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Tameside Wellness Centre, Denton, Greater Manchester

Archaeological Evaluation and Excavation Report

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Summary

Oxford Archaeology (OA) North were commissioned by The Environment Partnership Ltd (TEP) to undertake a trial trench evaluation of the proposed development of Tameside Wellness Centre, Denton, Greater Manchester (NGR SJ 9256 9566). The evaluation fieldwork, comprising six trenches, was carried out between 29th October and 2nd November 2018. The evaluation was rapidly followed by excavation of three parts of the site, with the fieldwork being undertaken between 8th and 21st November 2018.

The evaluation trenching aimed to establish the state of preservation of archaeological remains of interest within the Proposed Development Area (PDA) and, therefore, informed both the need for, and scope of, the subsequent excavation. The evaluation confirmed the presence of structural remains relating to the former hat factory and terrace housing, with floor surfaces and walls being identified in Trenches 1, 2, 3, 4 and 5. There was no archaeology identified in Trench 6, suggesting that the structures identified on the historic mapping had been truncated.

As significant structural remains were identified during the evaluation, a mitigation strategy was put in place which involved the exposure and recording of the remains of the hat factory and two of the terrace houses, to mitigate their loss or damage during subsequent development of the PDA. The excavation revealed that the structures on the site were fairly well preserved throughout the PDA. These structures also correlated well with the historic mapping and documentary evidence.



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The project was managed for Oxford Archaeology North by Paul Dunn. The fieldwork was directed by Andrew McGuire, who was supported by Sergio Quinterro-Cabello and Paul Simkins. Survey and digitizing was carried out by Andrew McGuire, Sergio Quinterro-Cabello and Mark Tidmarsh. The archive was prepared by Dot Boughton under the management of Rachel Newman.



1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology (OA) North was commissioned by The Environment Partnership Ltd (TEP) to undertake a trial trench evaluation at the site of Tameside Wellness Centre, Denton, Greater Manchester (NGR: SJ 9256 9566). The evaluation comprised excavation of six trenches.
- 1.1.2 The work was undertaken as a condition of Planning Permission (planning ref. 18/00541/FUL). A brief was set by Greater Manchester Archaeological Advisory Service (GMAAS) and a written scheme of investigation was produced by TEP (Appendix D) detailing the Local Authority's requirements for an initial phase of evaluation trial trenching. The evaluation trenching aimed to establish the state of preservation of archaeological remains of interest within the Proposed Development Area (PDA) and, therefore, informed both the need for, and scope of, the subsequent excavation. The evaluation fieldwork was undertaken between 29th October and 2nd November 2018.
- 1.1.3 Shortly following the trial trench evaluation, a phase of excavation was required by Andrew Myers of GMAAS. As such, a second WSI was produced by TEP (*Appendix E*) which set out the methodology to govern excavations in the vicinity of the former hat factory and two terrace houses identified during the trial trenching. The aim of this phase was to mitigate subsequent damage or destruction of the archaeology, by means of preservation by record. The fieldwork was undertaken between 8th and 21st November 2018. This document outlines how OA implemented the specified requirements.

1.2 Location, topography and geology

- 1.2.1 The PDA is located on land adjacent to Annan Street, Denton, Greater Manchester, centred upon National Grid Reference SJ 9256 9566. The site is bordered to the south by Annan Street, to the east by undeveloped waste land, to the north by Lance Corporal Andrew Breeze Way and to the west by the A6017 Stockport Road.
- 1.2.2 The solid geology of the area comprises Mudstone, Siltstone and Sandstone of the Pennine Middle Coal Measures Formation formed during the Carboniferous Period (BGS 2018). The superficial deposits are identified as Devensian Till deposited in the Quaternary Period (*ibid*).

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background of the site is discussed in the desk-based assessment (TEP 2018) and will not be repeated here.



2 EVALUATION AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The project aims and objectives were as follows:
 - i. to adhere to and fulfill the agreed programme of works associated with the archaeological potential of the development, as set out in the WSIs (*Appendices D* and *E*);
 - ii. to identify any archaeological deposits or features that may be present and related to post-medieval industrial activity within the PDA;
 - iii. to allow for any additional archaeological mitigation to be designed and undertaken in accordance with paragraphs 189, 190, 197 and 199 of the National Planning Policy Framework (NPPF);
 - iv. to conduct further research and/or analysis of any identified archaeological remains and place them within their local, regional and national context;
 - to compile a professional archival record of any archaeological remains within the PDA ahead of their potential destruction during subsequent development of the area.

2.2 Methodology

- 2.2.1 The methodology adopted during each phase of fieldwork followed that set out in the phase-specific WSI (included as *Appendices D* and *E*) at all times, and, as such, was fully compliant with prevailing guidelines and established industry best practice (CIfA 2014a: 2014b: 2014c: Historic England 2015).
- 2.2.2 The overburden was removed using 21-ton mechanical excavators (fitted with toothless ditching buckets) to the surface of the first significant archaeological deposit, under direct archaeological supervision at all times. Subsequent cleaning and investigation of all archaeological deposits were undertaken manually, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features. All features of archaeological interest were investigated and recorded. General trench depths were limited to 1m below ground level (bgl) across the general extent of a trench, for reasons of health and safety.
- 2.2.3 All trenches were excavated in a stratigraphic manner. The trenches were located by use of a differential Global Positioning System (dGPS), accurate to within 0.02-0.03m, and altitude information was established with respect to Ordnance Survey Datum.
- 2.2.4 All information identified during the site works was recorded stratigraphically, using a system adapted from that used by the former Centre for Archaeology of English Heritage, with an accompanying pictorial record (plans, sections, and digital photographs). Primary records were available for inspection at all times.
- 2.2.5 Results of all field investigations were recorded on *pro forma* context sheets. The site archive includes both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:50, 1:20 and 1:10).
- 2.2.6 A full professional archive has been compiled in accordance with the project WSIs, and in accordance with current CIfA (2014c) and Historic England guidelines (Historic



England 2015), and will be deposited with Greater Manchester Historic Environment Record Office in due course.



3 RESULTS

3.1 Introduction and presentation of results

- 3.1.1 The results of the evaluation, undertaken between 29th October and 2nd November 2018, will be discussed first. This will be followed by the results of the excavation, undertaken between 8th and 21st November. The full details of all trenches with dimensions and depths of all deposits can be found in *Appendix A*.
- 3.1.2 Context numbers reflect the trench numbers unless otherwise stated.

3.2 General soils and ground conditions

- 3.2.1 The soil sequence between all trenches was fairly uniform. The natural geology of clay was overlain by a relict subsoil, which in turn was overlain by re-deposited natural and/or levelling deposits. The majority of the site was sealed by a very mixed, modern overburden
- 3.2.2 Ground conditions throughout the evaluation and excavation were generally good, and the site remained dry throughout. Archaeological features, where present, were easy to identify as they were structural.

3.3 General distribution of archaeological deposits

3.3.1 Archaeological features were present in Trenches 1-5; there were no significant archaeological features within Trench 6. These features generally comprised a mix of 19th and 20th century walls and floor surfaces relating to domestic properties to the north and south-east and commercial buildings to the south-west. Additional excavations within Areas 1-3 expanded on the footprint of those identified features. The majority of the brick structures identified during the course of the evaluation and excavation, comprised red bricks measuring 0.23m long, 0.11m wide and 0.07m deep; where there were differences, these will be highlighted, where relevant.

3.4 Trench 1

3.4.1 Trench 1 was located to the western half of the PDA (Fig 3 and Plate 1) targeting several buildings associated with the former hat factory to the south of Amelia Street. The trench measured 30m long by 2m wide and was aligned east/west. The general stratigraphic sequence observed comprised natural clay 102 overlain by 101 a mixed overburden containing demolition rubble and clinker. The initial 5m from the western end of Trench 1 was excavated to a depth of 3m before backfilling to safe working standards. No archaeological features were present within this western area and overburden 101 was the only deposit observed; this suggested that the building targeted at this end of the trench, fronting onto Stockport Road, had been completely removed during demolition. However, archaeological features were encountered throughout the remainder of the trench at a depth of 0.2m.





Plate 1: Trench 1 looking west, scale 2m

- 3.4.2 Brick wall **103**, was located at the western end of the trench and was north-west/south-east aligned. It was constructed using a mixture of handmade and frogged bricks two and a half bricks wide, with no formal coursing and bonded with a mix of light grey or brown sandy mortars. This wall appeared to be the western wall of a building fronting Amelia Street (Fig 6)
- 3.4.3 Rectangular structure **104** (Plate 2) lay immediately to the east of **103**, measured 4m long by 1.75m wide, with a dividing wall running through the centre of the feature. **104** was constructed from handmade brick, a single brick wide, bonded with a light brown, sandy mortar. This structure was heavily truncated in places and contained frogged brick in areas indicating later repair work; it likely related to an internal structure within a building fronting Amelia Street (Fig 6).



Plate 2: Rectangular Structure 104 looking south, scale 2m



- 3.4.4 Wall **105** was a north/south aligned wall two bricks wide, constructed using handmade and frogged bricks bonded with a mid grey mortar. The wall survived to two courses high within the trench and was located immediately to the east of structure **104**. The eastern single brick thickness of **105** comprised only hand-made bricks bonded with a lime mortar suggesting the wall was later widened. Wall **105** appearing to be a dividing wall between two buildings identified on the historic mapping, with the later addition to the wall, on its western side, likely relating to the same building as wall **103** (Fig 6).
- 3.4.5 Two later walls **106** and **107** both a single brick wide, constructed using re-cycled handmade and frogged bricks and bonded using a dark grey/black cement-like mortar were revealed to the east of **105**. Wall **106** was aligned roughly west-east, extending from the eastern face of **105** and continuing through the eastern baulk. Wall **107** was bonded to the eastern face of **105** before turning 90° at the southern baulk and continuing (with a dog leg at 5.5m) through the eastern limit of excavation. Both of these walls appeared to relate to internal features within a building identified on the historic mapping fronting Amelia Street (Fig 6).

3.5 Trench 2

3.5.1 Trench 2 was located to the south-east of Trench 1 (Fig 3 and Plate 3) targeting several structures in the middle of the former hat factory, measured 30m long by 2m wide and was aligned east/west. The archaeological features present within Trench 2 resulted in the subsequent excavation of the south-western part of the PDA. As such, the whole Trench was subsumed by excavation Area 1, the details of which are described in greater detail below.



Plate 3: Trench 2 looking west, scale 2m



3.6 Trench 3

3.6.1 Trench 3 was located between Trenches 2 and 4 (Fig 3 and Plate 4) targeting several structures to the east of the former hat factory, measured 30m long by 2m wide and was aligned north/south. The general stratigraphic sequence was similar to that in Trench 1 and comprised natural clay **308** overlain by a mixed overburden **307**.



Plate 4: Trench 3 looking south, scale 2m

- 3.6.2 The northern end of Trench 3 was excavated to a depth of approximately 0.8m, for 7m, where a modern gas service was encountered; as such, no further excavations took place within this area. This area of the trench was targeting the internal area of a large building named as 'Hat Manufactory' on the historic mapping (Fig 6).
- 3.6.3 Archaeological features were encountered at a depth of 0.2m. The earliest feature being **301**, a single brick wide wall aligned roughly east/west (Plate 5); constructed using handmade bricks and bonded using a light brown sandy mortar, the wall spanned the width of the trench. **301** was sat upon a single brick foundation course with a coursed rubble foundation below. The foundation course was laid directly on the natural clay **308**, with no evidence for a construction cut being visible. Wall **301** appeared to relate to the northern wall of a large structure of the former hat factory fronting Annan Street (Fig 6); further remains of this structure had been identified in Trench 2 and then Area 1 (Section 3.9).





Plate 5: Wall 301 looking west, scale 2m

- 3.6.4 Immediately to the north of wall **301** were two concrete machine bases **302**. These were formed from concrete containing a mix of crushed brick and stone aggregate. The southern machine base measured 1.25m long and extended into the trench from the western limit of excavation 0.78m, it survived to a depth of 0.4m. The northern machine base was larger, measuring 4m long and extending into the trench from the western limit of excavation 1m. Both machine bases contained metal holding pins within their upper surface. These machine bases appeared to be within a small rectangular building identified on the historic mapping (Fig 6), suggesting that this building may have housed substantial machinery.
- 3.6.5 Between the two machine bases was **303**, a north-east/south-west-aligned, single brick thick wall, standing five courses high, constructed using machine-made brick and bonded with a dark grey mortar. **303** butted up against the northern most concrete base **302** and continued south-west through the western limit of excavation.
- 3.6.6 To the north of the concrete machine bases **302** was a sequence of substantial brick walls. The earliest of these appeared to be wall **304** (Plate 6), a north-west/south-east-aligned, two and a half bricks wide wall surviving to a height of ten courses. **304** was constructed using machine-made bricks, laid in an English Garden Wall (EGW) bond and bonded using a dark grey cement-like mortar. The wall entered the trench approximately 12m from the southern end of the trench and then continued for approximately 10m, at which point it appears to have been truncated. Wall **304** appears to form a dividing wall between a large building, identified on the historic mapping as 'Hat Manufactory' and smaller buildings to the east (Fig 6).





