



# Byrom Street, Blackburn, Lancashire

## Archaeological Evaluation Report

July 2019

**Client: WPL Consulting LLP on behalf of TJ  
Morris Ltd**

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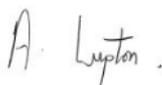
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## Byrom Street, Blackburn, Lancashire

### *Archaeological Evaluation Report*

*Written by Stephen Morgan*

*With illustrations by Mark Tidmarsh*

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## Summary

Oxford Archaeology (OA) North were commissioned by WPL Consulting LLP on behalf of TJ Morris Ltd to undertake an archaeological evaluation prior to the construction of a retail unit and associated parking at the site of Byrom Street, Blackburn, Lancashire (NGR SD 67888 27706). The work was undertaken as a condition of Planning Permission (planning ref. 10/08/0279). A brief had been provided to the Local Planning Authority by Joanne Smith, archaeological advisor to Blackburn with Darwen Council, initially on behalf of Lancashire Archaeological Advisory Service (LAAS), then subsequently of Lancashire County Council, defining the work required to discharge the planning condition. Following further discussions with LAAS, it was identified that their original request was for a Strip, Map and Sample (SMS) of the area of back-to-back housing fronting Chapel Street. However, the condition imposed required a watching brief during construction works. A compromise was met where a single evaluation trench would be excavated along the northern edge of the site, targeting the back-to-back housing. OA North were subsequently commissioned to produce a Written Scheme of Investigation (WSI) and undertake the fieldwork, which was undertaken between 4<sup>th</sup> and 6<sup>th</sup> June 2019.

The evaluation trench measured 40m by 5m and exposed the remains of nineteenth century back-to-back houses, depicted on the Ordnance Survey (OS) Town Plan of 1848. The nineteenth century remains were heavily truncated by the twentieth century remains, likely relating to a School, identified on the OS 25 inch to 1 mile map of 1946. The nineteenth century remains comprised north-west/south-east aligned walls, constructed from hand-made brick and stone, bonded by lime mortar, and floor surfaces, with evidence of cellaring. The twentieth century remains comprised concrete foundations and walls, constructed from machine-made frogged bricks bonded with dark grey Portland cement, and concrete floor surfaces.

The structures exposed during the evaluation correlated well with the historic mapping, the cartographic evidence illustrating that the nineteenth century structures changed little from their earliest depiction on the OS Town Plan of 1848 through to their latest depiction on the OS 25 inch to 1 mile map of 1931. They then appeared to have been demolished and replaced by a large rectangular building, possibly identified as a school, on the OS 25 inch to 1 mile map of 1946.

## Acknowledgements

OA North would like to thank WPL Consulting LLP who commissioned this project on behalf of TJ Morris Ltd. Thanks are also extended to Joanne Smith, who monitored the work, initially, on behalf of Lancashire Archaeological Advisory Service (LAAS) and subsequently, as archaeological advisor to Blackburn with Darwen Council, for her advice and guidance.

The project was managed for OA North by Paul Dunn. The fieldwork was directed by Andy Phelps, who was supported by Steve Clarke. Digitizing was carried out by Mark Tidmarsh

## 1 INTRODUCTION

### 1.1 Scope of work

- 1.1.1 OA North were commissioned by WPL Consulting LLP on behalf of TJ Morris Ltd to undertake a trial trench evaluation prior to the construction of a retail unit and associated parking at the site of Byrom Street, Blackburn, Lancashire (NGR SD 67888 27706).
- 1.1.2 The work was undertaken as a condition of Planning Permission (planning ref. 10/08/0279). A brief had been provided to the Local Planning Authority by Joanne Smith, archaeological advisor to Blackburn with Darwen Council, initially on behalf of LAAS, then subsequently of Lancashire County Council, defining the work required to discharge the planning condition.
- 1.1.3 Following further discussions with LAAS, it was identified that their original request was for a Strip, Map and Sample (SMS) of the area of back-to-back housing fronting Chapel Street. However, the condition imposed required a watching brief during construction works. A compromise was met where a single evaluation trench would be excavated along the northern edge of the site, targeting the back-to-back housing. OA North were commissioned to produce a Written Scheme of Investigation (WSI; *Appendix D*) and, subsequently, undertake the fieldwork. The fieldwork was completed over three days, 4<sup>th</sup> to 6<sup>th</sup> June 2019. This document outlines how OA implemented the specified requirements.

### 1.2 Location, topography and geology

- 1.2.1 The site lies within the centre of Blackburn, Lancashire to the north of the River Blakewater (NGR. SD 67888 27706; Fig 1). The site is bounded by Chapel Street to the north, Byrom Street to the east, the River Blakewater to the south and factory units to the west. The land of the development is currently used as parking.
- 1.2.2 The solid geology of the area is mapped as Mudstone, Siltstone and Sandstone of the Pennine Lower Coal Measure Formation deposited in the Carboniferous Period (BGS 2019). The superficial geology of the site is mapped as Sand and Gravel Glaciofluvial deposits, deposited in the Quaternary Period (*ibid*). The soils of the site are identified as freely draining slightly acid sandy soils (Cranfield 2019).

### 1.3 Archaeological and historical background

- 1.3.1 There has been no archaeological desk-based assessment produced for this project. As such, a brief historical background is provided here.
- 1.3.2 **Blackburn:** Blackburn appears to have been a place of some importance during the early medieval period, as the centre of a locally important estate (Egerton Lea Consultancy and Lancashire County Council 2005), that probably had a church by the eleventh century (LUAU 2000). In 1066 it was a royal manor, the centre of which became the settlement of Blackburn (*ibid*). It is possible that it became nucleated upon Church Street and Darwen Street by at least the thirteenth century, however, there is no evidence that there was a 'town' before the sixteenth century (White 1996). By the

end of the sixteenth century, Blackburn had become a centre of woollen cloth production and from 1650 became known for producing a cloth (fustian) known as 'Blackburn Checks', which was a mix of linen and cotton (Baines 1824). In the eighteenth century, the main product of the town was 'Blackburn Greys' an unfinished cotton cloth (Britton 1807). From around 1775, the town was growing as a centre for calico production, and by 1807 it was one of the most prosperous towns in the county (*ibid*).

- 1.3.3 In 1846, the railway came to the town and the covered market was built soon after in 1848, rendering the town independent from Preston in terms of provisions (Whittle 1852). In 1888, the town was made a country borough (Farrer and Brownsbill 1911), and the population rose from around 6,000 in the 1780s (Britton 1807), to over 133,000 by 1911 (Beattie 1992). This required the town to expand in size, taking in several nearby townships. By the end of the nineteenth century, Blackburn was recognised as being the world's centre of cotton spinning, peaking in terms of production and population by the First World War (*ibid*). The town was almost completely reliant upon the cotton industry for employment and prosperity, and so when the industry declined rapidly during the inter-war period, this resulted in the rapid clearing of housing and industrial premises (Egerton Lea Consultancy and Lancashire County Council 2005).
- 1.3.4 ***Byrom and Chapel Street:*** Correspondence with Joanne Smith of LAAS has suggested that the site is in the location of a short row of buildings, fronting Chapel Street, that may represent back-to-back houses with potential cellars, as shown on the 1848 OS Town Plan of Blackburn (Fig 3) (Smith *pers comm*). Back-to-back houses were a form of terraced housing, built from the eighteenth century through to the early twentieth century, in order to meet the increased demand for industrial workers dwellings in the midlands and the north of England (Jones 1996). The rapid increase in population of the town throughout the eighteenth and nineteenth century, resulted in the requirement for cheap new housing. Many had cellars which were probably used for loomshops, though by the mid-nineteenth century a high proportion would have been let as separate domestic accommodation (*ibid*).
- 1.3.5 The huge variety and quantity of nineteenth century housing which could be found in Blackburn up to the 1950s has been greatly reduced by later twentieth century clearance; as such, there is a notable lack of surviving back-to-back houses in Blackburn (*ibid*). Any such houses that do survive are considered to be important elements relating to the town's legacy of rapid growth in the early nineteenth century (*ibid*).

## 2 AIMS AND METHODOLOGY

### 2.1 Aims

2.1.1 The project aims and objectives were as follows:

- i. to adhere to and fulfil the agreed programme of works associated with the archaeological potential of the site;
- ii. to determine or confirm the general nature of any remains present;
- iii. to determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence;
- iv. to establish the significance of any archaeological remains present;
- v. to compile a professional archival record of any archaeological remains within the site.

### 2.2 Methodology

2.2.1 The full methodology is outlined in the WSI (*Appendix D*) and was adhered to in full, and, as such, was fully compliant with prevailing guidelines and established industry best practice (CIfA 2014a: 2014b: 2014c: Historic England 2015). A programme of field observation accurately recorded the character of deposits within the excavations.

2.2.2 The works involved the excavation of a single archaeological evaluation trench along the northern edge of the site (Fig 1). The overburden was excavated by a mechanical excavator (fitted with a toothless ditching bucket) to the surface of the first significant archaeological deposit, under direct supervision at all times. Subsequent cleaning and investigation of all archaeological deposits were undertaken manually, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions. All features of archaeological interest were investigated and recorded.

2.2.3 The trench was located by off-setting from known locations, identified on Ordnance Survey maps. Prior to excavating, the trench was scanned using a Cable Avoidance Tool (CAT) and Signal Generator (Genny), to identify any potential services. The trench was excavated in a stratigraphic manner.

2.2.4 All information identified during the site works was recorded stratigraphically, using a system adapted from that used by the former Centre of Archaeology of English Heritage, with an accompanying pictorial record (plans, sections, and digital photographs). Primary records were available for inspection at all times.

2.2.5 Results of all field investigations were recorded on *pro forma* context sheets. The site archive includes both a photographic and accurate large-scale plans and sections at appropriate scales (1:10, 1:20 and 1:50).

2.2.6 A full professional archive has been compiled in accordance with the WSI, and in accordance with current CIfA (2014c) and Historic England guidelines (Historic England 2015). The archive will be deposited with Lancashire Historic Environment Record.

## 3 RESULTS

### 3.1 Introduction and presentation of results

3.1.1 The results of the evaluation are presented below and include a stratigraphic description of the trenches that contained archaeological remains. The full details of all trenches with dimensions and depths of all deposits can be found in *Appendix A*.

### 3.2 General soils and ground conditions

3.2.1 The soil sequence throughout the trench was fairly uniform. The natural geology of orange sand was overlain by mid yellow brown silt subsoil.

3.2.2 Ground conditions throughout the evaluation were generally good, with both wet and dry conditions being experienced. Any archaeological features that were present were easy to identify due to their structural nature.

### 3.3 Evaluation Trench

3.3.1 The evaluation trench (Fig 2) located in the north-western part of the development area, targeted back-to-back housing identified on the 1848 Ordnance Survey town plan. The trench was aligned north-east/south-west, measured 40m long by 5m wide, and was excavated to a maximum depth of 1.3m. Natural geology **15** was identified at a depth of 0.6m below ground level (bgl), and was, subsequently, overlain by a mid-yellow brown subsoil **14**. Cutting the subsoil were a number of structural remains.

3.3.2 The earliest surviving structural features within the trench appear to be the north-west/south-east-aligned walls **05**, **06**, **07**, **08**, **09**, **09**, and **10**, as well as, north-east/south-west aligned wall **11**, likely relating to the back-to-back housing identified on the OS Town Plan of Blackburn 1848 (Fig 3). These walls are all cut by the north-east/south-west aligned walls belonging to building **03**, likely relating to a School, identified on the OS Map of 1946.

