation of on-site information panels, which will serve to disseminate the results of the archaeological investigation for the benefit of the local and wider community. It is anticipated that appropriate dissemination will also take the form of a booklet or an academic article in a journal such as *Post-medieval Archaeology*.

1. INTRODUCTION

- 1.1.1 Salford Archaeology were commissioned by Caddick Developments Ltd to undertake an archaeological excavation at land to the west of the Lancashire Business Park, situated off Grasmere Avenue in Farington, (centred on NGR 353658 423521) (referred to herein as the site) (Figure 1). The site lies within a small area of woodland to the north of the junction of Mill Lane and Hall Lane (Figure 2).
- 1.1.2 The proposed scheme (planning reference: 07/2020/00781/OUT) includes the erection of a series of industrial units, with associated servicing and infrastructure including external parking for cars and heavy goods vehicles. As such, this will necessitate earth-moving works, alteration to the drainage of the site, piling and clearance activity.
- 1.1.3 The site has been the subject of an archaeological desk-based assessment (Brogan, 2019). This document identified that the site contained potential for medieval and post-medieval remains. It was stated that there was considerable potential for buried remains of the medieval moat, and later farm buildings.
- 1.1.4 Considering the conclusions drawn from the archaeological desk-based assessment and following consultation with Lancashire County Council Historic Environment Team, a condition was attached to planning consent that required a scheme of archaeological investigation be implemented in advance of construction. The pre-commencement condition stated:
- 1.1.5 'A scheme of archaeological works will be carried out in accordance with the following:
1. Prior to any development within the areas of archaeological interest, a phased programme of archaeological investigations of evaluation trenching undertaken in accordance with the approved Written Scheme of Investigation (WSI) prepared by Salford Archaeology, dated 13th November 2020: 'Grasmere Avenue, Farington, South Ribble')
 2. A programme for post investigation assessment to include: a. analysis of the site investigation records and finds; b. production of a final report on the significance of the archaeological and historical interest represented.
 3. Deposition of the final report with the Lancashire Historic Environment Record.
 4. A scheme to disseminate the results of the archaeological investigations for the benefit of the local and wider community.
 5. Provision for archive deposition of the report and records of the site investigation. If unexpected significant archaeological remains are encountered then, where merited by the initial evaluation of the remains, a further phase of a targeted archaeological excavation, appropriate analysis, reporting and publication shall be developed in line with the above process (see items 1 to 5). Any

additional ground investigation shall be undertaken before any further development in that area of the site, and the findings submitted to the local planning authority for approval in writing. All archaeological works shall be undertaken by an appropriately qualified and experienced professional archaeological contractor and comply with the standards and guidance set out by the Chartered Institute for Archaeologists (CIfA). The development shall be carried out in accordance with the agreed details. REASON: To ensure and safeguard the recording and inspection of matters of archaeological and/or historical importance associated with the building/site in accordance with Policy 16 in the Central Lancashire Core Strategy’.

- 1.1.6 In January 2021, an archaeological evaluation of the site by trial trenching demonstrated that physical remains of a 18th- and 19th-century farm complex survived *in situ* at a very shallow depth below the modern ground surface (Cook, 2021). The remains included structural elements of farmhouses and agricultural buildings dating to the 18th and 19th centuries, together with evidence for an extensive cobbled courtyard and trackway.
- 1.1.7 The most significant result from the work was the identification of the western arm of the medieval moat, which was not depicted on 19th-century historic maps of the site. The lower levels within the moat were waterlogged and contained deposits containing preserved organic remains together with ceramics and animal bone. The artefactual evidence from these deposits was dated from the 14th to 15th centuries.
- 1.1.8 It was decided that further work was needed to expose and record the remains of the moat and farm buildings prior to development in this part of the site. The proposed development will encroach on an area limited to part of the western arm of the moat and adjacent moated platform – not the entire platform within the moat. Therefore, it was decided that work would take the form of a targeted excavation of the of the western side of the moated site, and a strip, map and record excavation of the later farm buildings to the west of the moat. Such an approach would form an appropriate means of mitigating the harm of the development in this particular part of the site and was approved by the Lancashire County Council Historic Environment Team.
- 1.1.9 The evaluation also indicated that, in the western part of the site, remains of a corn mill and its associated water-management features were probably buried beneath a thick deposit of landfill, corroborating the geotechnical surveys in this area (Cook, 2021). Given the depth of the modern overburden in the western half of the development site (covering the remains of the corn mill, its millpond or water-management features), no further on-site investigations were recommended in this

part of the site. The proposed building's foundations will be achieved through piling through this material rather than bulk excavation and so the remains are unlikely to be seriously affected.

- 1.1.10 The fieldwork took place between the 6th of September and 12th of November 2021. The archaeological works were supervised by Joe Brooks and Oliver Cook and the project was managed by Graham Mottershead.

2. AIMS AND OBJECTIVES

2.1 Aims

2.1.1 The main aims of the excavation were to expose and record the archaeological remains of the moat and later farm buildings prior to the development of this part of the site. The location of the excavation areas was determined through consultation with the Planning Archaeologists at the Lancashire County Council Historic Environment Team, in their role as advisors to the planners. Two separate excavation methodologies were agreed.

2.1.2 The 18th- and 19th-century farm buildings making up Farington Hall Farm – located to the west of the moat – were subject to a strip, map and record exercise. The remains were encountered at a shallow depth during the evaluation and could therefore be rapidly exposed and cleaned before being subject to recording and surveying. The aim of this work was to further enhance plans of the site and help refine the main construction phases of the various farm buildings.

2.1.3 Following consultation with the Planning Archaeologist it was recommended that the site of the moat was subject to a sample excavation, whereby a series of slots was excavated through the infilled moat to determine its form, fill sequence and where possible recover artefactual material, dating and environmental evidence. The top of the infilled feature was mechanically exposed and any demonstrably modern deposits and overburden were stripped. Following this the slots through the moat were excavated manually and samples taken from individual contexts.

2.1.4 This varied approach to the excavation was suitable given the difference between the depth and complexity of the archaeology of the farm buildings and moat. This methodology offered a viable means to mitigate the impact of development on the archaeological resource of the development area and was in accordance with national guidelines set out in the National Planning Policy Framework: Section 16.

2.2 Objectives

2.2.1 The principal objectives of the archaeological investigation were:

- to record, via excavation, the remains of the medieval moat, which will be revealed in plan and subject to manual excavation and recording;
- to record, via strip map and record excavation, the shallow remains of the farms and any associated structures and external surfaces;

- to produce a post-excavation report on the archaeological works with a view to finalising the extent of further work needed to analyse the artefactual assemblage, conduct historical research for the compilation of a final report / publication;
- to make available the results of the work in an appropriate format.

2.2.2 It is anticipated that the archaeological investigation will address several of the agenda for archaeological research of the industrial and modern periods stated in the current *North West Regional Research Framework* (NWRRF 2021). In particular, the work has the potential to contribute to a number of research questions set forth for the Late Medieval and Post-medieval research agendas.

2.3 **Late medieval:**

- 2.3.1 LM10: How can a review of excavated and surveyed extant farm buildings and house types contribute to our understanding of the late medieval/early post-medieval transition?
- 2.3.2 LM11: How can we improve our understanding of the origins and developments of building types from early medieval to late medieval?
- 2.3.3 LM15: How have recent detailed surveys of medieval halls informed our understanding of their evolution and transition to modern housing?
- 2.3.4 LM34: How can modern survey and excavation techniques improve our understanding of the origins and architecture of castles and defended sites?
- 2.3.5 LM41: To what extent was the development of defensive or pseudo-defensive structures linked to cultural ideas of landscape and power, and are these reflected in the development of high-status residences from the castle and defended house to the later stately home, country house and estate?
- 2.3.6 LM45: What can recent analysis of building materials tell us about building industry techniques and resource management?
- 2.3.7 LM50: How can archaeological studies further our knowledge of the development of ceramic building material production?
- 2.3.8 LM55: How can we develop a ceramic typology for the medieval period?
- 2.3.9 LM56: How can we identify different patterns of social interaction from artefact assemblage studies?

2.4 **Post-medieval:**

- 2.4.1 PM01: How can we develop post-medieval ceramic typologies and identify differences across social strata, rural and urban environments and the regions in the North West?
 - 2.4.2 PM02: How does the transition from timber to stone or brick differ according to building types and across the region?
 - 2.4.3 PM03: How do large domestic buildings relate to their wider social context?
 - 2.4.4 PM04: Where do 16th to 17th century structures survive and how does this inform our understanding of the chronology and evolution of brickwork during this period?
 - 2.4.5 PM05: How can dendrochronology sequences inform our understanding of building evolution, development and change during the post-medieval period?
 - 2.4.6 PM07: How are plants and animals exploited during this period and how is this linked to changes in consumption patterns?
 - 2.4.7 PM17: How have recent detailed surveys of medieval and Tudor halls informed our understanding of their evolution and transition to modern housing?
 - 2.4.8 PM21: How did buildings, settlements and landscapes associated with dissenting populations evolve and develop during this period?
 - 2.4.9 PM31: How do we standardise the recording of ware types and fabric types of North West post-medieval pottery?
 - 2.4.10 PM32: How do pottery industries develop throughout the post-medieval period?
 - 2.4.11 PM34: What can pottery traditions and production tell us about trades of commerce in the region?
 - 2.4.12 PM39: What new types of food and methods of food preparation and consumption were introduced into North West England and where did they come from?
- 2.5 It is also anticipated the work will contribute to the overall understanding of the site through answering the following site-specific research questions:
- 2.5.1 *Updated Research Aim 1:* What evidence is there to further understand the date and function of the moat, its main period of use and eventual abandonment?
 - 2.5.2 *Objective 1.1:* Is it possible to assign a date to the creation of the moat based on the available evidence from the western arm of the moat?
 - 2.5.3 *Objective 1.2:* Can the fill sequence of the moat be related to the known periods of occupation for the hall?

- 2.5.4 *Objective 1.3:* Can a more detailed plan of the moat – its size and shape – be created through modelling of the excavations and topography of the site?
- 2.5.5 *Objective 1.4:* How does the morphology of the moat compare to other moated sites in the region?
- 2.5.6 *Objective 1.5:* How was the western arm of the moat crossed and have any remains of a bridge or crossing from earlier periods survived?
- 2.5.7 *Objective 1.6:* What relationship does the moat have to the water-filled ditches immediately south of the hall and do these represent part of a much larger manorial complex?
- 2.5.8 *Objective 1.7:* What is the relationship between the moat and millpond, and can this be understood through targeted investigation of both features?
- 2.5.9 *Objective 1.8:* Undertake palaeo-environmental sampling of the moat fills to recover macrofossils (i.e. fishbones) and palynological evidence
- 2.5.10 Updated Research Aim 2: What form did the post-medieval and modern farms take?
- 2.5.11 *Objective 2.1:* Determine the exact form of the farm buildings took
- 2.5.12 *Objective 2.2:* How did the buildings develop over time?
- 2.5.13 *Objective 2.3:* Is it possible to determine the function of rooms and installations and can this be related to historical records and previous investigations (standing buildings records)?
- 2.5.14 *Objective 2.4:* What were the building materials employed in the construction of the farm buildings?
- 2.5.15 *Objective 2.5:* Do the farm buildings and farmhouse contribute to our understanding of the late medieval/early post-medieval transition, specifically the change from manorial ownership and lesser hall, to farm?
- 2.5.16 *Objective 2.6:* Have any earlier remnants of buildings been incorporated into the farms and/or have the later buildings been sited on the footprint of components of the medieval or Tudor complexes?
- 2.5.17 *Updated Research Aim 3:* Reconstruct the tenancy for of the hall, farms and corn mill, through documentary research, tracing the manorial history, later use of the hall, yeoman farmers, and decline / reasons for abandonment.
- 2.5.18 *Objective 3.1:* Consult the Lancashire Archives and South Ribble Museum and Exhibition Centre for records pertaining to the tenancy of the hall, farms and mill

(Manorial records; leases; wills, inventories and probate records, land tax and poor law record etc.)

- 2.5.19 *Objective 3.2:* Use the evidence from documentary research to understand how the status of the buildings and their inhabitants changed over time?

3. LOCATION, GEOLOGY & TOPOGRAPHY

- 3.1.1 The site lies within Farington and is located to the west of Lancashire Business Park (centred on NGR 353658 423521) with access being afforded from Mill Lane. The site is broadly rectangular in shape and covers an area of c. 2580m².
- 3.1.2 The site occupies a position on the eastern side of the development site, north of the junction of Mill Lane and Hall Lane. As a whole, the development site is bounded by the River Lostock to the west and north, Lancaster House and Lancashire Business Park to the east and Haslemere Industrial Estate and Farington Hall Wood to the south (Figure 1; Plate 1).



Plate 1: Recent aerial view across the site prior to development, showing the development boundary and site

- 3.1.3 The development consists of open fields, with a woodland area adjacent to the eastern boundary. Mature trees and hedgerows are present along each boundary and across

the centre of the site, with dense scrub vegetation across the footprint of Farington Hall.

- 3.1.4 According to the British Geological Survey (2022) the underlying solid geology of the site is comprised of mudstone, siltstone and sandstone. The superficial deposits are composed of till formed during the Quaternary Period.
- 3.1.5 The current topography of the site was flat. The current ground surface lies at c. 27m above Ordnance Datum (AOD).

4. HISTORICAL BACKGROUND

4.1 Introduction

4.1.1 The following section presents a summary of the historical and archaeological background to the site and is intended to provide a context in which to consider the results obtained from the archaeological excavation. The following information has largely been drawn from a report produced in 1985 by John Hallam, consultant archaeologist to the Central Lancashire New Town, which gives an account of work and documentary research carried out on the Lower Farington Hall site by the Central Lancashire Archaeological Research Unit between 1976 to 1984.

4.1.2 The following section also presents information gathered in a desk-based assessment of the site that was prepared by Salford Archaeology in 2019 (Brogan, 2019) and an evaluation report produced by Salford Archaeology (Cook, 2021).

4.2 Medieval

4.2.1 Farington probably has its roots in the early medieval period. Although any physical remains from this period are yet to be found, its origins can nevertheless be inferred from place-name evidence. The name Farington is Anglian in origin and has two possible derivations. It can be translated as ‘farmstead where the ferns grow’ (Mills, 1998) or ‘farmstead’ or ‘tun of Fara’, ‘Fara’ being a personal name (Elkwall, 1922: 3). The situation of the township in relation to the River Lostock and mosslands certainly lends weight to early settlement in the area. In the early medieval period this is likely to have been dispersed, perhaps consisting of scattering of small farmsteads.

4.2.2 After the Norman conquest, the township of Farington – then in the possession of Warine Bussel, the military overlord at Penwortham Castle – was given to the Abbots of Evesham. Land in Farington was leased by the abbots to generate income for the priory at Penwortham (Hallam, 1985: 3).

4.3 The earliest references to the Farington family can be found in deeds and leases dating back to 1149 and were drawn up between the Abbots of Evesham and the family, in turn providing some indication as to when the manor of Farington was established. The earliest references to the corn mill in Farington occur in the 14th-century, however as this specifies ‘the rebuilding’ of the mill by the Abbot of Evesham, an earlier date for the origins of the mill can be inferred.

4.4 After the dissolution of the monasteries, the priory’s land and property were supposedly sold to the Fleetwood family. This change in hands is confirmed by an inquisition post-mortem of John Fleetwood from 1591; this document refers to a hall

at Farington prior to 1500. It is therefore likely that the manorial residence of the Farington family was constructed on the site c. 1100-1500.

4.5 **Post-medieval**

4.5.1 The exact form taken by Farington Hall is not clear and no references to early plans or depictions of the buildings are made in previous studies of the site. Details of the component buildings and their amenities can be found in an indenture dating to 1541, which was drawn up between Sir Henry Farington and two chaplains: James Bannastre and Thomas Wilding. In this document, Farington Hall, is referred to as 'the hall and manor place called the Hall of Farington'. Sir Henry made additions to the hall, including the construction of the Ladyehouse Chamber. The chamber was located on the north side of the hall and consisted of two rooms across two storeys, including lavatories, fireplaces, closets and galleries. It is thought that the Ladyehouse Chamber served as a dower house for Sir Henry's mother. During this time, the hall was associated with a brewhouse, sieving house, kiln, turf-house (for storing turves of peat used as fuel), a chapel, dovehouse (or cote), water mill, great barn and the hall green. A gatehouse is also referred to as being located at the south side of the hall, which would place the gatehouse along Hall Lane (Figure 1), perhaps near its junction to Mill Lane. A dairy, wash-house and chamber, the old swinehouse, the flaxhouse, orchards and gardens were located on the north and east sides of the hall (Hallam, 1985: 4). The relevant part of the document is included below:

4.5.2 "In Farington: a third of the Hall of Farington and 1/3 of the Kechin and Bruhowse and Bultyng howse, 1/3 of the Killne and turffhowse; the Yatehowse both under and above standing on south of the court at Farington, the garden with the Chamber over the north side of the hall called the Laydyeshowse, now new built, containing a closet, an entry a ster with a double draught and 2 new chambers over and under with a double chimney and 2 galers; the old parlour with the chamber over it on the east part of the great parlour with the draughts thereunto which is now enlarged at the east end and the west end towards the great parlour to the baywindows over and under with the great stair and a new draught with 2 little closets over and under the south side of the said old parlour with 2 double chimneys; in one pipe all the waterhowse chamber, the milkhouse with the blind loft over it which is now new built with a milkhouse under and 2 chambers over it with 2 chimneys in one pipe, a closet with a stair to the entry of the said chambers and closet with a draught on the south side of the litell Yatehowse; and all the houses standing on the green near the cooks garden called the old swine houses and the flaxhouses together with the orchard and gardens on the east and north of the hall and parlour. All the cooks garden and 1/3 of the chapel at Farington;

1/3 of the Duffhowse the watermill called Farington corne milne and 1/3 of the Hall Greene with the north end of the Great Barne”

- 4.5.3 It is also important to note this reference to the corn mill, referred to as ‘the watermill called Farington corne milne’, which was clearly an asset that came under the control of the Farington family during the medieval period.
- 4.5.4 Other documentary evidence provides some indication of the hall and its use through the post-medieval period, after it ceased to be a manor. Following Sir Henry’s death in 1550, Robert, his son, put forward a claim for the hall. In 1581, Sir Henry’s granddaughter, Dorothy Beconshaw and her husband Sir Edmund Huddilston of Essex, appear on the lease of Farington Hall, showing that they were leasing the hall, along with 80 acres of land, to Andrew Huddilston. Andrew lived at the hall along with his two sons, Joseph and Richard.
- 4.5.5 One of the earliest cartographic sources relevant to the study area is a manuscript map of Lancashire that formed part of Lord Burghley’s 16th-century Atlas. The map was produced in the years following the Spanish Armada and its apparent purpose, in the context of Lancashire, was to create a record of the principal places and residences in the country. At this time, Catholicism retained a foothold amongst the county’s gentry. There is evidence to suggest it was a modelled on an earlier map of the county dated c.1576–1577. Although the map is stylistically drawn and offers little topographic detail beyond the waterways and main thoroughfares, it does make reference to the main residences in and around Leyland. Robert Charnock is shown as the occupant of Farington Hall, whilst William Farington appears as resident of Worden.
- 4.5.6 The evidence presented in the map accords with contemporary sources surviving from the latter half of the 16th century, such as a lease for Farington Hall and corn mill from 1581; in this lease, the property was granted by Sir Edmund Huddilston, and his wife Dorothy to Andrew Huddilston, and mentions the hall had ‘late been in the tenure of Robert Chernok esq’, presumably the same ‘Robert Charnock de Farington’ who appears on the late 16th-century map.
- 4.5.7 Amongst the miscellaneous records forming the Cecil Papers dated 1596 is an entry that details the suspicious movements of John Wilson, who was known to have Jesuit connections. He was said to have resorted to the house of Andrew Huddilston amongst other landed gentry in 1596 and ‘said mass at Farington Hall upon Candlemas’ (Cecil Papers: Miscellaneous 1596). This gives some indication of the religious leaning of the family during this period.

- 4.5.8 The practice of the Catholic faith must have had some influence of Andrew's seventh son, Richard Huddleston, who was born in 1583 at the hall and became a priest (Catholic Record Society, 1905: 132). According to documentary evidence, he was stationed at Farington Hall 'for some time' and 'reconciled to the Church many members of leading families'.
- 4.5.9 Joseph Huddilston continued to live in the hall with his wife and children. The birth of Joseph's son John in 1608 confirms their residency. It appears the Huddilstons remained fervent Catholics and appeared in the recusant roles between 1600 and 1611 (Op. cit.131). According to Hallam (1985: 6) Joseph was still living in the hall in 1634. He is known to have died on November 9th, 1646 (ibid).
- 4.5.10 Other occupants of the Farington Hall during the 17th century were George Lockar and Mr Roger Pearson. They both appear in the Leyland Parish records in 1670 and 1676, respectively (White, 1890: 224; 241). No other traceable records survive concerning the individuals, who are presumed to have been servants at the hall.
- 4.5.11 The hall and its land were subsequently held by the Fleetwood's from 1676, although the family is not thought to have resided at the site. Turning to the contemporary registers of Leyland Parish Church, a possible tenant Hugh Waterworth has been identified. His name appears in an entry from the 6th of July 1690 for the christening of his daughter Agnes and in 1704, when he buried another daughter, Mary. In these transcripts, he appears as Hugh Waterworth of Farington Hall. He married Margrett Leyland on 19th December 1675 and had a total of seven children between 1675 and 1693, born in Leyland and Farington. Although his status is absent from the parish records, it was recorded at the time of his marriage and death, as yeoman – typically a landowning or lease-holding farmer. As such he represented part of an intermediary class, or middle-class between the labouring class and gentry.
- 4.5.12 Hallam (1985: 6) identified two other records from the early 18th century, which he attributed to Hugh Waterworth. These were leases dated 1704 and 1720 and had been drawn up by Henry Fleetwood of Penwortham. Often signatures on documents such as these come from men of status and wealth, indicating that Hugh Waterworth may have been the master of Farington Hall during this time (Hallam, 1985: 6). Whilst the earlier record from 1704 could indeed be the same Hugh Waterworth, the latter may have been his son (of the same name), who was born c. 1693. A surviving will and inventory from 1710 for Hugh Waterworth of Farington, yeoman, may offer further clues about the wealth and status of an occupant of the hall at this time.

- 4.5.13 Changes in ownership of the hall are recorded in the Victoria County History, which states that the hall was subsequently held by Charles and Jane Stanley in 1749 and John Aspinall in 1752 (Farrer and Brownbill, 1911). Who ever lived in the hall during the early 17th century remains open to speculation; however, it was likely tenanted by other yeoman farmers.
- 4.5.14 Some elements of the post-medieval tenant farm were identified and recorded during fieldwork in the 1970s and 80s (Hallam, 1985). The farmhouse on the moated platform was dated to the 17th century but had seemingly reused timber from a much earlier structure. The earliest part of this farm was the house, which was built from hand-made bricks, rising from a stone plinth, which stood out from later bricks due to their texture and dimensions. The windows of the farmhouse were mullioned, constructed of brick and plaster to mimic stone. The ground floor of the farmhouse measured 16ft by 28ft. Inside it boasted an impressive fireplace and chimney, which was dated in Hallam's report to the mid-17th century. The first floor of the house was divided into two rooms. The partition was constructed east/west of timber and plaster. The south room was said to have the appearance of an upper parlour room. Some of the windows within the parlour had been blocked, possibly at the same time as the building of the west wing extension. The door to the parlour was impressive as it was constructed of planks and cross battens. The initials H.E.F. had been carved across the middle and upper panels. Several suggestions have been put forward for the interpretation of these initials, one example being 'Henry and Elizabeth Farington'.
- 4.5.15 By the late 18th century, the hall and its lands were presumably occupied by William Johnson, a yeoman from Ulnes Walton to the south of Leyland. He died of consumption (pulmonary tuberculosis) in 1784 and was buried in Croston Parish church; his abode was given as Farington Hall and status, yeoman. It is not known when Johnson took up tenancy within the hall. Prior to moving to Farington, William is mentioned in a lease dated 1745 together with his future father-in-law George Rookcroft. He married Ann Rookcroft (Roecroft) in 1752 and had five children between 1754 and 1762, all born in Ulnes Walton. His move to Farington Hall must have therefore been between 1762 and 1784.
- 4.5.16 The first detailed view of the site is provided by William Yates' map of Lancashire (Plate 2). It dates to 1786, and although not completely accurate, it depicts landscape features, principal roads and areas of settlement much as they were at the time of William Johnson's tenancy. The course of the River Lostock is shown meandering along the western edge of the site. Several tributaries of the river can be seen feeding into the river from Leyland and Farington. Further to the west, lay a large expanse of

wetland, known as Farington Moss. The lines of Mill Lane and Hall Lane can also be traced on the map. Although stylised the map depicts Farington Hall, the corn mill together with the mill pond and head race.

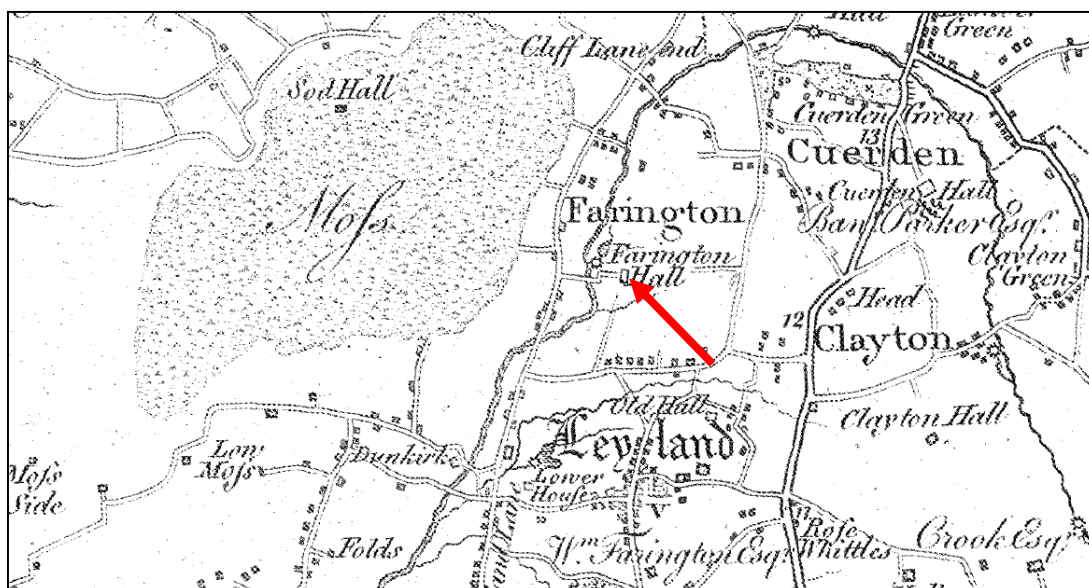


Plate 2: William Yates' map of Lancashire, 1786

4.5.17 During the late post-medieval period, the wider region was cementing its association with textile manufacturing, particularly at Preston to the north. This is also when Leyland also began to develop beyond a purely agricultural economy, first with the increase in domestic weaving and latterly, the introduction of mechanised textile production. Agriculture still played an important role and intensified during this period, to meet the demands of the growing urban population in nearby manufacturing towns (Hallam, 1988: 90). A particular emphasis of the local economy was dairy farming and cheese making (Hallam, 1988: 97).

4.6 19th century

4.6.1 The site is depicted and annotated on Hennet's 1830 map (Plate 3) as 'Lower Farrington Hall'. Another, later hall, to the north of the site, is annotated as 'Higher Farrington Hall'. Lower Farrington Hall became associated with the term 'Lower' and is later referred to in documents under several names, including Lower Farington Hall, Lower Hall and Lower House.

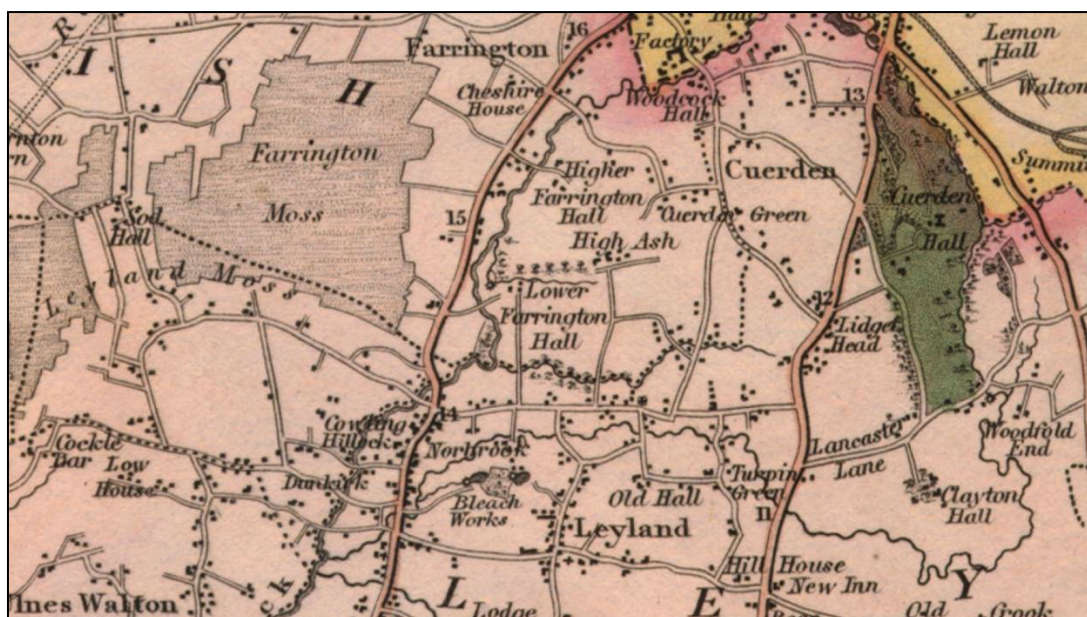


Plate 3: Hennet's 1830 map

- 4.6.2 The tithe award plan and schedule (not included in report) suggests that by 1839 Lower Farington Hall had been split into two farmsteads, although it is not known when the reorganisation took place. The tithe map and schedule indicates that one of the farmsteads was situated on the moated platform, whilst the other – referred to as Farington Hall Farm – was located to the south-west of the moat.
- 4.6.3 The 1839 tithe award plan and schedule states that the farmstead within the moat (hereon known as Farm 1) consisted of a farmhouse and ancillary buildings, including a granary (which was referred to as the 'Irishman's Hut'). Farington Hall Farm (hereon known as Farm 2), situated to the southwest of Farm 1, consisted of two barns flanking a farmhouse (Hallam, 1985: 9). This arrangement is depicted on the 1848 Ordnance Survey Map (Plate 4).

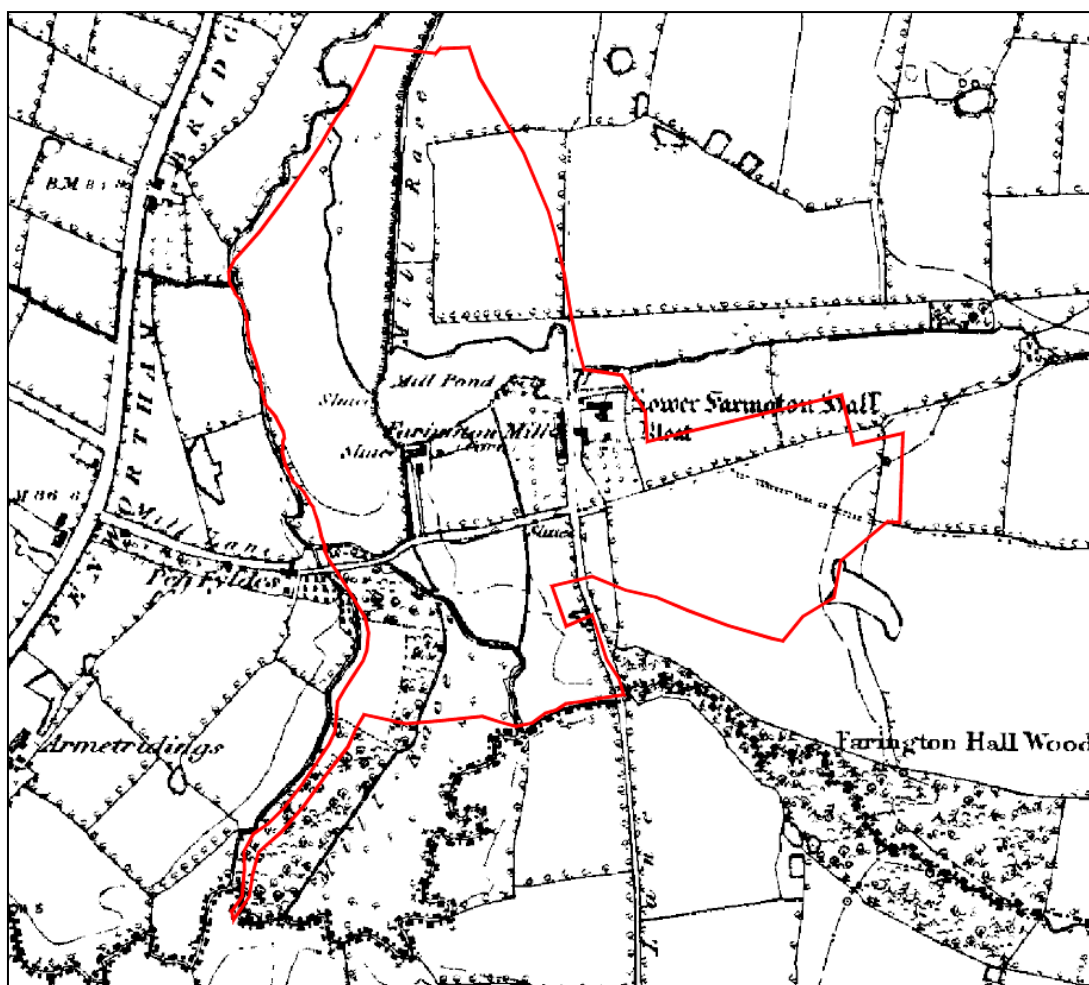


Plate 4: 1848 Ordnance Survey map with development area boundary

- 4.6.4 The Ordnance Survey of 1894 (Plate 5) shows that in the Farm 1 complex an extension had been added to the southern end of the farmhouse and some ancillary buildings – likely pig styes and calf pens – had been erected to the south-west. Additionally, a large barn had been constructed to the southeast of the farmhouse. According to a building survey of the site undertaken by Hallam in 1977, the barn had a datestone stating that the building was constructed in 1872 (Hallam, 1985). It was also inferred by Hallam that a slurry pit, located immediately to the west of the 1872 barn, was constructed at the same time.
- 4.6.5 By 1894, in Farm 2 an extension had been added to the southern end of the building range which, at this time included a cart-shed, cattle sheds (shippons) and a cattle pen. A barn that had stood to the north of the farmhouse was demolished and was replaced by a Dutch barn. Additionally, some out-buildings and horse gins were constructed between 1839 and 1894.

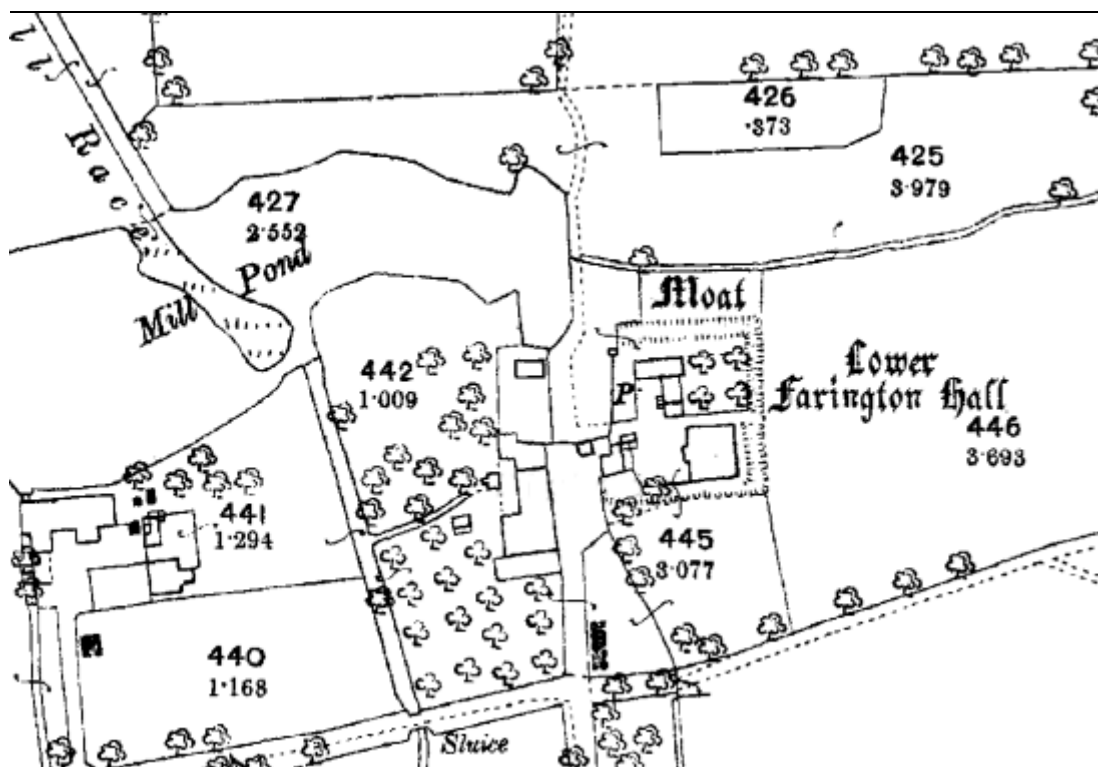


Plate 5: 1894 Ordnance Survey map of the site

4.7 20th century

- 4.7.1 By 1911 the Ordnance Survey map (Plate 6) indicates that a barn had been built within the northern part of the Farm 2 complex. The map also suggests that the northern arm of the moat, to the north of Farm 1, had been infilled.

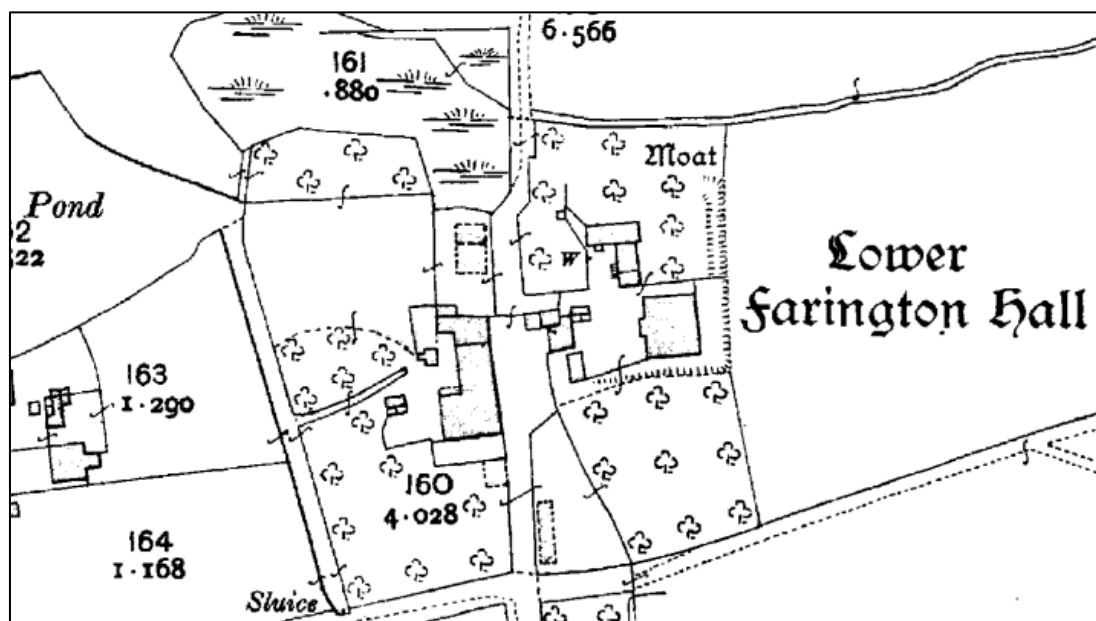


Plate 6: 1911 Ordnance Survey map of the site

4.7.2 By 1938 the only part of the moat depicted, and therefore probably the only part still open, was the north-eastern stretch (Plate 7). It is likely that by 1938 the rest of the moat had been infilled.

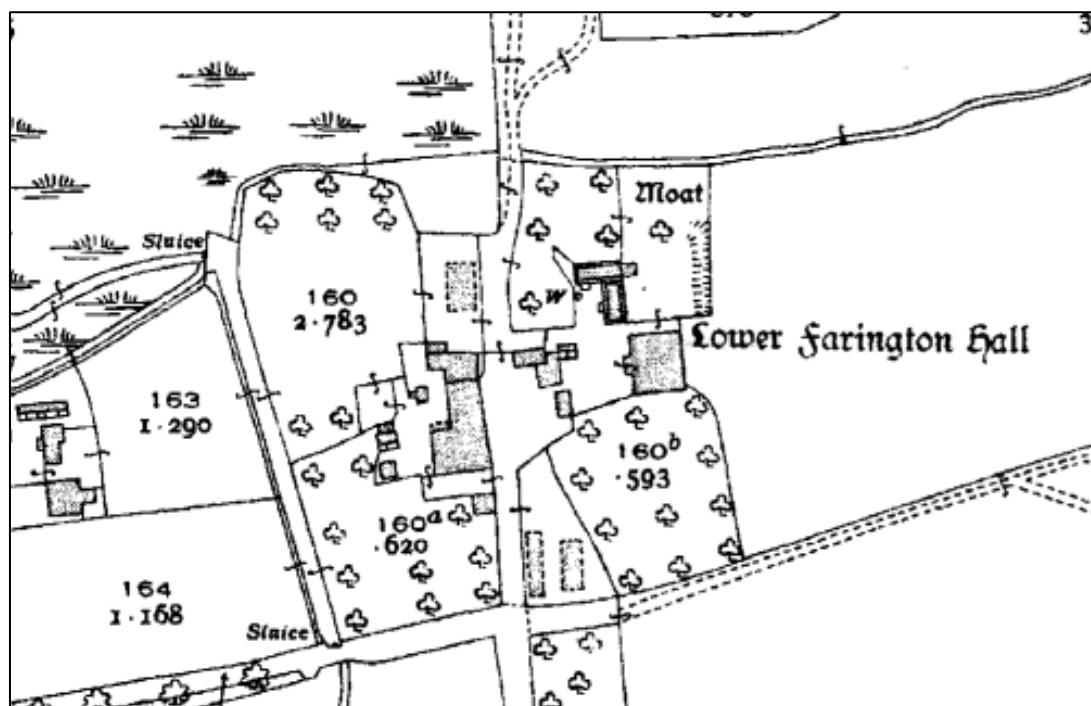


Plate 7: 1938 Ordnance Survey map of the site

4.7.3 The 1964 Ordnance Survey map (Plate 8) indicates that by the mid-1960's the moat around Farm 1 had been entirely filled in. Additionally, several small ancillary buildings had been added to both farm complexes. The 1964 map labels Farm 1 as 'Lower Farington Hall' and Farm 2 as 'Farington Hall Farm'.



Plate 8: 1964 Ordnance Survey map of the site

- 4.7.4 At some time from the 1960's or '70's onwards, the western part of the site was subject to considerable change, as a result of dumping of huge quantities of foundry and commercial waste from Leyland works. The extent of the landfill can be gauged from an Ordnance Survey map from 1983 (not included in report); the dotted convention for slag / landfill is clearly visible across much of the site and encircled the land around the moated site.
- 4.7.5 In 1976, when the site was first visited by the Central Lancashire Archaeological Research Unit, the farms were still tenanted although some of the buildings had fallen into disuse (Hallam, 1985: 1).
- 4.7.6 Shortly after this the farms became unoccupied and were subject to vandalism leading to the farmhouse collapsing into total ruin and the other buildings were set on fire or partially demolished (Hallam, 1985: 1). Consequently, in 1981 John Hallam and his team from the Central Lancashire Research Unit dismantled the walls and sorted through the debris to recover historic materials. Finally, the remaining structures were demolished and the site was cleared to ground level. Since 1981 the site has remained undeveloped and has subsequently become densely overgrown.

4.8 Previous archaeological work

- 4.8.1 Lower Farington Hall and Farington Hall Farm were investigated and tentatively recorded by the Central Lancashire Archaeological Research Unit (CLARU) during 1976-77 on behalf of the Central Lancashire Development Corporation and British Leyland. During the first investigation of the site in 1976, the farm was still tenanted, although apparently little farming was taking place.
- 4.8.2 In 1977 several trenches were excavated within the vicinity of Lower Farington Hall (Plate 9). According to the excavation report, a trench opened to the north of the northern end of Farm 2's farmhouse revealed a free-standing wall formed of hand-made brick on a base of sandstone plinths. It was thought that some of the masonry forming the plinth had been reused from an earlier structure. For example, one of the stones was 'L'-shaped and appeared to be a quoin with a slot to accommodate a door. The free-standing wall was interpreted as the north wall of an 18th-century barn, which may have been built in part for the storage of hay or oats.
- 4.8.3 Trenches were also placed in the northern part of the site revealing that, where the ground had not been disturbed, brick wall footings and several layers of cobbling survived. The remains of a Dutch barn were also reported.

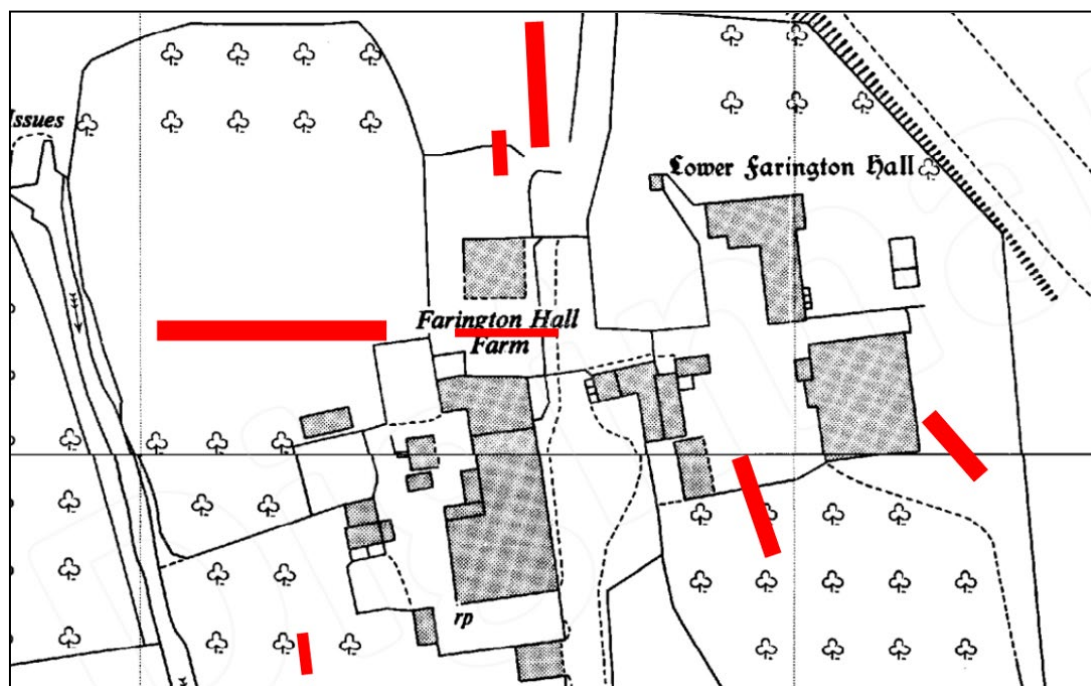


Plate 9: 1961 Ordnance Survey map overlaid with the trench locations of the CLARU excavation

- 4.8.4 Despite an excavation report being produced, it is unclear which structures were found within each trench. A plan of the trenches was produced, although they are not individually described or explained.
- 4.8.5 Subsequently the buildings at Lower Farington Hall were demolished (see paragraph 4.7.6) which allowed for the sampling of the timbers. Timbers from the farmhouse and the 18th-century barn were analysed for tree-ring dating. In total, 44 timbers from the farmhouse at Lower Farington Hall (Farm 1) were suitable for tree-ring dating. The timbers at Lower Farington Hall fell into two groups, one group of timbers dated to the 11th to the 13th century, and the second group dated from 1466 to 1501 AD (Hallam, 1985).
- 4.8.6 Samples were also taken from the 18th-century barn within Farm 2. The timbers from this building fell into three groups. The timbers from the barn dated the west wing of the building to the late 18th to early 19th century, and the south wing to the 17th century (Hallam, 1985). The dates of the timbers at Lower Farington Hall may indicate that the timbers had been reused from an earlier building, possibly the medieval hall that once occupied the site.

5. METHODOLOGY

- 5.1.1 The site was densely overgrown with scrub and trees, which needed to be cleared before excavation could commence.
- 5.1.2 Two open areas were excavated (Figure 3). Area 1, located in the eastern part of the site measured c. 60 north-south by c. 15m east-west. Area 2 was located in the western part of the site and measured c. 24m north-south by 10m east-west



Plate 10: excerpt of Figure 3 showing excavation areas and trench locations, north at top

- 5.1.3 All archaeological work was conducted following the ClfA Standards and Guidance for archaeological field excavation (ClfA, 2020). Prior to the commencement of any excavation works, the location of the area targeted for archaeological investigation was laid out accurately with respect to the Ordnance Survey national grid. The position of the trenches was then scanned for live services using a cable avoidance tool. The excavations were regularly scanned as work progressed.
- 5.1.4 Under the supervision of a suitably experience archaeologist, a 12-tonne machine with a toothless bucket was used to remove the overburden sealing the structural remains in Areas 1 and 2. Thereafter, remains were cleaned manually to define their extent, nature, form and, where possible, date.
- 5.1.5 The structural remains and associated levelling layers in Area 1 were then lifted to expose the deposits below which represented the infilled moat and causeway.
- 5.1.6 Three slots were excavated through the moat (Figure 3). Trench A was located in the northern part of Area 1; Trench B was located in the centre of Area 1; and Trench C was located in the southern part of Area 1.

- 5.1.7 Within Trench A and B, the upper fills of the moat were reduced by machine to a level where 19th-century material was no longer encountered, thereafter all excavation continued by hand. An exception to this methodology was applied in Trench C, where the later fills within the moat extended near to the base of the moat and consequently this trench was excavated entirely by mechanical means. Flooding within Trench C meant that hand-excavation was not suitable.
- 5.1.8 In Trench A and B, the fills within the moat were excavated stratigraphically and in Trench B single-context recording was employed.
- 5.1.9 All contexts were recorded using *pro-forma* sheets, and details were incorporated into a Harris matrix. All written recording of survey data, contexts, photographs, artefacts and ecofacts was cross-referenced from record sheets using sequential numbering.
- 5.1.10 A full and detailed photographic record of individual contexts was maintained and similarly general views from standard view points of the overall site at all stages of the excavation was generated. Photography was undertaken in accordance with Historic England guidance, *Digital Image Capture and File Storage Guidelines for Best Practice* (Historic England, 2015). All frames will include a visible, graduated metric scale. Photographs records will be maintained on photographic *pro-forma* sheets.
- 5.1.11 The precise location of all archaeological remains encountered was surveyed using a combination of GPS survey, 3D laser scanning and aerial drone/Hiview photogrammetry. This process generated scaled plans within AutoCAD, which were then subjected to manual survey enhancement. The drawings were generated at an accuracy appropriate for 1:20 scale, but can be output at any scale required. All information was geo-rectified to the Ordnance Survey National Grid and all levels were tied into Ordnance Datum.
- 5.1.12 The finds recovery and sampling methodologies were undertaken in accordance with current Chartered Institute for Archaeologists' guidelines and were subjected to expert advice in order to minimise deterioration (CIfA, 2020). Finds storage during fieldwork and any site archive preparation will follow professional guidelines.