Plate 6: Wall 304 looking north-east, scale 2m

- 3.6.7 Two walls extended to the west from wall **304**. **305** was an east/west-aligned wall capped with flagstones. Much of the fabric within **305** was obscured, but the wall seemed to have been constructed using a mix of stone and machine-made brick, bonded using a dark grey cement-like mortar. Wall **305** butts up to wall **304** to the east, and appeared to be an internal wall within a large building identified as 'Hat Manufactory' on the historic mapping (Fig 6).
- 3.6.8 **306** was of the same construction as wall **304** and appeared to be an east/west-aligned return of wall **304**, constructed using machine-made bricks, two and a half bricks wide and surviving to a height of five courses. The wall was bonded in an EGW style with a dark grey cement-like mortar. **306** continued west through the baulk and was tied into the fabric of **304**. Wall **306** is shown on the historic mapping as a dividing wall between the large building identified as 'Hat Manufactory' and the small rectangular building containing machine bases **302**. The substantial size of walls **304** and **306** suggest that the building, identified as 'Hat Manufactory' on the historic mapping (Fig 6), was several stories high and may in fact have been the main works building of the former hat factory.

3.7 Trench 4

3.7.1 Trench 4 was located to the south-east of the PDA (Fig 3 and Plate 7) targeting a row of four terrace houses fronting Annan Street, measured 30m long by 2m wide and aligned roughly east/west. The general stratigraphic sequence observed natural clay 412 overlain by a relict subsoil 411 and redeposited natural 410 and capped by a mixed overburden 409. Archaeological features were encountered at a depth of 0.4m





Plate 7: Trench 4 looking east, scale 2m

- 3.7.2 Wall **401** a north/south-aligned, single brick wide wall was identified at the western end of the trench. Constructed using handmade bricks, bonded with a light grey sandy mortar, it spanned the width of the trench. A single fireplace buttress was observed projecting 0.5m from the eastern face of wall **401**, at 0.8m from the southern extent.
- 3.7.3 Immediately to the east of wall **401** was wall **402**, an east/west-aligned, single brick thick wall constructed using handmade bricks, laid in an EGW style and bonded with a dark grey cement-like mortar. The wall survived to a height of eight courses and was only observed extending for 4m in the south-facing section of the trench. Wall **401** appeared to be the western elevation wall of the western end-terrace house, with wall **402**, likely being the back wall to the property (Fig 6).
- 3.7.4 Approximately 5m to the east of walls **401** and **402**, was rectangular structure **403** and **404**. **403** comprised two north/south-aligned walls approximately 1m apart. Both walls were a single brick wide and constructed using handmade bricks with a mid-grey sandy mortar. At 1.5m from the southern extent of the trench, the internal gap was bridged by a single flagstone. Wall **404** was a north/south-aligned, single brick wide wall constructed using handmade bricks and bonded with a dark grey cement-like mortar. **404** was located at 0.5m west of **403** and was truncated at its southern extent, as such, no relationship between the two features could be ascertained. Structure **403** likely relates to a fireplace or chimney on the dividing wall between the western two houses identified on the historic mapping (Fig 6).
- 3.7.5 **405** a north/south aligned, single skin partition wall spanning the width of the trench (Plate 8), was located 5m to the east of **403**. It was constructed using handmade bricks and bonded with a dark grey mortar. Fireplace structures projected 0.7m from the west and east faces of **405** with a mirrored footprint. These structures combined a



single, brick wide buttress with a later range-like structure to the south. The buttresses survived to a height of five courses, supported on stone foundations. Wall **405** appeared to be the dividing wall between the central two houses in the block of terraced housing (Fig 6).



Plate 8: East-facing section of wall 405, relic soil horizon 411 and redeposited natural 410, scale 2m

- 3.7.6 Wall **406** was identified 5m to the east of **405**, was aligned north/south and constructed from handmade bricks and bonded with a dark grey cement-like mortar. The wall survived to a height of eight courses and spans the width of the trench. Wall **407** was located 1m to the east of wall **406** and was again a single brick wide wall aligned north/south. The wall was constructed from handmade bricks and bonded with a dark grey mortar; the wall again spanned the width of the trench. **406** appears to be a similar structure to **403** to the west, and again, may relate to a chimney or fireplace up against the dividing wall between the two houses. Wall **407** does not match the historic mapping particularly well and may in fact be some form of internal wall within the very eastern property of the block of terraced housing (Fig 6).
- 3.7.7 Another north/south-aligned wall, 408, was located 6m to the east of wall 407. However, this wall was constructed from roughly-hewn masonry with no evidence of bonding material, suggesting that all that has survived here is a foundation course. Wall 408 was 0.3m wide and spanned the width of the trench. The alignment and location of wall 408 appeared to correlate well with the eastern elevation wall of the block of terraces fronting Annan Street on the historic mapping (Fig 6).

3.8 Trench 5

3.8.1 Trench 5 was located to the north of Trench 3 (Fig 3 and Plate 9) targeting a block of three terraced houses to the north of Amelia Street, measured 30m long by 2m wide and was aligned roughly east/west. The general stratigraphic sequence observed



natural clay **509** overlain by overburden **508**, comprising demolition debris and redeposited material. The eastern half of the trench was capped by concrete slab **507** beneath which, no archaeological features were encountered. Where archaeological features were encountered, this was at 0.2m bgl. A potential service was identified halfway along the trench aligned north/south, this service was identified by use of a Cable Avoidance Tool and Signal Generator. As such, a 2m exclusion was placed either side of the service.



Plate 9: Trench 5 looking east, scale 2m

3.8.2 The walls within Trench 5 relate to a block of housing identified on the historic mapping, with walls 501, 503, 504, 505 and 506 being the main north/south-aligned walls and wall 502 being a partition wall. The five main north/south walls all spanned the width of the trench and were constructed from handmade bricks, a single brick wide and bonded with light brown sandy mortar. Wall 501 appears to relate to the western elevation of the block of terraced houses, with walls 503 and 506 being internal dividing walls and wall 505 being the eastern elevation of the block of terraced houses (Fig 6). The partition wall 502 was aligned east/west, extended east for 13m



from wall **501** to wall **505**. The wall was constructed from handmade brick, half a brick wide and bonded with a light brown sandy mortar.

3.9 Area 1

3.9.1 Area 1 was located across the extant remains observed within evaluation Trench 2 and measured 37.50m long by 20m wide (Fig 4 and Plate 10). The purpose of Area 1 was to establish the potential for, and characterise any earlier fabric pertaining to the former hat factory observed on historic mapping (Fig 7).



Plate 10: General Shot of Area 1 looking west, scale 1m

- 3.9.2 The general stratigraphic sequence across Area 1 comprised natural clays **1003** overlain by relict subsoil and/or redeposited natural **1002** and capped by overburden **1001** comprising a mix of demolition debris and contaminated soils. The area contained several rooms which are described below.
- 3.9.3 Rooms **1004**, **1005**, **1006** and **1007** are all shown as a single long building fronting Annan Street on the historic mapping (Fig 7). Room **1004** was located to the southeast corner of Area 1 and measured 5.7m x 4.4m (Fig 4 and Plate 11). The room was rectangular in shape, aligned north/south and bounded by brick walls to the west, north and east.





Plate 11: Room 1004 looking north-east, scale 1m

- 3.9.4 The eastern elevation was constructed using handmade brick, one brick wide and bonded with a light brown sandy mortar. This wall was seated upon a brick and a half brick step foundation with dry coursed rubble masonry beneath. Despite partial truncation the eastern elevation continued south through the baulk, and north to the juncture at room **1010**. The entire wall measured approx. 14.5m and formed the eastern elevation for rooms **1004**, **1009** and **1011**.
- 3.9.5 The northern elevation was constructed using hand-made bricks and bonded with light grey cement-like mortar. This wall abutted the eastern elevation and continued west for 3m where a single stone block and truncated flagged floor formed a formal entrance measuring 1m in width between rooms **1004** and **1011** to the north. The wall continued below this feature for 32m, continuing through the western baulk and forming the northern elevation for rooms **1005**, **1006** and **1007**. Additional excavations within these areas highlighted a single stepped brick and coursed rubble masonry foundation, bonded with a light Brown sandy mortar.
- 3.9.6 The western elevation of room **1004** was constructed using single course of handmade bricks and bonded with a light brown sandy mortar. This wall abutted the northern elevation and was seated upon a single headered/soldiered course with a coursed, rubble masonry foundation beneath. Remnants of a heavily truncated flagged floor surface were observed during excavations. This was 'bedded' with a clinker levelling deposit.
- 3.9.7 Room **1005** (Fig 4 and Plate 12) was located to the immediate west of room **1004** and very similar in size and construction. The northern and eastern elevations were shared with room **1004** and described above. The western elevation was tied into the fabric of the northern elevation, constructed using a single course of hand-made bricks and bonded with a light brown sandy mortar. A single, 'soldiered' step and coursed rubble masonry formed the foundation. No features were identified.





Plate 12: Room 1005 looking north-west, scale 1m

- 3.9.8 Room **1006** was located to the immediate west of room **1005** sharing its northern and eastern elevations (Fig 4). The western elevation was constructed using handmade brick, a single brick wide and bonded with a light brown sandy mortar. The room was aligned east/west, rectangular in shape and measured approx. 18m x 6m. The truncated remnants of a reinforced concrete floor surface were observed along the northern extent of the room. Several features were identified including two, square pillar bases measuring 0.6m², constructed using machine-made brick and bonded with a dark grey cement-like mortar. These two structures shared a similar alignment, were approximately 4m apart. The pillar bases were also aligned with two pilasters observed within the south face of the northern elevation.
- 3.9.9 A formal entrance (Plate 13) measuring 1m x 1m and bounded by two, north/south-aligned brick walls, was located within the northern elevation at 4m from the western extent of room **1006**. The entrance comprised a stone-flagged floor, flanked by two, 3-course walls constructed using machine-made bricks and a dark grey cement-like mortar. The southern extent of the entrance was heavily truncated, but remnants of brick masonry may suggest that the western wall may have extended southwards to form the boundary of room **1006**. This would also have been roughly 4m from the western pillar base described above.





Plate 13: Formal Entrance in northern elevation of room 1006 looking south, scale 1m

- 3.9.10 A large rectangular platform measuring 1.65m x 4.8m and constructed machine-made brick, four and half bricks wide and bonded with a dark grey cement-like mortar, was situated to the south-west of the entrance. This structure was capped on the upper surface by concrete/stone and was located 0.64m from the western elevation of **1006**.
- 3.9.11 Room 1007 was located at the south-western corner of Area 1 and measured 6m x 4.5m (Fig 4). The room was probably rectangular in shape with the eastern and northern elevations continuing west and south through the baulk. The only feature observed within room 1007 was a brick well (Plate 14) measuring 2m in diameter with an internal span of 1.5m. The well was constructed using hand-made brick laid in an EGW style and bonded with a light brown sandy mortar. The hand-made bricks were specifically engineered to be slightly curved or trapezoidal forming a more circular structure. Later repairs or additions were noted to the western and eastern sides of the well and comprised machine-made brick, bonded with a dark grey cement-like mortar. The western repairs contained the truncated remains of ceramic drainage. The entire feature had been backfilled with a mixed deposit containing demolition debris and seemingly capped by cement/stone flags.





