Heaton Lane, Stockport

Post-excavation Assessment and Updated Project Design

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Summary

Wessex Archaeology was commissioned by WSP, on behalf of Transport for Greater Manchester and Stockport Metropolitan Borough Council, to carry out an archaeological excavation in advance of the re-development of Heaton Lane car park in Stockport (NGR 389123 390395).

The excavation was successful in addressing the aims and objectives set out in the Written Scheme of Investigation (WSI). The results of the excavation revealed a palimpsest of 19th and 20th-century archaeological remains. These have been analysed to their full potential and it is recommended that a summary of the existing information be published in an appropriate journal.

The earliest development on site was probably that shown on mid-19th century Ordnance Survey maps. Documentary evidence suggests that this dates to the 1830s, or a few years either side. A lack of definitively 18th-century finds confirms this general picture. Prior to the earliest development, the existing ground surface had been truncated, removing or reworking any agricultural soil. Levelling layers (primarily of silt and sand) were deposited at the beginning of the 19th-century development.

In the west of the site the remains of the Wellington Bridge cotton mill were revealed, including the setting for at least one Cornish-type boiler, and large stone bases that may have been the steam engine foundation beds. The mill was probably built by James Wilkinson and passed to his son Samuel Wright Wilkinson before closing around 1900. The general arrangement of the mill, known from historic maps, was confirmed by excavation. However, the excavation did not provide information regarding the workings or processes that would have occurred during the operation of the cotton mill.

In the centre and east of the site the fragmentary remains of the walls of ranges of back-to-back and terraced houses were exposed. The majority of the houses were demolished in the early 1890s, although the Jacques Street terraces remained until the 1930s. The remains of road surfaces, and of levelling layers and services present beneath the roads, may have been contemporary with the back-to-back housing, if not representative of later modification or maintenance. These roads were removed, repurposed, truncated and/or renamed in the early 1890s.

The site was gradually taken over by a gasworks. The gasworks was built in 1825 but was at that time confined to the area north of the site. By 1895 the gasworks had expanded into the area of former back-to-back housing. The remains of an office, a weighbridge, yard entrances and a gasholder were identified by excavation. The former Wellington Bridge Mill building was incorporated into the gasworks in the early 20th century. Stockport Image Archive holds informative photographs of the mill and gasworks from this time.

By 1934 the site had been wholly subject to demolition and a tram and bus depot erected in the place of the mill, housing and gasworks. Excavation revealed that the depot building was steel-framed with infill walls of machine brick and black ash mortar walls. An extensive range of drains was probably contemporary with the depot. In recent years the site has been used as a car park, following demolition of the tram and bus depot in 1978.

The finds assemblage was typical of industrial sites of this period. Dateable artefacts provided little information about the phased development of the site. A single environmental sample was not informative.

The archive resulting from the excavation is currently held at the offices of Wessex Archaeology in Sheffield. Stockport Local Heritage Library and Archives has agreed in principle to accept the archive on completion of the project, under an accession code to be determined. An OASIS form, wessexar1-507752, has been provisionally completed and will be finalised at the time of deposition.

Acknowledgements

Wessex Archaeology would like to thank WSP for commissioning the archaeological excavation on behalf of Transport for Greater Manchester and Stockport Metropolitan Borough Council. Wessex Archaeology is also grateful for the advice of the Archaeological Advisor from Greater Manchester Archaeological Advisory Service, who monitored the project for the Local Planning Authority, and provided advice about the interpretation of the remains of the Wellington Bridge Mill.

Heaton Lane, Stockport

Post-excavation Assessment and Updated Project Design

1 INTRODUCTION

1.1 Project and planning background

1.1.1 Wessex Archaeology was commissioned by WSP, on behalf of Transport for Greater Manchester and Stockport Metropolitan Borough Council, to undertake archaeological mitigation works comprising a strip, map, sample excavation within a 0.6 ha parcel of land located off Heaton Lane, Stockport, Greater Manchester, SK4 1AQ, centred on NGR 389123 390395 (**Fig. 1**).

1.1.2 The excavation was undertaken in association with the redevelopment of the existing car park at Heaton Lane into a temporary bus station/depot, including the construction of bus bays on the eastern side of the site. Deep drainage and a fuel interceptor tank are planned for this area, with final below current ground surface levels reaching up to 0.75 m. A planning application (DC/071417) submitted to the Local Planning Authority (LPA), was granted, subject to conditions, one of which related to archaeological investigation. Condition 54 states that:

> *Prior to commencement of development and in accordance with the relevant phasing plan approved under Condition No 2, the applicant or their agents or successors in title shall secure the implementation of a programme of archaeological works. The works shall be to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by Stockport Planning Authority. The WSI shall cover the following: A phased programme and methodology of investigation and recording to include: - evaluation trenching - informed by the above, targeted excavation (subject to a new WSI).*

1.1.3 The excavation was the final stage in a programme of archaeological works, which had included a watching brief on geotechnical work (Salford Archaeology 2019) and a trial trench evaluation (Wessex Archaeology 2020).

1.1.4 All works were undertaken in accordance with a Written Scheme of Investigation (WSI) which detailed the aims, methodologies and standards employed during the archaeological programme of works (WSP 2020). The Archaeological Advisor for Greater Manchester Archaeological Advisory Service approved the WSI prior to fieldwork commencing.

1.1.5 The excavation was undertaken between 6 December 2020 and 5 February 2021.

1.2 Scope of the report

1.2.1 The purpose of this report is to provide the provisional results of the excavation, alongside those of the preceding evaluation (Wessex Archaeology 2020), and to assess the potential of the results to address the research aims outlined in the WSI. Where appropriate, it includes recommendations for a programme of further analysis, outlining the resources needed to achieve the aims (including the revised research aims arising from this assessment), leading to dissemination of the archaeological results via publication and the curation of the archive.

1.3 Location, topography and geology

1.3.1 The excavation area is located within Stockport town centre at NGR 389123 390395. The plot is bounded by Heaton Lane to the south, Wellington Road North (the A6) to the east, Great Egerton Street to the north (with the M60 immediately beyond Great Egerton Street) and Gas Street to the west. The site is close to the north bank of the River Mersey and was recently used as a car park.

1.3.2 Existing ground levels are approximately 45 m above Ordnance Datum (OD).

1.3.3 The underlying geology is mapped as sandstone bedrock of the Chester Formation, overlain by superficial deposits of River Terrace sands and gravels (British Geological Survey online viewer 2022).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 The following section includes background information summarised from the WSI (WSP 2020), which itself was drawn from a historic environment desk-based assessment produced by AECOM (AECOM 2016). This includes brief summaries of previous archaeological works and provides an extensive overview of the archaeological and historical background of the site. Documentary research has been added to the narratives presented in earlier reports. Census records and other genealogical data have been accessed via a commercial website (Find My Past 2022). **Appendix 1** contains this unedited research, which is summarised in this section.

2.2 Previous works related to the development

Watching Brief on geotechnical works (2019)

2.2.1 In November 2019 Salford Archaeology carried out an archaeological watching brief on geotechnical works comprising the excavation of six trial pits and four window samples. The watching brief confirmed that there was potential for remains of archaeological interest relating to the former presence of back-to-back housing and part of the Wellington Bridge Mill on the site (Salford Archaeology 2019).

Archaeological evaluation (2020)

2.2.2 In June 2020 Wessex Archaeology carried out an archaeological evaluation comprising the excavation of three trenches. The uncovered features comprised brick walls, concrete platforms, and brick and cobble surfaces. The remains represented evidence of the survival of elements of former back-to-back housing and the Wellington Bridge Mill. These remains were covered by layers of demolition material.

2.3 Archaeological and historical context

Prehistoric to medieval

2.3.1 Prehistoric finds in the Stockport area have been rare and sporadic. Bronze Age cremation burials have been recorded at Cheadle (roughly 4 km west-south-west of the site) and two Bronze axes found in Adswood (roughly 2 km south-west of the site; Tindall 1985, 69).

2.3.2 Evidence for Roman presence in Stockport is also archaeologically very slim. There have been occasional Roman finds in the area but as yet there is little firm archaeological evidence for early settlement. However, it is likely that the Roman roads from Cheadle to Melandra Castle (Gamesely) and from Manchester to Buxton crossed the Mersey in Stockport (Salford Archaeology 2018).

2.3.3 There is little archaeological evidence for activity during the early medieval period. Anglo-Saxon coins have been found locally, however Stockport is not recorded in the Domesday Survey of 1086, which suggests there was no settlement here prior to the Norman Conquest.

2.3.4 The settlement developed during the medieval period, centred on Market Place and Millgate and most likely included a bridge over the Mersey by the 15th century (Dodgson 1970, 271). A deer park was located on the site of Astley Street at this time (Arrowsmith 1996, 91).

Post-medieval to modern

2.3.5 It was not until the 18th century that Stockport began to grow rapidly, when it emerged as one of the early centres of industrialisation in the North West (Salford Archaeology 2018).

2.3.6 The factory-based silk industry was of particular importance locally by the end of the 18th century, although this branch of the textile industry had been superseded by cotton by the early 19th century.

2.3.7 Cotton production grew rapidly during this period with the introduction of new mills and the introduction of a successful power loom in the 1820s. This is perhaps best demonstrated by the collapse of the local handloom weavers, which dropped from 5000 practising individuals in Stockport in 1816 to just 300 in 1834 (Arrowsmith 1997, 146).

2.3.8 Hat manufacturing, together with a thriving button-making trade, emerged as important local industries during the course of the 19th century.

Wellington Bridge Mill

2.3.9 Part of the former Wellington Bridge Mill stood on the western third of the site (**Fig. 2**). It was a cotton mill. The Wellington Bridge Mill should not be confused with the extant nearby Wellington Mill, also known as 'Hat Works', and which currently houses a museum in part of the building. Both mills may derive their names from the nearby Wellington Road, a major thoroughfare in Stockport.

2.3.10 The Wellington Bridge Mill complex comprised a series of buildings arranged around a courtyard. The former presence of buildings of different design suggests a phased development of the works, although the available chronological information suggests that this phased development was rapid, probably confined to the 1830s, or a few years either side. The mill is absent from early trade directories including Pigot and Co's 1828–9 directory (pp 56–57), suggesting that it had not opened by this time. However, by 1841 the mill owner James Wilkinson was already recorded by the census as a cotton manufacturer, suggesting that the Wellington Bridge Mill had already been constructed by this time, or that he had another cotton manufacturing concern elsewhere. The earliest Ordnance Survey maps show that the mill complex had already assumed its final form by the mid-19th century. The earliest of these maps was a six-inch first edition compiled in 1845 (issued 1848; not reproduced). A twenty-five inch town plan from 1851 shows the same information and is partly reproduced as **Fig. 3**.

2.3.11 In the east of the complex, the main mill hall was aligned north to south adjacent to John Street (e.g. **Fig. 3**). It is likely that this building was the focus of the mill complex as it is this building that is labelled on historic maps. It was probably the main spinning hall. Photographs held by Stockport Image Archive (see **Appendix 1** for detail) reveal that this building was of five storeys, with the lowest floor partly underground. An 'Engine Ho. [house]' is labelled in the south end of this range on historic maps (**Fig. 3**, partly obscured in the vicinity of context 647).

2.3.12 In the south, adjacent to Heaton Lane, there were further substantial buildings, comprising a six-storey range within the area of the site, and more buildings including a four-storey range further west. The six-storey range is labelled on historic maps as containing 'Boilers' (**Fig. 3**).

2.3.13 Further four- and three-storey ranges in the west and north of the complex are not directly relevant to the excavation results but were likely associated buildings.

2.3.14 Trade directories, census information and other sources reveal that the mill was built and owned by James Wilkinson. He retired around 1851–1853 and was buried on the 14 October 1869 at the nearby Tiviot Dale Methodist Church. The mill passed to his son Samuel Wright Wilkinson, who is recorded in the 1861 and 1881 censuses as having 'employed 300 hands', revealing the scale of the Wellington Bridge Mill operation.

2.3.15 The Cotton Spinners & Manufacturer's Directory of 1891 recorded that the 'Heaton Lane Mill' under Samuel Wright Wilkinson (almost certainly meaning the Wellington Bridge Mill) housed 17,000 spindles producing '6/36 extra hard twist' (p 193). This information is repeated in Grace's Guide (2022).

2.3.16 The unmarried and apparently childless Samuel Wright Wilkinson was buried on 17 October 1900. The Stockport Advertiser contains an obituary of a Colonel Wilkinson in 1900, if this is the same individual it suggests that Samuel Wright Wilkinson had a military career (Turner n.d.).

2.3.17 It may be that activity at the mill was wound up around the time of Samuel's death. The twenty-five inch Ordnance Survey edition of 1910 (revised 1907, published 1932; not reproduced) shows that the Wellington Bridge Mill was still extant at this date, but that it had been subsumed within the gasworks.

2.3.18 The mill was photographed by the borough surveyor in July 1930 and attributed as 'Wilkinson's Mill'. The photographs are held by the Stockport Image Archive.

2.3.19 Demolition was underway on 18 March 1931, when piles of timber and brick rubble alongside remnants of the mill buildings were photographed (Stockport Image Archive). Photograph 41488 may show a floor of the main spinning hall; the floor was supported in part by metal (cast iron?) piers.

2.3.20 Demolition was still underway in 1932, when another photograph (Stockport Image Archive 35972) shows the windows and roof removed from the six-storey building adjacent to Heaton Lane. The photograph is labelled 'Site of New Garage. Demolition of Wilkinson's Mill.'

2.3.21 An Ordnance Survey map of 1934 (not reproduced) shows that the mill building had been demolished.

Worker's housing

2.3.22 Three streets (John Street, Union Street and Henry Street) of workers' housing covered the centre and east of the site (**Fig. 2**), as depicted on the 1851 town plan (**Fig. 4**). There were at least two streets by each of these names in Stockport. The streets within the site were in Heaton Norris, Stockport, Lancashire and the synonymous streets were in Stockport, Cheshire.

2.3.23 Census records reveal that the inhabitants of these dwellings were generally employed in cotton trades, and it is reasonable to assume that many of them would have been among the '300 hands' working in the closest cotton factory, the Wellington Bridge Mill. Many of the cotton workers were young women, although a demographic range is represented. Some workers (generally men) were instead employed in other trades such as agriculture, stone masonry, iron founding, tailoring, coal mercantilism and at the county court as a bailiff. It is not the case, then, that these houses were only accessible to workers at the Wellington Bridge Mill. If the houses were owned by the mill, the mill as landlord may have been indifferent about their tenants' employers. Alternatively there may have been no tenurial link between the houses and the mill.

2.3.24 The census records contain instances of working mothers with young babies (under two years old); perhaps these babies were present in the mill alongside their working mothers. As is common across industrial populations at this date, many children were employed.

2.3.25 There are instances of women at the head of households, and these are not limited to widows. Contrary to the picture of rigid patriarchal family structures usually seen in census records from this period (e.g. Tuck and Rajic 2021, chapter 2), a very few young women were apparently able to make a life for themselves free of the constraints of marriage.

John Street

2.3.26 Census records for John Street, Heaton Norris, exist from 1851 to 1891. Census records for John Street also exist for 1841, however it is not possible to definitively link these to the John Street within the site.

2.3.27 The 1895 Ordnance Survey first edition twenty-five inch map (surveyed 1892–1893) reveals that the housing on John Street had been demolished. The alignment of the road survived; however it may no longer have been a public road, perhaps acting only as access to the existing mill and/or gasworks buildings.

Union Street

2.3.28 Although the back-to-back housing on Union Street was mapped in 1851 (Ordnance Survey town plan; **Fig. 4**), it is only in 1871 that it can be identified in census records. All references to Union Street, Stockport in earlier censuses are to properties in St. Thomas' parish, i.e. elsewhere in Stockport, not in Heaton Norris. No references to Union Street, Heaton Norris could be definitively identified in the 1881 or 1891 censuses.

2.3.29 By the time of the 1895 Ordnance Survey first edition twenty-five inch map (surveyed 1892–1893) Union Street had disappeared completely.

Henry Street/Jacques Street

2.3.30 Henry Street, Heaton Norris was recorded by census between 1851 and 1891. The 1851 Ordnance Survey town plan (**Fig. 4**) shows back-to-back houses on the west side of the road and terraced houses on the east. Maps show that the terraced housing to the east of this road was of different character to the housing to the west and across the rest of the site. The housing to the east was irregularly arranged, partly around courtyards, and may have developed piecemeal. It is possible that it belonged to a different landlord (or landlords) to the housing closer to the mill.

2.3.31 The back-to-back housing west of Henry Street was demolished between the time of the 1891 census and the compilation in 1892/3 of the 1895 first edition twenty-five inch Ordnance Survey map (**Fig. 5**). This map also shows that Henry Street had been truncated

and renamed Jacques Street, probably to avoid confusion with the other Henry Street in Stockport.

2.3.32 The remaining terraced housing east of Jacques Street continued to be recorded in censuses from 1901 and 1911. Jacques Street was not recorded by the 1921 census, perhaps indicating that the street was no longer inhabited.

2.3.33 The houses east of Jacques Street can be identified in the rear of photographs from July 1930 (Stockport Image Archive photographs 41499 and 41501). These can be securely located due to the presence of a weighbridge matching excavation results (see below). The houses appear to conform to the standard plan of two-storey terraced houses rather than back-to-backs. The houses closest to Heaton Lane (i.e., in the south) are slightly taller than the others and have different chimneys, suggesting that they were built separately. The house closest to the truncated north end of Jacques Street stands separate from the rest of the terrace, also perhaps built in a different phase of development. As depicted on the 1895 Ordnance Survey first edition twenty-five inch map (**Fig. 4**), this northernmost house is within the gasworks compound and has a side door directly accessing the gasworks yard. It may be that this house was built after the truncation of Jacques Street, or that it is a partial survivor of a range of houses that was mostly demolished at this time.

2.3.34 The terraced housing east of Jacques Street continued to be mapped until a twenty-five inch Ordnance Survey edition of 1910 (revised 1907, published 1932; not reproduced) but was demolished prior to compilation of a twenty-five inch Ordnance Survey revision of 1934 (published 1936; **Fig. 5**).

Gasworks

2.3.35 Bagshaw's directory of 1850 (p 275) records that 'The GAS WORKS were established in 1825, by a company of shareholders… The works are situate in Millgate… There are also three gasometers in Heaton lane… The works were presented to the Corporation in 1838.' It is the Heaton Lane gasometers (gasholders) that are relevant to the present site. The first detailed Ordnance Survey maps (a six-inch first edition of 1848, not reproduced; and a town plan of 1851, **Fig. 4**) reveal that at that time the Heaton Lane gasworks was confined to an area north of the site. However, the gasworks expanded, slowly taking over the site (**Fig. 2**). By 1895, the first edition twenty-five inch Ordnance Survey map (surveyed 1892–3; **Fig. 5**) shows that the gasworks had expanded into the north-east of the site. Photographs from 1930 held by the Stockport Image Archive (e.g. photograph 35972; see **Appendix 1**) show an elaborate brick wall extending all the way to Heaton Lane, suggesting that all of this area belonged to the gasworks.

Tram and bus depot

2.3.36 In 1934, a twenty-five inch Ordnance Survey revision (published 1936; **Fig. 6**) shows that the site (mill, all worker's housing and gasworks) had been wholly redeveloped as 'Tram & Bus Depôt (Stockport Corporation)'. This development is depicted as two large adjacent sub-rectangular buildings with tram tracks emanating from the north-east.

2.3.37 The Stockport Image Archive holds multiple images of this building. It was a single storey building of around nine gabled bays fronting Heaton Lane. Each bay had two plain rectangular windows. The north end of the east elevation appears to have had a large opening partly covered by a large wooden gate or shuttering. Maps show tram tracks entering the building here. Part of a large archway accessing the southern part of the building can be seen.

2.3.38 The demolition of the Tram and Bus Depot was also recorded by photography dated 9 May 1978 (Stockport Image Archive photographs 11744 and 11745).

Car park

2.3.39 Following demolition of the tram and bus depot, the site has been used in recent years as a car park.

3 AIMS AND OBJECTIVES

3.1 Aims

3.1.1 The general aims of the excavation, as stated in the WSI (WSP 2020) and in compliance with the Chartered Institute for Archaeologists' *Standard and guidance for archaeological excavation* (CIfA 2020a), were:

- to examine the archaeological resource within a given area or site within a framework of defined research objectives;
- to seek a better understanding of the resource;
- to compile a lasting record of the resource; and,
- to analyse and interpret the results of the excavation and disseminate them.

3.2 Project specific research objectives

3.2.1 Following consideration of the archaeological potential of the site, the research objectives of the excavation defined in the WSI (WSP 2020) were:

- to determine the extent and rate of survival of the 19th century industrial sites and workers' housing identified by the evaluation trenching;
- to determine if there is evidence present for earlier use of the site;
- to mitigate through 'preservation by record' impacts on archaeological remains at risk from the 0.5–0.75 m remediation across the site (including those identified in the evaluation trenching); and,
- to mitigate through 'preservation by record' impacts on any buried archaeological remains due to any remediation deeper than 1.0 m below ground level, particularly new drainage systems and in the area of the proposed fuel interceptor tank.

3.2.2 This document seeks to consider, evaluates and update the original research objectives as part of the Updated Project Design. This will ensure that they contribute to the goals set out in the relevant sections of the North West England Regional Research Framework (Research Frameworks 2022).

4 METHODS

4.1 Introduction

4.1.1 All works were undertaken in accordance with the detailed methods set out within the WSI (WSP 2020) and in general compliance with the standards outlined in CIfA guidance (CIfA 2020a). The post-excavation assessment and reporting followed advice issued by the

Association of Local Government Archaeological Officers (ALGAO 2015). The methods employed are summarised below.

4.2 Fieldwork methods

General

4.2.1 The excavation area was set out using a Global Navigation Satellite System (GNSS), in the same position as that proposed in the WSI (**Fig. 1**). The topsoil/overburden was removed in level spits using a 360º excavator equipped with a toothless bucket, under the constant supervision and instruction of the monitoring archaeologist. Machine excavation proceeded in spits until the archaeological horizon was exposed.

4.2.2 Where necessary, the surfaces of archaeological deposits were cleaned by hand. A sample of archaeological features and deposits was hand-excavated, sufficient to address the aims of the excavation.

4.2.3 Spoil derived from machine stripping and hand-excavated archaeological features was visually scanned for the purposes of finds retrieval. Artefacts were collected and bagged by context.

Recording

4.2.4 All archaeological features and deposits were recorded using Wessex Archaeology's pro forma recording system. A complete record of excavated features and deposits was made, including plans and sections drawn to appropriate scales (generally 1:20 or 1:50 for plans and 1:10 for sections) and tied to the Ordnance Survey (OS) National Grid.

4.2.5 A Leica GNSS connected to Leica's SmartNet service surveyed the location of archaeological features. All survey data is recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSTN15 and OSGM15, with a three-dimensional accuracy of at least 50 mm.

4.2.6 A full photographic record was made using digital cameras equipped with an image sensor of not less than 16 megapixels. Digital images have been subject to managed quality control and curation processes, which has embedded appropriate metadata within the image and will ensure long term accessibility of the image set.

4.3 Finds and environmental strategies

4.3.1 Strategies for the recovery, processing and assessment of finds and environmental samples were in line with those detailed in the WSI (WSP 2020). The treatment of artefacts and environmental remains was in general accordance with: *Guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2020b) and *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage 2011).

4.4 Monitoring

4.4.1 The Archaeological Advisor for Greater Manchester Archaeological Advisory Service monitored the works on behalf of the LPA.

5 STRATIGRAPHIC EVIDENCE

5.1 Introduction

Summary of archaeological features and deposits

5.1.1 The excavation revealed archaeological features, deposits and structures, which formed a palimpsest of industrial 19th- and 20th-century developments (**Fig. 2**).

5.1.2 The results have been phased primarily through their correlation with historic maps, supported primarily by the typology of materials used in the construction of structural remains. Artefactual evidence was generally not useful in establishing the detailed chronology of the remains.

5.1.3 The initial development of the site (phase 1) comprised the Wellington Bridge Mill in the west and worker's housing in the centre and east of the site. This phase of activity was associated most strongly with structures comprising handmade bricks and lime mortar. Much of the worker's housing was replaced by the expansion of a gasworks (phase 2). Structures belonging to this phase included examples constructed of handmade brick and lime mortar, but with the introduction of machine bricks and black ash mortar. Phase 3 comprised redevelopment as a tram and bus depot, with structural remains comprising steel framing, machine bricks and black ash mortar. Finally, the current use of the site was as a carpark (phase 4).

5.1.4 The results of the trial trench evaluation (Wessex Archaeology 2020) have been integrated into the mitigation results below. Context numbers from trial trenches can be readily identified as they begin with 1, 2 or 3 (depending on trench).

5.1.5 Detailed descriptions of individual contexts are provided in the summary tables (**Appendix 2**). **Fig. 1** shows the site location; **Fig. 2** is the general site plan; **Figs 3–6** are phase plans, generally overlaid on historic maps, and sections are on **Fig. 7**.

5.2 Natural deposits

5.2.1 The natural undisturbed geological substrate comprised yellow brown sand (713; **Fig. 8**). The upper interface of the natural was disturbed and was greyer, with inclusions of silt and gravel (714, possibly the same as 707 seen elsewhere).

5.3 Phase 1: Wellington Bridge Mill and worker's housing

Wellington Bridge Mill

5.3.1 In the south-west of the excavation area, excavation revealed structural remains of part of the Wellington Bridge Mill (**Figs 3** and **9**). The surviving elements were constructed from handmade red brick and white or grey sandy lime mortar, except where specified otherwise below.

5.3.2 The results from the mill are described chronologically as far as possible, starting with pre-construction levelling layers, then walls, surfaces and the fittings of the mill (foundation beds and boiler related structures). Within each sub-section, description has been ordered from west to east as far as is practicable.

<u>Pre-construction levelling</u>

5.3.3 In the south-west of the excavation area, bedding layers of black silt and rubble (deposits 112, 659–662 and 742) probably represent pre-construction levelling layers.

Walls

5.3.4 The pre-construction levelling layers were overlain by wall foundations (113, 607–610, 615–619, 622, 628–631, 637–638, 658 and 770–773), forming divisions of the mapped Wellington Bridge Mill.

5.3.5 Walls 609 and 610 partly enclosed a 2.3 m long and 0.46 m wide shallow trough of unknown function (611, 612 and 614; **Fig. 10**) floored with ash-stained bricks (613).

5.3.6 Part of wall 651 had been repaired with unmortared bricks (657).

5.3.7 Walls 622, 628, 630, 637 and 771 were unusually wide (five skins) are correlate with the boundaries of the main mill range (**Fig. 3**). In contrast to other structures in the area, the interior of this range was lime washed (**Fig. 11**). Further buildings/structures were present to the west and south; it may be that this range slightly pre-dated them.

5.3.8 Wall 771 contained a blocked arch (777; **Fig. 12**), perhaps a former drain or vent discharging outside the building rather than a relieving arch. In a small exterior area immediately east of wall 771 was a culverted drain (**Fig. 13**) walled with bricks (773 and 774; 774 not illustrated) and floored (776) and capped (775) with sandstone flags. Three-skin wall 772 was located on the west side of John Street (**Fig. 3**; to the east of both wall 711 and drain 773–776). Wall 772 was, therefore, an exterior wall defining the limit of the plot containing the works buildings.

Surfaces

5.3.9 Small fragments of cobblestone (650) and flagstone (729) surfaces were preserved, perhaps original surfaces of the ground floor of the works. These surfaces were probably laid down during the initial construction of the works but their stratigraphic position was not securely determined. They were stratigraphically later than adjacent walls and earlier than demolition deposits. Late during the life of the buildings, at least one area had a concrete floor added (645). This abutted earlier walls 615 and 617 (**Fig. 14**) demonstrating that it was poured while these walls still stood and probably formed part of the works rather than part of a later development. The use of concrete is not inconsistent with a 19th-century date.

Steam engine foundation beds

5.3.10 There were four large similar stone bases (634, 647, 648 and 649; **Fig. 15**) in the east of the Wellington Bridge Mill. Stone foundation bed 634 (**Fig. 15**) was contained within partially preserved brick walls 633, 635 and 636. The top of foundation bed 634 contained a rectangular locating depression with two sockets that would have accommodated metal fixings. The base was flanked to the south by an iron pipe. The further stone foundation beds (647, 648 and 649) contained locating depressions and iron pin fixings. Bases 647 and 648 were in the area mapped in 1851 as ‘Engine Ho.’ (**Fig. 3**) and could potentially have carried a steam engine. Bases 634 and 649 were instead in the south of the main mill hall but could have carried a continuation of either the steam engine or power transmission equipment associated with it. The total area of bases 634, 647, 648 and 649 was about 5 m square, however they continued to the south beyond the area of excavation.

Boiler base

5.3.11 A well-preserved brick setting for a boiler (623–627, 640, 651–652, 732 and 733) may have carried a Cornish-type boiler. Cornish boilers were invented in 1812 by Richard Trevithick and consisted of a single metal fire tube set within a cylindrical shell containing water to be heated to steam. The exhaust gasses from the fire tube would travel back through a pair of

brick side flues as an efficiency improvement to transfer more heat to the water. The 1851 Ordnance Survey town plan (**Fig. 3**) labels a series of 'Boilers' in this area.

5.3.12 The brick base (**Fig. 16**) comprised a handmade red brick and lime mortar core (e.g. 623, 624). Firebrick had been used for every exposed face (625–627, 640, 651–652, 732 and 733). Side flues were probably present above stepped structures 732 and 733 to the west and in a similar position above 654 to the east. Part of the structure to the west was sloped (733); the corresponding slope on the east side had been truncated. The surface underneath and around the boiler comprised an opportunistic mix of handmade red brick and firebrick (731). This surface continued north as 653 and 620. A small (0.59 m) square structure (730, centre of **Fig 16**, also **Fig 18**) probably accommodated the blow-down valve.

5.3.13 A cistern (641; **Figs 16–18**) capped with a valve (734, not drawn) was built into masonry 640, 651 and 652. The tank had a rusted circular fitting for a badge on the west side. The cistern was probably a reservoir associated with the potential Cornish boiler. Its position built into a masonry structure is curious. There were no signs of heat transformation on the surrounding masonry; the cistern may not have been hot during use. An attempt was made to preserve the cistern however the rusted object disintegrated when lifted. The remains were not retained. We believe that this was communicated to Greater Manchester Archaeology Advisory Service at the time.

5.3.14 A large iron pipe (655; **Fig. 18**) 0.45–0.47 m (1.5 feet) in diameter ran diagonally to the south of the cistern and may have been associated with the boiler.

Another potential boiler-related structure

5.3.15 In the west, at the junction of walls 615 and 617, structure 616 (**Fig. 14**) contained some firebricks in addition to handmade red bricks. These were probably used opportunistically but may represent the truncated remains of the setting for another boiler.

Worker's housing

5.3.16 Three streets of worker's housing were present to the east of the mill. The housing is depicted on the 1851 Ordnance Survey town plan (**Fig. 4**), and some is recorded in the 1841 census. Construction of the housing was therefore either roughly contemporary with construction of the mill, or pre-dated construction of the mill. The excavation results are described from west to east (John Street, Union Street then Henry/Jacques Street). Within each sub-section, contexts are described in chronological order as far as practicable.

