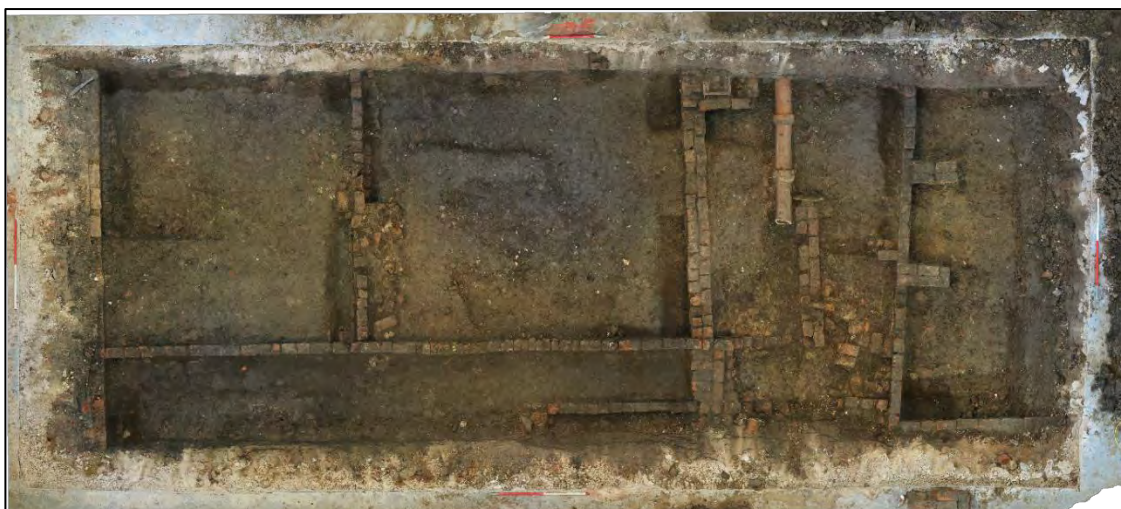




**Archaeological excavation on
land at Heyrod Street
Manchester
August 2021
Post-excavation assessment report**

Report No. 024/047

Author: Dan Garner, Chris Chinnock

Illustrator: Sofia Turk



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Site code: LP4029C

Report No. 024/047

Project Manager: Dan Garner, John Duffy

Quality control and sign off:

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OASIS REPORT FORM

Project: Heyrod Street, Manchester		OASIS No: molanort1- 524778	
ACTIVITY TYPE			
Project/ Activity type	Excavation		
Reason for investigation	Planning requirement		
Development type	Housing		
Planning reference ID	127317/FO/2020	Planning stage	
PROJECT LOCATION			
National grid ref	SJ 85249 98019		
Site name	Heyrod Street, Manchester		
REVIEWERS/ ADMIN			
HER for project	Greater Manchester HER		
National organisation	Historic England		
WORK UNDERTAKEN			
Methodological summary	<p>The Archaeological works included excavation and recording of below ground remains associated with land at Heyrod Street, Manchester. The Archaeological excavation consisted of two trenches, Area 1 measuring 7.5m by 6m; and Area 2 measuring 12m by 5m. The excavation areas were opened using a mechanical excavator equipped with a hydraulic pecker and wide toothless blade under the constant direction of the supervising archaeologist with material being removed in spits of no more than 0.3m in thickness.</p>		
Previous works?	Yes	Future works?	Not known
Dates - Start date:	04-Aug-2021	End date:	19-Aug-2021
Scientific dating done?	No	Type:	
Enviro sampling done?	Yes		
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PEOPLE			
Organisation	MOLA		
Project manager	John Duffy, Dan Garner		
Project officer/ supervisor			
Funding body	Packaged Living		
KEYWORDS			
Monuments found/ date	Cellar - POST MEDIEVAL - Privy House - POST MEDIEVAL		
Finds types found/ date	Pottery, metal buckle plate, oyster shell		
RESULTS			
Description of outcomes/ summary of research framework contribution			
ARCHIVES			
Accession ID			
Finds Archive repository	The Manchester Museum	Expected date of submission:	TBC
Paper Archive repository	The Manchester Museum	Expected date of submission:	TBC
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Archaeological excavation on land at Heyrod Street Manchester August 2021 Post-excavation Assessment report

ABSTRACT

Two excavation areas were examined on Heyrod Street, Manchester, in 2021, following a phase of evaluation. The excavation areas uncovered large parts of individual 19th-century property plots. Remains observed in Area 1 represent large parts of the house and rear yard, including two earth closet privy pits and an outhouse, of one of the terraced properties fronting onto Longacre Street (previously known as Riders Row and Forty Row). Riders Row first appears in the mapping evidence in 1819 (Martin and Nash 2020, figure 8). Those remains recorded in Area 2 comprise a large part of a property fronting onto Court No.3 as well as parts of an alleyway to the rear and a small part of the property at the corner of Heyrod and Court No.3. In both areas, some evidence for redevelopment of the space was observed. Finds assemblages represented low status domestic occupation.

1. INTRODUCTION

This report details the results of an Archaeological Excavation carried out on the site of land at Heyrod Street, Manchester, on behalf of Packaged Living. The work seeks to satisfy planning Condition 9 as set by Manchester City Council, prior to the commencement of building works on the site.

The fieldwork was carried out by Dan Garner, Ethan Ellis, Kelly Griffiths, Matt Thomas and Chris Matthews of L – P Archaeology between the 4th and 19th of August 2021, prior to the transfer of L – P Archaeology to MOLA (Museum of London Archaeology). A draft report written for L-P Archaeology, was prepared by Dan Garner and updated for MOLA by Chris Chinnock and Claire Finn.

The site is located on land off Heyrod Street, Manchester, M1 2WW (Fig 1 and 2). The National Grid Reference is SJ 85249 98019. The site code allocated by L – P Archaeology is LP4029C.

All works were carried out in accordance with the approved Written Scheme of Investigation (WSI) (Martin and Nash 2021) and the Chartered Institute for Archaeologists (CIfA) Standards and Guidance for an Archaeological Evaluation (CIfA 2020).

2. SITE BACKGROUND

2.1. Planning

In February 2019 the Ministry for Housing Communities and Local Government (HCLG) updated the Revised National Planning Policy Framework (NPPF) (HCLG 2019). Chapter 16 of this document sets out policies for the conservation and enhancement of the historic environment.

The NPPF indicates planning decisions should be made based on the significance of Heritage Assets. These are defined as buildings, monuments, sites, places, areas or landscapes positively identified as having a degree of significance meriting consideration in planning decisions.

In considering any planning application for development the Local Planning Authority is Manchester City Council, who take advice from the Greater Manchester Archaeological Advisory Service (GMAAS).

Packaged Living (the Client) has secured full planning permission (ref. 127317/FO/2020) from Manchester City Council for the erection of a part 25 part 21, part 14, part 7 storey building for 352 apartments. Comprising 39 Studios, 77 one-bed, 227 two-bed and 9 three-bed (Use Class C3) with ground floor commercial space within four units (494m²) for Class A1 (Shop), A2 (Financial and Professional Services) A3 (Café and Restaurant), A4 (Drinking Establishment), A5 (Hot Food Take Away), B1 (Office) and D1–D2 uses, ancillary indoor and outdoor amenity space (including 1st and 21st floor external areas) car parking for 20 vehicles, cycle parking and associated hard and soft landscaping works, following demolition of existing buildings on land at Heyrod Street, Manchester, M1 2WW (hereafter the Site).

This report details work undertaken to discharge Condition 9 of the planning consent (Application reference 127317/FO/2020) which states that:

No demolition, development or development-related groundworks shall take place until the applicant or their agents or successors in title has secured the implementation of a programme of archaeological works. The works are to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by Manchester Planning Authority. The WSI shall cover the following:

- *A phased programme and methodology of investigation and recording to include:
 - i) archaeological evaluation trenching, possibly leading to area excavation*
- *A programme for post investigation assessment to include:
 - i) post-fieldwork analysis of the evaluation and excavation records and finds of the below- ground archaeological interest.*
- *Deposition of the final report with the Greater Manchester Historic Environment Record.*
- *Dissemination of the results of the archaeological investigations commensurate with their significance.*
- *Provision for archive deposition of the report and records of the site investigation.*
- *Nomination of a competent person or persons/organisation to undertake the works set out within the approved WSI.*
- *Reason: In accordance with NPPF Section 16, Paragraph 199 - To record and advance understanding of heritage assets impacted on by the development*

and to make information about the archaeological heritage interest publicly accessible

- *GMAAS will monitor the implementation of the recording on behalf of Manchester City Council.*

Archaeological evaluation trenching was undertaken to satisfy item 1.(i) of Condition no. 9 (Dean 2021). The archaeological evaluation involved the excavation of three trenches targeting the footprint of former terraced housing named as Riders/Forty Row, back-to-back housing named as Court No. 1, and the former timber yard area.

On the basis of the results of the evaluation trenching GMAAS recommend to the Council that the archaeological potential of the Site, as demonstrated through evaluation, was sufficient to trigger area excavation; sufficient in scope to address item 1.(ii) of Condition no. 9 and those relevant elements of items 2, 3, 4, 5 and 6. Accordingly, two areas were identified for archaeological area excavation. These areas provide an opportunity to investigate a larger sample of the remains of Forty Row, and the blind-backs and back-to-backs on the north-west and south-east sides of Court No.1 as shown on the 1851 town plan.

2.2. Geology and topography

The British Geological Survey GeoIndex for the site records the superficial (drift) deposits are Devensian - Till, over a bedrock of Chester Formation Sandstone (BGS, 2021). This data is at relatively low resolution and does not give site specific data.

The Site is located in Ancoats, Manchester at national grid reference (SJ) 385275, 398047 (Fig 1). The Site is occupied by warehouse structures, in the north-eastern part there is car-parking and outdoor storage and there is an area of raised car-parking in the south eastern part of the Site. The Site is relatively flat, with a maximum approximate elevation of 47m above Ordnance Datum (aOD) in the north-east and a minimum of 45m aOD in the south-west.

2.3. Historical and archaeological background

The planning application was supported by an archaeological desk-based assessment (Martin 2019).

In summary, there are no known prehistoric sites within the Site and the potential for prehistoric remains is considered to be very low/negligible. The potential for Roman, early medieval and medieval remains to survive in-situ within the Site is similarly considered to be equally low/negligible, reflecting the absence or low-intensity of known archaeological remains from this period in the vicinity and the intensive development of the Site from the mid-19th century onwards. The greatest potential for buried archaeological remains derives from the construction and use of a complex of structures at the Site during the 19th century.

Some of the potential archaeological remains are related to domestic premises. Any such remains would be categorised as non-designated archaeological assets. The archaeology of the domestic arrangements and living conditions of Manchester during the 19th century is a recognised research priority for North-West England (NWRP 2024). The opportunities are expanded upon below in the examination of the project's aims and objectives.

There are no overt archaeological research priorities for 19th-century timber yards, but as an ancillary trade related to and supporting the textile and other industries there is a modest research potential.

The archaeological desk-based assessment was superseded by the results of a trial trench evaluation (Dean 2021). The results of this evaluation are summarised below:

Trench 1 was the only trench able to provide information on the configuration of domestic premises as all of the other intended targets of the evaluation had been subject to demolition. Within Trench 1 the buildings of Rider's Row or Forty Row terrace which previously fronted onto Long Acre Street had cellars or basement levels which were accessed via staircases and may have had flagstone floors. These basements yielded examples of Refined White Earthenware(s), Bone China and English Porcelain which the report author concluded could imply that the buildings' previous occupants had access to diverse economic markets and may have been adopting some of the social and cultural practices of the middle/upper class through material culture. Furthermore, the absence of the ubiquitous oyster and cockle shells compared to the larger quantity of pig and cattle bone may not be indicative of a direct change in socio-economic circumstances but could suggest a trend away from these traditional food stuffs.

Trench 2 had two partially surviving brick walls which extended into an assumed basement level to the north-east of No.1 Court on the 1851 map. The remains of a large flagstone surface (204) may relate to the floor of a business or workshop – or perhaps as a curb for the alleyway that ran between No.1 Court and Forty Row. A metalled surface (202) was found which might also allude to phasing and improvement of the back alleyway.

Uncovered in Trench 3 was a large area of sandstone paving (308) which may relate to the timber yard shown on mapping. This surface had been arranged in multiple rows aligned east to west and had been apparently fixed into position with the use of bitumen or tar. Furthermore, this area appeared to have been expanded following the demolition of the building previously located near the south-western end of the trench (1851), this building was also targeted by Trench 3. That building did have a surviving basement level and a red brick floor but had been demolished before the paved area was extended across its footprint.