Plate 14: Brick well within room 1007 looking east, scale 1m

- 3.9.12 Room **1008** covered an area of approx. 70m² at the north western edge of Area 1 (Fig 4) and comprised a series of rooms or structures that lay within an area where potentially hazardous contaminants were encountered. This area was centred at 5.45m from the northern extent of Area 1 where a 2.6m x 3m room was partially excavated. The room was bounded by brick and a half wide walls to the north and south which comprised a single internal course of refractory brick a single brick width of handmade brick. Both walls were bonded with a light brown sandy mortar. At approx. 1m in depth a brick platform was encountered alongside hazardous materials. The platform was constructed using refractory brick. Due to the presence of potential asbestos, the room was immediately backfilled, and the area segregated from the rest of the excavation. Evaluation Trench 2 feature **201** and wall **202** were previously identified within this area. Room **1008** is located within a large building identified on the historic mapping (Fig 7), which may aid in the suggestion that this structure housed the boiler and potentially engine, as the building extends west beyond the western limit of excavation.
- 3.9.13 Room **1009** was located within the northern half of Area 1 (Fig 4 and Plate 15), between rooms **1010** and **1011**. **1009** was roughly rectangular in shape, with the north-western corner instead angled at approx. 45°. The whole room measured 22m x 3.15m and was bounded on all sides by a single brick wide wall, constructed using hand-made bricks and bonded with a light brown sandy mortar. A single brick foundation step was observed with coursed rubble masonry beneath. A single coursed partition wall of similar construction divided the room at 10.35m from the western extent. The entire area was initially covered with a concrete floor surface (identified as context **209** in evaluation trench 2) which was exposed and subsequently removed during excavation. Below this surface several features were identified. These included



a series of three concrete pillar bases (previously **204** in Trench 2) measuring approx. 0.65m x 0.9m and located at roughly 3.6m apart. These bases were bonded up to the internal fabric of the northern elevation and the central partition wall. A layer of redeposited clay dominated the surrounding area with no additional features observed within the western half of room **1009**. **1009** is shown on the historic mapping as being part of the same building which included rooms, **1004**, **1005**, **1006** and **1007** on the historic mapping (Fig 7).



Plate 15: Room 1009 looking east, scale 1m

- 3.9.14 At the eastern end of room **1009** brick floor surface (previously **208** within Trench 2) comprising hand-made bricks laid in a stretcher pattern (north/south) and bonded with a dark grey mortar was identified. The floor was truncated at 2.9m from the eastern elevation, but truncated remnants were also observed to the west and bounded by the central partition wall. The western floor remnants were bedded in a re-deposited clay whilst the eastern surface was bedded on a dark purple sandy mortar. This capped any additional features below.
- 3.9.15 A potential flue system and stoking area for an earlier boiler measuring approx. 5.2m x 2.25m (Plate 16) was identified beneath the brick floor within room **1009**. The whole structure was constructed using handmade bricks, a single brick wide and bonded with a light brown sandy mortar (eastern half) or a light grey sandy mortar (western half and platforms to north and south). The eastern half of the structure comprised refractory bricks forming the internal coursing with bull-nosed headers at stepped junctures. The whole structure had been filled/covered with a mix of sharp sands and demolition debris. Coal fragments were observed below these deposits within the western extent of the structure.





Plate 16: Flue system for a potentially early boiler within room 1009 looking east, scale 1m

3.9.16 Room **1010** was located at the north-eastern extent of Area 1 and measured 14m x 3.6m (Fig 4 and Plate 17). The room was rectangular in shape and bounded by a coursed rubble masonry foundation to the west, room **1009** to the south and a truncated modern brick wall to the east. An additional north-east/south-west-aligned wall continued from the eastern extent of **1010**, through the eastern baulk and towards Trench 3. This may have been the return of wall **303** therein. **1010** appeard to correlate well with a rectangular building identified on the historic mapping (Fig 7), which appeared to lie between the large building identified as 'Hat Manufactory' and the building fronting Annan Street, which has been the main focus of the excavation of Area 1. The two buildings shown on the historic mapping to the west of **1010**, do not appear to have survived.





Plate 17: Room 1010 looking west, scale 1m

- 3.9.17 Two floor surfaces were identified within room **1010**. The upper surface comprised a concrete skim with cut-off, upright 'I-beams' incorporated along the southern extent. These were spaced at 2.75m intervals and similarly aligned with two concrete bases at the room's western extent. Below the concrete was another floor surface, constructed using hand-made bricks and laid in a 'soldiered' style (east/west). The western extent of this floor surface was bounded by a mix of stone flags and cobbles.
- 3.9.18 External Yard **1011** was located across the centre of Area 1 and comprised an open area of hard-standing approx. 132.5m² (Fig 4 and Plate 18). The whole area was covered with a 0.2m layer of concrete with a central, stone drainage runnel aligned east/west. Several small cobbled areas were observed along the south western extent at irregular intervals. External Yard **1011** is clearly shown on the historic mapping (Fig 7).





Plate 18: External Yard 1011 looking east, scales 1m and 2m

3.10 Area 2

3.10.1 Area 2 was located across the extant remains observed within evaluation Trench 4 and measured 13m long by 8.5m wide (Fig 5 and Plate 19). The purpose of Area 2 was to establish the full footprint of a single domestic property observed within this area on historic mapping (Fig 7). The layout observed comprised three rooms which are described below.



Plate 19: Area 2 looking north, scale 1m



- 3.10.2 Room **2001** was a rectangular, cellared room at the southern extent of the building. The room was aligned east/west and measured 5.35m x 3.95m. Features included: a bayed window support or cellar light within the southern elevation; a set of, cellar steps at the eastern extent of room **2002**, previously identified as features **403** and **404** and; a blocked doorway within the western elevation at the juncture of rooms **2001** and **2002**. Interior facings were painted or white washed. Additional excavations revealed an absence of floor surfaces and a cellar fill comprising modern refuse material. The west, south and east elevations were all constructed using machinemade brick, a single brick wide and bonded with a mid-grey, cement-like mortar.
- 3.10.3 Room **2002** was a square room measuring 4.3m x 4m forming the rear room within the building. Features included a fireplace within the western elevation, previously identified as feature **401**. The west and south elevations were constructed using handmade brick, a single brick wide and bonded using a light brown sandy mortar. The north and east elevations were constructed using machine-made bricks and a midgrey, cement-like mortar.
- 3.10.4 Room **2003** was a square annexe to the rear of the building and measured 2.9m x 2.9m. The north and west elevations were constructed using 2-courses of machine-made brick and bonded with a mid-Grey cement-like mortar. The east and south elevations were constructed using machine-made brick, half a brick wide with a single brick wide foundation.

3.11 Area 3

3.11.1 Area 3 was located across the extant remains observed within evaluation Trench 5 and measured 11.5m long by 7m wide (Fig 5 and Plate 20). The purpose of Area 3 was to establish the full footprint of a single domestic property observed within this area on historic mapping (Fig 7). The layout observed comprised two rooms which are described below.



Plate 20: Area 3 looking north, scale 1m



- 3.11.2 Room **3001** was a square room measuring 4.1m² and located to the southern extent of the property. Features included a single fireplace buttress projecting from the western face of the eastern elevation. The room was bounded by: a single brick wide exterior wall (previously identified as **501**) to the west; single skin partition walls to the north and east (previously identified as **502** and **503** respectively) and; a brick and a half wide exterior wall to the south. All elevations were constructed using handmade bricks and bonded with a light Brown sandy mortar.
- 3.11.3 Room **3002** was a rectangular room to the rear (north) of the property and measured 4.1m x 3.2m. Features included a single skin partition wall extending south from the northern elevation and forming a possible stairwell up to the first floor. The northern elevation was constructed using handmade brick, a single brick wide and bonded with a light brown sandy mortar. The west, south and east elevations are the same as those described in room **3001**. A truncated yard surface was observed to the rear of the property with wall **501** continuing northwards to form the yard boundary.

3.12 Environmental and Finds summary

3.12.1 There were no samples taken during the archaeological works as there were no suitable deposits. There were very few artefacts found, however, two 'Minton' floor tiles were recovered from Area 2. They were not retained due to the potential presence of contamination in the vicinity. The presence of 'Minton' tiles does suggest that the property excavated within Area 2 was fairly affluent.



4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 In general, the reliability of field excavations was good with archaeological features being somewhat shallow and clearly visible against the underlying geology. However, problems with potentially hazardous material towards the north-western end of Area 1 meant that the fabric within that vicinity (room 1008 Area 1) could only be partially revealed. Recording features within this area was done to as high a degree of accuracy as possible but allowed very little in terms of interpretation.

4.2 Evaluation and excavation objectives and results

- 4.2.1 The following section considers the project's success measured against the principal aims and general objectives as stated in Section 2.1. This report is a synthesised record of the fieldwork undertaken and its submission to both the client and the local authority alongside the fieldwork archive ensures the information is publicly available.
- 4.2.2 Five of the trenches excavated during the evaluation phase revealed structural archaeological remains, Trenches 1, 2, 3, 4 and 5. These structures were found to be reasonably well preserved, of a date consistent with the known operation of the hat factory, and could be positively related to historical cartographic evidence. Trench 6 was devoid of archaeology. The dearth of archaeology in Trench 6 suggested that this may have been an open area or that the structures identified on the historic mapping in this area have been completely truncated away.
- 4.2.3 During the subsequent phase of excavation, a greater part of the hat factory was successfully exposed within Area 1 and greater areas of the two areas of housing within the PDA were also successfully exposed. Potential power sources for the hat factory were identified in rooms 1008 and 1009 of Area 1. There was no evidence of earlier structures beneath the Hat Factory, which corroborates with the historic mapping.

4.3 Interpretation

- 4.3.1 The archaeological remains identified during both the evaluation and the excavation correlated well with the historic mapping (Figs 6 and 7). Trenches 2, 4 and 5 were subsumed by Areas 1-3.
- 4.3.2 **Trench 1**: a mix of fabrics were observed with the internal coursing of wall **105** having the potential to be the earliest phase of construction on site. The general layout of features within this trench correspond to buildings observed on the 20th century mapping. The west of the trench fell within the footprint of the Denton & Haughton Co-operative store which may have been thoroughly cleared during demolition as made ground was observed to a depth of 3.00m. No archaeological features were observed but the extent of the observed deposits may suggest that this property was cellared.
- 4.3.3 The central and eastern area comprised 19th and early 20th Century fabrics, forming boundary walls and a series of internal structures. These fall within the north western hatworks complex, an area documented as being involved with "wet-end processes



such as planking" (Whitehead 2018). Pictorial and documentary evidence suggest a two storey building in the north-west, bordered to the east by single storey workshops (*ibid*).

- 4.3.4 **Trench 3**: this trench observed the substantial, exterior walls of the northern extension, located within the eastern part of the former hat factory complex (Fig 6). Walls **304** and **306** formed the western and northern boundary elevations of rooms observed on the 20th Century historic mapping (Fig 6). Concrete bases **305** seem to have been located internally, within a room bordering rooms **1010** and **1009** to the south and west. The bases suggest the inclusion of heavy machinery within this area, this machinery may relate to wet-end processes, which required large steaming, rolling and pressing machinery (English Heritage 2013).
- 4.3.5 **Area 1**: contained several rooms but very few identifying features. Those which contained features and those whose use is documented are described below.
- 4.3.6 The rooms along the southern extent **1004**, **1005**, **1006** and **1007** are documented as being "dry-end workshops" (*ibid*) of two-storey construction. 'Dry-end' processes generally involved trimming and lining insertion but the early 20th Century saw the expansion of the 'half-millinery' trade at a factory level and included the addition of ribbons and/or bows to womens hats (English Heritage 2013). These rooms formed part of the factory building extending along Annan Street, which was designed so that if the business failed, the building could be converted into a row of terraced houses (TEP 2018). This design would likely explain the internal divisions between rooms **1004**, **1005** and **1006**. Room **1006** was a large open space with no evidence of machine bases, which does suggest that the processes being undertaken in this area were 'Dryend', this only required light tables to work at.
- 4.3.7 Room **1007** contained a single brick-built circular structure which seems to be documented as being a well, (Whitehead 2018) fed by a natural spring within the area and after which the Silver Springs Pub (originally located to the south west corner of the site) took its name (TEP 2018). The well was located within the interior of room **1007** possibly serving as a water source for the engine and boiler rooms to the north.
- 4.3.8 Rooms within 1008 included the documented remains of the hatwork's boiler house and engine room (Whitehead 2018; TEP 2018). The internal structure of the boiler house was partially observed before fieldwork in this area was curtailed by the presence of contaminants; it was constructed with typical, refractory fabrics associated with high temperature environments. Documentary evidence also states the chimney was located just beyond the western limit of excavation. No evidence for the engine house was observed within 1008. The boiler house remains in room 1008 likely relate to the final location of the structure, with evidence that the structure was still upstanding in 1985 (Whitehead 2018).
- 4.3.9 Within room **1009** there was potential evidence for an earlier, undocumented boiler system within the centre of the hatworks complex. This comprised a small flue system, typical of a small Cornish boiler (Myers and Mottershead *pers comm*) and constructed using hand-made and refractory brick. The whole structure was buried below a later brick floor surface within the eastern extent of the room. Documentary evidence suggests that the 'initial phase' of construction for the hatworks complex was



completed in 1868 with subsequent phases completed by 1871 (Whitehead 2018). There was a further extension to the factory in 1886, which may explain the movement of the power source for the factory. However, there was no other evidence for internal features within this building and, as such, the flue system may have been used as part of wet-end processing, where steam was required.