John Street

5.3.17 A series of stratigraphically early pre-construction levelling layers were exposed below the remains of back-to-back housing fronting John Street (**Figs 7** and **19**). An environmental sample from the lowest layer reached (707, brownish yellow loam with red brick fragments) contained clinker and charcoal. It may represent the disturbed upper surface of the natural, similar to layer 714 seen elsewhere. Layer 707 was overlain by dark ashy, gritty silt (708) and a bed of lime mortar with fragments of brick (709) carrying stone foundation 683. Nearby, wall 549 was also bedded on a layer of sandy silt (711).

5.3.18 The truncated wall foundations of back-to-back housing fronting the east side of John Street were revealed. The wall fronting John Street comprised a substantial sandstone foundation 0.67 m wide (665; **Fig. 20**). The foundation carried a two-skin handmade red brick and lime mortar wall (669; **Fig. 20**). The continuation of this brick wall was seen further north (205, 534, 548, 561, 588 and 591; **Fig. 21**; see also **Fig. 36**), as was the continuation of the sandstone foundation (683; not drawn in plan; **Figs 7** and **19**). Handmade brick and lime

mortar interior walls dividing these back-to-back houses comprised 549 (see also **Fig. 32**), 550 and 670.

5.3.19 Piled against wall 665 (the front wall of back-to-back housing fronting John Street) were a series of levelling deposits building up the ground level below John Street itself. These deposits (597, 598, 663, 746 and 760) were a mixture of grey silty sand and redeposited natural. It is probable that these deposits were roughly contemporary with the construction of the back-to-back housing.

5.3.20 The levelling layers below John Street had been cut by a service trench (743, not illustrated) backfilled with sandy silt deposits (598, 744 and 745). The fills of trench 743 were then cut by a large (2.4 m wide) trench (751) for the installation of two cast iron gas pipes (756 and 766), thought to carry gas from the gasworks (see below). The pipes were not fully exposed but were substantial (**Fig. 22**; 756 was larger than 0.6 m (2 feet) in diameter. The backfill of this pipe trench comprised further silty sand deposits (599 and 752). The chronology of these pipes is unknown; they may be contemporary with the phase 2 expansion of the gasworks (see below) or may be earlier in date. The gasworks were present to the north of the excavation area prior to 1850, perhaps from 1825 (Bagshaw 1850, 275).

5.3.21 Another trench (753, 0.65 m wide) cut layer 760 and contained a culverted drain comprising a sandstone flag base and capping with potentially reused, unmortared, broken handmade brick sides (755). Cut 753 was backfilled with sandy silt and gravel (754).

Union Street

5.3.22 The handmade brick and lime mortar wall of back-to-back housing facing the west side of Union Street was largely absent, but fragments (763 and 764) remained.

5.3.23 Levelling layers of sand and silt (758, 761 and 762) carried a truncated cobble surface (757; **Fig. 23**). This was probably the surface of the former Union Street.

5.3.24 Nothing was identified of the former back-to-back housing fronting the east side of Union Street.

Henry Street/Jacques Street

5.3.25 Little was preserved of the former back-to-back fronting the west side of Henry Street. Part of the handmade red brick and lime mortar wall (688) fronting Henry Street survived, as well as two further truncated fragments of handmade brick and lime mortar walls (739 and 741, not illustrated).

5.3.26 Henry Street was depicted on the 1851 Ordnance Survey town plan (**Fig. 4**) but had been truncated and re-named Jacques Street by the 1890s (first edition Ordnance Survey twenty-five inch map; **Fig. 5**).

5.3.27 The layers beneath the road surface were revealed (**Fig. 8**). Here, natural 713 and disturbed natural 714 (see above) were overlain by silt and sand levelling layers (700, 701=806, 702–704, 718, 750=811, 801–804 and 810) as well as a layer of clinker (719). The silt and sand layers comprised a mixture of redeposited natural and perhaps industrial ash, soil or other material. Inclusions of charcoal and clinker in these layers suggest that they are of relatively modern date and do not represent undisturbed early layers such as buried soils.

5.3.28 Some of the levelling layers (including 700) were cut by a trench (705) for a cast iron pipe. The cut was backfilled with more silt and sand (706), presumably the arisings from the trench.

5.3.29 A culverted drain (768; not drawn in plan; **Fig. 24**) was also cut through these layers (including 704) in a trench along the west side of Henry Street/Jacques Street. The drain comprised rough walls of reused, broken, handmade bricks bonded with black ash mortar and capped with flag stones (767). A deposit of brown and black fine sand (769) was present within the drain.

5.3.30 Under watching brief conditions at the end of the investigation, further north to south aligned linear features (782, 785 and 787) were seen below Henry Street/Jacques Street, as well as a west to east aligned drain (797). They were presumably further service trenches, although no pipes or services were identified. Their continuations in plan were not determined.

5.3.31 The levelling layers below Henry Street/Jacques Street were sealed by a layer of bitumen (542, 699) providing bedding for the cobbles surface of the road (542, 684; **Fig. 25**).

5.3.32 A stone kerb (697; **Figs 26** and **27**) on the west side of Henry Street/Jacques Street defined the limit of a pedestrian pavement that was cobbled in the south (691) and partly floored with a flagstone in the north (698). A metal fixing on top of the cobbles (765, **Fig. 27**) may have been the base for a lamp or some other piece of street furniture. The kerb curved, marking the position of a cart gate entrance leading to the west.

5.3.33 The pedestrian pavement on the east side of Henry Street/Jacques Street comprised flagstones (715). It was defined by a stone kerb (687). A metal rail, probably a tram track (716; not drawn in plan; **Fig. 28**), was incorporated into this surface, aligned west to east across the pavement. It may have been a later insertion contemporary with the tram and bus depot (see below).

5.3.34 East of Henry Street/Jacques Street, levelling layers (791–794) of mainly orange sand (792 was instead dark brown silt clay with gravel) had been laid down prior to construction of terraced housing.

5.3.35 A series of handmade red brick and lime mortar walls were remnants of the terraced housing east of Henry/Jacques Street. Wall 710 defined the street frontage of former terraced housing. Wall 721 formed the rear of the properties adjacent to a yard, with parallel wall 778 perhaps representing an interior passageway or staircase. Wall fragment 722 was located in the yard and may have been part of an outhouse or minor yard structure. Wall 780 divided two of the terraced properties (**Fig. 4**). Walls 721 and 778 were built in construction cuts (789 and 795), cut through the levelling layers mentioned above (791–794). A patch of a handmade red brick surface (781) may have been the ground floor surface of a house. A small fragment of a similar surface (779) may have been the exterior yard.

5.3.36 Evaluation trench 3 was located immediately south-east of the mitigation area. It revealed pre-construction levelling layers (303, 310 and 315) deposited prior to the construction of handmade red brick and ash mortar walls (304 and 305; **Fig. 29**). These structures may represent modifications to the existing lime mortared buildings in this area. A cobbled surface (307) and stone surface (309) were recorded by this evaluation trench, probably contemporary with the construction or life of these black ash mortared structures.

5.4 Phase 2: Gasworks

5.4.1 The 1895 first edition twenty-five inch Ordnance Survey map (surveyed 1892–3; **Fig. 5**) reveals that much of the north of the site was occupied by a gasworks in the late 19th century. Photographs held in Stockport Image Archive from 1932 (e.g. photograph 35972; see **Appendix 1**) suggest that the gasworks complex extended south to Heaton Lane. The

former Wellington Bridge Mill building was incorporated into the gasworks complex by the early-20th century but does not appear to have undergone major alteration at this time.

5.4.2 The remains are described in order from north to south, then from west to east, and finally in chronological order as far as practicable.

Sub-octagonal structures

5.4.3 A handmade brick and grey lime mortar structure (510) was sub-octagonal in plan and was built on a concrete base (517, **Fig. 30**). North of sub-octagonal structure 510 was a second structure (511) forming approximately a quarter of an octagon in plan and constructed in the same materials, again built on a concrete base (522, not illustrated). This combination of materials is unusual. However, ash mortars were sometimes abandoned around the turn of the 19th/20th centuries, reverting back to lime mortar, and coinciding with early regular use of concrete. The structures (510 and 511) approximately correlate with two structures shown on the first edition twenty-five inch 1895 Ordnance Survey map (**Fig. 5**).

Gasholder

5.4.4 In the north-east of the site, the remains of a gasholder (gasometer; **Fig. 31**) depicted on the 1895 first edition twenty-five inch Ordnance Survey map (**Fig. 5**) were uncovered. The curving wall of the gasholder (536, 538, 592) comprised six skins of handmade brick headers bonded with clay. Rectangular concrete bases (537, 592) were incorporated into the wall, with iron pins at each corner of each base.

5.4.5 The remains of the gasholder were sealed by a layer of brownish red sand (593), overlain by black clinker (594), both perhaps contemporary with the demolition of the structure.

Office

5.4.6 The remains of a building fronting John Street correlate with the 1895 first edition twenty-five inch Ordnance Survey map (**Figs 5**, **19**, **21**, and **32**). The map labels an ‘Office’ in this area; it may be that this building was the labelled office.

5.4.7 The truncated wall of the earlier back-to-back housing fronting John Street (here 548) had been reused as a foundation for the possible office building. Further south, the suggestion that the walls of the back-to-back housing were used as foundations of later structures is supported by a single bed of black ash mortar preserved on the upper surface of lime mortared wall 561.

5.4.8 The lowest structure probably contemporary with the construction of this office was 686, a small base of machine brick and black ash mortar. This carried another structure (685) in the same materials and a single substantial sandstone flag (682). The purpose of structures 682, 685 and 686 (**Fig. 32**) is unknown. They were buried beneath later rough brick surface 551 (probably contemporary with the tram and bus depot) and had been partly inserted beneath earlier lime mortared wall 549 (comprising part of the remains of back-to-back housing).

5.4.9 A bedding layer of dark sandy silt (578) had been laid down prior to the construction of the possible office.

5.4.10 The walls of the possible office (204 = 559, 206 = 557, 543–545, 552–553, 556, 558 and 574) comprised black ash mortar and machine bricks.

5.4.11 A further wall (546; **Fig. 19**) comprised reused firebricks and black ash mortar. It may have been inserted during maintenance of a series of pipes and was associated with grey brown rubble backfill 585.

Weighbridge

5.4.12 A weighbridge (**Figs 33–35**) had been constructed within the former Henry Street/Jacques Street, probably in the late-19th- or early-20th-century on the basis that ash mortar had been used in its construction. The weighbridge is marked 'W.M. [weighing machine] on a twenty-five inch Ordnance Survey 1922 edition (compiled 1916; not reproduced). It was located in the entrance to the gasworks, to the north of the truncated end of Jacques Street. [Two examples of contemporary weighbridges have been excavated by the present author (Moreland *et al.* 2020; Tuck in press).]

5.4.13 A silt and sand levelling layer (749) and a four-skin handmade brick and lime mortar wall (736, not visible in plan) carried a rough sandstone block levelled with slate (735; not visible in plan). The frame of the weighbridge sat on this and comprised large sandstone blocks (577 = 737; **Fig. 5**), bound together with external iron fixings (one preserved, 725). The frame had originally carried a metal railing. A cast iron plate or bar (747; not visible in plan) was present on the east side of the weighbridge, where a handmade brick and lime mortar annexe (582 = 748) probably housed some of the mechanical equipment (see **Fig. 34**). This annexe had been backfilled with dark silty sand (749), presumably after the weighbridge was decommissioned. Overlying this were redeposited cobbles (584) and a single, large, sandstone block with a gully in one side (583; see **Fig. 35**), this *ex situ* and formerly part of the weighbridge frame.

5.4.14 The weighbridge would originally have included a metal bridge. This had been removed when the structure was decommissioned, and the weighbridge then filled with a surface of reused handmade bricks (some with traces of lime mortar) and cobbles laid in sand (568 = 724; **Figs 33–35**). The weighbridge had been subsequently truncated by a drain (595; **Figs 34–35**; probably accessed from inspection chamber 565 to the west; see **Fig. 6**); drain 595 contained a ceramic pipe. Handmade brick surface 567 (**Figs 33–35**) may have been the reinstatement of brick and cobble surface 568 following this truncation.

Area west of Henry/Jacques Street

5.4.15 A layer (673) of demolition material probably derived from the demolition of back-to-back housing. Large feature 678 may have been a demolition pit associated with the removal of the back-to-back housing. The pit (678) was 9.1 m long, 6.4 m wide and was filled with dark brown silt with inclusions of lime mortar and rubble (679). It was overlain by walls 573, 671 and 694–696 (see below).

5.4.16 In the centre west of the site was a concrete machine base with two iron pin fixings (589, **Fig. 36**). It was adjacent to two brick surfaces (587 and 590; **Fig. 36**) that may have been contemporary or later than the machine base.

5.4.17 Walls 559, 573, 664, 671 (**Fig. 37**) and 694–696 comprised handmade bricks and lime mortar. They formed the foundations of a narrow west to east aligned range. One element in this was a robust wall (694–696; **Fig. 27**) a total of eight skins wide (outer skins 695 and 696 were stretchers, the rest, 694, comprised headers). A fragment of a stone surface bonded with white crumbly lime mortar (676) survived adjacent to the south of the range (**Fig. 37**). A clay deposit (677) had been packed around the foundation of wall 573.

5.4.18 These structures do not correlate with the mapped back-to-back housing, especially as walls 573 and 671 extend across the former Union Street. Wall 573 correlates with the

southern wall of the gasworks depicted on the 1895 first edition twenty-five inch Ordnance Survey map (**Fig. 5**). This development may be contemporary with the truncation of Henry Street/Jacques Street as wall 573 is in line with the end of the truncated road.

5.4.19 A further stone kerb (690; **Fig. 26**) ran across the probable cart gate entrance from Henry Street/Jacques Street (see above). Kerb 690 contained a central groove with some lead fittings, perhaps to accommodate a gate. A small survival shows that the cart entrance was also floored with cobbles (692).

Later minor wall

5.4.20 A small (maximum 1.6 m long), frogged machine brick and ash mortar 'L'-shaped structure (689) was built close to the cart gate entrance and was probably a later addition. The materials suggest a late-19th to early-20th century date.

5.5 Phase 3: tram and bus depot

5.5.1 A twenty-five inch Ordnance Survey revision of 1934 (published 1936; **Fig. 6**) depicts a tram and bus depot occupying the site. The results from this phase have been roughly ordered in chronological order.

5.5.2 A demolition layer (214, 516 and 575) contained machine bricks and some synthetics (plastic) suggesting that it was the debris of demolition in the early 20th century in preparation for construction of the depot, rather than an earlier deposit.

5.5.3 The demolition material was sealed by rough surfaces of bricks and other rubble (112, 207, 520, 523, 535, 551, 554, 555, 560, 563, 569–571, 604 and 674; **Fig. 38**). One of these contexts (569) comprised four flag stones and an *ex situ* chamfered ashlar block probably laid on its side (**Fig. 39**). It is likely that these surfaces represent a temporary yard surface. The presence of machine brick amongst handmade brick and firebrick suggests that these surfaces derived from the rubble of the gasworks. Similar surfaces were seen across all areas of the site (including the former areas of the Wellington Bridge Mill, the gasworks and the area to the south of the gasworks), inferring that the surfaces were associated with a period when the whole site was occupied by a single entity, i.e. the tram and bus depot.

5.5.4 Two unusual structures (541 = 566 and 564; **Figs 6** and **40**) near the centre of the site comprised small, square, cobbles as well as possibly reused handmade bricks, stone and concrete laid out to create sub-circular arrangements. Structure 541 = 566 surrounded concrete drain 579 containing a vertical ceramic pipe (not illustrated). The concrete incorporated crushed brick inclusions and was of potentially early-20th-century date. The chronology of these structures is not precisely known; it may be that they were part of the depot.

5.5.5 Excavation revealed various concrete and metal stanchion bases (513, 524, 525, 572/672/740, 586, 643, 646 and 723; 723 not illustrated). These were probably steel rather than iron by this date. Stanchion 572/672/740 (**Fig. 41**) was recorded under three separate contexts: iron/steel (572), concrete (740) and a kerb of reused handmade bricks (672). The presence of the stanchions reveals that the depot was primarily a framed building. It had unfrogged machine brick and black ash mortar infill walls (508, 512, 531–533, 540, 603 and 759). Machine brick and black ash mortar wall 540 contained a slate damp course and had probably been replaced by concrete wall 528. A concrete buttress (519) supported wall 512.

5.5.6 The former depot was evidenced by concrete foundations (503 and 586, with 528 to the north; also 505, not illustrated) and concrete surfaces (212, 506 and 509) bedded on crushed brick (530) and demolition rubble (726). Surface 506 correlated with the interior of

the southern building of the depot; surface 509 correlated with the northern building. Parts of the brick walls of the depot (eg, 508) were built on these surfaces. An area of cobbles (504, 40 m x 18 m in plan) partially overlay concrete surface 509, primarily forming an exterior surface east of the depot but also extending into the northern building, which was probably a tram shed and accessed by a large opening. This cobble surface can be seen in a photograph of 24 March 1978 (SIA photograph 11746).

5.5.7 Ash-mortared drain inspection chambers were common (521, 526, 529, 539, 547, 562, 565, 602, 621, 632, 642, 644, 666 and 784; **Fig. 42**; 529 not illustrated). These were typically built of machine brick, but reused handmade brick and firebricks were also used. Inspection chamber 539 contained a pipe. Inspection chambers 602, 642, 644 and 666 were situated along drain 605 = 667; inspection chamber 565 was on drain 595; and inspection chamber 784 was on drain 782, confirming the interpretation that these were drainage inspection chambers.

5.5.8 Walls 531 and 532 enclosed a possible conduit for water/gas pipes (**Fig. 43**), one of which survived *in situ*. The south end of the conduit was blocked by structure 533.

5.6 Modern car parks

5.6.1 Demolition material including brick and concrete rubble, silts, sands and ashes (102, 104, 106–111, 208–211, 302, 712, 717, 727, 728 and 738) overlay the structural remains of the bus and tram depot. The layers probably primarily derive from demolition of the tram and bus depot in 1978, likely incorporating the reworked debris of previous phases of demolition. It is possible that some represents imported material.

5.6.2 Following this demolition, and until the time of excavation, the site was used as a car park.

5.6.3 Trench 1 was sealed by brownish grey silty sand topsoil (101). The south-west of the mitigation area was sealed by black silty clay topsoil (600) overlying a layer of hardcore (601). Other areas, including trenches 2 and 3, were sealed by the tarmac surface of the car park (201, 301, 501) bedded on layers of hardcore (202, 203, 301). Other parts of the site were sealed by a concrete surface (501).

5.6.4 Modern drainage cuts and other services truncated the archaeological remains. Some were given context numbers (e.g., 680 and 720).

5.6.5 To the north of the excavation area is the Heaton Lane multi-storey car park. The extant concrete piers of the car park were rapidly recorded (502).

6 FINDS EVIDENCE

6.1 Introduction

6.1.1 A relatively small assemblage of finds was recovered from the excavation, which augments a small quantity found during the evaluation of the site, which have already been reported on (Wessex Archaeology 2020). The assemblage is entirely of post-medieval/modern date.

Table 1 Finds totals by material type

Material	EVALUATION		EXCAVATION	
	No.	Wt. (g)	No.	Wt. (g)
Pottery	12	879	219	6145
Ceramic building material (CBM)	-	-	9	11,892

Fired clay	-	-	2	792
Clay tobacco pipe	8	24	31	88
Stone	-	-	4	187
Glass	35	610	41	3494
Slag	2	10	54	3996
Metalwork Copper alloy Iron Other metal	 9 11 -	 - - -	 1 15 5	 - - -
Wood	-	-	1	12
Animal bone	1	3	5	40
Shell	-	-	3	19

6.1.2 All finds have been quantified by material type within each context. Totals by material type (including the evaluation finds) are given in **Table 1**, and a summary of the excavation finds by context in **Table 2**. The report that follows discusses the finds from the excavation, with reference to the evaluation assemblage where appropriate. The statement of potential and further recommendations are based on the combined assemblage.

Table 2 Finds by context (number / weight in grammes)

Context	Description	Clay Pipe	Glass	Metal (No.)	Pottery	Slag	Other Finds
Evaluation (all)		8/24	35/610	20	12/879	2/10	1 animal bone
531	?Conduit			1	1/8		
533	?Conduit			2	1/7		1 wood
569	Rubble	2/5					
575	Demolition	1/3	2/17		8/341		
576	Demolition	1/5			2/28		
578	Bedding layer	2/2			16/171	4/1308	2 animal bone; 1 shell
585	Pipe trench backfill			3	5/14	1/75	
596	Drain				5/135		
597	Pre-construction levelling	1/3			3/27		2 shell
598	Pre-construction levelling	1/1			12/138		
655	Pipe		1/8		8/481		
660	Pre-construction levelling			4	7/117		
661	Pre-construction levelling	1/4			12/74	2/90	
663	Pre-construction levelling				1/10		
668	Drain backfill	2/8			1/4		
673	Demolition	1/6			11/52		
679	Demolition				13/886		
684	Cobbled street			1			

Context	Description	Clay Pipe	Glass	Metal (No.)	Pottery	Slag	Other Finds
704	Pre-construction levelling	2/6			4/86		
707	Pre-construction levelling	1/2			1/1	24/139	
708	Pre-construction levelling				1/1		
712	Demolition			2	3/309	2/141	3 animal bone; 3 stone
718	?Pre-construction levelling	2/7			6/12		
725	Metal band			3			
731	Mill floor						1 CBM
738	Demolition		3/358				2 CBM
750	Pre-construction levelling				17/71		
754	Drain backfill	1/1		1	6/96		
757	Street surface	1/1			4/7		
758	Pre-construction levelling	4/18			11/1573		
761	Pre-construction levelling				7/1041		
769	Silting in drain					18/802	
786	Linear feature				6/13		
788	Drain backfill	3/7		2	9/52		1 stone
792	Pre-construction levelling				7/62		
799	Pipe trench	1/1			9/26		
800	Unstrat	2/5			6/78		
803	Unstrat				2/1		
805	Unstrat		7/65				
807	Unstrat				13/8		
808	Unstrat		27/3039				
809	Unstrat			1			
812	Unstrat	2/3					
816	Unstrat				1/215		
830	Unstrat		1/7			3/1441	
831	Unstrat						1 CBM
-	Unstrat			1			2 CBM
Sub-total excavation		*31/88*	*41/3494*	*21*	*219/6145*	*54/3996*	
Total		**39/112**	**76/4104**	**41**	**231/7024**	**56/4006**	

6.2 Pottery

6.2.1 The pottery assemblage amounts to 219 sherds, weighing 6145 g. All sherds are post-medieval/modern. The condition is fair to good; sherds have survived in relatively fresh condition, but the assemblage is fragmentary. A number of conjoining sherds were noted, but these are exclusively on fresh breaks. The mean sherd weight overall is 28.1 g.

6.2.2 The assemblage has been quantified (sherd count and weight) by ware type within each context, using accepted local/regional nomenclature (e.g. glazed redwares, feldspathic-glazed stonewares). Vessel forms have been noted where identifiable, as well as the presence of decoration and other salient features. Estimated Vessel Equivalents (EVEs) have not been used as the number of measurable rims is low; as an alternative means of quantification, the Estimated Number of Vessels (ENV) has been used, counting each non-joining sherd as a separate vessel except where there is a high probability of a context containing same-vessel sherds. The total ENV is 198. The level of recording accords with the 'basic record' advocated for the purpose of characterising an assemblage rapidly (Barclay *et al.* 2016, section 2.4.5). The pottery is listed by context in **Appendix 3**, **Table 5**.

6.2.3 The assemblage contains a mix of utilitarian earthenware bowls with the occasional jar (redwares, mostly black-glazed), stonewares (salt- and feldspathic-glazed containers) and refined wares (creamware, pearlware, whiteware, yellow ware). There are both tea-/tablewares, some with transfer-printed decoration and some with hand-painted decoration (plates, saucers, cups etc), as well as kitchen wares (bowls and jugs with slip-banded decoration).

6.2.4 One of the stoneware containers, a flagon from pipe trench 655, carries the stamped mark of Charles Barker of Stockport, presumably a local wine and spirits merchant. A rapid search for Charles Barker in local trade directories reveals no appearances in 1853, 1874, 1896 or 1902, although a John Barker in a similar trade is included in the directories for 1853 and 1874. A refined whiteware preserve jar from the evaluation bears the mark of William P. Hartley ('Not Genuine Unless Bearing Wm P Hartley's Label'), a mark that dates to the 1920s (Jarrett *et al*. 2016, fig 8, g and h).

6.2.5 While some of the glazed redwares and stoneware could date as early as the 18th century, the likelihood is that they are contemporaneous with the refined wares and can be dated as 19th-/20th-century. In terms of providing dating for the site, quantities throughout are very small, limiting the confidence that can be placed on the pottery as a primary dating tool. However, it can be observed that the character of the pottery appears the same more-or-less throughout the stratigraphic sequence, from pre-construction levelling onwards. Contexts invariably produced both glazed earthenwares and refined wares, suggesting a date no earlier than the 19th century. In the sequence exposed beneath the housing in between John Street and Union Street, layer 707 (the earliest layer excavated) produced a single tiny sherd of black-glazed redware, but the absence of anything later here cannot necessarily be taken as confirmatory of a relatively early date in the ceramic sequence.

6.3 Ceramic building material

6.3.1 Six pieces of ceramic building material were recovered. Five of these are refractory bricks. Three of them (one from brick surface 731 and two from demolition layer 738) are of similar form, rectangular with one rounded end (almost bull-nosed but slightly irregular). All three bricks were found within the area of Wellington Bridge Mill, and in both cases close to boiler-related structures. It is likely that the brick from surface 731 had been reused from its original function (the mix of flooring materials there suggested *ad hoc* use), and all three could have been used, for example, in a sill.

6.3.2 The other two refractory fragments were found unstratified, possibly also in the area of the mill, and conjoin to form a large rectangular block with an asymmetrically angled top. The shape suggests use as a capping or coping brick.

6.3.3 The sixth piece of CBM is an unstratified hard-fired, shallow brick (thickness 37 mm), and was possibly a paving block.

6.4 Glass

6.4.1 Forty-one sherds of glass were recovered during the excavation, comprising fragments of window glass and vessels. It is likely that the glass is from the 19th and 20th centuries. All is of post-medieval/modern date.

6.4.2 The vessel glass appears to consist entirely of containers (bottles and possibly jars). Most of these are probably beverage bottles, and this includes the group of three complete bottles and 24 fragments from a minimum of six further bottles, all found unstratified. Two of the complete bottles plus two fragmentary bottles are marked as manufactured for John Grundy of Stockport, while the third complete bottle and one fragmentary bottle were manufactured for W. P. Stafford of Denton. John Grundy is listed as a mineral water manufacturer in Kelly's trade directory for 1902. William Proctor Stafford was in business as a mineral water bottler by 1891 and a mineral water manufacturer by 1901 (Whitehead 2003–2022). Bottle necks found in this group include three with internal screw thread closures (the internal screw closure was invented in 1872) and two with crown closures (invented in 1892). Other containers include two bottle necks from smaller bottles, possibly for condiments.

6.5 Metalwork

6.5.1 The metalwork appears to consist mostly of structural and other fittings, including nails and bolts, pipework, steel wire cable and a bracket. Several small fittings are of uncertain function. Some of the metalwork was found in the area of Wellington Bridge Mill and could be associated with activity there, but others were found in pre-construction levelling deposits. There is nothing here that can be dated earlier than the 19th century.

6.6 Other finds

6.6.1 Other finds include very small quantities of animal bone (cattle and sheep), stone (three fragments roofing slate, one small fragment of possible building material), wood (small lath fragment), shell (three oyster shell). None of these finds are closely datable, but all would be consistent with a post-medieval/modern date.

7 ENVIRONMENTAL EVIDENCE

7.1 Introduction

7.1.1 One bulk sediment sample was taken from undated layer 707, possibly representing the disturbed upper surface of the natural geology. It was processed for the recovery and assessment of environmental evidence. No samples were collected during the trial trench evaluation.

7.2 Aims and methods

7.2.1 The aim of this assessment is to determine the nature and significance of the environmental remains preserved at the site, and their potential to address the project aims. This assessment has been undertaken in accordance with Historic England's guidelines (English Heritage 2011).

7.2.2 The size of the sample was 32 litres and it was pre-soaked in a solution of water and hydrogen peroxide to help break up the clayey sediment. The sample was processed by standard flotation methods on a Siraf-type flotation tank; the flot retained on a 0.25 mm mesh, residue fractionated into 4 mm and 1 mm fractions. The coarse fractions of the residue (>4 mm) were sorted by eye for artefactual and environmental remains and discarded. The environmental material extracted from the residue was added to the flot. The fine residue fractions and the flot were scanned and sorted using a Leica MS5 stereomicroscope at magnifications of up to x40.

7.2.3 Different potential indicators of bioturbation were considered, including the percentage of roots, modern seeds, modern insects, earthworm egg capsules, and the invasive burrowing blind snail (*Cecilioides acicula*). Remains were recorded semi-quantitatively on an abundance scale: C = <5 ('Trace'), B = 5–10 ('Rare'), A = 10–30 ('Occasional'), A* = 30–100 ('Common'), A** = 100–500 ('Abundant'), A*** = >500 ('Very abundant'/Exceptional').

7.3 Results

7.3.1 The results are presented in **Appendix 4, Table 6**.

7.3.2 The flot was 180 ml. Potential indicators of bioturbation are present in low quantities, indicating some possibility of contamination from later intrusive material (e.g., abundant modern roots).

7.3.3 The sample predominantly consisted of highly fragmented clinker/cinder, small fragments of coal, and fuel ash slag. The environmental evidence comprised small quantities of wood charcoal in generally poor condition. No other environmental evidence was preserved.

7.4 Discussion

7.4.1 The sample contained very limited environmental evidence. The abundant remains of clinker/cinder and coal, together with some charcoal, is strongly indicative of fuel waste. This material is likely to be of later medieval or post-medieval date since coal became widely used as a fuel source in these periods (Claughton *et al*. 2016). The resulting fuel waste was often incorporated or re-worked into levelling deposits in urban areas (MacBride 2013). No evidence of charred cereal remains, suggestive of agricultural activities taking place in the area, were recovered.

8 STATEMENT OF POTENTIAL

8.1 Stratigraphic potential

8.1.1 A quantification of the site archive is provided in the storage and curation section below.

8.1.2 All handwritten and drawn records from both the trial trench evaluation and the mitigation excavation have been collated, checked for consistency and stratigraphic relationships. Key data has been transcribed into a database, which can be used and updated during any future work.

8.1.3 The excavation records have established the basis for the site narrative, which has been enhanced by correlation of the structural remains with historic maps, and by phasing based on the typology of structural materials. As is typical of industrial sites, understanding of the stratigraphic narrative has been somewhat hampered as the deposit sequence comprises primarily demolition and levelling deposits ('made ground'), potentially including much reworked material. The chronology of artefactual assemblages recovered from these

deposits was not of sufficient granularity to inform interpretation of phasing of the site beyond a broad attribution to the 19th/20th centuries.