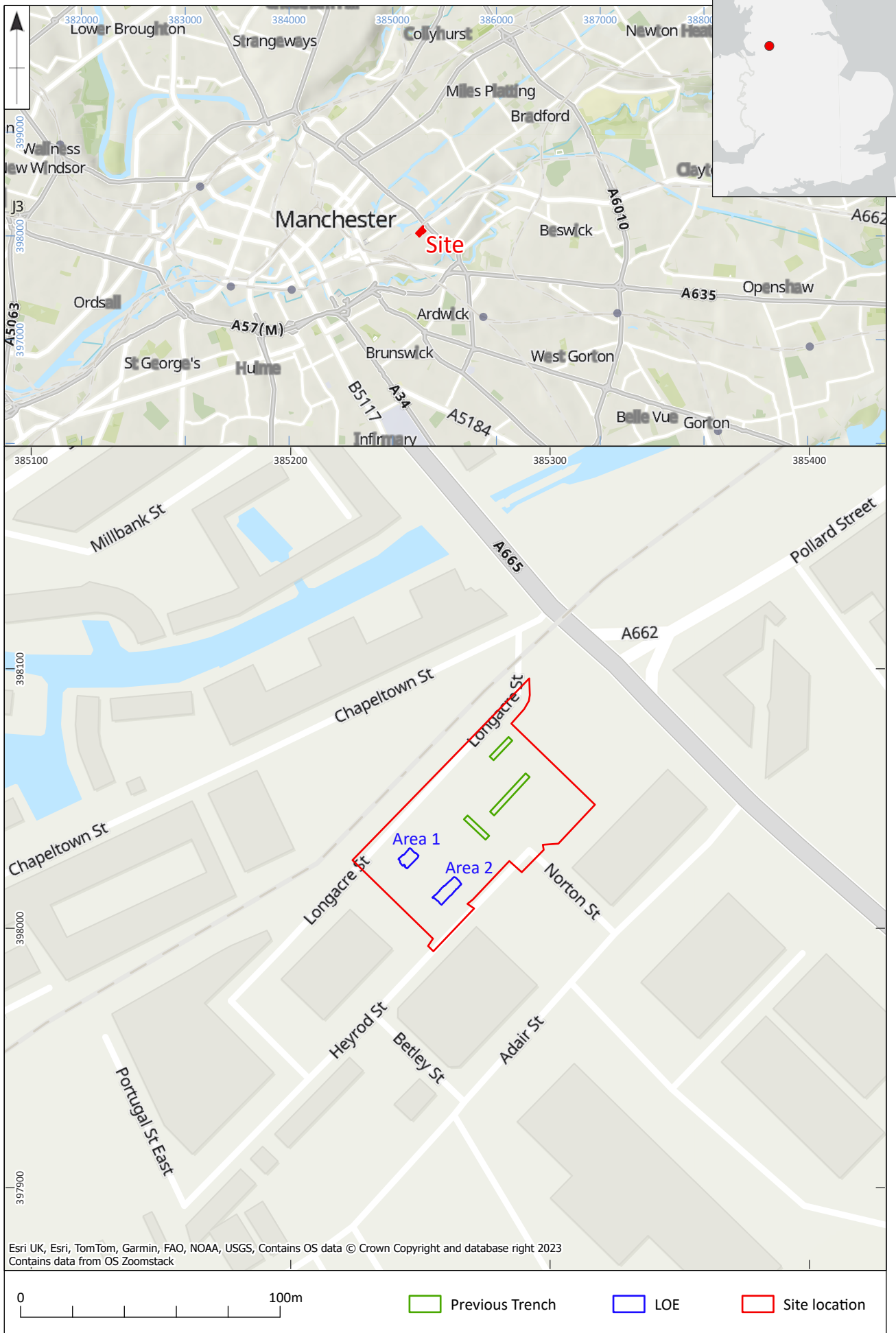
At the north-eastern end of Trench 3 the archaeological remains uncovered may offer insight into regressive projections of earlier settlement patterns for the area. The mapping (pre-1819) illustrates an open/marshy hinterland on the edge of settlement – it is feasible that in the decades prior to the expansion of Manchester (1820s–1840s), light industrial activity took place here such as brick making or peat extraction. The deep stratigraphy (2.76m) observed in this trench offers support to this theory of resource extraction followed by a period of refuse deposition/backfilling before becoming engulfed by new development during the mid-19th century.

There appears to have been a formal arrangement of street patterns in Ancoats (and around Manchester) during the latter end of the 18th century. This can be seen as a semi logistical process in order to receive the massive expansion in urban populations during the early 19th century.

By the middle part of the 19th century, following the initial construction of Rider's Row (1813–1819), the area became subject to large scale domestic and business building (1828–1848) possibly in response to the construction of the London Road Railway Station at Piccadilly along with work in the mills. This expansion is evidenced by the surviving brick-built remains uncovered in the evaluation trenches. By the end of the 1940s post-war slum clearances altered the appearance of the area once again to appear as more open yet still largely urban in character with large areas of hardstanding and the remains of cobble streets.



Fig 1: Photo of 59 Heyrod Street and No.3 Passage leading through to Court No.1, part of the back-to back terraces which occupied the Site prior to demolition in the mid-20th century (Copyright © Manchester Libraries)



3. AIMS AND OBJECTIVES

3.1. Project aims

The aims and objectives of the archaeological excavation were stated in the WSI (Martin and Nash 2021) and are detailed below:

The broad aims of the archaeological excavation were:

- To enhance knowledge and understanding of the historic environment of Manchester in particular, and North-Western England in general;
- To effectively and rapidly disseminate the results of the project, and to archive them, enabling the project findings to be widely and readily accessed by professional and non-professional audiences alike;
- To ensure that professional expertise and experience is advanced by the continual improvement of archaeological method and practice.

The detailed objectives of the archaeological excavation were:

- To make a full and proper record of any archaeological structures, deposits, features, artefacts and ecofacts within the relevant areas of the Site, permitting a reconstruction of the Site's history and formation processes. To recover a sample of artefact and ecofact samples from deposits of potential;
- To analyse the Site records, artefacts and ecofacts to produce a report on the archaeological potential of the site, identify the research implications of the site with reference to the regional research agenda and recent work in Manchester in particular and the Greater Manchester area/North West England in general.

The archaeological works were to be implemented with reference to the research questions and objectives outlined in the North West England Regional Research Agenda, specifically relating the Industrial and Modern periods (Brennand 2007).

The specific aims of the area excavation are to investigate:

- The early 19th-century (possibly late 18th-century) terrace along what is now the Longacre Street frontage but which has historically been known as Riders Row;
- The location of mid-19th-century court/back-to-back housing in 'Court No. 1', which was mapped as dwellings and workhouses/places of business; and

Some detailed research agenda and site-specific objectives to address include:

- What is the evidence for the date of construction of the structures?
- What can the Site of the structures tell us about settlement pattern and settlement change within Manchester from the late 18th century into the 20th century?
- What can the Site contribute to an understanding of the relationship of the urban settlement pattern during the 18th and 19th centuries?
- Can the archaeology of the Site add to regressive projections of earlier settlement patterns?

- Does the archaeology of the Site have anything to say about (voluntary?/compulsory?) abandonment of urban dwellings in the period after WW2?
- Does the Site have any potential to elicit reasons for abandonment?
- Is there evidence at the site for changes on consumption patterns linked to the social status of the occupants across the centuries?
- Can a larger sample of ceramic vessel sherds add meaningfully to the distribution pattern in the context of excavated dwellings and contribute to an emerging regional model?
- Was the relatively large number of stoneware bottles noted at the evaluation stage a sampling anomaly and will the stoneware bottle numbers during further investigations alter that proportion?
- Was the apparently rare recovery of Jasperware during the evaluation a one-off or will further sherds of this ware alter the understanding of what could be a 'typical' domestic vessel assemblage in Ancoats? Is there even sufficient sample size from Ancoats to hazard what is a typical domestic vessel assemblage?

In addition, the North-West Regional Research Framework (NWRF 2024) has been developed as part of a national strategy to create a series of self-sustaining regional historic environment research frameworks for England. It builds on the original North-West Region Archaeological Research Framework (Brennand 2006) and (Brennand 2007). The Industrial and 20th-Century Period benefits from a series of refreshed research questions focused on a number of period-related themes which the Site may be able to address.

The Environment:

- What evidence is there for the impact of Industrialisation on health, diet and natural resources?

This question can be addressed by recovering palaeoenvironmental data from cess pits and other suitable cut features to inform on diet, health, natural resource use and consumption patterns.

The Urban Landscape:

- How did industrial period towns affect the pre-existing historic landscape?
Test for evidence of any impact the historic landscape had on the development of the Site from at least the early 19th century
- How can an understanding of the impact of industrialisation on the working class and their living conditions be taken forward?
Opportunities to be taken for archaeological investigation of urban cellars to examine evidence for cellar dwellings and workshops in working class houses and areas of now undeveloped and cleared former working-class areas regarded as slums.
- What evidence do we have for the improvement of urban public health during this period?

Opportunities to be taken for archaeological investigation of provision for sewerage, drainage, drinking water, sanitation in urban dwellings.

- What contribution can be made to an understanding of the back yards of workers housing?

Archaeological investigations should not ignore areas to the rear of dwellings where information may elucidate approaches to the use of space and 'ad hoc' unilateral plot modifications.

4. METHODOLOGY

4.1. Excavation

All works were carried out in accordance with the Code of Conduct as set out by the Chartered Institute for Archaeologists (CIfA 2019, updated 2022) and Chartered Institute for Archaeologists standards and guidance for archaeological field evaluation (CIfA 2020, updated 2023a) and excavation (CIfA 2020, updated 2023b).

The Archaeological works included excavation and recording of below ground remains associated with land at Heyrod Street, Manchester. Archaeological features encountered were appropriately excavated and recorded, with site code LP4029C allocated by L – P Archaeology. This site code was used on all documentary archives.

The archaeological excavation consisted of two trenches (Fig 2): Area 1 measuring 7.5m by 6m; and Area 2 measuring 12m by 5m. The excavation areas were opened using a mechanical excavator equipped with a hydraulic pecker and wide toothless blade under the constant direction of the supervising archaeologist with material being removed in spits of no more than 0.3m in thickness. After the areas have been opened, excavation was undertaken by hand. Surfaces were cleaned and prepared as appropriate in order to allow visual inspection for the presence/absence of archaeological remains, deposits, features and structures (Fig 3). Upon exposure of the first horizon exhibiting archaeological artefacts, deposits, features or structures the use of the mechanical excavator ceased. Targeted use of the mechanical excavator was implemented at the close of the excavation to investigate thick deposits of homogenous material.



Fig 3: Initial hand cleaned surface of Area 1 following removal of rubble overburden, looking north-east

Both excavation areas conformed to the stated dimensions at their base. Appropriate battering, shoring, and/or stepping of the excavation limits was undertaken where necessary. Surviving structural elements such as stone/brick walls, culverts, flues, fireplaces, floors etc. were exposed and cleaned.

The archaeological works were surveyed using a total station tied to a known point surveyed with a GPS and the Ordnance Survey National Grid. The excavation areas, and any artefacts deposits, features and structures within them were accurately located on a site plan prepared at an appropriate scale.

Archaeological artefacts, deposits, features and structures were excavated manually using best-practice techniques and in a controlled and stratigraphic manner sufficient to address the aims and objectives of the project. An appropriate level of sample excavation in order to determine and demonstrate the presence/absence of archaeological remains and their state of preservation adequate to provide a site-wide deposit model was undertaken. With this in mind it was not necessary to excavate the complete stratigraphic sequence to geologically lain deposits but the inter-relationships between archaeological deposits, features and structures was investigated sufficiently and the complete stratigraphic sequence to geologically lain deposits was investigated where practicable.

The method of recording adopted best-practice techniques and the stratigraphy of each area was recorded in written descriptions even where no archaeological deposits were identified. The drawn record comprises plans of the site at an appropriate scale, e.g. area plans at scale 1:20 or 1:50 and sections at scale 1:10. A full photographic record of high resolution images was recorded.

A small assemblage of finds were retained and assessed in accordance with the Guidelines for the collection, documentation, conservation and research of archaeological materials (ClfA 2020a).

Bulk samples were taken for wet-sieving with flotation to recover plant macro fossils, pollen, insects, molluscs, fish/animal bone, charred cereal remains, seeds, small bones or other small remains. Selection of soil samples followed best practices and targeted well stratified contexts thought to contain good potential for the analysis of charcoal, pollen, and/or plant macrofossils

The finds assemblage will be retained for deposition with the site archive to an appropriate museum. It is not clear to date which museum or repository will take final accession of the site archive; this will be held by MOLA until final deposition is agreed. The project archive will be prepared in line with the Chartered Institute for Archaeologists standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (ClfA 2020b) and in consultation with the receiving repository.

5. EXCAVATION RESULTS

5.1. Overview

A summary of the results of the excavation are given below, for both areas. Not all context numbers referred to in the text are illustrated, but all are recorded in the archive. Deposit numbers are given in (parentheses) and cut numbers and masonry are given in [square brackets].

5.2. Area 1 (Figs 4–9)

Area 1 measured 7.5m by 6.0m and was located close to the western corner of the Site on a north-east to south-west alignment (Fig 5). A typical profile through the deposits in is shown in Fig 4 and Fig 8.