3.3.3 Working from the south-west end of the trench. Brick wall **05**, located 3.5m from the south-west end of the trench, butts up to wall **11**, creating a room exposed to 3.5m by 3.5m (Plate 1). Wall **05** was constructed from hand-made brick, a single brick wide and bonded by lime mortar, on an earlier stone foundation, **21**. Wall **11** was constructed again from hand-made brick, half a brick wide and bonded by lime mortar. Parallel to wall **11**, is partition wall **12**, constructed of hand-made brick, half a brick wide and bonded by lime mortar. The area between walls **12** and **11**, is approximately 1m wide, suggesting that this was likely the remains of a staircase. The floor of the room is flagged with large sandstone flags, **13**, laid on a compacted dark brown silt clay deposit, **16**.



Plate 1: Walls **05**, **11**, **12** and surface **13** looking south, scale 1m

- 3.3.4 Approximately 5m to the north-east of wall **05**, is wall **06** (Plate 2), cut by the later building **03**. Wall **06** survives to 1.85m long by 0.3m wide and to a depth of 1.3m, and is constructed from stone rubble, bonded and rendered with lime mortar. This wall differs to the other north-west/south-east-aligned walls in that it does not correspond well with historic mapping, being approximately 1m to the north-east of its depicted location.



Plate 2: Wall **06** with flagstone floor **18** looking south-west, scale 2 x 1m

3.3.5 Another 4m to the north-east of wall **06**, were the fragmentary remains of wall **07**, surviving to a length of 0.65m and a width of 0.4m, and constructed from stone rubble bonded with lime mortar. Another 4.5m to the north-east of wall **07**, was wall **08** (Plate 3), constructed from hand-made brick, a single brick thick, laid in alternating courses of stretchers and headers, bonded with lime mortar and surviving to a length of 2.5m and a depth of 1.3m. The eastern face of the wall is coated in white paint, whilst the western facing side was rendered with lime mortar.



Plate 3: Walls **08** and **09** looking north-east, scale 2 x 1m

3.3.6 Between walls **06** and **08** were the fragmentary remains of a flagstone floor surface, **18** (Plate 2). The sandstone flags, measuring 0.5m by 0.6m and 0.05m thick, suggest that these rooms depicted on the OS Town Plan of Blackburn 1848 were cellared. The area between walls **06** and **08** were subsequently filled with demolition rubble **22**.

3.3.7 A further 4.5m north-east of **08**, was wall **09** (Plate 3), constructed from irregular-shaped stone rubble bonded with lime mortar, and surviving to a length of 2.4m, a width of 0.23m and a depth of 1.3m. The western face of **09** is rendered with lime mortar, whilst the eastern face of the wall had been left rough, due to its use as a

retaining wall to natural geology, **15**, to the east. There was no evidence of a floor surface surviving between walls **08** and **09**, although the area being filled with demolition material, **22**, suggests that there may have been a cellar prior to the demolition of the building.

- 3.3.8 Another 4.5m to the north-east of **09**, was wall **10** (Plate 4). Natural geology **15** was cut by construction cut, **23**, for wall **10**, measuring 2.1m long by 0.25m wide. Wall **10** was constructed from hand-made brick, half a brick wide and bonded with lime mortar, within cut **23**, and surviving to a depth of 0.4m. Cut **23** was, subsequently, backfilled with a dark yellow brown sandy silt, **24**, to the west of wall **10**. To the east of wall **10**, there was no evidence of any floor surfaces, with deposit **20**, a dark grey brown compact clay, 0.38m thick, laid directly onto natural geology **15**, and, subsequently, overlain by a dark grey black fine silty sand deposit, **19**, 0.18m thick.



Plate 4: Wall **10** looking south-west, scale 1m

3.3.9 These earlier walls and floor surfaces were then truncated by building **03**, likely relating to a school identified on the OS Map of 1946 and exposed to a length of 39m and a width of 2.8m. The walls were constructed within a construction cut, **04**, approximately 0.5m wide and 0.8m deep. A thin layer of concrete was laid within the construction cut, and the walls relating to building **03**, were then constructed on this concrete foundation. The walls of building **03** were constructed from machine-made frogged bricks, either, one and half bricks wide, along the southern side of the trench, or one brick wide, along the northern side of the trench, and bonded with dark grey Portland cement. Concrete floor surface **02** survived at the north-eastern end of the trench, to a length of 6.45m and a width of 2.2m. There was also evidence of a compacted floor surface, **17**, to the south of building **03** and extending beyond the southern edge of the trench. This floor surface is constructed from weak cement and appears to abut building **03**, suggesting it is likely related to that building. These later structures were subsequently overlain by overburden **01**.



Plate 5: Concrete Floor surface **02** within building **03** looking south, scale 1m

## 3.4 Finds

- 3.4.1 Three sherds of eighteenth to nineteenth century pottery were recovered from deposit **20**, all from the same vessel, one with a decorative stamp “Fibre” on the base (Plates 6 and 7). The Fibre pattern was used by several pottery producers throughout the United Kingdom.
- 3.4.2 An unidentifiable copper alloy coin was also recovered from deposit **20**. This deposit was located to the north east of wall **10** and directly overlay the natural soils.



Plate 6: Eighteenth to nineteenth century pottery from deposit **20**



Plate 7: Eighteenth to nineteenth century pottery from deposit **20**, showing the "Fibre" mark

## 4 DISCUSSION

### 4.1 Reliability of field investigation

4.1.1 The archaeology exposed during the evaluation fieldwork was predominantly structural in nature and was clearly distinguishable from other deposits on the site. The structures relating to the nineteenth century back-to-backs had been heavily disturbed by the construction of a twentieth century rectangular building, likely related to a school identified on the 1946 OS map.

### 4.2 Evaluation objectives and results

4.2.1 The following section considers the project's success measured against the principal aims and general objectives as stated in *Section 2.1*. This report is a synthesised record of the fieldwork undertaken and its submission to both the client and the local authority alongside the fieldwork archive ensures the information is publicly available.

4.2.2 The principal objectives of the evaluation were to identify the presence or absence of back-to-back housing identified on the 1848 Ordnance Survey Town Plan and to assess its survival. The evaluation achieved these objectives by identifying the remains of the back-to-back housing fronting Chapel Street, although they were heavily truncated by a later building.

### 4.3 Interpretation

4.3.1 The archaeological remains identified during the evaluation fieldwork correlated well with the historic mapping (Fig 3). The general layout of the back-to-backs does not change from its earliest depiction on the 1848 OS Town Plan of Blackburn through to the OS 25 inch to 1 mile map of 1931, being the last depiction of the back-to-back housing. On the OS 25 inch to 1 mile map of 1946 the houses had been replaced by a single rectangular structure, labelled School, suggesting that the back-to-back houses were demolished in the period between the two maps being published.

4.3.2 The remains uncovered relating to the nineteenth century back-to-back structures primarily survive as north-west/south-east aligned walls, constructed from either hand-made brick or stone rubble and bonded with lime mortar. There was evidence of cellar floors between walls **06** and **08**, however, there was no evidence for cellars throughout the rest of the evaluation trench. Where the cellars were identified there was no evidence of use, as only a small area of the cellar survived.

4.3.3 The later remains of building **03** appear to truncate the earlier structures and were constructed from machine-made frogged bricks and bonded with dark grey Portland cement. This structure appears to correspond well with the OS 25 inch to 1 mile map of 1946, suggesting that it was related to the School depicted on this map.

### 4.4 Significance

4.4.1 The remains of the back-to-back housing survived poorly within the evaluation trench, having been heavily truncated by the later building **03**. However, they could be related to the historic mapping of the area. Due to the limited remains surviving, the cellars do not offer much further insight into their use.