8.1.4 The results were sufficient to address the aims and objectives as laid out in the WSI (WSP 2020). In summary, the project specific research objectives have been addressed with the following results. The extent of the Wellington Bridge Mill and worker's housing was consistent with that depicted on the 1851 Ordnance Survey town plan. Survival was variable, ranging from generally absent near the former Union Street to limited to the base of walls and similar structures such as in the area of the Wellington Bridge Mill. There was no evidence for earlier use of the site. The impact of development has been mitigated through preservation by record.

8.1.5 The North West Regional Research Framework (Research Frameworks 2022) contains questions, such as 'Ind58: How have industrial buildings adapted to new technology and processes?' to which the excavation had the potential to contribute. However, the results of the archaeological work do not directly significantly advance understanding of any area highlighted by the research framework. In the case of question Ind58, the results did not contain any significant information about the technologies or processes used at the Wellington Bridge Mill.

8.1.6 The results of the excavation do have some potential to contribute towards future synthetic regional studies. Some of this potential is highlighted by the research framework, e.g. in the questions 'Ind21: How did industrial period towns affect pre-existing historic landscape?' 'Ind22: How can we take forward out understanding of the impact of industrialisation on the working class and their living conditions?' 'Ind40: How well do we understand the historic development of urban transport infrastructure?' (Relevant to the roads accessing worker's housing, and perhaps the weighbridge.) Ind62: What are the key themes relating to the technology of construction and how can we record them?' 'Ind100: How do we capture the process of industrialisation?' The development and expansion of the gasworks provides some related information to inform 'Ind25: How do institutional buildings (e.g. prisons, asylums, workhouses, hospitals etc.) develop during this period and where are significant extant examples?' and 'Ind89: How have the expanding public utilities impacted upon development, particularly in relation to waste management?

8.1.7 These questions are too broad to be addressed directly as part of the present project, however dissemination will make the results available for future study. This dissemination should take the form of publication in an appropriate journal, as well as the supply of data to the HER and to the relevant archive repositories (the local museum and the Archaeology Data Service).

8.1.8 The preservation of archaeological remains (structures, features and deposits) was sufficient to interpret the site narrative with a sufficient (though not perfect) level of security. Iterative demolition events that occurred as the function of the site developed had impacted the preservation of remains. Truncated remains did, however, survive from each historically attested phase of occupation. There is little potential for further work to enhance interpretation.

8.1.9 The stratigraphic results from the excavation have been interpreted to the maximum degree possible. There is no further potential for stratigraphic analysis.

8.2 Finds potential

8.2.1 The finds assemblage is relatively small and entirely of post-medieval/modern date, probably confined to the range of 19th-/20th-century. The assemblage includes a mixture

of domestic refuse (pottery, vessel glass, clay tobacco pipe, animal bone, oyster shell) and structural debris (ceramic and stone building material, window glass). Some at least of the metal fittings could relate to the use of the Wellington Bridge Mill but are not sufficiently diagnostic to specific process(es)/structures. The domestic refuse probably relates to the occupation of terraced workers' housing on the site. However, few finds, derived from well stratified contexts, most either deriving from demolition and levelling layers, or occurring unstratified. Primary dating evidence (pottery) highlighted no discernible chronological difference between pre-construction levelling and subsequent deposits. The finds have broadly confirmed the nature and date range of activity on the site but have limited further research potential. The finds do not have the potential to significantly contribute to research questions identified in the North West Research Framework (Research Frameworks 2022).

8.3 Environmental potential

8.3.1 The assemblage has little potential and requires no further analysis.

8.4 Radiocarbon potential

8.4.1 No material suitable for radiocarbon dating was recovered.

8.5 Documentary records

8.5.1 Comparanda for the Wellington Bridge Mill, the worker's housing, the gasworks and the bus and tram depot will be sought to inform an updated interpretation of the results. The North West region was integral to the industrial revolution, with textile production playing a particularly important role.

8.6 Summary of potential

8.6.1 There is little potential for further work analysing any of the categories of data comprising the results of the archaeological investigation. The only further analysis proposed is to search for comparable sites to enhance interpretation of the excavation results.

9 UPDATED PROJECT DESIGN

9.1 Updated project aims

9.1.1 The aims of the project have already been wholly met, except for the need to disseminate the results. Publication in a local journal would be commensurate with the local significance of the remains. Deposition of the site archive with the relevant repositories (a suitable local museum and the Archaeology Data Service) is also necessary. The local HER will be informed of the results of the work.

9.1.2 In addition, comparable sites will the sought to enhance interpretation of the excavation results.

9.1.3 The updated project aims will be:

- to search for comparanda for the results from the archaeological excavation and evaluation; and,
- to disseminate the results of the archaeological excavation and evaluation.

9.2 Stratigraphic evidence – recommendations for analysis

9.2.1 The stratigraphic evidence will sustain no further analysis.

9.3 Finds evidence – recommendations for analysis

9.3.1 No further analysis is recommended for any of the finds, and none warrant publication, although relevant details of the finds may be included in any published stratigraphic narrative. No illustration is necessary. See paragraph 10.3.2. for the finds selection and discard policy.

9.4 Environmental evidence – recommendations for analysis

9.4.1 The assemblage requires no further analysis. Paragraph 10.3.3. addresses the retention/discard of the environmental material.

9.5 Radiocarbon evidence – recommendations for analysis

9.5.1 No radiocarbon dating is possible.

9.6 Summary of recommendations for analysis

9.6.1 Comparanda will be sought for the results of the archaeological excavation, including the cotton mill, worker's housing, gasworks and bus and tram depot. A journal article and potentially a final archive report will be produced and the site archive deposited with suitable repositories.

9.7 Proposal for archive report

9.7.1 It is anticipated that GMAAS will require the preparation of an archive report including the phasing of the cotton mill and gasworks, comparanda for the results of the excavation and the placing of the findings in their archaeological and historical context. Following confirmation of this requirement, and of its scope and format, a formal task list will be drawn up informing the work required to produce this deliverable.

9.8 Proposal for publication

9.8.1 It is proposed that a journal article is prepared summarising the results and interpretation presented in this report.

9.8.2 *Industrial Archaeology Review* have indicated an interest in carrying the piece.

Provisional synopsis of journal publication

Working title: Heaton Lane, Stockport: a palimpsest of 19th-century and 20th-centuy development. The Wellington Bridge Mill cotton mill, workers' housing, a gasworks and a tram and bus depot.

by Ashley Tuck

Introduction	500 words
Integrated narrative combining stratigraphic and documentary information, supplemented by existing finds and environmental assessment as appropriate	5000 words
Discussion	500 words

Total: approximately 6000 words, 4 figures, 6 plates, 0 tables

9.9 Programme for publication

9.9.1 Production of a publication will commence when this document and the proposals therein have been approved by the Archaeological Advisor for Greater Manchester Archaeological Advisory Service, on behalf of the LPA, and the work has been commissioned in full by WSP on behalf of Transport for Greater Manchester and Stockport Metropolitan Borough Council.

9.9.2 Typically, the publication programme for a journal article will take around nine months. A project-specific programme will be developed and agreed at the time of commission.

9.10 Personnel and resources

9.10.1 The following Wessex Archaeology core staff are scheduled to undertake the work as outlined in the task list for post-excavation analysis and publication (**Table 3**).

Table 3 Task list

Task no.	Task description	Days	Staff
Management and support			
01	Project management	1	A Tuck
02	Project monitor and QA	1	R Clarke
03	Publication/production management	1	R Clarke
Report compilation			
04	Research to find comparanda	4	A Tuck
05	Introduction and background	0.5	A Tuck
06	Compile and integrate report	3	A Tuck
07	Discussion	1	A Tuck
08	Bibliography	0.5	A Tuck
09	Captions (figures, plates and tables)	0.5	A Tuck
10	Prepare brief for illustrations	0.5	A Tuck
11	Prepare illustrations	3	R Goller
12	Edit report	2 1	A Tuck R Goller
13	Review report	2	R Clarke
14	Revise report following journal review	2 1	A Tuck R Goller
15	Check proofs	1 1	A Tuck R Goller
16	Journal publication cost	ext.	
Archiving			
17	Finalisation/implementation of selection strategy	1	J Irwin
18	Physical archive preparation	1	J Irwin
19	Physical archive deposition	ext.	
20	Digital archive preparation	2	T Burt
21	Digital archive deposition	ext.	
22	Box storage grant	ext.	

9.11 Management structure

9.11.1 The team will be headed by a Project Manager, who will assume ultimate responsibility for the execution of the project as outlined in the Updated Project Design. The Project manager

will ensure performance targets, be they academic or budgetary, are met within the agreed timetable.

9.11.2 The Project Manager may delegate specific aspects of the project to other key staff, who will supervise others and have a direct input into the compilation of the report. They may also liaise with external consultants and specialists who are contributing to the publication, and the recipient museum of the project archive.

9.11.3 The Project Manager will be assisted by the Senior Research Manager and the Senior Publications Manager, who will help to ensure that the report meets internal quality standards as defined in Wessex Archaeology's guidelines.

10 STORAGE AND CURATION

10.1 Museum

10.1.1 The archive resulting from the excavation is currently held at the offices of Wessex Archaeology in Sheffield. Stockport Local Heritage Library and Archives has agreed in principle to accept the archive on completion of the project, under an accession code to be determined. Deposition of any finds with the museum will only be carried out with the full written agreement of the landowner to transfer title of all finds to the museum.

10.2 Preparation of the archive

10.2.1 The archive, which includes paper records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Stockport Local Heritage Library and Archives, and in general following nationally recommended guidelines (SMA 1995; CIfA 2020c; Brown 2011; ADS 2013).

10.2.2 All archive elements are marked with the accession code, and a full index will be prepared. The physical archive is quantified in **Table 4** below.

Table 4 Archive quantification

Item	Number
Context indices	12
Context records	270
Graphics registers	2
Plan drawings	13
Section drawings	14
Digital photographs	1382
Artefacts	468
Environmental samples	1

10.2.3 The physical archive is currently stored in:

- 3 cardboard boxes of artefacts and ecofacts, ordered by material type
- 1 file of paper records and A3/A4 graphics

10.3 Selection policy

10.3.1 Wessex Archaeology follows national guidelines on selection and retention (SMA 1993; Brown 2011, section 4). In accordance with these, and any specific guidance prepared by the museum, a process of selection and retention will be followed so that only those artefacts or ecofacts that are considered to have potential for future study will be retained. The selection policy given here has been proposed by finds and environmental specialists and will be agreed with the museum and the Archaeological Advisor for Greater Manchester Archaeological Advisory Service prior to implementation. It will be fully documented in the project archive.

Finds

10.3.2 Given the relatively small quantity of finds recorded, their nature and date range (commonly occurring types of recent date) and provenance (largely redeposited in demolition or backfill layers), retention for long-term curation is not warranted. These finds are considered to have limited archaeological significance and no further research potential.

Environmental material

10.3.3 The assessed flot has no further potential and should be discarded. The residue was discarded after sorting.

10.4 Security copy

10.4.1 In line with current best practice (e.g. Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

10.5 OASIS

10.5.1 An OASIS (online access to the index of archaeological investigations) record (http://oasis.ac.uk/pages/wiki/Main) has been initiated, with key fields completed (**Appendix 5**). A .pdf version of the final report will be submitted following approval by the Archaeological Advisor for Greater Manchester Archaeological Advisory Service. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service (ADS) ArchSearch catalogue.

11 COPYRIGHT

11.1 Archive and report copyright

11.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations 2003*. In some instances, certain regional museums may require absolute transfer of copyright, rather than a licence; this should be dealt with on a case-by-case basis.

11.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research or development control within the planning process.

11.2 Third party data copyright

11.2.1 This document and the project archive may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of *the Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of such material

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APPENDICES

Appendix 1: Background research

Introduction

11.2.2 This appendix comprises unedited background research undertaken during compilation of this report.

11.2.3 The site is located in the Heaton Norris area (often abbreviated 'H.N.' in primary sources). In 1835 Heaton Norris became part of the County Borough of Stockport. Although most of the County Borough was within Cheshire, the area of Heaton Norris continued to be both part of Lancashire and Stockport borough until 1889. Today the whole of Stockport forms part of Greater Manchester.

Wellington Bridge Mill

Overview

11.2.4 Part of the former Wellington Bridge Mill stood on the western third of the site (**Fig. 2**). It was a cotton mill, producing printed calico material in vast quantities. The main mill hall was to the east with the engine and boiler rooms to the south (WSP 2020).

11.2.5 The Wellington Bridge Mill should not be confused with the extant nearby Wellington Mill, also known as 'Hat Works', and which currently houses a museum in part of the building. Both mills may derive their names from the nearby Wellington Road, a major thoroughfare in Stockport.

11.2.6 The Wellington Bridge Mill complex comprised a series of buildings arranged around a courtyard. The presence of buildings of different design suggests a phased development of the works, although the available chronological information suggests that this phased development was rapid, probably confined to the 1830s, or a few years either side.

11.2.7 In the east of the complex, the main mill hall was aligned north to south adjacent to John Street (e.g. **Fig. 3**). It is likely that this building was the focus of the mill complex as it is this building that is labelled on historic maps. It was probably the main spinning hall. Photographs held by Stockport Image Archive (see below for detail) reveal that this building was of five storeys, with the lowest floor partly underground. An 'Engine Ho. [house]' is labelled in the south end of this range on historic maps (**Fig. 3**).

11.2.8 In the south, adjacent to Heaton Lane, there were further substantial buildings, comprising a six-storey range within the area of the site, and more buildings including a four-storey range further west. The six-storey range is labelled on historic maps as containing 'Boilers' (**Fig. 3**).

11.2.9 Further four- and three-storey ranges in the west and north of the complex are not directly relevant to the excavation results but were likely associated buildings.

11.2.10 Trade directories and other sources reveal that the mill was owned by James Wilkinson, passing after his death to his son Samuel Wright Wilkinson. At the time of its demolition, the Wellington Bridge Mill was referred to as 'Wilkinson's Mill'.

Chronological references 1841–1853

11.2.11 Pigot and Co.'s directory for 1828–9 (pp 56–57) lists multiple cotton manufacturers and spinners on Heaton Lane, however none of these can be positively identified with the

Wellington Bridge Mill. It is probable that the Wellington Bridge Mill had not yet been constructed at this time.

11.2.12 The 1841 census records James Wilkinson as a cotton manufacturer, indicating that either the Wellington Bridge Mill had already been constructed in 1841, or that he had another cotton manufacturing concern elsewhere at this time. This individual can be securely identified with the owner of the mill due to his address on Greek Street, a short distance south of the mill in Stockport proper.

11.2.13 The earliest Ordnance Survey maps show that the mill complex had already assumed its final form by the mid-19th century. The earliest of these maps was a six-inch first edition compiled in 1845 (issued 1848; not reproduced). A larger scale Ordnance Survey town plan from 1851 is partly reproduced as **Fig. 3**. Bagshaw's 1850 directory (p 304) lists James Wilkinson and Son at the Wellington Bridge Mill. In addition, it reveals that 'Jas. Wilkinson & Son, cotton spnrs.' resided in Greek Street (*ibid.*, 296).

11.2.14 The 1851 census records James Wilkinson, cotton manufacturer, residing at Apsley Cottage, Greek Street. Apsley Cottage, referred to as 4 Greek Street in later records, is labelled on an 1874 first edition twenty-five inch Ordnance Survey map (not reproduced). The area has now been redeveloped, but Apsley Cottage was then a large property opposite the Free Grammar School and set amongst similar large houses (but unlabelled on the map and therefore perhaps less prominent).

11.2.15 Three years after Bagshaw's 1850 directory, Whellan's directory of 1853 (p 795) does not specifically identify Wellington Bridge Mill but lists 'Wilkinson Saml. Wright, Heaton ln. Heaton Norris' as a cotton spinner. Census records (see below) confirm that this is the son of James Wilkinson. Whellan's Directory (1853, 788) continues to list James Wilkinson as resident at 4 Greek Street. James Wilkinson, therefore, appears to have retired between 1851 and 1853 (probably aged between 68 and 70). This is consistent with the 1861 census that records him as having 'Retired from business'.

11.2.16 Whellan's directory (1853, 788) also reveals that the firm at this time had a warehouse at 4 Milk Street, Manchester. This is confirmed in further directories of Manchester (e.g. Slater 1847, 21).

James Wilkinson genealogical data

11.2.17 James Wilkinson was born in 1783 (or up to 1786) in Leeds. Details of his early life could not be traced; this particular James Wilkinson could not be definitively identified among records from Leeds. The 1841 census reveals that an Elizabeth lived with James but does not record their marital status. Birth records for Samuel, James' son (see below), give Elizabeth as his mother, strongly suggesting marriage. A marriage between a James Wilkinson (already a widower) and an Elizabeth Potter in the parish of St. Mary's, Stockport (not necessarily at the Anglican church) on 7 Dec 1820 would accommodate the birth of Samuel in 1822. However, as Samuel was born in Portswood (Southampton), it is hard to be definitive about the middle of James Wilkinson's life and this marriage is not certainly that of the owner of the Wellington Bridge Mill.

11.2.18 An Elizabeth Wilkinson was buried on 27 May 1842 aged 64. She was buried at Tiviot Dale Methodist Church, Heaton Norris, Stockport, not far from the Wellington Bridge Mill. This was the same place James Wilkinson would be buried 27 years later. The owner of the Wellington Bridge Mill was therefore a nonconformist. In their methodism, the Wilkinson family probably experienced religion side by side with some of workers they employed.

11.2.19 Two options exist within the parish of St. Mary's, Stockport that may be James Wilkinson's next marriage (probably at least his third). A James Wilkinson married Ann Fernley or Fernely on the 2 October 1845, and (presumably) another James Wilkinson married Ann or Anne Keighley on 28 June 1846. Subsequent census records record Ann as the wife of the Wellington Bridge Mill owner; she was born 1783–1786 in Manchester.

11.2.20 By 1861 James Wilkinson (aged 78) had moved to 8 Wellington Road. This property could not be accurately traced using the consulted resources; however, the modern numbering system would probably place this property north of the Mersey close to the junction with Heaton Lane (i.e. in Heaton Norris close to the Wellington Bridge Mill).

11.2.21 James and Ann Wilkinson could not be identified among the census records for 1871 in Stockport. This is because Ann Wilkinson was buried on the 29 October 1863 (aged 80) and James Wilkinson was buried six years later on 14 October 1869 (aged 86). As with Elizabeth, they were both buried at Tiviot Dale Methodist Church close to their residence at 8 Wellington Road. He was buried in a vault costing £9 10s, suggesting a person of means consistent with his status as a mill owner.

Samuel Wright Wilkinson genealogical data and chronological references 1874–1891

11.2.22 One son, Samuel Wright (born 1822) lived with James in 1841 and 1851. It is not recorded if Samuel's baptism was nonconformist. Samuel's name is absent from school records; he may have been privately educated. In 1841 and 1851, Samuel was also employed as a cotton manufacturer and he is almost certainly the '& Son' listed by Bagshaw in 1850. Morris & Co.'s directory of 1874 confirms Samuel Wright Wilkinson's link to the Wellington Bridge Mill. The directory (Morris & Co. 1874, 650) reveals that Samuel Wilkinson remained at 4 Greek Street after his father had moved to 8 Wellington Road.

11.2.23 The 1861 census also records that 'Sm Wilkinson' was resident at Apsley Cottage, Greek Street (incorrectly transcribed as 'William Wilkinson' on the digitised version of the census; other errors are present in the transcription of this entry). Both Samuel Wilkinson and Apsley Cottage/4 Greek Street are missing from the 1871 census; perhaps the census taker struggled to gain access, or the family was away. They appear again in 1881; little had changed except the passage of time. The 1861 and 1881 censuses both state that Samuel Wilkinson 'employed 300 hands', revealing the scale of the Wellington Bridge Mill operation. Samuel Wright Wilkinson remained unmarried in 1881 aged 59.

11.2.24 Samuel Wright Wilkinson was in charge of the 'Heaton Lane Mill' in 1891 (Cotton Spinners & Manufacturer's Directory 1891, 193; Grace's Guide). This is presumably a reference to the Wellington Bridge Mill, although other mills were present on the lane. There were 17,000 spindles producing '6/36 extra hard twist' (Cotton Spinners & Manufacturer's Directory 1891, 193). The census of that year for 4 Greek Street records (in addition to Samuel) Samuel's nephew and niece Charles E. and Emma, both apparently single and in their 40s (it may be that they were in fact married but as visitors incorrectly recorded under a strict interpretation of the census methodology). Charles E. may have been Samuel's protégé as both are listed with the same occupation: 'Cotton spinner'.

11.2.25 Samuel Wright Wilkinson was buried on 17 October 1900. Like his father, mother and step-mother he was interred at Tiviot Dale Methodist Church. He too therefore probably lived a life of religious nonconformity. The Stockport Advertiser contains an obituary of a Colonel Wilkinson in 1900, if this is the same individual it suggests that Samuel Wright Wilkinson had a military career (Turner n.d.).

11.2.26 There were two servants listed on each of the Wilkinson census returns, under both James and Samuel and at both addresses. All of the servants were female and generally in their 20s. Some were identified as cooks. None of the servants' names appear on more than one census, suggesting a high turnover of staff who may have had no particular loyalty to the family.

11.2.27 A second prominent Samuel Wright Wilkinson, a relative of the portrait artist Charles Allen Du Val, also lived in the Lancashire/Cheshire area in the late-19th- and early-20th centuries.

Empty mill

11.2.28 It may be that activity at the mill was wound up around the time of Samuel's death. The house at 4 Greek Street (and Charles E. and Emma Wilkinson) are again absent from the 1901 census. By 1911 a Scottish Doctor of Medicine, Robert Alexander Murray, had taken up residence there. Neither Kelly's 1902 or 1914 directories contain a mention of the Wellington Bridge Mill, nor the 'Heaton Lane Mill', nor of any member of the Wilkinson family resident at Greek Street. Perhaps the inheritance of the operation was not simple following the childless Samuel's death. Perhaps the aging patriarch had not kept the mill in good order in the later years of his life. Perhaps Charles E. inherited the mill and was able to make a break, closing down the operation and transferring any liquid capital elsewhere.

11.2.29 The twenty-five inch Ordnance Survey edition of 1910 (revised 1907, published 1932; not reproduced) shows that the Wellington Bridge Mill was still extant at this date, but that it had been subsumed within the gasworks.

11.2.30 The mill was photographed by the borough surveyor in July 1930 and attributed as 'Wilkinson's Mill'. Part of the south elevation (fronting Heaton Lane) was captured (Stockport Image Archive [SIA], photograph 41492; images not reproduced here). It shows the six-storey range in detail, with a four-storey range in the background. Each floor of the six-storey range had similar plain windows with stone sills and slightly arched brick lintels. The ground floor windows had larger constituent panes of glass (nine per window), with the other floors containing 49 (7 x 7) smaller panes each, opening as a sash. Boilers would have sat behind the ground floor windows.

11.2.31 The rear (north elevation) of these buildings is shown on SIA photograph 41494.The four-storey building contained a probable winching position with access to each floor, surmounted by a small pediment. A further winching position was present at the rear of the six-storey building, but with access to only the lower four floors. The rear ground floor was accessed by two large openings with stone arches. These correlate with areas that were open on the ground floor as indicated on historic maps (e.g., **Fig. 3**). West of the four-storey building was another brick building with angled walls, polygonal in plan in the rear.

11.2.32 The west elevation of the main east range is shown on SIA photograph 41497, which reveals the presence of a six-storey tower, taller than the adjacent main range that was of five storeys (one semi-subterranean). This tower can be seen in plan on historic maps. A winching position is also visible, as is a two-storey window/doorway accessing the range in the south where maps indicate an engine house. A cart with wooden wheels sits in a cobblestone courtyard.

11.2.33 SIA photograph 41502 probably shows part of the east elevation of the main north to south aligned part of the mill. In the hazy distance is a chimney shown on historic maps and better captured on other photographs described below. A gate may mark the entrance to the former John Street. The presence of some buddleia plants and general debris suggest that

the complex is unmaintained. SIA photograph 41500 shows the same elevation at a distance.

11.2.34 A minor outbuilding adjacent to the railway viaduct and with a distinctive circular window is shown on SIA photograph 41495, and plain north ranges (all beyond the site boundaries) are shown on SIA photographs 41496 and 41498.

11.2.35 Demolition was underway on 18 March 1931, when it was captured by SIA photographs 41485–9. These show piles of timber and brick rubble. The photographs include another view (41485) of the rear of the six-storey building fronting Heaton Lane, showing the round sandstone arches and winching position, as well as part of the partially demolished main east range, of which only the most southern portion (the engine house) remains standing. Another photograph (41487) shows a dilapidated timber floor within a partially-demolished building. It might be the first floor of the main east range. Little detail is visible except the chamfered opening of a window, perhaps facing east. Photograph 41488 may show this same floor with more timbers removed; the floor was supported in part by metal (cast iron?) piers. Photograph 41489 is the reverse angle of 41485, taken from the area of the former John Street looking south-west. The same southern part of the main east range is not yet demolished and the east elevation of the six-storey building fronting Heaton Lane can be seen. This steps out slightly in plan, consistent with historic maps and the excavation results (see below). The same chimney visible on SIA photograph 41502 is shown more clearly on 41489.

11.2.36 Demolition was still underway in 1932, when a photograph (SIA 35972) shows the windows and roof removed from the six-storey building adjacent to Heaton Lane. The photograph is labelled ‘Site of New Garage. Demolition of Wilkinson’s Mill.’

11.2.37 A twenty-five inch Ordnance Survey revision of 1934 (published 1936; not reproduced) shows that the mill building had been demolished.

11.2.38 A further photograph (SIA 21832) claims to show the Wellington Bridge Mill but is inconsistent with other photographs, showing a building not depicted in any of the other images. The date of 21832 (recorded as ‘c.1960s’) is inconsistent with the history of the mill. The archive also records that the mill in this photograph was demolished in 1973, again inconsistent with other records. It is likely that this photograph is of some other mill.

Worker’s housing

11.2.39 Three streets (John Street, Union Street and Henry Street) of back-to-back workers’ housing covered the east of the site (**Fig. 2**), as depicted on the 1851 town plan (**Fig. 4**). There were at least two streets by each of these names in Stockport. The streets within the site were in Heaton Norris, Stockport, Lancashire and the synonymous streets were in Stockport proper, Cheshire. Census records were consulted to examine links between the housing and the mill.

11.2.40 The inhabitants of these dwellings were generally employed in cotton trades and it is reasonable to assume that many of them would have been among the ‘300 hands’ working in the closest cotton factory, the Wellington Bridge Mill. Many of the cotton workers were young women, although a demographic range is represented. Some workers (generally men) were instead employed in other trades such as agriculture, stone masonry, iron founding, tailoring, coal mercantilism and at the county court as a bailiff. It is not the case, then, that these houses were only accessible to workers at the Wellington Bridge Mill. If the houses were owned by the mill, the mill as landlord may have been indifferent about their

tenants' employers. Alternatively there may have been no link between the houses and the mill other than their geographic proximity.

11.2.41 The census records contain instances of working mothers with young babies (under two years old); perhaps these babies were present in the mill alongside their working mothers. As is common across industrial populations at this date, many children were employed.

11.2.42 There are instances of women at the head of households, and these are not limited to widows. Contrary to the picture of rigid patriarchal family structures usually seen in census records from this period (e.g. Tuck and Rajic 2021, chapter 2), a very few young women were apparently able to make a life for themselves free of the constraints of marriage.

John Street

11.2.43 In the 1841 census results it is not possible to easily distinguish between the two Stockport John Streets. Nearby John Streets in Hyde and Brinnington add further confusion. There were 158 households recorded from John Streets in the Stockport area. Many of the inhabitants were listed as employed in cotton trades.

11.2.44 In 1851, census records were made for ten households at John Street, Heaton Norris. Two of these (numbers 1 and 3) were initially erroneously recorded as at Bank Field Street and then amended by the census taker. These entries appear to be missing from the consulted digitised version of the census (scans of the originals were used instead). Eleven or twelve back-to-back houses are depicted on the 1851 town plan (**Fig. 4**) on John Street facing the Wellington Bridge Mill. These may correlate with the odd-numbered houses recorded by census. The location of three even-numbered houses on John Street, Heaton Norris is not known.

11.2.45 Samuel Lamb at number 1 was a 'Card Grinder of Cotton' (perhaps he sharpened carding nails?) and his wife Nancy was a cotton power loom weaver despite having a one-year-old daughter. The family at number 3 was led by the widowed Elizabeth Hawkins whose son George was 'Self Acting Piece Cotton' (perhaps doing piece work for the mill). Three lodgers included a young male agricultural labourer and two young women employed as '— [illegible] Spinner Cotton'. Thomas Woolrich at number 5 was an agricultural labourer, but two of his children were probably employed at the mill: John (16) was a cotton bobbin doffer (i.e. he replaced full bobbins with empty ones), and Sarah (13) was 'Learning to be a Weaver'. At number 7, Warton Foulds was a 'Journeyman spindle maker'. His wife Hannah was a hand loom weaver and two lodgers with the same surname were linked to cotton manufacture: Ellen (40) was a cotton winder and Betty (80) was 'Formerly a weaver'. Another young lodger, John Healy, was a stone mason. Number 9 was inhabited by the Paton family. The parents had been born in Ireland, but the children were native to Heaton Norris. The father, James, was a labourer in an iron foundry, and his son Michael (only 11 years old) was another cotton bobbin doffer. The Downes family at number 11 were not directly linked to the mill though they may have used its products. Peter was a 'Master tailor' and his wife Delina was a dressmaker. No record exists for number 13; comparison with census records from subsequent decades suggests that the number may have been skipped. Number 15 held Ellen Hussey (60), a 'Mangle and charwoman'. The unmarried Thomas Schofield (55) was her lodger and was an under bailiff to the county court.

11.2.46 In 1851 the even numbers at John Street were inhabited by Henry Heywood at number 2, a cotton power loom weaver, and his wife Mary, a cotton winder, again with a one-year-old daughter. Number 4 was inhabited by Isaac Morton, unexpectedly a 'Boatman journeyman'. His daughter Elizabeth (12) was a cotton reeler. Another daughter, Alice (23) was a cotton power loom weaver and her husband Eli Hate lived with them. At 19 years old, he was a

coal carter (potentially at the mill). At number 6 John Street, the large Gilchar family contained two men called William Gilchar listed as 'Millwright journeyman'. These were the head (48) and his son (22). Silas (20) was an apprentice butcher, and Ralph (17) and Leonard (15) were again 'Self acting piecer cotton'.

11.2.47 The last census recording dwellings at John Street, Heaton Norris was taken as late as 1891. At number 1, Charles Williamson (39) and Samuel (16) were brickmakers, and Sarah J (17) and Nancy (14) were cotton winders. The unmarried Sarah E. Lamb and Sarah A. Bagshaw (both 32 years old) lived at number 3. Sarah E. was a calico weaver and Sarah A. was a 'Cotton cop winder'. At number 5 Thomas B. Hurst was a cotton bobbin carrier, Martha S. (17) was a 'Cotton bobbin winder' and William (15) was a doffer. The married (deserted?) Elizabeth Brown at number 7 may have relied on her children's income. Frank (18) was a hatter, Mary (14) was a weaver, and Fred (12) was a butcher's assistant. The married and childless Joseph Davies at number 9 was a hairdresser. At number 11, Edward Walker was a cotton doubler and Mary A. Walker a 'Cotton cop winder', with a baby not yet one year of age. Number 13 was headed by Gilbert G. Slann, a cab driver. At number 15, Elizabeth Dainty (44) was 'Maintained by daughter'. The unmarried children had a different surname to the mother (perhaps the mother had remarried): Ellen Dean (22) was a 'Cotton jack frame tenter' and Annie E. Dean (17) was a cotton winder. The widowed Martha Plant (55) lived alone at number 17, working as a cotton thread reeler. And at number 19, the widowed Eleanor A. Dickinson (only 43) was 'Living on her own means'. Her married daughter Mary E. Chapman (21, a cotton winder) lived here too, with a one-year-old daughter and no sign of the husband. Mary's brother William T Dickinson was a 'Signal labourer calico print works'.