The earliest recorded deposit within Area 1 was natural yellow/brown clay (20). The depth of the natural was not recorded. Within Area 1, the natural clay was sealed by a layer of dark brown-black burnt silt (30) around 1.20m below the surface level and 0.20m thick. This was overlain by mid red-brown layer of crushed brick (29) between 0.05–0.18m thick. These two layers were thought during initial excavation to reflect a possible clamp kiln firing the bricks for the construction of the first phase of the subsequent housing. Subsequent excavation of these layers indicated that rather than reflecting the remnants of a kiln, which would be expected to produce a 'tiger-stripe' patterning, rather the crushed orange brick layer was found to overlay the black silt (Fig 4). These deposits may represent levelling deposits ahead of the development of Forty Row and the subsequent expansion of further development throughout the Ancoats area in the mid to late 19th century.



Fig 4: Section against the north-western excavation baulk shows the layer of crushed brick and clay (29) overlaying black silt (30) with later walls cut through the layers



Scale 1:50

Plan of Area 1 Fig 5

A complex series of walls and other brick-built features were observed in this trench, which relate to the terraced properties of Forty Row (previously Riders Row) (see Fig 16 for relationship with historic mapping). The complexity suggests that the properties had been altered and added to over time, as was the case with the remains of those properties recorded in Area 2 (see below).

It has proven challenging to accurately overlay the trench onto relevant historic mapping. However, what is clear is that the width of one property and parts of the two adjacent properties are visible within the excavation area. Walls [23] and [11], aligned north-west to south-east, reflect the north-eastern boundary of the plot, and wall [04] reflects the south-western boundary. Wall [01] is likely to have been the original back wall of the house though significant alterations appear to have taken place at a later date. Wall [06]/[09]/[12] may also represent the rear wall of the house though wall [06] appeared to have cut through earlier boundary wall [04], again raising the possibility that the properties in this area were significantly redeveloped at some point.

Some external features were identified to the rear of the properties. A rectangular brick-built structure [07] was located against the south-east edge of the trench (Fig 6). The three visible sides measured 1.06m by 0.9m. the fourth was beyond the limit of excavation. The structure was likely the base of an external earth closet privy. Overlying a brick floor were two fills; the basal fill (21) was a mid red-brown clay silt of 0.25m thickness, containing a mixed domestic finds assemblage including ceramics, CBM, shell, CTP, glass, and animal bone, likely a deposit accumulated while the privy was in use, although cross-fitting pottery sherds between fills (19) and (21) suggest the two backfilling events might not be chronologically distinct. A bulk sample <3> produced clinker, hammer scale and micro-charcoal suggesting ash waste from a fire may have been deposited on the waste in the privy. The upper fill (19) of grey-brown clay silt c0.25m thick, contained ceramics, CTP, CBM, bone, glass, and iron. A bulk sample <02> again produced slag, hammer scale and clinker, as well as fish bones, seeds and elder. This fill was possibly a secondary backfill after the privy had fallen into disuse. Both bulk samples taken from the fills had low values of spores associated with human waste; however, it is likely that the ash waste was used for hygiene reasons and the waste was cleared out.



Fig 6: Partially excavated brick-lined pit [07], probable earth closet privy, looking north-east

Constructed against the line of the adjacent plot wall [11] was a similar brick-built rectangular structure [24], in the north-east corner of the site (Fig 7). This had an almost identical construction with a brick floor, and also contained a similar pattern of deposition, with a clay-silt basal fill (28), 0.15m thick, containing a domestic finds assemblage of glass, pottery, CTP, CBM, metal objects, animal bone including a cattle metapodia. A sample from this fill produced a glass bead, fish bone, hammerscale, clinker and slag. This was overlain by an upper backfill (27), 0.12m thick, which accumulated into the privy after its primary use had ceased, although again as with privy [07], the cross-fitting of pot sherds between the two fills suggests the layers may be more mixed. This layer included a modern spark plug, suggesting some disturbance.

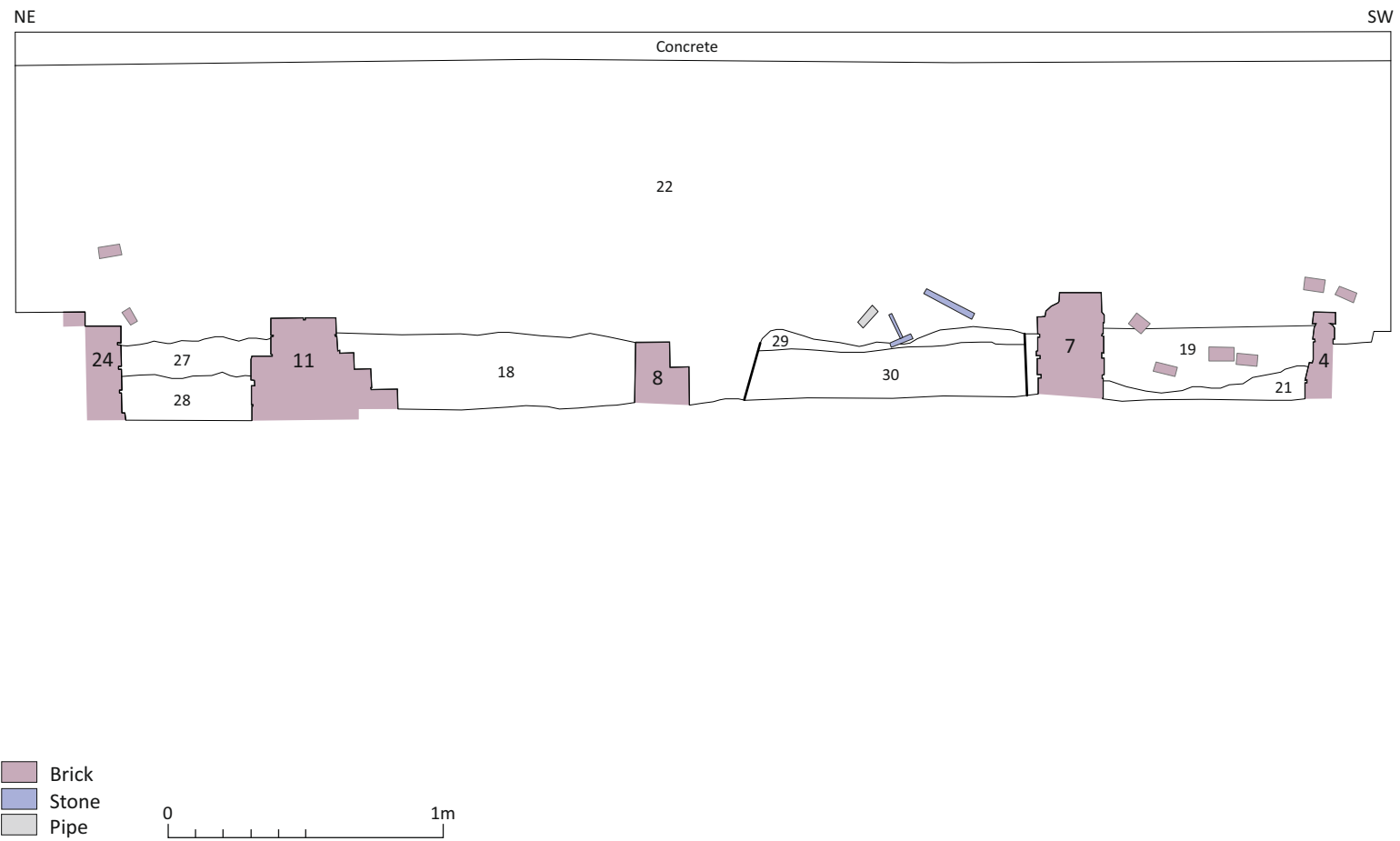
On the eastern edge of the area, between the two privies, a small brick-built rectangular structure was identified (Fig 7). This was defined by brick wall [08] aligning north-east by south-west with a return at each end and abutting the north-west by south-east wall [11]. This structure was backfilled with a dark brown silt (18), 0.26m thick, overlying the natural clay. A sample <4> produced little environmental material, but small inclusions of clinker, slag, hammerscale, slate and CBM. The structure lacked the brick floors identified in privy [07] and [24], and therefore is likely to have had a different function, perhaps as a small outbuilding.

Part of a brick surface [31] was present in the southern corner of the site, adjacent to privy [04]. This is the remains of a probable yard surface (Fig 7).

A thick layer, around 1.0m deep, of demolition rubble overlay the remains of the terraced properties (22), which formed the foundation layer for the warehouse buildings, which were upstanding during the excavation. The final layer was a 0.10m thick layer of reinforced concrete, which formed the floor surface of the warehouse buildings (visible in Fig 7).



Fig 7: Area 1 showing the depth of overburden and fully excavated brick-lined features with small area of brick/cobbled surface in the foreground



Scale 1:25

North-west facing section of Area 1 Fig 8



Scale 1:50

Area 1 rectified drone photography Fig 9

5.3. Area 2 (Figs 10–14)

Area 2 measured 12m by 5m and was located in the southern corner of the Site and was aligned parallel to Heyrod Street (Fig 11). A typical profile through the deposits is shown in Fig 12.

The excavation in this area revealed evidence for the back-to-back terraces fronting onto Heyrod Street and the adjacent Court No.1, visible in the 1848 Ordnance Survey map and more clearly in Adshed's 1850 Map of Manchester (Martin and Nash 2020 fig 11 and 12), and see Fig 16. Brick walls fronting onto Court No.3 were recorded, as well as several internal walls and a possible alleyway. A small piece of in-situ paving was present external to the wall fronting Court No.3, indicating the original ground surface. Its presence confirms that across the area original floor and/or occupation surfaces had been completely removed during the demolition of the terraces, which occurred sometime before the creation of the 1948 Ordnance Survey Map (Martin 2019). The surviving archaeological remains comprised structural evidence for the basement/ or sub-floor level of the properties, along with associated drainage features. Deposits possibly related to the installation of slate roofs to the terraces was recorded, though the majority of the levelling layers across the area relate to the early 20th-century demolition.



Fig 10: Area 2 under excavation looking south-east, showing wall [206] to the left, wall [208] and drain [209] centre, and wall [203] right



The earliest context within Area 2 was the natural light yellow/brown clay (242) which was encountered at a depth of between 1.35 and 1.45m below modern floor level within the standing building. No archaeological features were identified cutting into the natural clay. Natural clay (242) was sealed by a layer of dark grey/brown clay silt (241), which was up to 0.35m thick and was encountered throughout Area 2 (Fig 12). Layer (241)/(229) was interpreted as a cultivation soil pre-dating the construction of Heyrod Street. A bulk sample <6> taken from layer (241) produced only a few plant remains but this did include bramble/raspberry and knotweed seeds which may indicate waste ground or have been derived from a nearby hedgerow. The sample also produced hammerscale and clinker derived from ironworking. A small artefact assemblage was recovered from layer (241) which included fragments of clay tobacco pipe and pottery, with the pipes giving possible dates of late 17th/early 18th century and the pottery a spot date of 1805–1900.



Fig 12: South-east facing section of Area 2, showing contexts (242, (241), (222) and (213)

Between brick wall [203] and the south-western end of Area 2, layer (241) was sealed by a deposit of dark grey clay silt (240) that was very rich in small fragments of grey slate. This deposit was up to 0.26m thick and also produced finds of clay tobacco pipe, glass and pottery. The grey slate fragments were derived from slaters' waste, usually associated with the construction of a slate roof. This deposit was also recorded as context (223). Overlying this slate rich layer was a relatively shallow deposit of friable dark grey-brown silt, 0.04–0.10m thick, which was observed throughout much of the trench (212). This layer may relate to the occupation of the house or could have formed part of a dirt surface in the basement space of the house. The layer contained a rich array of finds, and comprised the largest assemblage recovered from the excavation (see section 6).

At the south-western end of Area 2, deposit (240) was cut by the construction trench [231] of brick wall (200); which was aligned north-west to south-east, at least 0.7m wide and 0.3m deep. Brick wall [200] consisted of a foundation course of brick headers with seven regular courses of brick above; the wall was 0.23m thick and survived to a

height of 0.65m. Construction trench [231] was backfilled with fill (232) after the construction of wall [200]. Brick wall [200] represented part of the south-west facing external elevation of Court No.3 as shown on Adshed's plan of 1850, and the 1851 and 1891 Ordnance Survey map (Fig 16; Martin and Nash 2020 figs 12 and 13).

Approximately 6.5m to the north-east of wall [200] there was a parallel brick wall (203), which was of comparable thickness and height to [200]. Wall [203] was set within construction trench [220], which was at least 0.7m wide and 0.3m deep. Construction trench [220] was backfilled with fill (221) after the construction of wall [203]. These walls indicate the front and back walls of a property fronting onto Court No.3. an internal wall [202], divides the plan of the property into two rooms.

In the north-western excavation baulk, the ends of several brick walls were observed (Fig 13 and Fig 15). It is suggested that these likely reflect the position of supporting buttresses to the wall between properties fronting onto Court No.3. They are comparable with the buttresses recorded to wall [206], in the north-eastern part of the excavation area (see Fig 10 and visible at the north end of Fig 14).