6. ARCHAEOLOGICAL SEQUENCE

6.1 Phase 1: Natural Geology (Devensian)

6.1.1 The earliest deposits recorded on the site consisted of friable, light yellowish-red, natural sand [446]/[447]/[449] recorded at a maximum height of 24.51m AOD in Area 1. This most likely represents part of the Devensian till formation, which although primarily consisting of clay 'consists of a heterogenous mixture of clay, sand, gravel, and boulders' (BGS, 2022).

6.1.2 The deposits of sand and gravel in Area 1 [446]/[447]/[449] were overlain by a deposit of light pinkish-brown silty clay [198]/[443]/[444]/[445]/[448] also identified as Devensian Till, as described by the British Geological Survey (2019). Natural silty clay was also revealed in the northern part of Area 2 [450] at 25.91m AOD.

6.1.3 The superficial deposits were formed up to 3 million years during the Quaternary period.

6.2 Phase 2: Late medieval / early post-medieval (pre-1550)

6.2.1 Area 1: the moat (Figure 4; Plate 11)

6.2.2 The western arm of the moat was observed in Area 1, where it was exposed over an area of 66m x 13m. This part of the moat was north-south orientated and cut through the natural geology. It was investigated by three trenches: A, B and C.

6.2.3 The earliest identifiable cuts of the moat, consistent with its creation and maintenance in the Late Medieval / Early Post-medieval period, were observed in the central and northern trenches (Trench A and B).



Plate 11: Initial exposure of the moat, which can be seen as a dark band running through the centre of the photo, to the north of the causeway, looking northwest

6.3 Initial cutting of the moat

6.3.1 Trench A (Figure 4; Plate 12 & 13)

6.3.2 A linear cut [250] recorded across the base of western side of the moat in Trench A, represented the earliest cut of the moat. This cut [250] was north-south orientated and was recorded at a maximum level of 24.38m AOD. The western edge of the cut [250] had a length of 1.95m continuing south and north beyond the limits of excavation; it had a width of 0.44m and maximum depth of 0.23m. The profile was straight and steep-sided becoming slightly concave towards the base, where there was a moderate to sharp break of slope. The base was flat.

6.3.3 Cut [250] was filled by soft, light pinkish-brown silty sand [256] with occasional small stone inclusions. A lens of redeposited sand was encountered on the western side of the cut, presumably representing where the natural sand along the edge had collapsed inwards. The eastern side of [250]/[256] was truncated by [251].

6.4 Recutting and maintenance of the moat

6.4.1 Trench A (Figure 4; Plate 12 & 13)

6.4.2 The fill [256] of the earliest moat cut [250] was truncated to the east by a linear cut [243]/[251] which had a similar profile to [250] and was also oriented north-south. The cut [243]/[251] extended to a depth of 24.03m AOD and was recorded at a highest

level of 24.26m AOD. It had a maximum width of 1.53m and continued beyond the northern and southern limits of excavation.



Plate 12: South-facing section through moat in Trench A (see Figure 4 for context numbers), showing the western side of the moat. The pinkish-brown clayey silt [255] can be seen at the bottom of the left side of the cut [251]. looking north, scale: 1m vertical

- 6.4.3 The cut [251] was filled with soft light pinkish-brown clayey silt [255] and may have served as a lining of the moat. The clayey silt [255] had a maximum width of 1.46m and a thickness of 0.08m. The clayey silt [255] was sealed by a friable, light greyish-brown medium sand [254] with occasional flecks of charcoal. The brown medium sand [254] was deposited over an area of 1.95m x 0.39m across the base of the cut and had a thickness of 0.13m. The uppermost fill within cut [251] was soft, light greyish-brown silty sand [253] with occasional small organic inclusions. This was deposited over an area of 1.95m x 0.75m and had a maximum thickness of 0.20m.
- 6.4.4 The cut [243] forming the eastern side of the moat was represented by cut [243] which was filled with firm light brownish-grey clayey silt [241] with fragments of redeposited light pinkish-brown clayey sand and occasional small sub-angular stones. The clayey silt [241] was covered by moderately compact, light greyish-brown silty sand [242].
- 6.4.5 The fills [241]/[253] of the cut [243]/[251] were truncated by a linear cut feature [240] identified in the middle of the moat with a linear shape in plan and a tapered, blunt profile. The cut feature [240] was 0.62m wide and was traced in plan for 1.95m, extending north and south beyond the limits of excavation.



Plate 13: South-facing section through moat in Trench A, showing the eastern side of the moat. The light pinkish-grey sand [239] can be seen in a narrow cut [240] just to the left of the scale, looking north, scale: 1m vertical

- 6.4.6 The cut [240] was filled by soft, light pinkish-grey silty sand [239] with moderate fragments of worked wood and small to medium stones. This contained a single sherd of medieval pottery (Appendix 2).
- 6.4.7 **Trench B** (Figure 5; Plate 14)
- 6.4.8 In the southern part of Trench B the natural geology was truncated by a linear, north-south oriented cut [179], recorded at a maximum level of 25.40m AOD. It was traced for 3.68m along its length and had a maximum surviving width 2.80m and depth of 1.24m, extending down to a level of 24.16m AOD. The profile on the eastern side was characterised by gently sloping sides becoming concave with an imperceptible break of slope to the base.



Plate 14: Trench B looking south, fill [277] highlighted, scales: 1m vertical, 2m horizontal

- 6.4.9 The earliest fill of the cut [179] was friable, light brownish-grey silty sand [277] recorded at a highest level of 25.16m AOD. The silty sand fill [277] had a maximum thickness of 0.25m. The silty sand fill [277] was encountered over an area of 5.14m x 2.36m and contained leather and worked wood. Shoes recovered from the fill [277] were dated typologically to the early 16th century (Appendix 2).
- 6.4.10 The silty sand fill [277] was sealed by spongy, dark blackish-brown peaty sand [276], recorded at a maximum level of 25.43 AOD. This was encountered over an area of 0.80m x 0.65m and was 0.40m thick.
- 6.4.11 **Trench C** (Figure 9)
- 6.4.12 Although none of the deposits recorded within the moat forming the southern side of the enclosure were demonstrably medieval or early post-medieval in date, it seems likely the moat was broadly contemporary with those sections excavated to the north. The surviving profile of the moat in Trench C was comparable with the later recuts identified in Trenches A and B and it is likely that here an early deposits or cuts had been truncated during as a result of recutting / maintenance.
- 6.4.13 The remains of a possible bank [171] on the outside of the feature were identified on the southern side of the moat. This positive feature was only exposed in plan and was not fully investigated. The surface of the bank was comprised of friable, light yellowish-brown sandy clay, which appeared to overlie the natural [448].

6.5 Phase 3: early post-medieval (c. 1550)

6.5.1 Masonry bridge abutment construction

6.5.2 Trench B (Figure 5 & 6; Plate 15 & 16)

6.5.3 A rectangular construction cut [174] measured 4.22m x 2.70m, extending to a depth in excess of 1.63m and was cut from a height of 25.43m AOD. The cut [174] truncated a deposit of brown peaty sand [276]. The stratigraphic relationships on the northern side could not be established as a result of the later disturbance and robbing of wall [340], isolating this from the early sequence of deposits.

6.5.4 The cut [174] was not fully excavated so that the structure it contained could be preserved *in situ*, but when examined in section, the cut [174] was characterised by steep, near vertical sides and a flat base.



Plate 15: Aerial view of masonry bridge abutment, looking west. Wall [175] is visible to the left of the scales and wall [340] is at a lower level to the right of the scales, scales: 2m horizontal, 2m vertical

6.5.5 Two substantial freestanding masonry walls [175]/[340], representing the southern and northern foundations of a bridge abutment, located on the eastern side of the moat, were built within cut [174]. The walls were aligned east by west and were formed of large, dressed gritstone blocks. The wall stepped out at each course towards the base was therefore self-supporting. The outer faces of walls [340] and [175] were built closely up to the edges of cut [174] suggesting both structures were built from the interior of the construction cut. The abutment did not appear to have been originally enclosed at its western side by a wall facing into the moat. A north-south aligned wall

[339] spanning the east-west aligned sides of the abutment [175]/[340], was attributed to a later phase of activity (see section 6.11.7).

- 6.5.6 The southern wall [175] of the abutment measured 2.70m east-west by 0.70m north-south and had a surviving height of 1.60m. The highest level of survival was 26.10m AOD. The southern and western faces of the wall [175] were exposed during the excavation of the moat, however the infill behind the wall [175] was left unexcavated and so the northern face could not be inspected. The exposed wall faces were fair faced and constructed primarily from large rectangular gritstone blocks, ranging in size from 800 x 250 x 200mm to 1460 x 245 x 323mm. The masonry was constructed in regular courses, which were stepped.
- 6.5.7 Where the uppermost course of facing stones had been removed from the southern face, an infill of sub-angular gritstone rubble was visible between the outer facing stones. Towards the base of the wall [175] it was constructed tightly up to the edge of the construction cut [174], but the upper portion of the wall [175] was set back 0.31m from the southern edge of the construction cut [174].
- 6.5.8 Also, within the construction cut [174], situated 2.27m to the north of the wall [175] described above, was another east-west aligned wall [340] forming the northern side of the abutment on the eastern side of the moat. This survived to a lesser extent than wall [175] but was nonetheless exposed along its full length, measuring 3.10m east-west with a width of 0.80m, surviving to a maximum height of 1.62m with the highest level of survival at 25.88m OD. The upper courses of the wall [340] appeared to have been removed. The wall [340] was constructed of gritstone blocks, ranging in size from 600mm x 300mm x 295mm to 1200mm x 427mm x 320mm.



Plate 16: Aerial view of the moat, looking north. The scales are resting on the southern wall [175] of the abutment, scale: 1m horizontal, 1m vertical

- 6.5.9 A fill [275] consisting of firm, mid greyish-brown silty sand with lenses of redeposited natural clay and fragments of stone, including a large glacially worn boulder measuring 480mm x 451mm x 238mm was deposited against the southern face of the wall [175]. The fill [275] was sealed by a deposit of friable light brownish-grey clayey silt [173] with occasional fragments of ceramic building material and charcoal flecks.
- 6.5.10 Sealing the infilled construction cut was a deposit of firm light brownish-grey silty clay [274] with frequent ceramic building material, stone inclusions, including fragments of stone roofing slabs. It is noteworthy that [274] resembled the composition of fill [173]. The silty clay [274] was 0.11m thick and extended over an area of 4.03 x 0.66m within the moat, continuing south beyond the limit of excavation. The deposit [274] was also visible in section beneath the recut of the moat [262].
- 6.6 **Phase 4: post-medieval (c. 1550-1650)**
- 6.7 **Sub-phase 4a: Maintenance of the moat**
- 6.7.1 After the partial accumulation of fills during Phase 2 and construction of the bridge in Phase 3, it appears the western arm of the moat was then subject to an episode of clearance, ascribed to Sub-phase 4a. The moat was recut during this period re-establishing a functional channel, the sides of which were supported in places by wattle revetments. The depth of the re-established moat [262]/[263] in Trench A and B was shallower than its predecessors. In Trench C, the profile of the moat [160] was recognisably similar to those found in Trench A and B: [262]/[263]; here however, no

earlier cuts had survived beneath and it is suggested that the cut [160] had removed any earlier remnants when it was re-established.

6.7.2 A second phase, Sub-phase 4b, was attributed to the accumulation of fills within the moat after it had been recut, which contained post-medieval finds (Appendix 2).

6.7.3 **Trench A** (Figure 4)

6.7.4 In Trench A, the fill [239] of the recut [240] and the upper fill [242] of the moat [243] assigned to Phase 2 were truncated by a broad linear cut [263]. The cut [263] had been made from a maximum height of 25.32m AOD and was 7.60m wide with a concave profile extending to lowest level of 24.14m AOD.

6.7.5 **Trench B** (Figure 5)

6.7.6 In Trench B the backfill [274] of the moat [174] and backfill of the construction cut [175] for the bridge foundation was truncated by a broad linear cut [262]. The cut [262], which was traced in plan for 10.39m, extending north and south beyond the limits of excavation, was thought to represent the same cut attributed the context number [263] in Trench A. The cut [262] had a maximum width of 7.25m and was 1.48m deep. The overall profile of the cut [262] was broadly concave with flattish base, measuring 1.20m wide across.

6.7.7 **Trench C** (Figure 9)

6.7.8 In Trench C, the moat [160] cut the natural geology from a maximum level of 25.96m AOD, extending to a depth of 23.63m AOD. The profile was characterised by irregularly, stepped sides with a gradual break of slope leading to a flat base. The sequence of fills ascribed to Phases 4 and 5 had a combined thickness of 1.44m.

6.7.9 **Trench B: Wattle revetments [246] and [247]** (Figure 8; Plate 17, 18 and 19)

6.7.10 Adjacent to the bridge, midway up either side of the moat [262] wattle structures [246] and [247] had been constructed forming revetments.



Plate 17: Aerial view of the revetment [246], looking west, scale: 0.50m vertical

- 6.7.11 A wattle revetment structure [246] recorded on the western side of the moat was the better preserved of the two structures. It comprised a north-south orientated line of stakes driven into the natural sand. The stakes were unmodified roundwood, some retaining bark, which were identified as primarily being from the alder species (Arnold and Howard 2022); a single stake [324] was identified as holly (ibid). The lower portions of the posts were tapered to a point. Around the posts were woven a series of coppiced alder rods. The highest level of survival for the structure was 25.34m AOD. The lowest level of the wattling [246] was situated at 24.40m AOD, suggesting the structure was built within the recut [262] of the moat.



Plate 18: The southern end of revetment [246], looking west, scale: 0.50m vertical

- 6.7.12 On the eastern side of the moat [262] was a poorly preserved wattle revetment structure [247] formed by a north-south line of vertically-set stakes [227]-[236] around which horizontal rods had been woven. The wattle revetment structure [247] survived to a total length of 1.02m north by south and was recorded at a highest level of 25.35m AOD. The lowest level of survival for the wattle was 24.61m AOD, firmly lying within the cut [262]; the position of the structure [247] broadly corresponded to a clear geological change in the natural, through which the moat had been cut. The posts appeared to have been driven into the natural sand at a level of c.24.60m following the recutting of the moat ditch.
- 6.7.13 The majority of the stakes forming the wattle structure [247] were degraded, possibly owing to the greater proportion of sand within the fills in this part of the ditch. Only three rods of wattle were recorded *in situ*. As with the wattle structure on the western side [246], the stakes were unmodified roundwood, tapered to a point. None of the stakes were selected for species identification due to their poor condition but were visually similar to the alder posts used in wattle revetment structure [246] on the western side of the moat.
- 6.7.14 The wattle structures [247]/[246] were abutted by the primary backfill [237] of the re-cut moat [262], consisting of laminated, friable light yellowish-white silty sand and firm light grey clayey silt, containing moderate to frequent small stone inclusions and fragments of wood.



Plate 19: Revetment [247]. The masonry structure to the right of the scale is wall [340], looking east, scale: 1m vertical

6.7.15 A deposit of firm, mid greyish-brown silty clay [199], occasional small, rounded pebbles had been deposited behind the revetment structure [246] and, as it was sealed by a deposit [260] filling the moat, can be viewed as broadly contemporary with the wattle structure's [246] construction.



Plate 20: Detail of the lap-joint securing timbers [283]/[310] on the bridge base frame, scale: 0.30m horizontal

6.7.16 **Bridge base frame [333]** (Figure 5, 6 & 8; Plates 20, 21, 22 & 23)

- 6.7.17 In Trench B, a north-south aligned timber-built bridge base frame [333] measuring 2.55m north-south by 0.68m east-west was recorded in the space between the two east-west aligned walls forming the bridge abutment foundation [175]/[340] on the east side of the moat.
- 6.7.18 The ground frame was formed from a complex arrangement of articulated timbers, many of which appeared reused. The base of the structure lay at a level of 24.34m AOD with the highest level of survival at 25.37m AOD.
- 6.7.19 The ground frame was founded on a north-south orientated beam acting as a base plate [312]. Above this, lay a mid-plate [283], also aligned north by south. These were held in place by a row of vertical stakes located to the west of the beams [312] and [283] within the moat. On either side of the mid-plate [283] were two east-west orientated base plates [310] and [314]. The base plates [310] and [314] were secured to the corresponding mid-plate [283] by means of lap-joints (Plate 20 & 22).
- 6.7.20 At the moat end of the east-west oriented base plates [314] and [310], the structure was supported by further timbers [313] and [311] used as packing. Samples for dendrochronological dating were taken from the timbers [311] and [313] which have concluded that both were oak. Only one was suitable for dating and this was assigned a felling date of c. 1565-90 (Arnold and Howard, 2022).
- 6.7.21 This part of the assembly was secured by wooden pegs driven vertically through the top of the east-west oriented base plates [310] and [314] into the supporting timbers [313] and [311] below. Further strengthening was achieved by two posts [336] driven either side of the southern east-west oriented base plate [310], tightly against the western face of [311]. The northern east-west oriented base plate was braced in a similar manner by timber [338].



Plate 21: Trench B, an example of the assembly marks on the upright laths, bridge base frame [333], looking east, scale: 0.30m horizontal



Plate 22: bridge base frame [333], looking north-east, scale: 0.5m



Plate 23: bridge base frame [333], looking south-east, scale: 0.5m

- 6.7.22 Running behind the mid-plate [283] were a series of upright laths [278]-[282] / [285]-[309], inclined diagonally. The surviving laths were typically rectangular in cross-section, ranging in width from 25mm to 80mm, though primarily 40mm to 65mm wide and up to 780mm long. The majority of the laths bore carpenters' marks in the form of a sequence Roman numerals that appeared to be related to the assembly of the structure. The southernmost laths [308]/[309] were jointed to the upper face of base plate [310]; both timbers were worked to a narrow cylindrical point (resembling a dowel) at their base, which had been inserted into a round hole of similar dimensions in the upper surface timber [310]. A firm, light greyish-brown puddling clay had been applied around the base of the structure. The structure was abutted on the western side by moat fill [237] and on the eastern side by deposit [342].
- 6.7.23 Cross-sectional samples were taken from the structure for dendrochronological analysis and species identification. Only one sample – timber [311] from the bridge ground frame [333] – was suitable for dating, and although it lacked sapwood was assigned a felling date of c. 1565-90 (Arnold and Howard, 2022). The datable timber [311], was confirmed along with timber [313] as being oak. A third timber [314], one of the base plates was identified as poplar/willow (Arnold and Howard, 2022).

6.8 **Phase 4b: partial filling of the moat**

6.9 **Trench A** (Figure 4)

- 6.9.1 The earliest fill within the re-cut [263] of the moat consisted of firm, mid grey to blackish-grey clayey silt [249], with moderate, small organic inclusions and fragments of wood; this was deposited within the base of the cut on the eastern side of the moat. The fill [249] was recorded over an area of 1.95m x 0.44m, continuing north and south beyond the limits of excavation; it had a maximum thickness of 0.05m.
- 6.9.2 Sealing the clayey silt fill [249] and similarly deposited on the eastern side of the moat was a fill [248] consisting of loose, light yellowish-grey, silty sand with moderate small gravel inclusions. The silty sand fill [248] was encountered over an area of 1.95m x 0.82m and had a maximum thickness of 0.08m. Given the composition of this deposit, it likely represents sediment that had been deposited through natural processes of erosion.
- 6.9.3 Above the silty sand fill [248] was a thinly laminated deposit of light grey and mid blackish-grey silty clay [252]. This contained organic peaty clay lenses and fragments of organic matter, wood and angular stone inclusions. This was encountered over an area of 1.95m x 5.00m and had a maximum thickness of 0.15m. Based on the composition of the silty clay deposit [252], it was probably formed whilst the moat contained sluggish or slow-moving water. The presence of lenses of peaty clay may suggest vegetational growth along the edge of the moat.
- 6.9.4 Two deposits [244] and [257] had accumulated above the silty clay deposit [252] on the eastern and western sides of the moat, respectively. Fill [244] consisted of a loose, light yellowish-grey, silty sand with moderate small gravel inclusions. This extended over an area of 1.95m x 0.96m and was 0.13m thick. Fill [257] was of similar composition, consisting of a loose, light pinkish-brown silty sand with frequent small angular stone and gravel inclusions. Both fills were deposited on a downward sloping gradient, mirroring the profile of the moat. The comparatively larger particle size within these deposits compared to the underlying fill [252] is suggestive of a more rapid process of deposition.



Plate 24: West-facing section through moat in Trench C, looking east scale: 0.50 and 1m vertical, 2m horizontal

6.9.5 **Trench B** (Figure 7)

6.9.6 The primary fill of the re-cut [262] identified in Trench B was a fill [237] consisting of firm, mid bluish-grey clayey silt, containing occasional to moderate rounded to sub-angular stone inclusions and moderate fragments of worked wood. This was deposited against the faces of timber structures [246]/[247]/[333]. The fill contained pottery, animal bone, leather articles and worked stone (in the form of roof slates). Leather shoes recovered from the fill were dated typologically to c. 1500-1550 (Appendix 2). This suggests that the shoes were old by the time they were deposited in the moat, possibly as part of a clearance event at Lower Farington Hall.

6.9.7 Sealing the mid-bluish-grey clayey silt [237] was a fill [260] consisting of laminated, friable light yellowish-white silty sand and firm light grey clayey silt, containing moderate to frequent small stone inclusions and fragments of wood. The fill [260] was encountered over an area of 8.65m x 4.20m and had a maximum thickness of 0.20m; the top of this deposit lay at 25.45m AOD. The bulk of the artefactual assemblage recovered from this fill was dated typologically between the mid-16th to the early 17th century, however a single sherd of Buckley-type slipware could indicate continuous deposition until the middle of the 17th century (Appendix 2). Several high-status metal objects, namely several fragments of copper alloy mail armour and a key chain

(Appendix 2), stand out from the assemblage, whilst they have not been closely dated in their own right.

6.9.8 **Trench C** (Figure 9; Plate 24)

6.9.9 Two fills [161] and [162] had accumulated along the southern and northern sides of cut [160], close to the base of the moat. Both deposits consisted of a friable, light grey silty sand. The fill [161] on the southern side had a maximum thickness of 0.36m and fill [162] on the northern side was deposited to a maximum thickness of 0.21m. A closely dated find, a mid-17th century clay tobacco pipe bowl (c. 1641-1660), came from fill [161], providing some indication of when the process of silting may have begun. The absence of any earlier finds suggests this part of the moat was routinely scoured out and cleaned.

6.10 **Phase 5: late post-medieval (c. 1650-1800)**

6.10.1 **Area 1: Trench B**

6.11 **Adaptation of the moat crossing (17th-18th century)** (Figure 5, 6 & 8; Plate 25)

6.11.1 During Phase 5, modifications were made to the masonry bridge abutment on the eastern side of the moat. The modifications included the construction of north-south aligned masonry abutment [176] on the western side of the moat; dismantling of the northern foundation wall [340]; and the erection of a new north-south aligned foundation wall [339] on the eastern side of the moat. The two new structures may have supported a simple beam-bridge spanning a 2.67m-wide section of the moat.

6.11.2 **Western masonry bridge abutment [176]**

6.11.3 Cut into the natural clay on the western side of the moat was a shallow construction cut [344], forming a flat shelf on which was built a stone bridge abutment [176]. The construction cut [344] was broadly rectilinear in plan, narrowing slightly at its southern end where the stone abutment [176] arced to the west. It had surviving length of 5.21m and maximum width of 1.78m. The maximum depth of the cut was 0.47m. Although this was left unexcavated, it was clear the base of the cut on its eastern side was flat, accommodating the coursed masonry [176].

6.11.4 The stone abutment [176] was formed of a single row of roughly hewn gritstone blocks, running 5.16m north by south. The wall was 0.36m-0.42m wide and was laid along the eastern edge of construction cut [344]. The stones utilised within the abutment measured up to 1060mm x 430mm x 300mm and were similar in size to the blocks used in the walls [175] and [340] on the eastern side of the moat. The structure survived to a maximum height of 0.62m; the highest level of survival was 26.08m

AOD. The southern 2.00m of the abutment was curvilinear in plan, respecting the cut of the moat where it widened to the south of the bridge crossing. No similar extension of the wall was uncovered on its northern side, where the moat similarly opened out; however, this area had been subject to post-depositional floralturbation, likely resulting in the truncation of this element of the structure.

- 6.11.5 Deposited against the western side of the abutment [176] was a deposit of firm – friable mid greyish-brown sandy clay [343] with frequent rounded stone inclusions. This was exposed only in plan, filling the western half of cut [344]. The fill had a maximum thickness of 0.47m.



Plate 25: Section through the causeway and moat showing wall [339], looking south, scale: 0.50m vertical

6.11.6 **Masonry wall [339]** (Figure 5 & 8)

- 6.11.7 On the eastern side of the moat a freestanding masonry wall [339] was constructed between the walls [175] and [340] forming the eastern bridge abutment. Wall [339] was aligned north by south, measuring 2.70m in length, 0.33m in width and stood to a height of 0.98m. The highest level of survival for the wall [339] was 26.05m. It was not possible to determine the precise stratigraphic position of the wall in relation to any underlying deposits, as the structure was left *in situ*. In section, it was however clear that the wall [339] was built from a height of 25.07m AOD; incidentally, this corresponds with truncated upper level of the northern wall [340] forming the eastern bridge abutment structure, which may have been robbed out to provide masonry for

the north-south oriented wall [339]. The wall [339] was founded on thin flat stones, above which were constructed three regular courses of blockwork. The southern end of the wall [339] abutted the northern side of the wall [175] that formed the southern side of the bridge structure.



Plate 26: Masonry bridge abutment [175]/[340]/[339], looking east, scale: 1m horizontal, 2m vertical

- 6.11.8 A sequence of deposits [222], [221], [220] and [219] had been dumped behind the eastern and north faces of the north-south oriented wall [339]. The earliest deposit abutting the eastern face of the wall [339] was a layer [222] of friable light grey silty sand with fragments of redeposited clay and occasional to moderate rounded stone inclusions. The layer [222] was only partially excavated within a sondage (measuring 1.90m x 0.90m) and was recorded in section as having a maximum thickness of 0.25m.
- 6.11.9 Overlying the silty sand layer [222] was a 0.21m thick deposit [221] of friable, light yellowish-brown and light grey silty sand made up of laminated bands of sandier and siltier material resembling a layer [261] recorded to the west.
- 6.11.10 The silty sand deposit [221] was sealed by a layer of compact light brown sandy clay [220], containing frequent angular stone inclusions and brick rubble. This deposit [220] yielded pottery, clay tobacco pipes and metal artefacts.
- 6.11.11 Above the sandy clay [220] was a further dump layer [219] which comprised firm, mid greyish-brown silty sand with occasional flecks of charcoal, occasional to moderate coal fragments and moderate angular stone inclusions. This dump layer [219]

contained century pottery, glass from either vessel or window and a lead musket ball, dating the context to the 17th century (Appendix 2). This layer was recorded in plan over an area of 3.10m x 2.77m and was recorded as having a maximum thickness of 0.19m.

6.12 Causeway construction (18th century) (Figure 6; Plate 25 & 27)

6.12.1 The lower western half of the causeway had been created by deliberate infill of the moat between the stone bridge abutment [176] and bridge structure [339] by a succession of deposits.

6.12.2 Two stakes [268] and [269] were driven into the surface of the moat's fill [260]. The roundwood stakes both had oval-shaped cross-sections and were worked to a blunt point. These were recovered during the excavation for timber drawing and further analysis. Timber [268] measured 440mm x 95mm x 25mm and timber [269] measured 490mm x 90mm x 90mm. The timbers likely formed part of a retaining structure, supporting the dumped material used in the construction of the causeway.



Plate 27: Trench B (Area 1) looking north, a mid-excavation shot of the causeway, scales: 1m horizontal, 1m vertical. Note the row of stones running east-west along the southern limit of the causeway

6.12.3 Stratigraphically above the two posts [268]/[269] was deposit [261], covering an area of 2.80m x 2.90m and measuring up to 0.23m in thickness. The top of the deposit [261] lay at a maximum height of 25.65m AOD. The deposit [261] was a loose, mid greyish-brown silty sand with frequent gravel inclusions, occasional CBM fragments and concentrations of broken roof slates (measuring up to 550mm x 360mm x 40mm).

6.12.4 Sealing layer [261] were a series of deposits [217], [218] and [215], and a putative timber structure (constituent timbers: [264] and [265]). The deposits [217], [218] and

[215] had been dumped into the moat between the western bridge abutment [176] and the western face of the stone wall [339] which formed part of the bridge support structure.

6.12.5 Sealing the silty sand deposit [261] was a layer [217] consisting of compact light yellowish-grey, sandy clay with moderate angular stone inclusions and occasional fragments of handmade post-medieval bricks. This layer [217] was encountered over an area of 2.89m x 1.11m.

6.12.6 The sandy clay layer [217] was covered by a layer [218] formed of loose, light brown sandy silt with occasional small fragments of stone, ceramic building material, frequent timber fragments. Covering an area of 2.89m x 1.30m, this deposit [218] had a maximum thickness of 0.37m. Finds recovered from [218] included pottery, clay tobacco pipes and wooden artefacts; these had a date range of the late-17th to early 18th century (Appendix 2). Of particular interest were the remains of wooden panel in the form of a door or lid recovered from fill [218] (Plate 28).



Plate 28: Working shot looking east showing remains of a wooden door lift being exposed, prior to lifting

6.12.7 Overlying the eastern half of the sandy silt layer [218] was a deposit [215] of firm to friable, light brown silty sand with very frequent fragments of flat stone – likely used as roofing material – and occasional fragments of ceramic building material.

6.12.8 Driven into the layer [218] were two upright stakes, [264] and [265]. Both were roundwood stakes and had an oval-shaped cross-section; the lower portion of the

timbers were worked to a tapered blunt point. The stakes [264] and [265] measured 325mm x 44mm x 23mm and 210mm x 44mm x 25mm respectively.

6.12.9 Above the stakes was a layer of firm/friable, light greyish-brown clayey sand [206] with fragments of redeposited clay, inclusions of rounded stones, and worked wood. A row of large boulders and gritstone fragments was included within the clayey sand [206] and had seemingly been used to create a temporary retaining structure along the southern side of the causeway.

6.13 Causeway drains (Figure 6; Plates 29, 30 & 31)

6.13.1 The layers [215] and [206] forming the surface of the causeway were cut, to the east, by a linear construction cut [212], which was north-south orientated, running parallel to the western face of the wall [339] of the bridge structure. The linear construction cut [212] had steep, sloping western side and a flat base. The cut [212] measured 3.00m in length, 0.62m in width and 0.18m in depth.

6.13.2 Laid within the base of the cut [212] was a degraded fragment of wood [216], possibly representing a collapsed timber drain. The timber measured 3000mm x 200mm x 200mm.



Plate 29: Drain [210]/[207] looking east, scale: 1m horizontal

6.13.3 Within the cut above the timber [216], a drain [210]/[207] had been built formed of two, unbonded single-skin walls of handmade brick (brick dimensions: 220mm x 120mm x 55mm) laid in stretcher bond. The side walls of the drain [210] were capped with flagstones [207]; the highest surviving level of the drain was 26.03m AOD. The interior

of the drain was filled with a deposit of loose, mid grey sandy silt [208], which was 0.14m thick.



Plate 30: Area 1, looking north, drain [139] looking south, scale: 2m vertical



Plate 31: Area 1, looking north, drain [139] after the removal of the capstones, looking south, scale: 2m vertical

6.13.4 A deposit of firm light brown silty clay [211] had been backfilled within the construction cut, against the sides of the drain. Due to the degradation of the timber [216] and

subsidence of the side walls [210] of the drain, the structure had collapsed and was partially infilled by the silty clay fill [211].

- 6.13.5 A north-south oriented linear cut [213] was also found alongside the stone abutment [176] on the western side of the causeway. This cut measured 3.08m in length, 0.80m in width and 0.43m in depth. It had a near vertical eastern side and flat base.
- 6.13.6 Constructed against the eastern side of the cut was a linear row of stone blocks [139] aligned north by south. The blocks [139], which measured up to 405mm x 340mm x 230mm, were unbonded and made of gritstone.
- 6.13.7 Placed on top of and spanning across the gap between the row of blocks [139] and the stone abutment [176] to the west, was a series of large flat capstones. The top of the capstones was at a level of 26.14m AOD.
- 6.13.8 The row of blocks [139] and the stone abutment [176] appeared to form the sides of a drain or culvert with the capstones forming the roof.
- 6.13.9 Abutting the eastern face of the drain wall [139] was a deposit of friable, light yellowish-brown silty sand [214], containing occasional to moderate small, rounded stone inclusions; finds included pottery spanning the late 17th to mid-18th century and animal bone (Appendix 2). The interior of the drain had partially been infilled by loose, mid greyish-brown sandy silt [202] with occasional fragments of ceramic building material. Pottery of an 17th-18th century date was also retrieved from this deposit (Appendix 2).
- 6.13.10 Extending across the causeway sealing earlier deposits [211]/[214]/[219] and [343] was a layer of indurated to firm light greyish-brown silty sand [172], containing moderate, large fragments of stone, occasional fragments of ceramic building material and charcoal flecks. Finds recovered from the deposit [172] were dated to the 17th-18th century (Appendix 2). This deposit [172] was interpreted as a surface in its own right. This deposit [172] was machine excavated to the top of the two drains on either side of the causeway and the adjacent stone foundations at each side of the moat.



Plate 32: Area 1 looking east, a mid-excitation shot of the causeway after the removal of surface [133], bedding layer [137] and partial excavation of [172], scales: 2m horizontal; 2m vertical

6.14 Further accumulation of fills within the moat

6.15 Trench A (Figure 4)

- 6.15.1 In Trench A overlying fills [244] and [257] attributed to Sub-phase 4b within the moat, was a fill [154] consisting of firm mid bluish-grey clayey silt, containing fragments of stone, wood, fragments of redeposited clay. The grey clayey silt [154] covered an area of 1.95m x 2.65m, continuing north and south beyond the limits of excavation; it had a maximum thickness of 0.26m. Pottery and ceramic building material contained within the fill were dated to the late 17th to mid-18th century (Appendix 2).
- 6.15.2 The grey clayey silt [154] was sealed by a fill [152] which had accumulated within the middle of the moat. The fill [152] consisted of a firm mid grey silty clay with organic inclusions. It was recorded over an area of 1.95m x 2.65m, continuing north and south beyond the limits of excavation and had a maximum thickness of 0.53m. The finds assemblage from [152] consisted of two sherds of early post-medieval pottery and a clay tobacco pipe bowl (c. 1640-1660) (Appendix 2).
- 6.15.3 Covering the silty clay fill [152] on the eastern side of the moat was a thin band of sticky, light yellowish-grey silty sand [245]. The silty sand [245] contained moderate very small, rounded gravel inclusions, wood fragments together with a single sherd of glass, of probable 17th or 18th century date (Appendix 2). This deposit [245] was recorded over an area of 1.95m x 1.50m and had a maximum thickness of 0.16m.

- 6.15.4 The silty sand [245] was sealed by a 0.38m thick deposit [259] of firm mid brownish-grey silty clay, with occasional to moderate charcoal flecks and small stone inclusions. No finds were recovered from this deposit.
- 6.15.5 The morphology of the fill sequence, particularly [245], [249], [252], [257], [154] and [152], as revealed in section (Figure 4) would suggest the uppermost portion of these fills had been subject to horizontal truncation to a level of 24.83m AOD. This might have arisen through re-establishing the moat as a drainage feature in the late 18th century. This was also suggested by the apparent deposition of the overlying fills [153], [151] and [148], which were laid down horizontally.
- 6.15.6 The earliest of these fills, [153] consisted of a friable, light grey, silty sand interspersed with lenses of clayey sand. This contained frequent stone inclusions and brick rubble. It covered an area of 1.95m x 4.00m and had a maximum thickness of 0.18m.
- 6.15.7 The silty sand [153] deposit was overlain by a friable, mid to light greyish-brown, sandy clay [151], with frequent brick rubble and moderate stone inclusions. This deposit [151] was encountered over an area of 4.00m x 6.40m and had a maximum thickness of 0.25m. This contained pottery with a date range spanning the 16th to 18th centuries and was likely deposited during the 18th century (Appendix 2).
- 6.15.8 **Trench B**
- 6.15.9 A series of late post-medieval fills had accumulated within the moat on the southern side of the causeway.
- 6.15.10 The earliest fill [177], which was found to partially overlie deposit [261], covered an area of 3.50m x 4.00m. The fill [177] had a maximum thickness of 0.30m and consisted of firm dark brown clayey silt with moderate to frequent stone inclusions and brick rubble.
- 6.15.11 Overlying fill [177] was a substantial deposit [180] of soft greyish-brown clayey silt with frequent inclusions of ceramic building material. This covered an area of 3.90m x 4.30m and was deposited to a greater extent on the eastern side of the moat, where it was recorded at a maximum level of 25.77m OD. The fill [180] was deposited on a gradient, sloping down into the moat from east to west, ranging from 0.18m to 0.03m in thickness. The fill [180] was overlain by a loose, light yellowish-brown sand [138].
- 6.16 **Trench C** (Figure 9)
- 6.16.1 A fill [163] occupied the lower portion of the moat, measuring 5.51m in width and 0.64m thick. The fill [163] consisted of firm, mid brownish-grey clayey silt and was dated by ceramic finds, produced between the 17th to 19th century (Appendix 2).

6.16.2 Overlying the clayey silt [163] was a thin band of soft blackish-brown organic-rich silt [164] which contained residual 18th-century ceramics. The organic-rich silt [164] was encountered over an area of 5.52m and was 0.23m thick.

6.17 **Establishment of farm complex in western part of site (Farm 2)** (Figure 12 & 13)

6.17.1 Two layers [022] / [024] were revealed to the south of Building 1 in Area 2. These were interpreted as levelling deposits.

6.17.2 Layer [024] consisted of a moderately compact light pinkish-brown clayey sand containing occasional small, rounded stones and fragmented brick rubble. This was revealed over an area of 7.00m x 3.50m. Layer [022] represented a southern continuation of the levelling deposit [024]; it was exposed over an area of 2.50m x 1.64m.



Plate 33: Cobble surface [015] looking east, scales: 1m horizontal, 1m vertical

6.17.3 An external floor surface [015] survived over an area of 1.35m x 0.87m and was comprised of cobbles measuring 90mm-130mm in diameter (Plate 33). The surface [015] pre-dates the surrounding structural sequence and was visibly truncated by construction cuts [018] and [020] associated with the construction of Building 6 (Rooms 6.3/6.4).

6.17.4 The remains of a brick wall [012] were situated to the south of Building 1. The wall was housed in a linear trench [025] cut through layer [024]. The construction cut [025] had a surviving length of 8.20m and was 0.32m wide. The wall [012] had a length of

5.60m and survived only as a single course of brickwork in height. The structure has been interpreted as an external boundary wall.

6.18 **Building 1: stable, barn and cowhouse** (Figure 12 & 13)

6.18.1 The earliest identifiable components of the farm complex to the west of the moat consisted of stone foundations forming elements of Buildings 1 and 2, which were probably built in the 18th century.

6.18.2 The remains of a stone-built barn (Building 1) in the middle of Area 2 formed the main element of the farm complex. The earliest exposed evidence of its construction was a foundation cut [423], which was revealed at the southern end of the building, housing foundation wall [031]. Only the southern edge of the construction cut [423] – which was recorded at a maximum height of 26.40m AOD – could be seen because the northern side of the cut [423] was obscured by floor surfaces within Building 1, which were left *in situ*.



Plate 34: Aerial view of the western farm buildings, east at top of photo

6.18.3 Within the construction cut [423] was a wall foundation [031], which extended east-west over a total length of 9.53m. The wall foundation [031] had a linear shape in plan, was 0.81m wide and formed the base of the southern gable wall of Building 1. The wall foundation [031] was built using a rubble core construction technique; the outer faces were formed of medium to large-sized, rectangular gritstone blocks, which were

built in regular courses bonded with lime-based mortar. The core of the wall foundation [031] had been crudely backfilled with angular stone and brick rubble. The facing stones varied in size from 630mm x 170mm x 90mm to 730mm x 370mm x 230mm, whilst the core material was typically less than 100mm in diameter. The wall foundation [031] was keyed into walls [064] and [065] at its western end but was truncated at its eastern end. Abutting the southern face of the wall foundation [031] within cut [423] was a backfill deposit [424] consisting of firm, mid greyish-brown sandy clay.

- 6.18.4 The foundations [064], [065], [068] [073], [074], [079], [097] forming the northern, eastern and western sides of Building 1 were recorded in plan but were not removed during the excavation so their relationship to the underlying stratigraphy was not established. The construction of these walls followed the same technique as the wall foundation [031] to the south, excepting a small portion of walling [065] constituting the interior, south-western corner of the building, which was constructed in handmade brick.
- 6.18.5 The walls [064] and [068] were both aligned north-south and formed the western side of Building 1. The wall [064] to the south measured 3.15m in length by 0.60m wide and had a maximum surviving height of 26.45m AOD. It was keyed into a wall [031] at its southern end and was stop-ended to the north, where a 0.88m-wide opening afforded access to a passage within the cowhouse (Room 1.3) of Building 1.
- 6.18.6 The wall [068] to the north extended a for a total length of 11.32m continuing to the north-eastern corner of Building 1, where it was keyed into wall [097]. The wall had a maximum recorded width of 0.44m.
- 6.18.7 The northern gable-end of Building 1 was formed by a wall [097], which was exposed in plan. The wall [097] was likely trench-built but its foundation trench had been obscured by layer [050] to the north and a series of internal surfaces to the south, which were left *in situ*. The wall [097] had a maximum length of 9.28m and a maximum width of 0.55m; it had an exposed height of 0.42m which was recorded at a maximum level of 26.69m AOD.
- 6.18.8 The eastern side of Building 1 was formed by a three sections of wall foundation: [073], [074] and [079]. These sections were separated by a series of entrances into Building 1. The southern section of wall [073] measured a maximum length of 2.37m and had a maximum width of 0.56m. The wall [074] forming the middle section had a total surviving length of 2.20m and at its widest measured 0.51m. The northern section of wall [079] measured 2.43m in length and was a maximum of 0.46m in width.

- 6.18.9 The position of five doorways were identified in the eastern side of Building 1. The northernmost entrance was distinguishable by two recessed stones [080] and [081] within the eastern wall, which would have supported door jambs. The doorway opening was 0.92m wide and was floored with cobbles, representing a continuation of surface [133]. The doorway led into a narrow passageway at the northern end of the building created by surfaces [093] and [091].
- 6.18.10 To the south was a further entrance, affording access to the barn (Room 1.2) in Building 1. This entrance was demarcated by recessed stones [075] and [076] with a brick threshold [077] measuring 0.83m x 0.33m. Two additional breaks in the southern foundation between walls [073] and [074], and between walls [031] and [073] may have constituted doorways into the cowhouse (Room 1.3).
- 6.19 **Building 2** (Figure 12 & 13)
- 6.19.1 At the northern end of Area 2, the remains of a north-west by south-east oriented construction cut [414] were revealed in section during machining. The cut was straight-sided and flat-based. The north-eastern side of the trench and its associated wall [088] had been severely truncated by modern disturbance. The level from which the foundation trench was cut was therefore unclear, however, the surviving stone foundation [088] within the trench survived to a height of 26.35m AOD.
- 6.19.2 The wall [088] measured 9.68m east-west by 0.58m wide and was constructed from large gritstone blocks. Remnants of the construction cut backfill [415] were identified as a friable, mid greyish-brown silty sand.



Plate 35: Wall 88, Building 2 looking west, scale: 2m vertical

6.20 **Phase 6a: Development of farm complexes (c. 1800-1850)**

6.21 **Area 1** (Figure 10 & 11)

6.22 **Dump deposits within the moat**

6.22.1 To the north of the causeway, the backfill [172] of the moat attributed to Phase 5 was sealed by a deposit of loose, light brownish-grey silty sand [205] with frequent rounded stones inclusions. The silty sand [205] was recorded over an area of 7.00m x 4.00m and had a thickness of 0.30m. It was sealed by deposit [204].

6.22.2 Stratigraphically above the silty sand [205] was a deposit of friable, light greyish-brown silty sand [204] with occasional to moderate small stone inclusions and occasional brick rubble. This was recorded over an area of 7.00m x 8.10m and was 0.88m thick.

6.23 **Gateway** (Figure 5)

6.23.1 Two large post-holes [271] and [272] were exposed to the east of the moat flanking the causeway.

6.23.2 The northern post-hole [271] had an oval shape in plan with vertical sides and a gradual break of slope, leading to a flat base. This cut [271] was visible from a height of 26.07m AOD within the natural clay [198]. It is likely it was cut from higher up in the stratigraphic sequence. It measured 0.65m x 0.67m and was 0.26m deep. It was filled with a friable, brownish-grey sandy clay with small stone inclusions, which contained 19th-century finds.

6.23.3 The southern post-hole [272] was cut from a height of 25.92m AOD through a dump layer [219] attributed to Phase 4. The post-hole [272] measured 0.80m x 0.35m. It had a similar profile to [271] but incorporated a second, 0.15m-diameter circular cut at its base, interpreted as the remains of a post-setting. The inner cut was offset from the centre of the feature. The entirety of the feature was filled by loose, dark grey sandy clay [273] with frequent stone inclusions. Remnants of a degraded wooden post were found in the base of the cut.

6.24 **Cobbled surface (Areas 1 and 2)** (Figure 10; Plate 36)

6.24.1 A cobbled surface [133] was laid down to the north of Building 4. This surface was left *in situ* within Area 2 but was excavated within Area 1, where it formed part of the causeway crossing of the moat.

6.24.2 The cobbles [133] were bedded on a layer of compact light pinkish-orange sand [137] which lay stratigraphically above layer [172] (within Area 1). This deposit was recorded over an area of 12.15m x 3.20m continuing to the west beyond the limit of the Area 1 excavation.

6.24.3 Surface [133] extended for approximately 43m north-south and 10m east-west forming a trackway, which was left *in situ* within Area 2. Surface [133] also extended across the causeway (Area 1), where it was laid above bedding layer [137]. Within Area 1 it covered an area of 12.13m x 3.14m and was 0.12m thick, with an uppermost level of 26.54m AOD.



Plate 36: Cobble surface [133] extending across the moat causeway, looking west, scales: 2m horizontal, 1m vertical

6.25 Levelling layer [138]

6.25.1 A layer of friable, light yellowish-brown silty sand [138] containing occasional fragments of CBM and worked wood was deposited against the southern side of the causeway, abutting deposit [172] and fill [180]. The sandy silt layer [138] was recorded across an extent of 3.72m x 6.37m within Trench B continuing beyond the southern limit of excavation. The layer [138] had a maximum thickness of 0.40m and was recorded at a maximum level of 26.40m AOD. Pottery dated to the 17th and 18th centuries was recovered from the layer [138] providing a deposition *terminus post quem*.

6.26 Drainage features

6.26.1 The levelling layer [138] was truncated by a linear construction cut [141] which was north-south orientated and had straight sides with a flat base. The construction cut [141] was recorded at a maximum height of 25.87m AOD, measured 0.75m wide and was 0.20m deep.

- 6.26.2 A linear drain [140] was housed within the construction cut [141] represents a southern continuation of an earlier drain [139]. The drain [140] measured 4.40m in length and 0.71m in width and had a maximum height of 26.06m AOD.
- 6.26.3 The space between the sides of the drain [140] and the construction cut [141] were filled with friable light greyish-brown sandy silt [142].
- 6.26.4 A cut [145] was located to the south of the drain, forming a rectilinear construction cut for a brick-built chamber [144], into which the drain [140] fed. The construction cut [145] measured 1.10m x 1.20m and was in excess of 0.45m deep, cut from a maximum height of 25.90m AOD. The chamber [144] was constructed using unbonded handmade bricks. The fill of the construction cut [380] consisted of loose clinker; this had been backfilled against the outer faces of the brick chamber [144]. This feature lay beyond the southern limit of excavation and was not investigated further and remains *in situ*.
- 6.27 **Building 4: Room 4.1 & 4.2 (granary, stables)** (Figure 10 & 11; Plate 38)
- 6.27.1 The levelling layer [138] to the south of the causeway was truncated by a series of linear construction cuts [345], [352], [354], [359], [361] and [362]. Two associated linear construction cuts [348] and [350] truncated the backfill of the construction cut [142] of the drain described above.
- 6.27.2 The construction cuts [345], [352], [354], [359], [361], [362], [348] and [350] varied in width from 0.30m to 0.45m and were characterised by vertical sides and flat bases; they were all cut from a maximum height of 26.30m AOD.
- 6.27.3 The construction cuts housed brick walls of two distinct buildings, a granary and a stables, which adjoined a small, enclosed yard in the north-east. According to documentary sources the north-western building (see paragraph 4.6.3 of this report) contained a granary with a loose box below (Room 4.1) and was known colloquially as 'the Irishman's hut'. Overlaying the survey results to the sequence of historic mapping, it became clear that the granary (Room 4.1) – formed by four walls [041]/[042]/[046]/[158]=[159] – originally stood alone. To the south-east was a detached stable block (Room 4.2), which was survived by two walls [052]/[155] and a three brick columns [058]/[060]/[062] forming an open-fronted, western side.
- 6.27.4 All structural remains associated with this phase of activity in Building 4 utilised handmade bricks bonded with a hard, light pinkish-white lime-based mortar. The fills of the construction trenches, unless otherwise stated, consisted of a friable, light

yellowish-brown silty sand containing moderate fragments of CBM and occasional flecks of coal and charcoal.

6.28 **Granary (Room 4.1)** (Figure 10 & 11)

6.28.1 A linear construction cut [350] was orientated north-east by south-west. This truncated fill [142] and housed a wall [041], which acted the northern side of the granary (Room 4.1); the wall extended beyond the footprint of the granary to the north-east, where it likely functioned as a boundary wall enclosing a small yard. The wall [041] had a maximum surviving length of 9.83m and width of 0.23m and survived to a maximum height of 26.50m AOD. The wall [041] was keyed into walls [042]/[159] forming the eastern and western sides of the granary (Room 4.1). The north-eastern end of the wall [041] was keyed into another wall [155], which also may have functioning as a wall defining the eastern side of a small yard; to the south, the wall [155] acted as the back of the stables (Room 4.2). The space between the wall [041] and the construction cut [350] was filled with friable silty sand [351].

6.28.2 The southern side of the granary (Building 4, Room 4.1) was formed by a trench-built wall [46], housed respectively in cut [348]. The wall [46] had a maximum surviving length of 3.18m truncated at its north-eastern end by post-depositional disturbance; it was 0.22m wide. The space between the walls [046] and the construction cut [348] was filled with deposits of friable silty sand [349].

6.28.3 Vestiges of two walls [158] and [159] formed part of the western side of the granary (Room 4.1). The walls were 0.23m wide and had surviving lengths of 1.67m and 0.58m, surviving to a height of 26.14m AOD. The walls were housed in cut [345], which was traced in plan for 4.14m.