11.2.48 In 1891, there were two records for even numbers on John Street, Heaton Norris. Number 4 was inhabited by a boiler maker, Charles Pollitt, whose daughter Ada (16) was a cotton winder, and son George worked at 'Ropery half tine'. At number 6, a couple born in Ireland had had children in Stockport. James Maxwell was a cotton carder and Ann was a cotton spinner.

11.2.49 The 1895 Ordnance Survey first edition twenty-five inch map (surveyed 1892–1893) reveals that the housing on John Street had been demolished. The alignment of the road survived, however it may no longer have been a public road, perhaps acting only as access to the existing mill and/or gasworks buildings.

Union Street

11.2.50 Although the back-to-back housing on Union Street was mapped in 1851 (Ordnance Survey town plan; **Fig. 4**), it is only in 1871 that it can be identified in census records. All references to Union Street, Stockport in earlier censuses are to properties in St. Thomas' parish, that is elsewhere in Stockport, not in Heaton Norris. The 1851 town plan depicts 23–24 back-to-back houses. The 1871 census lists half this number: 12 households. The houses on the west side of Union Street backed onto the houses on John Street, so it is almost certain that they were constructed and demolished at the same time. The census was also searched speculatively for names such as 'Back John Street' with no success. The absence of later census records might be due to a change in road name as happened with Henry Street/Jacques Street, although it is unknown what name may have replaced Union Street.

11.2.51 In 1871 at number 1 Union Street, Heaton Norris, Humphrey Williamson was a 'Smith's Striker' and his wife Jane a cotton weaver. At number 3 David Rawlinson was a gardener. Some of his children were employed: Henry (21), Elizabeth (18), George (12) and Sarah (10) were described as 'Labourer', 'Cotton Card Room operative', 'Cotton Doffer' and 'Cotton Card operative' respectively. A 19-year old couple at number 5 were employed as

a greengrocer (Isaac Butterworth) and cotton winder (Ellen). George H. Sharples at number 7 was a cotton spinner ('Self Acting' had been crossed out) and Sarah was a cotton weaver. At number 9, Peter Fryer was a labourer in a lumber yard, but three of his children (Mary, 18; Elizabeth, 12; and Margaret, 10) were cotton weavers. This family had a 66-year-old servant, Elizabeth Moss, perhaps employed to make up for the lack of a wife and mother. At number 11, Charles Hadfield was a cotton spinner (again, 'Self Acting' had been crossed out). Finally, at number 13, the census taker clearly had trouble interpreting what Nicholas Schneider from 'France' was saying as it took them several attempts to misspell his name 'Scheneider [sic]' and they recorded 'Occupation unintelligible'. A boarder, Sarah Pimbott, was a cotton doubler.

11.2.52 For the even numbers, Thomas Hodgkinson at number 4 Union Street was a Hackney Cab driver. Workers at number 6 were John Pownall, an ivory, bone and wood turner, and his wife Anne, a 'Cotton Thread Furnisher', with a seven-week-old child (and a four-year-old scholar). Number 8 was the home of William Swindells, a farm labourer; wife Elizabeth, a 'Cotton car[d] worn [?] operative'; Samuel (15), a doffer; and Sarah (10), a cotton winder. At number 10, William Wall was a cotton factory labourer, and Nancy was a 'cotton factory Card worn [?] hand'. Widower John Whittle lived alone at number 10 and was a 'Cotton Lap Carrier'.

11.2.53 By the time of the 1895 Ordnance Survey first edition twenty-five inch map (surveyed 1892–1893) Union Street had disappeared completely.

Henry Street/Jacques Street

11.2.54 Henry Street, Heaton Norris was first recorded by census in 1851, when 14 households were enumerated. The 1851 Ordnance Survey town plan (**Fig. 4**) shows 12 back-to-back houses on the west side of the road and roughly seven terraced houses on the east. Maps show that the terraced housing to the east of this road was of different character to the housing to the west and across the rest of the site. The housing to the east was irregularly arranged, partly around courtyards, and may have developed piecemeal. It is possible that it belonged to a different landlord (or landlords) to the housing closer to the mill. This eastern housing comprised the even numbers on the street and survived for a few decades longer than the rest of the housing on site.

11.2.55 Six women are recorded living at 2 Henry Street in 1851. Mary Hamilton was the head of the family and stayed at home, while her five daughters were all cotton winders. These were the married Betsey Hunter (29) and the unmarried Hannah (26), Jane (21), Maria (19) and Sarah (16). The widowed Ann Smith kept house at number 4, where her son Philip was a 'Self acting winder cotton' and his wife Sarah worked at 'Bobbin frame tenter cotton'. Newborn Philip may have been their child, but the family relationships of three other grandchildren of Ann Smith are uncertain, especially with their different surnames. Perhaps Ann took in waifs and strays? Another Sarah Smith (19) was a 'Jack frame tenter cotton', an Edward Garner (20) was a 'Frame piecer cotton' and there was also a Mary Ann Plawl (6). Lodger Charles Potts (22) was a 'Hand mule piecer cotton'. At number 6, James Bramall was a 'Gass [sic] man' (presumably working at the adjacent gasworks) and his wife Ann was a 'Factory operative cotton'. Number 8 housed the Riley and Maher families, linked by marriage and all born in Ireland (the youngest was nine, suggesting they had emigrated to Stockport within the last decade). Michael Riley (60) was a labourer and four of the family members were 'Factory operative cotton' (another Michael Riley, 25; Ann Riley, 20, Ann Maher, 20 and William Maher, 16). Three adult women, a 13-year-old boy (James Maher) and a school age child (Catherine Maher, 6) were all 'At home', perhaps suggesting that the families were struggling to integrate.

11.2.56 At number 1 Henry Street, the widowed Mary Holland was a provision dealer. Her daughter Elizabeth (25) was a bonnet maker and lodger Alfred Ormerod (21) was a joiner. Thomas Walker lived alone at number 3 and was a shoemaker. The Shanley family from Ireland may have been spread across two adjacent houses. Martin at number 5 and Michael at number 7 were labourers, each with a factory operative child: another Martin (17) at number 5 and Catherine (14) at number 7. Number 9 held the widowed Catherine Manning and daughters Ann (23), a weaver, and Bridget (21), a spinner. At number 11, another widow, Elizabeth Ridgway, was the head; her son Edward (20) was a 'Self acting spinner' and a lodger, Thomas Lister (18), was a ropemaker. Thomas Rayner (68) was a porter and lived at number 13 with married lodgers James (61) and Ann (64) Jackson. James was a dyer. At number 15, John Garner was a mule spinner, wife Martha a washer woman, Mary Ann (18) a weaver, Elizabeth (14) and Sarah Ann (10) were each 'Card Room hand Cotton'. A lodger, Charles Clark (18), was a 'Piecer Cotton'. Abraham Tildsley at number 17 was a tinker (i.e. probably a tinsmith). His wife Margaret was a weaver and his son Jeremiah (14) a 'Piecer cotton'. There were four men employed as moulders from the Hanson family at 19 Henry Street: Samuel (51), William (20), another Samuel (18) and James (12).

11.2.57 Census records for Henry Street continue in much the same way until 1891 (11 households). The back-to-back housing west of Henry Street/Jacques Street was demolished between the time of the 1891 census and the compilation in 1892/3 of the 1895 first edition Ordnance Survey twenty-five inch map (**Fig. 5**). The 1895 map shows that Henry Street had been truncated and renamed 'Jacques Street', probably to avoid confusion with the other Henry Street in Stockport.

11.2.58 In 1901 the census recorded five houses on the truncated Jacques Street. About half of the workers were employed in cotton trades. It is possible that these were workers employed at the Wellington Bridge Mill, although this mill is thought to have closed down around this time (Wellington Bridge Mill owner Samuel Wright Wilkinson had died the year before). There were many cotton mills in the area and the cotton workers may have found employment at other mills.

11.2.59 In 1901, those at number 2 Jacques Street were William Earlam, a strap piecer, and Sarah a throstle spinner. Number 4 housed John McNelly, a foundry labourer; wife Kate was a 'Cotton throstle spinner' and lodger Alice Bradley (18) was a 'Cotton Ring Spinner'. At number 6, William Mason was a 'Hatters Wool Washer', William (18) a 'Cotton Roving Carrier', and Sarah (14) was a 'Cotton Ring Spinner'. Number 8 housed David Beswick, a tobacco worker and Emma, a calico weaver with a child of four. Finally, number 10 contained a foreman from the gasworks (William Maule), whose nephew lived with them and was a 'Lamp Lighter Gas W [gas works]'.

11.2.60 The number of inhabitants had dropped by 1911; the slight reduction in the proportion of cotton workers is probably not statistically significant. There was no record for number 2. Number 4 had been taken by the widowed Ann Jane Cochayne, perhaps partially supported by her 13-year-old granddaughter Minnie Roberts, a 'Cardroom cotton mill jack — [illegible]'. William Mason at number 6 was still a wool washer and Sarah, now 23, still a 'Cotton Ring Spinner'. John Potter at number 8 was an ice manufacturer. William Maule was still at number 10 but instead of being a foreman was now a 'Pipe fitter at the Stockport Corporation Gas Works'.

11.2.61 Jacques Street was not recorded by the 1921 census, suggesting that the street was no longer inhabited.

11.2.62 The houses east of Jacques Street can be identified in the rear of photographs from July 1930 (SIA photographs 41499 and 41501). These can be securely located due to the presence of a weighbridge matching excavation results (see below). The houses appear to conform to the standard plan of 'terraced' houses rather than back-to-backs. They are two storeys, with robust chimneys and rectangular first floor sash windows with stone lintels and sills. The houses closest to Heaton Lane (i.e., in the south) are slightly taller than the others and have different chimneys, suggesting that they were built separately. The house closest to the truncated end of Jacques Street stands separate from the rest of the terrace, also perhaps built in a different phase of development. As depicted on the 1895 first edition Ordnance Survey twenty-five inch map (**Fig. 4**), it is within the gasworks compound and has a side door directly accessing the gasworks yard. It may be that this house was built after the truncation of Jacques Street, or that it is a partial survivor of a range of houses that was mostly demolished at this time.

11.2.63 The housing continued to be mapped until a twenty-five inch Ordnance Survey edition of 1910 (revised 1907, published 1932; not reproduced) but was demolished prior to compilation of a twenty-five inch Ordnance Survey revision of 1934 (published 1936; **Fig. 5**).

Gasworks

11.2.64 Bagshaw's directory of 1850 (p 275) records that 'The GAS WORKS were established in 1825, by a company of shareholders… The works are situate in Millgate… There are also three gasometers in Heaton lane… The works were presented to the Corporation in 1838.' It is the Heaton Lane gasometers (gasholders) that are relevant to the present site. The first detailed Ordnance Survey maps (a six-inch first edition of 1848, not reproduced; and a twenty-five inch town plan of 1851, **Fig. 4**) reveal that at that time the Heaton Lane gasworks was confined to an area north of the site. However, the gasworks expanded, slowly colonising the site (**Fig. 2**). By 1895, the first edition Ordnance Survey twenty-five inch map (surveyed 1892–3; **Fig. 5**) shows that the gasworks had expanded into the north-east of the site. Photographs from 1930 (see below) suggest the gasworks extended all the way to Heaton Lane and it is possible that this expansion happened prior to 1895.

11.2.65 In 1874 the 'clerk and storekeeper' at the gasworks at Henry Street, Heaton Lane was a John Webb Robinson (Morris & Co. 1874, 685). It is probable that this individual was recorded in the 1871 census as John W. Robinson, resident at 38 Henry Street (the same road as the gasworks) and employed as a 'commercial clerk'. Earlier and later census records reveal that this was not a long term job or address for John Webb Robinson.

11.2.66 Kelly's Directory of 1902 (p 534) mentions 'The gas works, in Wellington road north, Heaton Norris, are the property of the corporation…'. This almost certainly refers to the gasworks at Heaton Lane, which were bounded to the east by Wellington Road North. It suggests that by this time the focus of gas production had shifted from Millgate to Heaton Lane.

11.2.67 A photograph of July 1930 (SIA photograph 41500) shows both the east elevation of the Wellington Bridge Mill and also a building within the gasworks complex marked as an 'Office' on historic maps (e.g. **Fig. 5**). The building is of a single storey with a hipped roof. Three doors and two low-arched windows faced east.

11.2.68 One of the photographs taken in 1932 during demolition of the Wellington Bridge Mill (SIA photograph 35972) shows an elaborate exterior brick wall fronting Heaton Lane. This wall may have been contemporary with the expansion of the gasworks into the site.

11.2.69 Two more of the borough surveyor's photographs from July 1930 (SIA photographs 41499 and 41500) can, as previously mentioned, be located by presence of a weighbridge

correlating with the excavation results. This places the photographs within the gasworks complex at the entrance to the truncated Jacques Street. The images depict metal tracks (tram tracks?), barrels and other items in storage in front of a small building and a gate. The wall adjacent to the gate is built to the same design style as that seen in the previous photograph (SIA 35972), reinforcing a picture of contemporaneity. This photograph also shows another gate identified by excavation (see context 690 below). Importantly, it suggests that the southern plot between the former John Street and Jacques Street was at this time part of the gasworks.

Tram and Bus Depot

11.2.70 In 1934, a twenty-five inch Ordnance Survey revision (published 1936; **Fig. 6**) shows that the site (mill, all worker's housing and gasworks) had been wholly redeveloped as a 'Tram & Bus Depôt (Stockport Corporation)'. This development is depicted as two large adjacent sub-rectangular buildings with tram tracks emanating from the north-east.

11.2.71 The SIA holds multiple images of this building (e.g. photographs 538, 4676). It was a single storey building of around nine gabled bays fronting Heaton Lane. Each bay had two plain rectangular windows. A string course separates the ground floor from the roof.

11.2.72 A photograph of 24 March 1978 (SIA 11746) may show the east elevation of the depot. The east end of the northern part of the depot appears to have had a large opening partly covered by a large wooden gate or shuttering. Maps show tram tracks entering the building here. Part of a large archway accessing the southern part of the building can be seen. The photograph is notable for the far right political graffiti painted on the wall.

11.2.73 The west elevation of the depot facing Gas Street (beyond the limits of the present site) is depicted on another photograph, taken 9 May 1978 (SIA 11747). As far as can be seen, the west elevation mirrors the east elevation.

11.2.74 The demolition of the Tram and Bus Depot was also recorded by photography (SIA 11744, 11745). These photographs are dated 9 May 1978.

Car park

11.2.75 Following demolition of the tram and bus depot, the site has been used in recent years as a car park.

Appendix 2: Context list

Trench No 1	Length 11 m	Width 2 m	Depth 1.20 m

Context Number	Fill Of/Filled With	Interpretative Category	Description	Depth BGL (m)
101		Topsoil	Light brownish grey silty sand with rare (3%) pebbles, poorly sorted and 10-30 mm in size. Frequent fine and moderately coarse roots inclusions. Infrequent (10%) broken brick and concrete, up to 200 mm in size	0.0–0.45
102		Demolition material	Mid-greyish brown silty sand with rare (3%) sub-rounded pebbles, poorly sorted and 5-20 mm in size inclusions. Frequent red brick fragments, with occasional yellow brick and cobble fragments. frequent shards of glass	0.32–1.00+
103		Surface	Truncated concrete surface.	0.75
104		Demolition material	Dark grey silty sand with frequent (50%) sub-rounded and sub-angular stones, very poorly sorted and 5-40mm in size inclusions. Frequent red brick and mortar fragments. occasional glass shards	0.64–0.70
105		Surface	Incomplete handmade brick surface. Bricks on edge. Possibly collapsed vaulting	0.60
106		Demolition material	Light grey concrete rubble from demolition	0.34–0.57
107		Demolition material	Light grey concrete block, *ex situ*	0.65
108		Demolition material	Light grey concrete rubble from demolition	0.65
109		Demolition material	Mid-greyish yellow sand derived from concrete	0.58–0.82
110		Demolition material	Light grey concrete block *ex situ*	0.66
111		Demolition material	Mid-greyish brown silty sand with rare (3%) sub-rounded pebbles, poorly sorted and 5-30mm in size inclusions. small chunks of brick and concrete	0.76
112		Levelling layer	Dark greyish brown silty sand with rare (3%) sub-angular pebbles, poorly sorted and 10-50 mm in size	1.00 +
113		Wall	Supporting N-S wall for vault 105, constructed of mixed handmade red bricks and firebrick	0.8 +

Trench No 2	Length 10 m	Width 3 m	Depth 1 m

Context Number	Fill Of/Filled With	Interpretative Category	Description	Depth BGL (m)
201		Surface	Dark blackish grey tarmac	0.0–0.21
202		Levelling layer	Light grey stone/concrete rubble	0.0–0.22
203		Levelling layer	Light grey stone/concrete rubble	0.22–0.38
204		Wall	Linear foundation exterior wall aligned WNW-ESE. Constructed from handmade red brick. Bonded with ash mortar.	0.64–1.10
205		Wall	Linear foundation exterior wall. aligned NNW-SSE. Constructed from handmade red brick. Bonded with lime mortar.	0.64–1.20
206		Wall	Linear foundation wall aligned WNW-ESE. Constructed from handmade red brick and bonded with ash mortar.	0.64–1.22
207		Surface	Incomplete floor surface. Constructed from handmade red brick. Poorly dressed and bonded with lime mortar.	0.64
208		Demolition material	Dark brown with a grey hue and infrequent, irregular, yellow patches silty sand with rare (5%) sub-angular stones, poorly sorted and 5-50 mm in size. occasional yellow slag like material, seem quite sulphurous inclusions	0.65–0.81
209		Demolition material	Dark blackish grey silty sand with rare (1%) sub-angular stones, well sorted and 10-30mm in size inclusions	0.81–0.92
210		Demolition material	Mid-brownish red crushed brick with nearly 100% crushed brick, with the largest chunks 0.80m in size inclusions	0.38–0.64
211		Demolition material	Irregular *ex situ* concrete block. Maximum height: 0.25 m.	0.27–0.52
212		Surface	Concrete	0.92–0.95
213		Demolition material	Mid-greyish brown silty sand with rare (3%) sub-angular stones, poorly sorted and 5-40mm in size inclusions	0.68 +
214		Demolition material	Light greyish yellow sand with no inclusions	1.00 +

Trench No 3	Length 15 m	Width 3 m	Depth 1 m

Context Number	Fill Of/Filled With	Interpretative Category	Description	Depth BGL (m)
300		Surface	Dark blackish grey tarmac	0.00-0.20
301		Levelling layer	Dark brownish grey silty sand with frequent (50%) sub-angular pebbles, very poorly sorted and 5-40mm in size inclusions	0.20-0.55
302		Demolition material	Dark brownish grey silty sand with rare (5%) sub-angular pebbles, poorly sorted and 5-30 mm in size inclusions. Frequent broken red brick, concrete chunks	0.55-1.00
303		Pre-construction levelling	Dark reddish-brown silty sand with rare (5%) sub-angular pebbles, poorly sorted and 5-30 mm in size inclusions. Occasional broken red brick	1.00+
304		Wall	Linear handmade red brick wall. aligned E-W. Bonded with ash mortar. Maximum height: 0.52 m.	0.55–1.07
305		Wall	Linear handmade red brick wall. aligned E-W. Constructed from handmade red brick and bonded with ash mortar.	0.55–0.82
306		Surface	Concrete.	0.70–0.95
307		Surface	Truncated cobble surface.	0.60–0.79
308		Deposit	Crushed sandstone hardcore associated with 20th century piles	0.55-1.00
309		Surface	Sub-square stone surface. Maximum height: 0.08 m.	0.90–0.98
310		Pre-construction levelling	Dark blackish grey clayey silt	1.00
311		Surface	Truncated cobble surface bonded with ash and tar.	0.60–0.76
312		Surface	Concrete.	0.75–0.85
313		Wall	Linear brick wall aligned E-W. Constructed from machine frogged red brick and bonded with ash mortar.	0.55–1.07
314		Surface	Truncated cobble surface bonded with ash and tar. Maximum height: 0.16 m.	0.60–0.76
315		Pre-construction levelling	Dark reddish brown silty sand with rare (3%) sub-angular pebbles, moderately sorted and 10-30 mm in size inclusions. Rare crushed CBM	1.00+
316		Surface	Concrete.	0.62–0.80
317		Wall	Frogged brick rebuild of wall 304	0.55

Context Number	Fill Of/Filled With	Interpretative Category	Description
501		Layer	Modern car park surface. Concrete and tarmac surface measuring 48 m across.
502		Foundation	Concrete foundations for piers of extant Heaton Lane Multi-Storey Car Park. Semi-circular. Measuring 1.8 m x 0.8 m x 0.2 m (+)
503		Foundation	Light bluish grey 20th century concrete base of former bus depot. Measuring 8 m x 1 m.
504		Surface	Cobbled surface. 20th century cobbled surface measuring 40 m x 18 m.
505		Structure	Concrete plinth for bus depot.
506		Surface	Concrete surface for bus depot bedded on crushed brick
508		Wall	Red brick wall. 20th century red brick wall for bus depot.
509		Surface	Concrete surface of bus depot.
510		Structure	Handmade brick and grey lime mortar brick platform. Semi-octagonal brick platform
511		Structure	Handmade brick and grey lime mortar quarter-octagonal brick platform.
512		Wall	Unfrogged machine brick and black ash mortar wall aligned N-S. Measures 1.15 m x 0.71 m.
513		Stanchion	Concrete and metal girder stanchion base measuring 0.45 m x 0.16 m.
516		Demolition material	Brown coarse rubble layer. Stratigraphically intermediate
517		Foundation	Concrete foundation pad for brick platform 510.
519		Buttress	Large concrete block supporting wall 512.
520		Surface	Rough surface of a variety of brick types and other rubble.
521		Inspection chamber	Unfrogged machine brick and black ash mortar possible inspection chamber.
522		Foundation	Stone slab set into concrete as foundation for brick structure 511. Measures 0.88 m + x 0.20 m +.
523		Surface	Rough floor consisting of various brick types and other rubble. Continuation of 520. Measures 2.10 m x 0.52 m.
524		Stanchion	Concrete and brick base providing support for iron girder. Measures 0.76 m x 0.76 m.
525		Stanchion	Concrete and iron girder stanchion base.
526		Inspection chamber	Red brick and black ash mortar structure, possibly an inspection chamber. Measures 1.21 m x 0.95 m
527		Wall	Handmade red brick wall.
528		Wall	Concrete wall.
529		Inspection chamber	Mix of machine brick and reused handmade brick. Measures 1.9 m x 1.4 m.
530		Levelling layer	Red brick crush. Measures 20 m x 1.5 m.
531		Wall	Machine brick and black ash mortar wall. Measures 4.52 m x 0.24 m.
532		Wall	Machine brick and black ash mortar wall. Contains metal pipe. Measures 4.57 m x 0.38 m.
533		Structure	Red brick structure composed of machine made bricks and black ash mortar. Measures 1.55 m x 0.94 m.

Context Number	Fill Of/Filled With	Interpretative Category	Description
534		Wall	Red brick wall consisting of handmade bricks and lime mortar. Measures 1.18 m x 0.12 m.
535		Surface	Handmade red brick surface. Measures 1.44 m x 1.43 m.
536		Wall	Gasholder wall. Six skins of handmade red bricks bonded with clay. Measures 7.1 m x 0.72 m.
537		Base	Concrete base with pins incorporated in gasholder wall. Measures 1.8 m x 1.73 m.
538		Wall	Gasholder wall. Six skins of handmade red bricks bonded with clay. Measures 1.5 m x 0.72 m.
539		Inspection chamber	Machine brick and black ash mortar possible inspection chamber. Measures 0.7 m x 0.7 m.
540		Wall	Brick wall consisting of machine bricks and black ash mortar topped with slate. Measures 1.67 m x 0.26 m.
541		Structure	Curious circular arrangement of square cobbles, handmade bricks, stone and concrete. Measures 1.72 m x 1.36 m.
542		Road	Cobbled road surface. Henry Road/Jacques Road. Measures 14 m + x 5.4 m.
543		Wall	Machine brick and black ash mortar wall.
544		Wall	Machine brick and black ash mortar wall. Measures 0.74 m x 0.36 m.
545		Wall	Machine brick and black ash mortar wall. Measures 0.63 m x 0.12 m.
546		Wall	Opportunistically used firebricks and black ash mortar. Measuring 0.94 m x 0.23 m.
547		Inspection chamber	Possible inspection chamber.
548		Wall	Handmade red brick and lime mortar wall measuring 6 m + x 0.3 m.
549		Wall	Handmade red brick and lime mortar wall. Measures 1 m x 0.33 m.
550		Wall	Handmade red brick wall bonded with lime mortar. Measures 2.9 m x 0.22 m.
551		Surface	Opportunistic mix of re-used handmade, machine made and fire bricks. Measures 5.3 m x 2.9 m.
552		Wall	Machine brick wall. Measures 0.73 m x 0.23 m.
553		Wall	Machine brick and ash mortar wall. Measures 0.83 m x 0.49 m.
554		Surface	Opportunistically re-used handmade, machine and firebricks. Measures 3.10 m x 2 m.
555		Surface	Surface of reused handmade and machine bricks. Measures 2.20 m x 0.98 m.
556		Wall	Machine brick and black ash mortar wall. Measures 5.37 m x 0.63 m.
557		Wall	Unfrogged, machine made bricks and black ash mortar. Measures 3.10 m x 0.37 m.
558		Wall	Machine brick and black ash mortar wall with patch of pale mortar. Measures 1 m x 0.18 m.
559		Wall	Machine brick and black ash mortar wall.
560		Surface	Surface constructed opportunistically from handmade red bricks and some firebrick. Measures 2.82 m x 1.80 m.

Context Number	Fill Of/Filled With	Interpretative Category	Description
561		Wall	Handmade brick and lime mortar wall with a single bed of black ash mortar on upper surface. Measures 3.26 m + x 0-.24 m.
562		Inspection chamber	Rectangular structure composed of machine brick and ash mortar. Measures 0.5 m x 0.6 m.
563		Floor	Mixed reused handmade, machine brick and firebrick. Measures 3.45 m x 3 m.
564		Structure	Curious circular arrangement of square cobbles, handmade bricks. Measures 1.60 m x 1.42 m.
565		Inspection chamber	Machine brick and black ash mortar. Measures 1.28 m x 0.93 m.
566		Surface	Synonym for 541. Brick and cobble surface. Surface comprising red handmade brick and large stone cobbles. Measures 7.66 m x 2.30 m.
567		Surface	Handmade bricks laid in sand associated with the Henry Street cobbles 542. Measures 2.93 m x 0.23 m.
568		Surface	Handmade bricks laid in sand associated with the Henry Street cobbles 542. Measures 1.89 m x 1.69 m.
569		Surface	Stone flags and a chamfered ashlar block used as part of rough handmade brick surface. Measures 2 m x 2 m.
570		Surface	Floor surface consisting of mixed machined and handmade brick. Measures 2 m x 1.4 m.
571		Surface	Brick surface. Rectangular surface composed of mixed frogged and unfrogged bricks. Measures 20.30 m x 10.60 m.
572		Stanchion	Iron girder set in concrete 740. Measuring 0.7 m x 0.47 m.
573		Wall	Handmade red brick and lime mortar wall. Measures 13.95 m x 0.43 m.
574		Wall	Machine brick and black ash mortar wall. Measures 1.30 m x 0.86 m.
575		Demolition material	Dark brown sand and brick, stone and concrete rubble
576		Demolition material	Dark, compact
577		Weighbridge	Metal and stone frame of weighbridge. Measures 4.11 m x 2.65 m.
578		Bedding layer	Dark silty layer underlying brick floor 556. Measures 10 m + x 10 m +.
579		Drain	Concrete drain containing vertical ceramic pipe at centre of 541. Measures 0.94 m x 0.74 m.
582		Wall	Rough wall of reused materials including red handmade bricks bonded with ash mortar. Measures 0.90 m x 0.24 m.
583		Structure	Paving slab floor and sandstone gully. Measures 1.45 m x 1.25 m.
584		Surface	Cobblestones. Ex situ?
585		Layer	Rubble fill. Mid-greyish brown rubble fill occupying rooms between walls 546 and 548.
586		Group	Line of stanchions of bus depot. Constituents: 524, 525 and unnumbered others

Context Number	Fill Of/Filled With	Interpretative Category	Description
587		Surface	Brick surface composed of red, unfrogged bricks. Roughly laid. Measures 2.10 m x 0.58 m.
588		Wall	Handmade red bricks with pale cream lime mortar. Measures 1.40 m x 0.26 m.
589		Base	Concrete machine base. Rectangular concrete pad with two metal fittings. Measures 1.60 m x 1.08 m.
590		Surface	Rough handmade brick surface. Measures 1.70 m x 1 m.
591		Wall	Handmade brick and lime mortar wall.
592		Wall	Six skins of handmade bricks bonded with clay. Measures 5.80 m x 0.72/1.70 m.
593		Demolition material	Brownish red sand layer below clinker layer 594 and above gasholder 592.
594		Demolition material	Black clinker layer overlying sand layer 593 in gasholder area.
595	596	Cut	Cut for E-W aligned drain.
596	595	Fill	Backfill of drain. Black silty sand with a brownish hue. Contains post-med pottery and in situ ceramic pipe.
597		Levelling layer	Redeposited natural. Mid brown yellow clay and gravel.
598	743	Primary fill	Brown black sandy silt with gravel
599	751	Primary fill	Mid-brownish red sand with yellow, black and grey patches.
600		Topsoil	Black silty clay
601		Levelling layer	White gravel layer overlying all structures in the SW corner of site.
602		Inspection chamber	Machine brick and concrete truncated inspection chamber
603		Wall	Brick wall. Red machine made bricks bonded with ash mortar. Forms one wall of the bus depot. Measures 17.50 m x 0.47 m.
604		Surface	Loose unbonded brick surface. Measures 10 m x 5 m.
605	606	Cut	Drain. Contains concrete and a ceramic drainpipe. Cuts demolition rubble 604. Measures 8.96 m x 0.56 m.
606	605	Drain	Drain. Ceramic drainpipe and concrete. Measures 8.56 m x 0.18 m.
607		Wall	Brick wall. Wall constructed from red handmade brick and sandy lime mortar. English garden wall bond. Measures 1.30 m x 0.24 m.
608		Wall	Brick wall. Wall constructed with red handmade bricks and sandy lime mortar. Adjacent to 607. Measures 0.46 m x 0.38 m.
609		Wall	Brick wall. Wall constructed from red handmade brick and lime mortar. Measures 1.08 m x 0.50 m
610		Wall	Brick wall. Wall constructed from red handmade brick and lime mortar. Measures 2.44 m x 0.35 m.
611		Wall	Brick wall constructed with red handmade bricks and lime mortar. Measures 2.30 m x 0.69 m.
612		Wall	Brick wall constructed with red handmade bricks and lime mortar. Measures 2.50 m x 0.24 m.