- 4.3.10 **Area 2**: uncovered the extant remains of number 5 Annan Street. Initial excavations in Trench 4 had highlighted the 'mirrored' remains of structures associated with domestic housing along the south-eastern extent of the development area. Subsequent excavations in Area 2 were undertaken to reveal the full footprint of the easternmost property (number 5).
- 4.3.11 Number 5 was a large terraced building with a rear annex **2003** and yard to the north east. The rear (north) room **2002** contained evidence for a fireplace with later extensions forming a pot boiler or range. The front (south) room **2001** was cellared, contained a bay window and had access via a stairwell along the eastern extent of the property. Documentary evidence suggests that between 1881 and 1891, this was the residence of William Howe, son of Joseph Howe and who later (1895) became the first chairman of the Denton Urban District Council (*ibid*). The presence of 'Minton' tiles and the large footprint of the building would attest to a higher status property. It may also be noted that this row of terraces was located within close proximity to the late Georgian manor house of Denton Lodge, who's owners, the Peacock family, were also involved with the hat making trade (*ibid*).
- 4.3.12 **Area 3**: uncovered the extant remains of number 11 Amelia Street. Initial excavations in Trench 5 had highlighted a row of simple terraced housing within the northern half of the development area. Subsequent excavations in Area 3 were undertaken to reveal the full footprint of the easternmost property (number 11);
- 4.3.13 Number 11 was an average sized terraced property with a standard two-up two-down floorplan divided by single skin partition walls. A single fireplace was observed along the eastern partition of the southern room **2001** and a stairwell structure was observed to the north-western extent of the building in room **2002**. A yard and small annex were noted to extend northwards beyond the limit of excavation and into the baulk. No additional census information was found.

4.4 Significance

4.4.1 The structures identified on the site generally survived well immediately below the modern ground level. These structures, despite truncation and disturbance in places, could be related relatively well to building depicted on historic mapping of the area. These remains did not necessarily aid interpretation of specific functions within sections of the buildings, although it has been possible to postulate that there was a putative earlier boiler in room 1009, which was replaced by a later one in room 1008. The results also correspond well with the documentary evidence, which has led to the suggestion of specific functions of the structures identified during the works.