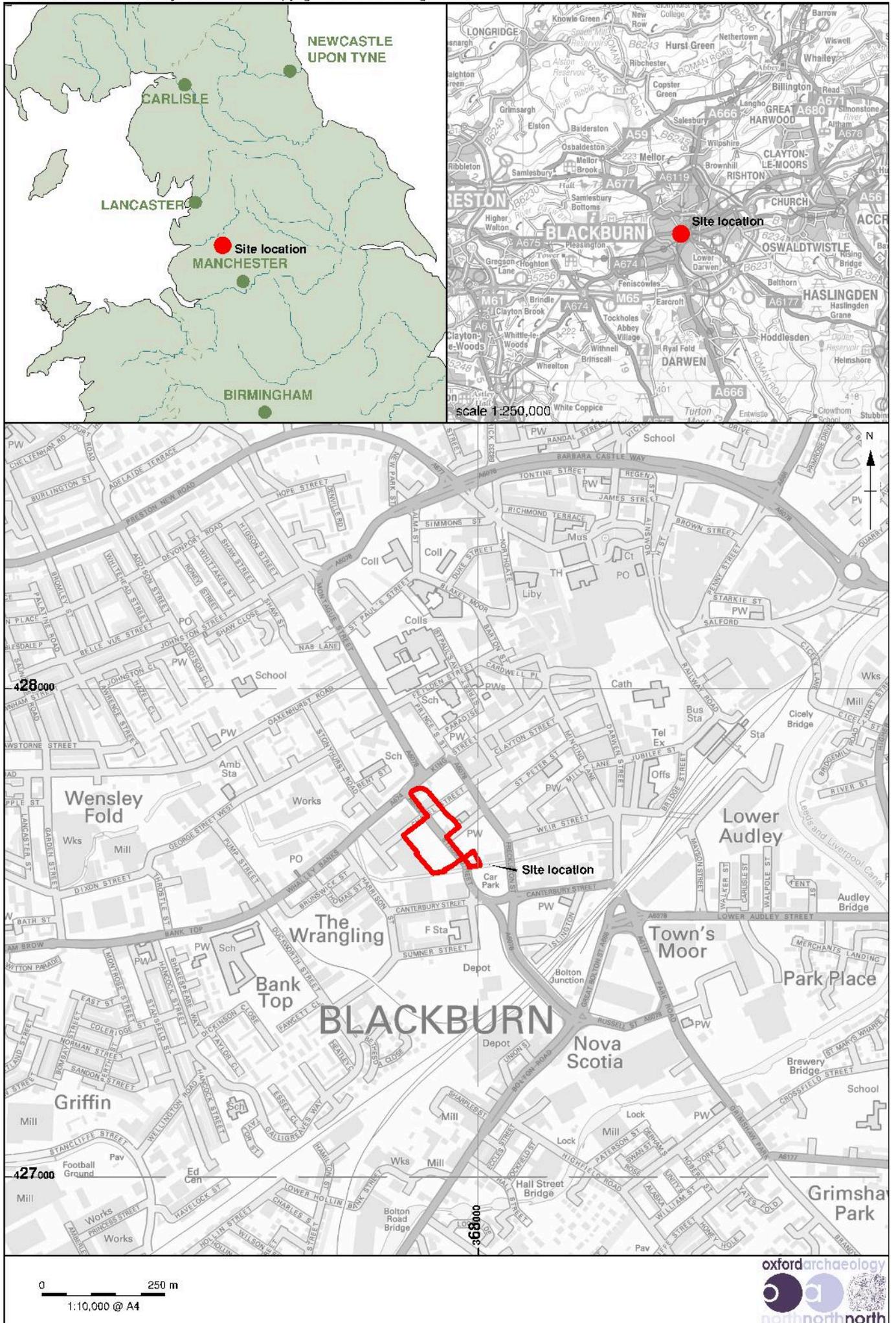


Figure 1: Site location

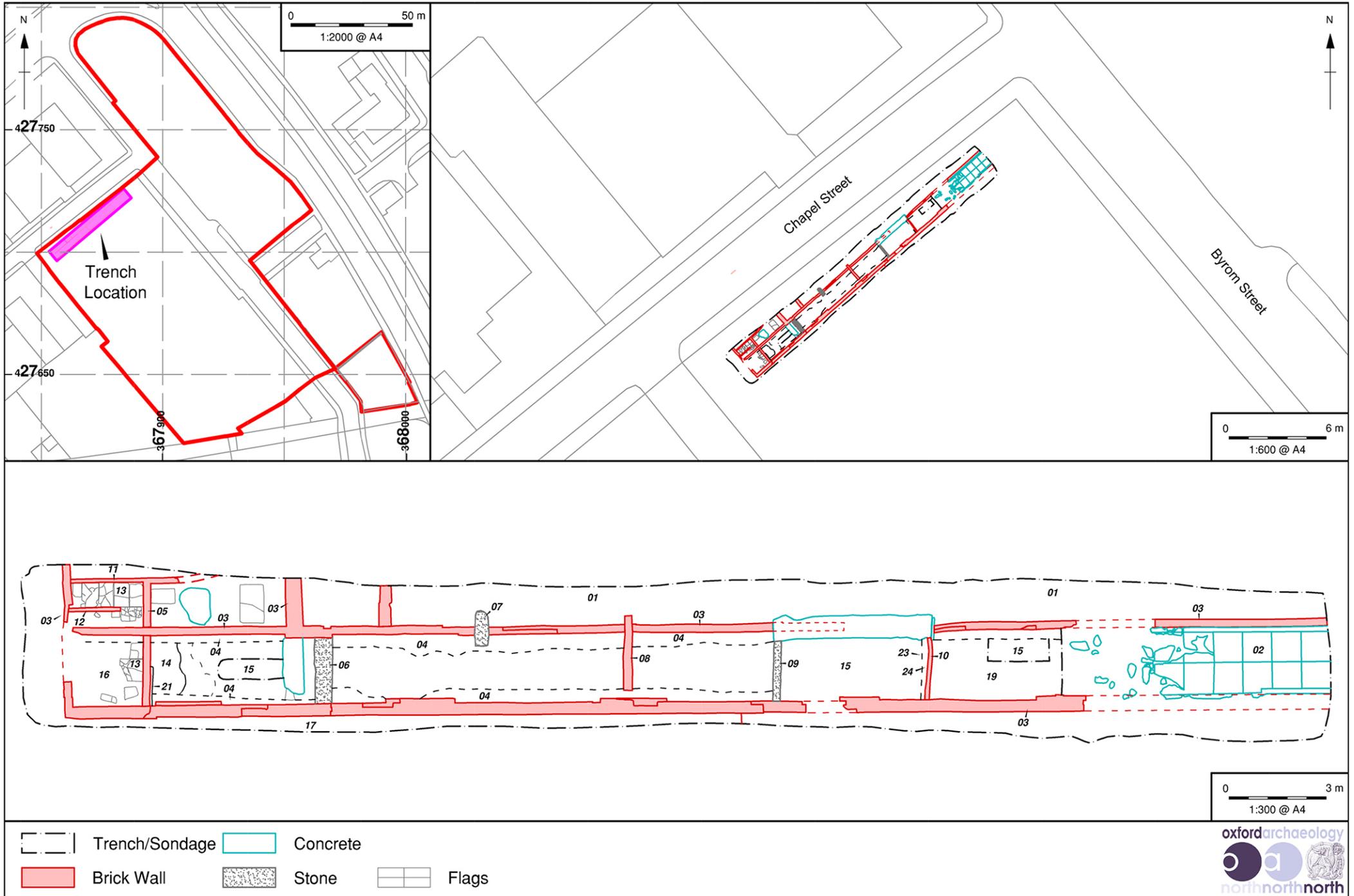


Figure 2: Evaluation trench plan



Figure 3: Evaluation trench plan superimposed on the Ordnance Survey town plan of Blackburn, 1848

## APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description					Orientation	NNE-SSW
Trench contained the cellars and walls of the 19 <sup>th</sup> century on back-to-back housing					Length (m)	60
					Width (m)	1.6
					Avg. depth (m)	0.50
Context No.	Type	Width (m)	Depth (m)	Description	Findings	Date
<b>01</b>	Layer	-	-	Overburden	-	-
<b>02</b>	Structure	2.20	-	Concrete floor surface	-	20 <sup>th</sup> c.
<b>03</b>	Structure	2.80	-	Rectangular Building	-	20 <sup>th</sup> c.
<b>04</b>	Cut	0.50	-	Construction cut of <b>03</b>	-	20 <sup>th</sup> c.
<b>05</b>	Structure	0.23	-	North-west/south-east-aligned brick Wall	-	19 <sup>th</sup> c.
<b>06</b>	Structure	0.30	-	North-west/south-east-aligned stone wall	-	19 <sup>th</sup> c.
<b>07</b>	Structure	0.40	-	Fragment of North-west/south-east-aligned stone wall	-	19 <sup>th</sup> c.
<b>08</b>	Structure	0.25	-	North-west/south-east-aligned brick wall	-	19 <sup>th</sup> c.
<b>09</b>	Structure	0.23	-	North-west/south-east-aligned stone wall	-	19 <sup>th</sup> c.
<b>10</b>	Structure	0.12	-	North-west/south-east-aligned brick wall	-	19 <sup>th</sup> c.
<b>11</b>	Structure	0.12	-	North-east/south-west-aligned brick wall	-	19 <sup>th</sup> c.
<b>12</b>	Structure	0.12	-	North-east/south-west-aligned brick wall	-	19 <sup>th</sup> c.
<b>13</b>	Structure	2.3	-	Flagstone floor	-	19 <sup>th</sup> c.
<b>14</b>	Layer	1.35	0.2	Subsoil	-	-
<b>15</b>	Layer	-	-	Natural Geology	-	-
<b>16</b>	Layer	2.25	-	Dark brown silt beneath <b>13</b>	-	-
<b>17</b>	Structure	-	-	Compacted cement floor surface	-	20 <sup>th</sup> c.
<b>18</b>	Structure	1.50	-	Flagstone cellar floor	-	19 <sup>th</sup> c.
<b>19</b>	Layer	2.30	0.18	Black ashy silt	-	-
<b>20</b>	Layer	0.7	0.38	Dark brown compacted clay below <b>19</b>	Cu coin, pot	-
<b>21</b>	Structure	-	-	Stone Foundation of brick wall <b>05</b>	-	19 <sup>th</sup> c.
<b>22</b>	Layer	1.8	-	Demolition rubble	-	-
<b>23</b>	Cut	0.25	-	Construction cut of wall <b>10</b>	-	19 <sup>th</sup> c.
<b>24</b>	Layer	0.25	-	Fill of Construction Cut <b>23</b>	-	19 <sup>th</sup> c.

## APPENDIX B      BIBLIOGRAPHY

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**APPENDIX C****SITE SUMMARY DETAILS**

<b>Site name:</b>	WPL Consulting LLP on behalf of TJ Morris Ltd
<b>Site code:</b>	BSB19
<b>Grid Reference</b>	SD 67888 27706
<b>Type:</b>	Evaluation
<b>Date and duration:</b>	4/06/19 and 6/06/19, 3 days
<b>Area of Site</b>	200m <sup>2</sup>
<b>Location of archive:</b>	The archive is currently held at OA North, Mill 3, Moor Lane Mills, Moor Lane, Lancaster, LA1 1QD
<b>Summary of Results:</b>	Remains of nineteenth century back-to-backs fronting Chapel Street, identified within evaluation trench. There was evidence that some had been cellared and the remains corresponded well with the OS Town Plan of Blackburn 1846. The nineteenth century remains had been heavily truncated by a twentieth century rectangular building, potentially related to a School building identified on OS 25 inch to 1 mile map of 1946. Due to the limited remains surviving, there was little evidence of the usage of the cellars, where present.

## APPENDIX D

## WRITTEN SCHEME OF INVESTIGATION



# Byrom Street, Blackburn, Lancashire

## Written Scheme of Investigation Archaeological Evaluation

March 2019

**Client: WPL Consulting LLP on behalf of TJ  
Morris Ltd**

Issue No: V. 1  
NGR: SD 67888 27706



Client Name: WPL Consulting LLP on behalf of TJ Morris Ltd  
Document Title: Byrom Street, Blackburn, Lancashire  
Document Type: Written Scheme of Investigation  
Grid Reference: SD 67888 27706  
Planning Reference: 10/18/0279  
Site Code:  
Invoice Code:  
  
OA Document File Location: X:\Paul\Tenders\22427\_Byrom\_Street\_Blackburn\WSI  
OA Graphics File Location: X:\Paul\Tenders\22427\_Byrom\_Street\_Blackburn\OAN\_CAD  
  
Issue No: V. 1  
Date: 27/03/2019  
Prepared by: Paul Dunn (Project Manager)  
Checked by: Paul Dunn (Project Manager)

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**Byrom Street, Blackburn, Lancashire**  
***Written Scheme of Investigation for an Evaluation***  
***Centred on SD 67888 27706***

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## 1 INTRODUCTION

### 1.1 Project details

1.1.1 Oxford Archaeology (OA) North has been commissioned by WPL Consulting LLP on behalf of TJ Morris Ltd to undertake an archaeological evaluation of the site of a proposed commercial development on land off Byrom Street, Blackburn, Lancashire (NGR. SD 67888 27706; Fig 1).

1.1.2 The work is being undertaken as a condition of Planning Permission (planning ref: 10/18/0279). Discussions with the client and the archaeological advisors to the Local Planning Authority, Lancashire Archaeological Advisory Service (LAAS), have defined the work required to discharge planning condition 14:

***14. No development shall take place within the application site until the applicant has secured the maintenance of an on-site watching brief by a suitably qualified and experienced archaeologist during construction work, in accordance with written details which have been submitted to and approved in writing by the Local Planning Authority. In the event of important archaeological features or remains being discovered which are beyond the scope of the watching brief to excavate and record and which require a fuller rescue excavation, then construction work shall cease until the applicant has secured the implementation of a further programme of archaeological work in accordance with a written scheme of investigation which has been submitted to and approved in writing by the Local Planning Authority.***

***Reason: In order to safeguard the recording and inspection of matters of archaeological and historical importance, in accordance with the requirements of Policy 39 of the Blackburn with Darwen Borough Local Plan Part 2.***

1.1.3 Following further discussions with LAAS, it was identified that they had originally requested a Strip, Map and Sample of the area of back-to-back housing fronting Chapel Street. However, the condition imposed required a watching brief during construction works. A compromise was met where an evaluation trench measuring 40m long by 5m wide would be excavated along the northern edge of site, targeting the back-to-back housing fronting Chapel Street. This document outlines how OA will implement those requirements.

1.1.4 All work will be undertaken in accordance with local and national planning policies referenced within this document.

### 1.2 Location, topography and geology

1.2.1 The site lies within the centre of Blackburn, Lancashire to the north of the River Blakewater (NGR. SD 67888 27706; Fig 1). The site is bounded by Chapel Street to the north, Byrom Street to the east, the River Blakewater to the south and factory units to the west. The land of the development is currently used as parking.

1.2.2 The solid geology of the area is mapped as Mudstone, Siltstone and Sandstone of the Pennine Lower Coal Measure Formation deposited in the Carboniferous Period (BGS 2019). The superficial geology of the site is mapped as Sand and Gravel Glaciofluvial

deposits, Devensian, deposited in the Quaternary Period (*ibid*). The soils of the site are identified as freely draining slightly acid sandy soils (Cranfield 2019).