6.29 **Stables (Room 4.2)**

6.29.1 A linear construction cut [354] was traced for a total length of 12.38m along the eastern side of the of the original edge of Building 4. The construction cut [354] housed a brick wall [155]. The southern portion of this wall (9.69m in length) was aligned north-south, towards the northern end it incorporated a north-west by south-east dogleg, which continued for a further 2.70m to wall [041]. The wall extended to a maximum height of 26.65m AOD. The construction cut was backfilled with loose friable silty sand, which deposited against the faces of wall [155].



Plate 37: Granary (Room 4.1), north at top



Plate 38: Stables (Room 4.2), west at top

6.29.2 The wall [052] was aligned east-west and formed the northern side of the stable block (Room 4.2). The wall [052] had a total length of 2.72m and was 0.23m wide. At its western end, the wall [052] was keyed into a brick column base [062], which formed the north-west corner of the open-fronted stable. The eastern end of the wall [052] was keyed into a north-south oriented wall [155].

6.29.3 Three rectangular construction cuts [359], [361] and [362] housed the remains of brick columns [058], [060] and [062] supporting the western side of the stable block (Plate 39). The construction cuts measured 0.63m x 0.53m and contained 0.37m x 0.50m brick columns. The fabric of the brickwork was consistent with the other structural remains assigned to this phase. Butting up to the brickwork within the construction cuts were backfill deposits [360], [376] and [377].



Plate 39: The western side of the stables showing brick column bases and threshold, looking south, scale: 1m

6.30 **Floor surfaces within Building 4 (Figure 10)**

- 6.30.1 Abutting the walls of the granary (Room 4.1) was a thin layer of silty sand [043] which formed a bedding layer for a single stone flag, representing the remains of a floor [044] in the south-eastern corner of the room. The stone flag [044] was recorded at a maximum level of 26.15m AOD. The stone flag [044] was a light grey colour and of hard, fine-grained sandstone lithology.
- 6.30.2 A floor surface [059] of light grey sandstone flags had been laid within the stable block, located at the southern end of Building 4. This surface was uneven and comprised mainly of broken slabs. The floor surface [059] lay above the infilled construction trenches associated with the outer walls of the building, specifically fills [355], [360], [376] and [377]. The floor surface [059] covered a total area of 5.57m x 2.92m. The floor surface [059] lay at a height of 26.29m AOD. Two protruding flagstones extended slightly beyond the western side of Building 4, overlying an external floor surface [053], forming a threshold.
- 6.30.3 An area of 0.37m x 0.55m in the middle of the room was surfaced in brick [057], probably representing a repair. Elsewhere repairs were signified by the insertion of square, Staffordshire-blue, stable floor bricks (brick dimensions: 144mm x 144mm x 80mm).

6.31 **External floor surfaces (Figure 10)**

- 6.31.1 Two contemporaneous external surfaces [378] and [053] were exposed to the south and west of Building 4.
- 6.31.2 A cobbled surface [053] was revealed to the west of the stable block. This covered an area of 1.50m x 1.70m and was recorded at a maximum height of 26.11m AOD. Surface [053] was comprised of rounded stones, measuring 60mm-90mm in diameter.
- 6.31.3 A cobbled surface [378] was exposed to the west of surfaces [049] and [053]. This surface [378] formed a ramp connected to a contiguous cobbled surface [133] situated to the west. The ramp had a maximum height of 26.64m in the west and fell to a level of 26.07m AOD at its eastern end. The surface [378] extended over an area of 11.51m x 1.81m.
- 6.31.4 Situated to the south of walls [046] and [156] and to the west of wall [157] was an uneven surface [049], covering an area of 3.63m x 1.67m; recorded at a height of 26.26m AOD. The surface [049] was comprised primarily of rectangular sandstone setts with occasional reused building stones and broken millstones. At its western extent, the surface incorporated a recessed stone, inset with an iron post-socket,

perhaps intended for a tethering post. The stone surface [049] had been laid up to the external face of the walls, overlying the infilled construction cuts. At its western end it was contiguous with the cobbled surface [378] described above.

6.32 **Area 2** (Figure 12 & 13)

6.33 **Building 1**

6.33.1 The external walls of Building 1 were probably constructed during the 18th century, represented by Phase 5. However, as attested by the addition of several walls and floors, the internal configuration of Building 1 was altered during the 19th century, which is ascribed to Phase 6a.

6.33.2 The internal additions ascribed to Phase 6a were designated on the basis of the materials used in their construction as well as their stratigraphic position. These marked them out as being later than the initial construction of the outer walls of the building.

6.34 **Internal configuration** (Figure 12)

6.34.1 A wall [040], probably acting as a partition wall between the cowhouse and barn, survived as two sections of brick wall with a combined length of 8.35m and width of 0.29m. The wall [040] utilised handmade bricks (brick size: 230mm x 110mm x 80mm) bonded with a hard greyish-white lime-based mortar. A 1.02m-wide opening in the middle of the wall [040] likely acted as a doorway. This interpretation was further reinforced by the presence of a recessed stone [069] immediately north of the opening's eastern side; this stone may have supported a door jamb.

6.34.2 Bedding deposits [037]/[416]/[417] supported a suite of floor surfaces which survived intermittently within the building. The bedding deposits [037]/[416]/[417] post-dated the construction of the outer walls [031]/[064]/[065]/[073]/[075]/[076]/[074]/[068]/[079]/[097] and partition wall [040].

6.34.3 Layer [037] was visible beneath the floor surfaces in the southern part of Building 1, covering an area of approximately 8.60m x 3.00m within the cowhouse. The top of the layer lay at a height of 26.56m AOD. Layer [037] consisted of a firm, light yellowish-brown sandy clay. This deposit visibly abutted the internal faces of walls [031]/[064]/[065]/[073], and presumably overlay their infilled construction cuts though this was not proven stratigraphically.

- 6.34.4 Two layers [416]/[417] were deposited against the internal faces of the walls in the northern part of the building; both consisted of a firm, light to mid yellowish-brown sandy clay and were likely laid down in one event.
- 6.34.5 A bedding layer [416] was exposed over an area of 6.40m x 8.96m bounded by wall [040] to the south, wall [068] to the west and wall [074] to the east; it had been laid down after the construction of the walls and presumably overlay the infilled construction cuts associated with the masonry, although this was not demonstrated through excavation. The layer had a maximum surviving height of 26.36m AOD. It was cut by construction cut [418] housing wall [078] and was overlain by a suite of surfaces and installations [063]/[069]/[071]/[076]/[438] associated with the barn and cowhouse.
- 6.34.6 Another bedding layer [417] was found in the northernmost part of the building, corresponding to the stable; it covered an area of 8.62m x 3.98m bounded by walls [068]/[079]/[097]. As with layer [416], this post-dated the construction of the outer walls of Building 1. Layer [417] was truncated by cuts [418] and [421]. The uppermost level of the layer lay at a height of 26.50m AOD.
- 6.35 **Floor surfaces** (Figure 12)
- 6.35.1 Internally, the stable, barn and cowhouse within Building 1 were floored with an assortment of brick, flagstones, setts and concrete.



Plate 40: Building 1, cowhouse (Room 1.3), north at top

6.36 **Cowhouse (Room 1.3)** (Figure 12; Plate 40)

6.36.1 According to Hallam's report (1985: 27), the southern part of the building functioned as a shippon or cowhouse (Room 1.3).

6.36.2 Stone stall divisions [035] within the cowhouse were formed from long chamfered stone blocks, measuring up to 900mm x 160mm x 160mm. Some of these exhibited a central groove or recess and were possibly reused window mullions. The recessed stones had evidently supported upright timber stalls. These subdivided part of the southern room into a maximum of four 1.80m-wide stalls (Plate 41).

6.36.3 Along the southern side of the building, to the south of the stalls was a narrow brick floor [033]. This surface was formed from handmade brick (brick sizes: 230mm x 110mm x 80mm), covering an area of 6.42m x 0.94m at a height of 26.65m AOD.



Plate 41: The westernmost stall in the cowhouse (Room 1.3), Building 1, looking south, scale: 1m horizontal, 1m vertical

6.36.4 Internally, the stalls were floored with handmade brick. This partially surviving surface [034] within the cowhouse covered an area of 7.05m x 1.00m and lay at a height of 26.61m AOD.

6.36.5 Running along the northern side of the cowhouse was a sunken passageway flanked on either side by a stone edging [038]. The stonework was typically 0.14m wide and had a maximum length of 8.80m.

- 6.36.6 The base of the passageway was formed of light grey concrete [039], which was taken to represent a later addition to the building and was ascribed to Phase 6b. The concrete was not removed during the excavation so it was not possible to determine how this passageway had been surfaced during Phase 6a.
- 6.36.7 Immediately north of the passageway was a narrow strip of brick flooring [063] comprised of handmade bricks (brick sizes: 230mm x 110mm x 80mm), covering an area of 8.99 x 0.60m at a height of 26.52m AOD.



Plate 42: Building 1, barn (Room 1.2), north at top

6.37 **Barn (Room 1.2)** (Figure 12; Plate 42)

- 6.37.1 The central room within this building functioned as a barn (Room 1.2). The floor surfaces were severely truncated and survived largely in the south-western corner of the room.
- 6.37.2 A recessed stone [069] within the barn may have been associated with a doorway through wall [040]. The stone was laid above layer [416]. It measured 290mm x 220mm x 170mm and featured a 70mm x 120mm square recess offset from the centre.
- 6.37.3 A spread of stone flags [071] was encountered above the bedding layer [416] within the barn. An intact portion of floor surface was recorded in the south-west corner of the barn covering an area of 4.48m x 1.56m and forming a level surface at a height of 26.63m AOD.

- 6.37.4 In the centre of the western wall of the barn, flags [438] had been laid over part of the external wall foundation [074] forming a 2.16m wide threshold. This suggested that a doorway had been made by knocking through the western wall of the barn.
- 6.37.5 To the north lay another threshold formed from bricks laid between two recessed stones [075] and [076]. This presumably formed a doorway at the north-east corner of the barn. The brick threshold comprised of bricks (brick sizes: 230mm x 110mm x 80mm) and covered an area of 0.84m x 0.35m, lying at a height of 26.70m AOD.
- 6.38 **Stable (Room 1.3)** (Figure 12)
- 6.38.1 The northern room within Building 1 functioned as a stable (Hallam, 1985: 27). The division between the stable and the barn was formed of a trench-built wall [078], which cut through layers [416] and [417]. The linear foundation cut [418] was 0.38m wide and 8.71m long and ran east-west across the building.
- 6.38.2 Housed within the cut was a 0.23m-wide brick wall foundation [078] formed from handmade brick (brick sizes: 230mm x 110mm x 80mm). The wall [078] utilised a hard greyish-white lime-based mortar and was recorded at a maximum height of 26.71m AOD. Backfill deposits [419] and [420] consisting of friable mid greyish-brown silty sand were identified on either side of the structure abutting the northern and southern faces of the wall within cut [418].
- 6.38.3 Cutting through the bedding layer [417] within the room, broadly parallel with the wall [078] but to the north, was a trench-built drain [095] housed in a linear cut [421]. The cut [421] was only partially exposed in plan and continued below surfaces left *in situ* in the north-east corner of the room. The drain [095] was exposed over an area of 1.75m x 0.47m, continuing to the east, out of the stable. The drain [095] was formed of 0.13m diameter ceramic pipes laid in sections totalling 1.29m. This terminated at the western end in a square brick-built drain 0.47m x 0.42m, which abutted the internal face of wall [068].



Plate 43: Building 1, stable (Room 1.1), north at top

- 6.38.4 In the south-western corner of the stables were the remains of a disturbed cobble surface [096] laid above layer [417]. The surface covered an area of 3.10m x 1.30m and was made up of cobbles measuring 70mm-180mm in diameter.
- 6.38.5 The eastern half of the room was floored primarily with a rectangular setts [089], typically 120mm x 140mm in size, with some larger fragments of gritstone measuring up to 320mm x 280mm. This surface [089] was similarly laid above layer [417]. It covered an area of 3.70m x 2.93m and lay at a height of 26.75m AOD.
- 6.38.6 A cobble surface [093] was recorded along the northern side of the stable and had survived to a lesser extent to the south of an open drain [091]. It was exposed over an area of 2.17m x 1.84m although it was also visible in the north-west entranceway of the building, where it formed a cobbled threshold. As with the other surfaces in this room it had been laid above layer [417]. The cobble surface [093] was overlain for the most part by later concrete screed surface [094] taken as evidence of maintenance / repair. The cobble surface comprised small cobbles measuring <120mm in diameter though the majority used were 40mm-50mm in size. Several larger gritstone blocks [092] had been set within the southern part of the surface.
- 6.38.7 An open drain [091] ran between the presumed extent of [093] and [089]. This structure was formed from unbonded Staffordshire blue bricks (brick sizes 230 x 110 x 70mm). Two rows of bricks forming outside of the structure were laid on-edge, whilst the bricks forming base of the drain were laid stretcher, on-bed. The drain had a total length of 8.20m and was 0.25m wide. Part of the drain was interrupted by surface [089].

6.39 External surfaces (Figure 12)

- 6.39.1 A number of external surfaces to the east and west of Building 1 were ascribed to Phase 6a.
- 6.39.2 A cobbled external surface [067] to the east of the cowhouse and barn was encountered as two spreads, one measuring 1.80m (east-west) x 1.40m (north-south) and another measuring 1.75m (east-west) x 1.96m (north-south). The average size of the cobbles used were 130mm x 90mm x 60mm. The surfaces lay at a height of 26.63m AOD. Part of the cobbled surface had been relaid with bricks [066].
- 6.39.3 An external surface [113] formed of yellow sandstone flags lay to the north-west of the stables and south-west of the farmhouse. This had a maximum extent of 3.25m x 4.30m. This formed a level surface at a height of 26.47m AOD.
- 6.39.4 To the south of [113] were further remains of cobbled surfaces [115]. The cobbles used were typically 70mm-100mm in diameter. These were exposed at a shallow depth below the modern ground surface and had incurred some damage during the initial machine excavation of this area; this had resulted in there being two surviving spreads of cobbles. The most intact spread adjacent to the barn, measured 2.25m x 1.79m. It lay at a height of 26.50m AOD.



Plate 44: Building 3 the farmhouse and buttery, north at top

6.40 **Building 3: Rooms 3.1, 3.2, 3.3 (the farmhouse)** (Figure 11 & 12)

- 6.40.1 The available ground between Buildings 1 and 2 was developed during the period c. 1800-1850 with the construction of Building 3, which consisted of a farmhouse with three ground floor rooms (Rooms 3.1-3.3) and an adjoining buttery (Room 3.4). The farmhouse incorporated two existing walls [088] and [097] belonging to Buildings 1 and 2 and was effectively inserted between the two existing structures. The northern gable of the farmhouse was formed by wall [088] – the southern side of an existing barn (Building 2); the barn is shown as standing on the 1848 Ordnance Survey map but had been demolished by the end of the century (Figure 14) although masonry from the original structure was retained. The southern side of the farmhouse incorporated the northern wall [097] of Building 1, which remained standing alongside the farmhouse until both were demolished in the 20th century.
- 6.40.2 Prior to the construction of the eastern and western walls of the farmhouse (Building 3), a layer of firm light reddish-brown sandy clay [150] was laid down between the two existing structures (Buildings 1 and 2). This deposit was recorded over an area of 13.27m east-west by 8.68m north-south.
- 6.40.3 This layer [150] was in the first instance cut by an east-west aligned linear cut, [381] housing a sub-floor drain [104]/[098]/[099]. The drain was constructed from handmade brick and capped with sandstone flags. The top of the drain lay at a height of 26.58m AOD. Backfilled against the side walls of the drain and above it within the construction cut was a mid-greyish-brown sandy clay [382].
- 6.40.4 The fill [382] sealing the drain [104]/[098]/[099] was truncated by the construction cuts [383], [384] and [385] of the eastern external wall [087] of Building 3 and a north-south oriented internal wall [101] and [103].
- 6.40.5 Internally, the main farmhouse was divided into three rooms. The western room (Room 3.2) was delineated by walls [097], [101], [104] and [132]; the eastern room (Room 3.3) by walls [087], [097], [101] and [106]. The northern room (Room 3.1) spanned the width of Building 3 and was demarcated by walls [087], [088], [106], [114] and [132].
- 6.40.6 The eastern and western sides of Building 3 were formed by a series of trench-built, brick walls [087] and [114], which lay stratigraphically above [150] and [382].
- 6.40.7 The eastern wall of the farmhouse [087] was housed in a construction cut [385]. Only the western side of the cut and backfill [386] were exposed in plan. The exposed portion of the cut [385] was 7.49m long and 0.42m wide (excluding wall [087]). The

wall [087] had a total length of 7.45m and was 0.24m wide and stood to a height of 0.23m. It was recorded at a maximum height of 26.61m AOD and was constructed of handmade bricks (230mm x 120mm x 80mm) bonded in a hard, greyish-white lime-based mortar. To the south the wall [087] abutted the northern external wall of Building 1 [097] and [081], and to the north the southern wall [088] of Building 2.

- 6.40.8 A backfill deposit [386] was observed within the construction cut [385] and consisted of a friable mid greyish-brown clayey sand with moderate, small fragments of mortar [386]; this abutted the western face of the wall [087]. The eastern face of the wall was abutted by an external cobbled yard surface [133] and porch structure [084]/[085]/[086].
- 6.40.9 Two rectangular hollow brick-built structures [082] and [083], interpreted as drainage features, were exposed against the eastern face of the wall [087]. The structures measured 0.45m x 0.23m. Neither structure was keyed into the external wall [087].
- 6.40.10 The western wall of Building 3 [114] was housed in a linear construction cut [400] aligned north-south. The construction cut [400] had a width of 0.70m and contained a wall [114] which had a total length of 4.94m and was 0.35m wide, stepping out a further 0.12m, towards its foundation on its eastern side. It should be noted that the wall continued a further 0.58m north from its intersection with an internal wall [132]. The wall [114] was constructed with handmade bricks bonded with a crumbly, light pinkish-white lime-based mortar. Backfilled within the cut against the faces of the wall [114] was fill [401].
- 6.40.11 In the centre of Building 2, a north-south aligned wall [101] was recorded which formed an internal division between the eastern and western rooms. It was housed in a linear construction cut [387], measuring 4.35m in length. In plan the cut measured 0.87m in width. Wall [101] measured 4.20m in length and 0.37m in width and stood to a height of 0.26m. The width of the foundation trench accommodated two east-west aligned walls: [103], which were keyed into [101]; these formed the cheeks of a fireplace within the eastern room. The walls measured 0.55m x 0.24m. In the middle of structure [103] was a brick-lined ash pit [100], measuring 0.64m x 0.68m. This was filled with a powdery, dark grey ash [389] with coal inclusions.
- 6.40.12 Two walls [106] and [132] were aligned east-west and served as internal divisions between the northern and southern parts of Building 3. Both were single-skin brick walls bonded with a light greyish-white lime-based mortar.



Plate 45: Fireplace [102] Building 3, Room 3.2, looking south, scale: 0.50m

6.40.13 The eastern wall [106] was housed in a 0.24m-wide construction cut [402]. The wall measured 3.47m in length and 0.11m in width. It was stop-ended at its western extent, leaving a gap of 1.08m between the next wall [103] to the west, perhaps indicating the position of an internal doorway.

6.40.14 A construction cut [398] housing an internal wall [132] recorded in the western part of Building 3 was 0.60m wide and approximately 3.43m long. The wall [132] measured 3.53m in length and 0.11m in width and stood to a height of 0.40m. Keyed into the wall [132] were the remains of two back-to-back fireplaces [109] and [102]. The eastern end of the wall stopped short of the next wall to the east [103], leaving a 0.90m opening.

6.40.15 In the western room (Room 3.2) of the farmhouse, a fireplace [102] was situated to the south of the northern wall [132] and was formed of two rectilinear walls, enclosing a central hearth measuring 1.24m x 0.97m (Plate 45). To the north of the internal wall [132] lay a rectangular brick foundation [109] and surviving eastern wall. The structure [109] measured 1.06m x 0.86m. Positioned 0.54m to the west was a single stone flag laid against the internal wall [132].

6.40.16 Vestigial traces of a flagstone floor [105] were identified in the eastern room (Room 3.3) of Building 3. Two areas of survival were noted; the remaining flags had been laid

above the infilled foundation trenches of walls [101] and [087], overlying fills [388] and [386]. The flags lay at a height of 26.62m AOD.



Plate 46: Stairwell structure [107]/[108], looking north, scale: 0.50m

6.40.17 Located in the northern room (Room 3.1) of the farmhouse was a rectangular structure, interpreted as the base of a stairwell. This was formed by two parallel, north-south-aligned walls [107] and a flagstone floor [108]. The walls measured 1.63m in length and 0.11m-0.24m in width. The associated floor [108] measured 1.30m x 0.80m formed of flags measuring 820mm x 420mm x 40mm.



Plate 47: The buttery (Room 3.4), looking east, scale: 1m horizontal, 2m vertical

6.41 **Building 3: Room 3.4 (the buttery)** (Figure 12; Plate 47)

6.41.1 A buttery was built to the west of the farmhouse. This structure was demarcated by walls [111], [112], [114], [405], [408] and [427].

6.41.2 The southern side of the building was formed by a wall [112] housed in a linear construction cut [412], which cut deposit [401] – the fill of the construction cut [400]/[114] for the western external wall of Building 3 – from a maximum height of 26.50m AOD. The construction cut [412] measured 4.10m in length and 0.36m in width. The wall [112] had a maximum length of 4.10m and was 0.24m wide. It was formed of red handmade brick (brick sizes: 230mm x 110mm x 70mm) bonded with light, pinkish-white lime-based mortar. The wall [112] abutted the eastern face of the external wall [114] of Building 3, but was keyed into the western wall [111] of the buttery.

6.41.3 The western wall [111] of the buttery and was housed in a linear construction cut [411] extending 5.20m north-south. The foundation trench [411] was 0.45m wide. The wall [111] was identical in form and construction as the southern wall [112] of the buttery; it had a maximum length of 5.10m and was 0.24m wide. At its northern end it was keyed into the northern wall [427] of the buttery.

6.41.4 A truncated wall [427] / [405] delineated the northern side of the buttery, measuring 1.71m and 0.93m in length, respectively. The walls [427] / [405] were of identical form

and construction as the southern and western walls [112] / [111] of the buttery and utilised the same lime-based mortar. Both walls [427] / [405] were housed in linear construction cuts [426] / [404] typically 0.40m wide. A 0.91m-wide truncation had removed part of the wall and foundation cut, which originally would have been 3.74m long. It was evident that the eastern section of wall [405] abutted the western end of the wall [088] that formed the northern extent of Building 3.

6.41.5 In a construction cut [407] measuring 0.60m x 0.35m was a north-south oriented wall [408], which represented the southern return of the northern wall [405] of the buttery. The wall [408] itself was 0.58m long and 0.23m wide and abutted the southern face of the northern wall [088] of Building 3. The position and scale of the wall [408] mirrored that of a short buttress or wall stub forming the northern end of wall [114]. No construction cut was found extending north-south between the southern end of the stub wall [408] and the northern end of the western wall [114] of Building 3. The 3.06m-wide aperture that this left in the western wall of Building 3 was likely occupied by a timber, non-load-bearing wall.

6.41.6 Constructed against the internal faces of the walls of the buttery were a series of additional trench-built foundations [430], [433] and [436], likely forming the bases of installations within the buttery. These walls [430], [433] and [436] were housed in linear construction cuts [429], [432] and [435]. The fabric of these walls [430], [433] and [436] was similar to the external walls of the buttery although they were not keyed in.

6.42 **Phase 6b: additions to the farm complexes (c. 1850-1900)**

6.43 **Area 1**

6.44 **Building 5: Rooms 5.1 and 5.2 (calving pen and loose box)** (Figure 10 & 11)

6.44.1 Construction activity recorded within Farm 1 was attributed to Phase 6b. Two additional rooms (Building 5) forming an eastern extension to Building 4 were added in the latter half of the 19th century. From previous building surveys (Hallam, 1985), this part of the extension was known to have contained a calving pen at its northern end with a loose box to the south.

6.44.2 **Calving pen (Room 5.1)** (Plate 48)

6.44.3 The calving pen (Room 5.1) was defined by three brick walls [054]/[368]/[371] housed in linear construction cuts [365]/[367]/[370]. These likely formed a lean-to extension against the eastern external wall [155] of Building 4.

6.44.4 The southern side of the room was delineated by an east-west-aligned construction cut [365] measuring 2.80m in length by 0.30m in width with vertical sides and a flat base. The construction cut [365] housed a wall [054], which was formed of red handmade bricks (brick sizes: 230mm x 120mm x 70mm) bonded with a hard, light, pinkish-white lime-based mortar. The wall [054] survived to a height of 26.76m AOD and measured 2.70m in length by 0.24m wide. Abutting the northern and southern faces of the wall [054] was a deposit of friable mid greyish-brown silty sand [373].



Plate 48: Calving pen (Room 5.1), looking south, scales: 1m horizontal, 2m vertical

6.44.5 The eastern and northern walls [368] and [371] of Building 5 were exposed only in plan and were left *in situ*. The walls [368] and [371] were both housed in 0.35m-wide linear construction cuts. Wall [371] measured 4.20m in length and 0.23m in width and had a maximum surviving height of 26.76m AOD. Wall [368] 1.54m in length and 0.22m in width and stood to a height of 26.65m AOD. Both walls were built in a similar fabric to the southern wall [054] and were clearly contemporaneous. The northern external wall [368] stopped 1.24m short of the eastern wall [155] of Building 4 affording access into Building 5 from the north. Backfill deposits [369] and [372] filled the remainder of the construction cuts [367] and [370] abutting the faces of the walls [368] and [371].

6.44.6 Abutting the northern face of Building 5's external wall [368] was a floor surface formed of cobbles [047]. The surface [047] consisted of a sporadic spread of cobbles

– typically measuring 70mm-80mm in diameter – recorded over an area of 1.40m x 1.10m at a maximum height of 26.60m AOD.

- 6.44.7 A layer of loosely compacted clinker [374] had been laid up to the internal faces of the walls of Building 5, directly overlying the infilled construction cuts. This may have constituted a floor surface in its own right. This layer [374] was revealed over an area of 3.76m x 2.77m, extending a further 0.20m northwards in the north-western corner of the room and lay at a height of 26.58m AOD. The deposit [374] was overlain by a concrete screed surface [050], which lay at a height of 26.63m AOD, that had been poured above [374] and extended north of Building 5 over an external cobble surface [47].



Plate 49: Loose box (Room 5.2), looking north, scales: 1m horizontal, 2m vertical

6.45 **Loose box (Room 5.2)**

- 6.45.1 A loose box located in the southern part of Building 5, was delineated by the eastern external wall [155] of Building 4 and two trench-built walls [054] and [061], which formed the northern and southern sides of this room, respectively.
- 6.45.2 The southern wall [061] was housed in a 0.34m-wide linear construction cut [363] with vertical sides and a flat base and was cut from a height of 26.66m AOD. The wall [061] had a length of 3.10m and was 0.22m wide. It was constructed from red handmade brick bonded with a hard pinkish-white lime-based mortar. A construction

cut backfill deposit [364] abutted the northern and southern faces of the wall within the cut [363].

6.45.3 The eastern side of the building was open fronted in a similar style to the stables (Room 4.2), situated immediately to the west. A single brick column was exposed within the floor surface [439]; this measured 0.50m x 0.37m and was constructed in handmade brick bonded with a hard pinkish-white lime-based mortar.

6.45.4 A levelling layer of silty sand [373] was laid across the footprint of the room abutting the northern and southern walls [54] and [61] and the column [439]. This levelling layer [373] was varied in thickness from 0.11m in the east to 0.25m in the west, increasing in thickness with the slope of the moat over which Building 5 had been built.

6.45.5 A floor surface [056] comprising unfrosted bricks laid on bed at a maximum level of 26.82m AOD. The western portion of [056] was formed of the bricks were laid in rows with an east-west orientation. This part of the surface was bordered to the east by a single row of bricks laid on bed in a north-south orientation. To the east of this were shorter east-west oriented rows forming the remainder of the floor. The bricks used had a notably sharper arris and smoother surface than the handmade brick used in previous phases of construction; many were frost-fractured and damaged and were exposed at a shallow depth beneath the modern topsoil [341].

6.46 **Area 2**

6.47 **Building 1** (Figure 11 & 12)

6.47.1 In Building 1 a series of concrete floor surfaces, which have been attributed to Phase 6b, were laid above the Phase 6a floors.

6.47.2 Concrete screed [036] was laid above [034] and [035] within one of the stalls of the cowhouse (Room 1.3). The surface [036] covered an area of 2.00m x 0.90m and was 60mm thick.

6.47.3 A concrete floor [039] revealed in the cowhouse, covering an area of 8.84m x 0.77m, lay above the stone borders of the passageway [038].

6.47.4 A concrete surface [090] revealed in the stable (Room 1.1) measured 1.51m x 0.99 x 0.11m thick and constituted a repair to the cobble sett surface [089].

6.47.5 Another thin concrete surface [094] within the stable, encountered over an area of 5.15 x 0.80m had been laid over the cobble surface [093].

6.47.6 A surface [070] consisting of a thin concrete screed was spread over surface [063]. It covered an area of 0.80m x 0.64m.



Plate 50: Porch (Room 3.5), looking west, scale: 1m horizontal

6.47.7 Porch (Room 3.5) (Plate 50)

6.47.8 Against the eastern external wall [87] of the farmhouse (Building 3) a brick porch (Room 3.5) consisting of freestanding walls [084] and [086] had been constructed. The southern wall [084] measured 1.23m east-west by 0.08m north-south and the northern wall [086] measured 0.95 east-west by 0.08m north-south. Between the walls lay a 60mm-thick concrete floor [085] covering an area of 1.73m x 0.98m.

6.47.9 Building 6: cart-shed, cowhouses and bull stable

6.47.10 Building 6 was built to the south and south-west of Building 1 and contained four rooms.

6.47.11 Building 6 (east) (Room 6.1, 6.2, 6.3 & 6.4) (Figure 12)

6.47.12 The eastern part of Building 6, immediately south of the external wall [031] of Building 1, was delineated by walls [029]/[002], [001] and [009].

6.47.13 Internally Building 6 was sub-divided by three walls [011], [013] and [014] which separated the building into three rooms documented by Hallam (1985: 28) as a cart-shed (Room 6.1), cowhouse (Room 6.2) and bull stable (Room 6.3).

6.47.14 The northern side of this part of the building utilised the southern wall of Building 1 [031], attributed to Phase 5. To the south of Building 1's wall [031] were two north-south-aligned construction cuts [020] and [440].

- 6.47.15 The western construction cut [020] was linear in plan and had a maximum length of 8.13m. Only the eastern side of the construction cut was visible in plan and was offset 0.13m from the foundation and overlying wall. A crude foundation [029] built of squared sandstone and gritstone blocks was laid across the base of the cut and was exposed over an area of 2.60m x 0.46m, continuing to the south beneath wall [002]. Abutting the eastern face of the foundation [029] was a backfill deposit consisting of moderately compact, light pinkish-white sand with mortar inclusions.
- 6.47.16 The foundation [029] was overlain to the south by the remnants of an upstanding brick wall [002] and abutted to the north by a cobble threshold [030].
- 6.47.17 The upstanding brick wall [002] was north-south aligned and formed from handmade brick (brick dimensions: 231mm x 110mm x 70mm) bonded with a hard greyish/yellowish-white lime-based mortar. This wall [002] survived to a maximum length of 5.58m and was 0.36m wide and lay at a height of 26.37m AOD. The wall [002] formed the western side of Building 6.
- 6.47.18 In the north-west corner of Room 6.1 situated in a gap between the eastern wall [029] and northern wall [031] was a rough surface formed of pebbles [030]. The surface was formed of small, rounded cobbles measuring <120mm in diameter, and was recorded over an area of 0.50m x 0.84m. The surface, which was recorded at a height of 26.33m AOD, continued to the west beneath a layer [125]/[128].
- 6.47.19 The eastern side of Building 6 was formed by a north-south oriented wall [009], which was housed in an L-shaped construction cut [440] which also contained an adjoining internal wall [011]. The construction cut [440] was offset from the wall by 0.09m-0.13m.
- 6.47.20 The wall [009] forming the eastern side of Building 6 extended for 7.80m and was 0.52m wide. It was built from handmade brick (brick sizes: 230mm x 113mm x 70mm) bonded with a hard light greyish/yellowish-white lime-based mortar. The wall [009] stopped short of the south-eastern corner of Building 6, forming an entranceway into a passage along the south of the building. The wall [009] was overlain at its northern end by a wide flagstone threshold [028] into the cart shed (Room 6.3).
- 6.47.21 The southern side of Building 6 was formed by a wall [001] measuring 8.10m east-west by 0.35m in width. The wall [001] was built using handmade bricks (brick sizes 224mm x 109mm x 68mm) bonded with a hard light greyish-white lime-based mortar. A gap between the western stop-end of the wall [001] and the north-south wall [002] provided access from the southern side of the building and was floored with cobbles [016].

6.47.22 An east-west oriented wall [011] was keyed into Building 6's eastern external wall [009] and was therefore contemporary with the initial build. The wall [011] was housed in a western spur of the construction cut [440] aligned east-west. The wall [011] had a recorded length of 6.10m and was 0.22m wide, widening to 0.30m at its junction with the external wall [009]. The internal wall [011] formed a divide between the cart shed (Room 6.1) and cowhouse shed (Room 6.2).

6.48 **Cart shed (Room 6.1)**

6.48.1 Virtually nothing survived of the floor surfaces within the cart shed aside from one stone flag [032] in the north of the room, accompanied by a flagstone threshold [028] identified along the eastern side of the room.

6.49 **Cowhouse (Room 6.2)**

6.49.1 Further internal divisions and surfaces, forming elements of a linear passage and stalls, were recorded in the south-eastern part of Building 6, Room 6.2.

6.49.2 A disturbed cobble surface [008] was revealed in the eastern half of the cowhouse. It covered a minimum area of 1.80 x 1.90m, continuing west beneath surface [006]. This lay at a height of 26.46m AOD.

6.49.3 A brick surface [003] was revealed along the southern side of the building alongside the southern external wall [001]. This surface [003] had a maximum extent of 6.82m x 0.46m and lay at a height of 26.51m AOD.

6.49.4 To the north of the brick surface [003] was a sunken, linear passage bordered with two rows of stone edging [005]. Between the two rows of stone [005] lay a cobble surface [004], covering an area of 6.90m x 0.76m, lying at 26.48m AOD.

6.49.5 To the north of the sunken passage were the remains of three, 1.60m-wide stalls divided by three fragmentary brick walls [023]. The walls were 0.22m wide and typically 0.46m long. Internally, the stalls were floored with handmade brick [006]. The northern side of the stalls was demarcated by a low stone division [010].

6.49.6 The northern part of the cowhouse (Room 6.2) had a handmade brick floor [007], which survived over an area of 1.05m x 3.20m at a height of 26.57m AOD.



Plate 51: Sunken passage in the cowhouse (Building 6, Room 6.2), looking west, scale: 0.50m horizontal

6.50 **Room 6.3 (bull stable)**

6.50.1 In the south of Building 6, two walls [013] and [014] formed a small rectangular room (Room 6.3), the bull stable. The walls [013]/[014] were housed in a cut [018], which truncated the fill [021] of construction cut [020]. The cut [018] measured 1.70m east-west and 2m north-south and was 0.35m-0.41m wide. The walls [013]/[014] utilised handmade brick (brick sizes: 220mm x 220mm x 70mm-230mm x 120mm x 75mm) set in a hard light greyish-white lime-based mortar. Filling the remainder of the wall

construction cut [018] was a deposit of friable light grey silty sand [019]. The walls [013]/[014] demarcated a small rectangular room (Room 6.3), which functioned as a bull stable (Hallam, 1985: 28).

- 6.50.2 The partial remains of a brick surface [016] survived in the southern half of the bull stable (Plate 52), covering an area of 1.25m x 1.90m, lying at a maximum height of 26.51m AOD. This surface [016] was formed of handmade brick laid on bed. A brick drain surmounted by a square capstone had been inserted in the south-east corner of the room against walls [001] and [014]. Remnants of stone edging [017], perhaps representing a continuation of [005] were recorded immediately north of surface [016].



Plate 52: Brick floor [016] and associated drain, looking west, scale: 0.50m

6.51 **Building 6 western cowhouse (Room 6.4)** (Figure 12)

- 6.51.1 The research conducted by Hallam recorded that the western half of Building 6 functioned as a cowhouse (Room 6.4) (1985: 28). This room and was delineated by an internal wall [002]/[029]/[064] to the east, and external walls to the north [119], west [126] and south [131]. The internal layout consisted of a rectangular room flanked by narrow passages to the east and west, with a central floorspace divided into six stalls.
- 6.51.2 The northern, western and southern walls, [119], [126] and [131], were exposed only in plan. All were formed of handmade brick (brick sizes: 230mm x 110mm x 70mm) bonded with a crumbly light greyish-white lime-based mortar.
- 6.51.3 The northern wall [119] measured 4.20m east-west by 0.37m wide and survived to a height of 26.56m AOD.

- 6.51.4 The western wall, [126] was 12.65m long and 0.37m wide and stood to a height 26.49m AOD.
- 6.51.5 The southern wall, [131] measured 4.50m in length and 0.35m in width and had a maximum surviving height of 26.56m AOD.
- 6.51.6 The internal faces of the walls were abutted by levelling deposits [125] and [128] consisting of light yellowish-brown sand. It is noteworthy that the levelling deposit [125] partially extended over the cobbled surface [030] which formed the threshold into Room 6.1, indicating the internal surfaces within the cowhouse were later than in Room 6.1 to the west.
- 6.51.7 Brick floor surfaces [123] and [130] were extant in the central and eastern parts of the cowhouse, partitioned by a low stone division [124], which was aligned north south and consisted of five separate fragments of stone.
- 6.51.8 The six stalls within the cowhouse could be discerned by the position of five stall divisions set into floor surface [123]. These were formed of recessed and socketed stone blocks, which were spaced roughly 2m apart. Four of the recessed stones were fitted with iron post sockets.
- 6.51.9 To the west of the stalls was a sunken passage running north-south, floored with concrete [120], lying at 26.40m AOD. It was flanked on either side by stone edging [121], which survived in four discrete areas.
- 6.51.10 A concrete surface [127] lay between the passage and the western wall of the cowhouse at a height of 26.51m AOD.

6.52 **Phase 6c: continued development of farm complexes (c. 1900-1911)**

6.53 **Area 1**

6.54 **Trench A** (Figure 4)

- 6.54.1 Two late-19th to early-20th-century layers had accumulated within the top of the moat on its eastern and western sides.
- 6.54.2 Sealing a fill [151] within the western side of the moat was a 0.39m thick deposit of friable, light yellowish-grey silty clay [148], covering an area of 2.90m (east-west) x 4.00m (north-south).
- 6.54.3 On the eastern side of the moat, also sealing [151] was a sticky, greyish-brown clayey sand with frequent fragments of redeposited clay with small stone inclusions and fragments of coal. The fill [151] covered an area of 1.90m (east-west) x 4.00m (north-south) and had a maximum thickness of 0.50m.

6.54.4 Cut through fills [148] and [149] from a height of 25.84m AOD was a linear, flat-bottomed trench [146]. This had a broadly concave profile tapering inwards with a gradual break of slope to a flat base, lying at 24.71m AOD. The trench [146] housed a tubular salt-glazed ceramic drain and had been backfilled with firm to friable, mid brownish-grey sandy clay [147]. Brick fragments and occasional stone inclusions were noted within the fill.

6.55 **Trench C** (Figure 9)

6.55.1 A sequence of deposits attributed to Phase 6c were revealed with Trench C, the southernmost intervention across the moat. These deposits [165]/[166]/[167]/[168]/[169]/[170] were excavated by machine and recorded in section.

6.55.2 An east-west oriented ceramic tubular pipe, similar to that exposed within Trench A, had been laid above the backfill [164] of the moat. The pipe was overlain by a backfill deposit [166] consisting largely of redeposited clay.

6.55.3 Two further backfill deposits [167] and [168] had been dumped within the upper portion of the moat and consisted of a mixture of redeposited clay and sand.

6.56 **Area 1**

6.57 **Building 4, Room 4.3 and 4.4 (an unspecified room and loose box)** (Figure 10 & 11; Plate 53)

6.57.1 From historic mapping it is clear the enclosed yard space adjacent to the granary and stables (Room 4.1 & 4.2), backing onto the calving pen (Room 5.1), was infilled prior to 1911 (Plate 6) with a block comprising two additional rooms. It is likely this addition (Rooms 4.3 and 4.4) was a lean-to structure, utilising existing walls: [041]/[052]/[155]. Two new walls [156] and [157] were built during this phase and were housed in linear construction trench [356].

6.58 **Unspecified Room (Room 4.3)**

6.58.1 The north-eastern room (Room 4.3) measured 5.80 x 3.50m, delineated by brick walls to the west [042], north [041] and east [155]. The southern side of the room was demarcated by wall [156], which was built to the same alignment as wall [046]. The structure was 4.17m long and 0.22m wide

6.58.2 The wall [156] continued for a further 4.17m to the north-east on the same alignment as wall [046] and was keyed into the wall [155] that formed the eastern side of Building 4.

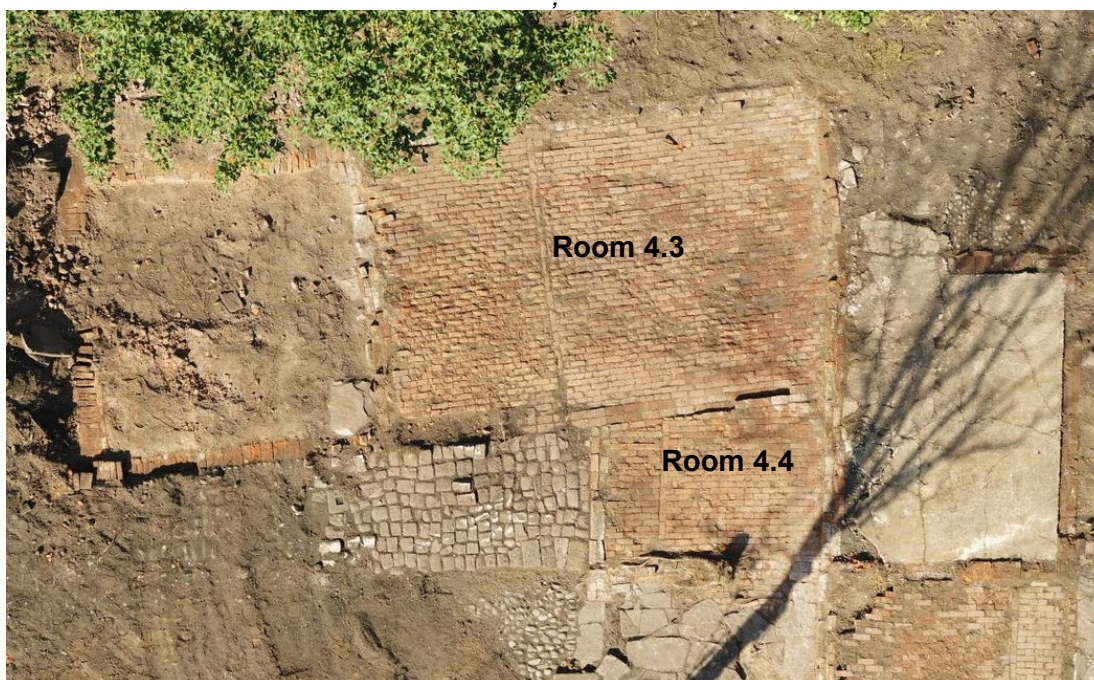


Plate 53: Building 4, indicating Room 4.3 and 4.4, north at top

- 6.58.3 The southern side of the room (Room 4.3) was formed by a northeast-southwest oriented wall [156], housed in a linear construction cut; the wall [156] was 0.22m wide and had a maximum surviving height of 26.30m AOD. The space between the wall [156] and the construction cut [356] was filled with a deposit of friable silty sand [347]. It should be noted that the south-western end of the wall was truncated by modern tree growth.
- 6.58.4 Surface [045] was constructed immediately above the infilled construction cuts, forming floor surface to Room 4.3. It was found to overlie fills [351], [353], [355] and [357]. It had a maximum extent of 3.60m x 5.70m and was constructed from red handmade brick (brick dimensions: 220mm x 100mm x 80mm) set with lime-based mortar. The bricks used in the floor were laid on-bed in rows respecting the axis of the room, however a single row laid perpendicular to the rest in the western half of the room; this was positioned 2.09m to the north-east of wall [042]. The surface of the floor sloped from a maximum level of 26.50m OD in the north-eastern corner of the room to 26.27m OD to the south-west.
- 6.59 **Loose Box (Room 4.4)**
- 6.59.1 The loose box (Room 4.4) measured 2.80 x 2.15m. Four walls defined the edges of the small room: [053]/[155]/[156]/[157]. Descriptions of the pre-existing walls [053]/[155]/[156] are found above. The western wall [157] of the room was housed in southern branch of the construction cut [356].

6.59.2 A floor surface of handmade bricks [051] was exposed within the small room, identified as the loose box (Room 4.4). The surface was laid up to walls [052], [155], [156] and [157], lying stratigraphically above the infill of their associated construction cuts, specifically [355], [357] and [358]. The floor [051] covered an area of 2.11m x 2.77m with a maximum level of 26.47m AOD. The bricks used in the floor were red handmade bricks laid primarily in stretcher bond, in east-west aligned rows, dissected by a single north-south aligned row in the western half of the room.

6.60 **Area 2: Extension to the farm buildings**

6.61 **Building 6** (Figure 12 & 13)

6.61.1 Two concrete surfaces [122] and [129] were recorded laid within Room 6.4 (the cowhouse). These surfaces [122] and [129] were taken as evidence of repair / maintenance to the brick surfaces within Room 6.4.



Plate 54: Building 7, looking east, scales: 1m vertical, 1m horizontal

6.62 **Building 7** (Figure 12 & 13)

6.62.1 A small rectangular extension was recorded to the north of the north-western part of Building 6. The remains of Building 7 correspond to an extension shown on the historic mapping (Figure 16).

- 6.62.2 Building 7 was demarcated on its northern side by an L-shaped rectangular wall [451] which measured 1.36m in length east-west and 0.90m in length north-south and was 0.14m wide. The wall [451] was formed of red wire cut bricks and machine-made Staffordshire blue bricks, bonded with a hard grey cement.
- 6.62.3 The southern wall of Building 7 was formed by the northern wall [119] of Building 6. The eastern wall Building 7 was formed by the western wall [068] of Building 1.
- 6.62.4 A flagstone surface [118] appeared to respect the alignment of the northern wall [451] of Building 7. The individual flags varied in size from 1.16m to 1.45m in length and 0.90m to 0.92m in width; they had a maximum extent of 3.50m x 2.00m, forming a level surface at 26.44m AOD.
- 6.62.5 The floor surface to the south of the northern wall [451] of Building 7 consisted of a concrete screed surface [442], which visibly overlay surface [067] at its eastern end. The concrete surface [442] was exposed across the full width of Building 7, measuring 4.23m x 1.64m and had been laid up to the northern and southern walls [451] and [119]. This surface [442] lay at 26.47m AOD.
- 6.63 **Phase 6d: continued development of farm complexes (1911-1981)**
- 6.64 **Area 1**
- 6.65 **Trench C**
- 6.65.1 The Phase 6c deposits in the moat were sealed by a layer of loosely compacted foundry waste [169] forming a flat layer across the top of the moat below the modern topsoil [170].
- 6.66 **Area 2**
- 6.67 **Building 8** (Figure 12 & 13)
- 6.67.1 The heavily truncated remains of a late extension to the barn were found on the western side of Building 1, formed by a wall foundation [116] and adjacent concrete surface [117].
- 6.67.2 The east-west oriented wall [116] consisted of a concrete plinth foundation surmounted by three courses of red wire-cut bricks (brick sizes: 220mm x 105mm x 70mm) bonded with a bluish-grey cement. The dimensions of the masonry found were 2.60m x 0.25m. This had a maximum surviving height of 26.54m AOD.



Plate 55: Wall [116], looking east, scale: 1m vertical

6.67.3 To the south of the wall was slab of concrete [117] covering an area of 4.86m x 2.20m, forming a floor surface at 26.53m AOD.

6.68 **Phase 7: (1981-present)**

6.69 **Demolition**

6.69.1 The final phase of activity was attributed to the demolition of the upstanding structural remains in the late 20th century. Surprisingly, very little in the way of demolition material was encountered above the structural remains, suggesting the site was intentionally cleared and this material taken off site.

6.69.2 Immediately above the demolished structures and infilled moat was a layer of topsoil [437]. The topsoil formed a shallow spread across many of the structures, typically

0.05m-0.18m in thickness but was up to 0.40m thick across some portions of the moat. This formed the modern ground surface at a height of 27.00m AOD in the northern part of the excavation and 26.55m AOD in the south.

6.69.3 A layer [170], recorded at a maximum level of 27.44m AOD in Trench C, constituted the modern topsoil and as such was considered contiguous with the topsoil layer [341].

6.70 **Unphased**

6.71 **Area 1, Trench B**

6.72 **Timber fences (Figure 5)**

6.72.1 A series of timbers [182]/[183]/[184]/[185]/[186]/[187]/[188]/189/[190]/[191]/[192]/[193]/[194]/[195]/[196]/[200]/[201] were identified to the south of the bridge structure within Area 1, Trench B. These were not closely dated and could not be ascribed to a specific phase of activity. The timbers were interpreted as the vestiges of fences demarcating the eastern and western edges of the moat, which survived as rows of stakes driven into the natural clay. The precise level from which these timbers were driven was not clearly established and as a result they could derive from the post-medieval period, Phases 2-5.

6.73 **Area 1, Trench C**

6.74 **Bank**

6.74.1 The remains of a possible bank [171] on the outside of the feature were identified on the southern side of the moat. This positive feature was only exposed in plan and was not fully investigated. The surface of the bank was comprised of friable, light yellowish-brown sandy clay, which appeared to overlie the natural [448].

7. MATERIAL ASSESSED

7.1 Introduction

7.1.1 The entire paper and material archive generated from all stages of the fieldwork was examined to ascertain its potential for further study. The method of assessment used varied with the class of information examined, although in each case it was undertaken in accordance with guidance provided by English Heritage in *Management of Archaeological Projects*, 2nd edition (English Heritage 1991a) and updated subsequently by MoRPHE (Historic England 2015). All classes of finds were examined in full, with observations supplemented by the records generated during the course of the fieldwork and maintained within the project archive. Quantifications are incorporated within the individual assessments. A breakdown of the paper and photographic archive appears in Table 1.

Total Contexts	449
Drawings	50
Palaeo-environmental Sample Records	2
Total Digital Photographs	598

Table 1: Quantification of the paper/digital archive

7.2 Aims and Objectives

7.2.1 The aim of the assessment was to evaluate all classes of data from the excavation, in order to formulate a project design for a programme of further analysis appropriate to the potential demonstrated by the site archive. A statement of the significance of the results from each element of the archive is given below. The quantification and assessments represent an amalgamation of the total body of work undertaken in 2021.