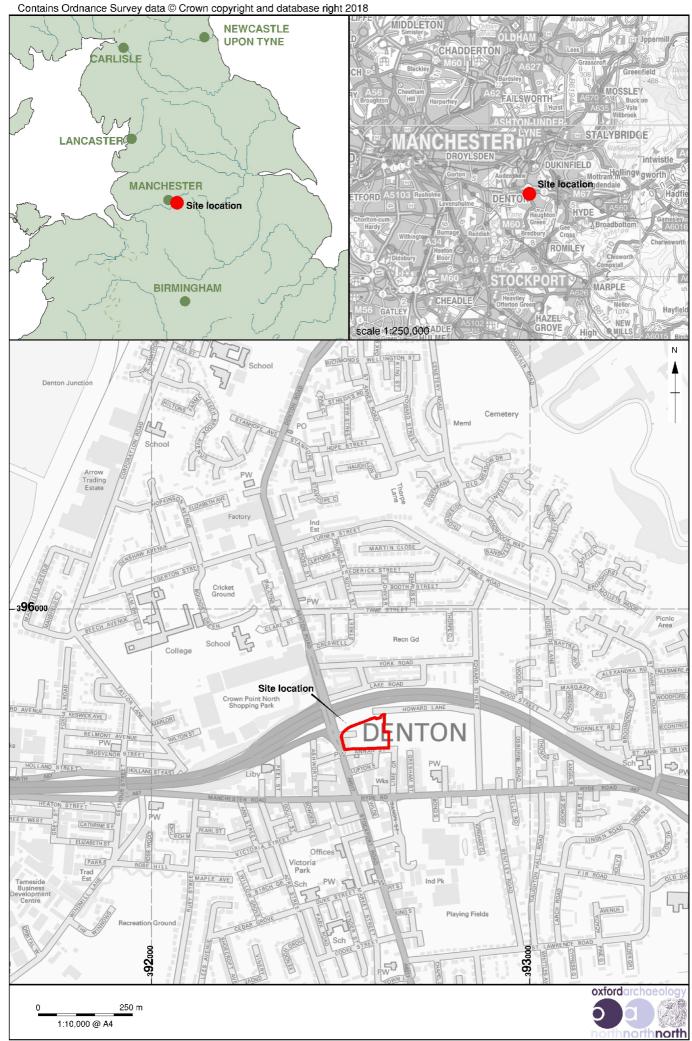


Figure 1: Site location

Figure 2: Location of evaluation trenches and excavation areas

Site Area

Evaluation Trenches

Excavation Areas

oxfordarchaeology

northnorth

20 m

1:650 @ A4

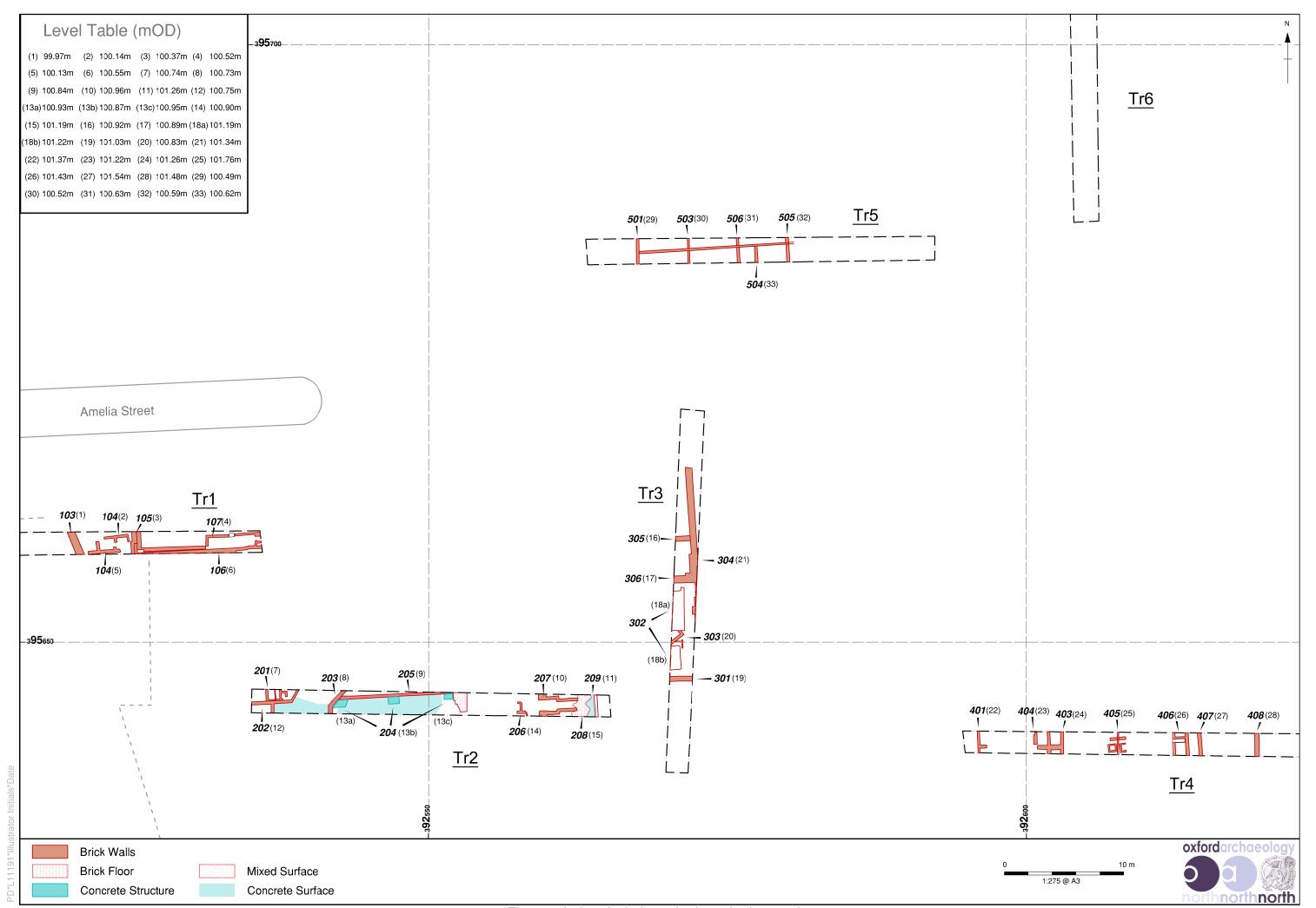


Figure 3: Archaeological remains in evaluation trenches

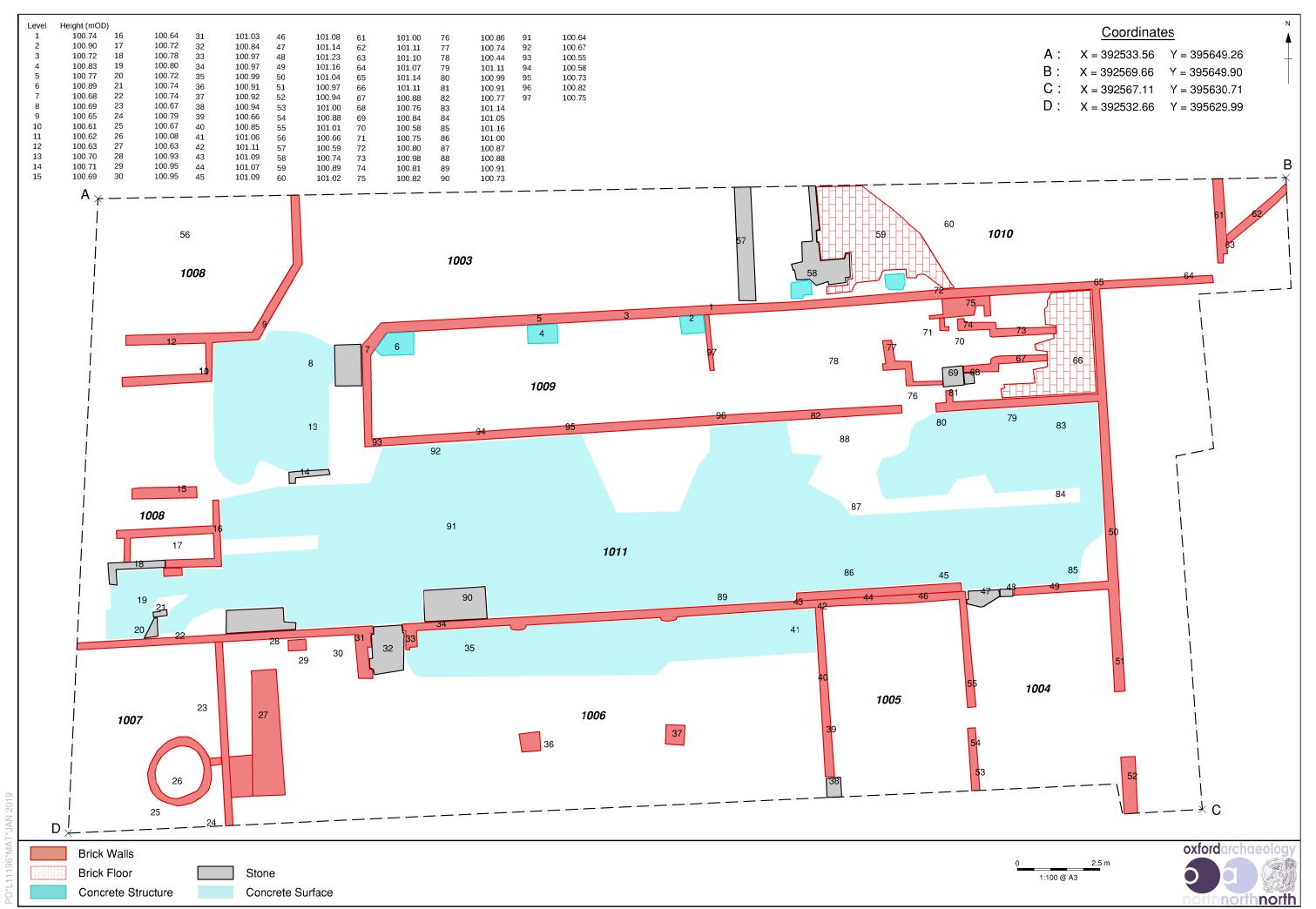


Figure 4: Archaeological remains in Area 1

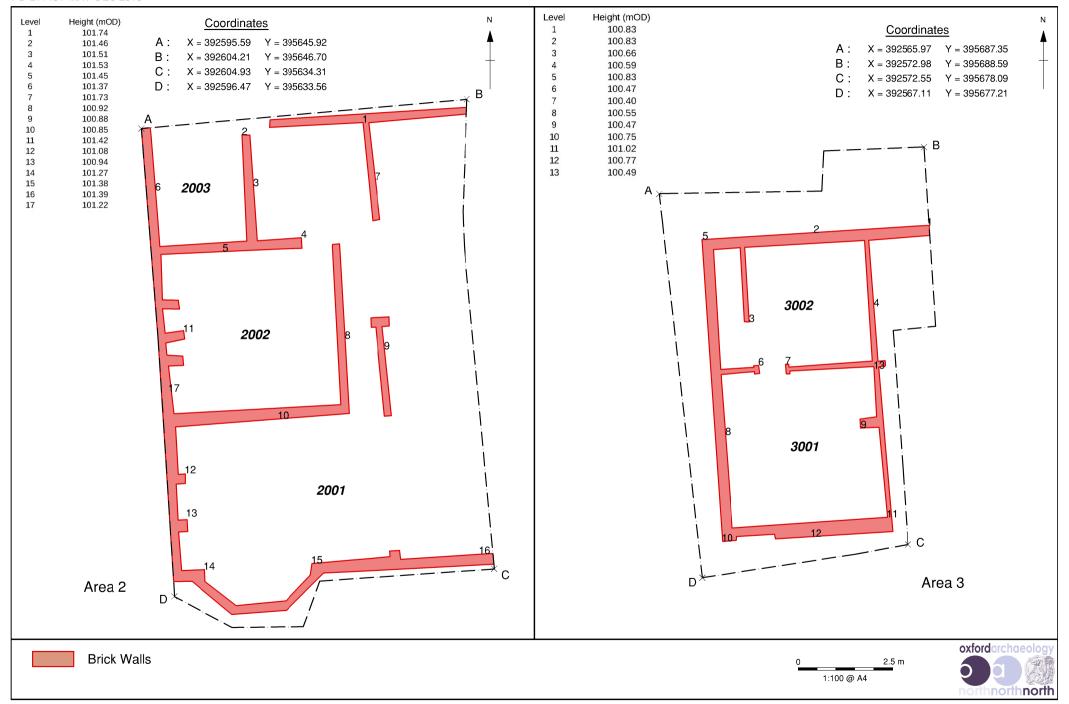


Figure 5: Archaeological remains in Areas 2 and 3

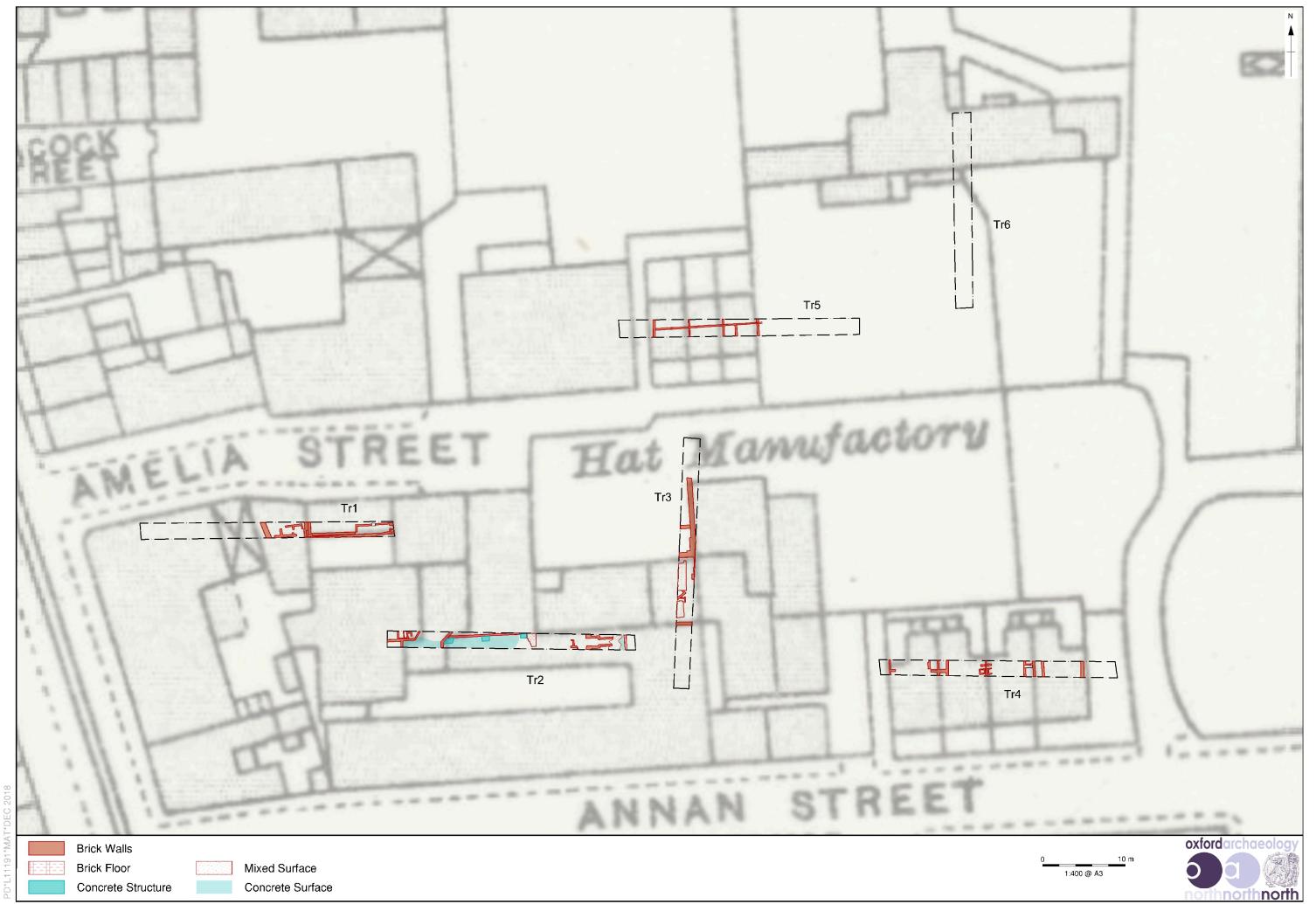


Figure 6: Archaeological remains in evaluation trenches superimposed on the Ordnance Survey 25":1 mile map of 1918

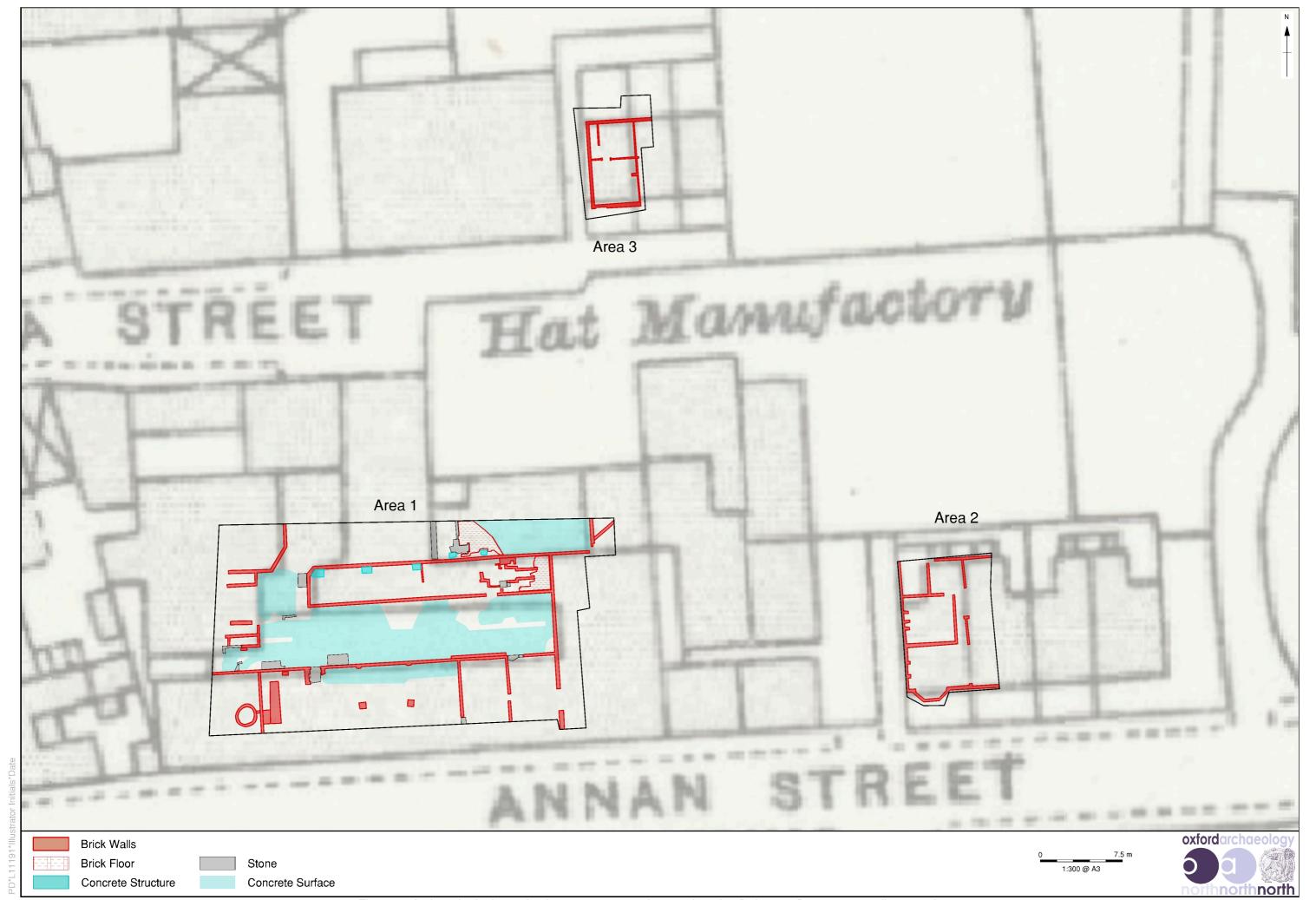


Figure 7: Archaeological remains in areas 1-3 superimposed on the Ordnance Survey 25":1 mile map of 1918



APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General c	description				Orientation	E-W
Western	end devoid	Rest of trench contained	Length (m)	30.00		
structure	s comprising	ury brick walls.	Width (m)	2.00		
					Max. depth (m)	3.00
Context	Туре	Width	Depth	Description	Finds	Date
No.		(m)	(m)			
101	Layer	2.00	0.40	Demolition rubble	-	20 th
						Century
102	Layer	-	-	Natural Clay	-	-
103	Wall	0.55	-	Two and a half bricks	-	Late
				wide, mixed fabric, North-		19 th /Early
				west/south-east aligned		20 th
						Century
104	Structure	1.45	-	Possible Privy, single brick	-	<i>c</i> . 19 th
				wide, mixed fabric, brown		Century
				sandy mortar		
105	Wall	0.87	-	Exterior wall, phased	-	Early
				fabric, forms structure to		19 th -20 th
				east		Century
106	Wall	0.50	-	East/west aligned, one to	-	Late
				two bricks wide, black		19 th /20 th
				mortar		Century
107	Wall	0.36	-	North/south and	-	Late
				east/west aligned, one to		19 th /20 th
				one and a half bricks wide,		Century
				black mortar		

Trench 2						
	description	Orientation	E-W			
	· ·	اممممط	امم مالمين			
		-pnased	walis and	floor surfaces pertaining to	Length (m)	30.00
Hat Work	S.				Width (m)	2.00
					Max. depth (m)	0.52
Context	Туре	Width	Depth	Description	Finds	Date
No.		(m)	(m)			
201	Structure	0.80	-	Possible privy with stone	-	Late 19 th
				slab partition, handmade		Century
				bricks, dark mortar		
202	Wall	0.25	-	Single brick wide, light	-	19 th
				sandy, mortar, handmade		Century
				bricks		
203	Wall	0.25	-	Single brick wide, light	-	19 th
				sandy, mortar, handmade		Century
				bricks		
204	Structure	0.65	-	3 pillar bases, early	-	19 th
				concrete, 3.00m spacing		Century