Context Number	Fill Of/Filled With	Interpretative Category	Description
613		Surface	Brick surface. Floor of shallow trough. Constructed with red handmade bricks and lime mortar. Measures 1.73 m x 0.46 m.
614		Wall	Brick wall constructed with red handmade bricks and sandy lime mortar. Measures 0.46 m x 0.24 m.
615		Wall	Brick wall constructed with red handmade bricks and sandy lime mortar. Measures 2.77 m x 0.35 m.
616		Wall	Brick wall constructed with red handmade bricks and sandy lime mortar. Measures 4.66 m x 0.48 m.
617		Wall	Brick wall constructed with firebrick and sandy lime mortar. Measures 2.84 m x 0.24 m.
618		Wall	Brick wall constructed from red handmade brick and sandy lime mortar. Measures 1.94 x 0.24 m.
619		Wall	Brick wall constructed with red handmade bricks and sandy lime mortar. Situated at northern end of excavation. Measures 3.28 m x 0.25 m.
620		Surface	Brick surface constructed from red handmade bricks and grey sandy lime mortar. Measures 1.22 m x 0.24 m.
621		Wall	Brick wall. Wall constructed with red handmade brick and grey sandy lime or ash mortar. Measures 0.32 m x 0.24 m.
622		Wall	Brick wall. Wall constructed with red handmade brick and sandy lime mortar. Measures 1.16 m x 0.48 m.
623		Wall	Brick wall constructed from red handmade brick and sandy mortar. Skinned with firebrick on both sides (625 and 626). Measures 1.25 m x 0.62 m.
624		Wall	Brick wall constructed from red handmade brick and lime mortar. Skinned with firebricks on either side (625 and 626). Measures 2.24 m x 0.63 m.
625		Wall	Firebrick and white lime mortar outer skin of 623 and 624. Measures 3.36 m x 0.24 m.
626		Wall	Fire brick and white lime mortar outer skin for 623 and 624. Measures 3.20 m x 0.25 m.
627		Wall	Brick wall/boiler housing constructed from firebrick and red handmade brick. Measures 1.60 m x 0.60 m.
628		Wall	Brick wall constructed from red handmade brick and sandy lime mortar. Measures 2.54 m x 0.61 m.
629		Wall	Brick wall constructed from red machine made brick and lime mortar. Measures 1.44 m x 0.62 m.
630		Wall	Brick wall constructed from red handmade brick and sandy lime mortar. Measures 1.06 m x 0.61 m.
631		Wall	Brick wall constructed from red handmade bricks. Measures 3.42 m x 0.24 m.
632		Inspection chamber	Opportunistic mix of reused handmade bricks and firebricks bonded with ash mortar. Measures 1.50 m x 1.34 m.
633		Wall	Brick wall constructed from red handmade bricks and lime mortar. Measures 2.04 m x 0.24 m.
634		Base	Stone foundation bed with fixings. Measures 2.23 m x 0.65 m.
635		Wall	Brick wall constructed from red handmade brick and sandy lime mortar. Measures 1.12 m x 0.24 m.

Context Number	Fill Of/Filled With	Interpretative Category	Description
636		Wall	Brick wall constructed from red handmade brick and lime mortar. Measures 0.72 m x 0.24 m.
637		Wall	Brick wall constructed from red handmade brick and sandy lime mortar. Measures 5.20 m x 0.61 m.
638		Wall	Brick wall. Wall constructed from red handmade brick and sandy lime mortar. Measures 0.78 m x 0.24 m.
639		Wall	Brick wall constructed from red handmade brick and sandy lime mortar. Measures 2.20 m x 0.24 m.
640		Wall	Wall surrounding cistern 641.
641		Tank	Ferruginous cistern encased in surrounding wall 640. Measures 0.75 m x 0.75 m.
642		Inspection chamber	Machine brick and ash mortar inspection chamber on drain 606. Measures 1.18 m x 0.93 m.
643		Girder	Ferruginous girder measuring 0.22 m x 0.21 m.
644		Drain	Machine brick inspection chamber for drain 606. Measures 1.26 m x 0.96 m.
645		Surface	Truncated concrete floor surface with broken brick inclusions. Measures 2.16 m x 1.50 m.
646		Girder	Ferruginous girder set into concrete. Measures 0.42 m x 0.21 m.
647		Base	Stone foundation bed. Measures 1.06 m x 0.63 m.
648		Base	Stone foundation bed. Measures 1.52 m x 0.92 m.
649		Base	Stone foundation bed. Measures 1.76 m x 1.28 m.
650		Surface	Fragment of cobblestone surface N of wall 619. Measures 1.47 m x 0.21 m.
651		Wall	Handmade red brick and lime mortar wall.
652		Wall	Handmade red brick and lime mortar wall. Measures 1.30 m x 0.83 m.
653		Surface	Handmade brick floor. More regular than 604. Close to cistern 641. Measures 1.35 m x 0.50 m.
654		Struture	Handmade brick and sand structure. Close to cistern 641. Measures 0.80 m x 0.40 m.
655	655	Pipe	Ferruginous pipe associated with cistern 641. 0.45–0.47 m diameter (1.5 feet)
656	656	Fill	Fill of pipe 655.
657		Wall	Brick wall constructed from red handmade bricks. No bonding agent. Measures 1.11 m x 0.34 m.
658		Wall	Brick wall constructed from red handmade brick and sandy mortar. Measures 3.70 m x 0.61 m.
659		Levelling layer	Black silt and rubble between walls 617 and 623. Measures 5 m + x 2.50 m.
660		Levelling layer	Black silt and rubble between walls 628 and 651. Measures 3.22 m x 2.10 m.
661		Levelling layer	Black silt and rubble between walls 628 and 633. Measures 5m + x 3.80 m.
662		Levelling layer	Black silt and rubble between 634 and 649. Measures 2.92 m x 2.30 m.
663		Levelling layer	Dark brown yellow clay. Redeposited natural.
664		Wall	Wall constructed from red handmade bricks and grey lime mortar. Measures 1.50 m x 0.37 m.

Context Number	Fill Of/Filled With	Interpretative Category	Description
665		Wall	Blueish grey stone wall. Measures 6.30 m x 0.67 m.
666		Inspection chamber	Inspection chamber constructed from red machine brick and black ash mortar. Measures 1.40 m x 1.14 m.
667	668	Drain	Drain cut. Measures 10 m + x 0.18 m.
668	667	Drain	Ceramic drainpipe.
669		Wall	Brick wall. Wall constructed from red handmade brick and lime mortar. Measures 4.70 m x 0.24 m.
670		Wall	Brick wall constructed from red handmade brick and lime mortar. Measures 0.49 m x 0.24 m.
671		Wall	Handmade red brick and grey lime mortar wall. Measures 3.70 m x 0.41 m.
672		Wall	Reused handmade brick and concrete. West of stanchion 572. Measures 1.60 m x 0.12 m.
673		Demolition material	Mid-brownish grey sand and rubble.
674		Surface	Rough surface of reused handmade bricks.
675		Demolition material	Dark ash and clinker with brick fragments.
676		Surface	Fragment of a stone and white crumbly lime mortar surface bonded to south side of 671. Measures 0.83 m x 0.31 m.
677		Demolition material	Light grey clay silt. Measures 6.50 m x 0.82 m.
678	679	Pit	Large irregularly shaped pit. Perhaps a demolition pit. Measures 9.10 m x 6.40 m.
679	678	Primary fill	Dark brown clay silt with lime mortar and rubble.
680	681	Drain	Modern drain aligned N-S. Measures 10 m + x 0.31 m.
681	680	Primary fill	Dark brown silty sand used to backfill drain cut.
682		Surface	Single substantial sandstone flag. Machine base. Measures 1.40 m x 1.40 m.
683		Foundation	Sandstone and lime mortar foundation for wall 548. Measures 3.30 m + x 0.25 m +.
684		Surface	Cobbled street. Measures 19.70 m x 8.60 m.
685		Foundation	Machine brick and black ash mortar foundation for stone block 682. Measures 1.65 m x 0.50 m.
686		Foundation	Machine brick and black ash mortar foundation for stone block 682. Measures 2.50 m + x 0.18 m +.
687		Kerb	Stone kerb of pavement on Jacques Street. Measures 12.30 m x 0.14 m.
688		Wall	Handmade brick and lime mortar wall. Measures 11.20 m x 0.60/0.73 m.
689		Wall	'L'-shaped wall constructed from red frogged bricks and ash mortar. Measures 1.60 m x 0.60 m.
690		Kerb	Stone kerb. Six separate pieces of stone, grooved centrally down the length on each piece. Some lead fittings. Measures 5.6 m x 0.3 m.
691		Surface	Cobbled footpath west side of Jacques Street. Measures 5.7 m x 1.6 m.
692		Surface	Cobbled cartgate surface. Measures 1.7 m x 0.75 m.
693	667	Primary Fill	Dark brown silty clay.

Context Number	Fill Of/Filled With	Interpretative Category	Description
694		Wall	Truncated handmade brick and lime mortar wall. Measures 0.84 x 0.70 m.
695		Wall	Truncated handmade brick and lime mortar wall. Measures 0.80 m x 0.11 m.
696		Wall	Truncated handmade brick and lime mortar wall. Measuring 0.84 m x 0.11 m.
697		Kerb	Stone kerb of pavement on Jacques Street. Measures 0.76 m x 0.15 m.
698		Surface	Flag stone footpath. Measures 1.55 m x 1.03 m.
699		Layer	Bitumen layer. Bitumen layer lying underneath cobbled footpath of Jacques Street.
700		Levelling layer	Blackish brown sandy silt levelling layer.
701		Levelling layer	Grey brown silty sand with gravel.
702		Levelling layer	Dark blackish brown silty sand with clinker waste.
703		Levelling layer	Mid-brownish yellow silty sand with charcoal flecks.
704		Levelling layer	Dark greyish brown sandy silt.
705		Service	19th-century service cut containing cast iron pipe.
706		Primary fill	Mid-greyish brown silty sand with clinker inclusions.
707		Layer	Mid-yellow sand and silty clay with red brick fragments. Possibly disturbed upper surface of natural if not imported levelling material.
708		Levelling layer	Blackish gritty silt.
709		Bedding layer	Lime mortar with fragments of brick and stone. Measures 3+ m x 0.1 m.
710		Wall	Handmade red brick and lime mortar wall.
711		Levelling layer	Mid-reddish brown gritty sandy silt.
712		Demolition material	Mixed mid-dark brown grit with slate fragments.
713		Natural	Mid-yellowish brown sand.
714		Layer	Layer. Mid-greyish brown with yellow flecks silty gravel interface layer levelling layer 704 and the natural 713.
715		Surface	Flag stone pavement east of Jacques Street.
716		Structure	Piece of linear metal with a groove in the middle, possible old tram track. Measures 1.76 m x 0.12 m.
717		Demolition material	Two *ex situ* concrete sleepers or lintels.
718		Levelling layer	Light yellow sand.
719		Levelling layer	Black silty clinker.
720		Drain	Concrete encased ceramic drain. Measures 2.5 m x 0.30 m.
721		Wall	Handmade red brick and lime mortar wall. Measures 3.20 m x 0.36 m.
722		Wall	Handmade red brick and lime mortar wall. Measures 6 m x 0.24 m.
723		Structure	Iron grate. Measures 0.23 m x 0.12 m.
724		Surface	Rough surface of reused handmade red bricks with traces of lime mortar. Measures 2+ m x 2+ m.
725		Structure	Metal band around weighing machine stonework. Measures 0.5 m x 0.03 m.
726		Demolition material	Reddish brown silty clay.

Context Number	Fill Of/Filled With	Interpretative Category	Description
727		Demolition material	Black sand.
728		Demolition material	Light grey silt with brick debris.
729		Surface	Survival of two flagstones from a larger surface. Measures 0.82+ m x 0.41+ m.
730		Wall	Firebrick and lime mortar wall. Possible housing for missing boiler. Measures 1.43 m x 0.59 m.
731		Surface	Handmade red brick and firebrick surface.
732		Wall	Fire brick and lime mortar wall. Sloped. Possibly associated with boiler housing. Measures 1.1 m x 0.59 m.
733		Wall	Handmade red brick, firebrick and lime mortar wall. Measures 2.10 m x 0.80 m.
734		Structure	Metal valve for cistern 641. Measures 0.35 m x 0.35 m.
735		Structure	Stone slab with some toolmarks, part of weighing machine.
736		Wall	Handmade red brick and lime mortar wall forming weighing machine pit. Measures 2 m x 0.52 m.
737		Structure	Displaced stone from weighing machine.
738		Demolition material	Brown sand with concrete, stone and brick debris.
739		Wall	Handmade red brick and lime mortar wall. Measures 0.61 m x 0.36 m.
740		Stanchion	Concrete base for iron girder 572. Measures 1.63 m x 1.1 m.
741		Wall	Handmade red brick and lime mortar 'L'-shaped wall. Measures 2.12 m x 0.24 m.
742		Levelling layer	Black fine sand layer
743	744, 745, 598	Drain	Truncated N-S cut for drainpipe. 0.52 m wide and over 0.4 m deep.
744	743	Primary fill	Light grey with yellow patches silty sand.
745	743	Primary fill	Brownish red silty sand.
746		Levelling layer	Mid-grey silty sand.
747		Structure	Cast iron slab which lies at the eastern side of stone weighing machine. Measures 1.5 m x 0.44 m.
748		Wall	Handmade red brick and lime mortar wall. Measures 1.27 m x 0.50 m.
749		Demolition material	Dark blackish brown silty sand.
750		Levelling layer	Mid-greyish brown sandy silt with gravel.
751	799, 752, 756, 766	Service	Cut for large Victorian gas pipe. Measures 4 m + x 2.40 m.
752	751	Primary fill	Light yellow with grey patches silty sand.
753	754, 755	Drain	Cut for stone capped culvert.
754	753	Primary fill	Mid-blackish brown sandy silt with gravel, redbrick and clinker inclusions.
755	753	Structure	Linear stone capped drainage culvert. Measures 1+ m x 0.56 m.
756		Structure	Metal pipe. Large linear metal gas pipe. Measures 4+ m x 0.60 m.
757		Surface	Cobbled surface. Measures 3.5 m x 2.35 m.
758		Levelling layer	Mid-blackish brown sandy silt.

Context Number	Fill Of/Filled With	Interpretative Category	Description
759		Wall	Unfrogged machine brick and black ash mortar wall. Measures 15+ m x 0.31 m.
760		Primary fill	Mid-brownish black with patches of yellow redeposited natural.
761		Levelling layer	Mid-greyish brown sandy silt.
762		Levelling layer	Dark blackish brown sandy silt clinker.
763		Wall	Handmade red brick and lime mortar wall. Measures 4.12 m x 0.24 m.
764		Wall	Handmade red brick and lime mortar wall (adjacent rubble including flagstone is later). Measures 0.95 m x 0.80 m.
765		Structure	Metal base of street furniture. Measures 0.20 m x 0.19 m.
766	751	Structure	Iron pipe.
767	768, 769	Drain	Culvert drain constructed of reused broken handmade red bricks and black ash mortar and capped with flags. Measures 9.2 m x 0.54 m.
768	767	Cut	N–S cut for drain 767.
769	767	Deposit	Mid-blackish brown sand fill of disused culvert.
770		Wall	'L'-shaped wall constructed of red handmade bricks and lime mortar. Measures 1.53 x 0.61 m.
771		Wall	Linear wall constructed of handmade red bricks and lime mortar. Measures 3.46 m x 0.61 m.
772		Wall	Linear wall constructed of handmade red bricks and lime mortar. Measures 4.10 m x 0.38 m.
773		Drain	Side wall of culverted drain constructed of handmade red bricks and lime mortar. Measures 1.50 m x 0.24 m.
774		Drain	Side wall of culverted drain constructed of handmade red bricks and lime mortar. Measures 0.99 m x 0.08 m.
775		Drain	Flagstone capping for culvert drain. Measures 5 + m x 1.56 m.
776		Drain	Flagstone base of culvert drain. Measures 1.50 m x 1.02 m.
777		Arch	Red brick arch. Red brick archway. Measures 0.65 m x 0.61 m.
778		Wall	Handmade red brick and lime mortar wall. Measures 4.6 m x 0.24 m.
779		Surface	Handmade red brick and lime mortar surface. Measures 0.97 m x 0.92 m.
780		Wall	Handmade red brick and lime mortar wall. Measures 5.08 m x 0.12 m.
781		Surface	Handmade red brick floor.
782	783	Drain	N-S aligned drain cut.
783	782	Fill	Black sandy silt with stones and brick.
784		Inspection chamber	Machine brick inspection chamber. 0.75 m square.
785	786	Cut	N-S aligned linear feature. 1 m wide.
786	785	Fill	Mid-grey sandy silt with frequent gravel and broken brick inclusions.
787	788, 799	Drain	N-S aligned linear feature, presumed to be a drain.

Context Number	Fill Of/Filled With	Interpretative Category	Description
788	787	Fill	Black silt with frequent stones and broken brick inclusions.
789	721, 790	Construction cut	Construction cut for wall 721.
790	789	Fill	Mid-brown silty sand.
791		Levelling layer	Orange sand.
792		Levelling layer	Blackish brown silty clay with common fine to medium gravel.
793		Levelling layer	Orange sand.
794		Levelling layer	Orange clayey sand.
795	778, 796	Construction cut	Construction cut for wall 778.
796	795	Fill	Light greyish silty clay.
797	798	Drain	W–E aligned linear feature, probably a small drain.
798	797	Fill	Fill.
799	787	Fill	Same as 789.
801		Levelling layer	Pink sand with common subrounded and angular stones.
802		Levelling layer	Mixed yellow sand redeposited natural with common rounded pebbles.
803		Levelling layer	Mid-brown lens.
804		Levelling layer	Yellow sandy clay with common fine gravel.
805		Levelling layer	Light grey sandy silt with frequent fine to medium gravel.
806		Levelling layer	Yellow clayey sand with rare gravel.
807		Levelling layer	Bedding layer for brick surface.
808		Levelling layer	Mixed black gritty deposit.
809		Levelling layer	Deposit between two structures.
810		Levelling layer	Yellowish brown sand.
811		Levelling layer	Mid-brown sandy silt.
812		Levelling layer	Levelling layer.

Appendix 3: Pottery by context

Table 5 Pottery by context

Context	Ware type	No. sherds	Wt. (g)	ENV	Comment
531	Pearlware	1	8	1	body sherd, banded dec
533	Creamware	1	7	1	base sherd, banded ware
575	Black-glazed redware	2	312	2	body sherds, glazed int
575	Pearlware	3	2	1	body sherds, slip-dec (marbled?)
575	Refined whiteware	2	5	2	cup/bowl rim, green transfer-print; small body sherd, blue transfer print
575	Feldspathic-glazed stoneware	1	22	1	flagon handle
576	Pearlware	2	28	2	lid rim (tureen/serving dish), bowl rim, beaded
578	Black-glazed redware	2	65	2	body sherd, glazed int
578	Refined whiteware	4	13	4	small rim (jug or cup?), transfer-printed; 3 body sherds, 1 transfer-printed, 1 hand-painted, 1 discoloured (but poss also TP)
578	Pearlware	1	2	1	plain body sherd
578	Creamware	1	4	1	plain body sherd
578	English stoneware	3	53	3	flanged bowl rim & 2 body sherds
578	Pearlware	3	28	3	plate rim, blue feathered egde; plate base, transfer-printed; body sherd, banded dec (closed form
578	Refined whiteware	2	6	2	rim (plate) and body sherds, transfer printed
585	Refined whiteware	5	14	2	4 joining sherds from cup rim, pale blue transfer print, Willow pattern; plain rim sherd
596	Black-glazed redware	1	118	1	body sherd, glazed int
596	Refined whiteware	3	11	1	conjoining body sherds with carination (flared bowl?); hand-painted polychrome decoration
596	Pearlware	1	6	1	base sherd
597	Refined whiteware	1	8	1	cup rim, pale blue transfer print
597	Refined whiteware	2	19	1	saucer rim, hand-painted polychrome dec (as sherds in 596)
598	Rockingham-type ware	1	23	1	lid-seated rim; teapot?
598	English stoneware	2	17	2	body sherds, 1 int feldspathic glaze

Context	Ware type	No. sherds	Wt. (g)	ENV	Comment
598	Pearlware	6	42	3	saucer rim, hand-painted; footring base (bowl?) with banded dec; 4 body sherds also banded (3 conjoining) could be from same vessel
598	Refined whiteware	2	14	2	base (?cup), plain body sherd
598	White salt glaze	1	42	1	body sherd, ?chamberpot
655	Feldspathic-glazed stoneware	8	481	1	two-handled flagon (shoulder); stamped CHARLES B[A]KER / STOCKPORT
660	Black-glazed redware	1	66	1	bowl rim
660	Pearlware	1	4	1	body sherd, transfer-printed; hollow ware
660	Refined whiteware	5	47	5	small bowl profile, sponged dec; body sherds; 1 sponged dec, 2 banded
661	Refined whiteware	10	65	4	1 base; body sherds, 6 banded (1 vessel); 1 hand-painted
661	Pearlware	1	7	1	base, cylindrical mug
661	Creamware	1	2	1	body sherd from cylindrical tankard; slip dec & green annular reeding
663	Refined whiteware	1	10	1	body sherd, banded dec, carinated (flared bowl?)
668	Refined whiteware	1	4	1	transfer-printed body sherd
673	Black-glazed redware	1	6	1	body sherd, glazed int & ext
673	Refined whiteware	8	39	8	body sherds, flat- and hollow wares, 4 transfer-printed, 1 banded
673	Pearlware	2	7	2	flatware body sherds
679	Refined whiteware	1	13	1	prob whiteware but covered in black residue
679	Refined whiteware	4	14	3	body sherds, transfer-printed
679	Black-glazed redware	3	821		2 rims, 1 base sherd, all glazed int, all prob from flared bowls
679	Pearlware	5	38	4	base sherds, 1 transfer-printed (all flatwares
704	English stoneware	2	45	1	shoulder of flagon (int feldspathic glaze); stamped I GALL
704	Refined whiteware	2	41	1	base, transfer-printed; ?bowl
707	Black-glazed redware	1	1	1	small thin-walled body sherd
708	Pearlware	1	1	1	tiny body sherd, transfer-printed

Context	Ware type	No. sherds	Wt. (g)	ENV	Comment
712	Black-glazed redware	1	286	1	flared bowl rim, heavy squared rim, glazed int
712	Pearlware	2	23	2	plate rims, blue feather edge
718	Refined whiteware	4	9	4	1 flatware rim, transfer-printed; 3 body
718	Creamware	1	2	1	body sherd
718	Pearlware	1	1	1	base sherd
750	Black-glazed redware	3	28	1	conjoining body sherds, glazed int
750	Refined whiteware	9	23	9	1 flatware rim, 8 body sherds; 4 transfer-printed, 2 banded
750	Pearlware	5	20	5	2 bases, 3 body (1 hand-painted, 1 banded)
754	Creamware	3	18	3	body/base sherds
754	Pearlware	3	78	3	base (flared banded bowl); car inated body sherd, also banded & poss from same bowl; plate rim, blue feathered edge
757	Refined whiteware	4	7	4	2 flatware rims; 1 base; 1 body (banded, as context 661)
758	Black-glazed redware	5	1172	4	2 large bowls (heavy squared rims), int glaze; 1 base (int glaze); 1 body (glazed int & ext)
758	English stoneware	1	373	1	base, large cylindrical bottle/jar
758	Redware	1	6	1	body sherd, glazed int & ext
758	Refined whiteware	4	22	4	2 flatware rims and 1 hollow ware body, all transfer-printed; 1 slip-decorated body, probably bowl
761	Black-glazed redware	4	862	4	1 flared bowl rim (heavy, squared), 1 convex jar rim, glazed int; 1 base, glazed int; 1 unglazed ?side handle from bowl
761	Feldspathic-glazed stoneware	1	156	1	base, cylindrical bottle/jar
761	Slipware	1	5	1	trailed slipware body sherd (open form)
761	Pearlware	1	18	1	base, transfer-printed (bowl?)
786	Yellow ware	1	3	1	banded dec
786	Refined whiteware	3	6	3	1 jug rim (banded dec), 2 body sherds (1 hand-painted)
786	Pearlware	2	4	2	base & body, the latter transfer-printed
787	Refined redware	4	11	1	flared bowl rim, blue banded dec
788	English stoneware	2	9	2	body sherds

Context	Ware type	No. sherds	Wt. (g)	ENV	Comment
788	Refined whiteware	1	6	1	flatware body
788	Pearlware	2	26	2	flatware base, hollow ware body
792	Black-glazed redware	1	14	1	body sherd, glazed int
792	Yellow ware	1	8	1	flanged bowl rim
792	Refined whiteware	3	26	3	flatware body & base sherds
792	Pearlware	2	14	2	plate rim, blue feather edge; body sherd, slip dec
799	Refined whiteware	7	10	6	flatware body & rim sherds, all transfer-printed
799	Pearlware	2	16	2	flared bowl rim, banded and marbled slip dec; body sherd
800	Refined whiteware	6	78	4	1 spout in form of lion's head; 1 plate base; 3 body sherds (2 conjoining banded, 1 marbled slip dec)
803	Refined whiteware	2	1	1	tiny conjoining body sherds, transfer-printed
807	Refined whiteware	5	3	5	tiny body sherds, 2 banded
807	Pearlware	8	5	8	tiny body sherds, 2 transfer-printed, plus hand-painted rolled rim (bowl)
816	Black-glazed redware	1	215	1	base, glazed int

Appendix 4: Environmental data

Table 6 Assessment of the environmental evidence

Feature Type	Context	Sample Code	Sample vol. (l)	Flot vol. (ml)	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other Notes	Charcoal >2mm (ml)	Charcoal	Other
Layer	707	234591_1	32	180	5%	-	-	-	-	-	1	Poor condition.	Clinker/cinder, fragmented (A***), coal, fragmented (A), fuel ash slag (B)

Scale of abundance: C = <5, B = 5–10, A = 10–30, A* = 30–100, A** = 100–500, A*** = >500. Bioturbation proxies: Roots (%).

Appendix 5: OASIS record

OASIS ID (UID): wessexar1-507752
Project Name: Heaton Lane, Stockport: Post-excavation Assessment and Updated Project Design
Activity type: Excavation
Project Identifier(s): Heaton Lane, Stockport
Planning Id: DC/071417
Reason for Investigation: Planning: Post determination
Organisation Responsible for work: Wessex Archaeology
Project Dates: 06-Dec-2020 - 05-Feb-2021
HER: Greater Manchester HER
HER Identifiers: [no data]
Project Methodology: Open area excavation following on from trial trench evaluation
Project Results: The excavation was successful in addressing the aims and objectives set out in the Written Scheme of Investigation (WSI). The results of the excavation revealed a palimpsest of 19th and 20th-century archaeological remains. These have been analysed to their full potential and it is recommended that a summary of the existing information be published in an appropriate journal. The earliest development on site was probably that shown on mid-19th century Ordnance Survey maps. Documentary evidence suggests that this dates to the 1830s, or a few years either side. A lack of definitively 18th-century finds confirms this general picture. Prior to the earliest development, the existing ground surface had been truncated, removing or reworking any agricultural soil. Levelling layers (primarily of silt and sand) were deposited at the beginning of the 19th-century development. In the west of the site the remains of the Wellington Bridge cotton mill were revealed, including the setting for at least one Cornish-type boiler, and large stone bases that may have been the steam engine foundation beds. The mill was probably built by James Wilkinson and passed to his son Samuel Wright Wilkinson before closing around 1900. The general arrangement of the mill, known from historic maps, was confirmed by excavation. However, the excavation did not provide information regarding the workings or processes that would have occurred during the operation of the cotton mill. In the centre and east of the site the fragmentary remains of the walls of ranges of back-to-back and terraced houses were exposed. The majority of the houses were demolished in the early 1890s, although the Jacques Street terraces remained until the 1930s. The remains of road surfaces, and of levelling layers and services present beneath the roads, may have been contemporary with the back-to-back housing, if not representative of later modification or maintenance. These roads were removed, repurposed, truncated and/or renamed in the early 1890s. The site was gradually taken over by a gasworks. The gasworks was built in 1825 but was at that time confined to the area north of the site. By 1895 the gasworks had expanded into the area of former back-to-back housing. The remains of an office, a weighbridge, yard entrances and a gasometer were identified by excavation. The former Wellington Bridge Mill building was incorporated into the gasworks in the early 20th century. Stockport Image Archive holds informative photographs of the mill and gasworks from this time. By 1934 the site had been wholly subject to demolition and a tram and bus depot erected in the place of the mill, housing and gasworks. Excavation revealed that the depot building was steel-framed with infill walls of machine brick and black ash mortar walls. An extensive range of drains was probably contemporary with the depot. In recent years the site has been used as a car park, following demolition of the tram and bus depot in 1978. The finds assemblage was typical of industrial sites of this period. Dateable artefacts provided little information about the phased development of the site. A single environmental sample was not informative.
Keywords:
Subject/Period: Cotton Mill: POST MEDIEVAL
FISH Thesaurus of Monument Types
Subject/Period: Back To Back House: POST MEDIEVAL
FISH Thesaurus of Monument Types
Subject/Period: Gas Works: POST MEDIEVAL
FISH Thesaurus of Monument Types
Subject/Period: Bus Depot: 20TH CENTURY
FISH Thesaurus of Monument Types

Archive:
Physical Archive, Documentary Archive - to be deposited with Stockport Archive Service;
Digital Archive - to be deposited with Archaeology Data Service Archive;
Reports in OASIS:
Tuck, A. and Saunders, B., (2022). *Heaton Lane, Stockport: Post-excavation Assessment and Updated Project Design*. Sheffield: Wessex Archaeology. 234592.01.

Appendix 6: Written Scheme of Investigation

Encl.