## 2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND AND POTENTIAL

### 2.1 Archaeological and historical background

- 2.1.1 There has been no archaeological desk-based assessment produced for this project. Correspondence with Joanne Smith of LAAS has suggested that the site is in the location of a short row of buildings, fronting Chapel Street, that may represent back-to-back houses with potential cellars, shown on the 1848 1<sup>st</sup> Edition Ordnance Survey Map (Smith *pers comm*). Back-to-back houses were a form of terraced housing, built from the eighteenth century through to the early twentieth century, in order to meet the increased demand for industrial workers housing in the midlands and the north of England (*ibid*).
- 2.1.2 There was a rapid increase in population of the town throughout the eighteenth and nineteenth century, with this population being accommodated in back-to-backs, which were laid out in planned rows (*ibid*). Many had cellars which were probably used for loomshops, though by the mid-nineteenth century a high proportion would have been let as separate domestic accommodation (*ibid*).
- 2.1.3 The huge variety and quantity of nineteenth century housing which could be found in Blackburn up to the 1950s has been greatly reduced by later twentieth century clearance, as such, there is a notable lack of surviving back-to-back houses in Blackburn (*ibid*). Any that do survive are considered to be important elements of the town's legacy of rapid growth in the early nineteenth century (*ibid*).

## **3 PROJECT AIMS**

### **3.1 General**

3.1.1 The general aims of the project can be summarised as follows;

- to adhere to and fulfil the agreed programme of works associated with the archaeological potential of the site;
- to determine or confirm the general nature of any remains present;
- to determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence;
- to inform a decision as to whether further archaeological investigation will be required during the construction phase of works, i.e. watching brief;
- to establish the significance of any archaeological remains present;
- to compile a professional archival record of any archaeological remains within the site.

### **3.2 Specific aims and objectives**

3.2.1 The specific aims and objectives of the evaluation are;

- i. to determine or confirm the general nature of any remains present.
- ii. to determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence.

## 4 PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY

### 4.1 Scope of works

- 4.1.1 The works will involve the excavation of a single archaeological evaluation trench along the northern edge of the site (Fig 2). This trench will measure 40m long by 5m wide and will be targeted on back-to-back housing identified on the 1848 Ordnance Survey Town Plan (Fig 3). The trenches will be excavated by a mechanical excavator fitted with a toothless ditching bucket, supervised by a suitably experienced archaeologist. The spoil will be checked for finds and if significant material is detected this will be retained. Once the trench is excavated to natural geology, the first significant archaeological horizon or the safe working depth of 1.2m below ground level, they will be manually cleaned and recorded. If archaeological features are present, they will be excavated, cleaned and recorded. If potentially significant archaeological remains are identified, the archaeologist will inform the client and will then consult with LAAS.
- 4.1.2 Once the trench has been fully recorded it will then be backfilled with the material arising from the trench. There will be no further compaction other than that provided by the mechanical excavator on-site.

### 4.2 Programme

- 4.2.1 It is anticipated that the fieldwork will take 3 days to complete, by a team consisting of a Project Supervisor, Andy McGuire, directing a Project Archaeologist, under the management of Paul Dunn, Project Manager.
- 4.2.2 All fieldwork undertaken by OA North is overseen by the Operations Manager, Alan Lupton MCIFA.

### 4.3 Site specific methodology

- 4.3.1 A summary of OA's general approach to excavation and recording can be found in *Appendix A*. Standard methodologies for Geomatics and Survey, Environmental evidence, Artefactual evidence and Burials can also be found below (*Appendices B, C, D and E* respectively).
- 4.3.2 Site specific methodologies will be as follows:
- i. the evaluation trench will be set-out using a dGPS, accurate to 0.02m. The trench will then be scanned using a CAT and Genny, operated by a suitably qualified and experienced person, the position of any potential services marked. Once the location is identified as clear the mechanical excavation of the trench can begin;
  - ii. the trench will be excavated by mechanical excavator, fitted with a toothless ditching bucket, under the direct supervision of the Project Officer, in even spits to natural geology or the first archaeological horizon, whichever comes first.
  - iii. the overburden will be banded to the side of the trench. The trenches will not exceed the safe working depth of 1.2m below ground level, if natural geology is not identified with that 1.2m, localised sondages will be excavated to test the natural where appropriate.

- iv. once the mechanical excavation of the trench is complete, it will be cleaned by hand, where necessary, and any archaeological features will be hand excavated. The hand excavation and recording methodology can be found in *Appendix A*.
- v. if any features of significance are identified during the evaluation, the client will be informed, in the first instance, and then LAAS will be consulted. A decision whether to continue the trench or stop at that level and record will be made;
- vi. with the trench fully recorded, it will be backfilled by the mechanical excavator. The overburden will be compacted by the mechanical excavator only and not by any other type of plant (*Appendix A*);
- vii. the ultimate release of the planning conditions will be dependent upon the successful completion of these archaeological aims, but also the production of a complete archaeological report detailing the results of the evaluation and an interpretation of their significance. If significant archaeological features are identified during the evaluation, there may be a requirement that further archaeological works, in the form of a watching brief, be undertaken during construction works;
- viii. at all times, the archaeologist will work under the Health and Safety directions of the principal contractor on-site.

## **5 PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY**

### **5.1 Programme**

- 5.1.1 An interim report will be made available to the client within 7 days of the completion of the fieldwork. The final report will then be completed within 6 weeks of the completion of the fieldwork.
- 5.1.2 A copy of the report in Adobe Acrobat (.pdf) format will be provided to the client. The report will also be provided to LAAS for comment prior to final issue. Paper copies can also be provided on request.

### **5.2 Content**

- 5.2.1 The content of this report will be as defined in *Appendix F*.

### **5.3 Specialist input**

- 5.3.1 OA has a large pool of internal specialists, as well as a network of external specialists with whom OA have well established working relationships. A general list of these specialists is presented in *Appendix G*; in the event that additional input should be required, an updated list of specialists can be supplied.

### **5.4 Archive**

- 5.4.1 The site archive will be deposited with Lancashire Historic Environment Record Office following completion of the project. An OASIS summary will be produced once the archive is ready for deposition, with a digital copy of the final report being uploaded.
- 5.4.2 A summary of OA's general approach to documentary archiving can be found in *Appendix H*.

## **6 HEALTH AND SAFETY**

### **6.1 Roles and responsibilities**

- 6.1.1 The Project Manager, Paul Dunn, will have responsibility for ensuring that safe systems of work are adhered to on site. Elements of this responsibility will be delegated to the Project Officer, Andy McGuire, who implements these on a day to day basis. Paul Dunn and Andy McGuire are supported by OA North's Health and Safety Advisor, Fraser Brown.
- 6.1.2 The Director with responsibility for Health and Safety at OA is Dan Poore Tech IOSH (Chief Business Officer).

### **6.2 Method statement and risk assessment**

- 6.2.1 A summary of OA's general approach to health and safety can be found in *Appendix I*. A risk assessment has also been undertaken and approved and will be kept on site, along with OA's standard Health and Safety file, which will contain all relevant health and safety documentation.
- 6.2.2 The Health and Safety file will be available to view at any time.

### **6.3 Monitoring of works**

- 6.3.1 Archaeological investigations will be monitored where appropriate by LAAS. All such site visits will be carried out under the auspices of the main contractors Health and Safety Plan and visitors will have a current CSCS card, wear appropriate PPE and be accompanied at all times.

## 7 BIBLIOGRAPHY

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Cranfield Soil and Agrifood Institute, 2018, Nation Soil Resources Institute, Soilscales of Britain Map, [Online], available at: <http://www.landis.org.uk/soilscales/> , Cranfield University (accessed March 2019)