7.2.2 The objectives of this assessment correspond to *Appendix 4* of *Management of Archaeological Projects*, 2nd edition (English Heritage 1991a). They are:

- to assess the quantity, provenance and condition of all classes of material: stratigraphical, artefactual and environmental;
- to comment on the range and variety of that material;
- to assess the potential of the material to address questions raised in the course of the project;

- to formulate any further questions arising from the assessment.

This assessment will present:

- a factual summary, characterising the quantity and perceived quality of the data contained within the site archive;
- a statement of the academic potential of the data;
- recommendations for the storage and curation of the data.

7.3 **Stratigraphic Data: Assessment**

7.3.1 The paper archive represents a percentage of the overall data gathered during the course of the archaeological investigation. In total, 449 contexts were recorded. The context record has confirmed the identification of features and structures of various periods, spanning the late medieval to modern periods. Overall, the main features of significance can be grouped into late medieval activity/early post-medieval activity, post-medieval activity and 19th century. The stratigraphic sequences are relatively simple and are generally well understood but should be subject to further scrutiny following further examination of the artefactual evidence.

7.3.2 Although several contexts produced sherds of medieval pottery, the bulk of the artefactual evidence from the moat can be termed transitional, in that it belongs to the medieval to post-medieval transition and as such is hard to closely ascribe to a period.

7.3.3 No archaeological remains dating to any earlier periods were identified, including any early medieval period activity. Later post-medieval activity was represented by stone-built walls and structured deposits within the moat constituting a causeway, as well as the foundations of agricultural buildings and a farmhouse, spanning the 18th to 19th centuries.

7.4 **Potential**

7.4.1 Analysis of the stratigraphic data has the ability to refine the site sequence and to add value to the artefact analysis. A thorough appraisal of the context sheets, drawing, digital plans and site matrices will allow nuances and sub-phasing to be devised for late medieval archaeological remains, distinct sequences of landscaping episodes and made-ground layers, and post-medieval structural remains.

7.5 **Photographic Data: Assessment**

7.5.1 In all, there are 598 site images, together with a large body aerial images (approximately 13.05GB) captured using the drone. The site photographs cover the whole of the excavation works.

7.5.2 The images are an invaluable aid in all aspects of post-excavation analysis. They provide a general and detailed pictorial record of the site throughout all phases of its excavation and recording.

7.6 **Potential**

7.6.1 The images include archaeological features and finds and record how the site was excavated. They will undoubtedly aid the stratigraphic analysis. The images could also be integrated with the site database to provide a visual element, which is helpful when dealing with a large corpus of information, and also have the ability to add valuable illustrative material to the final report.

7.7 **Digital Data: Assessment**

7.7.1 The digital data will include all the records of survey undertaken using differential GPS equipment, and the digital photographic archives.

7.8 **Potential**

7.8.1 The digital data provides an invaluable record of the site. A geo-rectified survey coupled with drone aerial photography was carried out to create an accurate and intricate plan of the built remains of the farmhouse and agricultural buildings. Comparisons between the geo-rectified survey and cartographic sources can provide insights into different phases of activity and can enhance archaeological interpretations. Further detailed analysis of the geo-rectified survey and available historic mapping may help to refine the site sequence and establish sub-phases.

7.8.2 Another aspect of the digital dataset created during the final recording of the site was a 3-dimensional laser scan of Trench B, capturing in detail the morphology of the masonry of the bridge walls and moat revetments. This will prove an invaluable aid during the post-excavation process. The data can be used to extract metric data and will facilitate the creation of illustrations for the final publication.

7.9 **Artefactual Evidence and Environmental Samples**

7.9.1 The evidence gathered in the form artefacts, ecofacts and environmental samples have been referenced to where appropriate in relation to the archaeological sequence and in the discussion. An assessment of the finds by Salford Archaeology is presented in *Appendix 2*; an accompanying report by the Nottingham Tree-ring Dating Laboratory contains the dendrochronological and species analysis and can be found in *Appendix 3*.

8. TIMBER PRESERVATION ASSESSMENT

8.1 Significance

- 8.1.1 The structural timbers used in the revetments were of variable condition, according to their taphonomy and distribution within the moat.
- 8.1.2 Clear evidence of joinery and tool marks were found in the timber revetment [333] on the eastern side of the moat, between the bridge walls. The assembly of the structure involved recumbent beams acting as a baseplate and mid-plate with additional beams used as packing. This part of the assemblage utilised two timbers [311] and [313], which identified as oak (Arnold and Howard, 2022). The structure was reinforced by two land-ties made from poplar or willow set at right-angles to the mid-plate, joined by lap-joints and secured by vertically driven pegs.
- 8.1.3 Less evidence of joinery or toolmarks was evident on the other two revetments: [246] and [247], although the ends of some of the coppiced rods displayed angled cut marks and the posts had been worked and trimmed.
- 8.1.4 Species identification was carried out of the timbers used in revetments [246] and [333] but not [247] due to the poorer state of preservation. The wattle revetment [246] was comprised mainly of alder with a single piece of holly identified, whilst the timber revetment utilised a mixture of oak and poplar/willow (Arnold and Howard, 2022)
- 8.1.5 Dendrochronological dating evidence from the timber revetment [333] identified one of the timbers [311] deriving from a tree felled c. 1565-90. This gives an earliest possible date the structure could have been built, however considering the clear reuse of some of the timbers used in the structure, an exact construction date is hard to pinpoint. A conservative estimate might place the structure more towards the end of this period.
- 8.1.6 Post-medieval timber structures occur quite frequently in deeply stratified urban contexts, particularly on riverside or coastal sites, but are generally limited to deep, waterlogged contexts such as those found in moats and wells, in rural settings.

8.2 Hydrological setting

- 8.2.1 Comparison of the hydrological, geotechnical reports and archaeological data has provided a context in which to understand the circumstances of the anaerobic conditions within the moat. The following assessment is based on analysis conducted by JPG Engineering Consultants.

- 8.2.2 The lower portion of the timbers are embedded into water bearing clays, which vary in composition from siltier to sandier clays, causing some localised variability in the preservation of organic materials found therein. Nonetheless, timber structures and artefacts of varying conditions were found within almost all strata within the moat and causeway. The better-preserved structural timbers were found towards the base of the moat within fills with better water retention.
- 8.2.3 The regional groundwater table is notionally 1m below the level of the timbers and as such it is considered that the water bearing clays local to the timbers are charged by infiltration of rainwater from surface level. With this in mind, there is likely to be fluctuation during the wetter months of the year with low lying areas such as the moat receiving water, which percolates through the coarser sandier upper fills to the siltier clay material at the moat base.
- 8.2.4 Infiltration may or may not be supplemented by the ingress of water from buried artificial watercourses or leats, such as those that historically fed the nearby millpond from the River Lostock. The millpond and moat are shown to be connected on some of the historic maps. The level of water transfer cannot however be quantified with any accuracy given the lack of evidence that these features remain active.

8.3 **Impact**

- 8.3.1 The development layout provides a large area of unsurfaced landscaping locally to the east of the timbers, this will permit infiltration from surface level to broadly remain unaltered.
- 8.3.2 In summary, it is considered likely that the waterlogged remains will remain in a relatively stable condition for the foreseeable future and will in effect be preserved *in-situ*. However, any potential future degradation occurring to the buried remains has effectively been mitigated by the primary records and laser scan of the structures, serving as a means of 'preservation through record'.

10. CURATION AND CONSERVATION

10.1 Recipient Museum

10.1.1 South Ribble Museum

11 Church Rd

Leyland

PR25 3FJ

10.2 Conservation

10.2.1 The requirements for conservation of various artefacts are discussed in *Appendix 2*.

10.3 Storage

10.3.1 The complete project archive, which will include written records, plans, digital plans and photographs, artefacts and ecofacts, will be prepared following the guidelines set out in Environmental standards for the permanent storage of excavated material from archaeological sites (UKIC 1984, Conservation Guidelines 3), and in accordance with South Ribble Museum's policy on archive deposition.

10.3.2 For long-term storage of the digital data, CDs will be used, the content including the reports, plans, scanned images and digital photographs. Each CD will be fully indexed and accompanied by the relevant metadata for provenance. The digital record should ideally be duplicated as a paper record for long-term archiving, including comprehensive printouts of photographs and survey plots, labelled and summarised.

10.3.3 All dry and stable finds will be packed according to the museum's specifications, in either acid-free cardboard boxes, or in airtight plastic boxes for unstable material. The artefactual assemblage is predominantly stable, but should be packed carefully with bubble wrap protecting the bags to minimise movement and abrasion in the boxes.

10.4 Packing

10.4.1 The assemblage is currently well-packaged and will require no further packaging. Box lists derived from the site database have been compiled and will be updated when the identification of objects is complete.

10.5 Discard Policy

10.5.1 A discard policy will be prepared, in consultation with the recipient museum. Material of no discernible long-term archaeological potential will be discarded, with the museum's agreement.

11. STATEMENT OF POTENTIAL

11.1 Introduction

11.1.1 The archaeological excavation undertaken has been successful in elucidating the extent, condition and significance of a suite of archaeological remains within the areas of investigation. The western arm of the moat was exposed in plan. In doing so, this has contributed to the overall understanding of the size and morphology of the moated enclosure. Our understanding of the later development of the site has also been expanded through the exposure and recording of a range of agricultural buildings. The key archaeological contexts have been allocated to Phases 2-6, spanning the medieval and later occupation of the site through. Natural layers (Phase 1) and modern activity (Phase 6d and 7) were also categorised.

11.1.2 The contexts generally fall into one of four categories: deposits, features, surfaces or structures. Structures make up the majority of the contextual records for the site. The most significant remains were unearthed in the eastern excavation area (Area 1). These include the cuts of the moat, a sequence of fills and its associated structures, namely the stone bridge and wooden revetments.

11.2 Principal Potential

11.3 Overview

11.3.1 The present section reviews the success of the fieldwork and post-excavation assessment in providing data to address the original research aims. Assessment of the primary stratigraphic records has established a sequence of activity on the site from the late medieval period to the 20th century.

11.3.2 Likewise, assessment of the artefactual recovered from stratified deposits on the site has highlighted those elements that have the greatest potential to advance archaeological knowledge, and which require further detailed analysis leading to the production of a full and detailed archive report and an appropriate level of publication.

11.4 Stratigraphy

11.4.1 The stratigraphic data will provide the framework within which the other analyses can take place. The archaeological stratigraphy has the potential for further, more in-depth description and discussion. The greatest potential for analysis in the various excavation areas lies in dating the sequence of archaeological features and deposits, and confirming their phasing.

11.4.2 The stratigraphy will need to be revisited once the artefacts and ecofacts have been analysed, in order to incorporate any new evidence and to test and revise the stratigraphic interpretations developed at assessment.

11.5 **Artefactual Data**

11.5.1 Elements of the artefactual assemblage recovered from the site have some potential to assist in establishing the chronological development of the moat and its associated structures. The assemblage of leather footwear for instance should be examined externally to provide more precise dates through cross-comparison with existing typologies. The pottery and clay tobacco pipe present in the assemblage are of principal value to dating the stratigraphic sequence.

11.5.2 The leather, wooden and organic artefacts found during the excavation of the moat have their own intrinsic value, given the rarity of their occurrence alongside other material classes of artefact within stratified medieval and post-medieval contexts. These artefacts are of regional importance and a report on them should include drawings of the main types footwear, wooden bowls, objects and basketry.

11.5.3 A smaller yet still significant assemblage of copper alloy, lead and iron objects were also recovered from stratified and unstratified contexts across the site. A number of key items are dateable and have potential to contribute to the overarching chronological framework of the site, principally through providing relative dates. A proportion of the metalwork is significant in its own right and would merit examination by independent specialists, who may provide further details concerning the production and date of individual objects.

11.6 **Environmental Data**

11.6.1 There is good potential for further analysis of the samples taken from the site.

11.6.2 In the first instance, the column and bulk samples offer an opportunity to contribute to an understanding of late medieval and post-medieval environment and activity in the immediate locale, specifically through examination of the pollen and insect remains trapped within the deposits.

11.6.3 The study of the samples will also offer the opportunity to elucidate the geomorphological processes associated with the accretion of the moat fills.

11.6.4 There is also the potential to obtain absolute dating for constituent fills of the moat and its associated structures and through radiocarbon assay of charcoal samples.

11.7 Regional Research Priorities

11.7.1 The excavation has potential to address and contribute to several of the agenda for the Late Medieval and Post-medieval periods in the North West Regional Research Framework:

- LM02: What is our understanding of late medieval land reclamation, water management and exploitation of natural resources?
- LM10: How can a review of excavated and surveyed extant farm buildings and house types contribute to our understanding of the late medieval/early post-medieval transition?
- LM41: To what extent was the development of defensive or pseudo-defensive structures linked to cultural ideas of landscape and power, and are these reflected in the development of high status residences from the castle and defended house to the later stately home, country house and estate?
- PM01: How can we develop post-medieval ceramic typologies and identify differences across social strata, rural and urban environments and the regions in the North West?
- PM03: How do large domestic buildings relate to their wider social context?
- PM05: How can dendrochronology sequences inform our understanding of building evolution, development and change during the post-medieval period?
- PM07: How are plants and animals exploited during this period and how is this linked to changes in consumption patterns?
- PM11: How can palaeoenvironmental indicators of consumption enhance our understanding of the wider patterning and social context?
- PM21: How did buildings, settlements and landscapes associated with dissenting populations evolve and develop during this period?
- PM32: How do pottery industries develop throughout the post-medieval period?

12. UPDATED PROJECT DESIGN

12.1 Revised research aims

12.1.1 This section will present an updated set of research aims, following on from the aims outlined in the evaluation report (Cook, 2021). The section will also integrate any new aims or objectives identified in the assessment process by stratigraphic, finds and environmental specialists. The updated research aims will form the basis of any future research agenda.

The updated research aims will consider the following:

- Initial creation of the moat in the late medieval period
- Construction of the bridge structure
- Maintenance of the moat
- Change in status of those occupying Lower Farington Hall from the medieval period to the late 20th century
- The development of the farm complexes throughout the post-medieval and modern periods

12.2 Updated Research Aim 1: can interrogation of the stratigraphic sequence provide a date for the initial cutting of the moat and subsequent backfilling and re-cutting events?

- Objective 1: Is it possible to ascertain a date to the initial cutting of the moat?
- Objective 2: can silting/deliberate backfilling events be dated and assigned to sub-phases?
- Objective 3: can re-cutting events – representing maintenance of the moat – be dated and assigned to particular sub-phases?
- Objective 4: Based on the stratigraphic analysis of the primary records, artefacts and ecofacts, for how long was the moat open and when did it fall into decline?
- Objective 5: How can samples and artefacts be used to provide the dating evidence needed to firmly bracket the phases and sub-phases of activity inferred from the stratigraphic evidence?
- Objective 6: Can the wattle revetment be independently dated through radio carbon assay and if so how will this refine our chronological understanding of the moat?

- Objective 7: Can further analysis of the stratigraphic sequence determine whether the timber bridge base was contemporary or later than the eastern masonry bridge abutment?
- Objective 8: Can the bridge found at Lower Farington Hall be categorised using the medieval bridge classification scheme developed by Rigold (1975)?

12.3 **Updated Research Aim 2: Using the survey data, drone photography and primary records is it possible to infer the size and shape of the moated site?**

- Objective 1: Create a plan of the moated enclosure based on the historic mapping and the evidence generated from the site investigation.
- Objective 2: How does the morphology of the moat compare to other moated sites in the region and in other parts of England?

12.4 **Updated Research Aim 3: can the artefactual, eco-factual and palynological evidence from the moat reveal how the site and its environs developed through the late medieval and early post-medieval periods, before the moat was backfilled?**

- Objective 1: Based on the timber structures and worked wood recovered from the moat can inferences be made about woodland management around the site?
- Objective 2: Were any other activities or practices associated with Lower Farington Hall evident from the artefactual assemblage? For instance, animal husbandry, carpentry, leatherworking, wood-turning and ceramics production?
- Objective 3: Can analysis of column samples inform inferences regarding environmental changes around the site from the late medieval period into the post-medieval period?
- Objective 4: Can the occurrence of discarded building materials within the moat be used as a proxy for understanding building practices within the site? Do the building materials used reflect trends in the types of materials over time and do these relate to the changing status of the site?

12.5 **Updated Research Aim 4: can the artefactual evidence from the moat inform us about the status of the site and its inhabitants?**

- Objective 1: What do the discarded / reused building materials found tell us about the construction of the adjacent hall and its architectural features?

- Objective 2: What sort of status can be attributed to the items of dress found in the moat, for instance the chainmail and leather assemblage?
- Objective 3: Can interrogation of the historical sources allow us to attribute parts of the assemblage to individuals or groups of individuals residing at the hall?

13. METHOD STATEMENT

13.1 Programme Structure

13.1.1 The post-excavation programme, designed to fulfil the research aims outlined in Section 11, will be divided into the following stages:

- full cataloguing of any data representatively sampled;
- analysis;
- synthesis;
- preparation of draft text and illustrative material;
- appropriate level of dissemination;
- archive deposition.

13.2 Material Assessed

13.2.1 The element of this method statement concerning the finds and samples recovered from the site has been taken *verbatim* from the finds report produced by Salford Archaeology's in-house specialist Jeremy Bradley (Appendix 2).

13.3 Management, monitoring and review

13.3.1 Task 1: management and monitoring tasks have been built into the project. These tasks will include project monitoring, advice and co-ordination, problem solving, and conducting meetings with project staff and all interested external parties.

13.3.2 Reviews of the project will include both the external specialists and the Salford Archaeology staff who are undertaking the analysis, and will provide an opportunity for all involved to present and receive information, to discuss the research aims, and permit an exchange of ideas. All specialists will be consulted following editing and prior to publication of their reports. In addition, there will be regular project review meetings at appropriate intervals throughout the preparation of the report.

13.4 Stratigraphy: analysis and synthesis

13.4.1 Task 2: the stratigraphic data will need to be studied in greater detail in order to refine the phasing. More detailed analysis will be undertaken on the moat (e.g. late medieval and post-medieval contexts). Where possible the stratigraphic sequences identified in the evaluation will be integrated into the site matrix.

13.4.2 Once the data from the excavation areas have been analysed and a stratigraphic narrative completed, it will be possible to prepare phase plans. Such phase plans are

a prerequisite for specialist analysis of the relevant artefact assemblages. Analysis and synthesis of the results of specialist analysis of some classes of finds, and especially the pottery will, however, contribute to the site phasing.

- 13.4.3 The site will be considered in relation to other archaeological sites in the area and in relation to the wider landscape and regional context. Examples of other moated sites in the North West should be cross-examined. This will involve an element of library- and web-based research.

13.5 **Conservation**

- 13.5.1 Task 3: Multiple material categories of artefact will require conservation to stabilise and preserve the objects in the long-term, and to aid the specialist with identification and analysis. Where applicable, specific artefacts or artefact groups requiring conservation are discussed in relation to their assigned material category.

13.6 **Processing and Transport of Artefact Assemblage**

- 13.6.1 Task 4: at an early stage in the analytical programme, arrangements will be made to transport all relevant assemblages to the appropriate specialists to facilitate analysis and reporting of the material. Conversely, on the completion of this work, material will need to be received from the specialist, and checked against database records.

13.7 **Medieval and Post-medieval Pottery**

- 13.7.1 Task 5: all the medieval and Post-medieval pottery recovered from the site will be classified by fabric and quantified by weight and sherd count, detailed catalogues produced by means of the production of a database, and illustrated form and fabric series will be prepared for publication. Comparative material will be studied and a full bibliography will be compiled. Material for illustration will be selected and catalogued.
- 13.7.2 Further study of the pottery, with detailed identification of the fabrics and forms, will be crucial to refining the dating of the medieval occupational sequence, whilst analysis of the distribution of pottery types may disclose patterns of use across the site.
- 13.7.3 Analysis of context groups will also allow changes in supply through time to be mapped, facilitating discussion of the significance of trade in material originating from outside the region, as well as regional distribution. Initial work on the ceramic assemblage suggests that it is domestic character. Detailed comparison with other sites in the region will elucidate these aspects of the site and add significantly to our understanding of the precise character of the rural medieval landscape of the South Ribble district.

13.7.4 The pottery from stratified medieval contexts should be fully quantified by fabric and form, and by sherd count, weight and equivalent vessel estimate (EVE), and then entered onto the database. The data should include such general information as vessel class, burning, repair in antiquity and sherd joins. All the major ceramic forms from stratified contexts should be photographed, catalogued and published by context.

13.7.5 Discussion will be based around the significance of the assemblage as a whole to the interpretation of the site, and its implications locally and regionally. Assemblages will be compared to those from other sites in the region, including, Cuerden, Salmesbury, Lancaster, Wigan, Rainhill and Prescott, Salford and Manchester

13.8 **Clay Tobacco Pipes**

13.8.1 Task 6: all the clay tobacco pipe recovered from the site will be quantified by weight and fragment count, with a detailed catalogue produced by means of the production of a database, and illustrated forms will be prepared for publication. Comparative material will be studied and a full bibliography will be compiled. Material for illustration will be selected and catalogued. A short report will be produced setting out the dating of the assemblage and places of manufacture.

13.9 **Non-ferrous metals**

13.9.1 Task 7: a number of non-ferrous finds require further analysis and in some cases require conservation. Further work on the mail armour will require a specialist report detailing description and method of construction, photography and illustration as necessary to present the results.

13.9.2 Prior to any further work, the lead window came will be conserved along with the other non-ferrous objects. The objects will be identified and subject to further analysis. A short report will be produced which will discuss the significance of the assemblage as a whole to the interpretation of the site. Assemblages will be compared to those from other sites in the region, including, Lancaster, Old Abbey Farm, Risley, Bewsey Old Hall, Warrington, Salford and Manchester.

13.10 **Glass**

13.10.1 Task 8: analysis of the window glass will be combined with that of the lead window came. Discussion will be based around the significance of the assemblage as a whole to the interpretation of the site, and its implications locally and regionally. Assemblages will be compared to those from other sites in the region, including Old Abbey Farm, Risley, Bewsey Old Hall, Warrington.

13.11 **Leather**

13.11.1 Task 9: prior to any further work on the leather, it will be sent for conservation. Once the conservation has taken place (this can take up to 14 weeks), the leather will be sent for specialist analysis. This will provide a brief catalogue of the leather assemblage which will form the site archive. A summary of the assemblage describing dating construction methods and the wider its significance will be produced, which will inform the site narrative and for any publication.

13.12 **Wood**

13.12.1 Task 10: Information concerning past woodworking is perhaps the most obvious potential of an assemblage of worked wood. Therefore, the worked wood assemblage has been identified as having the good potential for further analysis. This will comprise identification of woodworking techniques and conversion, species identification and where possible woodland management, as well as environmental indicators such as evidence of fungal, bacterial or beetle attack. For those objects such as the bowls, basket and staves, these will be further analysed to identify construction techniques and from which tree species they were made from.

13.12.2 As much of the timber fragments can be described as either waste from woodworking or round wood fragments, a sample will be randomly selected for species identification and identification of woodland management regimes (Brunning and Watson, 2010). The waste from woodworking is also useful because it can provide information on the type and size of tool being used and testifies to the activity in which the tool was employed.

13.12.3 Analysis of wood samples from Farington should help to ascertain whether a managed woodland was being exploited. This will require tree ring samples to determine age and growth rates and to identify character of woodland being exploited.

13.12.4 The wood will also be sampled for evidence of fungal, bacterial or beetle attack can help to reconstruct the environment in which the wood was deposited and determine whether timber was stored before use.

13.13 **Ceramic Building Material**

13.13.1 Task 11: all the CBM (ceramic building material) recovered from the site will be classified by fabric and quantified by weight and fragment count, detailed catalogues produced by means of the production of a database, and illustrated form and fabric series will be prepared for publication. Comparative material will be studied and a full bibliography will be compiled. Material for illustration will be selected and catalogued.

13.13.2 Further study of the CBM, with detailed identification of the fabrics and forms, will provide important data on the roofing traditions of elite houses. Analysis of the distribution of CBM types may disclose patterns of use across the site.

13.13.3 Discussion will be based around the significance of the assemblage as a whole to the interpretation of the site, and its implications locally and regionally. Assemblages will be compared to those from other sites in the region, including, Speke Hall, Merseyside, Old Abbey Farm, Risley, Bewsey Old Hall, Warrington and the production sites at Rainhill and Prescott.

13.14 **Stone**

13.14.1 Task 12: A catalogue of the stone roof tiles will be produced, and petrological analysis of the stone undertaken to establish their provenance.

13.15 **Palaeoenvironmental Analysis and Dating**

13.15.1 Task 13: ten of the bulk samples taken over the course of the project have been assessed for charcoal and charred plant remains (CPR) and waterlogged remains. The assessment has demonstrated that there is good potential for further analysis, and therefore further processing of samples should be undertaken to ensure that the full potential of the material is realised. From the assessment of bulk samples, particularly the presence of waterlogged material, it is also recommended that the four column samples are analysed for pollen.

13.15.2 The analysis has the potential to provide a range of data on technological, social and economic activity of the site. It will hopefully provide information on the character of the environment and the manner in which people interacted with it. The results of these analyses should be, integrated into the stratigraphic text. A full and accessible report, including a catalogue, will be included in the publication.

13.16 **Animal Bone**

13.16.1 Task 14: all the animal bone that was recovered from secure features will be placed, where possible, under categories of species, and a table of the number of identified specimens present (NISP) will be produced. Comparative urban and castle sites will be studied to further investigate and understand the nature of the animal bone assemblage within wider regional trends.

13.17 **Artefact illustration**

13.17.1 Task 15: during each part of the analytical programme, a selection will be made of appropriate material for illustration. This will include illustrations of artefacts, as appropriate.

13.18 **Digital data in the analysis phase**

13.18.1 Task 16: at the start of the fieldwork in 2021, a basic Microsoft Excel database was set up to record finds and archaeological contexts. A harris matrix was also created to present the stratigraphic relationships recorded on site. This was complimented by the survey data, which was saved to a CAD environment, in which all plans and sections could be placed to produce a composite view of the site.

13.18.2 Digital photographs: links to digital photographs will be embedded within the database where appropriate.

13.18.3 CAD Drawings: the majority of the fieldwork plans have been digitised to aid this assessment. However, in order that a detailed analytical text of the stratigraphic information can be produced, phase drawings, sections and other relevant line illustrations, as required, will be drafted. These will provide detailed information on the periods and sub-phases of the site, and will indicate stratigraphically related groups. The draft text and phase drawings will form the basis both of the summary information to be supplied to specialists and of the stratigraphic section of the final published report.

13.19 **Historic sources**

13.19.1 Task 17: Examine and review the available historic records pertaining to the site development. This involve an element of research that will take place at the Lancashire Archives.

13.20 **Integration of datasets and synthesis**

13.20.1 Task 18: the information gathered from the analysis of the finds and any historical sources will be reviewed and integrated into the stratigraphic narrative. This will allow re-interpretation of the site using a thematic approach.

13.21 **Illustrations**

13.21.1 Task 19: during each part of the analytical programme, a selection will be made of appropriate material for illustration. This will include historic mapping, general plans and sections, phase plans, and illustrations of artefacts (see Task 16).

13.22 **Production of text and publications**

13.22.1 Task 20: following the completion of the analysis of the stratigraphic and artefactual evidence, an archive report will be produced. The results of the programme of archaeological works will also be synthesised and prepared for publication in a suitable academic vehicle, such as a monograph or journal article. A popular publication could also be produced to disseminate the results of the investigation.

13.22.2 As specialist reports are received, information of relevance to the interpretation of the stratigraphic sequence will be integrated into the text. The discussion will incorporate an overview of the finds from the site. The report will be subject to internal revision, and will be submitted to all specialists after editing for their comments. It is also likely that some revision of the specialist reports will be required.

13.23 **Archive Deposition**

13.23.1 Task 21: Salford Archaeology undertakes to liaise throughout the project with the recipient museum to meet its deposition policies. On completion of the analysis, a discard policy will be implemented (Section 10.6). On submission of the completed text for publication, the archive will be updated as necessary and the receiving museum will be contacted to obtain the latest information on its deposition arrangements. Material in files and boxes will be checked, and indices and box lists will be compiled and appended. The digital archive will be checked and indexed, and hard copies made of the data, if required by the recipient museum. The digital data will be accompanied by metadata, which will explain origin and accuracy.

14. PRESENTATION OF RESULTS

14.1 Introduction

14.1.1 The results of the excavation should be reported on in a manner commensurate with their significance, which should include a final archive report and some form of wider public dissemination (to be agreed with a representative of Lancashire County Council Historic Environment Team). It is anticipated that the results will be disseminated via four different platforms which will include a final archive report, two information panels, a booklet and an article to be included in an academic journal.

14.2 Final archive report

14.2.1 The final archive report will build upon the results of the post-excavation assessment, incorporating any new data or insights gained through further research and analysis.

14.3 Information panels

14.3.1 It is proposed that two information panels are erected on the site. The panels will provide a brief overview of the history and development of Lower Farington Hall and Farington Hall Farm. The panels will also describe the archaeological works that have taken place on the site. It is expected that each panel will display around 5 images.

14.4 Popular booklet

14.4.1 The publication will take the form of a booklet, which will be disseminated locally to raise awareness of the site. The booklet will be written in a style that can be easily understood by the general public. The booklet will contain around 60-70 photographs and illustrations. It should follow these broad headings:

Summary and Acknowledgements

1: Introduction

2: History of Farington

3: History of the site

4: Excavations at the site in 2021

5: Understanding the site in its historical context

6: Conclusion

Suggested Reading

14.5 Overview Paper

- 14.5.1 A short, illustrated paper will present the principal findings of the investigation in a journal such as *Post-medieval Archaeology*. The article will include around 25 photographs and illustrations.

15. RESOURCES AND MANAGEMENT

15.1 Project Team

- 15.1.1 The team consists of internal Salford Archaeology staff and external consultants (Table 2). The project will be managed by Joseph Brooks.

Name	Organisation	Tasks
Joseph Brooks	Salford Archaeology	Project management; synthesis of datasets; production of publication text and editing; overseeing of the archive preparation
Oliver Cook	Salford Archaeology	Stratigraphic analysis; production of publication text
Jeremy Bradley	Salford Archaeology	Finds analysis
Ashley Brogan	Salford Archaeology	Historical and archival research
Lorraine McVinnie	Salford Archaeology	Archive preparation and deposition

Table 2: Proposed project team

15.2 Management Structure

- 15.2.1 Salford Archaeology operates a project management system. The team is headed by the Project Manager, in this case Joseph Brooks, who assumes ultimate responsibility for the implementation and execution of the Project Design and the achievement of performance targets, be they academic, budgetary, or scheduling.
- 15.2.2 The Project Manager may delegate specific aspects of the project to other key staff, who both supervise others and have a direct input into the compilation of the report. They may also undertake direct liaison with external consultants and specialists who are contributing to the publication report, and the museum named as the recipient of the project archive. The Project Manager will define and control the scope and form of the post-excavation programme.

- 15.2.3 Communication between all concerned in the post-excavation programme is of paramount importance and it is essential that the specialists involved liaise closely in order that comparable data are obtained. To this end, regular meetings and reviews are envisaged between all project staff and between particular groups of specialists. All information will be disseminated at regular intervals, thus ensuring that everyone is aware of current progress, strategy and thinking.
- 15.2.4 Salford Archaeology would also be able to provide updates on the progress of the work if required at regular intervals during the course of the project. To this end, a small advisory group would be convened as appropriate. Ideally, membership would comprise representatives from Caddick Developments Ltd and the Salford Archaeology project team.
- 15.2.5 Salford Archaeology places importance on the tight and effective management of projects in order to deliver best value to our clients. An element of managerial time will be dedicated to on-going quality assurance and internal monitoring. This is part of our internal quality assurance system and ensures the prompt delivery of the agreed report or other deliverables on time and budget.

16. CONCLUSIONS

16.1 Key Results

- 16.1.1 The excavation at Farington revealed seven archaeological phases with Phase 4 split into two sub-phases and Phase 6 split into four sub-phases. The earliest phase of anthropological occupation was represented by the creation of the moat in Area 1, Trench A, B, C.
- 16.1.2 In Trench A and C, a sequence of cuts and deposits relating to the creation, filling-up and maintenance (recutting) of the moat were recorded.
- 16.1.3 In Trench B, where the moat was crossed, a more complicated sequence was encountered. Here, after the initial accumulation of fills within the moat, a masonry abutment was constructed. Evidence for the moat being kept open was recorded in the form of recutting. Revetments, formed from wattle wound around vertically driven stakes, were recorded on both sides of the moat. Additionally, the remains of a timber bridge base frame was ascribed to this period of occupation (c. 1550-1650).
- 16.1.4 A subsequent phase of activity dating to the late post-medieval period (c. 1650-1880) witnessed the bridge being superseded, with the construction of a causeway across the moat.
- 16.1.5 A suite of remains relating to the development of two farm complexes was exposed, providing structural evidence of how the farm complexes evolved over time. Elements of the buildings' construction, internal arrangement and installations provide corroborative evidence for their use.
- 16.1.6 The latest phase of activity relates to the eventual demolition of the buildings occupying the site 1980's. The formation of the modern topsoil was also ascribed to this phase.

16.2 Recommendations

- 16.2.1 A further programme of research, analysis and dissemination will be required. This will include historical research and synthesis to place the site in context; analysis of the stratigraphic evidence and certain parts of the artefactual assemblage (Section 13; Appendix 2); the findings will be consolidated into a final archive report and publication to be agreed with Lancashire County Council Historic Environment Team. A key part of the public dissemination will be the erection of two onsite noticeboards, which will detail the history of the site and the archaeological work that has taken place. It is also recommended that the results of the investigation are presented in a booklet for popular public consumption, and also that an account of the results are

disseminated via an article in an academic publication such as *Post-medieval Archaeology*.

17. ARCHIVE

17.1.1 The results of the archaeological investigation will form the basis of a full archive to professional standards and in line with current ClfA guidelines updated 2020. The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the ClfA in that organisation's code of conduct. As part of the archiving process, the on-line OASIS (On-line Access to Index of Archaeological Investigations) form will be completed. The site archive will be so organised as to be compatible with the other archaeological archives produced in the North West. All drawn records will be transferred to and stored in digital format, in systems which are easily accessible. The integrity of the site archive will be maintained upon completion of the archaeological works with the archive ultimately being offered for deposition with the South Ribble Museum.

18. ACKNOWLEDGEMENTS

18.1.1 Salford Archaeology would like to thank Caddick Developments Ltd for commissioning the fieldwork and to Peter Iles of Lancashire County Council Historic Environment Team for monitoring the work. The authors would like to thank Jenny Addis, Joe Brooks, Richard Carter, Andy Coutts, Kieran Gleave, Evon Kirby, Lorraine McVinnie and Harrison Peters for their work on-site and John Roberts for his off-site support. Thanks are also given to Richard Ker for compiling the figures, Joseph Brooks for editing the report and Graham Mottershead for his project management.

BIBLIOGRAPHY

Cartographic sources:

William Yates' Map of Lancashire, published 1786

Greenwood's Map of Lancashire, published 1818

George Hennet's A Map of the County Palatine of Lancashire, published 1830

Ordnance Survey 1:10,560 sheet 69, published 1848, surveyed 1844-46

Ordnance Survey 1:2,500 Sheet Lancashire 69.10, published 1894, surveyed 1893. Ordnance Survey 1:2500 map, County Sheet Lancashire, 1911

Ordnance Survey 1:2500 map, County Sheet Lancashire, 1929

Ordnance Survey 1:2500 map, County Sheet Lancashire, 1931

Ordnance Survey 1:2500 map, County Sheet Lancashire, 1938

Secondary sources:

Brogan, A., 2019, Archaeological Desk-Based Assessment: Grasmere Avenue, Farington, Leyland, South Ribble, Salford Archaeology unpublished report

Catholic Record Society, 1905, *Miscellanea I* London: The Art and Book Company Ltd

ClfA Regulations, Standards and Guidelines, updated 2020, *Standards and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*

ClfA Regulations, Standards and Guidelines, updated 2020, *Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*

ClfA Regulations, *Standards and Guidelines, updated 2020, Standards and Guidance for an Archaeological Excavation*

Cook, O., 2021, Grasmere Avenue, Farington, Leyland, South Ribble: Archaeological Evaluation, Salford Archaeology unpublished report

Ekwall, E., 1922, *The Place-names of Lancashire*, Manchester

Farrer, W., and Brownbill, J., 1911, *A History of the County of Lancaster*, 5, London

Hallam, J., 1985, *History of Lower Farington Hall, Leyland* Preston: Central Lancashire Archaeological Research Unit

Hallam, J., 1988, *The Surviving Past: Archaeological Finds and Excavations in Central Lancashire*, Chorley

Langdon, J., 2004, *Mills in the medieval economy England 1300-1540* Oxford: University Press

Lewis, J.M., 2000, *The Medieval Earthworks of the Hundred of West Derby: Tenorial Evidence and Physical Structure*. Oxford: British Archaeological Reports (British series) 310.

Mannex, P & Co, 1855, *The History, Topography, and Directory of Mid-Lancashire with an Essay on Geology*, Preston

Newman, R.M., 1996, Medieval Rural Settlement, in R Newman (ed) *The Archaeology of Lancashire: Present State and Future Priorities*, Lancaster, 109-124

Rigold, S. E., 1975, Structural aspects of medieval timber bridges, in *Medieval Archaeology* Volume 19 pp. 48-91

Saraceni, J., 2020. Links of Tudor Chain Mail Analyzed - Archaeology Magazine. [online] Archaeology.org. Available at: <<https://www.archaeology.org/news/8663-200429-england-chain-mail>> [Accessed 5 May 2022].

Stanning, J.H., 1892, *The Royal Composition Papers, Being the Proceedings of the Committee of the Compounding AD 1643 – 1660 so Far as they Relate to the County of Lancaster* Printed for the Record Society, Manchester: Examiner Print Works

Steane, J.M., and Kelsall, A.F. 1962, The park, moat and house at New Park, Lathom, near Ormskirk, *The Historic Society of Lancashire and Cheshire*, 114, 73-98

Walker, J. S. F. and Tindall, A. S. 1985. *Country Houses of Greater Manchester*, The Archaeology of Greater Manchester Vol.2 Manchester: Greater Manchester Archaeological Unit. (GMAU),

White, W.S. (ed.), 1890, *The register book of christenings, weddings, and burials, within the parish of Leyland : in the county of Lancaster, 1653 to 1710* Printed for The Record Society, Manchester: Examiner Print Works, Pall Mall

Online Sources:

British Geology Viewer (accessed 07/04/22): www.bgs.ac.uk/map-viewers/geology-of-britain-viewer

APPENDIX 1: CONTEXT INDEX

Context	Area	Description	Building / sub-division	Phase
001	2	Wall of Building 6	Building 6	6b
002	2	Wall of Building 6	Building 6	6b
003	2	Floor of cowhouse	Building 6	6b
004	2	Floor of cowhouse	Building 6	6b
005	2	Stone edging of passage in cowhouse	Building 6	6b
006	2	Floor of cowhouse	Building 6	6b
007	2	Floor of cowhouse	Building 6	6b
008	2	Floor of cowhouse	Building 6	6b
009	2	Wall of Building 6	Building 6	6b
010	2	Stone stall divisions within cowhouse	Building 6	6b
011	2	Wall of Building 6	Building 6	6b
012	2	Wall	-	5
013	2	Wall of Building 6	Building 6	6b
014	2	Wall of Building 6	Building 6	6b
015	2	Cobble surface	-	5
016	2	Floor of bull stable	Building 6	6b
017	2	Stone edging	Building 6	6b
018	2	Construction cut for walls [013]/[014]	Building 6	6b
019		Fill of construction cut [018]	Building 6	6b
020	2	Construction cut for wall [029]	-	5
021	2	Fill of construction cut [020]	-	5
022	2	Levelling layer	-	5
023	2	Brick stall division within cowhouse	Building 6	6b
024	2	Levelling layer	-	5
025	2	Construction cut for wall [012]	-	5
026	2	Fill of construction cut [025]	-	5
027	2	Sub-floor deposit of cowhouse Building 6	-	6b
028	2	Threshold of cart shed	Building 6	6b
029	2	Wall foundation of Building 6	Building 6	6b
030	2	Cobble threshold	Building 6	6b
031	2	Wall of Building 1	Building 1	5
032	2	Floor of cart shed	Building 6	6b
033	2	Floor of cowhouse	Building 1	6a
034	2	Floor of cowhouse	Building 1	6a
035	2	Stone stall divisions within cowhouse	Building 1	6a
036	2	Concrete floor within cowhouse	Building 1	6a
037	2	Bedding layer within cowhouse	Building 1	6a
038	2	Stone edging of passage in cowhouse	Building 1	6a
039	2	Concrete floor of passage in cowhouse	Building 1	6a
040	2	Internal wall between cowhouse and barn	Building 1	6a
041	1	Wall of Building 4	Building 4	6a
042	1	Wall of Building 4	Building 4	6a
043	1	Bedding layer for floor surface [044]	Building 4	6a
044	1	Floor of loosebox	Building 4	6a
045	1	Floor of loosebox	Building 4	6a
046	1	Wall of Building 4	Building 4	6a
047	1	External surface	-	6b
048	VOID	VOID	VOID	VOID
049	1	External surface	-	6b
050	1	Concrete floor	Building 5	6b
051	1	Floor of loosebox	Building 4	6a
052	1	Wall of Building 4	Building 4	6a
053	1	External surface	-	6a
054	1	Wall of Building 5	Building 5	6b
055	1	Floor of loosebox	Building 5	6b
056	1	Floor of loosebox	Building 5	6b
057	1	Brick repair to floor [059]	Building 4	6a
058	1	Brick column of Building 4	Building 4	6a
059	1	Floor of stables	Building 4	6a

Context	Area	Description	Building / sub-division	Phase
060	1	Brick column of Building 4	Building 4	6a
061	1	Wall of Building 5	Building 5	6b
062	1	Brick column of Building 4	Building 4	6a
063	2	Floor surface of cowhouse	Building 1	6a
064	2	Wall of Building 1	Building 1	5
065	2	Wall of Building 1	Building 1	5
066	2	Brick surface repair to cobbles 067	Building 1	6a
067	2	External surface	-	5
068	2	Wall of Building 1	Building 1	5
069	2	Recessed door stone within barn	Building 1	6a
070	2	Floor of cowhouse	Building 1	6b
071	2	Floor of barn	Building 1	6a
072	VOID	VOID	VOID	VOID
073	2	Wall of Building 1	Building 1	5
074	2	Wall of Building 1	Building 1	5
075	2	Recessed door stone within barn	Building 1	5
076	2	Recessed door stone within barn	Building 1	5
077	2	Threshold of doorway into barn	Building 1	5
078	2	Internal wall of Building 1	Building 1	6a
079	2	Wall of Building 1	Building 1	5
080	2	Recessed door stone within stable	Building 1	5
081	2	Recessed door stone within stable	Building 1	5
082	2	Brick structure	Building 3	6a
083	2	Brick structure	Building 3	6a
084	2	Wall of porch	Building 3	6b
085	2	Floor of porch	Building 3	6b
086	2	Wall of porch	Building 3	6b
087	2	Wall of Building 3	Building 3	6b
088	2	Wall of Building 2	Building 2	5
089	2	Floor of stable	Building 1	6a
090	2	Floor of stable	Building 1	6b
091	2	Open drain within stable	Building 1	6a
092	2	Floor of stable	Building 1	6a
093	2	Floor of stable	Building 1	6a
094	2	Floor of stable	Building 1	6b
095	2	Sub-floor drain within stable	Building 1	6a
096	2	Floor of stable	Building 1	6a
097	2	Wall of Building	Building 1	5
098	2	Drain within farmhouse	Building 3	6a
099	2	Drain within farmhouse	Building 3	6a
100	2	Ash of pit of fireplace 103	Building 3	6a
101	2	Wall of Building 3	Building 3	6a
102	2	Fireplace within farmhouse	Building 3	6a
103	2	Fireplace within farmhouse	Building 3	6a
104	2	Drain within farmhouse	Building 3	6a
105	2	Floor of farmhouse	Building 3	6a
106	2	Wall of farmhouse	Building 3	6a
107	2	Side walls of staircase within farmhouse	Building 3	6a
108	2	Floor of staircase within farmhouse	Building 3	6a
109	2	Fireplace within farmhouse	Building 3	6a
110	2	Floor within farmhouse	Building 3	6a
111	2	Wall of buttery	Building 3	6a
112	2	Wall of buttery	Building 3	6a
113	2	External surface	-	6a
114	2	Wall of buttery	Building 3	6a
115	2	External surface	-	6a
116	2	Wall of Building 8	Building 8	6d
117	2	Floor of Building 8	Building 8	6d
118	2	External surface	-	6c
119	2	Wall of Building 6 (west)	Building 6	6b

Context	Area	Description	Building / sub-division	Phase
120	2	Floor of passage within cowhouse (west)	Building 6	6b
121	2	Stone edging of passage within cowhouse (west)	Building 6	6b
122	2	Floor within cowhouse (west)	Building 6	6b
123	2	Floor within cowhouse (west)	Building 6	6b
124	2	Stall division within cowhouse (west)	Building 6	6b
125	2	Levelling layer	Building 6	6b
126	2	Wall of Building 6 (west)	Building 6	6b
127	2	Floor within cowhouse (west)	Building 6	6b
128	2	Levelling layer	Building 6	6b
129	2	Floor within cowhouse (west)	Building 6	6b
130	2	Floor within cowhouse (west)	Building 6	6b
131	2	Wall of Building 6 (west)	Building 6	6b
132	2	Wall of Building 3	Building 3	6a
133	1/2	Cobble surface	-	
134	VOID	VOID	VOID	VOID
135	VOID	VOID	VOID	VOID
136	VOID	VOID	VOID	VOID
137	1	Sand, bedding layer	Trench B	6a
138	1	Sand	Trench B	6a
139	1	Stone drain	Trench B	6a
140	1	Brick and stone drain	Trench B	6a
141	1	Construction cut for drain [140]	Trench B	6a
142	1	Backfill of cut [141] above drain [140]	Trench B	6a
143	VOID	VOID	VOID	VOID
144	1	Brick chamber	-	6a
145	1	Cut for brick chamber	-	6a
146	1	Cut for drainage pipe	Trench A	6c
147	1	Fill of [146]	Trench A	6c
148	1	Fill of moat [263]	Trench A	6c
149	1	Fill of moat [263]	Trench A	6c
150	2	Levelling layer	Building 3	6a
151	1	Fill of moat [263]	Trench A	6a
152	1	Fill of moat [263]	Trench A	5
153	1	Fill of moat [263]	Trench A	5
154	1	Fill of moat [263]	Trench A	5
155	1	Wall of Building 4	Building 4	6a
156	1	Wall of Building 4	Building 4	6a
157	1	Wall of Building 4	Building 4	6a
158	1	Wall of Building 4	Building 4	6a
159	1	Wall of Building 4	Building 4	6a
160	1	Cut of moat	Trench C	4
161	1	Fill of moat [160]	Trench C	4
162	1	Fill of moat [160]	Trench C	4
163	1	Fill of moat [160]	Trench C	5
164	1	Fill of moat [160]	Trench C	5
165	1	Fill of moat [160]	Trench C	6c
166	1	Fill of moat [160]	Trench C	6c
167	1	Fill of moat [160]	Trench C	6c
168	1	Fill of moat [160]	Trench C	6c
169	1	Dumped layer of foundry waste	Trench C	6c
170	1	Modern topsoil, same as [341]	Trench C	7
171	1	External bank	Trench C	2
172	1	Layer, part of causeway	Trench B	5
173	1	Fill of [174]	Trench B	3
174	1	Construction cut for stone walls	Trench B	3
175	1	Stone bridge foundation	Trench B	3
176	1	Stone bridge abutment	Trench B	5
177	1	Fill of moat, on southern side of causeway	Trench B	5
178	VOID	VOID	VOID	VOID
179	1	Cut of moat	Trench B	5
180	1	Fill of moat, on southern side of causeway	Trench B	5

Context	Area	Description	Building / sub-division	Phase
181	VOID	VOID	VOID	VOID
182	1	Timber	Trench B	-
183	1	Timber	Trench B	-
184	1	Timber	Trench B	-
185	1	Timber	Trench B	-
186	1	Timber	Trench B	-
187	1	Timber	Trench B	-
188	1	Timber	Trench B	-
189	1	Timber	Trench B	-
190	1	Timber	Trench B	-
191	1	Timber	Trench B	-
192	1	Timber	Trench B	-
193	1	Timber	Trench B	-
194	1	Timber	Trench B	-
195	1	Timber	Trench B	-
196	1	Timber	Trench B	-
197	1	Timber	Trench B	-
198	1	Natural clay	Trench B	1
199	1	Fill behind revetment [246]	Trench B	4
200	1	Timber	Trench B	-
201	1	Driven stake (driven into 198)	Trench B	-
202	1	Fill of drain [139]	Trench B	5
203	VOID	VOID	VOID	VOID
204	1	Fill of moat on northern side of causeway	Trench B	6a
205	1	Fill of moat on northern side of causeway	Trench B	6a
206	1	Layer, part of causeway	Trench B	5
207	1	Capstones atop drain walls [210]	Trench B	5
208	1	Fill of drain [210]/[207]	Trench B	5
209	VOID	VOID	VOID	VOID
210	1	Side walls of drain	Trench B	5
211	1	Fill above drain [210]/[207] within construction cut	Trench B	5
212	1	Linear construction cut for drain [210]/[207]	Trench B	5
213	1	Linear cut housing drain [139]	Trench B	5
214	1	Post-med backfill of drain [139]	Trench B	5
215	1	Layer, part of causeway	Trench B	5
216	1	Timber, possible collapsed timber drain (?)	Trench B	5
217	1	Layer, part of causeway	Trench B	5
218	1	Layer, part of causeway	Trench B	5
219	1	Layer, abutting wall [339]	Trench B	5
220	1	Layer, abutting wall [339]	Trench B	5
221	1	Layer, abutting wall [339]	Trench B	5
222	1	Layer, abutting wall [339]	Trench B	5
223	1	Upright round timber stake, revetment [246]	Trench B	4
224	1	Upright round timber stake, revetment [246]	Trench B	4
225	1	Upright round timber stake, revetment [246]	Trench B	4
226	1	Upright round timber stake, revetment [246]	Trench B	4
227	1	Upright round timber stake, revetment [247]	Trench B	4
228	1	Upright round timber stake, revetment [247]	Trench B	4
229	1	Upright rectangular timber stake, revetment [247]	Trench B	4
230	1	Upright round timber stake, revetment [247]	Trench B	4
231	1	Upright round timber stake, revetment [247]	Trench B	4
232	1	Upright round timber stake, revetment [247]	Trench B	4
233	1	Upright round timber stake, revetment [247]	Trench B	4
234	1	Upright round timber stake, revetment [247]	Trench B	4
235	1	Upright round timber stake, revetment [247]	Trench B	4
236	1	Upright round timber stake, revetment [247]	Trench B	4
237	1	Fill of moat [262]	Trench B	4
238	VOID	VOID	VOID	VOID
239	1	Fill of [240]	Trench A	2
240	1	Cut of moat	Trench A	2
241	1	Fill of moat [243]	Trench A	2