Transport for Greater Manchester and Stockport Metropolitan Borough Council

TEMPORARY RE-DEVELOPMENT OF HEATON LANE CAR PARK, STOCKPORT INTERCHANGE

Written Scheme of Investigation for a Stage 2 Archaeological Excavation

70031899-364
JULY 2020

CONFIDENTIAL

Transport for Greater Manchester and Stockport Metropolitan Borough Council

TEMPORARY RE-DEVELOPMENT OF HEATON LANE CAR PARK, STOCKPORT INTERCHANGE

Written Scheme of Investigation for a Stage 2 Archaeological Excavation

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70031899

OUR REF. NO. 70031899-364

DATE: JULY 2020

Transport for Greater Manchester and Stockport Metropolitan Borough Council

TEMPORARY RE-DEVELOPMENT OF HEATON LANE CAR PARK, STOCKPORT INTERCHANGE

Written Scheme of Investigation for a Stage 2 Archaeological Excavation

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2
Date	09/07/2020		
Prepared by	Phil Weston		
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Signature			
Authorised by	Alexandra Grassam		
Signature			
Project number	70031899		
File reference	G:\Projects\LANC\Stockport Interchange - Heaton Lane\2 Excavation\Excavation WSI		

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APPENDICES

FIGURES

Appendix C

Figure 1 – Site Location Showing Evaluation Trenches

Figure 2 – Site Plan Showing Areas of Potential Impact on Archaeological Remains

Appendix D: Design Drawings

Drawing 14113-WSP-STP-ZZ-DR-C-0006 – Finished Contour Plan

Drawing 14113-WSP-STP-ZZ-DR-C-0010 – External Works Layout

Drawing 14113-WSP-STP-ZZ-DR-C-0011 – Standard Details

Drawing 14113-WSP-STP-ZZ-DR-C-0002 – Proposed Drainage Layout

EXECUTIVE SUMMARY

WSP has been commissioned by Transport for Greater Manchester and Stockport Metropolitan Borough Council to produce a Written Scheme of Investigation (WSI) for a Stage 2 archaeological excavation, in advance of the re-development of Heaton Lane Car Park, Stockport as a temporary bus station/depot. The groundworks for the temporary re-development of Heaton Lane Car Park will comprise the construction of bus bays on the eastern half of the proposed development, including deep drainage and excavations for a fuel interceptor tank to a depth of approximately 4m. Finished levels for the site are up to 0.75m below present ground level.

A Stage 1 archaeological evaluation of the site has demonstrated that ground disturbance during the proposed works has the potential to adversely impact archaeological features. Identified remains include potential elements of Wellington Bridge Mill, workers housing formally on John Street and further buildings including an inn at the south-east of the site. These buildings appear on the First Edition Ordnance Survey map published in 1851. The Greater Manchester Archaeology Advisory Service (GMAAS) has requested that these remains are further investigated.

This WSI sets out the project design for a programme of archaeological investigation which will form the archaeological mitigation strategy for the development. The mitigation strategy is designed to preserve the previously identified archaeological remains 'by record' (i.e. archaeological excavation and recording). This WSI sets out the fieldwork scope and methodology, reporting and archival processes.

The archaeological work is required in order to fulfil the terms of an archaeological planning condition (ref DC/071417, dated 16th October 2019) attached to the planning permission for the development.

The WSI sets out the scope and methodology for the archaeological excavation, including the fieldwork method (including health & safety considerations), approach to sampling, progress reporting, post-excavation reporting, archiving and dissemination. This document has been prepared in consultation with the Heritage Management Director at Greater Manchester Archaeological Advisory Services, the archaeological advisor to the Local Planning Authority (LPA).

1. INTRODUCTION

1.1. PROJECT BACKGROUND

1.1.1. WSP has been commissioned by Transport for Greater Manchester (TfGM) and Stockport Metropolitan Borough Council (Stockport MBC) to produce a Written Scheme of Investigation (WSI) for a Stage 2 archaeological excavation in advance of the proposed development at Heaton Lane, Stockport, Greater Manchester (National Grid Reference/NGR 389123 390395; **Appendix C: Figure 1**).

1.1.2. The scheme comprises the construction of a temporary bus station on the site of Heaton Lane Car Park, which currently includes multi-storey parking to the north of the site and ground-level parking to the south. The main area of impact will be on the ground-level parking to the south. This will involve the construction of bus bays on the eastern half of the site, which will also include deep drainage and excavations for a fuel interceptor tank to a depth of approximately 4m. Finished levels for the site are up to 0.75m below present ground level and therefore will result in substantial ground disturbance in some locations.

1.1.3. The archaeological work is required in order to fulfil the terms of an archaeological planning condition (ref. DC/071417, dated 16th October 2019) attached to the planning permission for the development. The condition states that *"Prior to commencement of development and in accordance with the relevant phasing plan approved under Condition No 2, the applicant or their agents or successors in title shall secure the implementation of a programme of archaeological works."*

1.1.4. Condition 54 states that *"The works shall be to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by Stockport Planning Authority. The WSI shall cover the following: A phased programme and methodology of investigation and recording to include: - evaluation trenching - informed by the above, targeted excavation (subject to a new WSI)".*

1.1.5. The WSI sets out the scope and methodology for the archaeological evaluation including fieldwork methods (inclusive of health & safety considerations), approach to sampling, progress reporting, post-excavation reporting, archiving and dissemination. The aim of the excavation is to mitigate for the truncation of archaeological remains on site through 'preservation by record'.

1.1.6. The WSI has been informed by a historic environment desk-based assessment (HEDBA; AECOM 2016) and a subsequent mitigation strategy prepared by WSP (2018) in support of the planning application. The scope of works set out in this WSI has also been informed by an archaeological watching brief, carried out in 2019 during Ground Investigation works (Salford Archaeology 2019) and by the results of an archaeological evaluation carried out in May 2020 (Wessex Archaeology 2020).

1.1.7. This WSI sets out the project design for a set of archaeological investigations which are required by the condition. The mitigation strategy is designed to preserve 'by record' (i.e. archaeological excavation and recording) the identified archaeological remains, which would be impacted by the scheme (See figure 1 Wessex Archaeology 2020). The main stage of archaeological mitigation (archaeological excavation) shall take place in advance of the construction phase.

1.1.8. This WSI sets out the fieldwork scope and methodology, reporting and archiving processes. This mitigation strategy has been informed by the results of the trial trench evaluation (May 2020) and

discussions between the WSP Cultural Heritage and Archaeology Team and the Greater Manchester Archaeology Advisory Service (GMAAS) (01/07/2020), which provides Development Control advice in respect of the historic environment to the Local Planning Authority. These discussions were based on the previous investigative work that has been carried out on the site to date, which is reported in the following documents:

- AECOM, 2016, Historic Environment Desk-Based Assessment: Stockport Interchange Bridge, unpublished
- WSP, 2018, Stockport Interchange, Heritage - Archaeology Strategy, Rep No: 70031899; 14113-
- WSP-SKZ-XX-RP-Y-0001
- WSP, 2020 Stockport Interchange, Heaton Lane, Phase II Geo-Environmental Ground Investigation Report, 14113-WSP-SKZ-XX-RP-Y-0007
- Wessex Archaeology, 2020, Heaton Lane, Stockport: Archaeological Evaluation, Unpubl. Rep. 234590.02

1.1.9. The mitigation strategy set out here comprises:

- *Archaeological Excavation*. To be undertaken within all areas where ground reduction is required for the construction of the temporary interchange which has the potential to impact below ground archaeological remains. This will target the structural remains identified in the evaluation and will ensure the site is excavated and recorded prior to the beginning of the construction programme (see **Section 3**).
- *Post-Excavation Assessment, Analysis and Reporting*. Following the completion of the archaeological excavation, a programme of assessment and analysis will be determined in order to disseminate the results of investigation. The approach to the post-excavation assessment and reporting will be proportionate the scale and significance of the findings of the excavation and agreed in consultation with GMAAS (see **Section 4**).
- *Deposition of Archive*: Following the completion of the post-excavation assessment, analysis and reporting, the project archive will be deposited with an appropriate local museum and a digital record of the archive will be stored on the Archaeological Database Service (ADS). The site archive (finds and project plans etc.) will be deposited with an appropriate repository within 12 months of issuing the report (see **Section 4.3**).

1.1.10. The location of this investigation is shown on **Appendix C: Figure 2** and detailed in Sections 3, 4, 5, and 6 of this WSI. The WSI should be read in conjunction with the evaluation report (Wessex Archaeology 2020).

1.1.11. This WSI sets out the methodologies which will be followed during the onsite fieldwork and during the post-excavation stages. These will follow the Standards and Code of Practice laid down by the Charted Institute for Archaeologists (CIfA 2014a).

1.1.12. All archaeological works on the site will be undertaken by competent archaeologists recognised by the Charted Institute for Archaeologists (CIFA) and approved by the WSP Cultural Heritage and Archaeology Team. All fieldwork operations will take into account personal safety and will follow national regulations and Health and Safety legislation.

1.2. CONSULTATION

1.2.1. WSP contacted the LPA Archaeological Advisor (Norman Redhead of GMAAS) and provided a draft of this WSI on 26/06/2020. GMAAS agreed the scope of the WSI via email on 01/07/2020.

1.3. PROJECT ROLES

1.3.1. The '*WSP Cultural Heritage and Archaeology Team'* is responsible for managing the scope and for monitoring and assuring the work on behalf of the client. The team will liaise directly with the GMAAS Archaeological Advisor. **Section 7** sets out the role and responsibilities in detail.

1.3.2. '*GMAAS'* provides the development control and planning advice to the Local Planning Authority and has the final decision on the scope of work and signs off the excavation when it is complete, in consultation with the WSP Cultural Heritage and Archaeology Team.

1.3.3. The '*archaeological fieldwork contractor'* is responsible for carrying out the fieldwork, post-excavation reporting, deposition of the archive and dissemination. All reporting by the archaeological fieldwork contractor will be via the WSP Cultural Heritage and Archaeology Team.

1.3.4. The '*Principal Contractor'* is the contractor in control of the site and responsible for all Health and Safety and site security.

1.3.5. The *'plant attendance contractor*' refers to the operative of the plant, potentially hired by the Principal Contractor and under their direction.

1.3.6. '*The client'* is the developer. This may or may not be the current landowner.

1.3.7. The '*project archive repository'* is the organisation, for example the county or local museum, responsible for the long-term curation of the project archive, including the field notes, plans, photographs and archived finds. The archaeological fieldwork contractor will establish the project archive repository prior to starting the work and will be assigned a unique project reference number ('site code').

1.4. STATEMENT OF LIABILITY

1.4.1. This document is confidential and for the exclusive benefit of the client (Transport for Greater Manchester and Stockport Metropolitan Borough Council). It may not be assigned to or relied upon by a third party without the agreement of WSP UK Limited ('WSP') in writing. WSP retains all copyright and other intellectual property rights in the document and its contents unless transferred by written agreement between WSP and the client.

1.4.2. The findings and opinions expressed are based on the conditions encountered and/or the information reasonably available at the date of issue of this document (or other date e.g. date of inspection) and shall be applicable only to the circumstances envisaged herein.

1.4.3. No person except the client shall have the benefit of this document by virtue of the Contracts (Rights of Third Parties) Act 1999.

2. HISTORIC ENVIRONMENT BASELINE SUMMARY

2.1. SITE LOCATION

2.1.1. The proposed development is located in Stockport town centre on land bounded by Great Egerton Street to the north, Heaton Lane to the south, Wellington Road North to the east and Gas Street to the west (centred on NGR SJ 389123 390395; **Appendix C: Figure 1**). The site lies on the north bank of the River Mersey and is currently used as a ground-level car park. The northern part of the proposed development is occupied by a multi-storey car park which is not subject to this WSI.

2.2. TOPOGRAPHY

2.2.1. The site of the proposed development is currently occupied by a car park. The tarmac surface of the carpark falls slightly from 45.1m above Ordnance Datum (aOD) at the north-east, adjacent to the multi-storey carpark, to 44.8m aOD fronting on to Heaton Lane to the south-west.

2.3. GEOLOGY

2.3.1. The site is located on sandstone bedrock of the Chester Formation formed c. 250 million years ago in the Triassic Period. The superficial natural consists of River Terrace deposits – Devensian sand and gravel – which were formed c. 3 million years ago in a local environment dominated by rivers (British Geological Survey 2019).

2.4. ARCHAEOLOGICAL POTENTIAL

2.4.1. The HEDBA (AECOM 2016) provides a detailed archaeological and historical background, which is summarised here.

2.4.2. Prehistoric remains in the Stockport area have been rare and sporadic. Finds consist of isolated discoveries such as some Bronze Age cremation burials in Cheadle and two Bronze axes found in Adswood. Evidence for Roman presence in Stockport is also archaeologically very slim. There have been occasional Roman finds in the area but as yet there is little firm archaeological evidence for early settlement. However, it is likely that the Roman roads from Cheadle to Melandra Castle (Gamesely) and from Manchester to Buxton crossed the Mersey in Stockport.

2.4.3. There is little archaeological evidence for activity during the early medieval period. Anglo-Saxon coins have been found locally, however Stockport is not recorded in the Domesday Survey of 1086 which suggests there was no settlement here prior to the Norman Conquest. The settlement developed during the medieval period, centred on Market Place and Millgate and most likely had a bridge over the Mersey by the 15th century. A deer park was located on the site of Astley Street at this time. However, it was not until the 18th-century that Stockport began to grow rapidly, when it emerged as one of the early centres of industrialisation in the North West.

2.4.4. The factory-based silk industry was of particular importance locally by the end of the 18th century, although this branch of the textile industry had been superseded by cotton by the early 19th century. Cotton production grew rapidly during this period with the introduction of new mills and the introduction of a successful power loom in the 1820s. This is perhaps best demonstrated by the collapse of the local handloom weavers, which dropped from 5000 practising individuals in Stockport in 1816 to just 300 in 1834.

2.4.5. Hat manufacturing, together with a thriving button-making trade, emerged as important local industries during the course of the 19th century. Interestingly, the Wellington Mill (later hat works), one of the largest ever built in Stockport, was opened by Thomas Marsland in 1828, and was mostly funded by profits from the print and dye business located at the Astley Street site. In 1833, it was recorded that Marsland's combined firm employed a workforce of 947, the largest in Stockport. During the early boom of calico printing in the 1820s, it appears that Marsland was the sole printer in Stockport, with two sites – one within the present study area, and a second located a few streets over at Daw Bank. The dye works were estimated to be the largest in Europe in the 1820s, potentially printing 1.27 million yards of cloth every six weeks.

2.4.6. Historic mapping analysis suggests that the south of the site (facing onto Heaton Lane) has not been disturbed to any great degree and, therefore, a potential for below ground archaeological remains was identified. Asset identified during the map regression comprise Wellington Bridge Mill, including the engine house, workers housing on the now defunct John Street, Union Street and Henry Street and further buildings at the east of site including an inn.

2.5. PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

2.5.1. The section below outlines the previous archaeological field investigation for the development, this provides the background information for this WSI and informs the mitigation strategy.

ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

2.5.2. An archaeological trial trench evaluation of the site was undertaken by Wessex Archaeology between 1st July and 8th July 2020. The evaluation comprised the excavation of three trenches. Trench one targeted Wellington Bridge Mill and revealed a concrete surface (0.65m bgl) and a red brick surface/vault cap (0.60m bgl). It was unclear if either surface was directly related to the mill. Trench 2 targeted workers houses fronting on to the now defunct John Street and revealed red brick wall footings (0.64m bgl). These remains are considered to be the remains of the workers' houses targeted. Trench three was located over former buildings in the east of site, including the inn. Red brick wall footings (0.55m bgl) and concrete (0.75m bgl) and cobble (0.60m bgl) surfaces were identified which are thought to represent the targeted buildings.

3. ARCHAEOLOGICAL EXCAVATION

3.1. INTRODUCTION

3.1.1. To mitigate the impact on the identified archaeological remains a strategy of 'preservation by record' is proposed, this shall be in the form of an archaeological excavation within the areas where ground reduction is required by the scheme. The area of excavation is shown on **Appendix C: Figure 2**. The excavation has been informed by the area of construction impact and the results of the archaeological trial trench evaluation (Wessex Archaeology 2020).

3.1.2. An archaeological excavation is defined by the Institute for Archaeologists as:

> *'a programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area or site on land, inter-tidal zone or underwater. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design'* (CIfA 2014a).

3.1.3. The development site was subject to previous targeted trial trenching (Wessex Archaeology 2020), which confirmed the presence of building foundations of 18th to 19th century date. The results of the evaluation suggest that these remains are at risk from ground reduction excavations for the construction of the temporary interchange.

3.2. RESEARCH AIMS AND OBJECTIVES

3.2.1. The following research objectives have been compiled with particular consideration of the results of previous archaeological evaluation trenches. These research objectives may be revised during the excavation in consultation with GMAAS.

- What is the extent and rate of survival of the 19th century industrial sites and workers' housing identified by the evaluation trenching?
- Is there evidence present for earlier use of the site?
- Mitigate through 'preservation by record' impacts on archaeological remains at risk from the 0.5-0.75m remediation across the site (including those identified in the evaluation trenching).
- Mitigate through 'preservation by record' impacts on any buried archaeological remains due to any remediation deeper than 1.0m below ground level, particularly new drainage systems and in the area of the proposed fuel interceptor tank.

3.3. ARCHAEOLOGICAL EXCAVATION METHODOLOGY

3.3.1. The area of ground reduction is shown on **Appendix C: Figure 2**. The figure divides up the area of ground reduction which has the potential to impact on archaeological remains ; with the range defined as 'no potential', 'low potential', 'moderate potential' and 'high potential'. This grading is based on the findings of the evaluation and the following design drawing:

- Drawing 14113-WSP-STP-ZZ-DR-C-0006. This drawing shows the topographical survey data of the current car park overlaid by the finished contour plan, which records the proposed finish ground level.

- Drawing 14113-WSP-STP-ZZ-DR-C-0010. This drawing shows the layout of the different surfaces to be used on site.
- Drawing 14113-WSP-STP-ZZ-DR-C-0011. This drawing shows the make-up and depth of the different surfaces to be used on site and mapped on drawing 14113-WSP-STP-ZZ-DR-C-0010.
- Drawing 14113-WSP-STP-ZZ-DR-C-0002. This drawing shows the location of the current drainage system on site, the proposed drainage system and the location of the proposed fuel interceptor tank.

3.3.2. These drawings can be found in **Appendix E: Design Drawings**.

3.3.3. Mechanical stripping of the area will require the extant car park surface to be broken up before being machined off. The broken-up tarmac will be removed under archaeological direction by a 360° tracked excavator fitted with an appropriate toothless ditching bucket. The foundation layers for the current car park surface and underlying rubble deposits will be removed in level spits until the required formation level for the development is achieved or archaeological features are revealed.

3.3.4. Should the formation level be reached, but the Principal Contractor considered the exposed deposits inadequate as a foundation for the proposed new surface layers, further excavation will only be carried out under archaeological supervision. Any archaeological remains exposed by any further excavation will be fully recorded.

3.3.5. Care will be taken for the machining not to have an impact any archaeological remains buried at shallow depths. No machinery will cross stripped areas until they have been given the ‘all-clear’ by the on-site archaeologist. All earthmoving and other vehicles will avoid travelling on the areas of archaeological investigation. Care should be taken not to damage archaeological deposits through excessive use of mechanical excavation.

3.3.6. The spoil generated by the stripping of the site will be removed from site by the Principal Contractor or their subcontractor.

3.3.7. A digital pre-excavation site-plan of any archaeological features will be prepared at an appropriate scale. All archaeological features will be surveyed and located to an accuracy of 0.1m or greater using a total station theodolite (TST) or differential Geographical Positioning System (GPS).

3.3.8. The archaeological team will undertake monitoring of the machine stripping, hand-cleaning and planning in close succession (on the same or consecutive days) in order to ensure the pre-excavation site plan captures all archaeological features. If vulnerable features are revealed special consideration shall be taken, and materials such as terram may be used to protect remains until recording and/or removal can take place.

3.3.9. Areas containing particularly significant archaeological remains will be protected and not left open to the weather or exposed to vandalism overnight. All reasonable measures will be taken to protect or preserve features ‘in situ’ overnight and to store any archaeological materials (such as artefacts and records), both on and/or off site. Artefacts of particular significance may have to be taken offsite and stored at a secure location.

3.3.10. All underground services/utilities will be identified by the Principal Contractor and made safe/ redundant prior to any groundworks commencing. No overhead cables are present.

ARCHAEOLOGICAL SAMPLE EXCAVATION AND RECORDING

3.3.11. Following monitoring of the preliminary stripping, archaeological excavation and recording within the area can commence. All excavation work will be supervised and monitored by a fully qualified Archaeological Project Officer/Supervisor.

3.3.12. A pre-excavation site-plan will be produced for an initial site excavation strategy meeting attended by the WSP Cultural Heritage and Archaeology Team and GMAAS. The site plan will be used to guide the recording and sampling strategy which will be subject to an updated specification if necessary, based on the results of further investigation, in consultation with the WSP Cultural Heritage and Archaeology Team and GMAAS. The excavation strategy will be flexible and will accommodate changes as the fieldwork proceeds. The excavation strategy will be justified against the stated aims and objectives of the excavation and will be agreed with GMAAS.

3.3.13. The agreed strategy and scope of work will be directed and managed solely by the WSP Cultural Heritage and Archaeology Team on behalf of the client in consultation with GMAAS. There will be no direct liaison between the archaeological fieldwork contractor and GMAAS.

3.3.14. Where archaeological horizons are encountered, subsequent archaeological excavation will be undertaken by hand.

- All exposed archaeological deposits and features will be recorded using a pro forma recording system.
- A context record will be kept on pro-forma record cards. Each discrete archaeological layer, structure, fill, cut, etc., will be individually numbered and described in terms of soil composition, stratigraphic position, dimensions, artefact content, samples, with professional interpretation as to the likely nature and date of the feature. The context system will be able to be cross-referenced to all records and will be compatible with digitisation.
- Registers will be kept of all photographs, levels, plans, sections, finds and samples taken in the field.
- A complete drawn record of excavated archaeological features and deposits will be made. Plans, sections and elevations will be drawn at a scale deemed appropriate, i.e. generally 1:20 or 1:50 for plans, 1:10 for sections and elevations) and tied to the Ordnance Survey National Grid.
- All plans and sections will include the Ordnance Datum (OD) height of strata and all principal features (as defined by OSGM15 and OSTN15).
- A 'site location plan', indicating site north shall be prepared at 1:1250. A plan at 1:200 (or 1:100) shall be prepared showing the location of archaeological remains investigated in relation to the investigation area. The location of site plans will be identified using OSGB co-ordinates.
- Single context planning (MOLA 1993) shall be used where complex stratigraphy is encountered.
- A 'Harris matrix' stratification diagram shall be employed to record stratigraphic relationships (Harris *et al.* 1993), where appropriate. This record shall be compiled and checked during the course of the fieldwork with spot dating, where appropriate, incorporated onto this diagram.
- A full photographic record will be made using Digital Single Lens Reflex (SLR) cameras equipped with an image sensor of not less than 10 megapixels in high resolution TIFF (uncompressed) format. This will record both the detail and the general context of the principal features and the site as a whole. Digital images will be subject to managed quality control and curation processes which will embed appropriate metadata within the image and ensure long term accessibility of the image set. Photographs will also be taken of all areas, including access routes, to provide a record of conditions prior to and on completion of the fieldwork.

- All hand drawn information shall be digitised (or preferably generated digitally in the first instance).

3.3.15. Where modern features (e.g. surface water drains) are seen to truncate the archaeological remains, these will be removed, where practicable, in a manner that does not damage the surrounding deposits.

3.3.16. It is expected that the archaeological remains on site will comprise the wall footings of brick-built structures, associated cobble and concrete surfaces and drains. Any demolition rubble between wall footings will be removed so any potential surfaces can be identified, and the full elevation of the surviving wall footings can be recorded. The archaeological fieldwork contractor will undertake sufficient excavation and recording to allow the determination of function and extent of identified archaeological remains. The excavation strategy will be reviewed continuously onsite and amended in order to take account of changing circumstances. Any changes or amendments will be agreed between the WSP Cultural Heritage and Archaeology Team and GMAAS.

3.3.17. Environmental bulk samples will be taken of in situ industrial deposits to aid the identification of the industrial process involved.

FINDS AND OWNERSHIP

3.3.18. All finds relating to the archaeological record of the site will be collected with reference to context and location. All archaeological finds from excavated contexts will be retained. Any finds requiring conservation or specific storage conditions will be dealt with immediately in line with First Aid for Finds (Leigh *et al*. 1998).

3.3.19. The WSP Cultural Heritage and Archaeology Team, the client and GMAAS will be notified immediately on discovery of any material covered, or potentially covered, by the *Treasure Act 1996* (as amended by *The Coroners and Justice Act 2009*). All information required by the Treasure Act (i.e., finder, location, material, date, associated items etc.) will be reported to the Coroner within 14 days along with the relevant Finds Liaison Officer.

3.3.20. Whereas ownership of any finds on the site lies with the landowner, it will be necessary that the landowner gives necessary legal approvals, licences and permissions to donate the finds to an appropriate local museum, to enable that body to carry out its obligations to curate the finds after discovery, in perpetuity, as part of the archaeological archive from this site.

3.3.21. These approvals, licences and permissions shall be either confirmed in the Agreement and Contract regulating the archaeological works and/or confirmed by the completion of the relevant Deed of Transfer form.

3.3.22. In such case, the client (or their agent) will make arrangements for the signing of the Deed of Transfer Form by the client or, if the landowner is different to the client, by the landowner.

3.3.23. Notwithstanding the above, subsequent arrangements may be made if required between the landowner and/or the client and an appropriate local museum for the conservation, display, provision of access to or loan of selected finds in or near their original location.

HUMAN REMAINS

3.3.24. It is considered highly unlikely that human remains will be encountered on site, however, In the event that human burials are discovered, a Home Office Licence will be required (in accordance with Section 25 of the *Burial Act 1857*) for both inhumation and cremated remains before the remains

can be lifted. Application for a Licence will be made by the archaeological fieldwork contractor. Any disturbed burials should be dealt with swiftly and sympathetically by a specialist in accordance with recognised guidelines (EH 2004).

3.3.25. WSP Cultural Heritage and Archaeology Team may consult Historic England and other stakeholders for input to the exhumation and sampling strategy.

3.3.26. Human remains, once recognised will be metal detected immediately to determine whether any metallic grave goods are present. If possible grave goods and other obvious artefact shall be recorded and lifted on the day of discovery to avoid the risk of vandalism and theft.

3.3.27. Where appropriate, the Principal Contractor shall ensure that adequate site security is provided. As a minimum, this will require a 24-hour comprehensive security regime until sensitive remains have been recorded and lifted.

UNFORESEEN SIGNIFICANT REMAINS OF NATIONAL IMPORTANCE

3.3.28. On the discovery of unforeseen nationally or internationally significant archaeological remains a site meeting will be called immediately with the WSP Cultural Heritage and Archaeology Team, GMAAS, the client, the archaeological fieldwork contractor and where appropriate the Historic England Inspector of Ancient Monuments, where a forward strategy for preservation in situ or full archaeological excavation will be discussed and agreed. If required, the WSI will be updated and funding negotiations will be commenced to achieve the agreed strategy.

3.3.29. Where appropriate, the Principal Contractor shall ensure that adequate site security is provided.

INTERIM STORAGE AND PROCESSING FACILITIES

3.3.30. Prior to final deposition of the archive, the storage and processing facilities shall be the responsibility of the archaeological fieldwork contractor.

3.3.31. All samples will be taken to address a specific question. The purpose of the sample, and the question it has been taken to address will be recorded on the archaeological fieldwork contractor sample record sheet.

4. REPORTING, DISSEMINATION & ARCHIVING

4.1. POST-EXCAVATION REPORTING

INTRODUCTION

4.1.1. The nature of the post-excavation reporting and the way in which it is disseminated (e.g. grey literature report, journal article or monograph) will depend on the significance of what was discovered during the fieldwork.

4.1.2. Following, and where possible during, the fieldwork, the findings will be assessed by the WSP Cultural Heritage and Archaeology Team in consultation with GMAAS, against the stated research aims and objectives as set out in this WSI. This will determine the extent to which the aims have been met and may lead to the identification of any new research questions. It will also enable a decision regarding the next step, which is likely to comprise one of the following:

- *Post-Excavation Assessment (PXA) and Updated Project Design*. The site archive and material finds are clearly significant but require further consideration as to further analyses and what form of publication and dissemination would be most appropriate.
- *Straight to publication*. The significance of the site archive is already reasonably well understood, and the most appropriate level of analysis and publication can be agreed with GMAAS and other stakeholders. No further assessment is required to determine this.
- *Post-Excavation Statement*. The results of the fieldwork are not particularly significant. A grey literature report for deposition within the HER and Archaeological Data Service is considered an appropriate level of dissemination.

POST-EXCAVATION ASSESSMENT (PXA) AND UPDATED PROJECT DESIGN

4.1.3. The Post-Excavation Assessment (PXA) has three principal aims:

- Provide an audit of all archaeological evidence recovered during the fieldwork.
- Provide a statement of significance of the quantity and perceived quality of the data as contained within the site archive and its potential to contribute to archaeological knowledge, in particular the stated research aims and objectives as set out in this WSI. It might identify additional research questions.
- Define scope, resource requirements and programme for the completion of analyses through to publication (including editing stages) and display (where appropriate). This will consider costs, specialist staff, a retention/discard strategy along with storage and curation requirements. The strategy will be proportionate to the significance of the findings.

4.1.4. A Post-Excavation Assessment report will normally contain the following information (CIFA 2014a):

- Introduction
- Scope of the project (e.g. sites involved)
- Circumstances and dates of fieldwork and previous work
- Comments on the organisation of the report
- Original research aims
- Summary of the documented history of the site(s)
- Interim statement on the results of fieldwork
- Summary of the site archive and work carried out for assessment

- Site records: quantity, work done on records during post-excavation assessment
- Finds: factual summary of material and records, quantity, range, variety, preservation, work done during post-excavation assessment
- Environmental material: factual summary of human and animal bone, shell and each type of sample (e.g. bulk organic, dendrochronological, monolith), quantity, range, variety, preservation, work done on the material during post-excavation assessment
- Documentary records: list of relevant sources discovered, quantity, variety, intensity of study of sources during post-excavation assessment
- Potential of the data
- A discursive appraisal of the extent to which the site archive might enable the data to meet the research aims of the project. Different classes of data should be discussed in an integrated fashion, sub-divided according to the research aims of the project
- A statement of the potential of the data in developing new research aims, to contribute to other projects and to advance methodologies
- A summary of the potential of the data in terms of local, regional, national and international importance
- Additional information could include: supporting illustrations at appropriate scales; sufficient supporting data, tabulated or in appendices, and/or details of the contents of the project archive, to permit the interrogation of the stated conclusions; and index, references and disclaimers

4.1.5. An Updated Project Design will also be produced, as a separate section within the PXA or stand-alone document. This will set out the updated research objectives for further analysis and this may include amendments or additions to the original research aims.

4.1.6. In addition to the PXA, an interim report giving an overall view of the project and its results in non-technical language may be prepared and issued to the client and other relevant parties on or before completion of the PXA.

4.1.7. The WSP Cultural Heritage and Archaeology Team will review and technically assure all documents before they are issued. The reports will form part of the project archive.

STRAIGHT TO PUBLICATION

4.1.8. In some cases, the significance of the information and material finds is apparent and does not require further work as outlined in the PXA stage above to determine which level of analysis and publication would be most appropriate. The WSP Cultural Heritage and Archaeology Team would need to agree this approach with GMAAS.

POST-EXCAVATION STATEMENT

4.1.9. As set out under the 2015 guidance of the Association of Local Government Archaeological Officers (ALGAO 2015), where archaeological evidence is uncomplicated and limited in scale and significance, a ‘Post-Excavation Statement’ will be prepared which will present the results of the fieldwork in a fully illustrated grey literature report. It will include tabulated data to support a summary site narrative and relevant site plan(s). There may be a requirement to obtain absolute dates or other evidence either to support or expand upon the site narrative.