205	Wall	0.25	-	Single brick wide,	-	Late 19 th
				handmade bricks, dark		Century
				mortar, butts 204		
206	Structure	1.04	-	Single brick wide, 0.80m	-	19 th
				gap between, handmade		Century
				brick, light sandy mortar		
207	Structure	1.50	-	North-east/south-west	-	Mid to
				aligned, single brick wide,		Late 19 th
				handmade brick, light		Century
				grey mortar, stone pads		Cerreary
				to western extent		
208	Surface	-	0.07	Handmade brick, dark	-	Late 19 th
				mortar		Century
209	Surface	-	0.07	Concrete skim	-	20 th
						Century
210	Wall	0.25	-	Single brick wide,	-	Late 19 th
				handmade brick, dark		Century
				mortar		,
211	Layer	-	-	Mixed demolition	-	20 th
				deposits		Century

Trench 3						
General o	description				Orientation	N-S
Trench c	omprises se	veral 20t	h Centui	ry features within the	Length (m)	30.00
Hat Wor	ks footprint	Width (m)	2.00			
		Max. depth (m)	1.06			
Context	Type	Width	Depth	Description	Finds	Date
No.		(m)	(m)			
301	Wall	0.40	-	Single brick wide,	-	19 th
				stone foundation,		Century
				handmade brick, light		
				sandy mortar		
302	Structure	1.00	-	Early concrete bases	-	19 th
						Century
303	Wall	0.25	0.40	Single brick wide,	-	Late 19 th
				machine-made brick,		Century
				dark mortar, butts		
				302		
304	Wall	0.60	0.80	North-west/south-	-	20 th
				east, machine-made		Century
				brick, light blue		
				cement, EGW bond, 3		
				foundation step, tied		
				into 306 , butts 305		
305	Wall	0.30	0.20	Butts 304 , north-	-	20 th
				east/south-west,		Century
				stone foundation,		



				machine-made brick, dark mortar		
306	Wall	0.72	0.40	North-east/south-	-	20 th
				west, same as 304 , 6		Century
				courses, EGW		
307	Layer	-	-	Mixed demolition	-	20 th
				deposits		Century
308	Layer	-	-	Natural clay	-	-

Trench 4						
General of	description				Orientation	E-W
	ontains seve	eral walls	pertainin	g to 19th Century	Length (m)	30.00
housing					Width (m)	2.00
					Max. depth (m)	1.20
Context No.	Туре	Width (m)	Depth (m)	Description	Finds	Date
401	Wall	0.25	0.48	Single brick wide, north/south, handmade brick, light sandy mortar	-	19 th Century
402	Wall	0.25	0.90	Single brick wide, east/west, EGW, handmade brick, dark grey mortar	-	Late 19 th Century
403	Structure	1.50	0.35	2 north/south walls, single brick wide, bridged by stone flags, handmade brick, grey mortar	-	19 th Century
404	Wall	0.25	-	North/south, handmade brick, dark grey mortar	-	Late 19 th Century
405	Structure	-	-	Fireplace, handmade brick, dark grey mortar	-	L19th Century
406	Structure	-	-	Same as 403	-	19 th Century
407	Wall	-	0.30	Single brick wide, north/south, handmade brick, dark grey mortar	-	Late 19 th Century
408	Wall	Approx 0.30	-	Truncated stone wall/foundation	-	-



409	Layer	-	-	Mixed demolition deposit	-	20 th Century
410	Layer	-	-	Re-deposited natural/relic soil	-	19 th Century
411	Layer	-	-	Natural clay	-	-
412	Wall	0.11	-	Single skin partition butts 405 and 413	-	Late 19 th Century
413	Structure	-	-	Fireplace, mirror of 405	-	Late 19 th Century

Trench 5						
General	description				Orientation	E-W
Trench d	evoid of ar	. Western half	Length (m)	30.00		
comprise	ed walls per	Width (m)	2.00			
					Max. depth (m)	0.80
Context No.	Туре	Width (m)	Depth (m)	Description	Finds	Date
501	Wall	0.25	-	Single brick wide, handmade brick, light sandy mortar, north/south exterior wall	-	19 th Century
502	Wall	0.11	-	East/west, single skin partition, handmade brick, light sandy mortar	-	19 th Century
503	Wall	0.25	-	Single brick wide, handmade brick, light sandy mortar, north/south	-	19 th Century
504	Wall	0.25	-	Single brick wide, machine-made brick, dark Grey mortar, north/south	-	Late 19 th Century
505	Wall	0.25	-	Single brick wide, machine-made brick, dark Grey mortar, north/south	-	Late 19 th Century
506	Wall	0.25	-	Single brick wide, light sandy mortar, handmade brick, east course Grey mortar	-	c. 19 th Century



507	Layer	-	0.20	Concrete slab	-	20 th
						Century
508	Layer	-	0.50	Mixed demolition	-	20 th
				debris		Century
509	Layer	-	-	Natural clay	-	-

Trench 6	Trench 6								
General o	description	Orientation	N-S						
Trench d	evoid of ard	haeolog	y. Comp	rised concrete and	Length (m)	30.00			
contamir	nated grour	id overly	ing natu	ral geology of grey clay.	Width (m)	2.00			
					Max. depth (m)	0.80			
Context	Type	Width	Depth	Description	Finds	Date			
No.		(m)	(m)						
601	Layer	-	0.30	Concrete slab	-	20 th			
						Century			
602	Layer	-	0.50	Leveling deposit	-	20 th			
			Century						
603	Layer	-	-	Natural Clay	-	-			

Area 1						
General o	description				Orientation	E-W
Area con	tains 19 th and	Length (m)	38.00			
the south	nern half of th	e former hat f	factory fo	ootprint.	Width (m)	20.00
		Max. depth	1.00			
					(m)	
Context	Туре	Width (m)	Depth	Description	Finds	Date
No.			(m)			
1001	Layer	_	0.20	Made ground,	-	20 th
				mixed demolition		Century
				debris		
1002	Layer	-	0.50	Redeposited	-	19 th
				natural &		Century
				levelling material		
1003	Layer	-	-	Natural clay	-	-
1004	Room	5.70x4.40	-	South-east room	-	19 th /20 th
						Century
1005	Room	5.70x4.40	-	West of room	-	19 th /20 th
				1004		Century
1006	Room	18.00x6.00	-	Possible Cutting	-	19 th /20 th
				room		Century
1007	Room	6.00x4.50	-	SW room	-	19 th /20 th
				containing Well		Century



1008	Room	70.00m²	-	Contaminated	-	19 th /20 th
				area contains		Century
				boiler room		
1009	Room	22.00x3.15	-	Contains possible	-	19 th /20 th
				Earlier boiler		Century
1010	Room	14.00x3.60	-	Northernmost	-	19 th /20 th
				room		Century
1011	Room/road	132.50m ²	-	Access/delivery	-	19 th /20 th
				road		Century

Area 2						
General description					Orientation	N-S
Exposed	Exposed footprint of No.5 Annan Street.					13
					Width (m)	8.5
					Max. depth (m)	1.50
Context	Туре	Width	Depth	Description	Finds	Date
No.		(m)	(m)			
2001	Room	5.35x3.95	-	'Front' (south)	-	19 th /20 th
				room/cellar		Century
2002	Room	4.30x4.00	-	'Back' (north) room	-	19 th
						Century
2003	Room	2.90x2.90	-	(North) annex, poss.	-	19 th /20 th
				kitchen		Century

Area 3						
General description					Orientation	N-S
Exposed footprint of No. 11 Amelia Street.					Length (m)	11.5
					Width (m)	7
						0.30
Context	Туре	Width	Depth	Description	Finds	Date
No.		(m)	(m)			
3001	Room	4.10x4.10	-	(South) 'front' room	-	19 th
						Century
3002	Room	4.10x3.20	-	(North) 'back' room	-	19 th
						Century



APPENDIX B BIBLIOGRAPHY

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APPENDIX C SITE SUMMARY DETAILS

Site name: Tameside Wellness Centre, Denton, Greater Manchester

Site code: TWC18

Grid Reference SJ 9256 9566

Type: Evaluation and excavation

Date and duration: 29th October – 21st November 2018, 15 days

Area of Site 0.79 ha

Location of archive: The archive is currently held at OA, Mill 3, Moor Lane Mills, Moor

Lane, Lancaster, LA1 1QD, and will be deposited with Greater Mancheser Historic Environment Record Office in due course.

Summary of Results: Structural remains relating to a late 19th and 20th century Hat

Factory and terrace housing were identified with five of the six evaluation trenches. A phase of excavation followed, where structural remains were found correlating well with the historic mapping and documentary evidence. Although it was difficult to discern the function of the buildings of the former Hat Factory, there were two likely boiler house locations, potentially identifying the location of the power source for the factory.



APPENDIX D EVALUATION WRITTEN SCHEME OF INVESTIGATION





ARCHAEOLOGICAL TRIAL TRENCH EVALUATION DENTON, GREATER MANCHESTER ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION

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Document Title	Archaeological Written Scheme of Investigation		
Prepared for	Network Space		
Prepared by	TEP - Market Harborough		
Document Ref	7200.002		

Author	Jason Clarke		
Date	September 2018		
Checked	Sarah Hannon-Bland		
Approved	Jason Clarke		

Amendment History					
Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
1.0	05.09.18	SHB	JC	Draft for client review	Draft





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Figures

Figure 1: Site location and Location of trial trenches



1.0 Introduction

- 1.1 This Written Scheme of Investigation (WSI) has been commissioned by Network Space Developments Ltd in response to a condition (14) of planning consent for a programme of archaeological trial trenching evaluation. The development scheme comprises the construction of a New Wellness Centre, 123 associated parking spaces and landscaping.
- 1.2 The development site is located on land adjacent to Annan Street, Denton, Greater Manchester M34 3FX. The development site is centred upon National Grid Reference SJ 9256 9566.
- 1.3 This WSI sets out the conditioned measures (item 2) as stated within Condition 14 of planning consent 18/00541/FUL. The requirement for work states that:
 - No development shall take place until the applicant or their agents or successors in title has secured the implementation of a programme of archaeological works. The works are to be undertaken in accordance with Written Scheme of Investigation (WSI) submitted to and approved in writing by Tameside Planning Authority. The WSI shall cover the following: 1. An archaeological desk based assessment. 2. A phased programme and methodology of site investigation and recording to include: archaeological evaluation through trial trenching (subject to a new WSI). - dependent on the results from the evaluation trenches, a targeted more detailed area excavation and recording (subject to a new WSI) 3. A programme for post investigation assessment to include: - production of a final report on the significance of the belowground archaeological interest. 4. Deposition of the final report with the Greater Manchester Historic Environment Record. 5. Dissemination of the results of the archaeological investigations commensurate with their significance. 6. Provision for archive deposition of the report and records of the site investigation. 7. Nomination of a competent person or persons/organisation to undertake the works set out within the approved WSI.
- 1.4 This WSI provides a method for an Archaeological trial trench evaluation of the development area, as well as a programme of reporting.
- 1.5 This WSI has been prepared by TEP, a Registered Organisation with the Chartered Institute for Archaeologists (CIfA). It has been authored by a full Member of the CIfA. The archaeological works will be undertaken by an appropriately qualified archaeologist.

Aims and Objectives

- 1.6 The following programme has been designed to identify any archaeological deposits or features that may be present related to post medieval industrial activity formally on the site.
- 1.7 The programme of work is designed to then allow for the need for, and scope of, any further necessary archaeological mitigation to be designed and undertaken. This approach is in accordance with paragraphs 189, 190, 197 and 199 of the National Planning Policy Framework (NPPF).



1.8 The research objectives of the programme of work will be determined by what, if any, archaeological remains are present within the development footprint. However, subsequent assessment and analysis will be in accordance with relevant objectives outlined in the North West Archaeological Research Framework (2006).



2.0 Policy, Standards and Guidance

- 2.1 Section 16 of The National Planning Policy Framework (NPPF), revised July 2018, describes the provisions specifically relating to conserving and enhancing the historic environment.
- 2.2 Paragraph 189 advises local planning authorities to require an applicant to describe the significance of any heritage assets affected by their proposal, including any contribution made by their setting, including "where a site on which development is proposed includes, or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation". It states that "the level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance".
- 2.3 Paragraph 190 advises local planning authorities "to identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise". The information gathered here should be taken "into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal".
- 2.4 Paragraph 197 states that "The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset".
- 2.5 Paragraph 199 states that "local planning authorities ... should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible". The request for pre-determination works attached to the planning application, and this corresponding WSI, are in accordance with this policy provision of the NPPF.