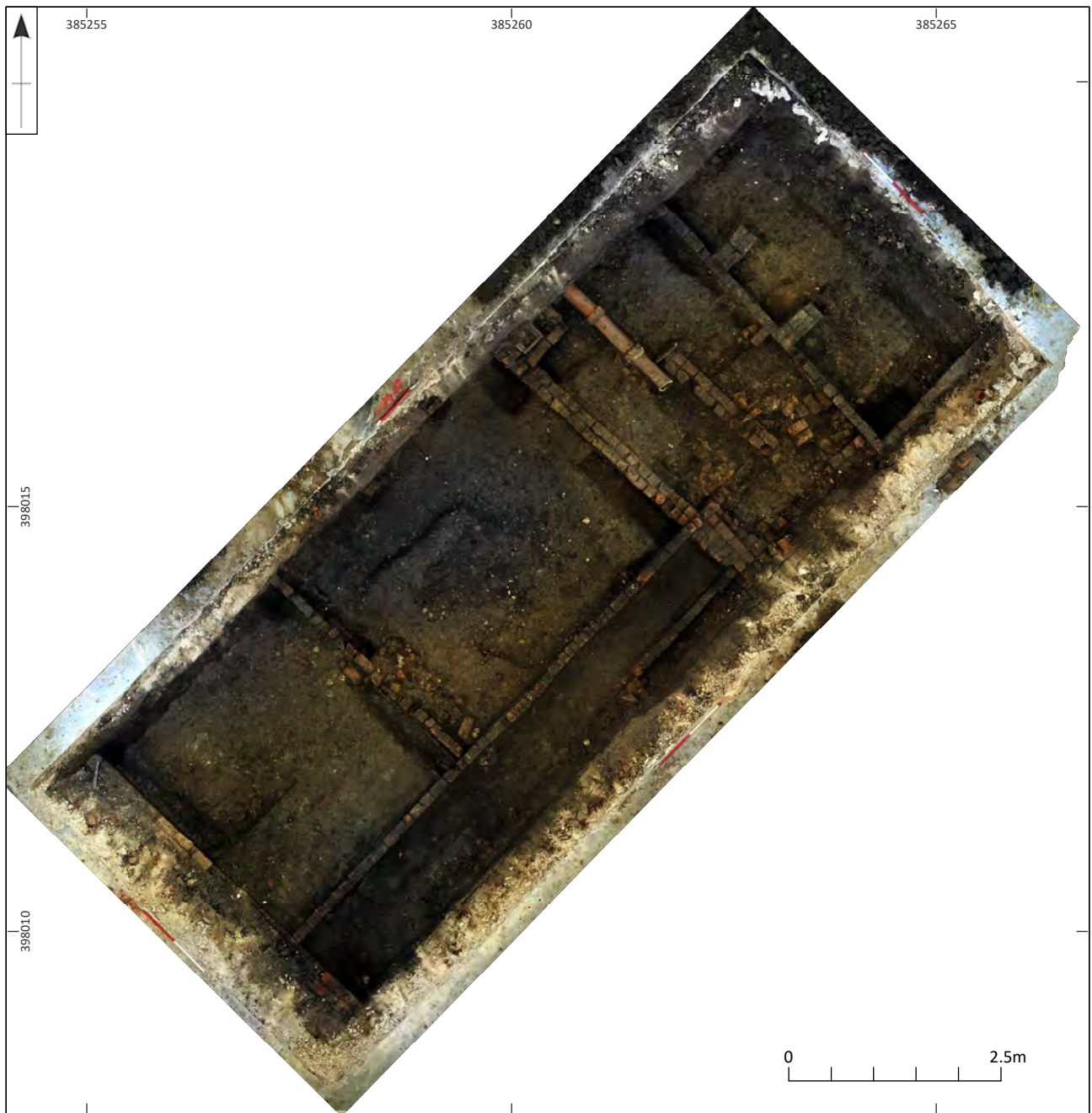


Fig 13: Possible buttresses, [234] and [235], visible in the north-western limit of excavation with wall [200] visible on the left, looking north-west

At the south-western end of Area 2, an in-situ paving stone (243) was noted butting the south-western side of brick wall [200] (Fig 15). Paving stone (243) represents the exterior pavement on the north-eastern side of Court No.3, as shown on both Adshed's plan of 1850 and the 1851 Ordnance Survey map. This serves to establish the original level of the external ground surface when the court buildings were in use and strongly suggests that internal floor surfaces were removed during demolition (Fig 15). This correlates with the mapping evidence; the 1948 Ordnance Survey map shows that domestic buildings on this part of Heyrod Street had been demolished but the street plan, including pavements, remain illustrated suggesting that they remained in-situ after the demolition.

Further structural remains comprising property walls [206/207], buttresses, and associated drainage (209/210) were recorded in the north-eastern half of the trench (Fig 10). These reflect the position of further elements of the back-to-back properties fronting Heyrod Street and Court No.1. A possible alleyway between the two properties may be reflected in the parallel double thickness walls [203] and [208] (Fig 10 and Fig 14). A probable alleyway at the rear of properties fronting onto Court No. 3 is shown on both Adshed's 1850 map, and the 1851 Ordnance Survey town plan, though the alleyway is not shown to extend through to Heyrod Street. However, the 1891 Ordnance Survey town plan shows alterations to this possible alleyway, the south-western end of Court No.1 (parallel to Heyrod Street), and to the two buildings on the corner of Heyrod and Court No.3 (Fig 16). Further analysis of the available mapping and archaeological evidence is required to determine the sequence of structural events here though it is likely that the features in the north-eastern part of the trench reflect part of this alleyway, with alterations over time.

Brick rubble layer (245), 0.35m thick, appears to have acted as a formation level for the construction of the later warehouse building but probably also represents the demolition rubble from the former court housing in this part of the site, corresponding to layer (22) in Area 1. The uppermost context within Area 2 was the c.0.2m thick reinforced concrete layer (244) forming the floor of the upstanding warehouse building.



Scale 1:75

Area 2 rectified drone photography Fig 13



Scale 1:25

South-east facing section of Area 2 Fig 15



Scale 1:250

Suggested excavated structures of 1891 OS map with approximate 1m SE shift Fig 16

6. THE FINDS

6.1. Summary of finds

The finds assemblages were quantified by material, weight and count in Table 1 (see section 12.2 for archive summary and Appendix 2 for full quantification).

Table 1: Finds summary by material

Material category	Type
Environmental	Animal bone Shell Flots
Building materials	Brick Burnt Stone CBM Slate Stone Worked stone/ slate/ plaster
Ceramics	Ceramic objects Clay Tobacco Pipe Pottery
Industrial materials	Clinker Coal Coke Hammer scale/ hammer slag Slag
Glass	Glass Glass bead
Metal/small finds	Metal Metal (Fe) Worked bone
Misc	Burnt flint Spark Plug

6.2. Pottery by Jennifer R. McNulty

The excavations recovered 983 sherds of stratified pottery weighing a total of 22453g (average sherd weight of 22.8g). Unstratified material from across the site weighed 300g and an additional 14 sherds (weighing 339g) of unstratified material from the cleaning of Area 1 were recovered. The material ranged in date from the late medieval to the modern period and spot-dates for each context can be seen in Table 2. The condition of the pottery was good overall with many forms identifiable and vessel multiple profiles surviving, although heavy concretions were present on many sherds.

Table 2: Spot-dates for each context

Context	Count	Weight (g)	Date
U/S	22	300	1825–1900
Area 1 cleaning	14	339	1810–1900
19	41	532	1810–1900
21	47	896	1830–1900
27	14	493	1830–1900
28	84	914	1805–1900
212	337	9461	1825–1900
217	12	226	1805–1900
218	25	118	1805–1900
219	15	136	1825–1900
222	125	3601	1830–1900
227	8	83	1830–1900
228	13	387	1805–1900
229	96	856	1820–1900
231	61	682	1830–1900
232	8	219	1805–1900
240	81	3445	1825–1900
241	16	404	1805–1900
TOTAL	1019	23092	

The assemblage was identified according to the Museum of London Archaeology (MOLA) medieval and post-medieval pottery codes, a list of which were present at the site can be found in Table 3. Where there was no corresponding MOLA code available, a basic description has been included and the fabric code and date range left blank. The material was catalogued according to current guidelines (MPRG 1998, MPRG 2016) and an MS Excel workbook was used to record the material by context, fabric code, fabric name, count, weight (g), maximum vessel number, vessel form, vessel part and approximate date range.

Table 3: Fabrics present across the entire assemblage

Fabric Code	Fabric Name	Date
CSTN	Cistercian	1480–1600
STMO	Staffordshire-type mottled brown-glazed ware	1650–1800
STMB	Staffordshire-type Marbled slipware	1680–1800
NOTS	Nottingham stoneware	1700–1800
CREA	Creamware	1740–1830
PEAR BW	Pearlware with underglaze blue-painted decoration	1770–1820
CREA MARB	Marbled Creamware	1770–1830

CREA UTR	Creamware with underglaze transfer-printed decoration	1790–1830
CREA BAND	Creamware with banded slip decoration	1797–1830
PEAR	Pearlware	1770–1840
PEAR TR	Pearlware with transfer-printed decoration	1770–1840
ENGS	English brown salt-glazed stoneware	1700–1900
ENPO PNTD	English porcelain with over- or underglaze polychrome-painted decoration	1745–1900
BBAS	Black basalt ware	1770–1900
TPW	Refined white ware with underglaze transfer-printed decoration	1780–1900
BONE	Bone china	1794–1900
PMR SLIP	Slipped red ware	1800–1900
LUST	Lustreware	1805–1900
REFW	Refined white earthenware	1805–1900
RFW PNTD	Refined white ware with underglaze painted decoration	1805–1900
TPW3	Refined white ware with underglaze brown or black transfer-printed decoration	1810–1900
YELL	Yellow ware	1820–1900
TPW4	Refined white ware with underglaze colour transfer-printed decoration	1825–1900
TPW FLOW	Refined white ware with underglaze transfer-printed 'flow blue' decoration	1830–1900
	Iron-glazed coarseware	
	Red ware	
	Post-medieval red ware with internal slip and clear (yellow) glaze	

Area 1

186 sherds (total weight 2835g, maximum vessel number of 75) were recovered from four contexts in Area 1. Three of these sherds were in a post-medieval red, gritty fabric with a black iron glaze and may actually be some form of ceramic building material. All contexts dated from the early 19th to the 20th century. Cross-fits were present in bone china, refined white earthenware and creamware from contexts (19) and (21). Several of these cross-fitting sherds from (19) and (21) also displayed heavy concretions on both surfaces and breaks and glaze was fractured and cracking, indicating some post-depositional processes occurring that damaged the pottery. Nottingham stonewares, pearlwares and creamwares dating from the 18th to the 19th centuries were amongst the earliest materials from Area 1. A post-medieval red ware with an internal slip and clear/yellow glaze in a pancheon bowl form was present in (27) and (28). This is likely a local utilitarian product and the date range for this fabric and form in the Manchester area should be further investigated to clarify this. Overall, the fabrics and forms recovered from Area 1 (Table 4) are commonly found at domestic sites in the post-medieval and early modern periods.

Table 4: Pottery record for Area 1

Context	Fabric code	Fabric Name	Count	Weight (g)	Max vessel number	Form	Vessel part	Date	Comment
19	NOTS	Nottingham stoneware	1	7	1	Jar	Shoulder	1700–1800	
19	CREA BAND	Creamware with banded slip decoration	2	6	1	Bowl	Body	1797–1830	
19	CREA	Creamware	15	289	3	Plate; jar	Rim, body, base	1740–1830	Heavy concretions and cracked glaze
19	BONE	Bone china	17	90	2	Dish; jar	Rim, body, base	1794–1900	
19	PMR SLIP	Slipped red ware	1	8	1	Bowl	Rim	1800–1900	
19	LUST	Lustreware	1	3	1	N/A	Body	1805–1900	
19	REFW	Refined white earthenware	1	5	1	N/A	Body	1805–1900	
19	RFW PNTD	Refined white ware with underglaze painted decoration	1	5	1	N/A	Body	1805–1900	External surface burnt, painted floral motifs on internal surface
19	TPW3	Refined white ware with underglaze brown or black transfer-printed decoration	1	4	1	N/A	Handle	1810–1900	
19		Red ware	1	115	1	N/A	Body		?CBM
21	NOTS	Nottingham stoneware	2	9	1	Jar	Rim	1700–1800	
21	CREA	Creamware	26	545	5	Jug, plate	Rim, body, base	1740–1830	Heavy concretions and cracked glaze; appears to be same vessels as (19)
21	BONE	Bone china	9	65	1	Dish; jar	Rim, body, base	1794–1900	Appears to be same vessels as (19)
21	LUST	Lustreware	1	1		N/A	Body	1805–1900	
21	REFW	Refined white earthenware	1	4	1	N/A	Base	1805–1900	
21	TPW4	Refined white ware with underglaze colour transfer-printed decoration	2	18	1	N/A	Handle	1825–1900	
21	TPW	Refined white ware with underglaze	4	160	1	Jar	Rim,	1830–1900	