Context	Area	Description	Building / sub-division	Phase
242	1	Fill of moat [243]	Trench A	2
243	1	Cut of moat	Trench A	2
244	1	Fill of moat [263]	Trench A	4
245	1	Fill of moat [263]	Trench A	5
246	1	Wattle revetment supporting moat	Trench B	4
247	1	Wattle revetment supporting moat	Trench B	4
248	1	Fill of moat [263]	Trench A	4
249	1	Fill of moat [263]	Trench A	4
250	1	Cut of moat	Trench A	2
251	1	Cut of moat	Trench A	2
252	1	Fill of moat [263]	Trench A	4
253	1	Fill of moat [251]	Trench A	2
254	1	Fill of moat [251]	Trench A	2
255	1	Fill of moat [251]	Trench A	2
256	1	Fill of moat [250]	Trench A	2
257	1	Fill of moat [263]	Trench A	4
258	VOID	VOID	VOID	VOID
259	1	Fill of moat [263]	Trench A	5
260	1	Fill of moat [262]	Trench B	4
261	1	Fill of moat [262]	Trench B	5
262	1	Cut of moat	Trench B	4
263	1	Cut of moat	Trench A	4
264	1	Driven stake	Trench B	5
265	1	Driven stake	Trench B	5
266	VOID	VOID	VOID	VOID
267	VOID	VOID	VOID	VOID
268	1	Driven stake	Trench B	5
269	1	Driven stake	Trench B	5
270	1	Fill of [271]	Trench B	5
271	1	Cut of post-pit	Trench B	5
272	1	Cut of post-pit	Trench B	5
273	1	Fill of [272]	Trench B	5
274	1	Fill of moat	Trench B	3
275	1	Fill of construction cut [174]	Trench B	3
276	1	Fill of moat [179]	Trench B	2
277	1	Primary fill of moat [179]	Trench B	2
278	1	Timber lath, revetment [333]	Trench B	3
279	1	Timber lath, revetment [333]	Trench B	3
280	1	Timber lath, revetment [333]	Trench B	3
281	1	Timber lath, revetment [333]	Trench B	3
282	1	Timber lath, revetment [333]	Trench B	3
283	1	Timber mid-plate, revetment [333]	Trench B	3
284	1	Timber wedge, revetment [333]	Trench B	3
285	1	Timber lath, revetment [333]	Trench B	3
286	1	Timber lath, revetment [333]	Trench B	3
287	1	Timber lath, revetment [333]	Trench B	3
288	1	Timber lath, revetment [333]	Trench B	3
289	1	Timber lath, revetment [333]	Trench B	3
290	1	Timber lath, revetment [333]	Trench B	3
291	1	Timber lath, revetment [333]	Trench B	3
292	1	Timber lath, revetment [333]	Trench B	3
293	1	Timber lath, revetment [333]	Trench B	3
294	1	Timber lath, revetment [333]	Trench B	3
295	1	Timber lath, revetment [333]	Trench B	3
296	1	Timber lath, revetment [333]	Trench B	3
297	1	Timber lath, revetment [333]	Trench B	3
298	1	Timber lath, revetment [333]	Trench B	3
299	1	Timber lath, revetment [333]	Trench B	3
300	1	Timber lath, revetment [333]	Trench B	3
301	1	Timber lath, revetment [333]	Trench B	3
302	1	Collapsed timber, revetment [333]	Trench B	3

Context	Area	Description	Building / sub-division	Phase
303	1	Timber lath, revetment [333]	Trench B	3
304	1	Timber lath, revetment [333]	Trench B	3
305	1	Timber lath, revetment [333]	Trench B	3
306	1	Timber lath, revetment [333]	Trench B	3
307	1	Timber lath, revetment [333]	Trench B	3
308	1	Timber lath, revetment [333]	Trench B	3
309	1	Timber lath, revetment [333]	Trench B	3
310	1	Timber land tie, revetment [333]	Trench B	3
311	1	Timber packing, revetment [333]	Trench B	3
312	1	Timber packing, revetment [333]	Trench B	3
313	1	Timber packing, revetment [333]	Trench B	3
314	1	Timber land tie, revetment [333]	Trench B	3
315	1	Upright round timber stake, revetment [246]	Trench B	4
316	1	Upright round timber stake, revetment [246]	Trench B	4
317	1	Upright round timber stake, revetment [246]	Trench B	4
318	1	Upright round timber stake, revetment [246]	Trench B	4
319	1	Upright round timber stake, revetment [246]	Trench B	4
320	1	Upright round timber stake, revetment [246]	Trench B	4
321	1	Upright round timber stake, revetment [246]	Trench B	4
322	1	Upright round timber stake, revetment [246]	Trench B	4
323	1	Upright round timber stake, revetment [246]	Trench B	4
324	1	Upright round timber stake, revetment [246]	Trench B	4
325	1	Upright round timber stake, revetment [246]	Trench B	4
326	1	Upright round timber stake, revetment [246]	Trench B	4
327	1	Upright round timber stake, revetment [246]	Trench B	4
328	1	Upright round timber stake, revetment [246]	Trench B	4
329	1	Upright round timber stake, revetment [246]	Trench B	4
330	1	Upright round timber stake, revetment [246]	Trench B	4
331	1	Upright round timber stake, revetment [246]	Trench B	4
332	1	Upright round timber stake, revetment [246]	Trench B	4
333	1	Structure number for timber revetment	Trench B	4
334	1	Timber plank, revetment [333]	Trench B	4
335	1	Group number for round stakes supporting [333]	Trench B	4
336	1	Group number for stakes supporting timber [311], part of [333]	Trench B	4
337	1	Stake supporting N. end of [333]	Trench B	4
338	1	Stake supporting timber [313], part of [333]	Trench B	4
339	1	Stone wall associated with modification of the bridge	Trench B	5
340	1	Stone bridge foundation	Trench B	3
341	1	Modern topsoil	Trench B	7
342	1	Infill between the timber revetment [333] and stone wall [339], friable light greyish-brown silty sand (unexcavated)	Trench B	5
343	1	Backfill of construction cut [344], against the western face of wall [176]	Trench B	5
344	1	Shelf-like, flat-bottomed construction cut for wall [176]	Trench B	5
345	1	Construction cut for walls [158] and [159]	Building 4	6a
346	1	Backfill deposit for wall [158]	Building 4	6a
347	1	Backfill deposit for wall [159]	Building 4	6a
348	1	Construction cut for wall [046]	Building 4	6a
349	1	Backfill deposit for wall [046]	Building 4	6a
350	1	Construction cut for wall [041]	Building 4	6a
351	1	Backfill deposit for wall [041]	Building 4	6a
352	1	Construction cut for wall [042]	Building 4	6a
353	1	Backfill deposit for wall [042]	Building 4	6a
354	1	Construction cut for wall [155]	Building 4	6a
355	1	Backfill deposit for wall [155]	Building 4	6a
356	1	L-shaped construction cut for walls [156] and [157]	Building 4	6a

Context	Area	Description	Building / sub-division	Phase
357	1	Backfill deposit for [156]	Building 4	6a
358	1	Backfill deposit for [157]	Building 4	6a
359	1	Construction cut for walls [052] and [062]	Building 4	6a
360	1	Backfill deposit for wall [052]	Building 4	6a
361	1	Construction cut for wall [060]	Building 4	6a
362	1	Construction cut for wall [058]	Building 4	6a
363	1	Construction cut for wall [061]	Building 5	6b
364	1	Backfill deposit for wall [061]	Building 5	6b
365	1	Construction cut for wall [064]	Building 5	6b
366	1	Backfill deposit for wall [064]	Building 5	6b
367	1	Construction cut for [368]	Building 5	6b
368	1	Brick wall [368] - northern wall of calving pen	Building 5	6b
369	1	Backfill deposit for wall [368]	Building 5	6b
370	1	Construction cut for wall [371]	Building 5	6b
371	1	Brick wall [371] -eastern wall of calving pen	Building 5	6b
372	1	Backfill deposit for wall [371]	Building 5	6b
373	1	Sub-floor deposit below [056]	Building 5	6b
374	1	Sub-floor deposit below [050]	Building 5	6b
375	1	Sub-floor deposit below [055]	Building 5	6b
376	1	Backfill against wall [060]	Building 4	6a
377	1	Backfill against wall [058]	Building 4	6a
378	1	Sloping cobble surface south of L-shaped barn	Building 4	6a
379	1	Threshold between stable block and exterior surface	Building 4	6a
380	1	Backfill of brick chamber [144]	-	6a
381	2	Trench for drain [104]	Building 3	6a
382	2	Backfill of drain [104]	Building 3	6a
383	2	Construction cut for wall [103]	Building 3	6a
384	2	Backfill of [383]	Building 3	6a
385	2	Construction cut for wall [087]	Building 3	6a
386	2	backfill of [385]	Building 3	6a
387	2	Construction cut for wall [101]	Building 3	6a
388	2	backfill of [387]	Building 3	6a
389	2	Ash pit fill, structure [100]	Building 3	6a
390	2	Construction cut for walls [107/108]	Building 3	6a
391	2	Backfill of [390], [107/108]	Building 3	6a
392	2	Construction cut for wall [104]	Building 3	6a
393	2	Backfill for [104] cut [392]	Building 3	6a
394	2	Construction cut for wall [102]	Building 3	6a
395	2	Backfill against wall [102], within cut [394]	Building 3	6a
396	2	Construction cut for wall [109]	Building 3	6a
397	2	Backfill for construction cut of wall [109]	Building 3	6a
398	2	Construction cut for wall [132]	Building 3	6a
399	2	Backfill for construction cut of wall [132]	Building 3	6a
400	2	Construction cut for wall [114]	Building 3	6a
401	2	Backfill for construction cut of wall [114]	Building 3	6a
402	2	Construction cut for wall [106]	Building 3	6a
403	2	Backfill for construction cut of wall [106]	Building 3	6a
404	2	Construction for wall [405]	Building 3	6a
405	2	Wall [405]	Building 3	6a
406	2	Backfill of wall [405]	Building 3	6a
407	2	Cut for wall [408]	Building 3	6a
408	2	Wall [408]	Building 3	6a
409	2	Backfill for wall [408]	Building 3	6a
410	2	Backfill for wall [111]	Building 3	6a
411	2	Cut for wall [111]	Building 3	6a
412	2	Cut for wall [112]	Building 3	6a
413	2	Backfill for wall [112]	Building 3	6a
414	2	Construction cut for wall [088]	Building 2	5
415	2	Backfill for wall [088]	Building 2	5
416	2	Bedding layer	Building 1	6a

Context	Area	Description	Building / sub-division	Phase
417	2	Bedding layer	Building 1	6a
418	2	Construction cut for wall [078]	Building 1	6a
419	2	Backfill of construction cut against wall [078]	Building 1	6a
420	2	Backfill of construction cut against wall [078]	Building 1	6a
421	2	Cut for drain [095]	Building 1	6a
422	2	Backfill above drain [095]	Building 1	6a
423	2	Construction cut for wall 031	Building 1	5
424	2	Backfill of construction cut against wall 031	Building 1	5
425	VOID	VOID	VOID	VOID
426	2	Construction cut for wall [427]	Building 3	6a
427	2	Buttery wall	Building 3	6a
428	2	Backfill against wall [427]	Building 3	6a
429	2	Construction cut for wall [430]	Building 3	6a
430	2	Buttery wall of internal installation	Building 3	6a
431	2	Backfill against wall [430]	Building 3	6a
432	2	Construction cut for wall [433]	Building 3	6a
433	2	Buttery wall of internal installation	Building 3	6a
434	2	Backfill against wall [433]	Building 3	6a
435	2	Construction cut for wall [436]	Building 3	6a
436	2	Buttery wall of internal installation	Building 3	6a
437	2	Backfill against wall [436]	Building 3	6a
438	2	Threshold adjacent to wall [074]	Building 1	6a
439	1	Brick column on the eastern side of Building 5 loose box	Building 5	6b
440	2	Construction cut for walls [009] and [011]	Building 6	6b
441	2	Backfill within construction cut [441] above walls [009] and [011]	Building 6	6b
442	2	Concrete surface	Building 7	6c
443	1	Natural clay - western side of moat	Trench B	1
444	1	Natural clay - western side of moat	Trench A	1
445	1	Natural clay - eastern side of moat	Trench A	1
446	1	Natural sand	Trench A	1
447	1	Natural sand	Trench B	1
448	1	Natural clay	Trench C	1
449	1	Natural sand	Trench C	1
450	2	Natural Clay	-	1
451	2	L-shaped brick wall - Building 7	Building 7	

APPENDIX 2: FINDS REPORT

Introduction

The artefactual assemblage comprises finds from various material categories, the bulk of which comprise pottery (late medieval and post-medieval), ceramic building material, and animal bone. There are also significant quantities of wood and leather shoe fragments, as well as clay tobacco pipes, glass, metalwork and palaeoenvironmental data. As part of the assessment process, two items from the assemblage, Finds Numbers (FN) 4 and 106 were subjected X-ray fluorescence (XRF) analysis courtesy of the University of Salford School of Science, Engineering and Environment to identify the material from which they were fabricated. Moreover, a single sample of oak from moat structure [333] was submitted for dendrochronological dating by the Nottingham Tree-ring Dating Laboratory which produced a felling date of between 1565 and 1590 (Arnold and Howard 2022). In addition, a total of seven samples from wattle revetment [246] and part of the structure [333] were submitted for species identification.

An assessment of each class of artefact/ecofact is provided in the following sections. The aim of the finds assessment is to evaluate all classes of archaeological material from the initial evaluation trenching and the excavation to assess their research potential and significance.

Methodology

Finds were collected using a 100% collection policy on site during the evaluation and excavation. Most metal finds were recovered from the spoil heap by metal detector. All finds were returned to the Salford Archaeology finds laboratory in sealed and labelled polyethylene bags. All finds were washed, except metal, which were dry brushed, and grouped by material for assessment. Organic finds such as wood and leather were carefully washed, hydrated and double bagged to aid preservation.

Overview

The finds assemblage was recovered from 45 stratified and unstratified contexts. The assemblage comprises a mixture of materials dating from the later medieval to modern period, with a total finds count of 1673, weighing 112.375kg (Note; waterlogged material has not been weighed; Table A2.1). The assemblage is in fair to good condition, with little signs of abrasion noted on the pottery and CBM, which contains numerous re-fitting sherds. The leather is in good condition, whilst the wood is in fair to good condition. Both of these material types are currently hydrated and refrigerated or being stored in a water tank at Salford Archaeology's Finds Lab.

Pottery comprises 33.11% by count and 25.94% by weight of the assemblage, totalling 554 sherds, with late medieval and Post-medieval accounting for the majority of the material collected, with only a small quantity later 18th century and 19th century sherds being present.

Significant quantities of the pottery, CBM, wood and leather were derived from sealed moat deposits, representing regionally important instance of stratigraphically sequenced late medieval and Post-medieval finds assemblage from the county of Lancashire.

Material	Number of contexts	Count	Weight (g)	% of total assemblage by count and weight	Period (century)
Pottery	30	554	29147	33.11%/25.94%	13 th -19 th
Clay tobacco pipe	12	33	176		17 th
Metal objects	14	65	1414		
Glass	10	45	800		
Leather	10	176	N/A		
Wood	15	131	N/A		
Ceramic objects	1	2	17		
Ceramic building material	19	153	49626		
Industrial, stone and building material	11	40	5257		
Animal Bone	18	472	25938		
Organics	2	2	N/A		

Table A2.1: all material recovered

The pottery

Quantification

The pottery assemblage recovered from the site consisted of 554 sherds weighing 29.147kg from 30 stratified and unstratified contexts. A small number of the sherds date from the later medieval period, with the majority of the pottery dating to the mid-16th to early 18th century, with only a small amount of later 18th and 19th century material present (see Table x2). The pottery was sorted and catalogued by pottery ware type and fabric, identifying vessel forms

present and any decoration. Where possible, sherds from the same vessels were catalogued together. The pottery has been classified using the Salford Archaeology fabric series.

Assessment

In general terms, the pottery was in good condition and, with many large sherds, few of which were heavily abraded or rolled and the breaks were clean, suggesting little post-depositional disturbance. In some cases, this was corroborated by the recovery of closely-dateable groups with little, or no, intrusive material. Pottery forms, particularly from the late medieval material and dark-glazed earthenwares were indefinable within the assemblage with good examples of cup and mug forms, storage vessels such as bung-hole jars which can be attributed to forms previously identified in the North West, Yorkshire and the North Midlands.

Pottery type	Number of contexts	Count	Weight (g)	% of total assemblage by count and weight	Date (century)
Medieval					
Partially reduced oxidised ware	4	12	2558		L12th-14th
Partially reduced grey ware	3	4	204		L12th-14th
Reduced green-glazed ware	2	10	1405		15th-18th
Medieval pottery non-specific	1	1	6		Medieval
Sub total		27	4173	4.87% / 14.32%	
Post-medieval					
Early post medieval finewares (Rainford/Cistercian type)	9	53	2647		15th-16th
Early post medieval coarseware (Midlands purple type)	12	60	5009		15th-16th
Dark glazed fineware (blackware)		22	853		17th-18th
Dark glazed fineware (late)	3	5	102		18th
Dark glazed coarse ware	17	210	11227		17th-20th
Self coloured earthenware	9	55	1744		17th-19th

Mottled ware	11	29	866		17th-18th
Slipware	9	32	777		17th-19th
Coarse red earthenware	1	3	91		17th-19th
German stoneware - Raeren type	2	3	228		Late 15th-17th
Stoneware (British)	3	11	486		18th-20th
Tin glazed earthenware	2	5	32		Early 17th - 18th
Yellow glazed earthenware	5	16	394		16th-18th
Sub total					
Industrial and modern					
Agate	1	1	4		18-19th
Refined white earthenware		21	419		Late 18-20th
Unglazed redware (plant pot)	1	1	95		18th-20th
Sub total					
Total		554	29147		

Table A2.2: Quantification of all fabric types recovered

Pottery types identified in the assemblage are presented in Table A2.2. The major pottery types include medieval fabrics and Dark glazed coarse wares. Amongst the Dark glazed coarse wares at Farington, there are significant quantities of Midlands purple type ware, Cistercian type ware and later blackware. Also prominent amongst the assemblage were Self coloured earthenwares and Mottled ware. Small quantities of imported German stoneware were also found in the moat. Such material, although notable on the east coast, is not exactly common (see for instance Didsbury 2011), contrasts with its presence in the North west where it remains a rare find. It is however, extremely diagnostic, particularly in terms of dating (ibid).

The medieval assemblage is significant as it adds to the growing corpus of stratified medieval pottery uncovered in Lancashire. The presence of Cistercian type ware and Midlands purple type coarse ware is particularly significant as the assemblage contains well preserved full and

partial profiles which presents a good potential for research into vessel forms, fabric types and dating evidence. The occurrence of some of the pottery in stratified contexts that also contained well preserved leather shoes provides an important opportunity for refining the dating.

Context

Given that the main focus of the excavation was the moat it is not entirely unexpected that the bulk of the pottery was derived from this feature and its associated structures. However, some 59 fragments, weighing 2514g (10.65% by count; 8.63% by weight) was retrieved from the topsoil [701], later surfaces [138] and layers [149], [151,] and [113].

The earliest moat fill to produce pottery was [277], which contained Midlands purple-type ware, and the complete base from Raeren-type German stoneware mug base and red earthenware. Generally, the latter fabric has been dated to the 17th century in Lancashire (Cook et al 2020, 103), but is seen in Yorkshire as a 'late medieval transitional' fabric dating to the late 15th or early 16th century (Didsbury 2011). A date based on the Raeren-type stoneware and associated shoes would suggest a deposition date of c. 1475-1550.

Where the moat was investigated during the evaluation (Trench 7), the earliest deposit [704] also produced pottery. This included large refitting sherds from a Reduced green-glazed ware bunghole jar, residual sherds of medieval Partially reduced oxidised ware and a single fragment of Self coloured earthenware. The Reduced green-glazed bunghole jar is reminiscent of Silverdale type ware and broadly dates from the late 15th to 18th century (Penney 1980; White 2000). Taken together, a 17th-century date may be applicable for deposition in this part of the moat.

Stratigraphically above the earliest moat fills was the remains of a stone bridge, which produced two pot bearing deposits [274] and [275]. These deposits only yielded two sherds of Midlands purple-type ware suggesting a late 15th – 16th-century deposition date.

Post-dating the bridge was a recut within the moat, with two deposits [237] and [260] being particularly rich in all classes of finds. These deposits producing between them 103 fragments weighing 6655g comprising 18.59% by count and 22.83% by weight of the total amount of pottery.

Fill [237] contained Midlands purple-type, Rainford/Cistercian type, black ware, Self coloured earthenware and Raeren-type German Stoneware. There were residual sherds of medieval Partially reduced grey and oxidised wares and an intrusive fragment of Pearlware. Shoes from this deposit have been preliminary dated to the period 1500-1550. Fill [260] produced similar material, with a Partially reduced oxidised urinal of late medieval date being notable. Slipware,

possibly 17th-century Buckley sgraffito ware, shoes dating to the period c. 1550-1600, and absence of clay tobacco pipe might suggest mid-16th to early 17th-century date for emplacement.

A causeway across the moat dominated the succeeding phase. This comprises deposits: [172, 177, 180, 206, 214, 215, 217, 218, 219 and 220]. Dark glazed wares were prominent amongst the assemblage comprising Midlands purple-type, Rainford/Cistercian-type, as well as Blackware and coarse wares. Midlands purple and Rainford/Cistercian types perhaps representing the disposal of older, less fashionable pots. The presence of self-coloured earthenware, slip-coated buff ware, yellow glazed earthenware, trailed slipware and mottled ware indicate a 17th-century date. While the occurrence of Clay tobacco pipe bowls dating to c. 1640-1660 within this phase and the lack of later fragments would suggest a mid to late 17th-century date for the construction of the causeway and deposition of pottery. A single fragment of transfer printed earthenware, weighing 1g, is probably intrusive in this instance.

Only three pottery bearing deposits [138], [147] and [149] were amongst the later structural features form the final phase of the excavated remains. Layer [138], a sub-floor deposit below the stables/outbuildings produced, along with later material, Rainford/Cistercian-type ware that was likely part of the disposal of older less fashionable pottery, whilst the Partially reduced oxidised ware was likely residual in this context. Dark glazed coarse wares, Blackware, Mottled ware and slip trailed wares are all probably contemporary and suggest deposition in the later 17th to early 18th century. It is possible that Reduced green-glazed ware, reminiscent of the pottery produced at Silverdale, on Morecambe bay, may also have been, if not contemporary, then had not long passed it's sell by date, as it is thought that it was still being produced in the 18th century (Penney, 1980).

The most recent features comprise deposit [149] and fill [147] of drain [146]. Deposit [149] produced a range of early to later 19th century pottery that included Industrial slipware, Pearlware including a plate with Neo-classical styled rim and a fragment of spongeware.

Drain fill [147] contained painted China, 18th-19th-century brown stoneware, 67 sherds of dark glazed coarse ware, perhaps 17-18th century in date including kitchen and/or dairy wares, as well as an unusual vessel, possibly an Industrial base belonging to the lower part of a distillation unit (Medieval Pottery Research Group (MPRG) 1998). Other wares included self coloured earthenware pipkin fragments, slip decorated ware and a mottled ware pancheon rim, all of which date to 17th or earlier 18th century. The diverse dating of the fill might suggest that the drain had cut through earlier deposits other than [149].

Fabric types

Medieval

The 27 sherds of medieval pottery, accounting for 4.87% by count and 14.32% by weight, were all derived from stratified contexts. The pottery has been grouped into broad fabric types comprising orange and grey partially reduced wares and Reduced green-glazed ware. Partially reduced wares, based on typological similarities to other regional ware types date to the late 12th-14th century, whilst Reduced green-glazed wares were introduced in the 15th century and in some case were still in use in the 17th/18th century.

Twelve fragments of orange Partially reduced wares were recovered during the excavations. Some of the orange partially reduced fabric bears some similarity to the pottery recorded at nearby Cuerden which lies 2km to the north-west (Cook et al 2020, 91-94). Both the Farington and Cuerden pottery can be compared with the pottery found at the Samlesbury production site (Wood et al 2009), located approximately 7km to the north-west, which based on typological grounds have been dated to the 13th-14th century. These were all likely to be residual within later contexts.

The exception to this dating being the large bunghole jar fragment from recut moat fill [237] where the context dates to the mid to late 16th or early 17th century (Plate A2.1). This vessel, due to the large size of the sherd suggests primary deposition. Perhaps indicating that it was either being curated or part of a late surviving partially reduced tradition. The same can be said of a urinal (Plate A2.2), also from the recut moat, but from fill [260]. It should be noted that although bunghole jars were a recovered from Samlesbury, urinals were a noteworthy absence from the Samlesbury repertoire (Wood et al 2009).



Plate A2.1: Partially reduced bunghole jar, scale: 5cm

Four other sherds of partially reduced greyware were recovered from moat recut fills [237 and 260] and fill [239]. Of note was a large knife trimmed body sherd from fill [260], which a drilled hole possibly as part of a repair. This internally and externally glazed sherd was reminiscent of Carlisle Partially Reduced Grey ware Fabric 15 and 17, and Partially Reduced Grey wares from Penrith (Brooks 2010; Newman et al 2000).



Plate A2.2: Partially reduced urinal, scale: 5cm

Late medieval Reduced green-glazed ware was retrieved from evaluation moat fill [704] and from a sub-floor deposit below stables/outbuilding [138]. All the Reduced green-glazed ware appears to be Silverdale-type ware named for the location of the kiln sites on Morecambe Bay (White 2000). That from [704] is a near complete bunghole jar (Plate A2.3), whilst the joining sherds from [138] are from a jug form. Late medieval Reduced green-glazed wares are a widely occurring fabric found throughout England from north of the Rivers Ribble and Humber. The tradition also continues north into the Scotland (McCarthy and Brooks 1992; Watkins 1987; Didsbury 2010; Hall 1996). Such wares were thought to in production from the late medieval period until the 18th century.

Silverdale-type wares are thought to have a similar production chronology (White 2000; Penney 1980). Regionally, Silverdale-type wares have been identified at sites in Cuerden (Cook et al 2020, 91-94), around Lancaster and Morecambe Bay and Kendal (Penney 1980;

Whitehead et al 2013), with similar a fabric having been excavated some 30km to the south-east at Bury Castle (Tyson 1986).



0 5 cm



Plate A2.3: Silverdale type ware bunghole jar, scale: 5cm

Post-medieval

Dark glazed earthenware

Dark glazed earthenware forms the largest fabric group comprising 347 fragments weighing 19.747kg. (62.64% of the pottery assemblage by count and 67.75% weight). The assemblage dates from the late 15th/early 16th century and extends into the early 18th century. The assemblage consists of late medieval/Post medieval finewares (Rainford/Cistercian types) and coarseware (Midlands purple type), through later fine wares and a more generic group of later coarsewares.



Plate A2.4: Rainford/Cistercian type two handled cup, scale: 5cm

Post medieval finewares: Rainford/Cistercian type and Blackwares

Some 53 sherds weighing 2647g (representing 9.57% by count and 9.08% by weight) were retrieved from nine stratified contexts. Prominent amongst Dark glazed earthenware are a number of well preserved cup forms with partial or complete profiles. The fabric ranges from an oxidised orange to reduced dark purple. Glazing is a very consistent metallic shiny lead-based glaze, appearing dark purple on reduced fabrics and dark brown on oxidised fabrics. Variation in fabric is most likely directly related to differential firing temperatures in the kiln (Cook et al 2020, 100).



Plate A2.5: Chafing dish, scale: 5cm

Cup forms with comparators to vessels identified at excavated kiln sites in Rainford (Merseyside) and Wrenthorpe (West Yorkshire) have been identified in Moat recut fills [237 and 260] (Philpott 2015; Moorhouse and Roberts 1992) (Plate A2.4). A complete base from a waisted three handled chafing dish was recovered from causeway deposit [177] (Plate A2.5). A similar three handled yellow ware chafing dish, but with a pedestal base, was revealed at

the nearby site at Cuerden to the north-west of the present site. Other dark glazed chafing dishes are known from the Rainford production site (Philpott 2015, 79-80).



0 5 cm

Plate A2.6: Large dark glazed fineware mug: 5cm

Rainford/Cistercian type vessels have been found in the south of the historic county of Lancashire and northern Cheshire, with particular concentrations at moated or high status sites such as Bury Castle (Tyson 1986) and Speke Hall (Higgins 1992). Cistercian ware in West Yorkshire is recorded from the late 15th century whilst west of the Pennines Rainford/Cistercian type wares are thought to have been first manufactured in the second half of the 16th century (Philpott 2015, 92).

As well as the Rainford/Cistercian type ware a smaller amount of the later fabric type commonly referred to as Blackware was also found. Such vessels are a 17th-18th development of Rainford/Cistercian wares. Some 22 sherds weighing 853g were found during the excavations. Fabric and glazing being very similar to Rainford/Cistercian types, however the vessel forms are quite distinct. Vessels were retrieved from moat recut deposits [237 and 260] and evaluation moat deposit [703] and causeway deposits [180 and 217]. Like the Rainford/Cistercian wares there are several well preserved profiles analogous to vessels identified at other sites in the region, such as at Bury Castle (Plate A2.6) and Rainford and recorded as part of the Staffordshire Blackware type series (Philpott 2015, 85-7; Barker 1986; Tyson 1986; Plate A2.7).



Plate A2.7: Dark glazed fineware cup

The final element of dark glazed finewares represented in the assemblage were five fragments, weighing 102g, of 18th century material. These were represented by a base, handles and a body sherds. The pottery was recorded from the causeway [206] and from the upper moat fill recorded in evaluation Trench 1.

Post medieval coarse wares: Midlands purple and later dark glazed coarse wares

Dark glazed coarsewares accounted for 48.74% by count and 55.7% by weight of the pottery assemblage (see Table A2.2 for quantification). The coarseware fabric can be divided into the earlier late 15th/16th century Midlands purple type represented by 60 sherds, weighing 5009g (10.83% by count 17.09% by weight) and later 17th-19th century dark glazed coarse ware. Some 210 fragments of the latter were retrieved, weighing 11227g (37.91% by count and 38.52% by weight).



0 5 cm

Plate A2.8: Midlands purple type cistern jar, scale: 5cm

Midlands purple ware is a hard fired fabric appearing dark red to purple, with patchy glazing that is dark brown on oxidised sherds and purple on reduced examples (Cook et al 2020, 106-107). It is a widespread tradition known from sites south of the Ribble in the North-West and across the West Midlands as well as Derbyshire, Staffordshire, Yorkshire and Shropshire (ibid). Geographically, similar traditions can be found in the more southerly counties of Northamptonshire, Cambridgeshire, Bedfordshire and Buckinghamshire, whilst a similar pottery can be found in North-West France known as grès normands (Slowikowski, 2011; Finlaison 2019). Given that this type of pottery, along with its regional variations and production sites, has been recognised over a large area of the England, a 'North West Purple Ware' has been proposed for the material produced at Prescott and Rainford (Philpott 2015).



Plate A2.9: Midlands purple type waster medallion, scale: 5cm

At Farington, early moat fill [277] produced a large jar fragment with vertical loop handle, decorated with three horizontal applied thumbed strips (Plate A2.8) whilst the later recut moat fills [237 and 260] also included large fragments of a bung-hole jar, a possible chamber pot, bowl and jar rims. Also, of note from moat fill [260] was a an overfired decorated bodysherd from rounded hollow ware vessel with cross stamped applied medallion (Plate A2.9). Such cross stamps on 17th century vessels are thought to represent Catholic sympathies in a Protestant dominated country (National Museums Liverpool 2021).

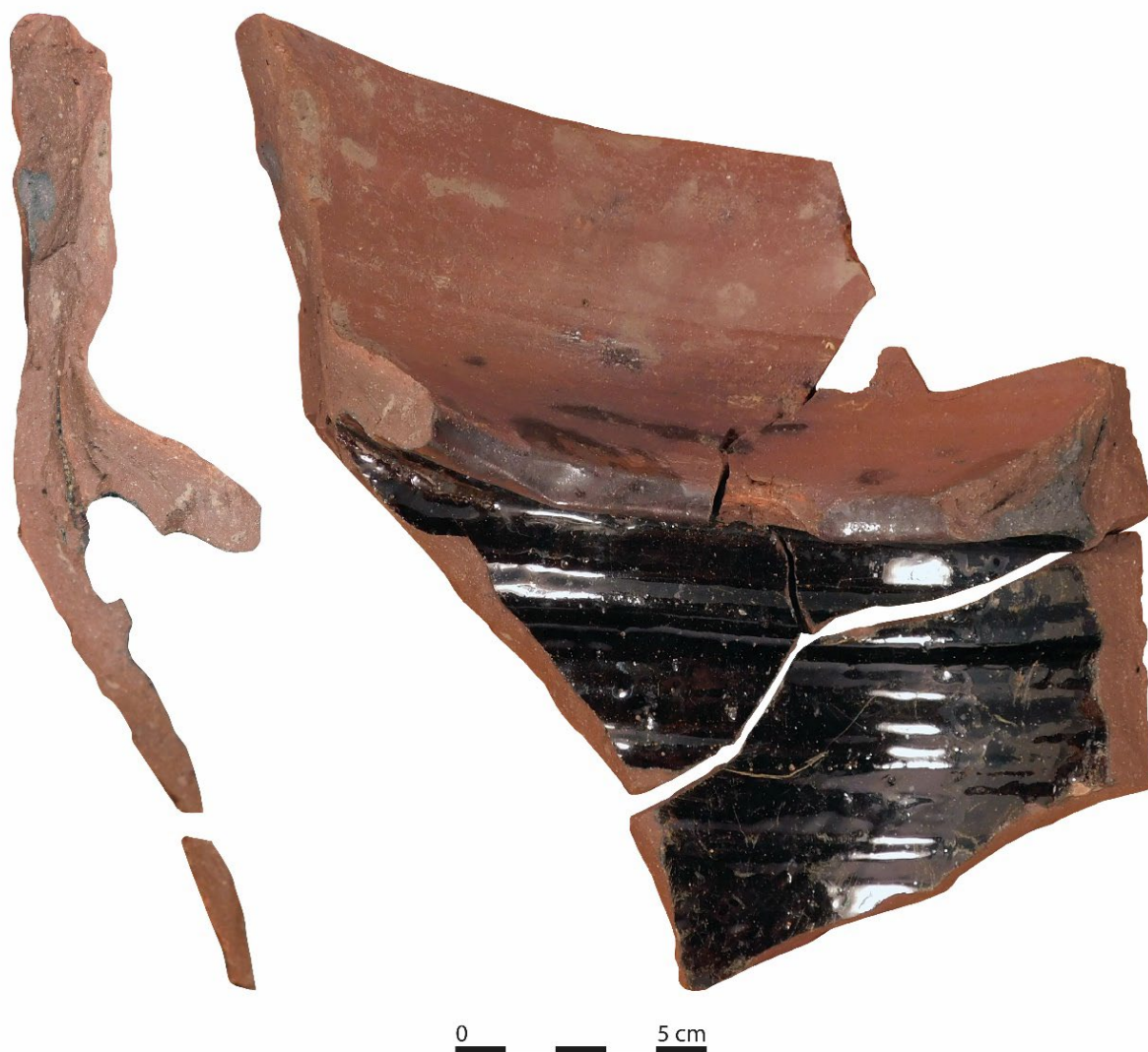


Plate A2.10: Dark glazed coarseware, scale: 5cm

Later dark glazed earthenware developed out of the Midlands Purple ware tradition and continued to be produced into the 19th century. Much of the coarseware was utilitarian in nature reflecting its general use in kitchens or dairies. Fabrics range from brick red to dark purple and an overfired grey. Glazes range from a dark brown to dark purple to almost black with some inconsistent application. Vessels identified at Farington included large flaring bowls or pancheons and a range of cylindrical and rounded jar types. Rarer forms include a possible chamber pot and a vessel that may have been used in distillation (Plate A2.10) from the fill of a service trench [147] and a possible frying pan from causeway deposit [180].

Similar collections of coarsewares have been recovered from Cuerden, Rainford, Norton Priory, Prescott and Greengate Towers in Salford, and they are a typical fixture in any early post-medieval pottery assemblages in the North West of England (Cook et al 2020; Philpott 2015; Brown Howard-Davies; 2008; Davey 1989 and OAN 2014).

The precise dating of the dark-glazed coarseware from Farington and indeed elsewhere is difficult, as these typically utilitarian forms change little over time. This difficulty is compounded by the problem of attributing pottery sherds to products of individual pot houses due to the similarity of fabrics. As most of the potteries south of the River Ribble used the coal measures clays, which are effectively indistinguishable (Miller et al 2018).



Plate A2.11: Self-coloured earthenware bowl, scale: 5cm

Yellow and Self-coloured ware

Yellow and Self-coloured ware formed 9.93% and 2.89% respectively by count and 5.98% and 1.35% by weight of the pottery assemblage (See Table x2 for quantification). Self-coloured wares and Yellow wares are very similar in terms of fabric and glaze, as well as being of similar date, and for the purposes of this assessment these wares types will be discussed together. Yellow ware fabrics can range from pale pink, through cream to yellow with a near transparent lead glaze firing yellow in an oxidising atmosphere, whilst Self-coloured ware fabric are darker with usually a greater occurrence of iron in the clay creating a darker 'honey' colour to the glazes (Motteshead et al in prep).

Self-coloured ware was identified in nine stratified contexts including moat deposits [704], [237] and [260], whilst yellows wares were retrieved from the causeway and non-moat deposits. As both of these contexts groups have been provisionally dated by the presence of clay tobacco pipes to the mid-17th century, this difference may be due to different disposal methods.

Due to the smaller number and fragmentary nature of the Yellow ware, few forms have been identified at this stage, other than a jar or cup base. More forms were recognisable amongst the Self-coloured ware, which comprised dishes (Plate A2.11), pipkins - jars adapted by the addition of a straight handle and often used for cooking - bowls and a possible dripping pan,

a type of dish specifically designed to catch the juices from roasting meat (MPRG 1998; Plate A2.12).

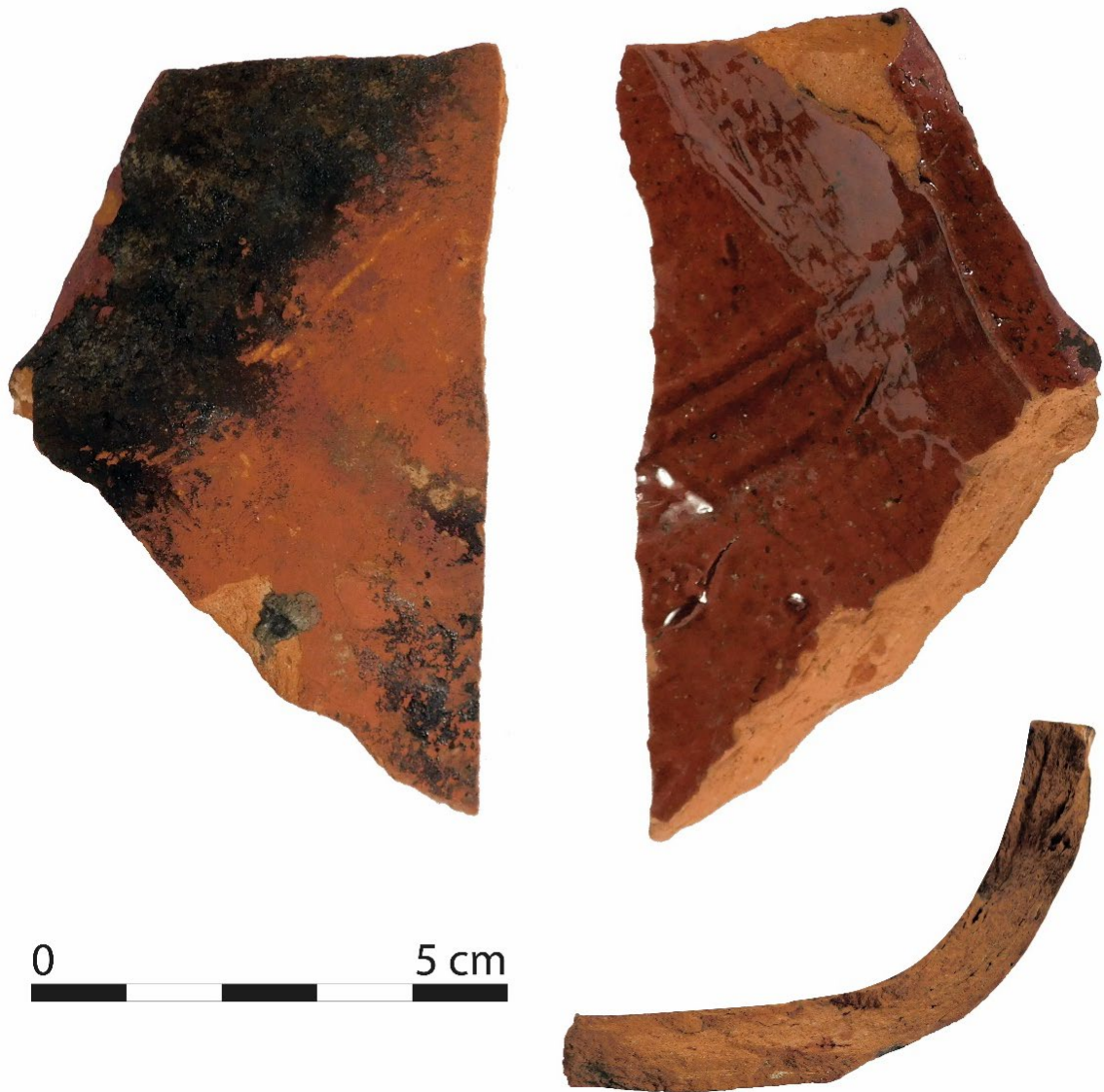


Plate A2.12: Self-coloured dripping pan, scale: 5cm

Yellow wares and Self-coloured wares are not infrequent finds from sites in Lancashire and Cheshire, with one or both fabrics being recorded at Cuerden, Rainford, Norton Priory and Old Abbey Farm, Risley (Cook et al 2020; Philpott 2015, 105-08, Brown and Howard-Davies 2008, 349-50 and Heawood et al 2004, 113). However, these wares are generally minor component in the North west, although perhaps occurring at Farington in greater frequency.

Slip ware

Some 32 fragments of Slip ware weighing 777g were recovered from nine stratified and unstratified contexts (Plate 13). Slip ware is a somewhat generic term for a variety of ware-types that describe earthenware pottery decorated with slip, or a liquid clay (Barker 1993, 3). The earliest material recovered unstratified and from recut moat deposit [260], resembles Buckley/Cheshire type sgraffito ware of the mid to late 17th century. Later 17th to early 18th century press moulded vessels, often with slip-trailed decoration are more common, although the addition of jug/jar fragment is altogether rarer (Plate 14). Like Yellow and Self-coloured wares they form a minor component of Post-medieval pottery assemblages in Lancashire, Merseyside and Cheshire, however, of note were those recovered from Prescott, Merseyside (Rowe and Miller 2021).

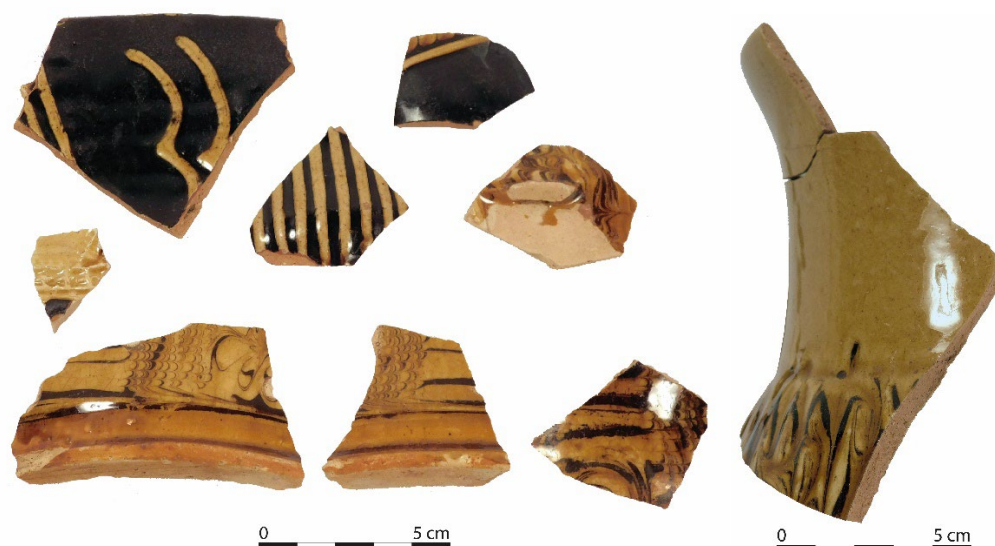


Plate A2.13 & 14: Slipware; slipware jar, scale: 5cm

Mottled ware

In total 29 sherds weighing 866g were collected from 11 stratified and unstratified contexts. The fabric is hard and consistent, buff to cream in colour with sandy inclusions. Glazing appears shiny yellow to brown and speckled. Dr plot records in his Natural history of Staffordshire that pottery of 'Motley-colour' was being produced in that country by 1686. There is also 18th century evidence of Mottled ware production at Prescott (McNeil 1989; Philpott 1989)

Few profiles were present, with the significant exception of a porringer or necked cup (Plate A2.15) with a horizontal side handle recovered from the upper fill of the moat [105] as

investigated during the evaluation (see Barker, 1986, blackware, Staffs Arch Studies, No 3, fig 2; 20 and 21). This context is dated to the mid-late 18th century.



Plate A2.15: Mottled ware porringer, scale: 5cm

Stoneware

Some 14 fragments of stoneware weighing 714g were retrieved from five stratified and unstratified contexts. This a broad category of ware types that includes pottery produced in England and also European imports. The earliest material comprises three fragments of German stoneware, which were retrieved from moat deposits [277] and [237] (Plate A2.16). All three fragments belong to a rounded mug form, although it is uncertain whether they are from the same vessel. The fabric is hard and reduced to a uniform grey colour with a glossy grey glaze with an iron wash. The base from [277] is frilled with a thick, undulating footring (MPRG 1998) whilst the two joining sherds from [237] represent a simple upright rim, with internal sooting and on break. Both vessels are likely to have been produced in Raeren in the Rhineland, Germany and date to between c 1475-1550 (Didsbury 2011). The remaining sherds are classified as British brown stoneware and comprise a bowl, pipkin and part of a flagon, which date from the late 17th to 19th centuries and were recovered from drain fill [147] and topsoil [701].



Plate A2.16: Raeren mug, scale: 5cm

Miscellaneous wares

This section comprises mostly small amounts of white earthenwares and transfer printed wares dating to the 19th century and a few early wares such as Tin glazed earthenware and red earthenwares (see table x2 for quantifications). The earliest material is represented by coarse red earthenware from moat deposit [277]. Generally, the latter fabric has been dated to the 17th century in Lancashire (Cook et al 2020, 103), but is seen in Yorkshire as a 'late medieval transitional' fabric (Didsbury 2011). Further work is required on this pottery type to establish its date and provenance. Also found were fragments 17th-18th century Tin glazed earthenware from drain fill [147] and layer [220]. Other than a single unstratified sherd of 18th-19th century Agate ware and plant pot (unglazed redware) the remainder were 19th century ware types such as Industrial Slipware, part of Neo-classical edgware plate, Pearlware and Spongeware.

Comparative material

A few good, well-stratified assemblages of late-medieval and post-medieval pottery from excavations in the North West have been published. These comprise the recently excavated material From Cuerden, South Ribble (Cook et al 2020) and China Street, Lancaster (Penney 1980). There are also several important groups from Merseyside, including material from pottery production sites at Prescott (McNeil 1989) and Rainford (Philpott 2015), as well as assemblages from South Castle Street, Liverpool (Davey and McNeil 1984), Norton Priory

(Brown and Howard-Davis 2008), and Speke Hall (Higgins 1989). Further afield, there are also important assemblages from Chapel Wharf, Salford (Rowe in prep).

Perhaps more relevant are a small number of stratified Post-medieval assemblages from moated sites such as Old Abbey Farm, Risley (Heawood et al 2004), Bewsey Old Hall, both near Warrington (Howard-Davis et al 2011), Bury Castle (Tyson 1986) and Sefton Old Hall, Merseyside (Lewis 1978). All these sites provide good comperanda for the pottery and wider finds assemblage found at Farington.

Potential

The excavations at Farington produced a significant and well stratified pottery assemblage of mostly Post-medieval and some medieval material, most of which was recovered from the moat. Sealed deposits within the moat provide a sequence of regional pottery types as well a few imported fabrics. Together, these have the potential not only to aid the dating of the archaeological sequence at Farington, but also a better understanding of vessel forms and fabric types being produced during this period. The assemblage also has the potential to gain a better understanding of where sites such as Farington were obtaining their pottery. Forms and fabrics found at the site, such as Reduced Greenware, Midlands purple-type Cistercian-type wares and Blackware have also been found at nearby Cuerden (Cook et al 2020), where it was noted that the site represents an assemblage with mixed regional ware types from both the Lancashire/Cumbria region and that of southern Lancashire.

There are similarities to the forms of Cistercian-type and Blackwares produced at Rainford (Philpott 2015), but of note are certain vessel forms such as the large cup from layer [161] and chamber pot from deposit [260] that are not found amongst the Rainford repertoire. An almost identical cup was recorded at Bury Castle (Tyson 1986), whilst a similar chamber pot from Staffordshire suggest that sites such as Farington were able to obtain their pottery from a variety of different sources.

The Post-medieval pottery assemblage from the excavations at Farington is of regional significance, and there is considerable potential to further research this collection to produce not only a better understanding of the chronology and taphonomy at the site, but also an opportunity augment the Post-medieval pottery sequence typology from the region. Further analysis of the assemblage will enable not only the reconstruction of vessel forms, identify fabric types from the late 15th/16th to early 18th centuries but, pending the results of the dendrochronological assessment, may provide key independent dating of the post-medieval contexts on the site.

As well as the potential described above the pottery also has the potential to address research questions posed in the North West Regional Research Agenda (Research Frameworks 2022a

and 2022b). The assemblage has the potential to further develop the understanding of the distribution networks for pottery production sites (LM54). Moreover, as expressed above, the assemblage further adds to the growing collections of Post-medieval pottery and the need to establish a regional synthesis (PM30). While the late medieval research question (LM55) concerning the need to develop a ceramic typology can be applied to both medieval and Post-medieval ceramics. Likewise, late medieval research question LM56 that seeks to identify different patterns of social interaction from artefact assemblage studies, can also be applied to pottery from both periods. These can be contrasted with other rural sites, such as Cuerden, that appears to be a non-elite settlement. Contrasting the Farington pottery with urban assemblages, such as those from Lancaster (Penney 1980) and Greater Manchester would also aid this research question.

Furthermore, the continuing retrieval of sizable and well stratified pottery assemblages, like that from this site, requires, a standardised approach to recording Post-medieval ceramics (PM31). This assemblage along with others such as the production site at Rainford has the ability to produce a chronology of post-medieval fabric types. In combination with those assemblages from sites such as Cuerden and Chapel Wharf, Salford can aid the plotting of the distribution of fabric types such as Midland Purple-type wares and Reduced Greenwares in the region (PM32).

The identification of pottery types at Farington from different parts of the region as well as European imports also has the potential to expand current knowledge of trades of commerce in the North West (PM34). The identification of specific vessel forms such as multiple-handled cups and mugs and the increasing use of items such as chafing dishes can in turn highlight the introduction of new types of food and methods of food preparation and consumption during the period (PM39).