4.2. PUBLICATION AND DISSEMINATION

4.2.1. Where potential for further archaeological work has been identified and detailed proposals for this set out in the PXA, further analysis and research may be required, leading to publication in either a

dedicated site-based monograph, or in a regional, national or period-based archaeological journal within five years (subject to availability in selected journal) of the completion of fieldwork on site. Agreement shall be sought with the client to allow a contingency sum to cover the estimated cost of such further analysis and publication should such work be recommended in the PXA report.

4.2.2. Consideration will be given by the WSP Cultural Heritage and Archaeology Team in consultation GMAAS as to whether it would be appropriate to publish the results of the project through a range of outlets, from conventional archaeological publications to, for example, site viewing platforms, interpretation panels and lectures, open days and school visits, radio and television programmes, videos and popular publications and the Internet. If, following the PXA, a formal letterpress or online journal publication report is agreed not to be warranted, consideration should be given to the availability of the digital report to ensure that the results of the project are widely available for future researchers and for the general public.

4.2.3. A short summary of the results of the work will be submitted to the local HER using the appropriate OASIS archaeological report form, and for publication in a local archaeological journal and/or other period-based archaeological journals.

4.3. THE PROJECT ARCHIVE

4.3.1. A digital record of the archive will be stored on the Archaeological Database Service (ADS), any finds will be deposited with an appropriate local museum. A unique site code for the project will be designated to this project and will be used as the site identifier for all records produced.

4.3.2. The Project Archive will include all materials retained (or the comprehensive record of such materials as referred to above) and all written, drawn and photographic records relating directly to the investigations undertaken. The archive will conform to recognised guidelines

- Archaeological Archives Forum, 2011, *Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation*
- Museums and Galleries Commission, 1992, *Standards in the Museum Care of Archaeological Collections*
- Society of Museum Archaeologists, 1993, *Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland*
- Society of Museum Archaeologists, 1995, *Towards an Accessible Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland, Scotland and Wales*
- Chartered Institute for Archaeologists, 2014b, *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*

4.3.3. The archive will be quantified, ordered, indexed and internally consistent before transfer to an appropriate local Museum.

5. PROGRAMME, STAFFING AND ATTENDANCES

5.1. INITIAL TIMETABLE AND STAFFING

5.1.1. The archaeological fieldwork is anticipated to start on 27th July 2020, with a duration of approximately 15-20 working days.

5.1.2. The archaeological fieldwork contractor will provide a programme for the archaeological monitoring to the WSP Cultural Heritage and Archaeology Team, which will include detailing of staffing requirements.

5.1.3. The exact details of time, areas and numbers of staff involved would be agreed in discussions between the WSP Cultural Heritage and Archaeology Team, the client, and GMAAS.

5.1.4. If significant archaeological remains are revealed which cannot be satisfactorily sampled in the period initially defined, there should be sufficient flexibility within the programme and resources to enable the remains in question to be investigated to the satisfaction of the WSP Cultural Heritage and Archaeology Team in consultation with GMAAS.

5.2. PROJECT TEAM

5.2.1. The work will be undertaken by an archaeological fieldwork contractor that is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA) and approved by the Cultural Heritage and WSP Archaeology Team.

5.2.2. Details of the archaeological fieldwork contractor staff including post-excavation specialists will be provided once the archaeological fieldwork contractor has been appointed and presented in a method statement prepared by the archaeological fieldwork contractor.

5.2.3. CVs of the key members of the WSP Cultural Heritage and Archaeology Team will be made available upon request.

5.3. PROGRESS REPORTS

5.3.1. The WSP Cultural Heritage and Archaeology Team will provide the client and, if appropriate, GMAAS, with a weekly summary progress memo (1–2 pages). This will:

- Summarise the work undertaken during the week and the key findings
- Report on site attendance, where appropriate
- Confirm that the work will be completed to programme and identify any potential issues to programme.
- Identify any health and safety issues (including near miss)

5.4. POST-EXCAVATION PROGRAMMING

5.4.1. The time required to complete the Post-excavation Assessment Report and any further work, will very much depend on the volume of records generated during the mitigation work. The results of the previous work on the site will be combined in the post-excavation assessment programme.

6. HEALTH AND SAFETY

6.1. INTRODUCTION

6.1.1. Health and Safety will take priority over all other requirements. A conditional aspect of all archaeological work is both safe access to the area of work and a safe working environment. The project will be carried out in accordance with safe working practices.

6.1.2. The work will be carried out during preliminary construction activities and is therefore subject to Construction (Design and Management) regulations (CDM 2015). The Principal Contractor on site will be in charge of site management and all aspects of Health and Safety.

6.1.3. The following sections outline the health and safety aspects of the site work along with known constraints and maybe subject to change following consultation with the client, landowner, and the archaeological fieldwork contractor.

6.2. RISK ASSESSMENT AND METHODOLOGY STATEMENT (RAMS)

6.2.1. The archaeological fieldwork contractor will produce a site-specific Risk Assessment and Methodology Statement (RAMS) to cover the onsite fieldwork. In respect of the archaeological excavation, this will comply with Construction (Design and Management) regulations (CDM, 2015) in accordance with the Principal Contractor RAMS. The archaeological fieldwork contractor RAMS will be reviewed by the WSP Cultural Heritage and Archaeology Team.

6.3. PERSONAL PROTECTIVE EQUIPMENT (PPE)

6.3.1. Staff present on site will be required to wear the appropriate Personal Protective Equipment (PPE), as identified in the RAMS. As a minimum this will be protective shoes, long sleeve high-visibility vest, high-visibility trousers, gloves, protective glasses and safety helmet. The requirement for any additional PPE will be identified in the RAMS.

6.4. WELFARE

6.4.1. The Principal Contractor will be responsible for providing and positioning suitable welfare facilities on site, including toilet and water for washing.

6.4.2. The site welfare is to be located at the eastern limit of the site in an area defined as having no archaeological potential.

6.5. SITE SECURITY

6.5.1. Due to the location of the site, site security is required to ensure the protection of all contractors and the general public. The Principal Contractor will be responsible for the securing the site and will review the ongoing fencing requirement during the course of the fieldwork.

6.6. ACCESS

6.6.1. Site access from the relevant landowner will be arranged by the client or their representative before site works commence. The WSP Cultural Heritage and Archaeology Team and archaeological fieldwork contractor shall be notified if access arrangements change prior to or during the evaluation programme.

6.7. NON-ARCHAEOLOGICAL CONSTRAINTS

SERVICES ABOVE GROUND AND BURIED

6.7.1. The identification of services and utilities will be the responsibility of the Principal Contractor.

6.7.2. Service plans shall be consulted, and excavation areas adjusted in order to avoid services. Each excavation area will be scanned with a CAT before machine excavation to identify the possible presence of any electrical services.

GROUND CONTAMINATION / ASBESTOS

6.7.3. The responsibility for all aspects of Health and Safety in respect of ground contamination will be the responsibility of the Principal Contractor.

6.7.4. A desk-based ground risk and remediation report is available (WSP 2020) and was consulted as part of the preparation of the WSI. This will be provided to the Principal Contractor and archaeological fieldwork contractor.

6.7.5. The ground risk and remediation report highlighted a number of potential risks to human health (based on a commercial use) that were assessed via generic quantitative risk assessment (GQRA). Elevated concentrations of benzo(a)pyrene were recorded in two locations: WS403 located in on the north-east corner of the site at 0.40m bgl and WS402B, located at the south-west corner of the site at 4.90m bgl. Proposed excavations near WS402B will not exceed depths of 1.2m and, therefore, should cease before the level of contamination is reached, however works should be considered to pose a potential risk. Concentrations are considered to represent a potential direct contact health risks to future site construction/maintenance workers and adequate protective measures are required to mitigate the risk.

6.7.6. Asbestos has been identified in made ground in one location in the form of large chrysotile (white asbestos) bundles from WS401 at the northern end of the site at 1.0m bgl. Although no asbestos was identified in the remaining samples screened, the report highlights the potential for further areas of contamination due to the age and function of the buildings which formerly occupied the site. The protection of all staff will require consideration particularly from risks associated with inhalation of dust and direct contact during redevelopment.

6.7.7. Whilst no groundwater has been detected, a risk to controlled waters from surface run off and direct percolation is anticipated to occur during redevelopment. Measures should be employed during construction to limit surface water runoff.

6.7.8. The ground gas risk assessment classifies the site as Characteristic Situation 1 – very low risk.

7. MONITORING AND ASSURANCE

7.1. ON SITE FIELDWORK

7.1.1. The WSP Cultural Heritage and Archaeology Team will monitor and assure all elements of the archaeological fieldwork and will ensure that the work is carried out in accordance with this WSI, professional standards and the requirements of GMAAS. Any variance in the scope of work shall be made by the WSP Cultural Heritage and Archaeology Team acting on behalf of the client, in consultation with GMAAS.

7.1.2. The WSP Cultural Heritage and Archaeology Team will undertake monitoring visits of the fieldwork where required. This will review the following:

- Compliance by the archaeological contractor with the agreed health and safety arrangements as set out in the RAMS;
- The agreed numbers and levels of fieldwork staff attendance;
- The agreed number and type of plant;
- Appropriate provision of welfare;
- Work is being undertaken in accordance with the requirements of this WSI;
- Work is being undertaken to programme; and
- Project risk (cost and programme).

7.1.3. Any non-compliance will be highlighted by the WSP Cultural Heritage and Archaeology Team at the earliest opportunity and steps agreed and put in place to resolve any issues.

7.1.4. Any key decisions (such as excavation strategy or work scope changes) that are made on site shall be noted during the monitoring visits and communicated by the WSP Cultural Heritage and Archaeology Team to relevant parties. Visits by GMAAS will be arranged so that they are satisfied that the works are being conducted to proper professional standards.

7.2. POST-EXCAVATION DELIVERABLES

7.2.1. The WSP Cultural Heritage and Archaeology Team will technically assure the deliverables conform to the format and scope agreed with GMAAS, and that the reporting is accurate and clear and with sound conclusions, and that it has been produced to professional standards and the requirements of GMAAS. This will be the case whether the agreed deliverables take the form of an archaeological report for the HER, journal article or monograph.

7.2.2. The WSP Cultural Heritage and Archaeology Team will liaise with the archaeological fieldwork contractor to ensure that the work is carried out to an agreed delivery programme.

8. FUNDING

8.1.1. Funding arrangements for the archaeological mitigation will be agreed between the WSP Cultural Heritage and Archaeology Team and the client or their representative (e.g. the Principal Contractor), together with agreements for attendance requirements, accommodation and facilities required.

8.1.2. The archaeological contractor may be appointed directly by the client or their representative, or it might be that they are appointed by the WSP Cultural Heritage and Archaeology Team.

8.1.3. Note that the client will be required to fund the on-site works up to the post-excavation assessment stage as defined by CIfA and as described in this document. Additional costs for the later analysis/publication programme will be confirmed following the completion of the post-excavation assessment report and Updated project design: the client is also responsible for any such post-excavation costs including the cost of dissemination of the results at an appropriate level and also temporary and long-term archival storage costs.

Appendix A

DRAFT TRANSFER OF FINDS OWNERSHIP FORM

Appendix A: TRANSFER OF TITLE FORM

This form should be printed and will be used in conjunction with RAMM's standard entry form. The entry form is a paper form that will be signed by owner of the objects or the depositing archaeological contractor at the time of deposition.

Museum accession number:

Site name and site code:

Name of Archaeological Contractor:

Name and address of owner:

Telephone Number:

I hereby confirm my donation of the archaeological discoveries (any objects, materials or remains of archaeological interest, other than those articles declared by Coroner's Inquest to be Treasure) recovered from the site named as an absolute and perpetual gift. I wish all material to be unconditionally transferred to the XXXXX, a service of XXXXX

Signed ---------- Date ----------

Print name ----------

Data Protection

The Museum retains the names and addresses of persons donating, bequeathing, selling or loaning objects because this information forms part of the object's history. This information is for the Museum's records and is not made available to any other organisation.

Appendix B

REFERENCES

PUBLISHED AND DOCUMENTARY SOURCES

AECOM, 2015, *Historic Environment Desk-Based Assessment: Stockport Interchange*, Unpubl.

Association of Local Government Archaeological Officers, England, 2015, *Advice Note for Post-Excavation Assessment*

Archaeological Archive Forum, 2011, *Archaeological Archives: a guide to best practice in creation, compilation transfer and curation*

Chartered Institute for Archaeologists, (CIFA), 2014a, *Standard and Guidance for an Archaeological Excavation*

CIFA, 2014b, *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*

English Heritage, 1991, *Management of Archaeological Projects* (MAP2)

English Heritage Centre for Archaeology Guidelines, 2004, *Human bones from archaeological sites: guidelines for producing assessment documents and analytical reports*

Historic England, 2011, *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation*

Leigh. D., Watkinson. D. and Neal. V., 1998, *First Aid for Finds: Practical Guide for Archaeologists*

Museums and Galleries Commission, 1992, *Standards in the Museum Care of Archaeological Collections*

Museum of London Archaeology, 1994, *Archaeological Site Manual 3rd edition*

Society of Museum Archaeologists, 1993, *Selection, Retention and Dispersal of Archaeological Collections.* Guidelines for use in England, Wales and Northern Ireland

Society of Museum Archaeologists, 1995, *Towards an Accessible Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland, Scotland and Wales*

Treasure Act 1996, *Code of Practice (2nd Revision)* 1996, *DCMS Treasure (Designation) Order* 2002, TSO

Wessex Archaeology, 2020, *Heaton Lane, Stockport: Archaeological Evaluation*, Unpubl. Rep. 234590.02

Appendix C

FIGURES

389100.000000

389200.000000

390400.000000

390300.000000

Date Modified: 16/03/2020

Drawn By: UKMXJ028

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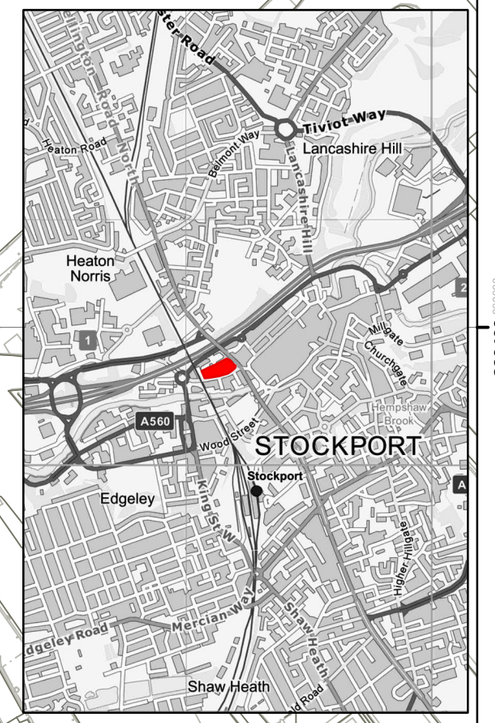
Legend

- Surveyed Trenches
- Site Boundary



0 5 10 20 30 40 Meters

wsp

TITLE:

Stockport Interchange - Heaton Lane
1:750 @ A3

FIGURE No:

Figure 1 - Site Location Showing Evaluation Trenches

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389200.000000

390400.000000

Date Modified: 16/03/2020

Drawn By: UKMXJ028

File: \\Client\C$\Users\UKMXJ028\Documents\Arc_GIS\HeatonLane\Heaton_Lane.mxd

Key

- No potential impacts
- Low potential impacts
- Moderate potential impacts
- High potential impacts
- Site Boundary

0 5 10 20 30 40 Meters

wsp

TITLE:

Stockport Interchange -
Heaton Lane
1:500 @ A3

FIGURE No:

Figure 2 - Site Plan Showing Areas of Potential Impact on Archaeological Remains

Appendix D

DESIGN DRAWINGS

DO NOT SCALE

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF WSP.
2. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.
3. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.

KEY:

MAJOR CONTOUR

MINOR CONTOUR

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	12/09/2019	DR	FOR INFORMATION	SMM	JSF
P01	26/07/2019	SS	FIRST ISSUE	SMM	JSF

DRAWING STATUS: S2 - FOR INFORMATION

wsp
8 First Street, Manchester, M15 4GU, UK
T+ 44 (0) 161 200 5000
wsp.com

CLIENT: TRANSPORT FOR GREATER MANCHESTER

ARCHITECT:

SITE/PROJECT: STOCKPORT TEMPORARY BUS STATION

TITLE: FINISHED CONTOUR PLAN

SCALE @ A1:	CHECKED:	APPROVED:
1:200	SM	JSF

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
70031899	SM	SS	September 19

DRAWING No: 14113-WSP-STP-ZZ-DR-C-0006 REV: P02

DO NOT SCALE

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF WSP.
2. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.
3. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
4. ALL WORKS TO BE IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS (SHW) AND OVERSEEING ORGANISATION'S STANDARD DETAILS.
5. TACTILE LAYOUT IS INDICATIVE, LAYOUT TO BE AS PER DETR GUIDANCE ON USE OF TACTILE PAVING AND CONFIRMED WITH ENGINEER PRIOR TO INSTALLATION.

KEY:

- SITE BOUNDARY
- FULL DEPTH FOOTWAY CONSTRUCTION
- TACTILE PAVING
- FOOTWAY OVERLAY
- MEDIUM DUTY CAR PARK CONSTRUCTION
- FULL DEPTH CARRIAGEWAY CONSTRUCTION
- CARRIAGEWAY RESURFACING
- LIGHT DUTY CAR PARK CONSTRUCTION
- CONCRETE PAVEMENT
- EXISTING PAVEMENT TO BE PERFORATED THROUGH TO SUB-GRADE AT 1m CENTRES AND BACKFILLED WITH SINGLE SIZED STONE AND FINISHED WITH 150mm TOPSOIL AND SEED
- 150mm TOPSOIL AND SEED
- PROPOSED RETAINING WALL
- EXISTING RETAINING WALL

REV	DATE	BY	DESCRIPTION	CHK	APP
P05	07/04/2020	DR	KERBLINE AMENDED ON THE EXIT TO TEMPORARY INTERCHANGE	SM	JF
P04	20/12/2019	DR	REVISION POST 06/12 TRANSMIT FROM CLIENT	SM	JF
P03	11/10/2019	DR	CONCRETE PAVEMENT APRON	SM	JF
P02	12/09/2019	DR	FOR INFORMATION	SM	JF
P01	26/07/2019	DR	FIRST ISSUE	JF	JF

DRAWING STATUS: S2 - FOR INFORMATION

wsp
8 First Street, Manchester, M15 4GU, UK
T+ 44 (0) 161 200 5000
wsp.com

CLIENT: TRANSPORT FOR GREATER MANCHESTER

ARCHITECT:

SITE/PROJECT: STOCKPORT TEMPORARY BUS STATION

TITLE: EXTERNAL WORKS LAYOUT

SCALE @ A1:	CHECKED:		APPROVED:
1:200	JF		JF
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
70031899	DR	DR	December 19

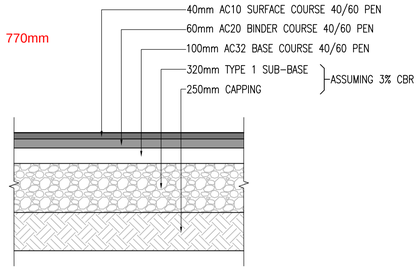
DRAWING No: 14113-WSP-STP-ZZ-DR-C-0010 REV: P05

File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\70031899\70031899 - STOCKPORT INTERCHANGE\02 WIP\CV CIVIL ENGINEERING\02 DRAWING\14113-WSP-STP-ZZ-DR-C-0010.DWG, printed on 07 April 2020 17:19:58, by Ramm, Declan

DO NOT SCALE

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF WSP.
2. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
4. ALL CLAUSE NUMBERS REFER TO THE SPECIFICATION FOR HIGHWAY WORKS (SHW), LATEST EDITION.
5. ALL PRECAST CONCRETE UNITS ARE TO CONFORM TO AND BE LAID IN ACCORDANCE WITH CL.1101 OF THE SPECIFICATION FOR HIGHWAY WORKS LATEST EDITION.
6. KERB, BED AND BACKING SHALL BE ST4 GRADE CONCRETE TO CL.2602 OF THE SHW, LATEST EDITION.
7. KERBS MAY BE LAID DIRECTLY ONTO THE CONCRETE WHILST STILL PLASTIC WITH THE WRITTEN PERMISSION OF THE ENGINEER.
8. ALL CONCRETE AND CONCRETE PRODUCTS BELOW GROUND LEVEL TO BE CLASS DS-1 IN ACCORDANCE WITH BRE SPECIAL DIGEST 1.
9. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.
10. DETAILED DESIGN TO BE IN ACCORDANCE WITH DMRB, BS7533 AND 6C's DESIGN GUIDANCE.
11. CCTV FOUNDATION DETAILS / DIMENSIONS ARE TAKEN FROM R&R ENGINEERING LTD DRAWING, PROVIDED BY TFGM

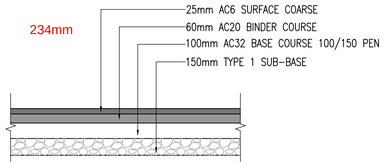


FULL DEPTH CARRIAGEWAY CONSTRUCTION

SCALE – 1:20

ASSUMES DESIGN LOADING OF 3MSA, TBC BY BUS MOVEMENTS SUPPLIED BY TFGM

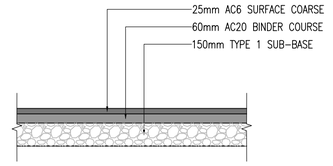
LAYER	CLAUSE	MATERIAL	BINDER	THICKNESS	SPECIAL REQUIREMENTS
SURFACE COURSE	912	AC10 CLOSE SURFACE COURSE	70/100	40mm	BS EN 13108-4
BINDER COURSE	929	DENSE MACADAM AC 20 DENSE BIN	40/60	60mm	PD 6691 TABLE B.11
BASE	929	AC32 BASE	40/60	100mm	
SUB-BASE	803	GRANULAR SUB BASE TYPE 1	N/A	320mm	ASSUMED CBR 3%
CAPPING LAYER	–	6F2	N/A	250mm	ASSUMED CBR 3%



MEDIUM DUTY CAR PARK CONSTRUCTION

SCALE – 1:20

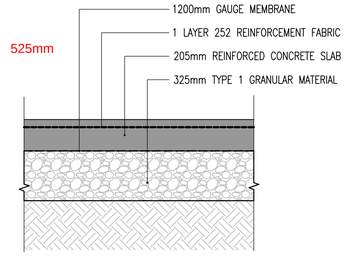
LAYER	CLAUSE	MATERIAL	BINDER	THICKNESS	SPECIAL REQUIREMENTS
SURFACE COURSE	1105	DENSE MACADAM AC 6 MED SURF	100/150	25mm	PD 6691 TABLE B.16
BINDER COURSE	1105	DENSE MACADAM AC 20 DENSE BIN	100/150	60mm	PD 6691 TABLE B.11
BASE	929	AC32 BASE	100/150	100mm	
SUB-BASE	803	GRANULAR SUB BASE TYPE 1	N/A	150mm	–



FULL DEPTH FOOTWAY / LIGHT DUTY CAR PARK CONSTRUCTION

SCALE – 1:20

LAYER	CLAUSE	MATERIAL	BINDER	THICKNESS	SPECIAL REQUIREMENTS
SURFACE COURSE	1105	DENSE MACADAM AC 6 MED SURF	100/150	25mm	PD 6691 TABLE B.16
BINDER COURSE	1105	DENSE MACADAM AC 20 DENSE BIN	100/150	60mm	PD 6691 TABLE B.11
SUB-BASE	803	GRANULAR SUB BASE TYPE 1	N/A	150mm	–

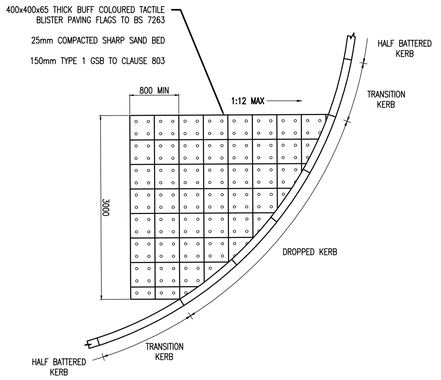


PAVEMENT CONSTRUCTION REF: P4 JOINTED CONCRETE SLAB (ACCESS ROUTE)

SCALE – 1:20

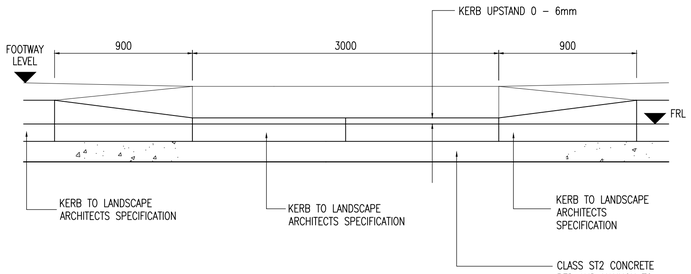
PAVEMENT REF: P4 CARRIAGEWAY

LAYER	CLAUSE	MATERIAL	BINDER	THICKNESS	SPECIAL REQUIREMENTS
SURFACE COURSE	N/A	PAV 2	N/A	205mm	4.5% MINIMUM AIR CONTENT BRUSH FINISH SURFACE TO RUN PERPENDICULAR TO THE BAY. 100mm TROWELLED MARGINS, GAUGE MEMBRANE TO HAVE BBA CERTIFICATE
SUB BASE	803	GRANULAR SUB-BASE TYPE 1	N/A	325mm	ASSUMED CBR 3%



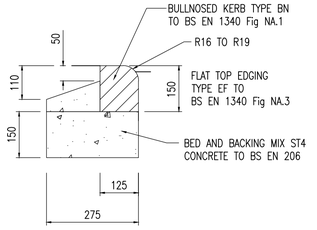
TYPICAL DROPPED CROSSING / TACTILE PAVING ARRANGEMENT

SCALE – 1:20



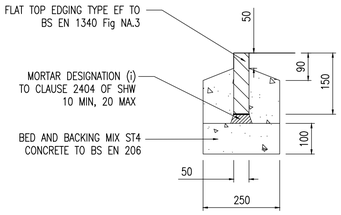
DROPPED CROSSING ELEVATION

SCALE – 1:20



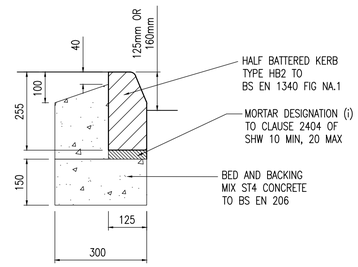
KERB TYPE DK:0–6mm UPSTAND

SCALE – 1:10



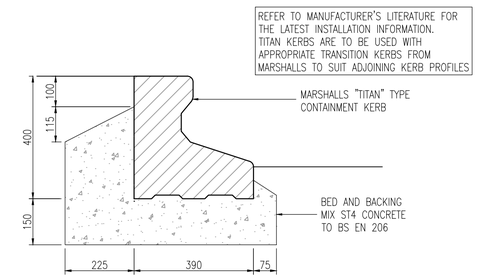
FLAT TOP EDGING TYPE EF

SCALE – 1:10



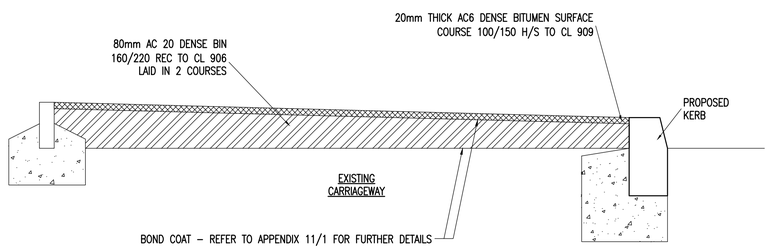
HALF BATTERED KERB TYPE HB2

SCALE – 1:10



"TITAN" CONTAINMENT KERB

SCALE 1:10

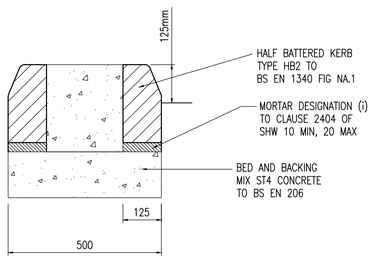


CARRIAGEWAY TO FOOTWAY CONSTRUCTION

SCALE – 1:10

MIN. OVERLAY DEPTH 65mm

MAX. OVERLAY DEPTH 125mm



HALF BATTERED KERB BACK TO BACK LOCATED AT THE INTERNAL CAR PARK

SCALE – 1:10

REV	DATE	BY	DESCRIPTION	CHK	APP
P04	06/02/2020	DR	JOINTED CONCRETE SLAB (P4) ADDED	SM	JF
P03	20/12/2019	DR	REVISION POST 06/12 TRANSMIT FROM CLIENT	SM	JF
P02	12/09/2019	DR	FOR INFORMATION	SM	JF
P01	26/07/2019	DR	FIRST ISSUE	JF	JF

DRAWING STATUS: S2 - FOR INFORMATION

8 First Street, Manchester, M15 4GU, UK
T+ 44 (0) 161 200 5000
wsp.com

CLIENT: TRANSPORT FOR GREATER MANCHESTER

ARCHITECT:

SITE/PROJECT: STOCKPORT TEMPORARY BUS STATION

TITLE: STANDARD DETAILS

SCALE @ A1:	CHECKED:		APPROVED:
AS SHOWN	JF		JF
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
70031899	DR	DR	February 20

DRAWING No: 14113-WSP-STP-ZZ-DR-C-0011 REV: P04

PROPOSED SW MANHOLE SCHEDULE

Manhole Number / Coordinates	Cover Level / Depth To Soffit	Connections		Pipe Inverts	Pipe Diams Inv-soff	Manhole Size	Types: Manhole	Types: Cover
S1 NEW MH CONSTRUCTED ON EXISTING SEWER	43.25	1	1	EXISTING PUBLIC SEWER SIZE & I.L. TBC	TBC			
E. 389083.521	TBC	0 2	2	TBC		1800 TBC	TYPE B	D400
N. 390347.210			0	TBC	TBC			
S1.1	43.45	1	1	41.60TBC	300			
E. 389084.570	1.55	0				1200	TYPE B	B125
N. 390357.195			0	41.60TBC	300			
S1.2	43.45	1	1	41.73	300			
E. 389109.861	1.42	0				1200	TYPE E	E600
N. 390362.881			0	41.73	300			
S1.3	43.65	1	1	41.88	300			
E. 389112.296	1.47	0				1200	TYPE E	E600
N. 390366.208			0	41.88	300			

REFER TO WSP DRAINAGE DETAILS DRAWING 1143-WSP-STP-ZZ-DR-C-003 FOR MH TYPE CONSTRUCTION DETAILS

EXISTING SW MANHOLE TO BE REBUILT

Manhole Number / Coordinates	Cover Level / Depth To Soffit	Connections		Pipe Inverts	Pipe Diams Inv-soff	Manhole Size	Types: Manhole	Types: Cover
ExMH18 REBUILD EXTG MH	44.51	1	1	43.77	150			
E. 389083.521	TBC	0				675x900	TYPE D	E600 DOUBLE CVR
N. 390347.210			0	43.77	150			
ExMH19 REBUILD EXTG MH	44.37	1	1	41.60TBC	150			
E. 389084.570	1.55	0				675x900	TYPE D	E600 DOUBLE CVR
N. 390357.195			0	43.51	225			

DESIGN RISK: DRAINAGE DESIGN CURRENTLY ASSUMES THAT SURFACE WATER RUNOFF FROM THE DEVELOPED SITE WILL NOT BE RESTRICTED TO EXISTING SURFACE WATER RUNOFF RATES. THERE IS A MINIMAL INCREASE IN IMPERMEABLE AREA (APPROX 5%) BUT GIVEN THAT THE DEVELOPMENT IS TEMPORARY SMBC HAVE BEEN CONTACTED TO CONFIRM WHETHER SURFACE WATER WILL NEED TO BE RESTRICTED TO THE EXISTING RATE AND A FLOW CONTROL DEVICE AND ASSOCIATED ATTENUATION WILL BE REQUIRED. ALLOWANCE TO BE MADE IN COST PLAN FOR HYDROBRAKE TO BE INSTALLED IN MH S1.1 AND APPROXIMATELY 25m OF 900mm DIA PIPEWORK BETWEEN MH'S S1.1 & S1.2.