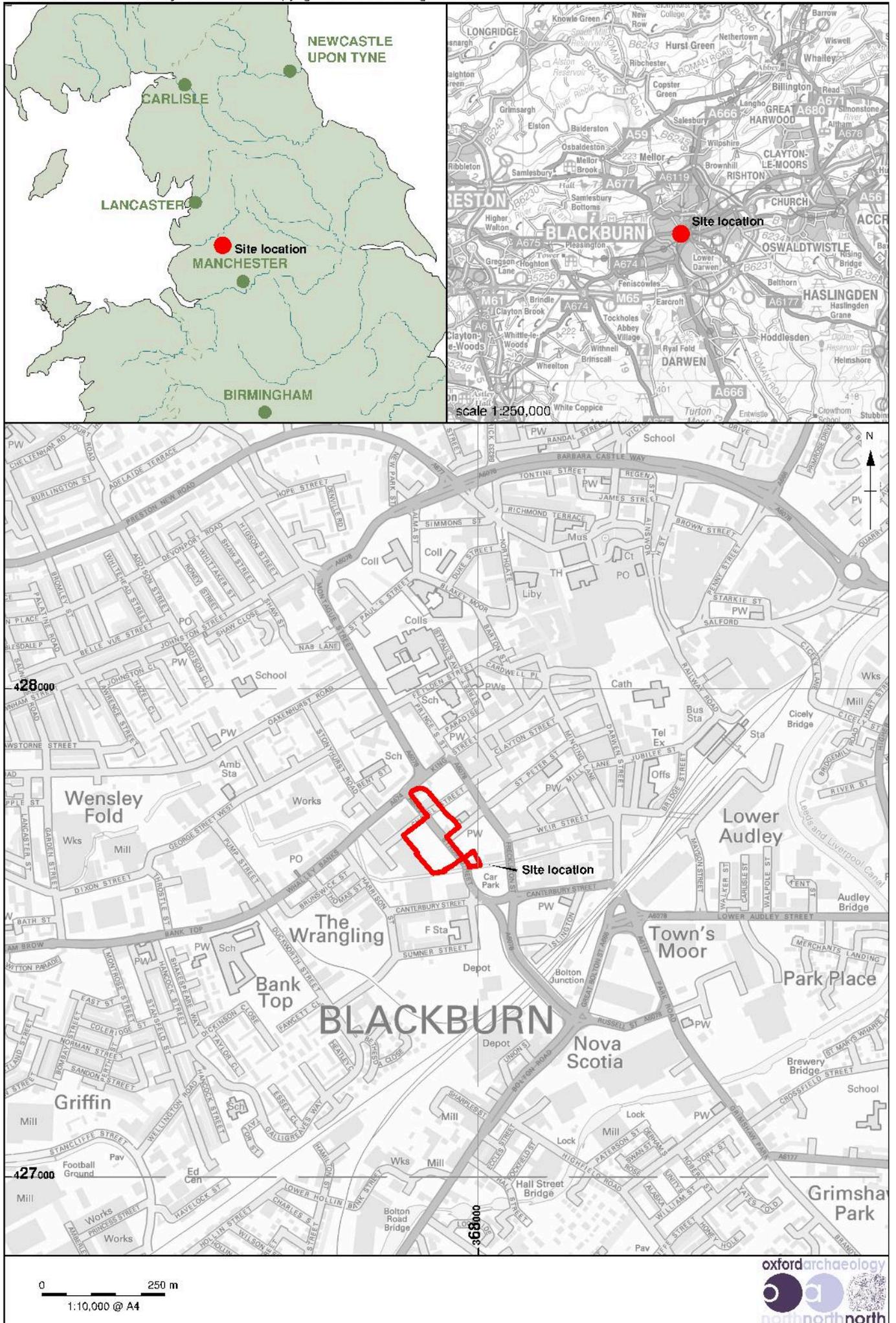
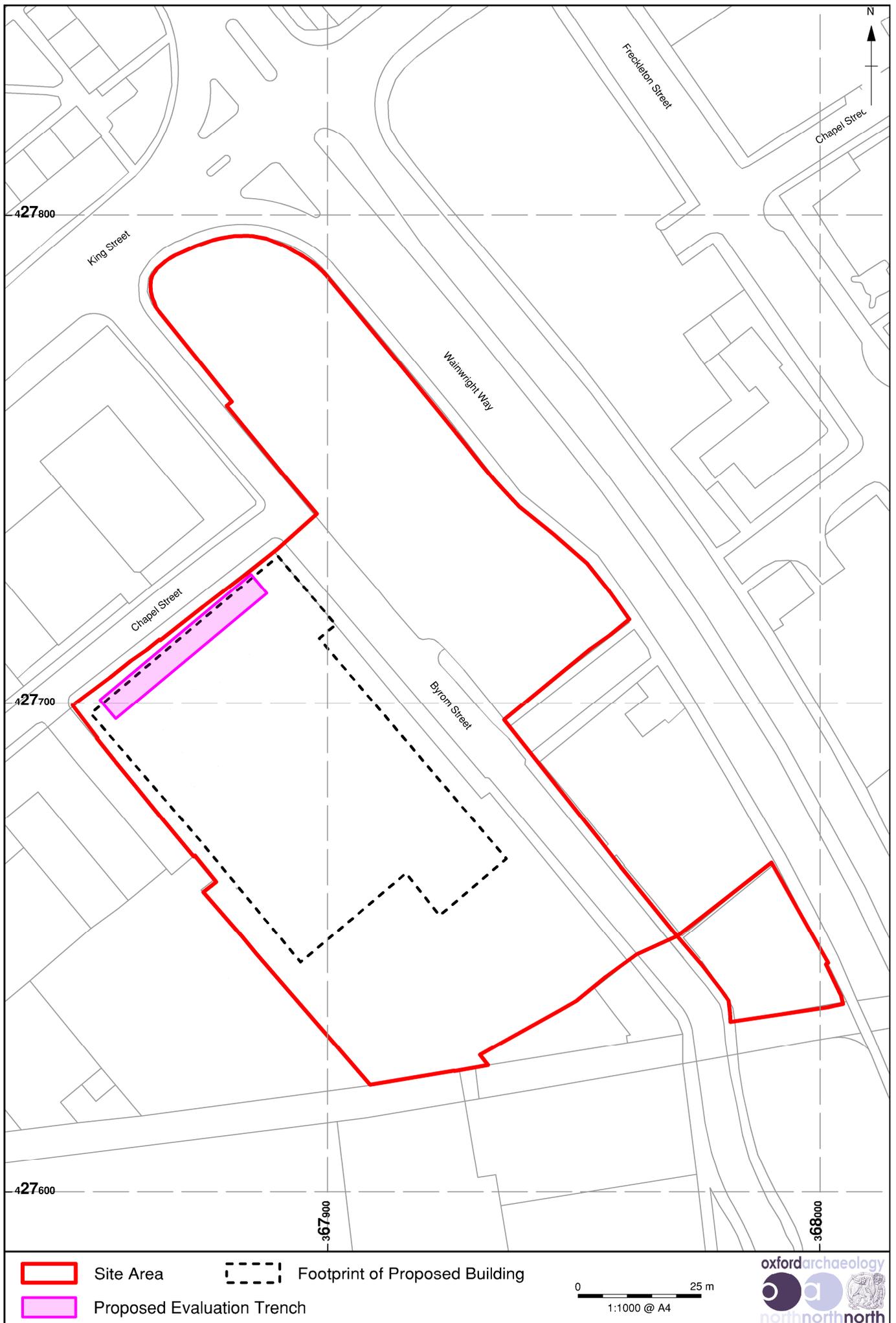
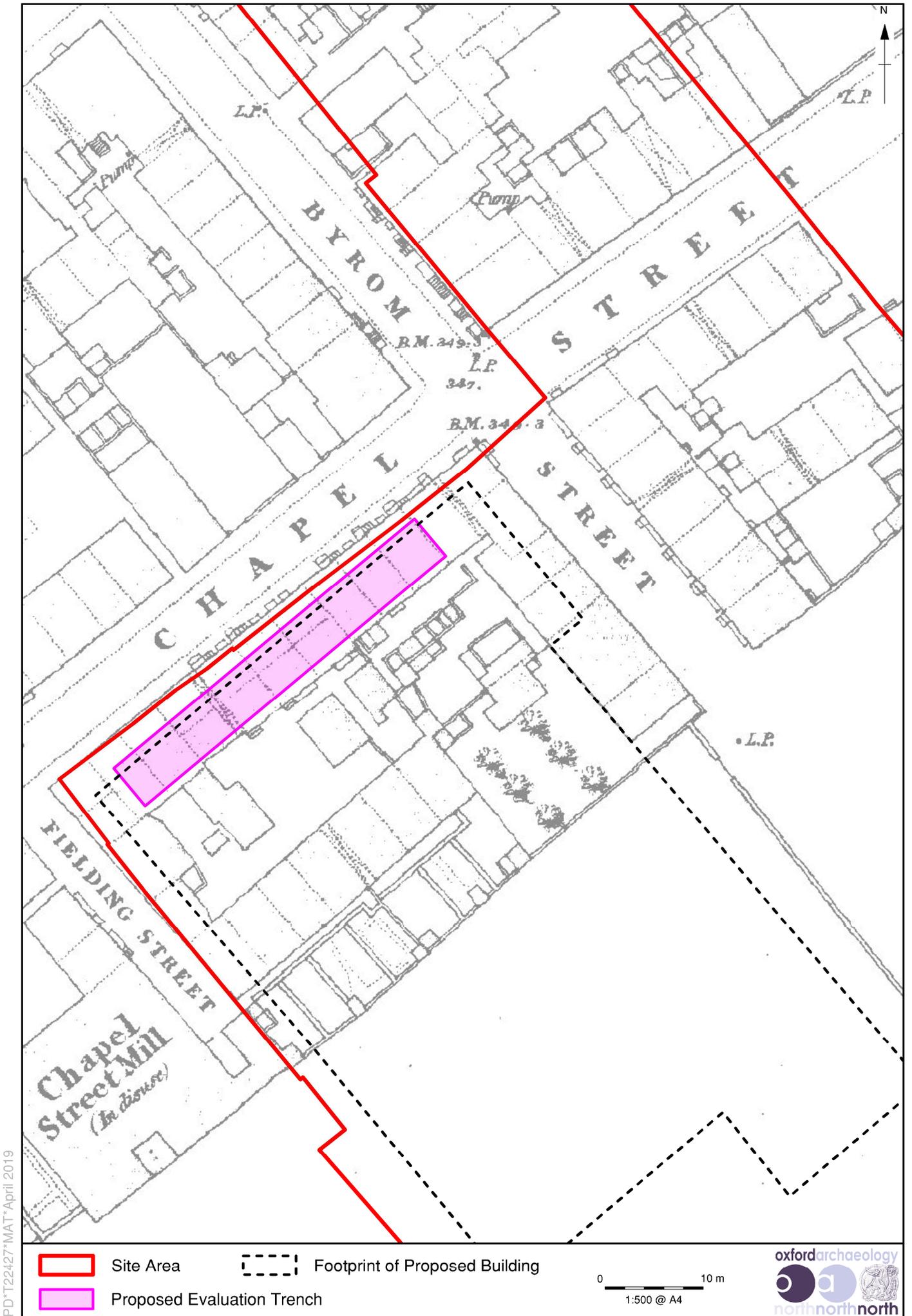


Figure 1: Site location



PD\*T22427\*MAT\*April 2019

Figure 2: Proposed evaluation trench



PD\*T22427\*MAT\*April 2019

Figure 3: Proposed evaluation trench superimposed on the Ordnance Survey town plan of Blackburn, 1848

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## OA STANDARD FIELDWORK METHODOLOGY APPENDICES

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The following methods and terms will apply, where appropriate, to all OA fieldwork unless varied by the accompanying detailed Written Scheme of Investigation.

Copies of all OA internal standards and guidelines referred to below are available on request.

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### APPENDIX A      GENERAL EXCAVATION AND RECORDING METHODOLOGY

#### A.1 Standard methodology – summary

##### *Mechanical excavation*

- A.1.1 An appropriate mechanical excavator will be used for machine excavation. This will normally be a JCB or 360° tracked excavator with a 1.5 m to 2 m wide toothless ditching bucket. For work with restricted access or working room a mini excavator may be used.
- A.1.2 All mechanical excavation will be undertaken under direct archaeological supervision.
- A.1.3 All undifferentiated topsoil or overburden of recent origin will be removed down to the first significant archaeological horizon, in successive, level spits.
- A.1.4 Following mechanical excavation, all areas that require examination or recording will be cleaned using appropriate hand tools.
- A.1.5 Spoil heaps will be monitored in order to recover artefacts to assist in the analysis of the spatial distribution of artefacts. Modern artefacts will be noted but not retained.
- A.1.6 After recording, evaluation trenches and test pits will usually be backfilled with excavated material in reverse order of excavation, and compacted as far as is practicable with the mechanical excavator. Area excavations will not normally be backfilled.

##### *Hand excavation*

- A.1.7 All investigation of archaeological levels will usually be by hand, with cleaning, examination and recording both in plan and section.
- A.1.8 Within significant archaeological levels the minimum number and proportion of features required to meet the aims of the excavation will be hand excavated. Pits and postholes will usually be subject to a 50% sample by volume. Linear features will be sectioned as appropriate. More complex features such as those associated with funerary activity will usually be subject to 100% hand excavation.
- A.1.9 In the case of evaluations, it is not necessarily the intention that all trial trenches will be fully excavated to natural stratigraphy, but the depth of archaeological deposits across the site will be assessed. The stratigraphy of a representative sample of the evaluation trenches will be recorded even where no archaeological deposits have been identified. Any excavation, both by machine and by hand, will be undertaken with a view to avoiding damage to any archaeological features or deposits, which appear to be worthy of preservation in situ.

## **Recording**

- A.1.10 Written descriptions will be recorded on proforma sheets comprising factual data and interpretative elements.
- A.1.11 Where stratified deposits are encountered a Harris matrix will be compiled during the course of the excavation.
- A.1.12 Plans will normally be drawn at 1:100, but on urban or deeply stratified sites a scale of 1:50 or 1:20 will be used. Detailed plans will be at an appropriate scale. Burials will be drawn at scale 1:10 or recorded using geo-referenced digital photography.
- A.1.13 The site grid will be accurately tied into the National Grid and located on the 1:2500 or 1:1250 map of the area.
- A.1.14 A register of plans will be kept.
- A.1.15 Long sections of showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20.
- A.1.16 A register of sections will be kept.
- A.1.17 Generally, all sections will be tied in to Ordnance Datum.
- A.1.18 A full photographic record, illustrating in both detail and general context the principal features and finds discovered will be maintained. The photographic record will also include working shots to illustrate more generally the nature of the archaeological work.
- A.1.19 Photographs will be recorded on OA Photographic Record Sheets.

## **A.2 Relevant industry standards and guidelines**

- A.2.1 The Chartered Institute for Archaeologists Standard and Guidance notes relevant to fieldwork are:
- Standard and Guidance for Archaeological Field Evaluation
  - Standard and Guidance for Archaeological Excavation
  - Standard and Guidance for an Archaeological Watching Brief.
- A.2.2 These will be adhered to at all times.

## **A.3 Relevant OA manual and other supporting documentation**

- A.3.1 All fieldwork will be undertaken in accordance with the requirements of the OA Field Manual (ed. D Wilkinson 1992), and the revised OA fieldwork manual (publication forthcoming).
- A.3.2 Further guidance is provided to all excavators in the form of the OA 'Fieldwork Crib Sheets - a companion guide to the Fieldwork Manual'. These have been issued ahead of formal publication of the revised Fieldwork Manual.