Guidance

- 2.6 The guidance most relevant to this WSI is provided in:
 - Chartered Institute for Archaeologists 2014, Standard and Guidance for Archaeological Field Evaluation,
 - Chartered Institute for Archaeologists 2014, Standards and Guidance for the Collection, documentation, conservation and research of archaeological materials,
 - Chartered Institute for Archaeologists 2014, Standards and Guidance for the creation, compilation, transfer and deposition of archaeological archives.
 - Historic England, 2015 Management of Research Projects in the Historic Environment (MoRPHE).



Monitoring

- 2.7 The implementation of the works outlined in this WSI will be monitored by the Senior Planning Archaeologist at Greater Manchester Archaeological Advisory Service (GMAAS) on behalf of the local planning authority (LPA). The LPA will be kept up to date with progress during all phases of the archaeological works.
- 2.8 All archaeological field work will be undertaken by suitably qualified archaeologists, working under the direction of a full Member of the Chartered Institute for Archaeologists, or equivalently qualified project director.



3.0 Background

Geology and Topography

- 3.1 The British Geological Survey (BGS) shows the underlying geology to be British Geological Survey as Pennine Middle Coal Measures Formation comprising mudstone, siltstone and sandstone overlain by Devensian Till.
- 3.2 The topography of the development site is mostly flat, approximately 134-135m above Ordnance Datum AOD.

Historic Background

- 3.3 A more detail archaeological background is detailed in the Historic Environment deskbased Assessment (TEP2018) of the development site, the background outlined below details the post medieval-modern industrial activity on the site.
- 3.4 Up until the 17th century the township of Denton remained part of the manor of Withington, a sub-manor of the manor of Manchester. As lands were sold off in the area, freeholders became wealthier as a result of the textile trade, and coal mining in the area and began to build higher status houses. Denton Hall was further remodelled at this time.

Post Medieval

- 3.5 Felt hat manufacture was recorded in Denton as early as 1702, where production initially operated on a domestic scale, carried out in houses, outbuildings or small workshops, to supplement family income from agriculture. Denton became was one of the six main centres of hat manufacture in England, alongside Atherstone, London, Luton, Manchester and Stockport.
- 3.6 In 1790 Denton Lodge was built to the east of the development site at the junction of Lime Grove and Annan Street by the Peacock family, who were hat manufacturers. The house had large grounds, ornamental ponds, and the carriage drive lined with lime trees (now Lime Grove). Messrs Bond, Bromley and Peacock are listed in the London Gazette in 1814 as partners in a hat manufacturing business, believed to be one of the oldest hat manufacturers in Denton. In 1838 Amelia Peacock was born, and she resided at the lodge with her uncle William Cook. Amelia died in 1842, and it is believed that Amelia Street was named after her.
- 3.7 Cartographic evidence of 1848, seen in the OS County Series maps shows a Wesleyan Chapel which fronted Ashton Road. This building was in use from 1817 to 1872 when a newer chapel was constructed to house the expanding congregation along Hyde Road, to the south of the development site.
- 3.8 The industry expanded rapidly over the early 19th century and hat making factories were soon built to accommodate the growing industry. By 1840 more than two thousand felt hats were being produced each week in Denton. During its peak, Denton was the largest hat manufacturing centre in Britain with 36 firms directly involved in felt hatting production and several dozen undertaking finishing, hat box making, and hat machine manufacture.



- 3.9 In 1838 Joseph Howe moved from London to Denton to start his business of dyeing for the hat trade. The business premises were built on Annan Street, which Joseph named after the town of Annan in Scotland where the Howes family originated. The business had humble beginnings, as Joseph originally took the dyed hats for sale on the back of a donkey. After a few years Joseph began to manufacture hats, and his six sons entered the business. In 1869, the Howe sons purchased a piece of land from the Denton Lodge grounds to build the hat works, which occupied a large part of Annan Street, to the entrance of Amelia Street. The 1871 census confirms that Annan Street had been built by this time. Built of brick, the hat making factory was a group of two and three storey workshops along Annan Street, where the hat trimming and finishing would have taken place. The boiler house and chimney were located on the Annan Street side, behind the Co-operative Store and Hall. A single storey workshop on the Amelia Street side, where the planking process of hat making would have taken place. The factory was designed so that if the business failed, it would be easily converted into a row of terraced houses. The ground floor windows on the street side alternated with round-headed and square headed windows so that the round-headed windows could be converted into doorways.
- 3.10 In 1858 a beerhouse named Silver Springs Arms was built at the corner of Ashton Road and Annan Street. The rectangular building was of brick construction with gable ends and had both a cellar and attic. The name for the beerhouse was derived from a spring located behind the building, which rose below the Joseph Howe & Sons Ltd hat factory. Trade directories between 1858 and 1914 list the owners of the Silver Springs Arms.
- 3.11 Later in the 19th century Denton Lodge was bought by James Bevan, another hat manufacturer in Denton, who consequently sold the house and grounds in 1888 for money to put into his hat business.
- 3.12 The Denton & Haughton Co-operative Store was built in 1893 on the east side of Ashton Road, on the corner of Amelia Street and abutted the Silver Springs Arms. The building was constructed of Accrington Nori brick and had ornate Dutch gables on the façade. The building also incorporated a hall, which was accessed from Amelia Street. The building housed local meetings, tea parties and dances. Members of the society obtained dividends from purchases made at the store and tokens were issued which were exchanged for cash when the quarterly dividend was declared. The office building where the bank operated from was constructed on Amelia Street in 1903.

Modern

3.13 By 1920 the hat making business on the development site was run by Joseph Howe's three grandsons, and became a limited company, by then named Joseph Howe & Sons Ltd. In 1922 J. W. Howe was the president of the British Felt Hat Manufacturers Federation.



- 3.14 In 1925 Denton Lodge and grounds were sold to Oldham & Son Ltd, as an expansion of their engineering business to the north of Hyde Road. The company was first established in 1865 making machinery for the hatting and mining industries, when they moved north to their new location, the company specialised in the manufacture of batteries. Denton Lodge was used by the company as an office building and the ornamental ponds were filled in for building land. The expansion of the business continued to support the war effort during the Second World War, temporarily converting the buildings into a munitions works.
- 3.15 In the early 20th century the original Silver Springs Arms beerhouse was demolished and replaced by a large more ornate style building, comprising a mix of Edwardian and medieval style architecture. The name of the new public house was changed to just 'Silver Springs'.
- 3.16 The hatting industry continued to dominate the town until the late 20th century, when it severely declined due a number of factors. These included the shift in fashion away from the everyday wearing of hats, rising raw material prices for both fur and wool and overseas competition. Decreasing demand for the traditional wool and fur felt hat led to redundancies, mergers, and closures across the industry during the 1950s. In 1966, Joseph Howe & Sons Ltd joined together with five hat manufacturers to form Associated British Hat Manufacturers Ltd (ABHM Ltd). The company remained independent for some time, but in a declining market it could not compete and so closed in 1973.
- 3.17 In 1978 Oldham & Sons Ltd became part of the Hawker Siddely group, and the battery factory was expanded further to cover a site of 120ha with 950 employees. In 1989 Denton Lodge was demolished as part of the engineering works expansion.
- 3.18 In 1993 the Denton & Haughton Equitable Co-operative Society Ltd building on Amelia Street was severely damaged by fire and never repaired.
- 3.19 After the closure of Joseph Howe & Sons Ltd the buildings were incorporated into industrial units, until the whole site was demolished in 2004. The remains of the post medieval hat factory buildings were extant at this time, as a wall along the south side of Amelia Street, a section of office wall on the northern side of Amelia Street and the lower courses of the workshop along Annan Street.
- 3.20 In 2016, the Silver Springs public house closed and along with the Denton & Haughton Co-operative Society Ltd building on Ashton Road, was later demolished in June 2017.

The proposed development

3.21 The development comprises, the erection of a New Wellness Centre, 123 associated parking spaces and landscaping.



4.0 Archaeological Fieldwork Method

Archaeological Trial Trenching

- 4.1 The development site comprises an area of demolished buildings and associated hardstanding, there is also a number of stockpiled and soil bunded areas, as well material classed as hazardous and Japanese knotweed. The field work will comprise a trial trench evaluation designed to adequately sample the proposed development site, avoid all potential hazards on the site and target potential archaeological interest relating to former 19th century industrial activity on the site.
- 4.2 All field work will be carried out by suitably qualified archaeologists, working under the direction of a full Member of the Chartered Institute for Archaeologists, or equivalently qualified project director.
- 4.3 The indicative trenching comprises six trial trenches measuring 30m long by 1.8m wide and will be excavated by a suitably sized machine. These have been designed to adequately sample the development site in order to define a sampling strategy for future mitigation and to locate potential remains of 19th century industrial activity on the site. The precise dimensions and location of the trial trenches have been confirmed in consultation with GMAAS.
- 4.4 The Trenches will be mechanically excavated using a machine fitted with a toothless ditching bucket. A breaker may have to be fitted to the machine to break any concrete or hard surfaces on the development site. Under instruction from the designated trench supervisor, the machine will operate in 'spits', removing only an appropriate amount of overburden with each action. The supervising archaeologist will give the command to stop should archaeological deposits or structures become visible. At each soil horizon change, the supervising archaeologist will indicate to the machine driver that each stratum should be stored separately.
- 4.5 Upon reaching the archaeological horizon or the natural horizon, whichever is encountered first, machine excavation will stop. Should the trench require excavation to depths in excess of 1.5m to reach archaeological horizons, the trench may require stepping or shoring, or investigation by machine sondage, rather than features being cleaned by hand. This would be confirmed in consultation with the client and GMAAS.
- 4.6 The archaeological works will provide an accurate record of any archaeological and paleo-environmental finds, features, artefacts or ecofacts identified.
- 4.7 In the event that any such finds or features are identified, subsequent excavations will be undertaken by hand. Any archaeological surfaces that are present will be cleaned sufficiently to enhance any features, site levels will be related to the Ordnance Survey National Grid and Datum. The general site plans will be hand drawn at a scale of 1:50 or 1:100.



- 4.8 Discrete features will be half-sectioned, or fully excavated if features are part of recognisable structures, contain deposits or artefacts of particular value, or likely to hold significant artefact or environmental assemblages. Intersections will be investigated to establish strategic relationships. Representative sections of linear and curvilinear features will be sample excavated away from intersections or other features or deposits, to obtain unmixed samples of material. Sections will be drawn at a scale of 1:10 or 1:20, as appropriate. Environmental bulk samples (usually 40 litres) will be taken where the deposit is likely to contain significant environmental assemblage. All records will be undertaken using pro form record sheets.
- 4.9 Sampling strategies will be in accordance with the archaeological sub-contractor fieldwork manual and described in their method statement as well as be the requirements of GMAAS.
- 4.10 The archaeological contractor will make appropriate pre-and post-excavation site records. All finds and features will be accurately located and planned accurately at appropriate scales. All site photographs will be taken using a digital SLR camera with a sensor of a minimum of 12 megapixels and supplemented with black and white film photography. All photography will be undertaken in accordance with Historic England guidance, Digital Image Capture and File Storage: Guidelines for Best Practice, 2015.

Excavation

- 4.11 Following completion of the trenched evaluation described above, the results will be discussed with GMAAS and a programme of archaeological recording through excavation agreed, that is proportionate to the significance of any heritage assets identified, and the predicted impact on them.
- 4.12 The area to be excavated and sampling strategies will be agreed in consultation and confirmed through the provision of an updated WSI.

General

Finds

- 4.13 All finds or environmental samples recovered during the archaeological works will be assessed and reported on by internal and external specialists of the archaeological contractor. A list of specialists for the project will be provided in a method statement from the appointed archaeological contractor prior to works commencing.
- 4.14 All finds will be treated in accordance with current best practice as set out in Chartered Institute for Archaeologists and Historic England guidance.

Human Remains

4.15 If human remains are encountered during the trial trench evaluation, they will be left in situ and the coroner notified. If it is deemed appropriate to excavate human remains, this will be done in accordance with appropriate Historic England and Chartered Institute for Archaeologists guidance (e.g. ClfA Technical Paper 13 Excavation and Post-excavation Treatment of Cremated and Inhumed remains). Excavation, removal from site, analysis and final placing will all be subject to the requirements of the appropriate Ministry of Justice licence.