Analysis of the Farington pottery should consist of the characterisation and quantification of an assemblage for the purposes of interpretation and reporting. Attributes to be recorded include fabric and vessel type, the form of component parts, sherd type, sherd thickness, decoration, surface treatment, vessel size, source, method of manufacture, evidence for use and condition as set out A Standard for Pottery Studies (Prehistoric Ceramics Research Group et al 2016).

Clay tobacco pipes

Context	Count	Weight (g)	Date	Description
177	1	7	c1640-1660	One milled bowl with un-stamped heel,

152	1	7	c1640-1660	Bowl with milled rim and partial heel (no stamp)
161	6	23	c1640-1660	Two bowls, one of which is stamped and four stems
180	1	5	Not closely datable	One stem
206	5	24	c1640-1660	One unstamped bowl and four stems
217	6	33	c1640-1660	Two bowls with stamps and four stems
218	7	43	c1640-1660	Two bowls, one with partial stamp on bowl, (letters illegible) and one with heel (no stamp), plus four stems and one heel
220	5	31	c1640-1660	One bowl, partially milled with possible stamp on bowl and four stems
273	1	3	Not closely datable	One stem

Table A2.3: Quantification of the clay tobacco pipes

Quantification

Some 33 fragments of clay tobacco pipes, weighing 176g from nine stratified and unstratified contexts were recovered during the excavation. Amongst the fragments were eight bowls, some with spurs and five with stamps, that can be dated to c 1640-1660 (See Table A2.3; Plate A2.17).

Potential

There is some limited potential for further research to establish the clay pipe manufacturers from the stamps. The stems should be analysed to check for residuality amongst the assemblage and whether it represents a coherent and potentially tightly dated group (Higgins 2017). However, a note of their presence or absence within stratigraphic deposits should be made, and the broad dating that has been attributed to individual fragments will need to be amalgamated with the stratigraphic narrative.



Plate A2.17: Clay tobacco pipe bowls, 1640-1660

Coins

Quantification, Assessment and Potential

Three coins were recovered during the excavation, two of which were unstratified whilst a third was recovered from fill [204]. Finds numbers 107 and 135 were a George V, 1917 one penny and heavily corroded Victorian half penny, the date of which was not visible. The third,

although unstratified was a 19th century Ottoman copper alloy 10 para coin (FN 129; Plate A2.18).



Plate A2.18: Ottoman coin obverse and reverse, scale 5cm

Ottoman 10 para coin (identification by Alex Payne)

The coin is dated 1860/1 (Hijri Islamic calendar 1277) from late Ottoman Egypt under Wali (a title somewhat like vassal or lord) Mohamed Sa'id Pasha, under Ottoman sultan Abdulaziz whose "Tughra" (name/signature) appears in calligraphic monogram on the obverse side to the date. Below the Tughra the value of the coin "10-papa" is given. The reverse side reads "8/Struck in Egypt/1277". A hole punched at its edge was presumably allowed the coin to be worn as a pendant, possibly for apotropaic purposes.

Potential

Other than the Ottoman coin the other coins have no further analytical potential. The Ottoman 10-para coin should be catalogued and brief description entered into the final report and any publication. The coin also has potential to elucidate the use of imported coins as good luck charms.

Non-ferrous metalwork (Silver, copper alloy and lead)

Quantification

In total 57 non-ferrous objects weighing 1070g from 14 stratified and unstratified contexts were found during the excavation. This comprised a broad range of objects and categories from a 19th/20th century silver 'name' or 'Love' brooch, copper alloy mail armour and key chain, lead window came and lead pistol shot. The objects are stable and in good condition.

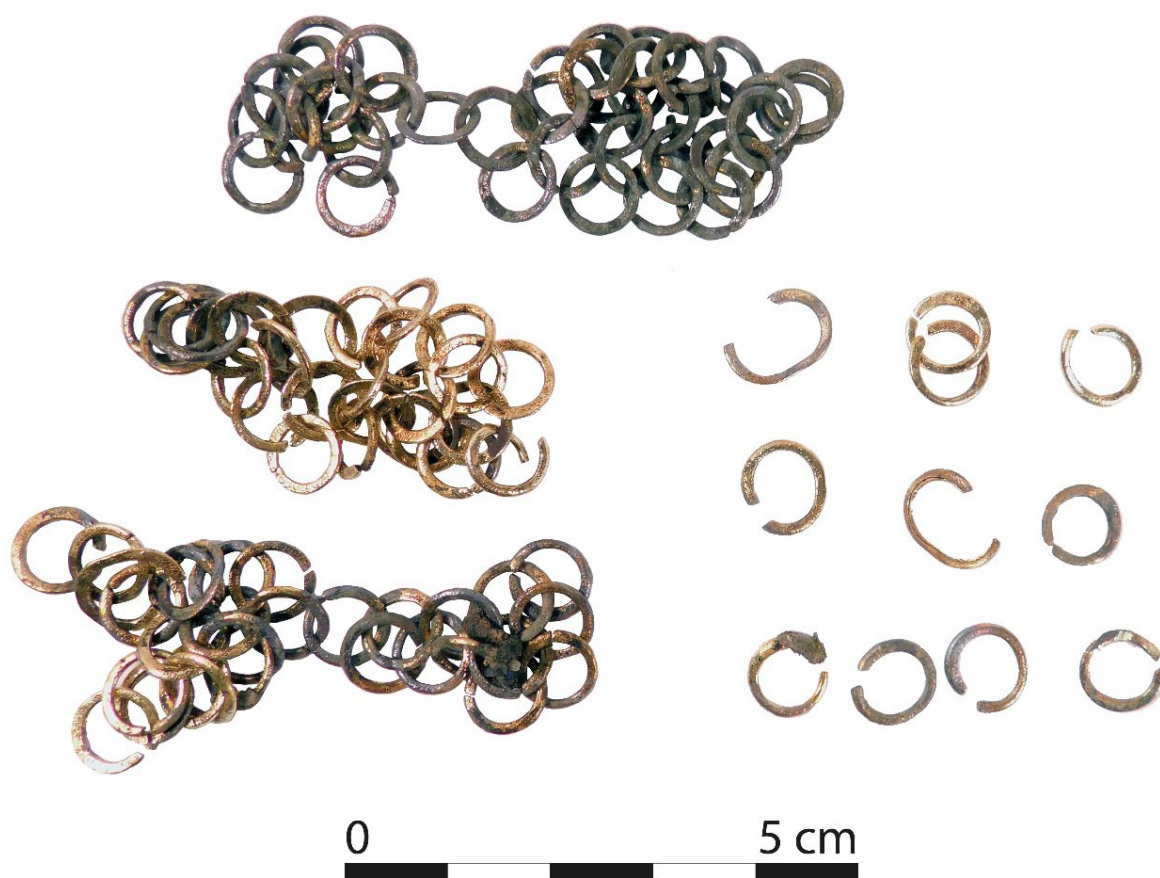


Plate A2.19: Mail, scale: 5cm

Assessment

Silver

A single silver brooch (FN 118), sometimes known as 'Love' brooches, dating to the mid-late 19th - early 20th century inscribed with name "JENNIE" was recovered unstratified.

Copper alloy

Some 30 copper alloy objects weighing 161g were recovered during the excavation from 10 stratified and unstratified contexts. The objects ranged from fragments of mail armour, a key

chain as mentioned above, a possible sword chape to more domestic items such as buttons, a thimble and a belt buckle.

Finds of mail armour (FN 4; Plate A2.19) are rare on archaeological sites, although less so from the Thames foreshore (Leahy and Lewis 2018). Found in fill [260] of the recut moat, it comprises 14 separate pieces although was originally likely to be a single piece. Unlike some examples from the Thames, for instance (ibid) the rings are not rivetted and but are open ended. Each link is 7.5 - 8mm diameter and is possibly made in a pattern known as barley corn where one link joins to four other links (Portable Antiquities scheme 2011). X-ray fluorescence analysis carried out by the University of Salford School of Science, Engineering and Environment, indicates that the mail is composed of brass. A small fragment of riveted mail was identified by the Portable Antiquities scheme from Ormskirk, West Lancashire (ibid). A broad medieval date of between 12th - 15th centuries was ascribed to this object. Small garments of bright 'gold' coloured mail are depicted in late medieval art, for instance on Hans Memling's Triptych of Adriaan Reins (Borchert et al 2005; Web Gallery of Art 2022; image xx20: *17rein11*).

The majority of the remaining items are domestic in nature, such as buttons (FN 109, 112, 119 and 122), a double loop buckle with D-shaped loops (FN 121), a thimble (FN 115) and (FN 114 and 131) rings which may be finger rings, brooches or buckles. Also found was a possible candle holder (FN 108), unusually formed from a rolled copper alloy sheet, rather than cast, formed into a cylinder with a central collar holding it together. Other uses for this object are also posited, such as being a chape for a weapon of some description.

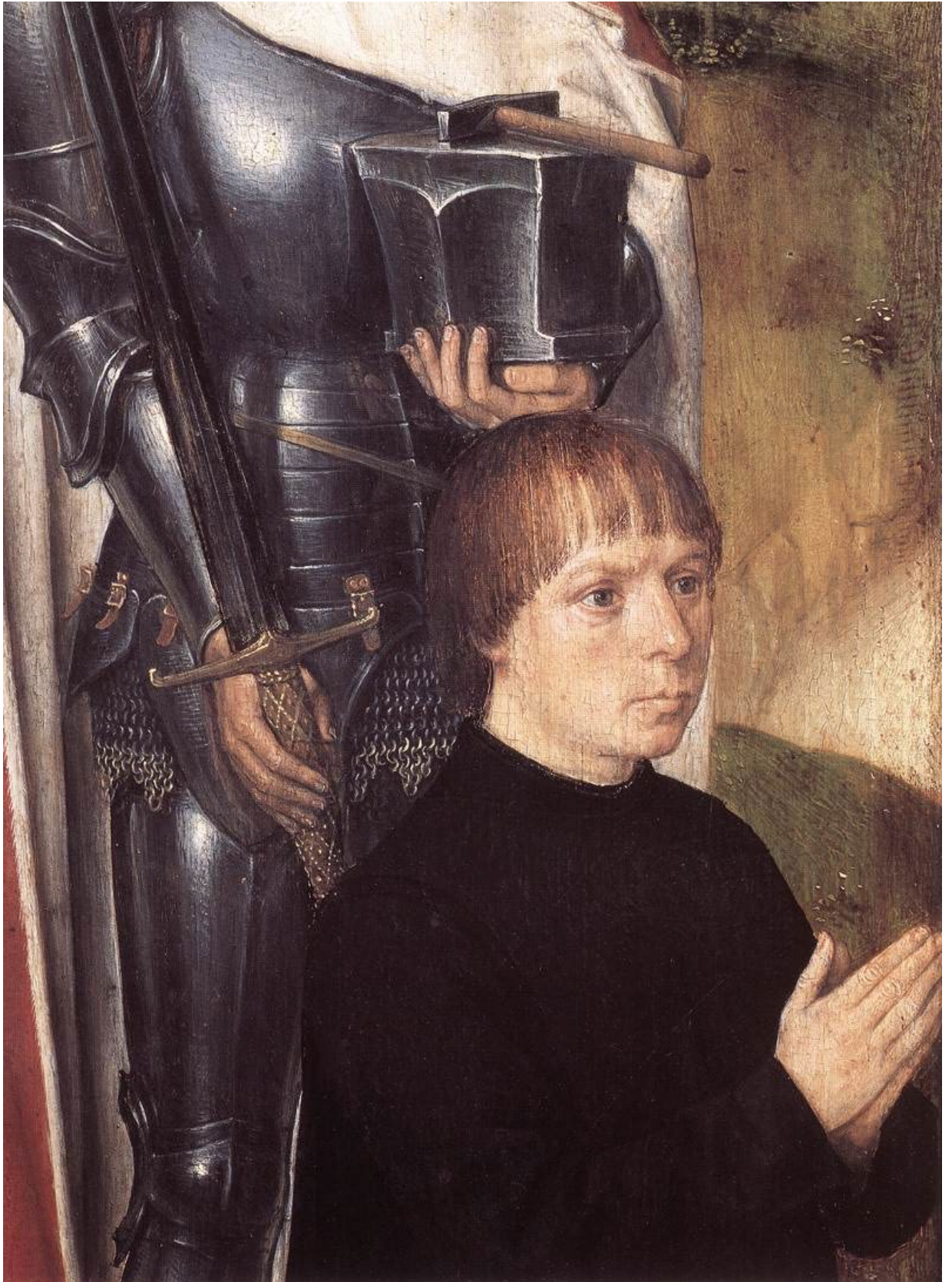


Plate A2.20: Hans Memling's Triptych of Adriaan Reins

Find 106 comprised a complete brass chain and part of key comprising bow and part of the shank. The chain comprises square sectioned wire formed into S-shaped links (Plate A2.21). Similar chains have been identified from Kirkstall Abbey and from London (Moorhouse and Wrathmell 1987; Egan 1998). X-ray fluorescence (XRF) analysis, gain carried out by the University of Salford School of Science, Engineering and Environment has enabled the material that the chain was fashioned from to be identified, which like the mail armour, was from brass.



Plate A2.21: Key chain, scale: 5cm



Plate A2.22: Possible sword chape, scale: 5cm

Two unusual finds were a copper alloy strip (FN 133), possibly repair for a cooking pot (Egan 1998) and an object composed of two crescentic pieces with a central spacer that may be a sword chape (FN 137; Plate A2.22). Rounded, as opposed to the more usual tapering style, sword or dagger chapes are recorded on the portable Antiquities Scheme, for instance a rounded form with a knob (GLO-9EA60E) from Gloucestershire, although this example is a closed form in the shape of a scallop shell. A form that appears to be closer in style to the Farington example can be seen in Pieter Bruegel the Elder's, 1568 painting *Three soldiers* (Plate A2.23; Oberthaler et al 2019).



Plate A2.23: Extract from Pieter Bruegel the Elder's, painting 'Three soldiers'

Lead

Twenty-six lead objects from six stratified and unstratified contexts weighing 905g were found during the excavations. By far the most common lead objects were fragments of window came, indicating that at least some of the windows within the buildings occupying the moat platform were glazed. Other artefacts have possible military associations such as lead shot and a

possible cap from a powder holder or lid from an inkwell. While the remainder are more typical of domestic life and trade.

The lead window came comprised 16 separate pieces including FN 169 from recut moat deposit [260] which retained two triangular shaped glass quarries, whilst a second smaller piece of window came from the same deposit that also contained an intact triangular glass quarry (Plate A2.24). The window came appears to be un-milled, ie the web or the channel which holds the glass quarry in place is un-reeded. Milling was characteristic of the 16th century. Greenish glass contained within the came is 2mm thick.

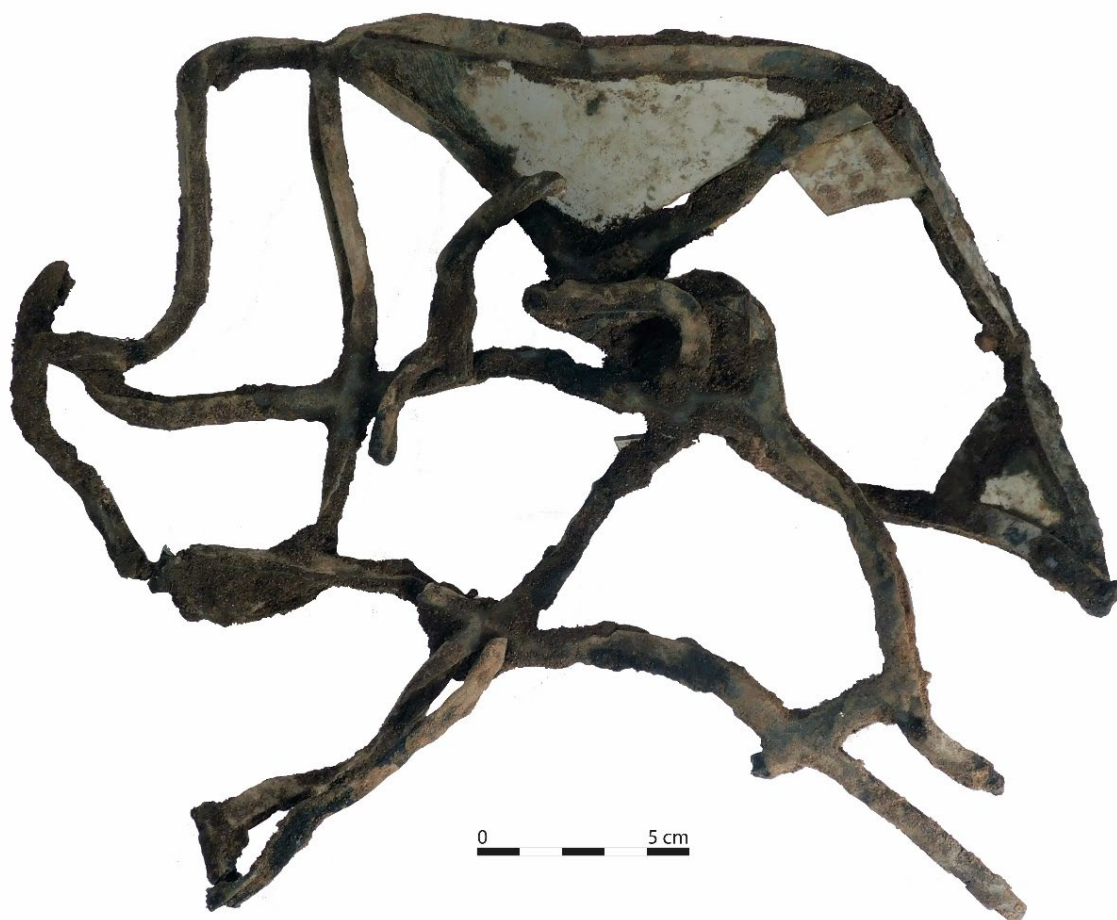


Plate A2.24: with triangular shaped intact lights, scale: 5cm

Finds such as window came complete with glass quarries still in situ, represents a rare find in the North West, although not without parallels elsewhere. Twisted fragments of lead window lights having been recovered from the moat at Old Abbey Farm, Risley (Heawood et al 2004). It should be noted at the latter site no complete quarries were recovered, whilst two complete in situ lights were retrieved from the moat at Farington. Moat deposit [260] being the repository of the bulk of the window, by weight, from the site.

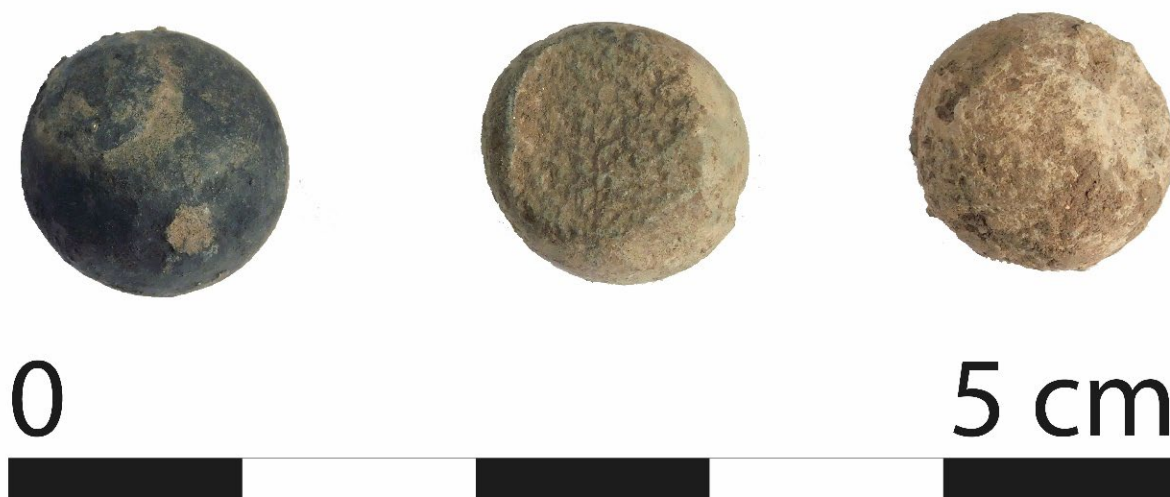


Plate A2.25 Lead shot, scale: 5cm

Four lead shot, probably from a pistol were also recovered, two of which were from stratified contexts including layer [206] which has been dated by clay tobacco pipe to c 1640-1660. The balls are approximately 10-11mm in diameter and weigh 7-8g (Plate A2.25). These are likely to be either pistol shot or possibly case shot (Flynn 2016). A flat circular object (FN 8) maybe a cap from a powder holder (Courtney 1992) or the lid from an inkwell (see for instance, PAS 2020, SWYOR-4D10E9). It is not clear at this stage whether the small assemblage of military items can be connected to the mid-17th century Civil War period, although sword chape (FN 137) and lead shot were found in contexts of that date.

A cloth seal, that is a lead seal attached to newly woven cloths by officials who controlled the quality of cloth sold (Webley 2017; Egan 1992) was recovered unstratified. Two lead weights were also found.

With exception of the lead window came and the possible military items, there are no significant or particularly diagnostic groups amongst the non-ferrous objects. Representing as they do the type of personal, domestic items likely to be discarded or lost. In this sense they are similar to other non-ferrous assemblages from other high-status sites in the region such as Old Hutt, Halewood, Merseyside and Old Abbey Farm, Risley, North Cheshire (Wrathmell 1992; Heawood et al 2004).

Potential

A number of artefacts have the potential to elucidate everyday life in a high status site such as Farington. Further work is recommended on the copper alloy mail armour with an attempt to place the date, manufacturing process, style in a regional and national context. Further comparators to the intact glass quarries and window recovered from the moat and elsewhere,

rare in itself in the North West, should be found as it may be possible to establish whether regional work shops or styles can be identified. The identification of glass working sites, but also lead smelting, have been flagged as a key issue in the North West Post-medieval Research Agenda (PM27 and 29, 2022a). Further work to identify whether FN108 is potentially a candle holder should also be carried out.

The lead shot and the unusually shaped sword chape have the potential to illuminate weapons and armour types. The buttons require further analysis to establish whether they are of military origin. The recovery of such artefacts in an archaeological context may help inform the understanding of regional battles or sieges (PM41, Research Frameworks 2022a).

The remainder of the non-ferrous artefacts from the site have limited potential aid the chronology of the site or to provide insights into everyday activities. They should be catalogued and in the case of the buttons, possible ink well/powder cap, and double loop buckle, dated and a brief summary added to any publication.

Ironwork

Quantification, Assessment and Potential

Five iron objects, weighing 323g were recovered during the excavation, with only two being derived from stratified contexts. These comprised a bone handled, scale tang knife or piece of cutlery (FN116), part of a horseshoe (FN110), an iron rod (FN172), an iron strip (FN125) and a nail (FN15). The ironwork does not merit further analysis, with the exception of the horseshoe, the typology of which, should be identified and note added to any publication.

Glass

Quantification and Assessment

Some 45 fragments of glass weighing 800g were recovered from 10 stratified contexts. Glass from Farington can be sub-divided into three forms, comprising a single blue glass, bead (FN3), 11 vessel glass fragments and 33 fragments of window glass.



0

5 cm



Plate A2.26: Glass bead, scale: 5cm



0

5 cm



Plate A2.27: Glass beaker with trailed decoration, scale: 5cm

Glass bead FN3 from 17th-century moat fill [177] is likely to be of this date as vast numbers of beads were manufactured in Europe around this period (Blackwell and Kirk 2015; Plate A2.26). The vessel glass comprises fragments of pale green 18th-century bottle glass and fragments of post-medieval drinking glasses that include goblet bases (FN127 and 103), and

two fragments of beakers with trailed decoration (FN100 and 104; Plate A2.27). A 16th or 17th century date for the drinking glasses may be appropriate here (Willmott 2002; Ratkai 2002).

Window glass, the majority of which was recovered from moat deposits [206], [237], [260] and [277], was typically pale green in colour and between 1mm and 2mm thick. Some of the glass was grozed, although no complete quarries were recovered it was clear that at least a few were over 80mm x 50mm in size. It should be noted that complete triangular quarries were found within leaded lights and these have been described above in the non-ferrous section.

Drinking glass assemblages with comparisons to Farington have been recovered from Norton Priory and Old Abbey Farm, Risley in Cheshire (Brown 2008; Heawood et al 2004). However, from further north in Lancashire these are lacking.

Potential

Post-medieval glass is comparatively well understood with the publication of Willmott's 2002 survey. Therefore, the vessel glass should be dated accordingly to aid the site chronology as well as possibly establishing sources for the glasses themselves. Window glass was recovered in some quantity from Norton priory, dating from both medieval and Post-medieval periods (Brown 2008). That from Farington should be compared to this assemblage for comparison and relative dating. Both the vessel glass, window glass and the leaded lights should be described in any publication.

Leather

Quantification and Assessment

In total 176 fragments of leather were retrieved from nine stratified and unstratified contexts. The leather was washed using a sponge, hydrated, double bagged and stored in refrigerated conditions. The majority of the fragments belong to footwear and comprise 38 soles and inner soles with a variety other components including welts, rands and heel stiffeners. The shoes display at least two different construction methods comprising turn shoes, typical of the medieval periods and welted construction which date to the 16th century and beyond. Also, of note within the collection are differing styles, including "cowmouth" type, typical of the 16th century and usually ascribed to the c 1500-1550, and later styles perhaps which date to the later 16th and 18th century.

The earliest of the moat fills [277] produced some 50 fragments including seven soles (Plate A2.28). These were distinctive in shape and are characteristic of shoes dating to c 1500-1550 (Goubitz et al 2001). Moat recut fill [237] produced the largest collection of leather fragments, comprising some 83 pieces including 18 soles. Again, these appear to date to c 1500-1550. Stratigraphically above deposit [237], moat fill [260] yielded 26 pieces of leather within which

were six soles, although these were quite fragmentary. However, one of the soles suggested that it may date to the second half of the 16th century. The only potentially later shoe remains are derived from deposit [180] which may date to the 18th century. What is striking about the shoe remains from Farington is the lack of uppers and quarters, ie that part of the shoe or boot covering the foot or leg. Much of the assemblage being dominated by whole or partial soles and associated pieces such as rands and welts.



Plate A2.28: Leather shoe fragments, scale: 25cm

It is possible that the collection of shoe parts represents old or worn out shoes where the uppers, generally less likely to receive direct contact with the ground and therefore not suffer as much wear and tear, have been stripped away and recycled.

Comparative material

Medieval and later leather shoes have been recovered during excavations in urban situations such as at Carlisle (see for instance Padley 2010; Howard-Davis 2010), Salford (Gregory and Miller 2017) and Chester (Open Arts Archive 2022). Away from urban centres, moats are the obvious environment for the retrieval of waterlogged remains such as leather shoes. Such items are restricted to a small number of moated sites. At Old Abbey Farm, Risley, near

Warrington, for instance, five fragments were recorded (Heawood et al 2004) and Bury Castle where some 315 shoe fragments were recovered (Tyeson 1986). In the case of the latter site this included 32 soles and 52 insoles. In terms of archaeological footwear the site at Bury is relevant to Farington as of the shoe parts were from Phases II, III and IV, which date to between c 1470 and 1700. A very similar period of time to those recorded from the present site.

Potential

The collection of shoes parts from the moat at Farington represents an important and noticeably large assemblage and rare opportunity to study late medieval and post-medieval footwear. As noted above outside of urban sites few large assemblages of leather shoes have been excavated in the North West. (It is noticeable that the survey of medieval leather found in York does not make reference to any sites in the North West (Mould et al 2003)). Where there are examples of excavated footwear in the North West, they tend to be representative of the medieval period rather than the succeeding centuries. The one exception being Bury Castle.

The difference between the medieval and Post-medieval periods is more often an artificial construct than a distinct division, with some archaeologists perceiving the 15th -17th centuries as an age of transition (Gaimster and Stamper 1997). However, there are noticeable differences in the construction of footwear between the late medieval period and the Post-medieval period. At the end medieval period turnshoes, where the shoe is constructed inside out, give way the 16th century welted sole tradition, which comprises two and sometimes three soles, comprising an insole, midsole and treadsole (Goubitz et al 2001). Other than the remarkable number shoe fragments recovered from Bury Castle, that recovered at Farington represents unique opportunity to examine footwear construction and change in fashion in the period c 1500-1700.

It is recommended that the leather, which is in good condition, is firstly conserved. Waterlogged material of this age, despite its good preservation is subject to both decay and wear and tear caused by frequent handling. Once conserved, this will allow the material to be analysed. A typology of shoe types should be created with comparators and comparisons to other sites which have produced footwear dating to the same period. The construction techniques should be recorded and the reasons for the apparent absence of upper and quarters examined.

Wood, Dendrochronological dating and species analysis

Quantification

In total 131 pieces worked wood were recovered from 16 stratified contexts. Wood was collected from structures, and as artefacts, as well as samples taken for species identification and dendrochronological dating. A felling date of between 1565 at the earliest and 1590 at the latest was obtained for timber [311] from timber revetment structure [333] (Arnold and Howard 2022). Worked wood objects included parts of planks, bowl fragments, a possible bung, and possible bucket staves.

Assessment

Count	Description
11	Bowls
12	Miscellaneous forms
30	Tangentially split
27	Radially split
3	Boxed
15	Round Wood
21	Nondiagnostic
1	Basketry
4	Dendrochronological sample
7	Species identification
131	Total

Table A2.4: Quantification of worked wood



Plate A2.29: plank, scale: 25cm



Plate A2.30: plank with possible keyhole, scale: 25cm

By far the most common worked wood objects were those that were likely to be tangentially split (see table x4 for quantification). Tangentially splitting usually encompasses splitting roundwood firstly in half, followed by splitting each half into two sections across the grain and so on (Morris 2000). In the main, these were likely to be plank off cuts, however, a few of these objects exhibited toolmarks or other indications of having being shaped or have holes created by boring tools. Of note were RF51 (Plate A2.29, FN51 (3) and 152 which both displayed bored holes, which were probably intended for trenails/pegs. Recorded find 50 may have had bored holed which had been further shaped into a possible keyhole (Plate A2.30, FN50 (3))

There were 27 pieces of timber that were probably radially split. In this technique round wood is half sectioned or halved, and then quartered producing timber shaped like a 'slice of cake'. Like the tangentially split wood most of the timbers were likely to be off cuts, although most displayed tool marks of some description. Five of the timbers displayed more diagnostic features. Find Numbers 97, 88 appeared to be stakes, FN64 was sawn with a possible lap joint and FN67 possibly exhibited a bird's mouth joint.

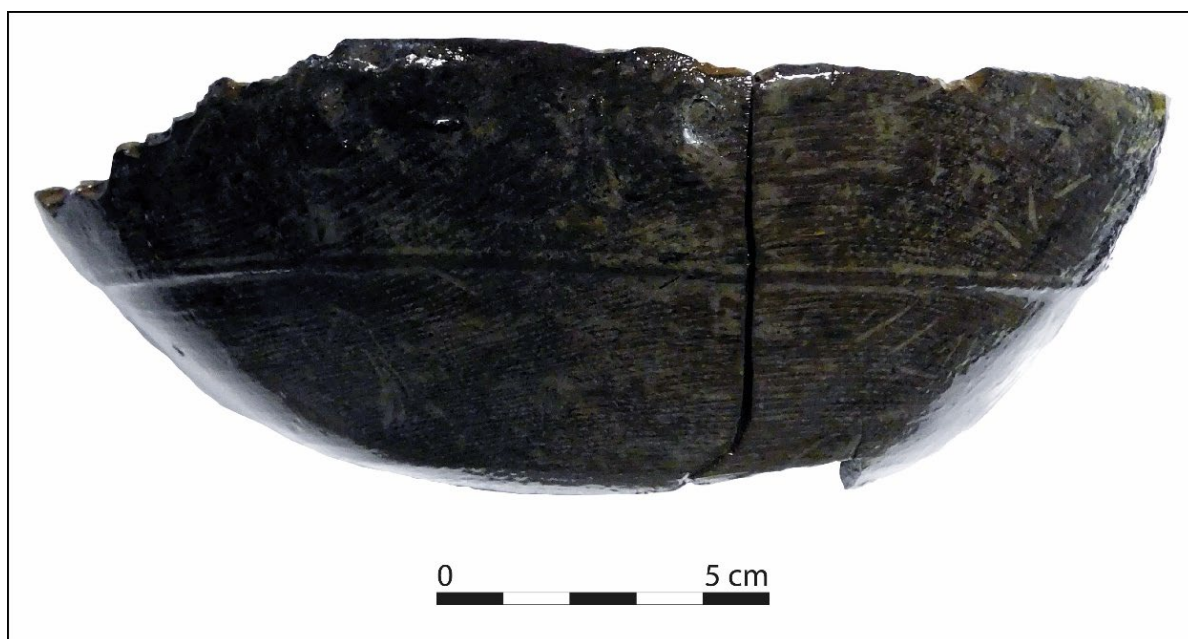


Plate A2.31: Turned bowl

The forms of a small number of timbers were identified. Parts of three turned bowls were recovered from moat fills [277], [237] and [154]. FN46 had a diameter of 230mm and was approximately 70mm high (Plate 31). FN89 was smaller with a diameter of 86mm and 35mm in height. Vessels with similar dimensions have been considered to be cups rather than bowls (Brears 2011).

Other artefacts where the form has been potentially identified are part of a door or lid (FN73) comprising three planks measuring 590mm long by 360mm wide and fastened in place by a transverse wooden batten. A possible tangentially split base plate, with two bored peg holes which measures 1100mm long x 120mm wide and 117mm thick. A disc (FN150) with a diameter of 83-86mm and centrally perforated, may have been used as a spindle whorl, or more likely a pot lid (Plate A2.32), with similarly sized items being recovered from both English and continental sites (Earwood 1993; Morris 2000). Other items comprised a wooden shoe heel [217], a bung (RF39), perhaps used in conjunction with a spigot and an octagonal fragment of wood. A small fragment of perforated wood (RF173) measuring 79mm x 27.5mm, with eight partial bored holes 9-13mm in diameter was recovered from moat fill [152] (Plate A2.33). Comparable objects have been interpreted as either part of a cheese/curd press or a

sluice (Morris 2000). A possible representation of a cheese/curd press can be seen being 'worn' by Prudence in by Pieter Bruegel the Elder's drawing of the same name (1559; Oberthaler et al 2019). The picture depicts a circular wooden container, the base of which is pieced by many holes.

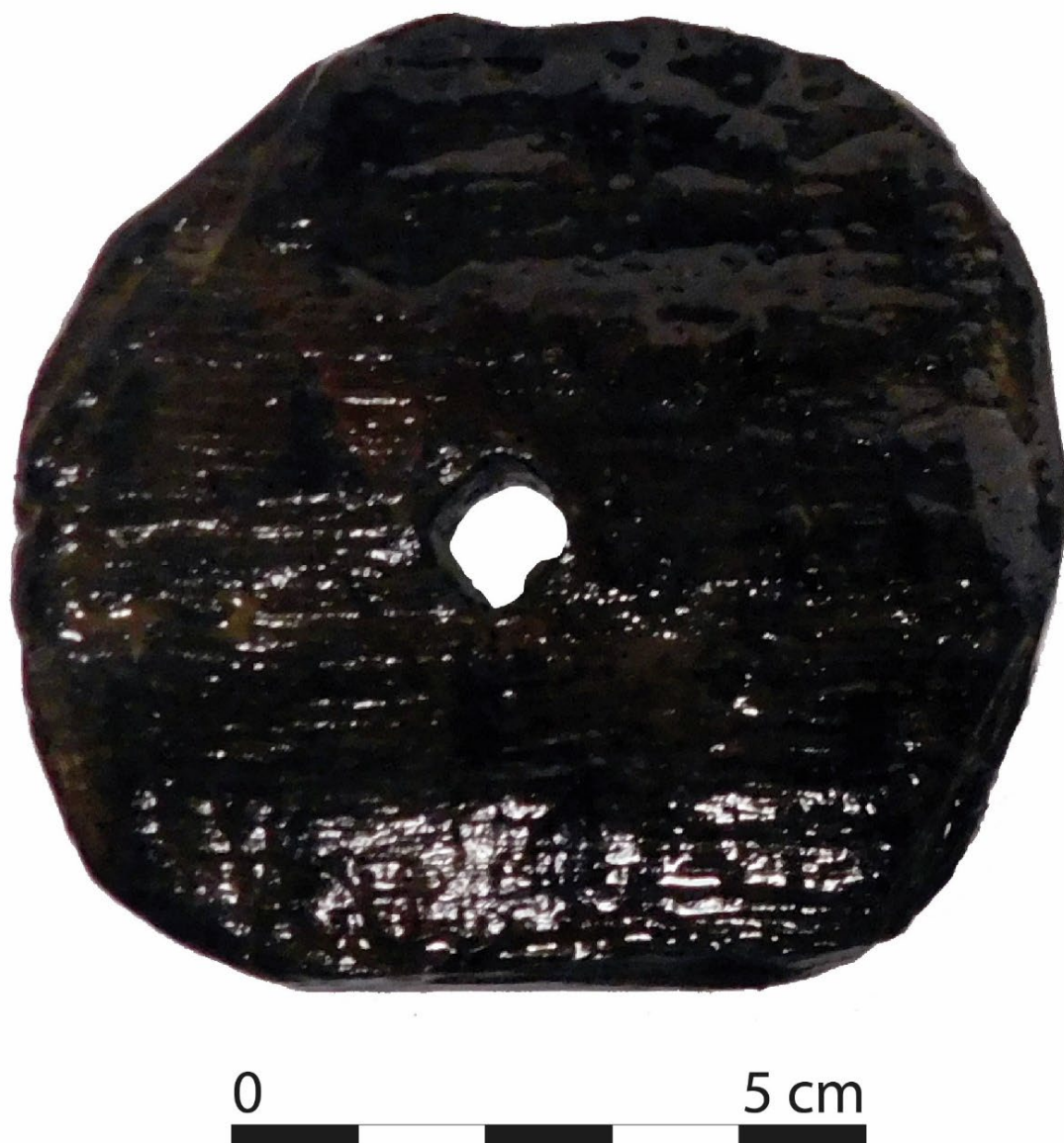


Plate A2.32: Perforated wooden disk

A unstratified radially or tangentially cleft stave from the moat may have belonged to a tub or bucket. Comparable, albeit earlier staves (10th-mid 11th century), have been recovered from York, whilst there are also depictions of wooden tubs with handle holes from the early 15th century (Morris 2000), although these are circular rather than D-shaped. For a closer comparison, the same drawing as cited above by Pieter Bruegel the Elder depicts a large

stave constructed tub with D-shaped handle holes (Oberthaler et al 2019). Such distinctive hand holes are considered rare finds in the British Isles (ibid).

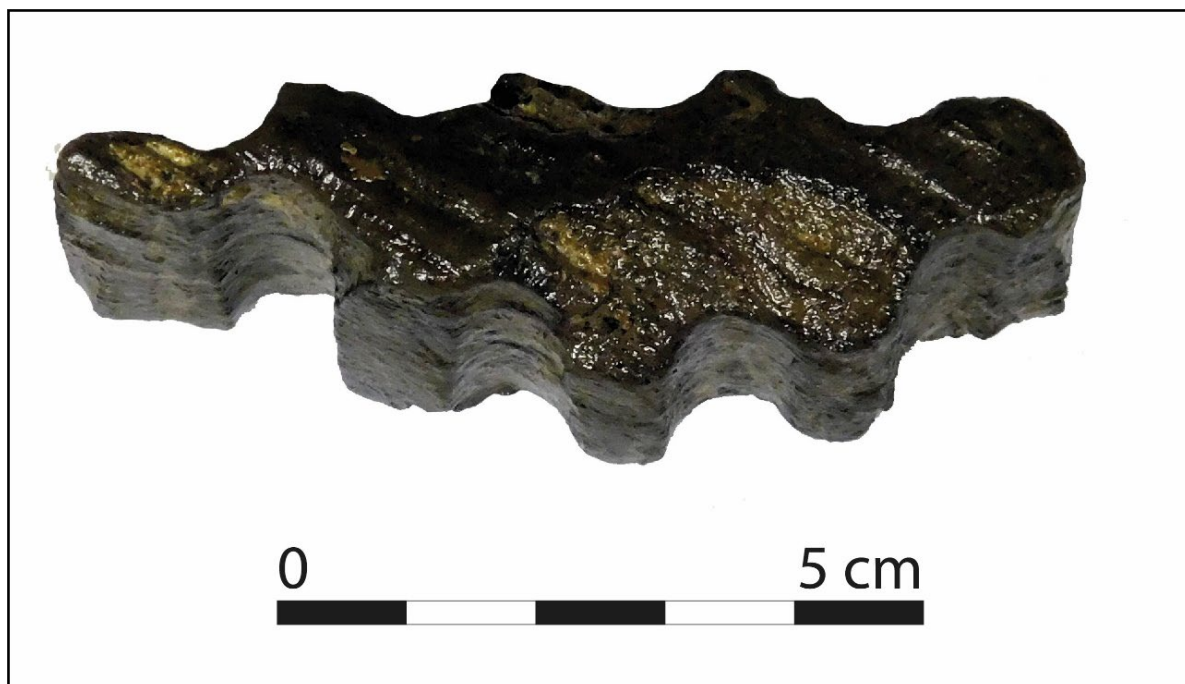


Plate A2.33: Small fragment of perforated wood

Fifteen fragments of timber retained their roundwood form, most if not all were likely to have been used as part of wattle structures such as the wattle revetment within Slot B of the moat [246] details of which can be found in *Section 6.10.9*. Large round wood stake (FN72) from foundry deposit [169] with a diameter of 100mm may be part of fence post. A second example of a stake (FN147) was recovered from [704]. Most of the remain roundwood pieces had diameters of between 20-45mm and were likely to have been coppice products. The remainder displayed breakages at one or both ends. Occasional evidence of how the wood was harvested could be seen, such as FN148, where an angled cut by a bladed tool showed where the pole had been removed from the tree.

Three fragments showed secondary conversion from roundwood unto squared or boxed timber. All three were probably off cuts. FN53 displayed possible axe marks, whilst FN56 exhibited a possible tenon.

Twenty-one fragments of wood were considered to be nondiagnostic where the conversion was not established. As with the bulk of the wood assemblage from Farington most of these fragments appeared to off cuts. Some of these fragments, notably FN142, 145 and 146, did display tool marks such as the possible impressions left by an axe on FN142.

The fragmentary remains of an oval basketry container were recovered from moat fill [277] (Plate A2.35). The object was lifted whole and then hand cleaned. An oval base of similar construction is illustrated in Dorothy Wright's *Baskets and Basketry* (1959). Basket making

was once a universal craft, with numerous uses. Basket making as a rural industry surviving in the Lune Valley, 44km to the north of the site, until the 1960s (Garnett 2000). Baskets, if not commonly illustrated in medieval and post-medieval manuscripts or paintings, are by no means rare. For instance, an oval based basket is portrayed in Gerard David's *The nativity with Donors and Saints Jerome and Leonard*, c 1510-15 (Metropolitan museum 2022; Plate A2.36). The lid, in this case, is constructed in similar style.



Plate A2.35: Oval basket, scale: 25cm

Comparative material

Several excavated moated sites in the North West of England and north Cheshire have produced wood assemblages, most notably Bury Castle, Old Abbey Farm, Risley and Bewsey Old Hall near Warrington (Tyson 1986; Heawood et al 2004; Howard-Davis et al 2011). Bury Castle produced examples of turned bowls, staves from barrels and pails and boards or planks, whilst wooden objects from Old Abbey Farm, Risley comprised turned bowls, pegs, a roundwood post and wood working debris, including many roundwood stakes associated with the construction of the bridge.

Basket making, although, once a wide spread rural industry (Garnett 2000), finds of baskets are not common from archaeological sites. They have, however, been recovered from sites where anoxic conditions prevail such as the moat at Farington, and include waterlogged urban sites such as York (Morris 2000) and wells as in Lincoln (Mann 2008).



Plate A2.36: Extract from Gerard David's The nativity with Donors and Saints Jerome and Leonard, c 1510-15

Dendrochronological dating and species identification

Three cross-sectional slices from timbers [311], [313] and [314] which had been recovered during archaeological excavations at this site were sent to the Nottingham Tree-ring Dating Laboratory for possible analysis by dendrochronology, all three samples being from structure [333] within the moat (Arnold and Howard 2022). Two of the samples [311], [313], were of oak,

whilst the third, [314], was of some other species of wood, and not suitable for tree-ring analysis. This sample was, therefore, submitted as a seventh specimen for species identification (see below for species ID and Appendix 3 for full Dendrochronological report).

Dendrochronological analysis

Of the two samples submitted [313] had a distorted growth pattern and a low number of annual growth rings and was therefore not suitable for dating. The remaining sample [311] was compared individually with the full corpus of reference chronologies for oak, which indicated a cross-match and date. In this instance, the 133 annual growth rings were found to span the years 1418 to 1550. Although the sample has lost all its sapwood rings, it is possibly *only* the sapwood that has been lost. Allowing that most oak trees have between a minimum of 15 sapwood rings, and a maximum of 40 sapwood rings (the 95% confidence interval), this heartwood/sapwood boundary date would suggest that the tree was felled at some point between 1565 at the earliest and 1590 at the latest (Arnold and Howard 2022).

Species identification

Seven samples of wood were submitted for species identification (see Appendix 00 for full report). Six of the samples (samples 23-28) were derived from wattle revetment [246], whilst the seventh [314] was from moat structure [333]. Identifications were made according to a combination of the descriptions and keys by Schweingruber (1990), Hather (2000) and by comparison with modern reference slides (Arnold and Howard 2022). Five of the samples from structure [246] (S23, 24, 25, 26 and 28) were identified as *Alnus glutinosa* (alder), with the sixth (S27) being *Ilex aquifolium* (holly). The seventh sample [314], taken from moat structure [333] was either *Populus* or *Salix* (poplar or willow). The latter genera have very similar anatomical structures and are difficult to separate (ibid).

Potential

Trees have always formed an important part of the landscape and their usefulness to people for fuel, fodder and the raw material for artefacts and structures has meant that the control and management of this natural resource was very important. The age, species composition, growth pattern and morphology of the wood assemblage from this site has the potential to help reconstruct the local woodland management and exploitation in the vicinity of Farington (Bunning band Watson 2019).

The majority of the worked wood assemblage comprises tangentially and radially split timbers and roundwood. Much of which can be connected to wood-working, carpentry and coppice derived products such as wattle. These may be connected to the construction of revetment

structure [333] and wattle structure [246], as well as other tasks associated with the upkeep and maintenance of the moated site such as Farington.

A small number were of a domestic or structural nature such, as the partial remains of three turned bowls, part of a door or lid, a possible tangentially split base plate, a spindle whorl, or more likely a pot lid, a wooden heel, a bung, a small fragment of perforated wood, and a tangentially cleft stave from the moat may have belonged to a tub or bucket.

Following Museum of London guidelines (1994) rods and sails from the basket base recovered from moat deposit [277] should be sampled for species identification and a short report produced in which the construction methods are identified, and comparators found.

The wood assemblage as a whole has the potential to further the understanding late medieval/post-medieval wood working techniques, including bowl turning. In particular, analysis of the wood has the potential to yield information not only on the species of wood exploited but also on the coppicing cycle. From this it may be possible to analyse methods and circumstances of woodland management (Museum of London Archaeology Service 1994). Valuable information on the types of tools used in finishing timber can be gained from a study of the surviving tool marks, although it is not always possible to differentiate between some tools, such as between adzes and single-bevelled broad axes (Brunning and Watson 2010).

As well as the potential described above the wood also has the potential to address research questions posed in both the late medieval and Post-medieval North West Regional Research Agenda (Research Frameworks 2022a and 2022b). For instance, as outlined above, the wood assemblage can aid the study the origins and development of the use of managed woodland (LM13). Moreover, analysis of building materials tell us about building industry technology techniques and the nature of woodland industries and management (LM45).

Ceramic Building Material (CBM)

Type	Number of contexts	Count	Weight (g)	% of total assemblage by count and weight	Date (century)
Hand made brick	11	23	25661	15.03%/51.71%	
Roof tile	15	124	23620	81.05%/47.6%	
Field drain/unidentified	5	6	345	3.92%/0.69%	

Totals	153	49626	100	
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Table A2.5: CBM type and quantification

Quantification and assessment

In total 153 fragments of CBM weighing 49.626kg from 19 stratified and unstratified contexts were retrieved during the excavation. The assemblage was dominated by hand made bricks and roof tile fragments (see table x5 for quantification). The material comprised generally large fragments, which in the case of the bricks were near complete, that were unabraded suggesting little post-depositional disturbance.



Plate A2.37: Spiked ridge tile, scale: 5cm

The majority of the roof tile was glazed, usually brownish-purple, with fabric ranging from rare pink to orange through to red and dark grey. The forms consisted of curve ridge tiles, sometimes exhibiting conical spikes, and to a lesser extent flat roof tile. However, it is possible that the flat examples are the terminal ends of the ridge tiles. No complete tiles were found, although occasional near complete examples measured 367mm wide (approximately 1 foot 2 $\frac{3}{4}$ inches) by 9-17mm thick (Plate A2.37).

There is evidence of post-Roman use of roof tiles in London from the late 12th century onwards (Drury 1981), their use increased particularly in urban environments in the succeeding centuries due to the number of devastating fires (Salzman 1952). However, outside of towns and in the rural North West the use of ceramic tiles, often glazed is generally restricted to high status building where their use is more as a decorative feature. Glazed ridge tiles being used with other forms of roofing, generally stone slates (see Industrial, stone and building material section, below). Glazed roof tiles (green and brown glazed) have been found at Old Hutt, Halewood for instance, in contexts dating from 13-14th century through to the 17th century. While spiked ridge tiles are known to have been manufactured by the 14th century at Chilvers Cotton, Warwickshire, their use in the north west appears to be somewhat later. For instance, spiked examples are known from Speke Hall in contexts dating to c 1500-1550 and the manufacturing of ridge tiles specifically with spikes was taking place at Rainford in the 16th and 17th century (Philpott 2015).

Twenty two brick fragments and one complete example were found during the excavation, with all fragments enabling width and thickness measurements to be taken. All the bricks were handmade with fabric varying between orange and red, with a single example being overfired to a grey colour with a clear glaze over parts of it. The sole complete example measured 228mm x 118mm x 60mm (11 inches x 4 $\frac{3}{4}$ inches x 2 $\frac{3}{8}$ inches). The bricks where two dimensions survived were fairly consistent suggesting they were the same size as the complete example.



Plate A2.38: Perforated corn drying tile

Brick was not widely used in Lancashire before the 17th century, although brick was used in alterations as early as 1545 at Samlesbury Hall, 11km to the north east. Bricks were certainly

being manufactured on Merseyside at both Rainford and Prescott in the 16th century. There are also references to bricks measuring 10 inches x 5 inches x 2 ½ inches from Merseyside in 1624, which are of similar, if not exactly the same dimensions to those found at Farington. Given that some of the pottery as well as the tile found at Farington may have been manufactured at Rainford, it is of note that bricks (including glazed examples) were also found in the kiln there, dating to the late 16th century (Philpott 2015). And, although the cost of transporting such bulky items as bricks could be high, transporting them from their place of manufacture was not unheard of (Salzman 1952). It is possible, therefore, that bricks, if not originating at Rainford, were being manufactured during the same period in the vicinity of Farington.