Context	Fabric code	Fabric Name	Count	Weight (g)	Max vessel number	Form	Vessel part	Date	Comment
	FLOW	transfer-printed 'flow blue' decoration					body, base		
21	ENPO PNTD	English porcelain with over- or underglaze polychrome-painted decoration	1	78	1	N/A	Figurine	1745–1900	Figurine, couple
21		Red ware	1	16	1	N/A	Body		?CBM
27	CREA	Creamware	3	13	1	Plate	Rim, body	1740–1830	Heavy concretions and cracked glaze on some sherds
27	CREA BAND	Creamware with banded slip decoration	1	1	1	N/A	Rim	1797–1830	
27	TPW	Refined white ware with underglaze transfer-printed decoration	1	1	4	Plate	Body	1780–1900	
27	REFW	Refined white earthenware	4	26	2	N/A	Body, base, handle	1805–1900	
27	RFW PNTD	Refined white ware with underglaze painted decoration	2	42	1	Plate; jar	Rim, body, base	1805–1900	
27	TPW3	Refined white ware with underglaze brown or black transfer-printed decoration	1	3	1	N/A	Body	1810–1900	
27	TPW FLOW	Refined white ware with underglaze transfer-printed 'flow blue' decoration	1	24	1	N/A	Body	1830–1900	
27		Post-medieval red ware with internal slip and clear (yellow) glaze	1	383	3	Pancheon bowl	Body, base		
28	PEAR BW	Pearlware with underglaze blue-painted decoration	9	293	8	Plate	Rim, body, base	1770–1820	
28	CREA	Creamware	11	151	1	Plate; jar	Rim, body	1740–1830	Heavy concretions and cracked glaze on some sherds
28	CREA MARB	Marbled Creamware	8	91	2	Jug	Rim, body	1770–1830	
28	CREA	Creamware with banded slip decoration	16	97	2		Rim,	1797–1830	

Context	Fabric code	Fabric Name	Count	Weight (g)	Max vessel number	Form	Vessel part	Date	Comment
	BAND						body, base		
28	BBAS	Black basalt ware	5	10	2	N/A	Body	1770–1900	
28	TPW	Refined white ware with underglaze transfer-printed decoration	2	7	3	N/A	Body	1780–1900	
28	BONE	Bone china	3	14	5	N/A	Rim, body	1794–1900	
28	RFW PNTD	Refined white ware with underglaze painted decoration	20	86	1	Cup; jar	Rim, body, base	1805–1900	
28	LUST	Lustreware	1	4	7	?Strainer	Base	1805–1900	
28	REFW	Refined white earthenware	7	65	1	Plate; jar	Rim, body, base	1805–1900	
28		Post-medieval red ware with internal slip and clear (yellow) glaze	1	72	3	Pancheon bowl	Rim		
28		Red ware	1	24	1	N/A	Body		?CBM
TOTAL			186	2835	75				

Table 5: Fabrics present in Area 2

Fabric Code	Fabric Name	Date
CSTN	Cistercian	1480–1600
STMO	Staffordshire-type mottled brown-glazed ware	1650–1800
STMB	Staffordshire-type Marbled slipware	1680–1800
NOTS	Nottingham stoneware	1700–1800
CREA	Creamware	1740–1830
PEAR BW	Pearlware with underglaze blue-painted decoration	1770–1820
CREA MARB	Marbled Creamware	1770–1830
CREA UTR	Creamware with underglaze transfer-printed decoration	1790–1830
CREA BAND	Creamware with banded slip decoration	1797–1830
PEAR	Pearlware	1770–1840
PEAR	Pearlware	1770–1840
PEAR TR	Pearlware with transfer-printed decoration	1770–1840
ENGs	English brown salt-lazed stoneware	1700–1900
BBAS	Black basalt ware	1770–1900
TPW	Refined white ware with underglaze transfer-printed decoration	1780–1900
BONE	Bone china	1794–1900
LUST	Lustreware	1805–1900
REFW	Refined white earthenware	1805–1900
RFW PNTD	Refined white ware with underglaze painted decoration	1805–1900
TPW3	Refined white ware with underglaze brown or black transfer-printed decoration	1810–1900
YELL	Yellow ware	1820–1900
TPW4	Refined white ware with underglaze colour transfer-printed decoration	1825–1900
TPW FLOW	Refined white ware with underglaze transfer-printed 'flow blue' decoration	1830–1900
-	Iron-glazed coarseware	-
-	Redware	-

Area 2

The assemblage from Area 2 was substantially larger than Area 1, producing 797 sherds weighing 19618g, from 12 contexts. In order to undertake a rapid assessment, pottery from layers (212), (222) and (240) were scanned and not recorded in full. The wares present in Area 2 (Table 5) were of a similar date and nature to those present in Area 1 and again, all contexts dated from the early 19th to the 20th century. As with Area 1, most of the earlier wares were made up of Nottingham stonewares, pearlwares and creamwares but did also include two sherds of 17th/18th-century Staffordshire wares (STMO from (240) and STMB from (241)). Two sherds of Cistercian ware (date range 1480–1600) were also recovered from Area 2, one sherd each from (219) and (222). Unfortunately, these sherds of earlier pottery were too small and fragmented to reliably date the contexts and are more likely to be residual. Locally produced iron-glazed post-medieval coarsewares similar to the internally slipped red ware from Area 1 made up a substantial proportion of the assemblage. Similar to the Midlands iron-glazed coarsewares (dating from 1700–2000), the forms were primarily utilitarian storage jars and pancheon bowls. Further work is needed to identify a parallel and its date range in the Manchester area.

Notably absent from the assemblage is any imported wares. It is not uncommon in the post-medieval and early modern periods for Rhenish stonewares or Dutch tin-glazed wares to be present even if only in small fragments. They are totally absent from both areas at Heyrod Street, perhaps indicative of the status of the household and lack of access to wares imported from the continent. Jasperware, identified in the evaluation phase of the archaeological works (Dean 2021), was also not recovered from the mitigation works.

Overall, this assemblage appears to represent primary deposits relating to domestic activity on the site primarily from the post-medieval period. The forms present, including plates, storage jars, pancheon bowls, cups, teapots and jugs, are all common domestic post-medieval and early modern forms. The majority of the assemblage dates from the late 17th through to the 20 century and it is difficult to draw any clear distinctions between periods of activity at the site.

6.3. CBM

Ceramics building materials were hand collected in small quantities in both areas, mainly as individual pieces, with an additional 927g of CBM recovered from samples (The excavations recovered 983 sherds of stratified pottery weighing a total of 22453g (average sherd weight of 22.8g). Unstratified material from across the site weighed 300g and an additional 14 sherds (weighing 339g) of unstratified material from the cleaning of Area 1 were recovered. The material ranged in date from the late medieval to the modern period and spot-dates for each context can be seen in Table 2. The condition of the pottery was good overall with many forms identifiable and vessel multiple profiles surviving, although heavy concretions were present on many sherds.

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217	12	226	1805–1900
218	25	118	1805–1900
219	15	136	1825–1900
222	125	3601	1830–1900
227	8	83	1830–1900
228	13	387	1805–1900
229	96	856	1820–1900
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232	8	219	1805–1900
240	81	3445	1825–1900
241	16	404	1805–1900
TOTAL	1019	23092	

The assemblage was identified according to the Museum of London Archaeology (MOLA) medieval and post-medieval pottery codes, a list of which were present at the site can be found in Table 3. Where there was no corresponding MOLA code available, a basic description has been included and the fabric code and date range left blank. The material was catalogued according to current guidelines (MPRG 1998, MPRG 2016) and an MS Excel workbook was used to record the material by context, fabric code, fabric name, count, weight (g), maximum vessel number, vessel form, vessel part and approximate date range.

Table 3: Fabrics present across the entire assemblage

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CREA	Creamware	1740–1830
PEAR BW	Pearlware with underglaze blue-painted decoration	1770–1820
CREA MARB	Marbled Creamware	1770–1830
CREA UTR	Creamware with underglaze transfer-printed decoration	1790–1830
CREA BAND	Creamware with banded slip decoration	1797–1830
PEAR	Pearlware	1770–1840
PEAR TR	Pearlware with transfer-printed decoration	1770–1840
ENGS	English brown salt-glazed stoneware	1700–1900
ENPO PNTD	English porcelain with over- or underglaze polychrome-painted decoration	1745–1900
BBAS	Black basalt ware	1770–1900
TPW	Refined white ware with underglaze transfer-printed decoration	1780–1900
BONE	Bone china	1794–1900
PMR SLIP	Slipped red ware	1800–1900
LUST	Lustreware	1805–1900
REFW	Refined white earthenware	1805–1900
RFW PNTD	Refined white ware with underglaze painted decoration	1805–1900
TPW3	Refined white ware with underglaze brown or black transfer-printed decoration	1810–1900
YELL	Yellow ware	1820–1900
TPW4	Refined white ware with underglaze colour transfer-printed	1825–1900

	decoration	
TPW FLOW	Refined white ware with underglaze transfer–printed 'flow blue' decoration	1830–1900
	Iron-glazed coarseware	
	Red ware	
	Post-medieval red ware with internal slip and clear (yellow) glaze	

Area 1

186 sherds (total weight 2835g, maximum vessel number of 75) were recovered from four contexts in Area 1. Three of these sherds were in a post–medieval red, gritty fabric with a black iron glaze and may actually be some form of ceramic building material. All contexts dated from the early 19th to the 20th century. Cross–fits were present in bone china, refined white earthenware and creamware from contexts (19) and (21). Several of these cross–fitting sherds from (19) and (21) also displayed heavy concretions on both surfaces and breaks and glaze was fractured and cracking, indicating some post–depositional processes occurring that damaged the pottery. Nottingham stonewares, pearlwares and creamwares dating from the 18th to the 19th centuries were amongst the earliest materials from Area 1. A post–medieval red ware with an internal slip and clear/yellow glaze in a pancheon bowl form was present in (27) and (28). This is likely a local utilitarian product and the date range for this fabric and form in the Manchester area should be further investigated to clarify this. Overall, the fabrics and forms recovered from Area 1 (Table 4) are commonly found at domestic sites in the post–medieval and early modern periods.

). The largest assemblage came from context (21), the lower fill of privy [07], from whence 36 pieces of CBM (1392g) were recovered. Further analysis of this material may indicate whether this deposition provides additional understanding of the use of the privy pits in Area 1, and particularly how pits [07] and [24] differed in use, or rather represents demolition debris.

Table 6: Ceramic Building Materials by context

Area	Context	Find Type	Weight (g)	Count	Description
Area 1	18	CBM	438	>100	From samples
Area 1	19	CBM	222	>100	From samples
Area 1	21	CBM	1392	36	
Area 1	21	CBM	34	3	
Area 1	27	CBM	235	2	
Area 1	28	CBM	17	1	
Area 1	28	CBM	184	11–20	From samples
Area 2	212	CBM	83	11–20	From samples
Area 2	240	CBM	109	1	
Area 2	241	CBM	65	1	
Unstrat	N/A	CBM	49	1	
Area 1	30	Brick	641	1	broken piece of brick
Total			3469	45 hand collected (200+ from samples)	

6.4. Clay tobacco pipe by Jennifer R. McNulty

The clay tobacco pipe assemblage consisted of 110 stem fragments and 11 bowl fragments hand collected from 16 contexts. A further four stem fragments were hand collected but were not stratified. Material recovered from environmental samples was not available for assessment.

Table 7: Clay tobacco pipes quantification

Context	Bowl	Stem	Mouthpiece	Date
U/S		3		
Area 1 Cleaning		1		
19		2		
20	1			1680+
21	2	3		1840+
27		2		
28		7		
212	2	42		1810– 1840
218	1	5		
219	1	5		1690– 1730
222	1	11		
225		3		
228		1		
229	1	9		1680+
231	1	9		
232	1	2		1680+
240		3		
241	1	6		1700+
TOTAL	12	114		

Current guidelines were followed during the recording of the assemblage (Higgins 2017). An MS Excel spreadsheet was used to record the material by context, bowl fragments, stem fragments, mouthpiece fragments, approximate date range and comment (Table 7). A separate sheet was used for the recording of stamps, decoration and bowl forms.

Oswald, 1985 was used in the identification and dating of bowl forms. Although there is a general rule that the wider the bore hole size the earlier pipe is likely to be (Ayto 2002, 28), bore hole sizes were not measured nor used in the dating of this assemblage as there were too few stem fragments to produce meaningful statistical data. Instead, bowl forms were used as the primary form of dating. The assemblage ranged in date from the late 17th century to the mid 19th century.

All pipes were produced using white-firing clay, although several had been exposed to post-firing burning and had heavy concretions on the surfaces. The assemblage was heavily fragmented with only three bowls being complete enough to determine type. One clay pipe survived that had the mouthpiece, full stem and a very small fragment of the bowl base. The mouthpiece was finished in a mould to form a nipple end, a form that was common from 1840 onwards (Higgins 2017, 6.5) Decoration was not common on the pipe stems in this assemblage although one makers mark did survive on a stem from context (21). One stem fragment recovered from sample <5> (28) had green glaze indicating that the fragment is towards the mouthpiece area of the stem as it was not uncommon for mouthpieces to be glazed. Beyond this, decoration was common on the bowls and spurs, with several spurs displaying relief moulded letter “O” with a dot in the centre while several bowls were fluted and had floral motifs on the bowl seam (Table 8).