## APPENDIX B GEOMATICS AND SURVEY

### B.1 Standard methodology - summary

- B.1.1 The aim of OA methodology is to provide comprehensive survey cover of all investigation areas. Additionally, it is designed to provide coverage for any areas, beyond the original scope of the project, which arise as a result of further work. It provides digital plans of all required elements of the project and locates them within an overall grid.
- B.1.2 It also maintains all necessary survey data and ensures that the relevant information is copied into the primary record, in order to ensure the integrity of the project archive. Furthermore, it ensures that all core data is securely stored and backed up. It establishes accurate project reference systems utilising a series of control stations and permanent base lines.
- B.1.3 The survey will be conducted using a combination of Total Station Theodolite (TST) survey utilising Reflectorless Electronic Distance Measurement (REDM) where appropriate, hand-measured elements and GPS (Global Positioning System), or photogrammetry.
- B.1.4 Before the main work commences, a network of control stations will be laid out encompassing the area. Control stations will be tied in to known points or existing features using rigorous metric observation. The control network will be set in using a TST to complete a traverse or using techniques as appropriate to ensure sufficient accuracy. A GPS, or other appropriate method, will be used to orientate the control network to National Grid or other recognised coordinate system.
- B.1.5 All control stations will be checked by closed traverse and/or GPS, as appropriate. The accuracy of these control stations will be accessed on a regular basis and re-established accordingly. All stations will be recorded on Survey Control Station sheets.
- B.1.6 Each control station will be marked with a PGM (Permanent Ground Marker). Witness diagrams will include the full 3-D co-ordinates generated, a sketch diagram and measurements to at least three fixed details, written description of the mark and a photograph of the control point in its environs.
- B.1.7 Prior to entry into the field all equipment will be checked, and all pre-survey information will be logged onto the field computer and uploaded onto survey equipment as appropriate. The software in the field computer will be verified and all cabling between the GPS and/or TST and computer will be checked. Prior to conducting the survey, the site will be reconnoitred for locations for a viable control network and check the line of sight and any possible hindrance to survey. Daily record sheets will be kept to record daily tasks and conditions.
- B.1.8 All spatial data will be periodically downloaded onto a field computer, and backed up onto CD, or DVD. It will be cleaned, validated and inspected.
- B.1.9 All survey data will be documented on daily survey record sheets. Information entered on these sheets includes key set up information (Instrument height etc.) as well as daily variables and errors/comments. All survey data will be digitally recorded in a raw

format and translated during the download process this shall allow for any errors to be cross referenced with the daily survey record and corrected accordingly.

- B.1.10** A weekly summary of survey work will be produced to access development and highlight problems. This information also will be recorded on the weekly survey journal. Technical support for the survey equipment and download software shall be available at all times. In those instances, where sites are remotely operated, all digital data will be backed up regularly and a copy returned to Oxford on a weekly basis.
- B.1.11** A site plan will initially be created by a rapid survey of relevant archaeological features by mapping their extent using a combination of TST and GPS. This will form the basis for deciding excavation strategy and will be updated as the excavation clarifies the extent of, and relationships between, archaeological features.
- B.1.12** Excavated archaeological interventions and areas of complex stratigraphy will be hand drawn. At least two Drawing Points (DPs) will be set in as a baseline and measurements taken off this by tape and offset. The hand drawn plans will be referenced to the digitally captured pre-site plan by measuring in the DPs with a TST or GPS. These hand drawn elements will then be scanned in, geo-referenced using the DPs as reference points and digitised following OA's digitising protocols. For further details on hand planning procedure please refer to the fieldwork guidelines.
- B.1.13** Where appropriate photogrammetry or rectified photography may be used to record standing structures or burials. This will be carried out in line with Standard OA procedures for photogrammetry or rectified photography.
- B.1.14** Survey data recorded in the field will be downloaded using appropriate downloading software, and saved as an AutoCAD Map DWG file, or an ESRI Shapefile. These files will be regularly updated and backed up with originals being stored on an OA server in Oxford.
- B.1.15** All drawings will be composed of closed polygons, polylines or points in accordance with the requirements of GIS construction and OA Geomatics protocols. Once created, additional GIS/CAD work will normally be carried out at the local OA central office or at on-site remote locations when appropriate. Support for all GIS/CAD work will be available from OA's Oxford Office during normal office hours. The aim of the GIS/CAD work is to produce workable draft plans, which can be produced as stand-alone products, or can be readily converted to GIS format. Any hand-drawn plans will be scanned and digitised on site in the first instance. Subsequent plans will be added to the main drawing as it develops.
- B.1.16** All plan scans will be numbered according to their plan site number. Digital plans will be given a standard new plan number taken out from the site plan index.
- B.1.17** All digital data will be backed up incrementally on CD or DVD. On each Friday the entire data directory will be backed up and returned to Oxford where it will be copied onto the OA projects server. Each CAD drawing will contain an information layout which will include all the relevant details appertaining to that drawing. Information (metadata) on all other digital files will be created and stored as appropriate. At the end of the survey all raw measurements will be made available as hard copy for archiving purposes.

## **B.2 Relevant industry standards and guidelines**

- B.2.1 Historic England (2007) Understanding the Archaeology of Landscapes A Guide to Good Recording Practice.
- B.2.2 Historic England (2015), Metric Survey Specifications for Cultural Heritage.
- B.2.3 Historic England (2016), Understanding Historic Buildings A Guide to Good Recording Practice.
- B.2.4 Historic England (2017), Photogrammetric Applications for Cultural Heritage. Guidance for Good Practice.

## **B.3 Relevant OA manual and other supporting documentation**

- B.3.1 OA South Metric Survey, Data Capture and Download Procedures
- B.3.2 OA South Digitising Protocols
- B.3.3 OA South GIS Protocols
- B.3.4 These will be superseded by the OA South Geomatics Manual (in progress).

## APPENDIX C ENVIRONMENTAL EVIDENCE

### C.1 Standard methodology – summary

- C.1.1 Different environmental and geoarchaeological sampling strategies may be employed according to established research targets and the perceived importance of the strata under investigation. Where possible an environmental specialist(s) will visit the site to advise on sampling strategies. Sampling methods will follow guidelines produced by Historic England and Oxford Archaeology. A register of samples will be kept. Specialists will be consulted where non-standard sampling is required (e.g. TL, OSL or archaeomagnetic dating) and if appropriate will be invited to visit the site and take the samples.
- C.1.2 Geoarchaeological sampling methods are site specific, and methodologies will be designed in consultation with the geoarchaeological manager on a site by site basis.
- C.1.3 Bulk soil samples, where possible of 40 litres or 100% of a deposit if less is available, will be taken from potentially datable features and layers for flotation for charred plant remains and for the recovery of small bones and artefacts. Larger soil samples (up to 100L) may be taken for the complete recovery of animal bones, marine shell and small artefacts from appropriate contexts. Smaller bulk samples (general biological samples) of 10-20 litres will be taken from any waterlogged deposits present for the recovery of macroscopic plant remains and insects. Series of incremental 2L samples may be taken through buried soils and deep feature fills for the recovery of snails and/or waterlogged plant remains, depending on the nature of the stratigraphy and of the soils and sediments. Columns will be taken from buried soils, peats and waterlogged feature fills for pollen and/or phytoliths, diatoms, ostracods and foraminifera if appropriate. Soil samples will be taken for soil investigations (particle size, organic matter, bulk chemistry, soil micromorphology etc.) and possibly for metallurgical analysis in consultation with the appropriate specialists.
- C.1.4 Bulk samples from dry deposits will be processed by standard water flotation using a modified Siraf-style machine and meshes of 0.25mm (flot) and 0.5 or 1mm depending on sediment type and like modes of preservation (residue). Heavy residues will be wet sieved, air dried and sorted. Samples taken exclusively for the recovery of bones, marine shell or artefacts will be wet sieved to 2mm. Waterlogged samples (1L sub-sample) and snail samples (2L) will be processed by hand flotation with flots and residues collected to 0.25mm (waterlogged plants) and 0.5mm (snails) respectively; these flots and residues will be sorted by the specialist. Samples specifically taken for insects, pollen, other microflora and microfauna, metallurgy and soil analysis will be submitted as whole earth to the appropriate specialists or processed following their instructions.

### C.2 Relevant industry standards and guidelines

- C.2.1 Historic England 2010. Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood.
- C.2.2 Historic England 2011. Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation, (2nd ed)

- C.2.3 Historic England 2004. Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates.
  - C.2.4 Historic England 2006. Archaeomagnetic Dating. Guidelines for Producing and Interpreting Archaeomagnetic Dates.
  - C.2.5 Historic England 2008. Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology.
  - C.2.6 Historic England 2008. Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains.
  - C.2.7 Historic England 2014. Animal Bones and Archaeology. Guidelines for Best Practice.
  - C.2.8 Historic England, 2015. Archaeometallurgy. Guidelines for Best Practice.
  - C.2.9 Historic England 2015 Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record.
- C.3 Relevant OA manual and other supporting documentation**
- C.3.1 Oxford Archaeology 2005. Environmental Sampling Guidelines, 2nd ed.

## APPENDIX D ARTEFACTUAL EVIDENCE

### D.1 Standard methodology - summary

- D.1.1 Before a site begins arrangements concerning the finds will be discussed with the Head of Finds. Information will be provided by the project manager about the nature of the site, the expected size and make-up of the finds assemblage and any site specific finds retrieval strategies. On-site requirements will be discussed and a conservator appointed who can be called on to make site visits if required. Special requirements regarding particular categories of material will be raised at this early stage for instance the likelihood of recovering assemblages of waterlogged material, large timbers, quantities of structural stone or ceramic building material. Specialists may be required to visit sites to discuss retrieval strategies.
- D.1.2 The project manager will supply the Head of Finds with contact details of the landowner of the site so that consent to deposit any finds resulting from the investigation can be sought.
- D.1.3 The on-site retrieval, lifting and short term packaging of bulk and small finds will follow the detailed guidelines set out in the OA Finds Manual (sections 2 and 3), First Aid for Finds and the UKIC conservation guidelines No.2.
- D.1.4 All finds recovered from site will be transported to an OA regional office for processing; local sites will return finds at the end of each day, away based sites at the end of each week. Special arrangements can be discussed for certain sites with the department manager before the start of a project. Larger long running sites may in some instances set up on-site processing units to deal with the material from a particular site.
- D.1.5 All finds qualifying as Treasure will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act (1996), and the Treasure (Designation) Order 2002. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.
- D.1.6 Each box of finds will be accompanied by a finds context checklist itemising the finds within each box. The number of bags of finds from each context and individual small find from each context will be recorded. A member of the processing team will check the list when it arrives in the department. There are separate forms for finds recovered from fieldwalking.
- D.1.7 The processing programme is reviewed on a weekly basis and priorities are worked out after discussions with the Head of Fieldwork and the Head of Post-excavation. Project managers will keep the Head of Finds informed of any pressing deadlines that they are aware of. All finds from evaluations are dealt with as a matter of priority.
- D.1.8 All bulk finds are washed (where appropriate), marked, bagged and boxed by the processing team according to the guidelines set out in section 4 and 5 of the OA Finds Manual, First-aid for finds and the UKIC guidelines No.2. They must also take into account the requirements of the receiving museum. Primary data recording count and weight of fragments by material from each context is recorded on the site database.