A somewhat unusual find was recovered from context [172]. This was fragment with seven cone shaped partial and incomplete perforations, with one fire blackened surface (Plate A2.38). It is possible this was formerly part of a tile from a grain drying or malt kiln (Crew 2021).

Potential

The recovery of glazed ridge tile, often displaying conical spikes from the excavation, although by no means unusual has been recorded at only a few sites in Lancashire, including Sefton Old Hall Farm, Lathom House, Speke Hall and Old Hutt, all of which are high status sites and are located near to the production site at Rainford (Philpott 2015). Those from Speke Hall in contexts dating to c 1500-1550 and manufactured examples from Rainford in the 16th and 17th century (ibid) are date-wise consistent with those from Farington which were recovered from moat fill 277, 237 and 260 which date between the 16th and 17th centuries.

The roof tile, therefore, presents an opportunity to examine these artefacts alongside others from Rainford and the sites mentioned above. A fabric a series and typology should be devised, and analysis presented in any future publication. The bricks, although less useful as a dating tool as they are so often reused, should however, be studied with comparisons made to those used in nearby contemporary buildings such as Samlesbury Hall and the manufacturing sites at Rainford and Prescott where bricks (overfired and glazed) are associated with the assumed kiln excavated at the Shakespeare North Playhouse site, Prescott (Miller et al 2018).

Additionally, the CBM assemblage has the potential to address research questions posed in the late medieval North West Regional Research Agenda (Research Frameworks 2022b). Analysis of datable building materials can increase information on both building industry technology and the nature extractive industries and management (LM45). This can be combined with research question LM50 where recent analysis of building materials can highlight building industry techniques and resource management.

Industrial, stone and building material

Quantification

In total 40 artefacts, weighing 5257g, from nine stratified contexts were recovered during the excavation. These comprised stone roof slate, a possible pot lid, hone stone, cannel coal and mortar and plaster.



Plate A2.39: Stone roof slate, scale: 5cm

Assessment

Stone roof slate, comprising eight complete or fragments of, and weighing 4126g, indicate that at least some the roofs of the buildings that formerly stood on the moat platform were clad in stone. These slates are composed of micaceous sandstone, the origin of which is probably from the Rossendale Formation, being quarried from sandstones known as Haslingden Flags, which are located in the Rossendale valley to the east of the site. Such quarries were originally known for supplying roofing slates (Historic England 2017). The relatively small size of the slates (L247mm x W202mm x T14mm; approximately 9 ½ x 8 x ½ inches; Plate A2.39) suggests that they were the slates laid next to the ridge stones or tiles, sometimes called 'closers' or 'spells' (Hartley and Ingilby 1997). It has been suggested that in other high status houses stone roof slates were used in conjunction with glaze ridge tiles (see CBM; Philpott 2015). Other stone objects consist of a possible honestone and pot lid.

A total of 7 mortar and plaster samples were also recovered from the excavation, with a combined weight of 772g. These samples have been retained for future compositional analysis

to identify the content of the mortar used in the construction during the late medieval and Post-medieval periods.

Also recovered were seven fragments of cannel coal. Cannel coal is sapropelic or hydrogen-rich coal with is a dull black, waxy lustre (British Geological Survey 2022). As a material which has been used as to produce objects such as jewellery, it has a long history (Sheridan 2002). However, at Farington, this material is likely to have been utilised as a fuel. Reserves of cannel coal being exploited near Wigan from the 16th century onwards (Farrer and Brownbill 1911).

Potential

The stone, plaster and cannel coal have little further analytical potential. However, the use of stone roof slates, their origin and possible use with glazed ridge tiles should be noted in any future publication. The use of cannel coal as a Post-medieval fuel which was exploited in Lancashire should also be noted in an publication.

In addition, the Industrial, stone and building material assemblage has the potential to address research questions posed in the late medieval and Post-medieval North West Regional Research Agenda (Research Frameworks 2022a). Recent analysis of building materials has the possibility to further inform about building industry techniques and resource management (LM45). Furthermore, LM51 suggests that analysis such materials can we improve knowledge of the extractive industries. The use of stone roof slates at the site can be used measure how the extractive industries develop during this period (PM29).

Organics and Palaeoenvironmental assessment

Quantification and assessment

This section comprises an assessment of the bulk and column samples and two organic finds that do not fit any of the above categories. These comprise fragments of avian eggshell and a length of coiled fibrous material from moat fills [237] and [260], respectively.

In total, 30 environmental bulk samples were taken from a variety of secure contexts excavated within the moat for the assessment of charcoal and charred plant remains (CPR) and waterlogged plant remains. Samples that contain CPR and waterlogged material are listed in Table A2.6. These have the potential to provide information about the environment and economy of the site, plus material suitable for radiocarbon dating.

Four monolith samples (samples 2, 3, 8 and 19) were taken through the moat deposits. Evidence of well-preserved artefacts recovered from contexts within the moat, such as leather, wood and waterlogged remains identified from the bulk samples suggest that there is a high potential for the survival of pollen, diatoms, foraminifera from theses deposits.

Sample number	Context	CPR/ waterlogged remains	Feature	Area	Comment
1	152	CPR	Moat fill	A	Fill of moat containing clay tobacco pipe (c 1640-1660) and Rainford/ Midlands purple-type coarseware
4	152	CPR	Moat fill	A	Fill of moat containing clay tobacco pipe (c 1640-1660) and Rainford/ Midlands purple-type coarseware
5	154	CPR	Moat fill	A	Fill of moat containing late 17 th to mid-18 th century pottery
6	252	CPR	Moat fill	A	No dating evidence
12	239	CPR	Moat fill	A	Contains medieval pottery
13	256	CPR	Moat fill	A	No dating evidence
14	241	CPR	Moat fill	A	No dating evidence
15	138	waterlogged	Sub-floor deposit	B	Contains late 17 th – early 18 th century pottery
16	260	CPR and waterlogged	Moat fill	B	Contains mid-16 th to 17 th century pottery
17	260	waterlogged	Moat fill	B	Contains mid-16 th to 17 th century pottery

Table A2.6: Summary of samples containing charred and waterlogged material identified further analysis

A small quantity of avian eggshell was recovered from moat fill [237]. Avian eggshell is known to survive well in alkaline and neutral soils (Preslee et al 2018), those around Farington are slightly acidic but base-rich, meaning they are either neutral or alkaline (Cranfield Soil and Agriculture Institute 2022). It is for this reason, combined with the undisturbed nature of the moat, that likely explains the survival of this material. Its potential as an archaeological resource has not been thoroughly explored, mainly because of the difficulties of identification (Preslee et al 2018).

Found in the moat fill [260], which is stratigraphically above that which produced the eggshell, was a small length of coiled and twisted fibrous material (Plate A2.40). The coiled material could be intended for use as part of a handle as has been ascribed to twisted round wood fragments recovered during the excavations in York. Other examples twisted round wood have been recovered from waterfront sites in London, but generally there are few examples of surviving basketry and related items (Morris 2000).

Potential

The archaeobotanical record in the north-west of England for the late medieval and post-medieval periods is very sparse (Hall and Huntley 2007, 207; Newman and McNeil 2007b, 148), and the original Archaeological Research Framework for the North West emphasised that more research is needed to reconstruct urban and rural environments. Information is also needed about the exploitation of plants and animals in this period (Newman and McNeil 2007).

The current North West Regional Research Agenda highlights the need to use a full range of archaeological techniques, such as palaeoenvironmental analysis, that can be applied to excavated sites (LM12, Research Frameworks 2022b). Such techniques can enable reconstruction of the local landscape and land usage. For instance, a pollen monolith from Wharton Hall (Greater Manchester) showed that during the 12th-14th centuries, temperatures were warm and cereal cultivation was a significant part of the economy but by the 16th century, cultivation of cereals had ceased and pastoral farming became standard (Research Frameworks 2022c).



Plate A2.40: twisted fibrous material, scale: 5cm

For these reasons it is recommended that those moat samples from Areas A and B listed in table x6, should be analysed, as the data may help our understanding of the economy and environment of the site. In addition, sub-samples containing charcoal have been identified specifically for radiocarbon assay.

It is also recommended that the avian eggshell from moat deposit [237] should be analysed for species identification. Particularly, whether the eggshell is from a domesticated or wild bird. It may also be possible to determine whether the eggs were hatched, which can indicate the presence of a breeding population. Moreover, as many species are selective about breeding grounds, eggshell analysis can assist in ecological reconstruction (Campbell et al 2011).

The coiled and twisted fibrous material from moat fill [260] should be submitted for species identification. This will allow further insights into how the natural environment was exploited. Further work alongside the basket retrieved from [277] should be carried out to identify comparators and sites where similar materials have been found.

The palaeoenvironmental remains from Farington also have the potential to address a number of questions posed in the medieval and Post-medieval research agenda (Research Frameworks 2022a and 2022b). Palaeoenvironmental remains have the potential to improve the knowledge of the various agricultural practices, plant and animal husbandry found in the North West, as well as charting how did these changed and developed over time (LM12). It may be possible to detect changes in consumption patterns linked to how are plants and animals exploited during the Post-medieval period (PM07). It may be possible to detect indicators wider patterns of consumption with palaeoenvironmental samples which might enhance the understanding of social context (PM11).

Animal bones

In total 472 artefacts, weighing 25938g, from 16 stratified contexts were recovered during the excavation. These comprised a range of domesticated and non-domesticated species. The bones have been washed and sorted into contexts but require detailed assessment and analysis.

Method statement (N.B. task numbers correspond to main report)

Processing and Transport of Artefact Assemblage

Task 4: at an early stage in the analytical programme, arrangements will be made to transport all relevant assemblages to the appropriate specialists to facilitate analysis and reporting of the material. Conversely, on the completion of this work, material will need to be received from the specialist, and checked against database records.

Medieval and Post-medieval Pottery

Tasks 5: all the medieval and Post-medieval pottery recovered from the site will be classified by fabric and quantified by weight and sherd count, detailed catalogues produced by means of the production of a database, and illustrated form and fabric series will be prepared for publication. Comparative material will be studied and a full bibliography will be compiled. Material for illustration will be selected and catalogued.

Further study of the pottery, with detailed identification of the fabrics and forms, will be crucial to refining the dating of the medieval occupational sequence, whilst analysis of the distribution of pottery types may disclose patterns of use across the site.

Analysis of context groups will also allow changes in supply through time to be mapped, facilitating discussion of the significance of trade in material originating from outside the region, as well as regional distribution. Initial work on the ceramic assemblage suggests that it is domestic character. Detailed comparison with other sites in the region will elucidate these aspects of the site and add significantly to our understanding of the precise character of the rural medieval landscape of the South Ribble district.

The pottery from stratified medieval contexts should be fully quantified by fabric and form, and by sherd count, weight and equivalent vessel estimate (EVE), and then entered onto the database. The data should include such general information as vessel class, burning, repair in antiquity and sherd joins. All the major ceramic forms from stratified contexts should be photographed, catalogued and published by context.

Discussion will be based around the significance of the assemblage as a whole to the interpretation of the site, and its implications locally and regionally. Assemblages will be compared to those from other sites in the region, including, Cuerden, Salmesbury, Lancaster, Wigan, Rainhill and Prescott, Salford and Manchester.

Clay tobacco pipes

Tasks 6: all the clay tobacco pipe recovered from the site will be quantified by weight and fragment count, with a detailed catalogue produced by means of the production of a database, and illustrated forms will be prepared for publication. Comparative material will be studied and a full bibliography will be compiled. Material for illustration will be selected and catalogued. A short report will be produced setting out the dating of the assemblage and places of manufacture.

Non-ferrous metals

Tasks 7: a number of non-ferrous finds require further analysis and in some cases require conservation. Further work on the mail armour will require a specialist report detailing description and method of construction, photography and illustration as necessary to present the results.

Prior to any further work on the lead window came will conserved and along with the other non-ferrous objects these will identified and subject to further analysis. A short report will be produced which will discuss the significance of the assemblage as a whole to the interpretation of the site. Assemblages will be compared to those from other sites in the region, including, Lancaster, Old Abbey Farm, Risley, Bewsey Old Hall, Warrington, Salford and Manchester.

Glass

Tasks 8: analysis of the window glass will be combined with that of the lead window came. Discussion will be based around the significance of the assemblage as a whole to the interpretation of the site, and its implications locally and regionally. Assemblages will be compared to those from other sites in the region, including Old Abbey Farm, Risley, Bewsey Old Hall, Warrington.

Leather

Tasks 9: prior to any further work on the leather, it will be sent for conservation. Once the conservation has taken place (this can take up to 14 weeks), the leather will be sent for specialist analysis. This will provide a brief catalogue of the leather assemblage which will form the site archive. A summary of the assemblage describing dating construction methods and the wider its significance will be produced, which will inform the site narrative and for any publication.

Wood

Tasks 10: Information concerning past woodworking is perhaps the most obvious potential of an assemblage of worked wood. Therefore, the worked wood assemblage has been identified as having the good potential for further analysis. This will comprise identification of woodworking techniques and conversion, species identification and where possible woodland management, as well as environmental indicators such as evidence of fungal, bacterial or beetle attack. For those objects such as the bowls, basket and staves, these will be further analysed to identify construction techniques and from which tree species they were made from.

As much off the timber fragments can be described as either waste from woodworking or round wood fragments a sample will be randomly selected for species identification and identification of woodland management regimes (Brunning and Watson 2010). The waste from woodworking is also useful because it can provide information on the type and size of tool being used and testifies to the activity in which the tool was employed.

Analysis of wood samples from Farington should help to ascertain whether a managed woodland was being exploited. This will require tree ring samples to determine age and growth rates and to identify character of woodland being exploited.

The wood will also be sampled for evidence of fungal, bacterial or beetle attack can help to reconstruct the environment in which the wood was deposited and determine whether timber was stored before use.

Ceramic Building Material

Tasks 11: all the CBM recovered from the site will be classified by fabric and quantified by weight and fragment count, detailed catalogues produced by means of the production of a database, and illustrated form and fabric series will be prepared for publication. Comparative material will be studied and a full bibliography will be compiled. Material for illustration will be selected and catalogued.

Further study of the CBM, with detailed identification of the fabrics and forms, will provide important data on the roofing traditions of elite houses. Analysis of the distribution of CBM types may disclose patterns of use across the site.

Discussion will be based around the significance of the assemblage as a whole to the interpretation of the site, and its implications locally and regionally. Assemblages will be compared to those from other sites in the region, including, Speke Hall, Merseyside, Old Abbey Farm, Risley, Bewsey Old Hall, Warrington and the production sites at Rainhill and Prescott.

Stone

Task 12: a catalogue of the stone roof tiles will be produced, and petrological analysis of the stone undertaken to establish their provenance.

Palaeoenvironmental Analysis and Dating

Task 13: ten of the bulk samples taken over the course of the project have been assessed for charcoal and charred plant remains (CPR) and waterlogged remains. The assessment has demonstrated that there is good potential for further analysis, and therefore further processing of samples should be undertaken to ensure that the full potential of the material is realised. From the assessment of bulk samples, particularly the presence of waterlogged material, is also recommended that the four column samples are analysed for pollen.

The analysis has the potential to provide a range of data on technological, social and economic activity of the site. It will hopefully provide information on the character of the environment and the manner in which people interacted with it. The results of these analyses should be, integrated into the stratigraphic text. A full and accessible report, including a catalogue, will be included in the publication.

Animal Bone

Task 14: all the animal bone that was recovered from secure features will be placed, where possible, under categories of species, and a table of the number of identified specimens present (NISP) will be produced. Comparative urban and castle sites will be studied to further

investigate and understand the nature of the animal bone assemblage within wider regional trends.

Illustrations

Task 15: during each part of the analytical programme, a selection will be made of appropriate material for illustration. This will include illustrations of artefacts, as appropriate.

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References

Arnold, A., J., and Howard, R., E., 2022 A moated site at Farington, near Preston, Lancashire; tree-ring analysis of timbers and wood samples for species identification, Nottingham Tree-Ring Dating Laboratory, unpubl rep

Barker, D., 1986 'North Staffordshire Post-Medieval Ceramics: A Type Series. Part two: Blackware', Staffordshire Archaeological Studies, 3, 58-75

Barker, D., 1993 Slipware, Botley

Blackwell A., and Kirk, S., 2015 Seventh century or seventeenth century? Identifying glass beads from Scotland, Proc Soc Antiq Scot, 371-399

Borchert, T., Ainsworth, M, W., Campbell, L., and Nuttall, P., 2005 Memling and the Art of Portraiture, London

Brears, P., C., D., 2012 Cooking & Dining in Medieval England, Totnes

Brennand M, with Chitty G & Nevell M, 2007, The Archaeology of North West England. An Archaeological Research Framework for North west England: Volume 2. Research Agenda and Strategy. Archaeology North West Volume 9.

British Geological Survey, 2022 BGS Rock Classification Scheme: Cannel-coal; available at https://webapps.bgs.ac.uk/bgsrscs/rcs_details.cfm?code=CANL; Accessed on 24/02/2022

Brooks, C., M., 2010 The Medieval Pottery, in M., L., Hird and C., M., Brooks, Roman and Medieval Carlisle: The Southern Lanes. Excavations 1981-2, Fascicule 3, The Roman and Medieval Pottery, Oxford Archaeology North, 85-107

Brown, F., and Howard-Davis, C., 2008 Norton Priory, Monastery to Museum: Excavations 1970-87. Lancaster Imprints 16.

Brunning, R., and Watson, J., 2010 *Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood*, Historic England, Swindon

Campbell, G., Moffett, L., and Straker, V., 2011 *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (second edition), Swindon

Cook, O., Miller, I., and Rowe, S., 2020 *Cuerden Strategic Site, Lancashire: Archaeological Excavation Final Report*, Salford Archaeology 2020/39, unpubl rep

Courtney, P., 1992 *Datasheet 11: Small Arms Accessories of the Mid-Seventeenth Century*, Finds Research Group 700 -1700: Datasheets 1-24

Cranfield Soil and Agriculture Institute, 2022 *Soilscapes*; available at: <http://www.landis.org.uk/soilscapes/>; accessed on 29/03/2022.

Crew, P., 2021 *Perforated tiles from grain drying kilns and malt kilns - an introduction*; available at:

https://www.academia.edu/5296626/A_catalogue_of_perforated_tiles_from_grain_drying_kilns_and_malt_kilns_v_8_2021 ; accessed on 24/03/2022.

Davey, P. J., and McNeil, R., 1984 *Excavations in South Castle Street, Liverpool, 1976 and 1977*, *J Merseyside Archaeol Soc*, 4, 1-158

Davey, P., 1989 *Archaeological Research in Prescott 1978-1986*, in *Archaeology in Prescott 1978-1986*, *Merseyside Archaeological Society Journal*, 5, 1-4

Didsbury, P., 2011 *The pottery*, in *Excavations at Blanket Row, Hull, 1997-2003*, *East Riding Archaeologist*, 13, 60-88

Drury, P. J., 1981 *The production of brick and tile in medieval England*, in D W Crossley (Ed), *Medieval industry*, Council for British Archaeology Research Report 40, London

Earwood, C., 1993 *Domestic Wooden Artefacts in Britain and Ireland from Neolithic to Viking times*, Exeter

Egan, G., 1992, *Datasheet 3: Leaden Cloth Seals*, Finds Research Group 700 -1700: Datasheets 1-24

Egan, G., 1998 *The Medieval Household, Daily living c. 1150- c. 1450*, *Medieval Finds from London*: 6.

Farrer, W., and Brownbill, J., (Eds) 1911 *Townships: Haigh*, in *A History of the County of Lancaster*: 4, 115-118; Available at: British History Online <http://www.british-history.ac.uk/vch/lancs/vol4/pp115-118>; Accessed 24/02/2022

- Finlaison, M., 2019 Normandy Stoneware – Traditional Jersey Pottery, Société Jersiaise
- Flynn, T., 2012 Portable Antiquities Scheme, Finds Recording Guides: Shot (including musket balls, cannon balls and bullet moulds); Available at: <https://finds.org.uk/counties/findsrecordingguides/shot/>; accessed on 21/02/2022
- Garnett, E., Basket-Making, in Winstanley, M., Rural Industries of the Lune Valley, Lancaster, 83-99
- Gaimster, D., M., and Stamper, P., 1997 The Age of Transition: The Archaeology of English Culture 1400-1600, Oxford
- Goubitz, O., van Driel-Murray, C., Groenman-Van Waateringe, W., 2001 Stepping Through Time: Archaeological Footwear from Prehistoric Times Until 1800, Zwolle
- Gregory, R., and Miller, I., 2015 'Greengate: The Archaeology of Salford's Historic Core', Greater Manchester's Past Revealed, 13, Lancaster
- Hall, D., W., 1996 Blind Date - Scottish medieval pottery industries, Tayside and Fife Archaeological Journal, 2, 126-129
- Hall A R & Huntley J P, 2007, A review of the evidence for macrofossil plant remains from archaeological deposits in Northern England: environmental studies report, Res Depart Rep Ser, 87-2007, Portsmouth.
- Hartley, M., and Ingilby, J., 1997 Life and Tradition in the Yorkshire Dales, Otley
- Hather, J G, 2000. The Identification of Northern European Woods; A Guide for Archaeologists and Conservators, London
- Heawood, R., Howard-Davis, C., Drury, D., Krupa, M., 2004 Old Abbey Farm, Risley, Lancaster Imprints 11
- Higgins, D., A., 1992 Speke Hall: Excavations in the West Range, 1981-82, Journal of the Merseyside Archaeological Society, 8 (for 1988-89), 47-84
- Higgins, D., 2017 Guidelines for the Recovery and Processing of Clay Tobacco Pipes from Archaeological Projects, Historic England
- Historic England, 2017 Strategic Stone Study: A Building Stone Atlas of Lancashire, Historic England
- Howard-Davis, C., Lewis, J., Heawood, R., 2011 Bewsey Old Hall, Warrington, Cheshire Excavations 1977-81 and 1983-5, Lancaster Imprints 17
- Howard-Davis, C., 2010 The Carlisle Millennium Project: Excavations in Carlisle, 1998-2001, Volume 2: The Finds, Lancaster Imprints 15, Lancaster

Kevin Leahy and Michael Lewis, 2018 *The British Museum's Portable Antiquities Scheme: finds identified: an illustrated guide to metal detecting and archaeological finds*, Witham

Lewis, J., 1978 Sefton Old Hall, Merseyside, Excavations 1956-61, *J Merseyside Archaeol Soc*, 2, 53-72

Mann, J., 2008 *Finds from the Well at St Paul-in-the-Bail, Lincoln*, *Lincoln Archaeology Studies* 9, Oxford

McCarthy, M., R., and Brooks, C., M., 1992 The establishment of a pottery sequence in Cumbria, England, in D., Gaimster and M., Redknap (eds), *Everyday and exotic pottery from Europe c 650-1900: studies in honour of John G Hurst*, Oxford, 21-37

McNeil R., 1989 *Excavation of an Eighteenth Century Pottery in Eccleston Street (Site F)*, *J Merseyside Archaeol Soc*, 5, 49-94

Medieval Pottery Research Group, 1998 *A Guide to the Classification of Medieval Ceramic Forms*, Occasional Paper 1.

Hans Memling, 1480, *Triptych of Adriaan Reins*, oil on oak panel, Memlingmuseum, Sint-Janshospitaal, Bruges; available at: <https://www.wga.hu/frames-e.html?bio/m/memling/biograph.html>; accessed on 30/03/2022

Metropolitan Museum, 2022 *The Nativity with Donors and Saints Jerome and Leonard*, c 1510–15; Available at: <https://www.metmuseum.org/art/collection/search/436099>; Accessed on 17/03/2022

Miller, I., Burns, M., Rowe, R., 2018 *Post-excavation Assessment: Shakespeare North Playhouse, Mill Street, Prescott, Merseyside*, *Salford Archaeology*, 2018/89, unpubl rep

Moorhouse, S., and Roberts, I., 1992 *Wrenthorpe Potteries. Excavations of 16th and 17th century potting tenements near Wakefield, 1983-1986*, *West Yorkshire Archaeology Service*

Moorhouse, S., and Wrathmell, S., 1987 *Kirkstall Abbey, Volume 1: The 1950-1964 Excavations: a reassessment*, *Yorkshire Archaeology* 1, Wakefield

Morris, C., A., 2000 *Craft, Industry and Everyday Life: Wood and Woodworking in Anglo-Scandinavian and Medieval York*, *The Archaeology of York* 17/13, York.

Mottershead, G., Miller, I., Rowe, S., and Harvey, K., *Chapel Wharf, Salford Greater Manchester: Archaeological Excavation*, *Salford Archaeology*, in prep

Mould, Q., Carlisle, I., and Cameron, E., 2003 *Craft, Industry and Everyday Life: Leather and Leatherworking in Anglo-Scandinavian and Medieval York*, *The Archaeology of York* 17/16, York.

Museum of London Archaeology Service, 1994 Archaeological Site Manual, Third edition, Museum of London

National Museums Liverpool, 2021 Archaeology: Rainford excavation; Available at: <https://www.youtube.com/watch?v=9jCVCdzT7kQ>, accessed on 24/01/2022

Newman, R., M., Hair, N., J., Howard-Davis, C., L., E., Brooks, C., and White, A., 2000 Excavations at Penrith Market, 1990, Cumberland Westmorland Antiq Archaeol Soc, 2nd Ser, 100, 105-130

Newman, R, and McNeil, R, 2007 The Industrial and Modern Period Research Agenda, in Brennand 2007, 133–158

Oberthaler, E., Hoppe-Harnoncourt, A., Pénot, S., Spronk, R., Sellink, M., 2019 Bruegel: the master, London

OAN, 2014 Greengate Towers, Salford. Archaeological Analysis Report (Issue 2), unpubl rep

Open Arts Archive, 2022, Mobility of Objects: Medieval shoes from the Grosvenor Museum, Chester; Available at: <https://www.openartsarchive.org/resource/mobility-objects-medieval-shoes-grosvenor-museum-chester>; Accessed on 02/03/2022

Padley, T., G., 2010 The Southern Lanes, Carlisle: Publication of Unpublished Fascicules: Fascicule 2, Oxford Archaeology North/English Heritage Project Number 5876

Penney, S., H., 1980 The Excavation of Two Post-Medieval Houses in China St., 1979, Contrebis, 8, 3-33

Philpott R.A. 1989 Pottery from High Street, Prescot, 1986 (Site 27), J Merseyside Archaeol Soc, 5, 95-97

Philpott, R., 2015 The Pottery and Clay Tobacco Pipe Industries of Rainford, St Helens: New Research, Merseyside Archaeological Society, Liverpool

Plot, R., 1686 The Natural History of Staffordshire, Oxford

Portable Antiquities Scheme, 2011 Mail Armour, Unique ID: LANCUM-B10EC4; Available at: <https://finds.org.uk/database/artefacts/record/id/180265>; accessed on 21/02/2022

Portable Antiquities Scheme, 2020 Inkwell Unique ID: SWYOR-4D10E9; Available at: <https://finds.org.uk/database/search/results/q/SWYOR-4D10E9>, accessed on 17/03/2022

Prehistoric Ceramics Research Group, Study Group for Roman Pottery and Medieval Pottery Research Group, 2016 A Standard for Pottery Studies in Archaeology, Historic England

Presslee, S., Wilson, J., Woolley, J., Best, J., Russell, D., Fischer, R., Kessler, B., Boano, R., Collins, M., and Demarch, B., 2018 The identification of archaeological eggshell using peptide markers, *Science Technology of Archaeological Research*. 4:1, 13-23

Ratkai, S., 2002 Vessel Glass, in Roberts, I., *Pontefract Castle: Archaeological Excavations 1982-86*, *Yorkshire Archaeology* 8,

Research Frameworks, 2022a North West Regional Research Framework: Research Agenda, Post Medieval Research Questions; available at: <https://researchframeworks.org/nwrf/sample-page/post-medieval/>; accessed on 24/01/2022

Research Frameworks, 2022b North West Regional Research Framework: Research Agenda, Late Medieval, Research Questions; available at: <https://researchframeworks.org/nwrf/sample-page/late-medieval/>; accessed on 24/01/2022

Research Frameworks, 2022c North West Regional Research Framework: Resource Assessment, Late Medieval; available at: <https://researchframeworks.org/nwrf/resource-assessments/late-medieval/>; accessed on 17/03/2022

Rowe, S., and Miller, I., 2021 Shakespeare North Playhouse, Prospero Place, Prescott: Analytical Final Report, *Salford Archaeology SA/2021/8*, unpubl rep

Rowe, S., in prep A post-medieval pottery assemblage from Chapel Wharf on the fringe of medieval Salford, Greater Manchester

Salzman, L., F., *Building in England Down to 1540: A Documentary History*, Oxford

Schweingruber, F.H. 1990. *Anatomy of European Woods*. Verlag Paul Haupt, Bern, Stuttgart

Sheridan, A., Davis, M., Clark, I., and Redvers-Jones, H., Investigating jet and jet-like artefacts from prehistoric Scotland: the National Museums of Scotland project, *Antiquity*, 76, 812-825

Slowikowski, A., 2011 'Genius in a Cracked Pot': Late Medieval Reduced Ware: A Regional Synthesis, *MPRG Occasional Paper* 4

Tyson, N., 1986 Excavations at the site of Bury Castle, *The Greater Manchester Archaeological Journal*, 8, 89-129

Watkins, J., G., 1987. *The Pottery*, Armstrong, P., and Ayers, B., (Eds), *Excavations in High Street and Blackfriargate*. Hull Old Town Report Series No. 5. *East Riding Archaeologist* 8, 53-181.

Webley, R., 2017 Portable Antiquities Scheme, *Finds Recording Guides: Cloth Seals*; available at: <https://finds.org.uk/counties/findsrecordingguides/cloth-seals/>; accessed on 21/02/2022

White, A., 2000 Pottery making at Silverdale and Arnside, Cumberland Westmorland Antiq Archaeol Soc, 2nd Ser, 100, 285-291

Willmott, H., 2002 Early Post-Medieval Vessel Glass in England, c. 1500–1670, CBA Research Report 132, York

Wood, P.N., Bradley, J., and Miller, I., 2009 A pottery production site at Samlesbury, near Preston, Lancashire, *Medieval Ceramics*, 30, 21-48.

Wright, D., 1959 *Baskets and Basketry*, London

APPENDIX 3: DENDROCHRONOLOGICAL ANALYSIS



A MOATED SITE AT FARINGTON NEAR PRESTON LANCASHIRE

TREE-RING ANALYSIS OF TIMBERS AND WOOD SAMPLES FOR SPECIES IDENTIFICATION



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A MOATED SITE AT FARINGTON, NEAR PRESTON, LANCASHIRE; TREE-RING ANALYSIS OF TIMBERS AND WOOD SAMPLES FOR SPECIES IDENTIFICATION

ALISON ARNOLD

ROBERT HOWARD

SUMMARY

Analysis by dendrochronology was undertaken on two of the three samples from this site which were submitted for dating, one sample, being of a timber other than oak, not being suitable for dating. There was no cross-matching between the two measured oak samples, and thus both were compared individually with the full corpus of reference chronologies for oak. This indicated a cross-match and date for only one sample, 20(311), when its 133 rings span the years 1418 to 1550. This sample appears to possibly retain the heartwood/sapwood boundary which, if correct, suggests that the source tree was felled at some point between 1565 at the earliest and 1590 at the latest.

In addition, a total of seven samples were submitted for species identification, this identifying these as *Alnus glutinosa* (alder), *Ilex aquifolium* (holly), and *Populus/Salix* (poplar/willow).

Introduction

Three cross-sectional slices from timbers which had been recovered during archaeological excavations at this site were sent to the Nottingham Tree-ring Dating Laboratory for possible analysis by dendrochronology, all three samples being from a structure within the moat (Fig 1a). It was hoped that dendrochronology might provide some contextual dating information in support of the other archaeological finds made during this excavation.

In addition to these three, a further six samples of wood were submitted for species identification, all six being from a wattle structure within the moat (Fig 1b). This analysis was undertaken at the direction of Jeremy Bradley, Project Officer (Finds) of Salford Archaeology at the University of Salford, Manchester.

Sampling for tree-ring analysis

An initial examination of the samples submitted for dendrochronological analysis showed that while two of them, samples 20(311), 21(313), were of oak, the third, 30(314), was of some other species of wood, and not suitable for tree-ring analysis. This sample was, therefore, submitted as a seventh specimen for species identification.

This initial examination also showed that one of the two oak samples, 21(313), had both considerable distortion to its annual growth rings (caused no doubt by the presence of a knot in this slice), and in any case had a quite low number of annual growth rings – eventually

determined as being 44 in number. Despite the distortion and low ring numbers in one oak sample, the annual growth ring widths of both oak samples were measured.

Tree-ring dating

Tree-ring dating relies on a few simple, but quite fundamental, principles. Firstly, as is commonly known, trees (particularly oak trees, the timber most commonly used in building construction until the introduction of pine from the late eighteenth century onwards) grow by adding one, and only one, growth-ring to their circumference each, and every, year. Each new annual growth-ring is added to the outside of the previous year's growth just below the bark. The width of this annual growth-ring is largely, though not exclusively, determined by the weather conditions during the growth period (roughly March–September). In general, good conditions produce wider rings and poor conditions produce narrower rings. Thus, over the lifetime of a tree, the annual growth-rings display a climatically influenced pattern. Furthermore, and importantly, all trees growing in the same area at the same time will be influenced by the same growing conditions and the annual growth-rings of all of them will respond in a similar, though not identical, way.

Secondly, because the weather over a certain number of consecutive years (the statistically reliable minimum calculated as being 54 years) is unique, so too is the growth-ring pattern of the tree. The pattern of a shorter period of growth, 20, 30, or even 40 consecutive years, might conceivably be repeated two or even three times in the last one thousand years, and is considered less reliable. A short pattern might also be repeated at different time periods in different parts of the country because of differences in regional micro-climates. It is less likely, however, that such problems would occur with the pattern of a longer period of growth, that is, anything in excess of 50 years or so. In essence, a short period of growth, anything less than 50 rings, is not reliable, and the longer the period of time under comparison the better.

Tree-ring dating relies on obtaining the growth pattern of trees from sample timbers of unknown date by measuring the width of the annual growth-rings. This is done to a tolerance of 1/100 of a millimetre. It is usual, furthermore, to obtain samples from a number of different timbers, usually between 8 to 12 if available, within each phase or element under investigation.

The growth patterns of these samples of unknown date are then compared with a series of reference patterns or chronologies, the date of each ring of which is known. When the growth-ring sequence of a sample 'cross-matches' repeatedly at the same date span against a series of different reference chronologies the sample can be said to be dated. The degree of cross-matching, that is the measure of similarity between sample and reference, is denoted by a 't-value'; the higher the value the greater the similarity. The greater the similarity the greater is the probability that the patterns of samples and references have been produced by growing

under the same conditions *at the same time*. The statistically accepted fully reliable minimum *t*-value is 3.5.

However, rather than attempt to date each sample individually it is usual to first compare all the samples from a single building, or phase of a building, with one another, and attempt to cross-match each one with all the others from the same phase or building. When samples from the same phase do cross-match with each other they are combined at their matching positions to form what is known as a 'site chronology'. As with any set of data, this has the effect of reducing the anomalies of any one individual (brought about in the case of treerings by some non-climatic influence) and enhances the overall climatic signal. As stated above, it is the climate that gives the growth pattern its distinctive pattern. The greater the number of samples in a site chronology the greater is the climatic signal of the group and the weaker is the non-climatic input of any one individual.

Furthermore, combining samples in this way to make a site chronology usually has the effect of increasing the time-span that is under comparison. As also mentioned above, the longer the period of growth under consideration, the greater the certainty of the cross-match. Any site chronology with less than about 55 rings is generally too short for reliable dating.

Having obtained a date for the site chronology as a whole, the date spans of the constituent individual samples can then be found, and from this the felling date of the trees represented may be calculated. Where a sample retains complete sapwood, that is, it has the last or outermost ring produced by the tree before it was cut, the last measured ring date is the felling date of the tree.

Where the sapwood is not complete it is necessary to estimate the likely felling date of the tree. Such an estimate can be made with a high degree of reliability because oak trees generally have between 15 to 40 sapwood rings. For example, if a sample with, say, 12 sapwood rings has a last sapwood ring date of 1400 (and therefore a heartwood/sapwood boundary ring date of 1388), it is 95% certain that the tree represented was felled sometime between 1403 (1400+3 sapwood rings (12+3=15)) and 1428 (1400+28 sapwood rings (12+28=40)).

Where only single samples, or a low number of samples, are obtained from a phase or element, or where samples do not cross-match with each other to produce a site chronology of combined or 'average' data, the samples can be compared individually with the full corpus of reference data. This process can sometimes be successful, with a cross-match and date sometimes being obtained, particularly where an individual sample has a higher number of rings, ie, something in excess of 70–80. However, such single-date results ought to be treated with a little caution as there is a possibility that any such results, no matter how high the

resultant t -values, are 'spurious' or random – such suspicions only being allayed when several cross-matching samples of a site chronology produce the same result. However, in many cases, single samples produce no results at all, and most often they remain undated.

Dendrochronological analysis

Each of the two samples obtained from this site was prepared by planed and cleaned with a blade or scalpel to clearly show the annual growth rings. These annual growth ring widths were then, measured, these measured data then being compared with each other as described in the notes above. As perhaps expected, given the distortion and low ring numbers of one sample, there was no satisfactory cross-matching between the two samples.

The data of the two measured samples were, therefore, compared individually with the full corpus of reference chronologies for oak, this indicating a cross-match and date for only one sample, 20(311). In this case the best series of t -values was found when its 133 rings span the years 1418 to 1550, the evidence for this dating being given in the t -values of Table 2.

This sample appears to possibly retain the heartwood/sapwood boundary, this boundary ring being dated to 1550. This means that although the sample has lost all its sapwood rings, it is possibly *only* the sapwood that has been lost. Allowing that most oak trees have between a minimum of 15 sapwood rings, and a maximum of 40 sapwood rings (the 95% confidence interval), this heartwood/sapwood boundary date would suggest that the tree was felled at some point between 1565 at the earliest and 1590 at the latest.

It should be noted that the results seen here are for a single sample, and that the climatic data it contains may not be particularly strong. Thus, some caution might be expressed over these results and, with the accumulation of further regional data, it is possible that this sample could be re-dated. The t -values indicated in Table 2, however, are the maximum, and there is no other similarly high or consistent cross-match indicated.

Conclusion

Analysis by dendrochronology has, therefore, dated one of the two oak samples which were submitted, the other oak sample having a distorted growth pattern and a low number of annual growth rings. Interpretation of the possible heartwood/sapwood boundary on the dated sample would suggest that the timber was felled during the second half of the sixteenth century.

Woodland sources

In some programmes of tree-ring analysis, it is possible to make some observations about the possibly woodland source(s) of the timber used at a particular site. When a site chronology is compared with the several hundred reference chronologies (over 2500) from every part of England in the reference database, there is sometimes a trend or tendency for a site chronology to match better with reference chronologies from one particular region or locality rather than any other part of the country. Whilst the exact location of the woodland sources for the timbers represented by these other reference chronologies are themselves not known, the matching might suggest that the dated samples investigation came from a similar regional source rather than from anywhere else in England. Unfortunately, this is rarely reliable with individual samples such as those obtained from Farington as singletons contain insufficient climatic data to give a truly reliable indication of source locality.

Species identification

Seven samples of wood were submitted for species identification. Thin sections of wood were taken by hand using a double edged razor blade, and mounted on a microscope slide for examination using high-power light-transmitting microscopy, using a Meiji EMZ-2 (x40x400). Identifications were made according to a combination of the descriptions and keys by Schweingruber (1990), Hather (2000) and by comparison with modern reference slides. See below for results

Note that identifications to species level are based upon the assumption that only a single native species is likely to have been present. Three taxa were identified: *Alnus glutinosa* (alder), *Ilex aquifolium* (holly) and *Populus/Salix* (poplar/willow). The latter genera have very similar anatomical structures and are difficult to separate. The presence of predominantly homogenous rays in sample 30 may suggest that *Populus* is present, but the differentiation is not considered entirely reliable (Hather 2000; Gale & Cutler 2000).

Bibliography

Arnold, A J, Howard, R E, and Litton, C D, 2005 Tree-ring Analysis of Timbers from White Hart Yard, 10–16 Cloth Market, Newcastle Upon Tyne, Tyne and Wear, Centre for Archaeol Rep, 36/2005

Arnold, A J, and Howard, R E, Kingsbury Hall, Kingsbury, Warwickshire; Tree-ring Analysis of Timbers, Centre for Archaeol Rep, 53/2006

Arnold, A J, and Howard, R E, 2011 unpubl Tree-ring Analysis of Timbers from Aslackby Manor, Aslackby, Lincolnshire – Nottingham Tree-ring Dating Laboratory unpubl computer file *ASBASQ01/ 02/ 03*

Arnold, A J and Howard, R E, 2014 unpubl Alcester War Memorial Town Hall, Alcester, Warwickshire, Tree-ring Dating of Timbers – Nottingham Tree-ring Dating Laboratory, unpubl computer file *ALCASQ01 / SQ02*

Arnold, A J, and Howard, R E, 2016 Church of St Michael, Knighton-on-Teme, Worcestershire; Tree-ring Analysis of Oak Timbers, Historic England Res Rep Ser, 18/2016

Bridge, M, and Tyers, C, 2017 The Fleece, Westgate Street, Gloucester, Gloucestershire; Tree-Ring Analysis of Oak and Elm Timbers, Historic England, 36/2017

Howard, R E, Laxton, R R, Litton, C D, and Simpson, W G, 1994 List 57 nos 4a, 11b – Nottingham University Tree-Ring Dating Laboratory: results, *Vernacular Architect*, 25, 36–40

Wood identification references

Gale, R & Cutler, D, 2000. *Plants in Archaeology: Identification manual of vegetative plant materials used in Europe and the southern Mediterranean to c. 1500*, Westbury and Kew.

Hather, J G, 2000. *The Identification of Northern European Woods; A Guide for Archaeologists and Conservators*, London, Archetype Publications.

Schweingruber, F.H. 1990. *Anatomy of European Woods*. Verlag Paul Haupt, Bern, Stuttgart

Table 1: Details of tree-ring and wood identification samples from Farington moated site (site GAF 178)							
Sample number	Context number		heartwood rings	Sapwood rings*	First measured ring date (AD)	Heart/sap boundary date	Last measured ring date (AD)
20	311	Oak for tree-ring analysis	133	h/s?	1418	1550	1550
21	313	Oak for tree-ring analysis	44	no h/s	-----	-----	-----

h/s? = sample may have the heartwood/sapwood boundary, i.e., only the sapwood rings are missing

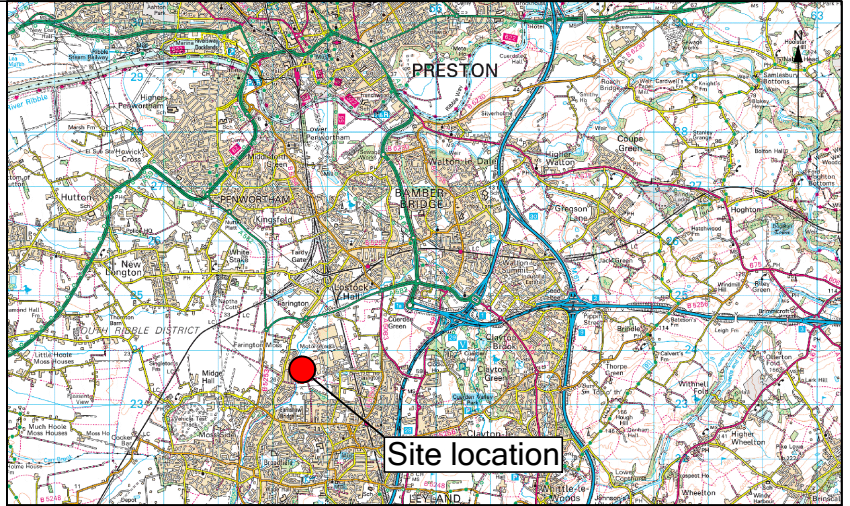
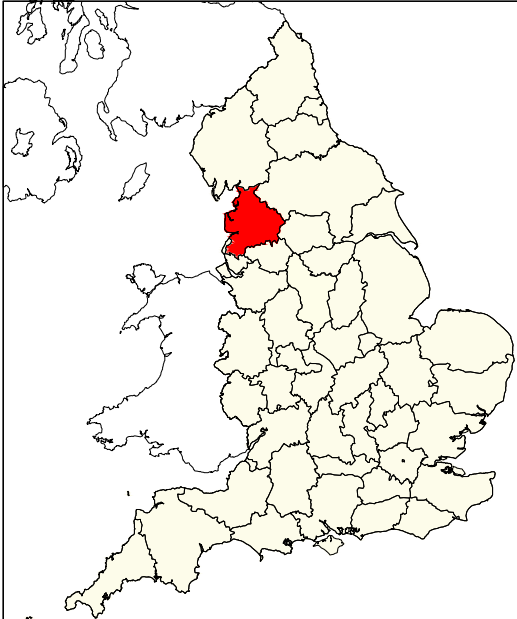
Table 2: Results of the cross-matching of sample 20(311) and the reference chronologies when the first ring date is 1418 and the last ring date is 1550

Reference chronology	t-value	
Church of St Michael, Knighton-on-Teme, Worcestershire	5.3	(Arnold and Howard 2016)
Whites Farm, South Leverton, Nottinghamshire	5.3	(Howard <i>et al</i> 1994)
Alcester Town Hall, Alcester, Warwickshire	5.2	(Arnold and Howard 2014 unpubl)
Aslackby Manor, Aslackby, Lincolnshire	5.1	(Arnold and Howard 2011 unpubl)
White Hart Yard, Newcastle Upon Tyne, Tyne and Wear	5.1	(Arnold <i>et al</i> 2005)
Ordsall Hall, Salford, Greater Manchester	5.1	(Howard <i>et al</i> 1994)
Fleece Inn, Westgate Street, Gloucester	5.0	(Bridge and Tyers 2017)
Kingsbury Hall, Kingsbury, Warwickshire	4.8	(Arnold and Howard 2006)
		Species ID samples
23	246	<i>Alnus glutinosa</i> (Alder)
24	246	<i>Alnus glutinosa</i> (Alder)
25	246	<i>Alnus glutinosa</i> (Alder)
26	246	<i>Alnus glutinosa</i> (Alder)
27	246	<i>Ilex aquifolium</i> (Holly)
28	246	<i>Alnus glutinosa</i> (Alder)
30	314	<i>Populus/Salix</i> (poplar/willow)

Given that this is a single sample, and that the climatic data it contains are not particularly strong, some caution might be expressed over this result and, with the accumulation of further regional data, it is possible that this sample could be re-dated. The t-values seen here, however, are the maxima for the date span given, there being no other similarly high or consistent cross-matches indicated

APPENDIX 4: FIGURES

- Figure 1: Site location
- Figure 2: Trenches excavated by the Central Lancashire Archaeological Research Unit 1976-77 and the evaluation trenches
- Figure 3: Areas 1 & 2 and trenches (A, B & C) across the moat
- Figure 4: South-facing section through moat in Trench A
- Figure 5: Plan of Trench B
- Figure 6: North-facing section through the moat and causeway (Section 4) Trench B
- Figure 7: North-facing section through the moat (Section 6) Trench B
- Figure 8: East facing and west facing elevations of revetments (Section 2 and Section 3) Trench B
- Figure 9: West-facing section through the moat Trench C
- Figure 10: Plan of structural remains built over the infilled moat in Area 1
- Figure 11: Structural remains ascribed to Phases 6a, 6b and 6c in Area 1
- Figure 12: Plan of structural remains in Area 2
- Figure 13: Phased plan of structural remains in Area 2
- Figure 14: Plan of Areas A and B superimposed on the Ordnance Survey map of 1894
- Figure 15: Figure 15: Plan of Areas A and B superimposed on the Ordnance Survey map of 1938
- Figure 16: Plan of Areas A and B superimposed on the Ordnance Survey map of 1961
- Figure 17: Plan of excavated moat superimposed on the Ordnance Survey plan of 1894