Table 8: Decoration of clay tobacco pipes

Context	Oswald 1985 type	Comment	Decoration
20	N/A	Bowl too fragmented but straight sides suggest post-1680 date	"O" with dot decoration on spur and relief moulded floral decoration on bowl
21	3,G.10	–	Fully milled bowl with "DUBLIN" stamp on bowl facing the smoker and shamrocks on heel
21	N/A	–	1 stem with "MELBOURNE" and "P.F.FALK & CO" impressed; 1 fragmented bowl with mouthpiece surviving with no visible finish and nipple end.
28	N/A	–	Beaded decoration on one stem towards bowl base; one stem demonstrates green glaze likely towards mouthpiece
212	4,G.24	–	
212	N/A	Bowl too fragmented but straight sides suggest post-1680 date	"O" with dot decoration on either side of spur fragment
218	N/A	Bowl too fragmented	Floral motif on seam and fluted decoration on bowl sides
219	4,G.20	–	Relief moulded decoration on bowl including floral motifs and cross
222	N/A	Bowl too fragmented	Floral motif on seam
229	N/A	Bowl too fragmented but straight sides suggest post-1680 date	–
231	N/A	Bowl too fragmented	Floral motif on seam and fluted decoration on bowl sides; "O" with dot decoration either side of spur fragment
232	N/A	Bowl too fragmented but straight sides suggest post-1680 date	–
240	N/A	–	One stem with spur attached and very small base of bowl with floral motif on seam and fluted decoration
241	N/A	Bowl fragmented with no stem attached, straight sides and spur so likely 1700+	–

Three bowls and 14 stems were recovered from Area 1 with the remainder of the stratified assemblage being recovered from Area 2. Layer (212), potentially related to the occupation of the houses, produced the highest quantity of pipes with 42 stems and two bowls. Fragmented bowls were recovered from (241) and (229), an early layer which may pre-date construction of Heyrod Street. However, the bowls were fragmented to such a degree that only an earliest date of late 17th/early 18th century could be suggested.

The condition and quantity of the pipes indicates low level domestic and recreational tobacco smoking at the site during the post-medieval and early modern periods.

6.5. Glass by Claire Finn

A total of 107 fragments of glass, with a total weight of 1364g, were hand collected from both areas (Table 9). In the main, the small glass assemblage represents a fairly typical mix of domestic 19th-century bottle body fragments in dark green, brown and

aqua glass, and small pieces of 19th–20th-century window glass, particularly from Area 2.

The smaller assemblage from Area 1 is more varied. As well as undiagnostic bottle body shards from (21) and (28), privy fill (21) produced some more unusual fragments comprising a piece from a possible white pressed glass jar, colourless vessel fragments in soda and lead glass including a moulded imitation cut glass goblet foot and decanter stopper. The fill also produced several pieces of heat-affected/melted glass in both colourless and bright blue material.

Contexts in Area 2 mainly produced bottle body or base fragments in aqua and green glass. Three cylindrical bottle bases are more datable than the body shards, these include a mould blown bottle base with an abrupt heel and low domed kick up from (219) dated 1825–1850, and two mouth blown bottle bases with domed kick ups, sand pontil marks and a rounded heel from (222) and (240) dated probably 1800–1850. A cylindrical bottle body shard from (225) had evidence of a bulging heel, suggesting an earlier date of 1750–1820, though this is difficult to confirm without other diagnostic features.

As with other material types, occupation layer (212) produced the largest volume of glass, nearly half of the total material by both weight and count. The assemblage was mainly made up of body shards from cylindrical green beer/wine bottles, aqua coloured cylindrical or Hamilton/torpedo style thick walled soda-water bottles, or octagonal/hexagonal prescription bottles. Three fragments of soda water bottle retained moulded letter: "W...18..."; "I...WA..."; and "...A...". Where datable, these are mainly from the latter half of the 19th century. One flat brown glass fragment came from a 19th-century gin case bottle.

An additional 86g of glass fragments were recorded from an environmental samples from (212), as well as a small number of glass beads from soil samples from contexts (21) and (28). This material was not available for analysis.

Table 9: Glass catalogue

Context	Weight (g)	Count	Colour	Type	Interp	Description	Date
21	18	10	colourless	body	vessel	1.3mm thin soda glass	18th–19th C
21	2.3	1	aqua	body	bottle	body shard	19th–20th C
21	13.2	4	colourless	flat	window	window glass shards, inc 1x modern float glass	19th–20th C
21	7.5	2	white (milk)	?lid	jar	press moulded milk glass with radiating lozenge pattern, possibly lid or base of cream jar	1850–1950
21	1.5	2	blue	-	-	melted glass blob	
21	20.3	3	colourless	-	-	melted glass blob	
21	39	1	colourless	foot	vessel	Moulded lead glass goblet foot	late 19th–20th C
21	58.9	1	colourless	stopper	decanter	Moulded hexagonal lead glass decanter stopper	late 19th–20th C
21	2.2	1	colourless	lip	vessel	Straight vessel lip	late 19th–20th C
21	48.2	6	colourless	-	-	misc broken fragments of moulded lead glass	late 19th–20th C

27	8.3	2	colourless	flat	window	Modern window glass	Post 1950
28	13.3	2	olive green	body	bottle	Mouth-blown	18th–19th C
Area 1 cleaning	2.6	1	colourless	flat	window	Modern bubble moulded textured flat glass	Post 1950
212	6.4	5	aqua	flat	window	window glass shards	19th C
212	117.6	12	dark olive green	body	bottle	Mixed body shards from cylindrical bottles	19th C
212	412.6	34	aqua	body	bottle	Mixed body shards from thick walled cylindrical and hamilton bottles, probably soda water, including tooled lip with blob finish	1850–1900
212	34	3	aqua	body	bottle	Thick walled hamilton bottle body shards with moulded text; "W...18..."; "I...WA..."; "...A..."	1850–1900
212	6.8	1	brown	body	bottle	Body shard from a square-based gin case bottle	19th C
212	38.6	5	aqua; mid green	body	bottle	Body shards from flat-sided octagonal/hexagonal prescription bottles	19th C
219	127.6	2	dark olive green	base	bottle	Mould blown bottle base with abrupt heel, low domed kick up	1825–1850
222	11	1	mid green	body	bottle	abraded body shard, some iridescence	19th C
222	135.3	2	dark olive green	base	bottle	Mouth blown bottle base with domed kick up, sand pontil, rounded heel, with metal concretion	18th C
225	24.3	1	mid green	body	bottle	Mouth blown cylindrical body, bulging heel	1750–1820
229	24.4	3	aqua; mid green	body, neck	bottle	Mouth blown	19th C
231	1.6	1	aqua	flat	window	1.37mm thick	19th–20th C
240	188.5	1	dark olive green	base	bottle	Mouth blown bottle base with domed kick up, sand pontil, rounded heel	1800–1850
Total	1364	107					

6.6. Small finds by Chris Faine

Twelve accessioned finds were recovered from the excavation, six copper alloy, three iron, two composite, and one stone (see Table 10). Material was recovered from contexts associated with early modern (1800–1900 AD) buildings.

The copper–alloy assemblage consisted primarily of dress accessories, with three buttons of post–medieval/modern type recovered from contexts (28), (213) and (217). A portion of trapezoidal buckle frame was also recovered from (212). The foliate design (stylistically earlier in date), and the poor metal quality suggest a piece of “costume” jewellery. A portion of possible tap/pipe fitting was also recovered from (28), with (22) yielding unidentified fragments.

Unidentified iron fragments were recovered from (28) and (212) along with a single unstratified item.

Composite items were recovered from contexts (217) and (212), in the form of a ceramic/iron electrical or gas fitting, and a bone cutlery handle.

A single stone item was recovered from recovered from context (21) in the form a slate pencil, used with chalkboards in the late 19th century.

This is a small domestic assemblage, consisting of personal effects, household items and fittings.

Table 10: Abridged small finds catalogue

Context	Object	Material	Date	Notes
21	Pencil	Stone	Post–Med/Modern	Prob slate pencil
22	Fitting	Cua	Post–Med/Modern	Handle and binding. Possible tap fitting
27	Fitting	Fe/Ceramic	Modern	Knurled ceramic fitting with heavily concreted iron head. Gas/electrical fitting?
28	Button?	Cua	Post–Med/Modern	Heavily concreted poss button?
28	Unid	Cua	?	Unid Cua frags
28	Unid	Fe	?	Unid Fe frags
212	Buckle	Cua	Post–Med	Lobed portion of trapezoidal buckle frame
212	Handle	Bone	Post–Med/Modern	Rectangular section cutlery handle
212	Unid	Fe	?	Unid Fe frag. Heavily concreted
213	Button	Cua	Post–Med/Modern	Flat button, with possible wire loop
217	Button	Cua	Post–Med/Modern	Flat button fragment
U/S	Pin	Fe	?	Unid Fe pin frag

6.7. Industrial materials

A total of 31 pieces of slag, coke and coal were hand collected from the site (18806g), with an additional 3084g of hammerscale, slag, and clinker (Table 11). A small fragment of what appears to be blast furnace waste was recovered from context (212).

Table 11: Industrial materials by context

Area	Context	Find Type	Weight (g)	Count
Area 2	212	Slag	330	11–20
Area 2	212	Clinker	745	51–100
Area 2	241	Clinker	100	>100
Area 1	18	Hammerscale/ hammer slag	110	>100
Area 1	18	Slag	6	1–10
Area 1	18	Clinker	64	11–20
Area 1	19	Slag	2	1–10
Area 1	19	Clinker	390	>100
Area 1	19	Hammerscale/ hammer slag	15	>100
Area 1	21	Slag	112	1
Area 1	21	Hammerscale/ hammer slag	75	>100
Area 1	21	Clinker	598	>100
Area 1	28	Slag	7	1–10
Area 1	28	Clinker	487	>100
Area 1	28	Coke	147	3
Area 1	28	Hammerscale/ hammer slag	–	>100
Area 1	30	Hammerscale/ hammer slag	73	>100
Area 1	30	Clinker	20	11–20
Area 2	212	Hammerscale/ hammer slag	62	>100
Area 2	212	Coal	77	1
Area 2	212	Slag	663	1
Area 2	231	Coal	22	1
Area 2	240	Coal	747	1
Area 2	241	Hammerscale/ hammer slag	–	>100
Area 2	222	slag	984	1
Area 2	222	slag	478	1
Area 2	222	slag	179	1
Area 2	222	slag	150	1
Area 2	222	slag	191	1
Area 2	222	slag	489	1
Area 2	222	slag	274	1
Area 2	222	slag	573	1
Area 2	222	slag	74	1
Area 2	222	slag	559	1
Area 2	222	slag	44	1
Area 2	222	slag	116	1
Area 2	222	slag	286	1
Area 2	222	slag	1397	1
Area 2	222	slag	896	1
Area 2	222	slag	1157	1
Area 2	222	slag	1054	1
Area 2	222	slag	93	1
Area 2	222	slag	3394	1
Area 2	222	slag	535	1

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Area 2	222	slag	1076	1
Area 2	222	slag	1315	1
Area 2	222	slag	1724	1
Total			21890	31 (hand collected)

7. THE ENVIRONMENTAL REMAINS

7.1. Animal bone by Chris Faine

Introduction

Two hundred and twelve grams of faunal material was hand collected from Heyrod Street (18 fragments total). Material was recovered from contexts associated with Early Modern (1800–1900 AD) buildings. Table 12 shows the assemblage quantified by excavation area in terms of number of fragments (NISP), and individuals (MNI). Fragments classed as “Large/Medium/Small Mammal” are not included in percentages. The catalogue is in Table 13.

Methodology

All data was initially recorded using a specially written MS Excel database. Each element was identified to species where possible using comparative collections and reference manuals. The presence of large (cattle size), medium (sheep size), small (cat size) and very small mammal fragments was also recorded for each context but not used when assessing species proportions. Where applicable the number of diagnostic zones was noted for each element using a standard MOLA system (after Serjeantson, 1996). Epiphyseal fusion data was also noted (after Silver 1969). Siding was be noted for the purposes of calculating MNI's. Tooth wear data for domestic mammal loose molars and mandibles (after Grant 1982, & Payne, 1973) was recorded to provide further ageing data. Where possible sexing was carried out via morphological criteria (e.g., Hatting 1995, Armitage and Clutton-Brock 1976), or metrical analysis (e.g., Grigson 1982, Ruscillo 2006, Greenfield, 2002). Metrical analysis followed Von Den Driesch (1976), Grigson (1982) & Payne and Bull, (1988). This information was used to aid in species differentiation e.g., between sheep and goat (after Boessneck 1969, Halstead et al 2002). Identification of horse vs other equids was carried via morphological criteria after Baxter, 1998, Davis, 1980 and Eisenmann, 1986.

Table 12: Species distribution (NISP/MNI)

Species	NISP	%	MNI	%
Cattle (<i>Bos</i>)	1	10	1	11.1
Sheep/Goat (<i>Ovis/Capra</i>)	3	30	3	33.3
Pig (<i>Sus scrofa</i>)	2	20	2	22.2
Dog (<i>Canis familiaris</i>)	3	30	1	11.1
Cod (<i>Gadus morhua</i>)	1	10	1	11.1
Unid. fish	1	10	1	11.1
Large Mammal	5			
Medium Mammal	2			
Total:	18	100	9	100

The assemblage

Three ovicaprid fragments were recovered from (212) in the form of juvenile tibia along with adult vertebra fragments. Whilst large mammal fragments were recovered, the only identifiable cattle element was an adult 3rd molar from (222). Pig remains were recovered from contexts (219) and (229), in the form an adult incisor and sawn proximal calcaneum. Context (212) yielded a partial axis and mandibles from a small adult dog. Fish remains were recovered from sample <28> of context (28), in the form a single cod caudal vertebrae and burnt unidentified specimen (also vertebrae).