EXISTING MAIN SITE DRAINAGE SYSTEM TO BE RETAINED AS IT PICKS UP FLOWS WHICH ARE SHOWN TO COME FROM EXISTING A6 RETAINING WALL.

EXISTING DRAINAGE RUNS TO BE RETAINED TO BE PROTECTED WITH 'CLASS Z' CONCRETE SURROUND TO EXTENTS SHOWN WHERE REDUCED SITE LEVEL RESULTS IN DEPTH OF COVER LESS THAN 1200mm.

COVER & FRAME OF EXISTING MH'S TO BE REBUILT WITHIN THE BUS APRON / CARRIAGEWAY TO BE REPLACED WITH LOAD CLASS E600 COVER & FRAME.

ALL EXISTING DRAINS WHICH ARE TO BE MADE REDUNDANT AS PART OF THE SCHEME TO BE GRUBBED UP OR ABANDONED IN ACCORDANCE WITH THE 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY' (CESW) 7TH EDITION.

PROPOSED DOMESTIC FOUL DRAINAGE FROM STAFF ACCOMMODATION BENEATH THE EXISTING CAR PARK RAMP TO BE CONNECTED INTO ExMH29 AS REQUIRED.

EXISTING HIGHWAY GULLY & CONNECTION TO EXISTING SITE DRAINAGE SYSTEM TO BE RETAINED.

PROPOSED SEPARATOR TO BE LOCATED CLOSE TO PROPOSED RETAINING WALL. CONTRACTOR TO CONSIDER IN SEQUENCING OF WORKS. EXCAVATION FOR SEPARATOR TO BE CIRCA 4M DEEP.

DUCTING REQUIRED FOR SEPARATOR VENT PIPE SHOWN ON WSP DUCTING LAYOUT 1143-WSP-STP-ZZ-DR-C-0014. VENTING DETAIL SHOWN ON WSP DETAIL DWG 1143-WSP-STP-ZZ-DR-C-0003.

PROPOSED SEPARATOR ALARM SYSTEM TO BE SPEL OMS-1 WITH WALL MOUNTED CONTROL BOX LOCATED IN STAFF ACCOMMODATION. DUCTING REQUIRED FOR ALARM CABLE SHOWN ON WSP DUCTING LAYOUT 1143-WSP-STP-ZZ-DR-C-0014.

EXISTING DRAINAGE SURVEY TO CONFIRM SIZE / INVERT LEVEL / CONDITION OF EXISTING PUBLIC SEWERS IN HEATON LANE HAS BEEN PROCURED. CURRENTLY AWAITING DETAILS. DRAINAGE LAYOUT TO BE AMENDED TO SUIT FINDINGS ON RECEIPT OF SURVEY INFO.

PROPOSED NEW CONNECTION TO EXISTING PUBLIC SEWER, SUBJECT TO APPROVAL FROM UNITED UTILITIES. DETAILS OF EXISTING PUBLIC SEWER TBC. REQUIREMENT FOR NEW MH TO BE CONSTRUCTED ON EXISTING SEWER TO BE CONFIRMED BY UNITED UTILITIES.

CCTV
1. A CCTV SURVEY AND REPORT IS TO BE UNDERTAKEN, A MAXIMUM OF 14 DAYS PRIOR TO PRACTICAL COMPLETION AND ISSUED IDENTIFYING CLEAN AND ROBUST DRAINAGE RUNS.

GULLIES
1. GULLIES TO BE PLASTIC OR PRECAST CONCRETE, ROAD GULLIES WITH 150MM OUTLET, TRAPPED WITH RODDING EYE TO BS 5911 : 1952 FITTED WITH D400 GULLY GRATE AND FRAME TO BS 497 PART 1 : 1976.
2. ALL GULLY LEADS TO BE 150mm DIAMETER.

FULL RETENTION SEPARATORS
1. FULL RETENTION SEPARATOR TO BE VENTILATED AND INCLUDE A HIGH LEVEL ALARM SYSTEM LINKED TO THE STAFF ACCOMMODATION / OFFICE BENEATH EXISTING MSCP RAMP BY TELEMETRY.

DO NOT SCALE

NOTES:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF WSP.
2. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.
3. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.

HEALTH AND SAFETY SYMBOLS LEGEND:
- INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION
- INDICATES A RESIDUAL RISK FOR INFORMATION
- INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION
- INDICATES A RESIDUAL RISK AS A WARNING

DRAINAGE KEY:
- EXISTING COMBINED WATER PUBLIC SEWER
- EXISTING SURFACE WATER PUBLIC SEWER
- EXISTING FOUL WATER PRIVATE SEWER
- EXISTING SURFACE WATER PRIVATE SEWER
- EXISTING SW SEWER TO BE ABANDONED
- ACO KERB DRAIN
- ACO Q MAX
- PROPOSED ROAD GULLY (SURFACE WATER)
- EXISTING MANHOLE
- PROPOSED SURFACE WATER DRAIN
- EXTENT OF CLASS 'Z' CONCRETE PROTECTION ON EXISTING SEWER TO BE RETAINED.

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	12/09/2019	SMM	MH SCHEDULE ADDED. SPEC FOR RE-BUILT MH'S SHOWN. EXTENTS OF CLASS 'Z' SURROUND ON EXTG DRAINS INDICATED. NOTES REVEIWED.	JSF	GRH
P01	26/07/2019	SS	FIRST ISSUE	SM	JSF

DRAWING STATUS: S2 - FOR INFORMATION

wsp
8 First Street, Manchester, M15 4GU, UK
T+ 44 (0) 161 200 5000
wsp.com

CLIENT: TRANSPORT FOR GREATER MANCHESTER

ARCHITECT:

SITE/PROJECT: STOCKPORT TEMPORARY BUS STATION

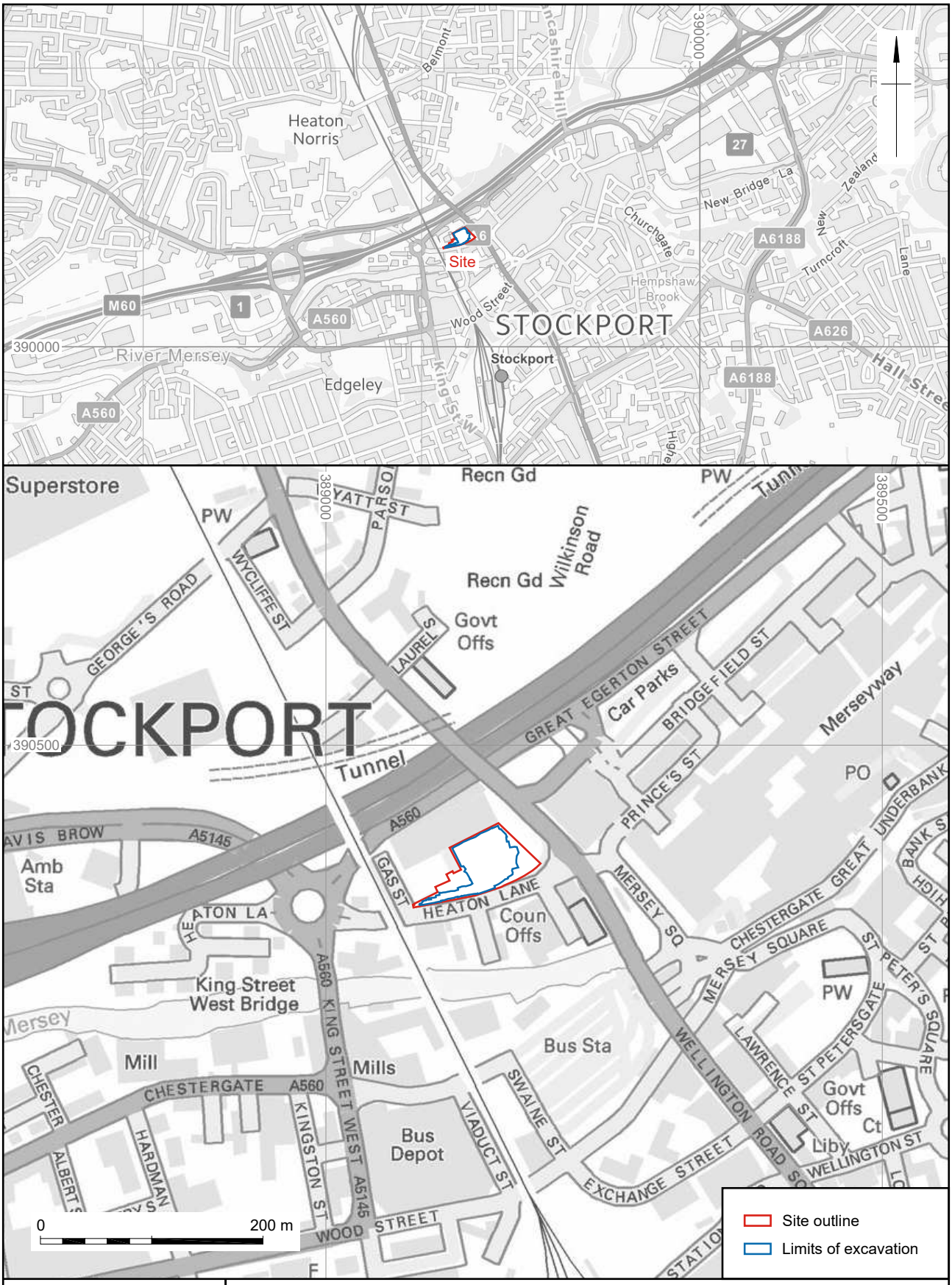
TITLE: PROPOSED DRAINAGE LAYOUT

SCALE @ A1:	CHECKED:		APPROVED:
1:250	JSF		GRH
PROJECT NO: 70031899	DESIGNED: SMM	DRAWN: SS	DATE: September 19

DRAWING No: 14113-WSP-STP-ZZ-DR-C-0002 REV: P02

Three White Rose Office Park
Millshaw Park Lane
Leeds
LS11 0DL

wsp.com



Coordinate system: OSGB36

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Scale:	Main figure 1:5000 at A4	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Site location

Figure 1

389100

389200

390400

Section 1 (see fig. 7)

Evaluation trench 2

Evaluation trench 3

Section 2 (see fig. 7)

Evaluation trench 1

0 20 m

Wall Surface

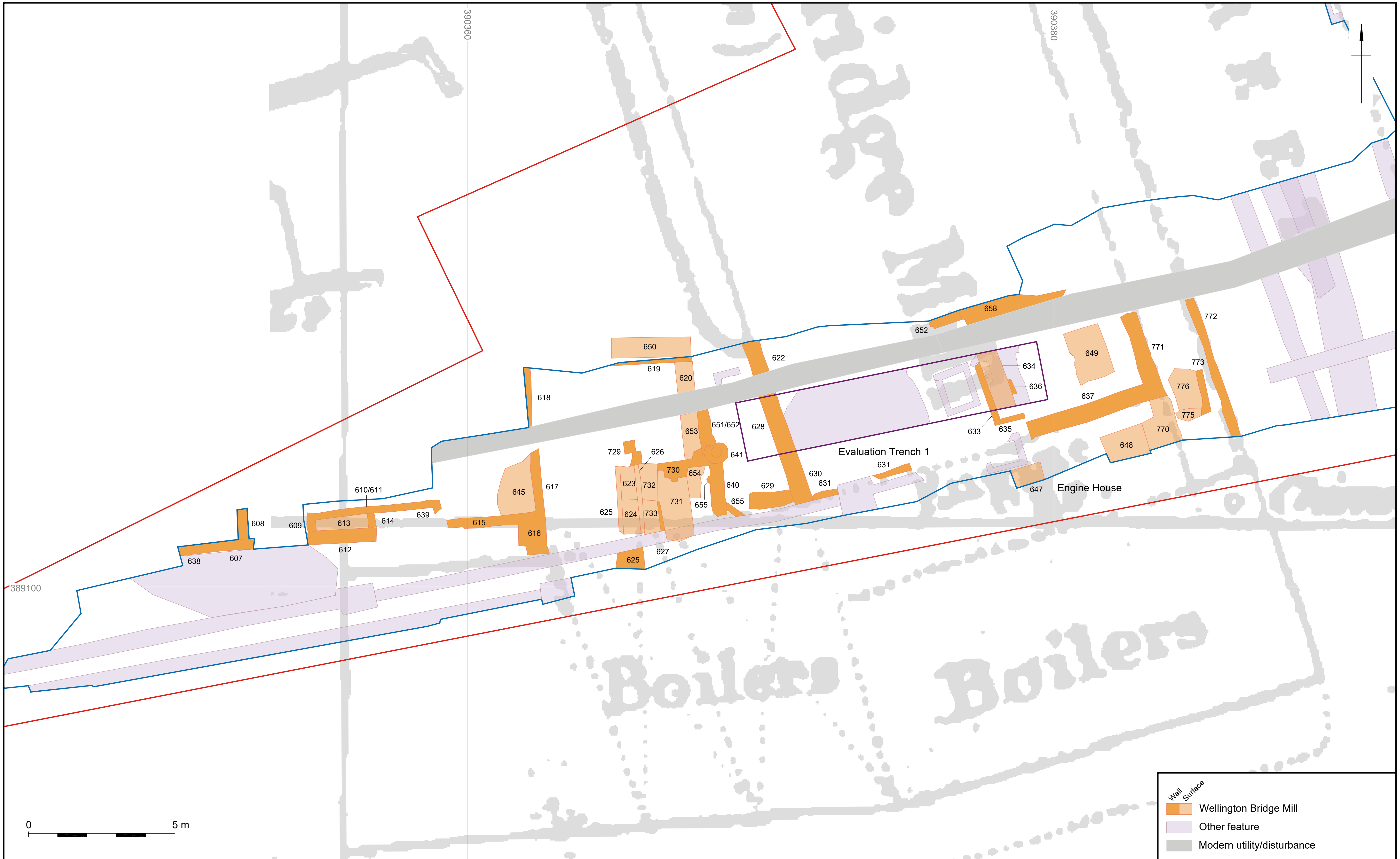
- Wellington Bridge Mill
- Workers' housing and roads
- Gasworks
- Tram and Bus depot
- Other feature
- Modern utility/disturbance

Coordinate system: OSGB36

Date:	05/09/2022	Revision Number:	0
Scale:	1:400 at A3	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Site plan

Figure 2



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Coordinate system: OSGB36
Historic mapping used by permission of client

Phase 1 – Wellington Bridge Mill features overlain on Ordnance Survey twenty-five inch town plan of 1851

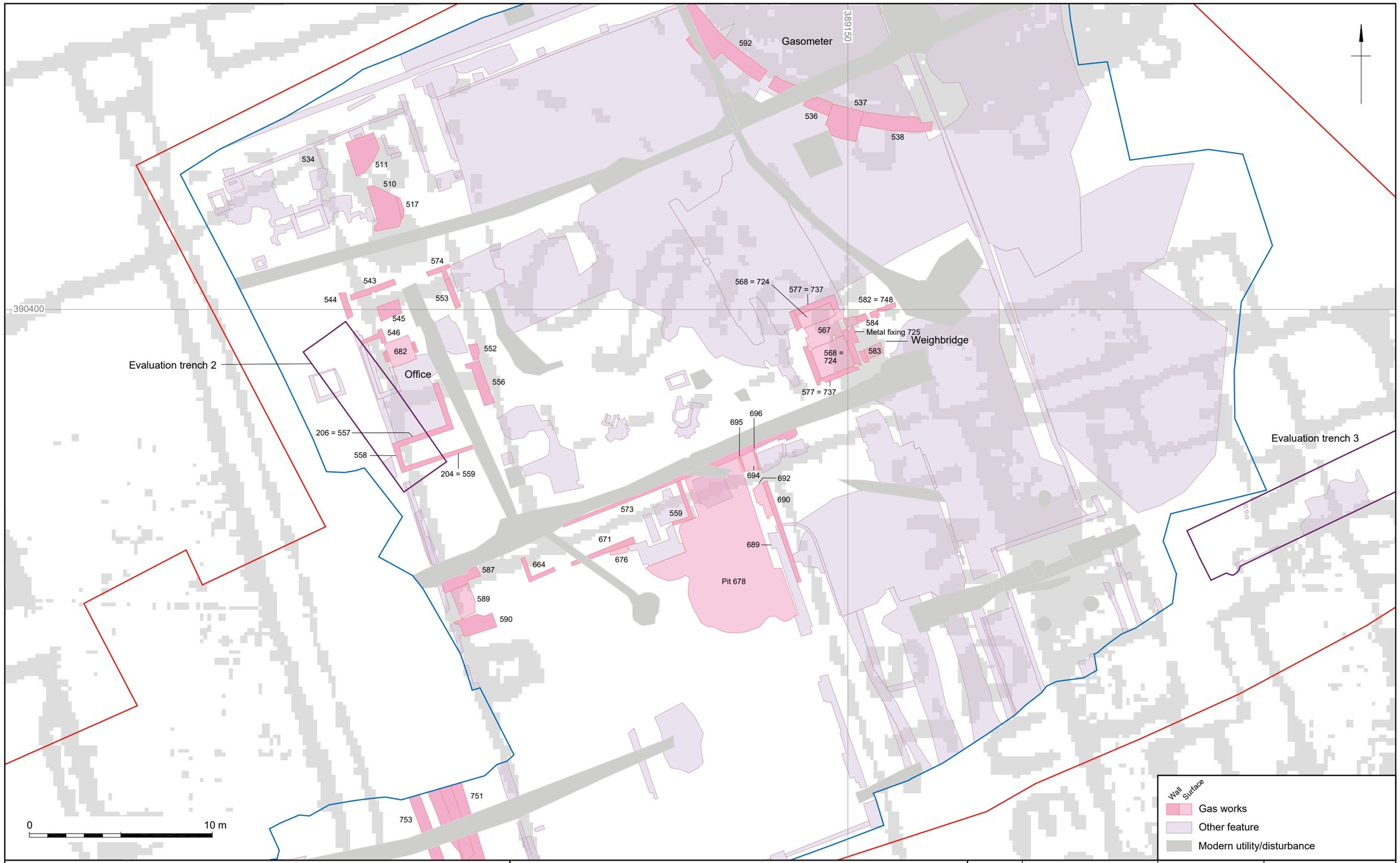
Figure 3

Coordinate system: OSGB36
Historic mapping used by permission of client

Date:	05/09/2022	Revision Number:	0
Scale:	1:200 at A3	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Phase 1 – Back-to-back and terraced housing remains overlain on Ordnance Survey twenty-five inch town plan of 1851

Figure 4



Coordinate system: OSGB36

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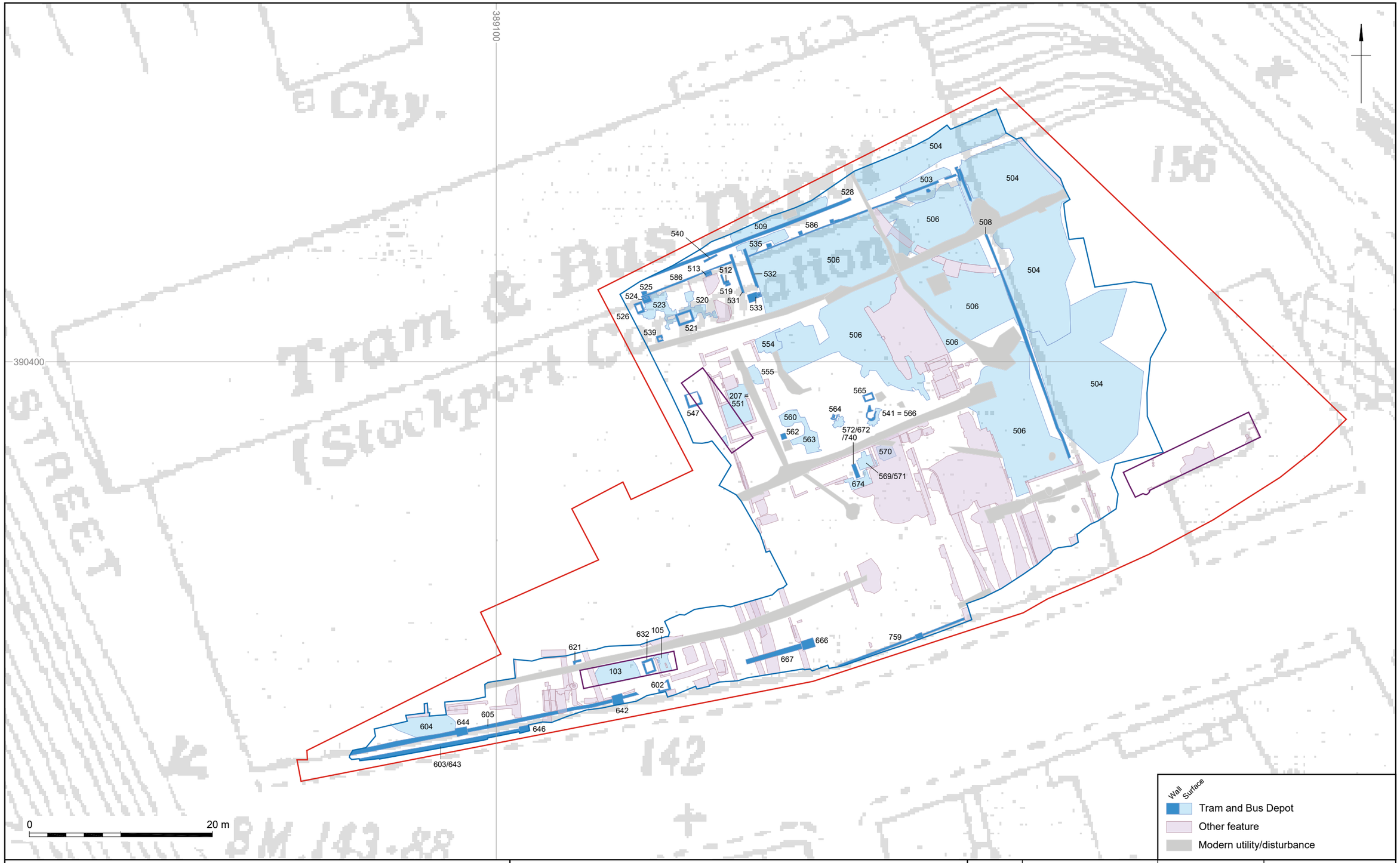
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Phase 2 – Gasworks remains overlain on first edition Ordnance Survey twenty-five inch map of 1895

Figure 5



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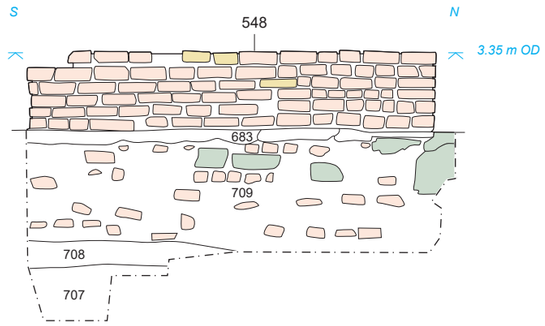
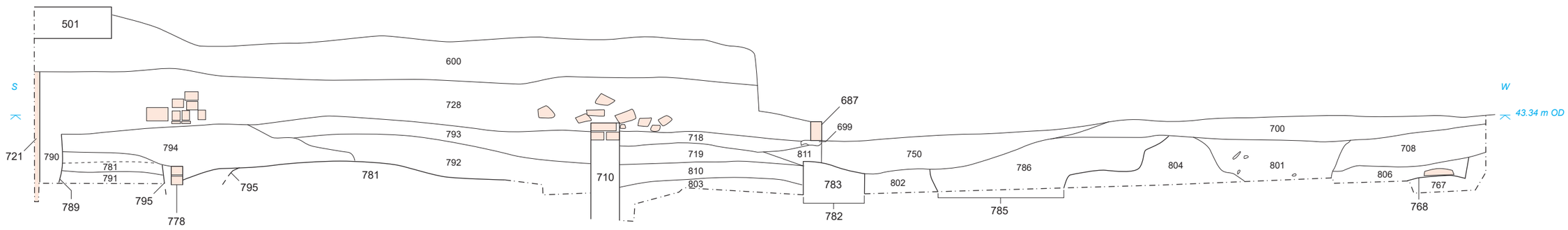
Phase 3 – Tram and bus depot remains overlain on Ordnance Survey twenty-five inch map revision of 1934

Figure 6



Section 1: Pre-construction levelling layers 707, 708 and 709 below stone foundation 683 and wall 548 comprising wall of former back-to-back housing fronting John Street

0 1 2 m



Section 2: Pre-construction levelling layers (791–793, 803 etc.); terraced housing walls 710, 721 and 778; drains 768, 782 and 785 and pavement kerb 687

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Sections

Figure 7

Figure 8: Machine sondage showing natural 713 overlaid by disturbed natural 714, silt and sand levelling layers, and road surface 684. 1 m scale. View from south

Figure 9: Working shot excavating structural remains of Wellington Bridge Mill. View from north-east

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 10: Trough 609–614. 2 m scale. View from south

Figure 11: Lime washed east face of wall 628/630. 2 m scale. View from east

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 12: Blocked arch 777. 0.2 m scale. View from east

Figure 13: Oblique view of culverted drain 773–776. 1 m scale. View from north-west

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 14: Firebrick wall 617 and concrete surface 645. 1 m scale. View from east

Figure 15: Stone foundation bed 634. 2 m scale. View from west

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 16: Boiler base potentially carrying Cornish boiler. Cistern 641 in left of shot. 1 m scale. View from north

Figure 17: Cistern 641. 2 m scale. View from east

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 18: Cistern 641 and environs including pipe 655. 2 m and 1 m scales. View from west

Figure 19: Sandstone foundation 683 carrying brick wall 548 (right of scale) and later wall 549 (left of scale). 2 m scale. View from north-north-east

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 20: Sandstone foundation 665 carrying brick wall 669. 1 m scale. View from north

Figure 21: Evaluation trench 2 showing floor 207 (middle of shot) and black ash mortar modifications 204 and 206 (foreground). 2 x 1 m scales. View from south

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 22: Iron pipe 756 below John Street. 2 m scale. View from north

Figure 23: Truncated cobble surface 757 (Union Street). 2 m scale. View from south-west

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 24: Culverted drain 768 (below Henry Street/Jacques Street). 1 m and 2 m scales. View from south

Figure 25: Cobble surface 542 (Henry Street/Jacques Street). 1 m scale. View from south

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 26: Kerb 690 and pedestrian pavement 691 west of Henry Street/Jacques Street. 1 m scale. View from north

Figure 27: (From left to right) wall 694–696, pedestrian pavement 698, kerb 697, part of cobble surface 684 and metal fixing 765. West of Henry Street/Jacques Street. 1 m scale. View from south

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 28: Pedestrian pavement 715 east of Henry Street/Jacques Street and metal rail 716. 1 m scale. View from west

Figure 29: Evaluation trench 3 showing handmade brick and ash mortar walls 304 and 305, and stone surface 309. 1 m scale. View from west

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 30: Sub-octagonal structure 510 built on concrete base 517. 1 m scale. View from north-east

Figure 31: Gasometer wall 536–538. 2 m and 1 m scales. View from south-east

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Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 32: Black ash mortared brick foundations 685 and 686 supporting sandstone flag 682 inserted partially below earlier lime mortar wall 549. 2 m and 1 m scales. View from west

Figure 33: Weighbridge 577=737. 2 m and 1 m scales. View from south

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 34: Weighbridge 577=737 and brick annexe 748 (foreground). 2 m scale. View from east

Figure 35: Weighbridge 577=737, later surfaces 568 and 724, cut by drain 595. 2 m and 1 m scales. View from north-west

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 36: Machine base 589, brick surfaces 587 and 590, and earlier walls 588 and 591 (under scale). 2 m scale. View from west

Figure 37: Wall 671 and surface 676. 1 m scale. View from east

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 38: Brick surface 571. 2 m scale. View from north

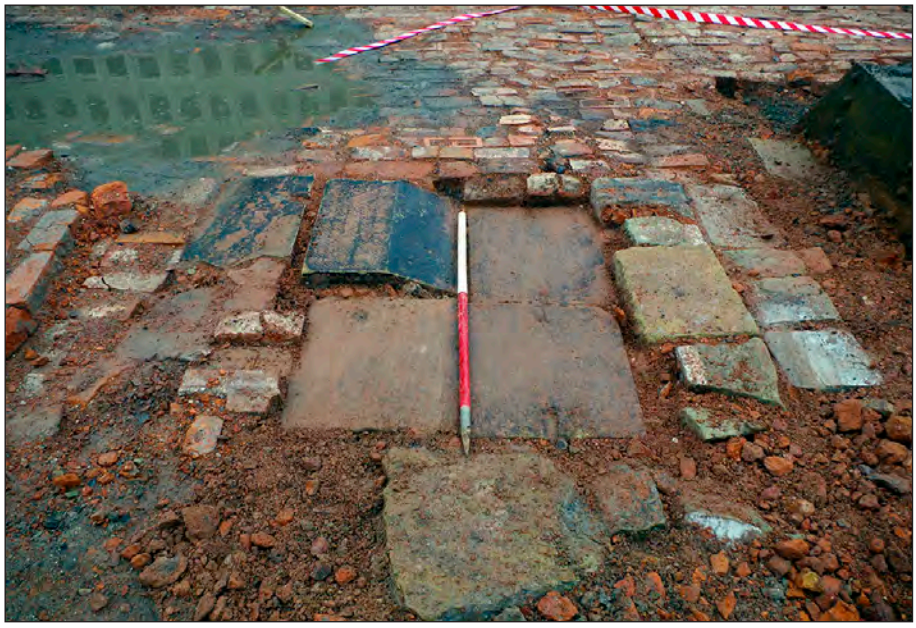

Figure 39: Ex situ rubble surface 569. 1 m scale. View from south

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 40: Structure 541. 1 m scale. View from east

Figure 41: Stanchion 572/672/740. 2 m scale. View from east

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

Figure 42: North-west corner of site including inspection chambers 521, 526 and 539. 2 m scale. View from west

Figure 43: Conduit 531–533. 2 m and 1 m scales. View from south

Date:	01/07/2022	Revision Number:	0
Scale:	Not to scale	Illustrator:	RG
Path:	S:\PROJECTS\234592\Graphics_Office\Rep figs\PXA_UPD\2022_07_01		

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FS 606559