- D.1.9 Unstable and sensitive objects are recorded onto the database and then packaged and stored in controlled environments according to their individual requirements. The advice of a conservator will be sought for sensitive objects in need of urgent conservation. All metalwork will be x-rayed prior to assessment (and to meet the requirements of most receiving museums).
- D.1.10 Finds recovered from the environmental sample processing will be incorporated into the main assemblage and added to the database.
- D.1.11 On completion of the processing and data entry a finds file for each archaeological investigation will be produced, a summary of which is available for the project manager. The assemblage is allocated an OA number for storage purposes. Bulk finds are stored on a roller racking system, metals in a secure controlled storage and organic finds are refrigerated where possible.
- D.1.12 The movement of finds in and out of the department storage areas is strictly monitored and recorded. Carbon copy transit forms exist to record this information. Finds will not be removed from storage without the prior knowledge of the Head of Finds.
- D.1.13 Finds information summarised in the finds compendium is used to assess the finds requirements for the post excavation stages of the project. The Finds department holds a list of all specialists used by OA (see below) both internal and external.
- D.1.14 On completion of the post excavation stage of the project the department prepares the finds assemblage for deposition with the receiving museum. Discussions will be held with the museum, the excavator and the head of finds to finalise any selection, retention or discard policy. Most museums issue strict guidelines for the preparation of archives for deposition with their individual labelling, packaging and recording requirements.

## **D.2 Relevant industry standards and guidelines**

- D.2.1 UKIC, 1983, Packaging and Storage of Freshly-Excavated Artefacts from Archaeological Sites. Conservation Guidelines No.2. Archaeology Section, United Kingdom Institute for Conservation.
- D.2.2 UKIC, 1988, Excavated Artefacts and Conservation: UK sites Revised Edition. Conservation Guidelines No.1. Archaeology Section, United Kingdom Institute for Conservation.
- D.2.3 Society of Museum Archaeologists, 1993, Selection, retention and dispersal of Archaeological Collections. Download available via <http://www.socmusarch.org.uk/publica.htm>
- D.2.4 Watkinson, D E & Neal, V, 1998, First Aid for Finds (3rd edition). RESCUE & UKIC

## **D.3 Relevant OA manual and other supporting documentation**

- D.3.1 Allen, L, and Cropper, C (internal publication only) Oxford Archaeology Finds Manual.

## APPENDIX E HUMAN REMAINS

### E.1 Standard methodology - summary

- E.1.1 Human remains will not be excavated without a relevant licence/faculty and, where applicable (for example, a post medieval cemetery), a risk assessment from the local environmental officer.
- E.1.2 All human remains will be treated with due care and regard to the sensitivities involved, and will be screened from the public throughout the course of the works.
- E.1.3 Excavation will be undertaken in accordance with ClfA (Roberts and McKinley 1993), Historic England (2018) and the Advisory Panel on the Archaeology of Burials in England (APABE, 2015, 2017). For crypts and post-medieval burials, the recommendations set out by the ClfA (Cox 2001) and by the Association of Diocesan and Cathedral Archaeologists and APABE (2010) are also relevant.
- E.1.4 In accordance with recommendations set out in the Historic England and Church of England (2005) and updated by the Advisory Panel on the Archaeology of Burials in England (2017), skeletons will not be excavated beyond the limits of the trench, unless they are deemed osteologically or archaeologically important.
- E.1.5 Where any soft tissue survives and/or materials (for example, inner coffins, mattresses and other paddings) soaked in body liquor, no excavation or handling of the remains will take place until an appropriate risk assessment has been undertaken. Relevant protocols (i.e. Cox 2001) for their excavation, recording and removal will be adhered to.
- E.1.6 OA does not excavate or remove modern burials (those less than 100 years old) and does not remove or open sealed lead coffins. Appropriate PPE (e.g. chemical suit, latex gloves) will be worn by all staff when working with lead coffins.
- E.1.7 Graves and their contents will be hand excavated in plan. Each component (for example, skeleton, grave cut, coffin (or remains of), grave fill) will be assigned a unique context number from a running sequence. A group number will also be assigned to all of these, and small finds numbers to features such as coffin nails, hobnails and other grave goods (as appropriate).
- E.1.8 Soil samples will be normally taken during the excavation of inhumations, usually from the region of the skull, chest, right hand, left hand, abdomen and pelvis, right foot and left foot. Infants (circa. less than 5 years) will normally be recovered as bulk samples. Soil samples will also be taken from graves that appear to contain no human bone.
- E.1.9 Burials (including the skeleton, cremation, coffin fittings, coffin, urn, grave goods / other) will be recorded by photographic and written record using specialised pro forma context sheets, although these records may only include schematic representations of the location and position of the skeletons, depending on the nature and circumstances of the burial.
- E.1.10 Where necessary, hand drawn plans (usually at 1:10, sometimes 1:5) will be made, especially of contexts where required details cannot be adequately seen using photography (for example, urned cremations; undisturbed hob nails).

- E.1.11 Levels will be taken. For inhumations this will be on the skull, pelvis and feet as a minimum.
- E.1.12 Human remains that are exhumed will be bagged and labelled according to skeletal region and carefully packed into suitable containers (for example, acid free cardboard boxes) and transported to a suitable storage location. Any associated coffins and coffin fittings will be contained with the human remains wherever possible.
- E.1.13 Unurned cremations will not usually be half sectioned, but excavated in spits and/or quadrants (i.e. large deposits or spreads), or recovered as a bulk sample.
- E.1.14 Wherever possible, urned cremations will be carefully bandaged, recovered whole and will be excavated in spits in the laboratory, as per the recommendations of McKinley (2004, 2017).
- E.1.15 Unless deemed osteologically or archaeologically important disarticulated bone / charnel will be collected and reserved for re-burial if immediate re-internment as close to its original position is not practicable. In some instances, a rapid scan of this material may be undertaken by a qualified osteologist, if deemed relevant.
- E.1.16 If undisturbed, pyre sites will normally be excavated in quadrants, at the very least in 0.5 m blocks of 0.5 m spits.
- E.1.17 Pyre debris dumps will be half sectioned or quadrant and will be subject to 100% sampling.
- E.1.18 Wooden and lead coffins and any associated fittings, including fixing nails will be recorded on a pro forma coffin recording sheet. All surviving coffin fittings will be recorded by reference to Reeve and Adams (1993) and the unpublished master catalogue that is being compiled by OA. Where individual types cannot be paralleled, they will be drawn and/ or photographed and assigned a style number. Biographical details obtained from legible departum plate inscriptions will be recorded and further documentary research will be made.
- E.1.19 Funerary structures, such as brick shaft graves and/or vaults will be recorded by photogrammetry or hand-drawn at a scale of 1:10 or 1:20, as appropriate. Location, dimensions and method of construction will be noted, and the structure added to the overall trench plan.
- E.1.20 Memorials, including headstones, revealed within the areas of development will be recorded irrespective of whether they are believed to be in situ.
- E.1.21 Where required, memorials will be accorded an individual context number and will also be included as part of the grave group, if the association with a burial is clear.
- E.1.22 Memorials will be recorded on pro-forma context sheets, based on and following the guidelines set out by Mytum (2002), and will include details of:
- Shape
  - Dimensions
  - Type of stone used

- Condition, completeness and fragmentation of stones, no longer in original positions
- Iconography (an illustration may best describe these features)
- Inscription (verbatim record of inscription; font of the lettering)
- Stylistic type

## **E.2 Relevant industry standards and guidelines**

- E.2.1 Advisory Panel on the Archaeology of Burials in England, 2013, Science and the Dead. A guideline for the destructive sampling of archaeological human remains for scientific analysis. English Heritage Publishing.
- E.2.2 Advisory Panel on the Archaeology of Burials in England, 2017 Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England
- E.2.3 Advisory Panel on the Archaeology of Burials in England, 2015 Large Burial Grounds. Guidance on sampling in archaeological fieldwork projects
- E.2.4 Association of Diocesan and Cathedral Archaeologists and APABE. 2010 Archaeology and Burial Vaults. A guidance note for churches. Guidance Note 2
- E.2.5 British Association of Biological Anthropology and Osteoarchaeology. 2011 Code of Practice
- E.2.6 British Association of Biological Anthropology and Osteoarchaeology. 2011 Code of Ethics
- E.2.7 Cox, M, 2001 Crypt archaeology. An approach. ClfA Paper No. 3
- E.2.8 English Heritage, 2002 Human Bones from Archaeological Sites. Guidelines for producing assessment documents and analytical reports
- E.2.9 Historic England, 2018 The Role of the Human Osteologist in an Archaeological Fieldwork Project. Swindon, Historic England
- E.2.10 McKinley, J, and Roberts, C, 1993 Excavation and post-excavation treatment of cremated and inhumed human remains, ClfA Technical Paper No. 13
- E.2.11 McKinley, J, 2004 Compiling a skeletal inventory: cremated human bone. In Brickley, M, and McKinley, J (eds) Guidelines to the Standards for Recording Human Remains, ClfA Technical Paper No. 7. 9-13
- E.2.12 McKinley, J, 2017 Compiling a skeletal inventory: cremated human bone. In Mitchell P, and Brickley, M (eds) Updated Guidelines to the Standards for Recording Human Remains, ClfA 14-19
- E.2.13 Mitchell P, and Brickley, M (eds) Updated Guidelines to the Standards for Recording Human Remains, CIFA 2017
- E.2.14 Mytum, H, 2000 Recording and Analysing Graveyards. CBA Handbook No. 15.
- E.2.15 Reeve, J, and Adams, M, 1993 The Spitalfields Project. Volume I – The Archaeology Across the Styx. CBA Research Report No. 85

#### E.2.16 The Human Tissue Act 2004

### **E.3 Relevant OA manual and other supporting documentation**

- E.3.1 Loe, L, 2008 The Treatment of Human Remains in the Care of Oxford Archaeology. Oxford Archaeology internal policy document
- E.3.2 Excavating and recording of buried human remains. Oxford Archaeology internal guidelines document

## APPENDIX F REPORTING

### F.1 Standard methodology - summary

F.1.1 For Watching Briefs and Evaluations, the style and format of the report will be determined by OA, but will include as a minimum the following:

- A location plan of trenches and/or other fieldwork in relation to the proposed development.
- Plans and sections of features located at an appropriate scale.
- A section drawing showing depth of deposits including present ground level with Ordnance Datum, vertical and horizontal scale.
- A summary statement of the results.
- A table summarising the features, classes and numbers of artefacts contained within, spot dating of significant finds and an interpretation.
- A reconsideration of the methodology used, and a confidence rating for the results.
- An interpretation of the archaeological findings both within the site and within their wider landscape/townscape setting.

F.1.2 For Excavations, a Post-Excavation Assessment and Project Design will generally be prepared, as prescribed by Historic England Management of Research Projects in the Historic Environment (MoRPHE) 2006, Section 2.3. This will include a Project Description containing:

- A summary description and background of the project.
- A summary of the quantities and assessment of potential for analysis of the information recovered for each category of site, finds, dating and environmental data. Detailed assessment reports will be contained within appendices.
- An explicit statement of the scope of the project design and how the project relates to any other projects or work preceding, concurrent with or following on from it.
- A statement of the research aims of the fieldwork and an illustrated summary of results to date indicating to what extent the aims were fulfilled.
- A list of the project aims as revised in the light of the results of fieldwork and the current post-excavation assessment process.

F.1.3 A section on Resources and Programming will also be produced, containing:

- A list of the personnel involved indicating their qualifications for the tasks undertaken, along with an explanation of how the project team will communicate, both internally and externally.
- A list of the methods which will be used to achieve the revised research aims.

- A list of all the tasks involved in using the stated methods to achieve the aims and produce a report and research archive in the stated format, indicating the personnel and time in days involved in each task. Allowance should be made for general project-related tasks such as monitoring, management and project meetings, editorial and revision time.
- A cascade or Gantt chart indicating tasks in the sequence and relationships required to complete the project. Due allowance will be made for leave and public holidays. Time will also be allowed for the report to be read by a named academic referee as agreed with the County Archaeological Officer, and by the County Archaeological Officer.
- A report synopsis indicating publisher and report format, broken down into chapters, section headings and subheadings, with approximate word lengths and numbers and titles of illustrations per chapter. The structure of the report synopsis should explicitly reflect the research aims of the project.