Discussion

This is very small assemblage that most likely represents general domestic waste from associated dwellings.

Table 13: Animal bone by context

Area	Context	Method	Species	Weight (g)
Area 1	28	Hand collected	Large Mammal	3
Area 1	28	Sample	Fish	3
Area 1	19	Hand collected	Medium Mammal	2
Area 2	212	Hand collected	Dog, Sheep, Medium mammal	123
Area 2	217	Hand collected	Unid	1
Area 2	219	Hand collected	Pig	2
Area 2	222	Hand collected	Cattle, Large mammal	46
Area 2	229	Hand collected	Pig, Large mammal	32
Area 1	18	Sample	Animal bone (unidentified)	1
Area 1	19	Sample	Unidentified mammal, fish	3
Area 1	21	Sample	Burnt bone	2
Area 1	28	Sample	Cattle, fish	6
Area 1	30	Sample	Fish scale	0.5
Area 2	212	Sample	Animal bone (unidentified)	3
Area 2	241	Sample	Unidentified mammal, fish	1
Total				228.5g

7.2. Environmental samples by Matt Law and Carolyn Smith

Seven samples, each comprising ten litres of sediment, along with an additional 60 litre sample from an oyster shell dump, were presented for assessment.

The assessment was carried out by Carolyn Smith, Sacha Davies and Yasmine de Gruchy (bulk samples), Dr Matt Law ('squash' slides) in October 2021. This report was written Dr Matt Law with Carolyn Smith.

Methods

The samples were processed using a Siraf-style flotation tank by Sacha Davies of L – P : Archaeology, following standard procedures (Campbell et al., 2011). The washovers ('flots') were caught on a 250µm mesh sieve, and the heavy fractions ('residues') were retained on a 300µm mesh. The residues were weighed and air dried, then sorted into fractions using a nest of sieves (8mm, 4mm, 2mm, 1mm, 500µm) by Sacha Davies and Yasmine de Gruchy. Items of interest were removed, and bagged, the geological material was discarded. The flots were weighed and air dried before being examined under a low power binocular microscope. A magnet was used to recover hammer scale.

For purposes of assessment, oyster shells were sorted into left (lower, cupped) and right (upper, flat) valves and then into the following size categories: Large = >85mm; Medium = 85–60mm; Small = <60mm. Assessment was semi-quantitative. Brief notes were made about the condition of the shell (presence of staining, chambering or chalky deposits; any signs of intentional damage; evidence of encrusting or boring (epibiont) organisms).

A series of three 'squash' slides were made from sediment from samples 2, 3, 4, 5, 6, and 7. These were made by disaggregating 0.2g of sediment in 0.5% aqueous trisodium phosphate for two hours, before passing the solution through two sieves (125µm and 20µm) and transferring the material from the smaller mesh to a 0.2ml vial before centrifuging it for 5 minutes at 7000rpm. The supernatant was then discarded.

and the residue mounted on a glass slide in glycerol. Assessment was undertaken at 100x magnification, and identifications at 400x magnification. Phytolith nomenclature follows ICPT (2019).

Biological remains were identified using a low power microscope.

The L – P : Archaeology reference collection was used during assessment and the botanical nomenclature follows Stace (2010).

Results – Bulk samples

Estimated abundances of items as found in the samples is presented in Table 14.

Flot material largely comprised fused grains of burnt sand. There was no charred grain in any of the samples and only a very little, fragmentary charcoal present in samples 1, 4 and 6. In the botanical material present the highest proportion was comprised of common wild species like bramble/ raspberry (*Rubus* sp) and elder (*Sambucus nigra*) most likely modern intrusions. A small quantity of animal bone was present in all samples, including a cattle metapodial in context (28). Fish bone is present in contexts (241), (28), (21) and (19). Fish scales were present in context (30).

All samples contained fragments of ceramic building material and large quantities of microscopic magnetic residue, including the pre-1800 buried soil contexts. Contexts (21) and (28) contained glass beads.

Table 14: Estimated abundance of biological remains and finds from bulk samples. Key to estimated abundance: + = 1–10 items, ++=11–50; +++ =51–100; ++++ – >100

Context	212		19		21		18		28		241		30	
Sample	1		2		3		4		5		6		7	
Sample Vol (L.)	10		10		10		10		10		10		10	
Context Description	Pre-1850 construction of Court No.1		Fill of late 19th-century privy pit		Fill of late 19th-century privy pit		Fill of brick structure		Fill of late 19th-century privy pit		Buried soil horizon		Buried soil horizon	
Date	c.1800–1850		c.1850–1900		c.1850–1900		c.1850–1900		c.1850–1900		Pre-1800		Pre-1800	
	Flot	Residue	Flot	Residue	Flot	Residue	Flot	Residue	Flot	Residue	Flot	Residue	Flot	Residue
Weight after processing (g)	171	4138	40	2848	150	2546	8	2487	23	3873	85	1145	18	2107
CHARCOAL								+				+		
>4mm	+													
2 – 4mm	+							+						
<2mm														
SEEDS			+									+		
<i>Rubus sp</i>														
<i>Bramble/</i>	+								++		+		+	
<i>Raspberry</i>														
<i>Sambucus nigra</i>	+		+											
<i>Elder</i>														
<i>Chenopodium sp</i>							+						+	
<i>Goosefoot</i>														
<i>Polygonum sp</i>											+		+	
<i>Knotweed</i>														
<i>Persicaria sp</i>											+			
<i>Persicaria</i>														
MARINE SHELL		++ (249g)						+						
SNAILS		+			+									
Burnt bone								++ (2g)						
BONE		+		++ (2g)		++ (1g)		+		++ (6g)		++ (1g)		+
Mammal indet.				+		+						+		
Cattle										+				
Fish				++		++				++		+		
Fish scale													+	
POT		++		+		+		+		++ (41g)		+		+
				(4g)		(0.5g)		(2g)				(2g)		(1g)

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Context	212	19	21	18	28	241	30
Sample	1	2	3	4	5	6	7
Sample Vol (L.)	10	10	10	10	10	10	10
Context Description	Pre-1850 construction of Court No.1	Fill of late 19th-century privy pit	Fill of late 19th-century privy pit	Fill of brick structure	Fill of late 19th-century privy pit	Buried soil horizon	Buried soil horizon
Date	c.1800-1850	c.1850-1900	c.1850-1900	c.1850-1900	c.1850-1900	Pre-1800	Pre-1800
	Flot Residue	Flot Residue	Flot Residue	Flot Residue	Flot Residue	Flot Residue	Flot Residue
Weight after processing (g)	171 4138	40 2848	150 2546	8 2487	23 3873	85 1145	18 2107
	(120g)						
CBM	++ (83g)	++++ (222g)		++++ (438g)	++ (184g)		
BURNT STONE CLAY			++ (88g)	+++ (48g)			
TOBACCO PIPE	+ (6g)	+ (2g)		+ (1g)		+ (3G)	+ (2g)
GLASS	++ (86g)	+ (<1g)	++ (9g)	+	++		+
BURNT FLINT	+ (29g)						
Fe OBJECT	+	+ (40g)	++ (<1g)		+ (10g)		
Fe	+++++	+++++	+++++	+++++	+++++	+++++	+++++
HAMMERCALE/HAMMERSLAG	(62g)	(15g)	(75g)	(110g)			(73g)
SLAG	++ (330g)	+ (2g)		+ (6g)	+ (7g)		
CLINKER	+++ (745g)	+++++ (390g)	++++ (598g)	++ (64g)	++++ (487g)	++++ (100g)	++ (20g)
WORKED STONE, SLATE, PLASTER - CERAMIC	+ (14g)	+ (34g)		+ (3g)	+ (95g)		
BUTTON			+				
CERAMIC BEAD	'+						
GLASS BEAD			++		+		

Table 15: Contents of 'squash' slides

Context Number	19	19	19	21	21	21	18	18	18	28	28	28	241	241	241	30	30	30
Sample Number	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7
Slide ID	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Phytoliths																		
Elongate entire	+				+					+		+		+				
Acute Bulbosus										+								
Microcharoal	+	++	+++	+		+	+	+	+		++			++	+	+	+	
Plant fibre									+									

Table 16: Estimated abundance of remains in samples from [site] Key to estimated abundance: + = 1–10 items, ++=11–50; +++ =51–100; +++++ – >100

<u>Quantity</u>	No. of left valves +++++ (at least 647)				No. of right valves ++++ (at least 327)			
<u>Size</u>								
Small	++ (12)				++(18)			
Medium	+++++ (at least 518)				++++ (at least 280)			
Large	++++ (at least 117)				+++ (29)			
Fragments	++ (20)				++ (9)			
	Frag L.V	Frag R.V	Small L.V	Small R.V	Medium L.V	Medium R.V	Large L.V	Large R.V
<i>Polydora ciliata</i>					+++	+	++	+
<i>Cliona celata</i>	++	++	"++	+	++++	++	+++	+
<i>Polydora hoplura</i>						++		+
Barnacles, oyster attachment or tubes	+				+++	+	++	
Other perforation					+	++	++	

Results – ‘Squash’ slides

Results of the ‘squash’ slide assessment are presented in Table 15.

The ‘squash’ slides did not contain any parasite ova, nor did they contain any spores of coprophilous fungi, which may suggest that the concentration of human waste in the deposits was low. Microscopic charcoal fragments (‘microcharcoal’) are present on most slides, reflecting soot from domestic fires. Phytoliths were present in low numbers on the slides, predominantly ELONGATE ENTIRE forms, which are a common form found in many plant species, especially in the leaves. Context (28), a cesspit fill additionally contained a single ACUTE BULBOSUS form. These are diagnostic of grasses.

Discussion

The samples broadly reflect domestic refuse. Charcoal was scarce and charred grain absent, and other seeds are likely to be recent intrusions. The ‘squash’ slides do not contain typical indicators of cesspit fills such as parasite ova or the spores of coprophilous fungi. Similarly, mineralised plant remains and Diptera (fly) puparia, which are often found in urban cesspits, are absent. It is likely that the human waste component of these fills was relatively minimal or diffuse.

7.3. Oysters by Miriam Weinbren

Estimated abundance of oyster shells per context, with size categories, proportion of left to right valves, and evidence of the condition of shells are presented in Table 16.

The sample contained close to a thousand oyster valves overall, and was dominated by the left valve. This is the valve in which the oyster is served in its liquor, and may reflect an intentional separation of kitchen waste from table waste. Shells are largely well-preserved, and the overwhelming majority fall into the ‘medium’ size category, which suggests that oysters were specially selected for size, rather than simply representing the supply of a chance selection of wild oysters.

Epibiont organisms present include the boring sponge *Cliona celata*, the marine polychaete worm *Polydora ciliata*, and barnacles, all of which are common of all British coasts. A small number were also bored by the worm *Polydora hoplura*, which tends to be more common on south-western and Atlantic coasts (Knight–Jones et al 2017).

A number of shells were stained or bore ferrous concretions suggesting proximity to iron in the burial environment.

Discussion

The oysters appear to represent table waste from a supply of oysters that has been selected to favour a medium size. They bear a number of epibiont organisms, which may have impacted their market value.

8. SPECIALIST RECOMMENDATIONS

8.1. Pottery

Further work is needed to:

- record the assemblages from (212), (222) and (240) in full;
- identify local parallels for the utilitarian coarsewares, and;
- further contextualise the pottery within the site and the wider Manchester area with the aim of answering the identified research questions.

The pottery assemblage recovered from the evaluation is broadly similar to that recovered from the mitigation works. It is unlikely that further insight will be drawn by combining the pottery reports.

8.2. CBM

A full analysis of the ceramic and stone building material assemblage should be undertaken. Further analysis of material from the lower fill of privy [07] may indicate whether this deposition provides additional understanding of the use of the privy pits in Area 1, and particularly how pits [07] and [24] differed in use, or rather represents demolition debris.

8.3. CTP

Further work should be done to date the makers mark ("MELBOURNE"/"P.F.FALK & CO") on the stem fragment from (21) and to contextualise the assemblage with other clay tobacco pipe assemblages recovered from Manchester city centre. This will aid in identifying the extent to which the clay pipes can assist in answering the research questions of the excavation.

8.4. Glass

The material from the samples, including the beads, should be catalogued. No further work is required on the rest of the assemblage.

8.5. Small finds

No further work is required.

8.6. Industrial materials

The slag and other metalworking waste should be fully analysed. The blast furnace waste from (212) may warrant further identification.

8.7. Animal bone

Given the small size of the assemblage, the faunal assemblage is unlikely to provide any research utility. No further work is required.

8.8. Environmental remains

The samples present only a limited insight into environmental conditions at the site, but show evidence of domestic refuse and some industrial activity.