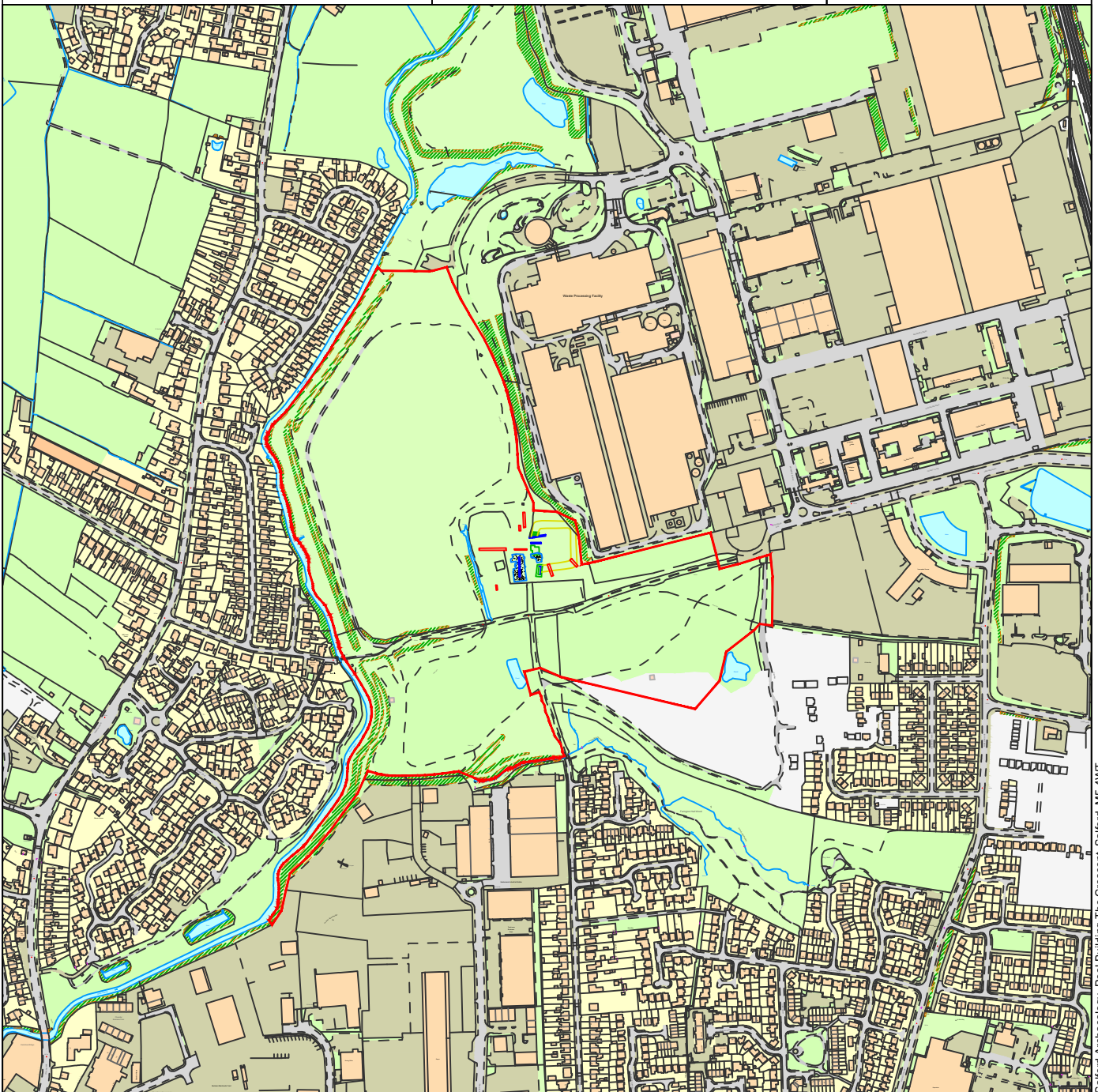


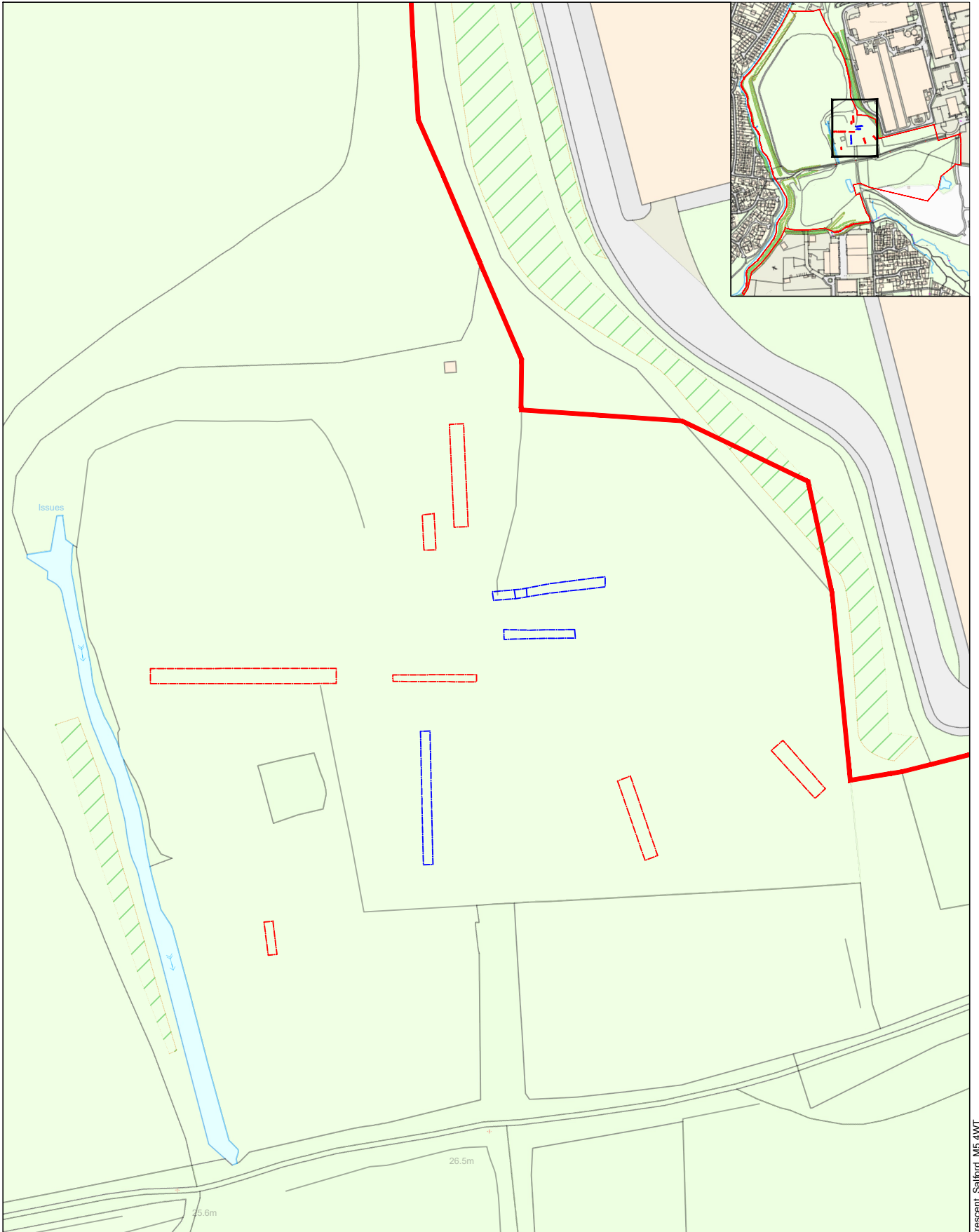
Grasmere Avenue, Farington

Figure 1: Site location



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Figure 2: Trenches excavated by the Central Lancashire Archaeological Research Unit (CLAR) in 1976-77 and the evaluation trenches

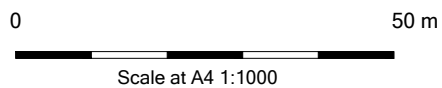


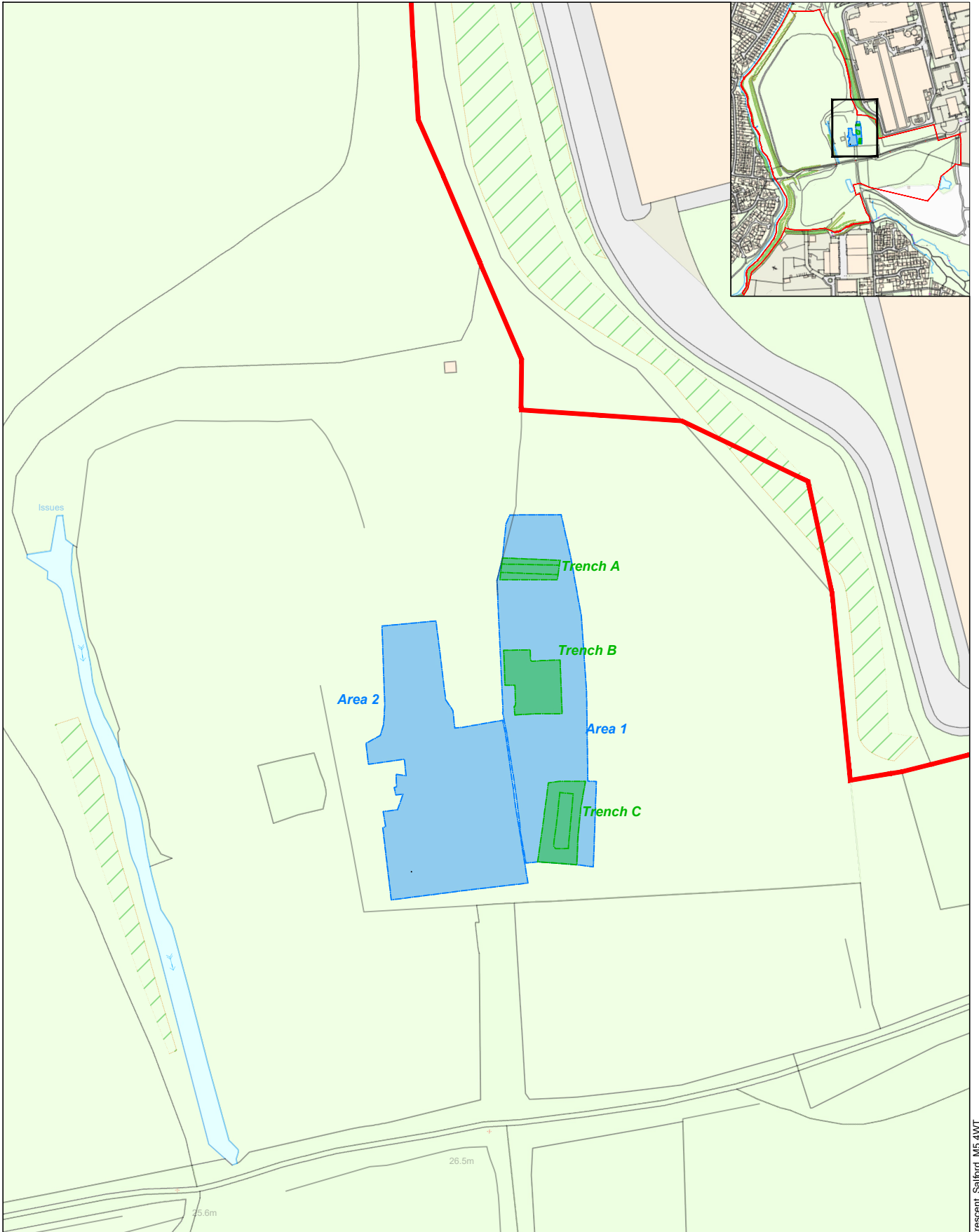
Key:

- CLAR trenches
- Evaluation trenches
- Site boundary



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Figure 3: Areas 1 & 2 and trenches (A,B & C) across the moat



Key:

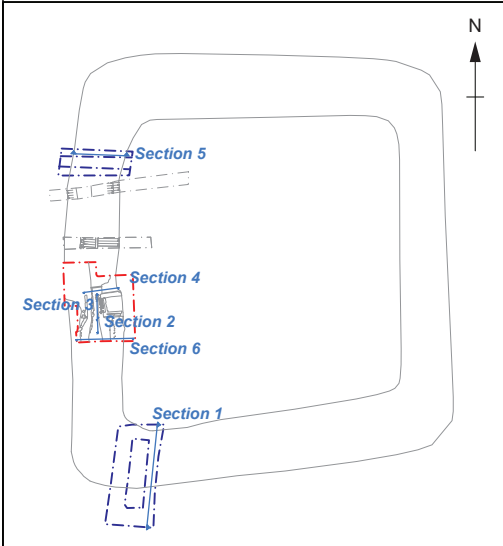
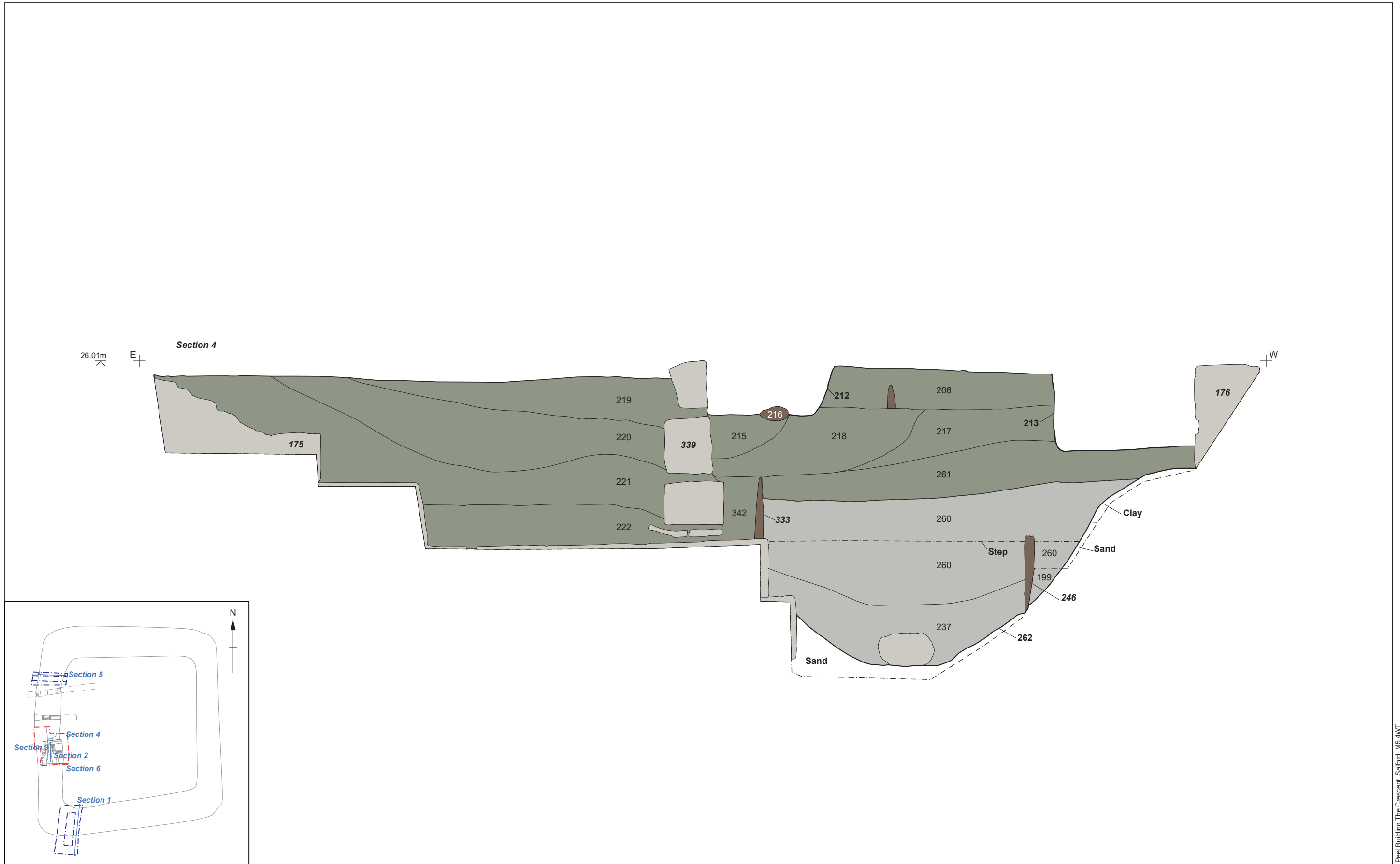
- Areas
- Moat trenches
- Site boundary

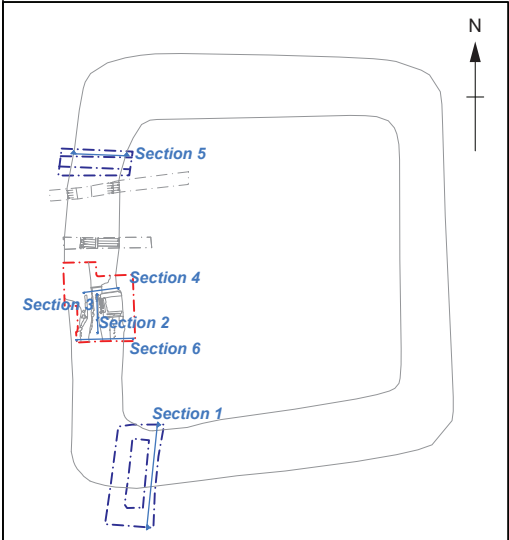
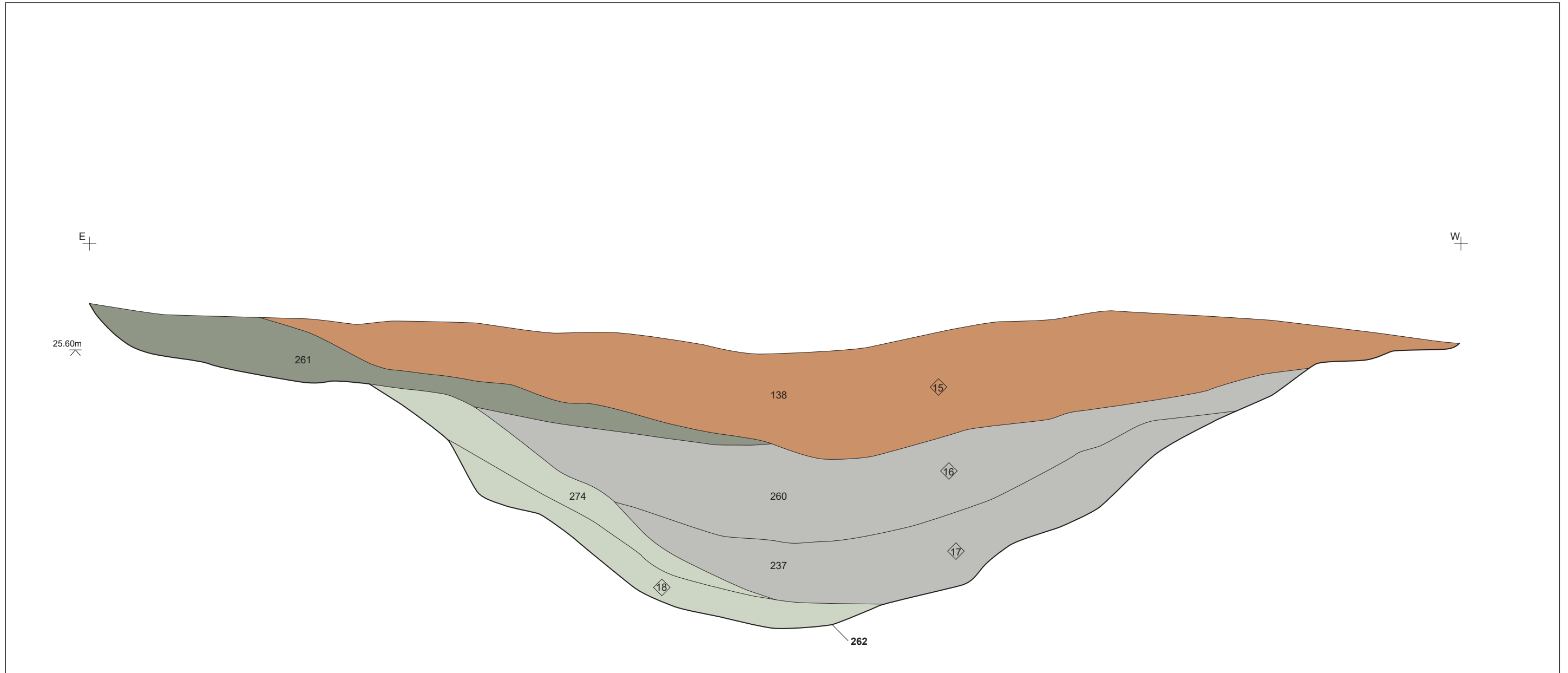


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0 50 m

Scale at A4 1:1000

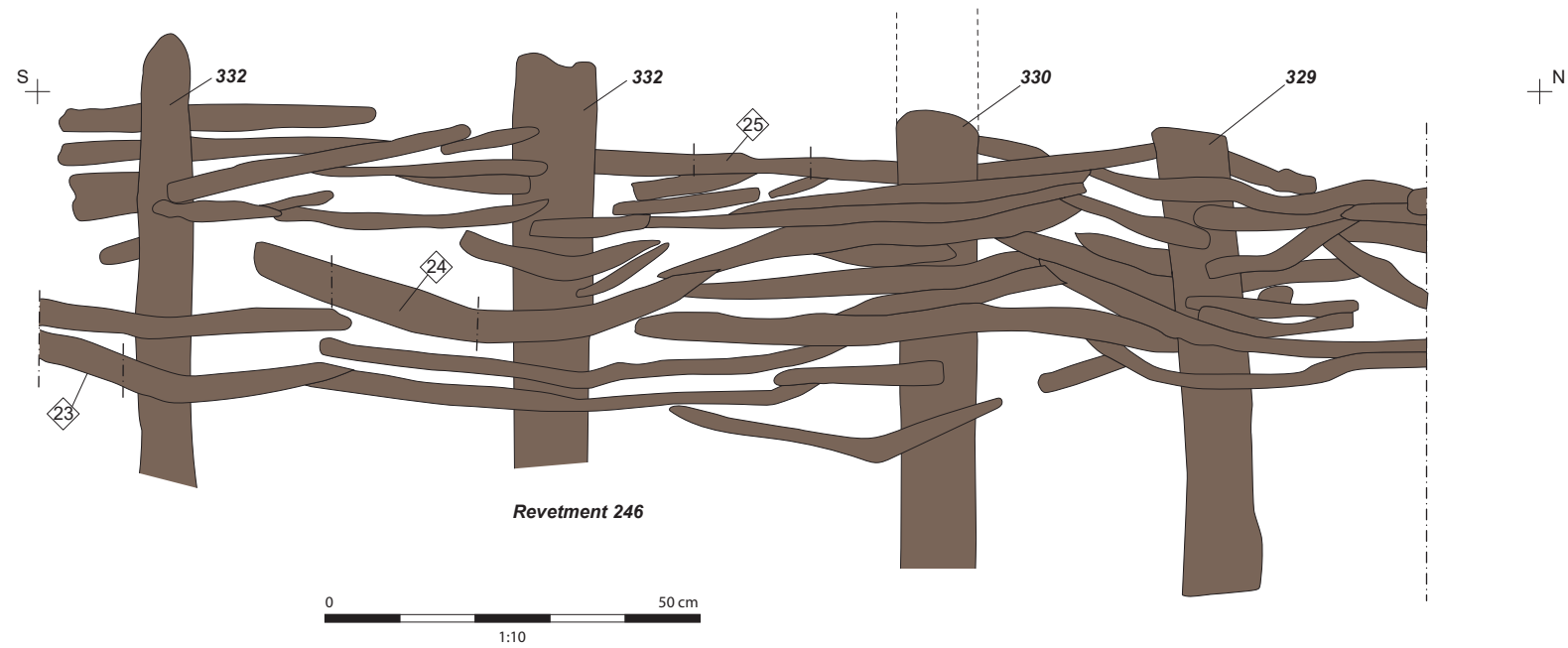




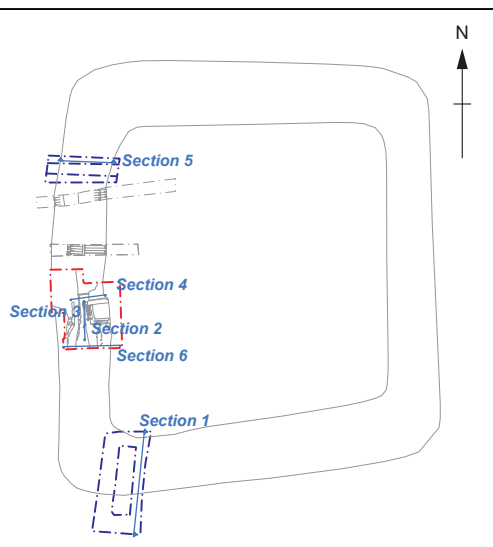
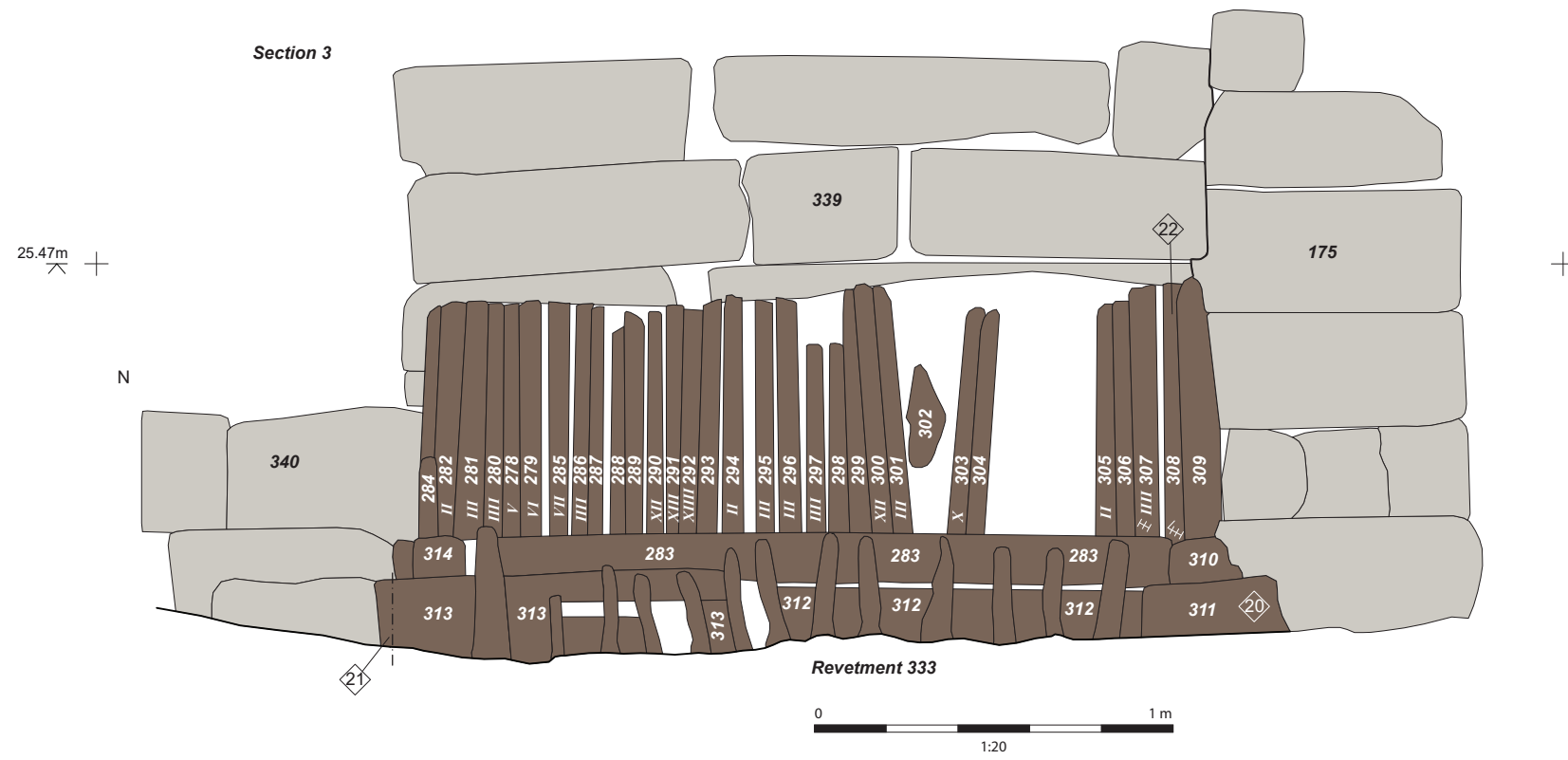
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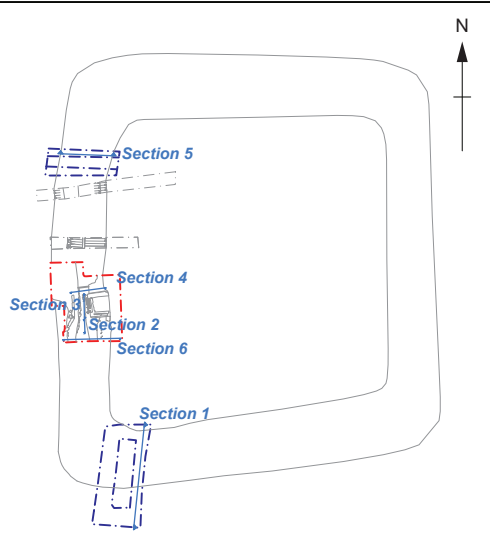
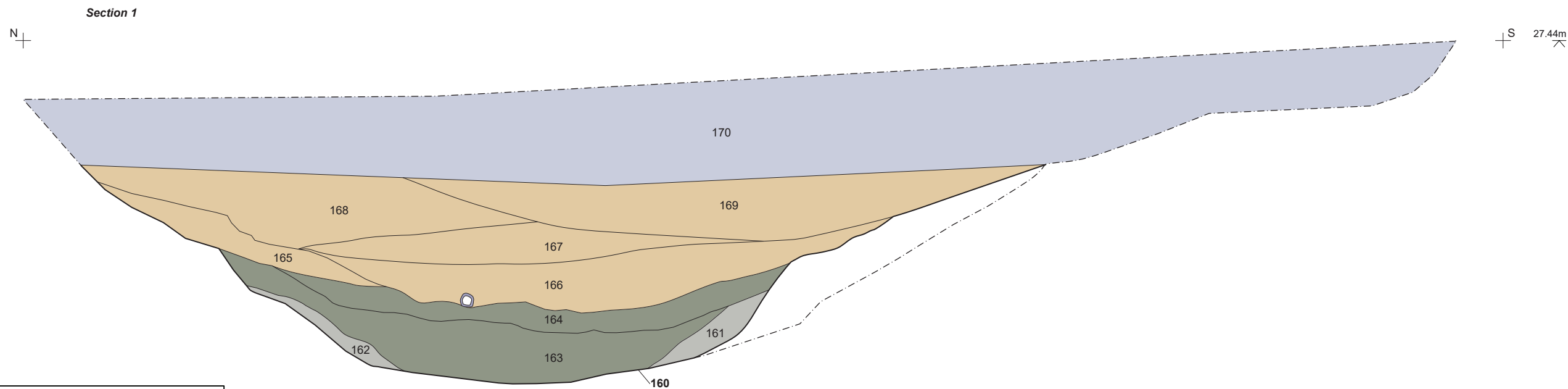
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100 Structure / group	 Phase 4	 Sample
100 Layer / fill	 Phase 5	

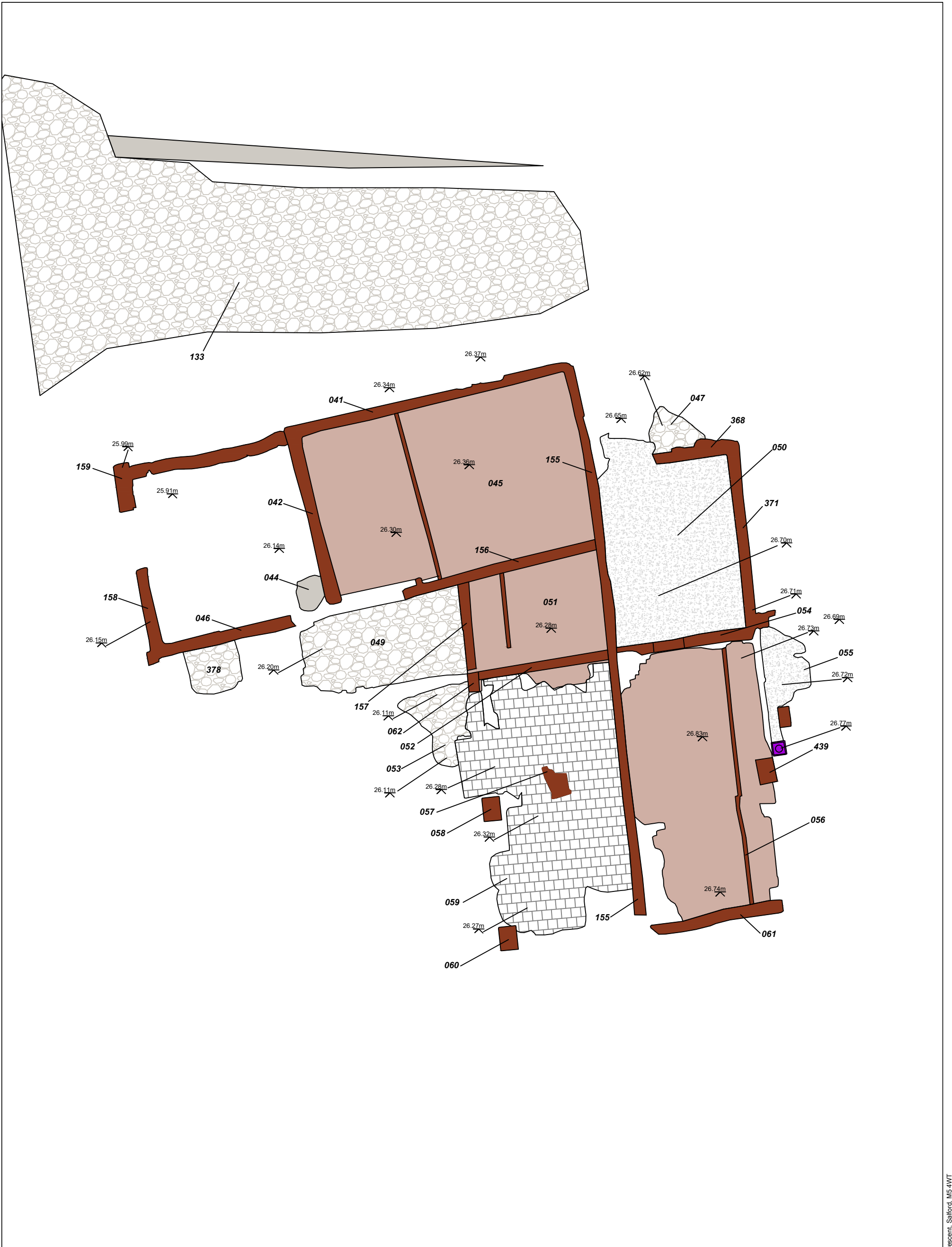
Section 2



Section 3

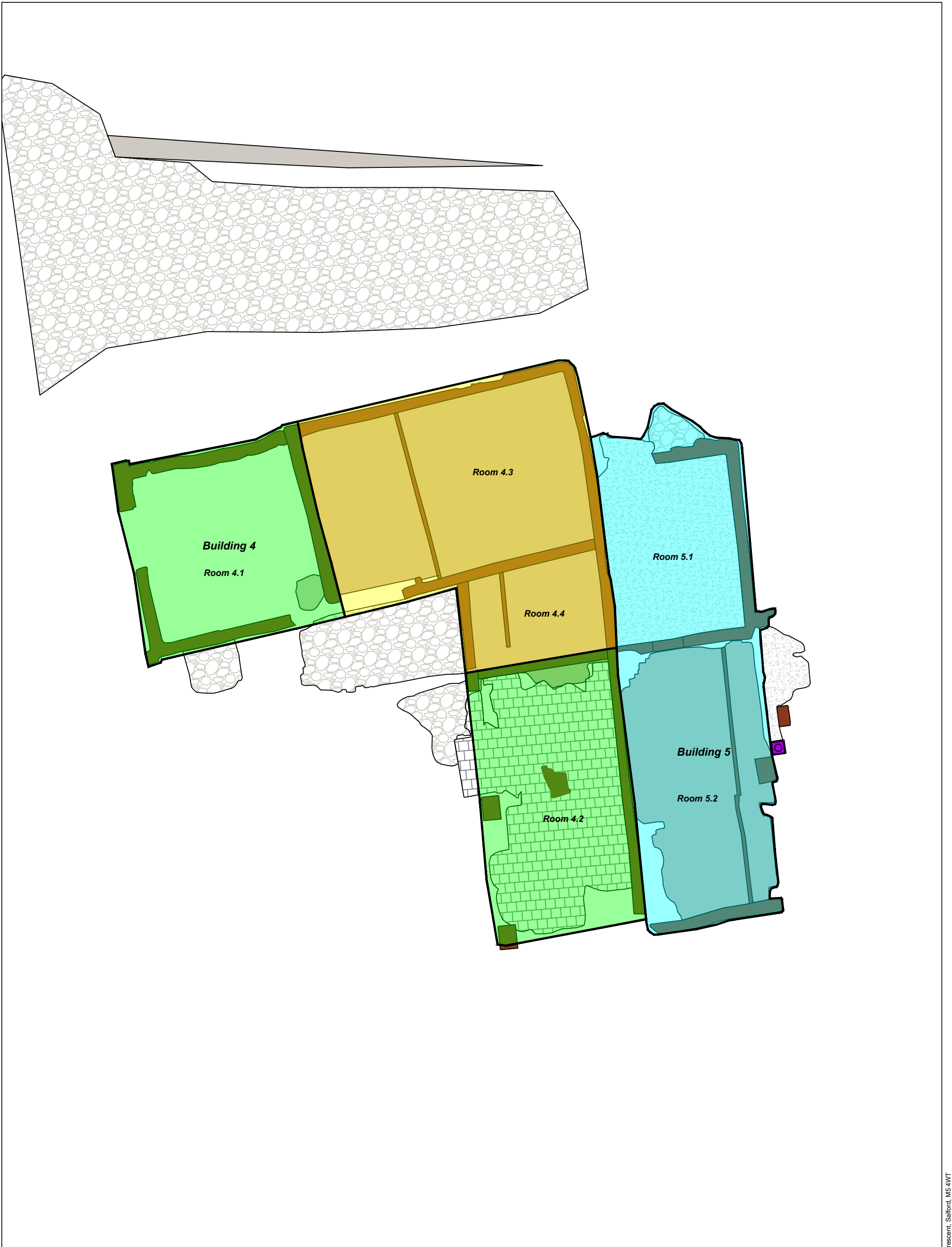






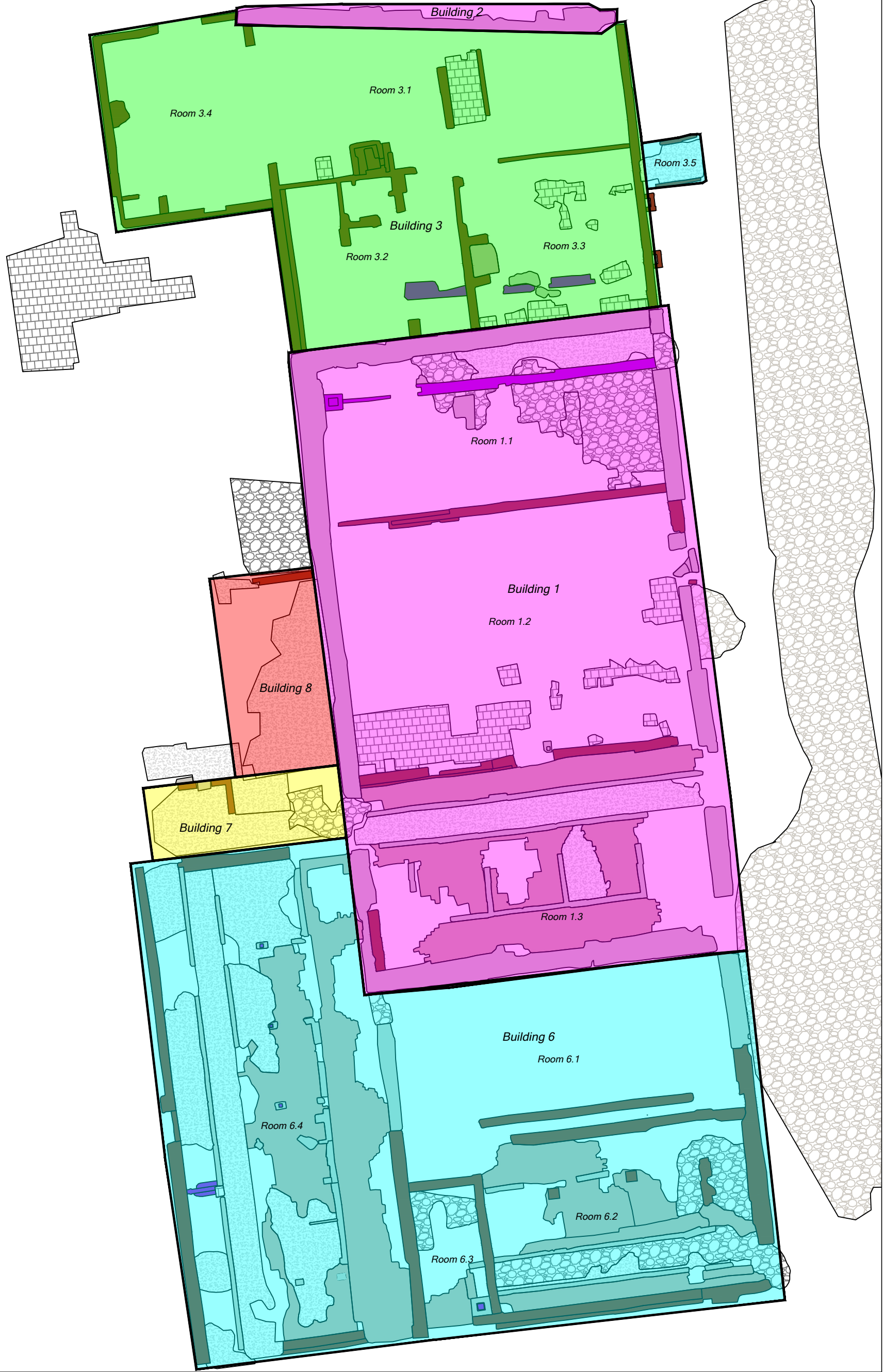
Grasmere Avenue,
 Farington Figure 10: Plan of structural remains built over the infilled moat in Area 1





Grasmere Avenue, Farington

Figure 11: Structural remains ascribed to Phases 6, 7 and 8 in Area 1



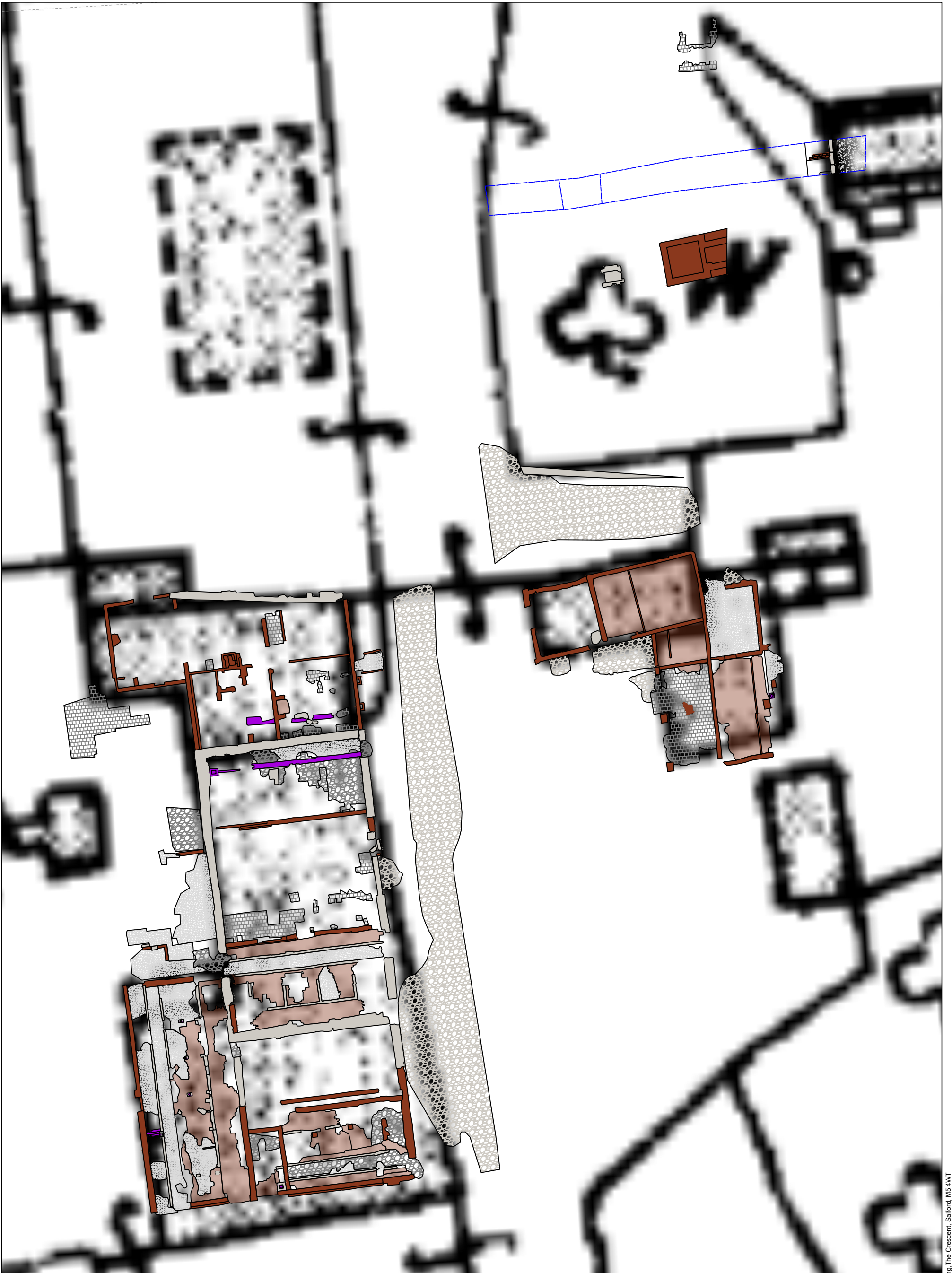
Grasmere Avenue, Farington

Figure 13: Phased plan of structural remains in Area 2



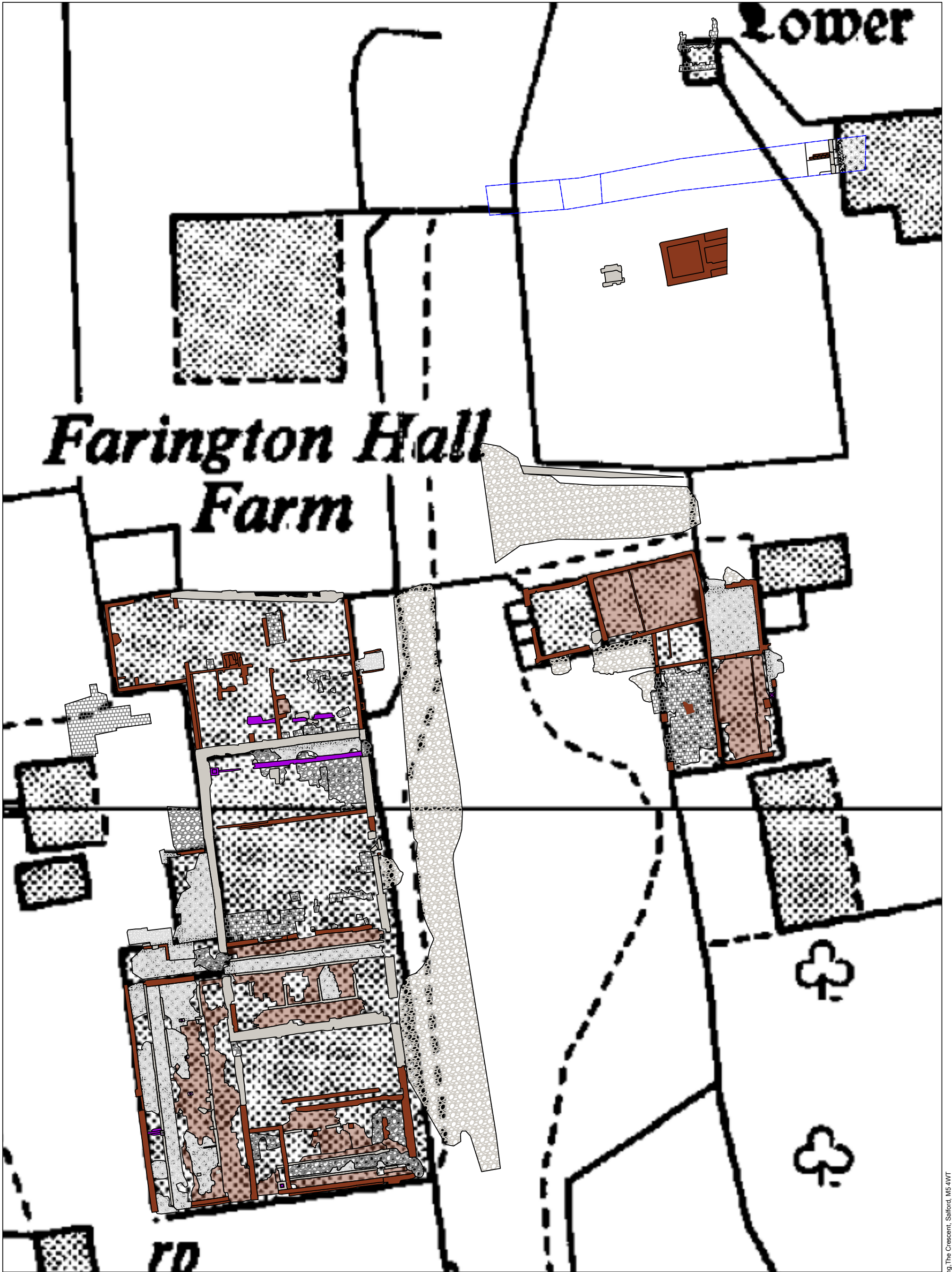
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Figure 14: Plan of Areas A and B superimposed on the Ordnance Survey map of 1894



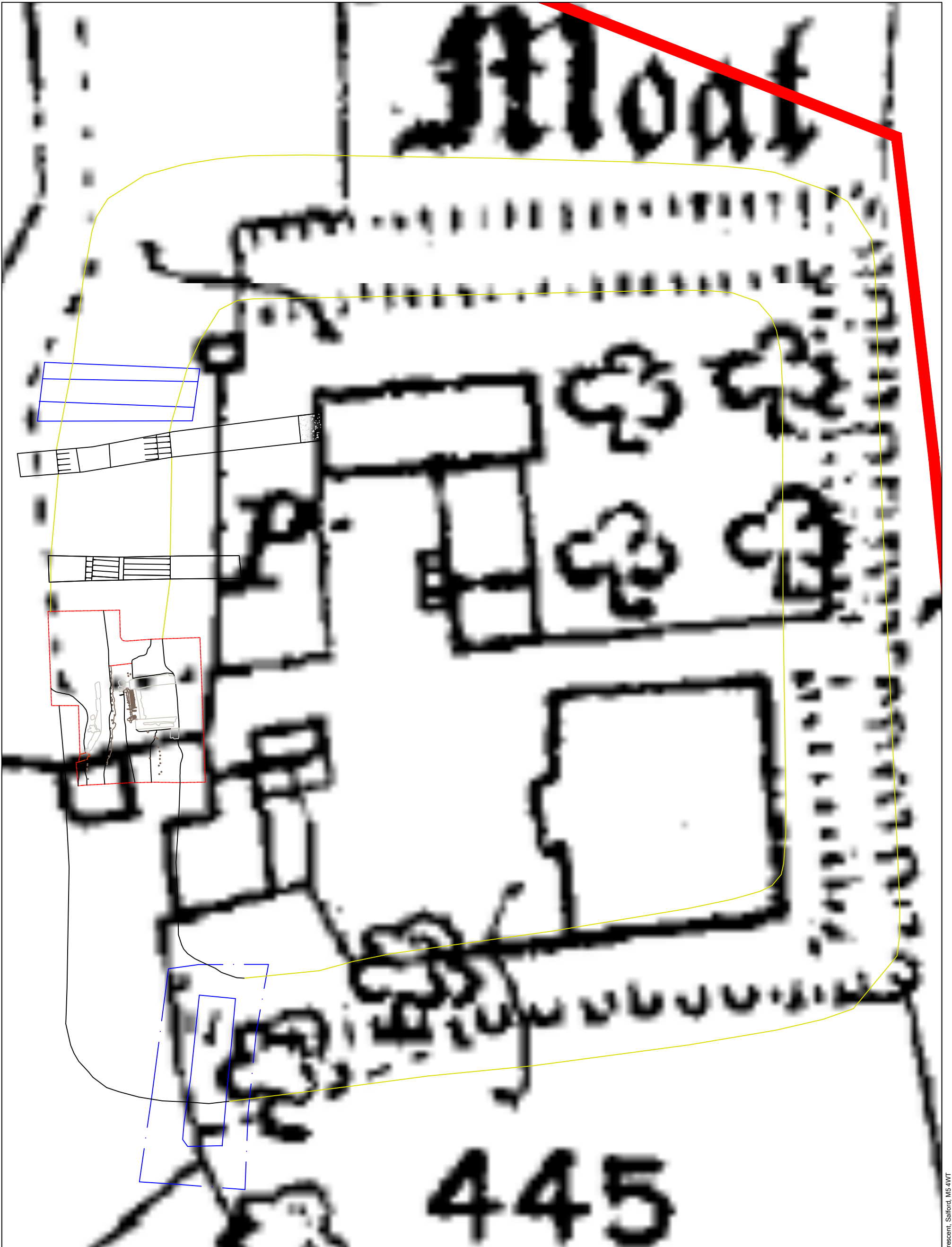
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Figure 15: Plan of Areas A and B superimposed on the Ordnance Survey map of 1938



Grasmere Avenue Excavation, Farington

Figure 16: Plan of Areas A and B superimposed on the Ordnance Survey map of 1961



Grasmere Avenue Excavation, Farington

Figure 17: plan of excavated moat superimposed on the Ordnance Survey plan of 1894