F.1.4 The Project Design will be submitted to the County Archaeological Officer or equivalent for agreement.

F.1.5 Under certain circumstances (e.g. with very small mitigations), and as agreed with the County Archaeological Officer or equivalent, a formal Assessment and Project Design may not be required and either the project will continue straight to full analysis, or a simple Project Proposal (MoRPHE 2006 Section 2.1) will be produced prior to full analysis. This proposal may include:

- A summary of the background to the project
- Research aims and objectives
- Methods statement outlining how the aims and objectives will be achieved
- An outline of the stages, products and tasks
- Proposed project team
- Estimated overall timetable and budget if appropriate.

F.1.6 Once the post-excavation Project Design or Project Proposal has been accepted, the County Archaeological Officer or his appointed deputy will monitor the progress of the post-excavation project at agreed points. Any significant variation in the project design will be agreed with the County Archaeological Officer.

F.1.7 The results of the project will be published in an appropriate archaeological journal or monograph. The appropriate level of publication will be dependent on the significance of the fieldwork results and will be agreed with the County Archaeological Officer. An OASIS (Online Access to the Index of Archaeological Investigations) form will be completed for each project as per Historic England guidelines.

## F.2 Relevant industry standards and guidelines

F.2.1 Oxford Archaeology (OA) adheres to the national standards in post-excavation procedure as outlined in Historic England's Management of Research Projects in the Historic Environment (MoRPHE; EH 2006). Furthermore, all post-excavation projects

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take into account the appropriate regional research frameworks as well as national research agendas such as the Framework for Historic Environment Activities & Programmes in Historic England (SHAPE; EH 2008).

## APPENDIX G LIST OF SPECIALISTS REGULARLY USED BY OA

G.1.1 Below are two tables, one containing 'in-house' OA specialists, and the other containing a list of external specialists who are regularly used by OA.

### Internal archaeological specialists used by OA

Specialist	Specialism	Qualifications
Lisa Brown	Early Prehistoric pottery	BA, PGDip, MLitt, MCIfA
Paul Booth	Iron Age and Roman pottery	BA, FSA, MCIfA
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hons), MCIfA
Cynthia Poole	CBM and Fired Clay	BA (Hons), MSc
Edward Biddulph	Roman Pottery	BA (Hons), MA, MCIfA
Ian Scott	Metalwork and Glass	BA (Hons)
Leigh Allen	Metalwork and worked bone	BA (Hons), PGDip
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD, MCIfA
Julian Munby	Architectural Stone	BA, FSA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hons), MA, D.Phil, MCIfA, FSA Scot
Dr Mairead Rutherford	Pollen	BSc, MSc
Lee Broderick	Animal bone	BA (hons), MA, MSc, FZG, SAC Dip (ecology)
Julia Meen	Charred and waterlogged plant remains and charcoal	BSc (Hons), MA
Dr Denise Druce	Charred plant remains, charcoal and pollen	BA (Hons), PhD, MCIfA
Elizabeth Stafford	Geoarchaeology and land snails	BA (Hons), MSc
Carl Champness	Geoarchaeology	BA (Hons), MSc, ACIfA
Dr Ian Smith	Animal Bone	BSc, PhD
Nicola Scott	Archaeological archive deposition	BA (Hons Dunelm)
Mike Donnelly	Flint	BSc, MCIfA
Dr Louise Loe	Human Bone	D.Phil, BA, MCIfA
Helen Webb	Human Bone	MSc, BSc
Mark Gibson	Human Bone	MSc, BA
Dr Lauren McIntyre	Human Bone	D.Phil, MSc, BSc

### External archaeological specialists regularly used by OA

Specialist	Specialism	Qualifications
Lynne Keys	Slag	BA (Hons)
Quita Mould	Leather	BA, MA

<b>Specialist</b>	<b>Specialism</b>	<b>Qualifications</b>
Penelope Walton Rogers, The Anglo Saxon Laboratory	Identification of Medieval Textiles	FSA, Dip.Acc
Dana Goodburn-Brown	Conservation	BSc (Hons), BA, MSc
Steve Allen, York Archaeological Trust	Conservation	BA, MA, MAAIS
Dr Richard Macphail	Soils, especially Micromorphology	BA (Hons), MSc, PhD
Dana Challinor	Charcoal	MA, MSc
Dr Nigel Cameron	Diatoms	BSc, MSc, PhD
Dr David Smith	Insects	BA (Hons), MA, PhD
Professor Adrian Parker	Phytoliths and pollen	BSc (Hons), D.Phil
Dr David Starley	Metalworking Slag	BSc (Hons), PhD
Wendy Carruthers	Charred and waterlogged plant remains	BA (Hons)
Dr Sylvia Peglar	Pollen	PhD
Dr John Whittaker	Ostracods and Foraminifera	BA (Hons), PhD
Dr John Crowther	Soil Chemistry	MA, PhD
Dr Martin Bates	Geoarchaeology	BSc, PhD
Dr Dan Miles	Dendrochronology	D.Phil, FSA
Dr Jean-Luc Schwenninger	Optically Stimulated Luminescence Dating	PhD
Dr David Higgins	Clay Pipe	BA, PhD, MCIfA
Dr Hugo Anderson- Wymark	Flint	BSc, PhD, FSA Scot, MCIfA
Dr Damian Goodburn- Brown	Ancient Woodwork	BA, PhD

## APPENDIX H DOCUMENTARY ARCHIVING

### H.1 Standard methodology – summary

- H.1.1 The documentary archive constitutes all the written, drawn, photographic and digital records relating to the set up, fieldwork and post-excavation phases of the project. This documentary archive, together with the artefactual and environmental ecofact archive collectively forms the record of the site. The report is part of the documentary archive, and the archive must provide the evidence that supports the conclusions of the report, but the archive may also include data which exceeds the limitations of research parameters set down for the report and which could be of significant value to future researchers.
- H.1.2 At the outset of the project OA Archive department will contact the relevant local receiving museum or archive repository to notify them of the imminent start of a new fieldwork project in their collecting area. Relevant local archiving guidelines will be observed and site codes, which integrate with the receiving repository, will be agreed for labelling of archives and finds.
- H.1.3 Where there is currently no receiving museum for the project archive, although responsibility for the archive ultimately lies with the client, OA will hold the archive on their behalf for a period of up to 3 years after completion of the report, after which time (in the event that a suitable depository has not been secured) provision for further storage of the archive will be made in agreement with Oxford Archaeology, the client and the relevant planning archaeologist.
- H.1.4 During the course of the project the Archive department will assist the Project Manager in the management of the archive including the cataloguing and development technique suitable for photographic archive requirements.
- H.1.5 The hard copy site archive will be security copied by scanning to PdFA and a copy of this will be housed on the OA Archive Server. A full digital copy of the archive, including scanned hard copy and born digital data, will be deposited with and made publicly available on-line through the ADS. A further copy will be maintained on the OA server and if requested a copy on disk will also be sent to the receiving museum with the hard copy. This will act as a safeguard against the accidental loss and the long-term degeneration of paper records and photographs.
- H.1.6 Born digital data will only be printed to hard copy for the receiving museum where practical. Archive elements that need maintaining in digital form will be sent to ADS in accordance with Arches Standard and ADS guidelines. A copy will be sent to the receiving museum by CD and back-up copies will be stored on the OA digital network. In most cases a digital copy of the report will be included in the OASIS project library hosted by ADS.
- H.1.7 Prior to deposition the Archive department will contact the museum regarding the size and content of the archive and discuss any retention and dispersal policies which may be applicable in line with local and SMA Guidelines ' Selection, Retention & Dispersal of Archaeological Collections' 1993.

- H.1.8 The site archive will then be deposited with the relevant receiving museum or repository at the earliest opportunity unless further archaeological work on the site is expected. The documentary archive will include correspondence detailing landowner consent to deposit the artefacts and any copyright licences in accordance with the receiving museum guidelines. Deposition charges will be required from the client as part of the project costs but the level of the fee is set by the receiving body, and may be subject to change during the lifespan of the project. Changes to archiving charges beyond OA's control will be passed across to the client.
- H.1.9 Oxford Archaeology will retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it will provide the receiving repository or museum for the archive with a full licence for use to the client in all matters directly relating to the project as described in the Written Scheme of Investigation, and in line with the relevant receiving body guidelines.
- H.1.10 OA will advise the receiving repository or museum for the archive of 3<sup>rd</sup> party materials supplied in the course of projects which are not OA's copyright.
- H.1.11 OA undertakes to respect all requirements for confidentiality about the client's proposals provided that these are clearly stated. It is expected that such conditions shall not unreasonably impede the satisfactory performance of the services required. Archaeological findings and conclusions can be kept confidential for a limited period but will be made publicly available in line with the above procedure either after a specified time period agreed with the client at the outset of the project, or where no such period is agreed, after a reasonable period of time. It is expected that clients respect OA's general ethical obligations not to suppress significant archaeological data for an unreasonable period.

## **H.2 Relevant industry standards and guidelines**

- H.2.1 At the end of the project the site archive will be ordered, catalogued, labelled and conserved and stored according to the following national guidelines:
- H.2.2 The 2014 EAC Guidelines A Standard and Guide to the Best Practice for Archaeological Archiving in Europe (GB) Perrin K, Brown E et al.
- H.2.3 The 2014 CIFA Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives.
- H.2.4 The 2011 AAF guide Archaeological Archives A Guide to Best Practice in Creation, Compilation, Transfer and Curation. Brown D.
- H.2.5 The UKIC's Guidelines for the preparation of excavation archives for long-term storage.
- H.2.6 The MGC's Standards in the museum care of archaeological collections.
- H.2.7 Local museum guidelines such as Museum of London Guidelines: (<http://www.museumoflondonarchaeology.org.uk/English/ArchiveResearch/DeposRe> source) will be adopted where appropriate to the archive collecting area.
- H.2.8 The site archive will be prepared to at least the minimum acceptable standard defined in Management of Archaeological Projects 2, Historic England 1991.

## **H.3 Relevant OA manual and other supporting documentation**

### **H.3.1 The OA Archives Policy.**

## **APPENDIX I            HEALTH AND SAFETY**

### **I.1     Standard Methodology - summary**

- I.1.1 All work will be undertaken in accordance with the current OA Health and Safety Policy, the OA Site Safety Procedures Manual, a site-specific Risk Assessment and, if required, Safety Plan or Method Statement. Copies of the site-specific documents will be submitted to the client or their representative for approvals prior to mobilisation, and all relevant H and S documentation will be available on site at all times. The Health and Safety documentation will be read in conjunction with the project WSI.
- I.1.2 Where a project falls under the Construction (Design and Management) Regulations (2015), all work will be carried out in accordance with the Principal Contractor's Construction Phase Plan (CPP).

### **I.2     Relevant industry standards and guidelines**

- I.2.1 All work will be carried out according to the requirements of all relevant legislation and guidance, including, but not exclusively:
  - I.2.2 The Health and Safety at Work Act (1974).
  - I.2.3 Management of Health and Safety at Work Regulations (1999).
  - I.2.4 Manual Handling Operations Regulations 1992 (as amended).
  - I.2.5 The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (2013).
  - I.2.6 The Construction (Design and Management) Regulations (2015).
  - I.2.7 Relevant OA manual and other supporting documentation
  - I.2.8 The OA Health and Safety Policy.
  - I.2.9 The OA Site Safety Procedures Manual.
  - I.2.10 The OA Risk Assessment templates.
  - I.2.11 The OA Method Statement template.
  - I.2.12 The OA Construction Phase Plan template.



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