No further work is recommended for the bulk sample material, which need not be retained. Similarly, no further work is recommended for the 'squash' samples, which may be discarded. The oyster shell assemblage has the potential to provide insights into oyster supply to Manchester, and can contribute to Strategy PM6.13 of the North West Regional Research Framework: 'Target all post-medieval deposits for the systematic recovery of shellfish remains and fish bones' (NWRF 2024). Full quantitative analysis of this is recommended, and the collection should be retained as part of the site archive.

9. REVIEW OF RESEARCH OBJECTIVES AND SIGNIFICANCE OF RESULTS

The excavation works in Areas 1 and 2 were preceded by a phase of evaluation works undertaken by Aeon Archaeology (Dean 2021). Consequently, the archaeological resource was relatively well understood prior to the additional excavation works taking place. A detailed suite of project aims and research objectives were laid out as part of the WSI (reproduced above, section 3.1). Following the assessment of the site archive, those aims and objectives, for the most part, remain valid and no additional recommendations for research are made here. The Site provides an opportunity to investigate, to greater and lesser degrees, those questions set out above.

The excavation areas have uncovered large parts of individual property plots. Remains observed in Area 1 represent large parts of the house and rear yard of one of the terraced properties fronting onto Longacre Street (previously known as Riders Row and Forty Row). Riders Row first appears in the mapping evidence in 1819 (Martin and Nash 2020, figure 8). Those remains recorded in Area 2 comprise a large part of a property fronting onto Court No.3 as well as parts of an alleyway to the rear and a small part of the property at the corner of Heyrod and Court No.3 (Fig 16). The back-to-back plots and courtyards off Heyrod Street first appear in the mapping evidence in 1848 (Martin and Nash 2020, figure 11), though are likely to have been built before 1844 when the building of such dwellings was banned by local by-law.

In both areas, some evidence for modification and redevelopment of the space was observed. This was most significant in Area 1 where multiple alterations had been made perhaps reflecting the longer lifespan of these buildings. It is unclear at this stage whether the alterations reflect unilateral plot modifications. Alterations in Area 2 focus mainly on the alleyway to the rear of the buildings, which correlates with changes visible on the historic mapping. This may coincide with the introduction of improved drainage and sanitation to the adjacent dwellings.

Evidence for phasing and modification was also noted in the trenches to the north-east, and further analysis should consider the evaluation and excavation evidence as a whole to better understand the scale and intent of modifications to the urban areas in and around Heyrod Street, Court Nos. 1 and 3, and Longacre Street. In this way, those research questions specific to the urban landscape may be directly addressed.

This should be considered in light of the introduction of public health legislation in the 19th and 20th centuries, which led to changes in the use of back-to-back housing, cellar dwellings, and courtyards (Nevell 2007). The introduction of The Manchester Waterworks and Improvement Act of 1867 forced landlords to convert back-to-back housing by connecting the two houses with a door to create through-houses, or by knocking down the rear property and converting it into a yard with a privy (ibid). However, it is noted that in many places, these houses remained unaltered despite the Act (ibid). The alterations to the properties recorded in Area 2 may reflect the introduction of sanitation into these rear buildings in response to the action taken by Manchester Council. These actions were prompted by the unusually high death rates in the area (Thresh 1889–90), and the evidence on the Site may be a direct reflection of that.

It is recommended that additional work on the map regression is undertaken, building on that presented in the desk-based assessment (Martin and Nash 2020), to more accurately place the evaluation and excavation areas against the cartographic evidence. Furthermore, comparison of the structural, finds, and environmental evidence with those of other relevant excavations in the area should be undertaken. For example, the ‘meanness’ of the construction methods such as single brick divisions between dwellings, as noted during excavations at Loom Street, are also evident in the archaeological evidence at Heyrod Street (Gregory 2007; Rose et al 2011). The Historic England resource on the history of the Ancoats industrial area is

particularly pertinent to understanding the broader context of the Site (Rose et al 2011). A useful overview of contemporary housing in the adjacent Ancoats district was published by Michael Nevell in 2007 bringing together much of the relevant excavated evidence in the areas surrounding the Heyrod Site. Archive images and references to a Ragged School, Working Men's Club, and Mission House on Heyrod Street at various times also provide useful insight to the social context of the site (Lamb 2021; Seymour 2023).

In isolation the site provides no new discoveries of great significance. However, the results are a valuable addition to the corpus of evidence for the industrial development of this part of Manchester. Upon submission to the local historic environment record it will provide valuable context for future excavation and analysis of the surrounding areas.

10. RESOURCES AND PROGRAMMING

10.1. Work completed

The primary work on the consolidation of the site archive, artefactual and ecofactual processing, basic site phasing, and updated project design has been completed. The majority of the assessment evaluation of finds and ecofacts and preparation of assessment reports has been completed; the ceramic and stone building materials, industrial materials (i.e. slag, hammerscale), and bulk finds recovered from samples have been quantified but assessment is outstanding. These categories will be subject to full analysis reporting at the next workstage.

10.2. Future work

- Task 1. Review phasing and grouping
- Task 2. Review of available map regression
- Task 3. Complete full finds and environmental analysis
- Task 4. Report structural site narrative
- Task 5. Illustrations including detailed plans and section drawings
- Task 6. Integration of finds and environmental analysis results
- Task 7. Report digest and discussion
- Task 8. Editing/proof reading
- Task 9. Preparation of research archive

Table 17: Post-excavation analysis task list

Week/ Task	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						
7						
8						
9						

11. REPORTING, PUBLICATION AND ARCHIVE

11.1. Reporting

The grey literature report will be laid out as following, subject to minor amendments arising through post-excavation.

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MOLA title page with quality control

Staff list

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4 ARCHAEOLOGICAL RESULTS

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Yard structures and sanitation (1850–1900)

Other features

5 THE FINDS

6 THE FAUNAL AND ENVIRONMENTAL EVIDENCE

7 DISCUSSION

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11.2. Archive

The archive will be held by MOLA until such a time as a suitable deposition arrangement has been made with The Manchester Museum or another designated repository, and Transfer of Title has been received. OASIS V forms will be completed for the project upon the issue of each report as part of the report procedure and each report upon receiving final sign off will be submitted to the Archaeological Data Service (ADS).

The archive will comprise all written, drawn and photographic records and all material finds, and processed sample residues recovered from the excavation, subject to any discard/retention policy of the receiving repository. It will be accompanied by the research archive which comprises the text, tabulated data, original drawings and all other records generated in the analysis of the site archive.

The archive will be fully catalogued and prepared for deposition according to standard professional practises (Walker, 1990); (MGC, 1992); (SMA, 1993); (Watkinson and Neal, 2001); (Brown, 2011); (ClfA, 2020b); (ClfA, 2020c); (WNCAA, 2021).

Born-digital data, such as this report, digital photographs, database and GIS data, with appropriate metadata, will be deposited with a CoreTrustSeal Repository, currently the Archaeology Data Service (ADS), making the archive publicly accessible. This could also include digitised copies of paper records, as archive quality PDFs, depending upon the requirements of the designated repository. Digital archiving will follow the guidelines outlined in MOLA's Digital Data Management Policy and Procedures (MOLA, Forthcoming). Digital formats will comply with archiving standards of the ADS.

11.3. Quantification of the archive

The records generated by the excavation have all been cross-referenced and checked for internal consistency. The context records and finds catalogues have been entered on to relevant databases. All records and finds are kept under the site code LP4029C.

Table 18: Site records archive quantities

Type	Area 1	Area 2	Total
Context registers (paper)	1	2	3
Context records	9	22	31
Photographic record sheets both areas (digital)	-	-	1
Digital images	31	21	52
Geo-rectified aerial images (tif)	1	1	3
Total Station points Register	1	1	2
Sample registers both areas	-	-	1
Plan and section register both areas (digital)	-	-	1
Pencil drawn plans on permatrace sheets (varying scales)	2	2	4
Pencil drawn sections on permatrace sheets (varying scales)	4	4	8

Finds and samples

Table 19: Finds archive summary prior to full analysis and selection/retention recommendations

Finds material type	Sum of Weight (g)	Sum of Count
Bone	228.5	18 (+samples)
Brick	641	1
Burnt flint	29	–
Burnt Stone	877	1
CBM	3469	45 (+samples)
Ceramic composite objects	–	1
Clinker	2404	–
Coal	846	3
Coke	147	3
CTP	874	121
CuA	–	6
Glass	1364	107 (+samples)
Glass bead	2	–
Hammer scale/ hammer slag	335	–
Metal (Fe)	–	3
Pottery	22453	983 (+samples)
Shell	–	c974
Slag	18158	25
Slate	87	1
Spark Plug	164	1
Stone	598	4
Stone obj	–	1
Worked bone composite	–	1
Worked stone/ slate/ plaster	146	–
Grand Total	100502	1497

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13. Appendix 1: CONTEXT INVENTORY

Table 20: Context inventory

Area	Context	Type	Description	Pottery spot date
1	01	Structure	Brick wall N–S	-
1	02	Structure	Brick wall N–S	-
1	03	Structure	Brick wall 'L' shaped	-
1	04	Structure	Brick wall E–W	-
1	05	Structure	Brick wall 'L' shaped	-
1	06	Structure	Brick wall N–S	-
1	07	Structure	Brick 'Tank'	-
1	08	Structure	Brick 'Tank'	-
1	09	Structure	Brick wall N–S	-
1	10	Structure	Brick wall 'L' shaped	-
1	11	Structure	Brick wall E–W	-
1	12	Structure	Brick wall N–S	-
1	13	Cut	Foundation cut for (1)	-
1	14	Cut	Foundation cut for (5)	-
1	15	Cut	Foundation cut for (4) + (5)	-
1	16	Fill	Light brown silty pit fill	-
1	17	Layer	Red / brown crushed brick layer	-
1	18	Fill	Fill of (8)	-
1	19	Fill	Fill of (7)	1810–1900
1	20	Layer	Stiff Yellow Brown Clay – Natural?	-
1	21	Fill	Fill of (7)	1830–1900
1	22	Deposit	Demolition layer with CBM covering site	-
1	23	Structure	Brick wall E–W	-
1	24	Structure	Brick wall 'Tank'	-
1	25	Structure	Brick wall N–S	-
1	26	Structure	Brick wall N–S	-
1	27	Fill	mid greyish brown fill of 24	1830–1900
1	28	Fill	mid reddish brown fill of 24	1805–1900
1	29	Deposit	bright red/orange crushed brick	-
1	30	deposit	dark black burnt (firm) deposit under (29) over area	-
1	31	Structure	Possible brick yard surface to the south of Area 1	-
2	200	Structure	Brick wall aligned N–S (W. end of Ts.)	-
2	201	Structure	Brick wall aligned E–W (S.side)	-
2	202	Structure	Brick wall aligned N–S	-
2	203	Structure	Brick wall aligned N–S	-
2	204	Structure	Brick Structure – Grid of drain	-
2	205	Structure	Modern brick wall aligned E–W	-

2	206	Structure	Brick wall aligned N-S	-
2	207	Structure	Brick wall aligned E-W	-
2	208	Structure	Modern brick wall aligned N-S	-
2	209	Structure	Modern sewer pipe	-
2	210	Structure	Modern sewer pipe	-
2	211	Structure	Brick structure 'L' shaped	-
2	212	Layer	Dark grey/brown clayey silt below (213)	1825-1900
2	213	Layer	Stiff brown clay covering most of trench	-
2	214	Layer	Modern demolition rubble above (213)	-
2	215	Cut	Foundation trench for wall (202)	-
2	216	Fill	Fill of [215]	-
2	217	Deposit	within wall structure (211) dark brown/black silt	1805-1900
2	218	Deposit	w of (211) dark brown/black silt	1805-1900
2	219	Deposit	NE of pipe [209], black silt on top of ?	1825-1900
2	220	Cut	Foundation trench for wall (203)	-
2	221	Fill	Fill of [220]	-
2	222	Deposit	NE corner, midden deposit	1830-1900
2	223	Deposit	Compact iron panning / slate waste layer	-
2	224	Cut	Foundation trench for wall (201)	-
2	225	Fill	Fill of [224]	-
2	226	Cut	Cut for sewer pipe (209)	-
2	227	Fill	Fill of [226]	1830-1900
2	228	Layer	Layer cut by [226]	1805-1900
2	229	Deposit	Layer beneath (219), clayey silt backfill	1820-1900
2	230	Structure	N-S Brick Wall	-
2	231	Cut	Foundation trench for wall (200)	1830-1900
2	232	Fill	Fill of [231]	1805-1900
2	233	Deposit	under (213) at NE end	-
2	234	Structure	Brick wall end far left of SE elevation	-
2	235	Structure	Brick wall end second left of SE section	-
2	236	Structure	Brick wall end second right of SE section	-
2	237	Structure	Brick wall end far right of SE section	-
2	238	Cut	Construction cut for [206]	-
2	239	Fill	mid brownish grey clay fill of [238]	-

2	240	Deposit	Compact layer of grey slate fragments	1825–1900
2	241	Layer	Dark grey/brown clayey silt below (240)	1805–1900
2	242	Natural	Light yellow / brown natural clay	-
2	243	Surface	In situ Yorkstone pavier	-
2	244	Layer	Modern concrete floor slab	-
2	245	Layer	Loose brick demolition rubble below (244)	-



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