Treasure

4.16 If any artefacts are encountered that would constitute 'treasure' as defined by The Treasure Act, 1996, they will be reported to the local Coroner and relevant Finds Liaison Officer. Any artefacts deemed to be Treasure should be excavated on the day they are discovered and removed to a secure site. If this is impractical then appropriate security provided until full excavation and removal can occur.

Paleo-environmental sampling and analysis

- 4.17 The paleo-environmental assessment aims to identify areas within the development footprint where conditions are such that deposits suitable for the study of past environments are preserved. These most commonly occur in the form of subsurface peat layers, but are also taken to include all waterlogged deposits. The identification of any suitable areas will take place during the archaeological evaluation.
- 4.18 Should any such deposits exist within the area of impact, samples will be taken by a suitably qualified specialist sub-contractor.
- 4.19 The samples would be assessed for their potential by internal or external specialists of the archaeological contractor, and suitable techniques applied to sub-sample from select cores to determine the preservation and taxonomic diversity within the samples. This is likely to include assessing for one or more of the following:
 - Pollen (focussing on organic units)
 - Diatoms (focussing upon lithological transitions within and at the base of the Holocene sediment stack)
 - Foraminifera (focussing on mineral strata and in particular on transitions)
 - Plant macro-remains (focussing on organic units)
- 4.20 Having assessed the potential for analysis a project design will be produced that will provide a detailed proposal for analysis (including, for example, C14 dating, loss-on-ignition to measure organic carbon content, humification and mass specific magnetic susceptibility) of any present selected samples.
- 4.21 If necessary and appropriate the advice of the Historic England Science Advisor for the North West will be sought.

Programme

- 4.22 It is anticipated that the works will happen in accordance with the following programme:
 - September 2018 submit WSI for approval by GMAAS
 - November 2018 undertake evaluation
 - +4 weeks report
 - +8 weeks deposit archive

Organisation and Key Personnel

4.23 TEP is a Registered Organisation with the Chartered Institute for Archaeologists (ClfA). The heritage team is under overall management of Ian Grimshaw BA (Hons) MA (LM) MSc CMLI MRTPI, Director



4.24 The archaeological works will be undertaken by Oxford Archaeology North (OAN) and will be managed by Jason Clarke BSc MA MCIfA, Principal Historic Environment Consultant (TEP).



5.0 Reporting

- 5.1 In accordance with the principles of Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2015) and the Management of Archaeological Projects, 2nd Ed (MAP2) (English Heritage 1991), a programme of post-excavation assessment and reporting will be undertaken, to commence on completion of the archaeological evaluation fieldwork.
- In the event of negative, or non-complex findings, a report will be produced detailing the results of fieldwork within four weeks of the end of fieldwork and archived within six months. The report will include;
 - a front cover to include the NGR, and HER reference number
 - · a concise, non-technical summary of the results,
 - the circumstances of the project and the dates on which the fieldwork was undertaken,
 - description of the methodology, including the sources consulted,
 - a very brief summary of the historical background of the study area,
 - a statement, where appropriate, of the archaeological implications of the impact.
 - a copy of this project design, and indications of any agreed departure from that design,
 - the report will also include a complete bibliography of sources from which data has been derived, and a list of any further sources identified but not consulted,
 - a site location plan related to the national grid,
 - appropriate plans showing the location and position of features or sites located.
 - plans and sections showing the positions of deposits and finds,
 - illustrative photographs as appropriate,
 - coordinates (latitude/longitude) of relevant sites if archaeological remains have been discovered.
- 5.3 In the event of archaeologically significant finds, the results of fieldwork will also be published in a relevant and appropriate journal, or other publically disseminated publication, as appropriate.
- 5.4 Pottery reports will refer to the appropriate type series.



6.0 Archive

- 6.1 A copy of the report provided as a PDF on disk, and as hard copies, will be submitted to the Greater Manchester Historic Environment Record.
- An archive of the results of the archaeological work will be produced, in accordance with current English Heritage guidelines (Management of Archaeological Projects, Appendix 3, 2nd edition, 1991) and Chartered Institute for Archaeologists Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (ClfA 2014). The archive will contain any site matrices, and summary reports of the artefact record, context records, and any other records or materials recovered.
- 6.3 Greater Manchester HER will be informed of field work commencing and of the arrangements made for deposition of the project archive.
- The original record archive of projects (paper, magnetic and plastic media), and a full copy of the record archive (microform or microfiche), together with the material archive (artefacts, ecofacts, and samples) will be deposited with the relevant local archive.
- 6.5 Any relevant archive generated will be deposited with an appropriate regional depository, it is understood that a charge may be made for this and that the depository will need to be contacted to agree to the deposition of any archive in advance.
- 6.6 Details of the work will be entered on the OASIS database at http://ads.ahds.ac.uk/projects/oasis.



7.0 Health and Safety

- 7.1 All work on site would be undertaken strictly in accordance with the project health and safety plan and task specific risk assessments. All companies working on the project will adhere to the client's required quality, health, safety and environment controls.
- 7.2 Access routes to working areas would be specified by the client and access would only be permitted to those routes and the area of the fieldwork.
- 7.3 All site staff, including subcontractors and visitors, will prove that they have attended a site induction and have the necessary competencies (e.g. CITB training for machine operators) and any other necessary health and safety qualifications.



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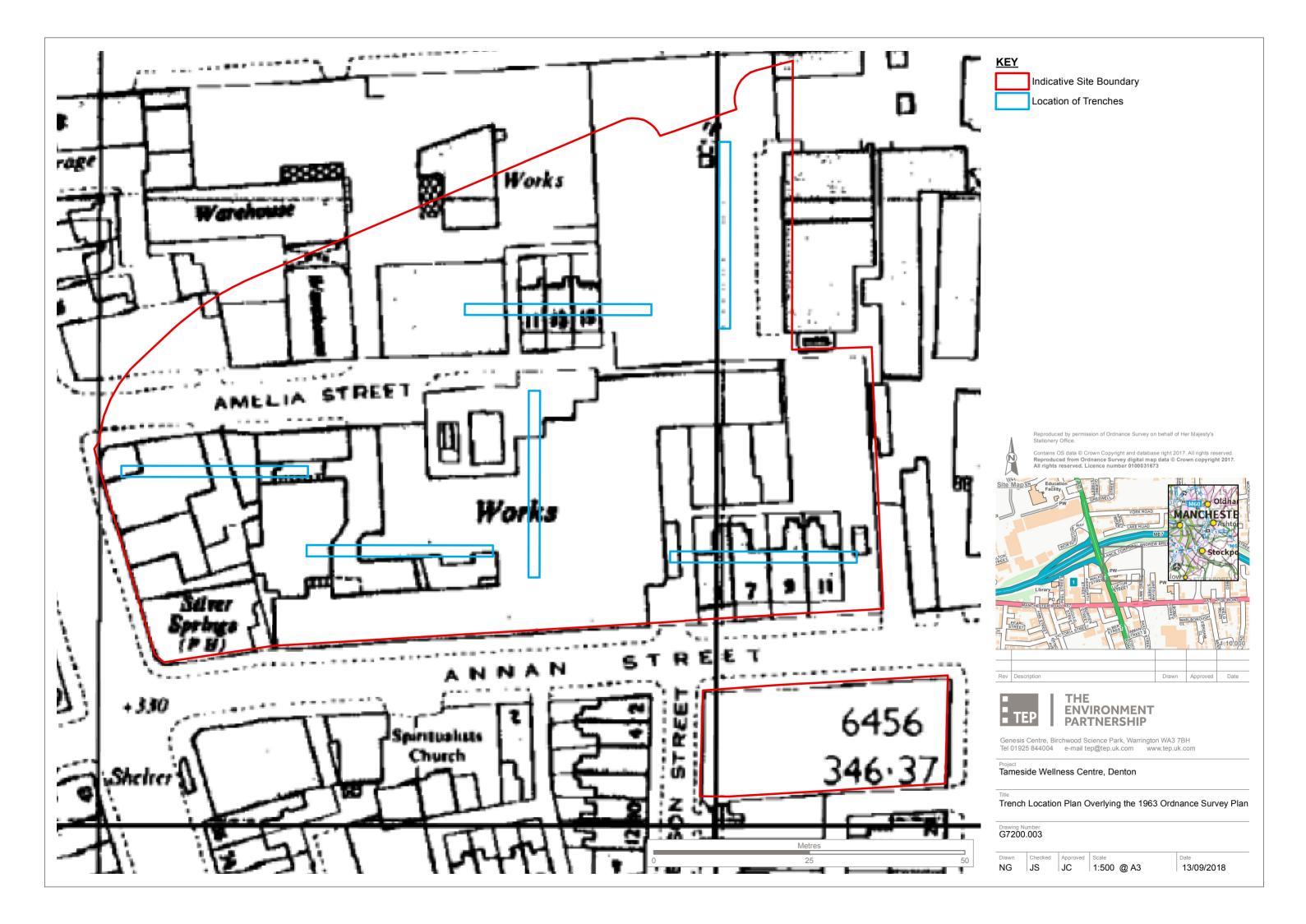
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www.british-history.ac.uk

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APPENDIX E EXCAVATION WRITTEN SCHEME OF INVESTIGATION





ARCHAEOLOGICAL EXCAVATION DENTON, GREATER MANCHESTER ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION

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Document Title	Archaeological Written Scheme of Investigation	
Prepared for	Network Space Development Ltd	
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Figure 1: Site location and Areas of Archaeological Investigation



1.0 Introduction

- 1.1 This Written Scheme of Investigation (WSI) has been commissioned by Network Space Developments Ltd in response to a condition (14) of planning consent for a programme of archaeological trial trenching evaluation. Trial trenching evaluation undertaken in November 2018 revealed the survival of remains relating to the 19th century Joseph Howe & Sons hat factory, therefore this WSI deals with the subsequent requirement for further archaeological works on site following consultation with the Senior Planning Archaeologist for GMAAS. The development scheme comprises the construction of a New Wellness Centre, 123 associated parking spaces and landscaping.
- 1.2 The development site is located on land adjacent to Annan Street, Denton, Greater Manchester M34 3FX. The development site is centred upon National Grid Reference SJ 9256 9566.
- 1.3 This WSI sets out the conditioned measures (Item 2) as stated within Condition 14 of planning consent 18/00541/FUL. The requirement for work states that:
 - No development shall take place until the applicant or their agents or successors in title has secured the implementation of a programme of archaeological works. The works are to be undertaken in accordance with Written Scheme of Investigation (WSI) submitted to and approved in writing by Tameside Planning Authority. The WSI shall cover the following: 1. An archaeological desk based assessment. 2. A phased programme and methodology of site investigation and recording to include: archaeological evaluation through trial trenching (subject to a new WSI). - dependent on the results from the evaluation trenches, a targeted more detailed area excavation and recording (subject to a new WSI) 3. A programme for post investigation assessment to include: - production of a final report on the significance of the belowground archaeological interest. 4. Deposition of the final report with the Greater Manchester Historic Environment Record. 5. Dissemination of the results of the archaeological investigations commensurate with their significance. 6. Provision for archive deposition of the report and records of the site investigation. 7. Nomination of a competent person or persons/organisation to undertake the works set out within the approved WSI.
- 1.4 This WSI provides a method for an open area excavation of the development area, as well as a programme of reporting.
- 1.5 This WSI has been prepared by TEP, a Registered Organisation with the Chartered Institute for Archaeologists (CIfA). It has been authored by a full Member of the CIfA. The archaeological works will be undertaken by an appropriately qualified archaeologist.

Aims and Objectives

1.6 The following programme has been designed to identify any archaeological deposits or features that may be present related to post medieval industrial activity on the site.



- 1.7 The programme of work is designed to then allow for the need for, and scope of, any further necessary archaeological mitigation to be designed and undertaken. This approach is in accordance with paragraphs 189, 190, 197 and 199 of the National Planning Policy Framework (NPPF).
- 1.8 The research objectives of the programme of work will be determined by what, if any, archaeological remains are present within the development footprint. However, subsequent assessment and analysis will be in accordance with relevant objectives outlined in the North West Archaeological Research Framework (2006).



2.0 Policy, Standards and Guidance

- 2.1 Section 16 of The National Planning Policy Framework (NPPF), revised July 2018, describes the provisions specifically relating to conserving and enhancing the historic environment.
- 2.2 Paragraph 189 advises local planning authorities to require an applicant to describe the significance of any heritage assets affected by their proposal, including any contribution made by their setting, including "where a site on which development is proposed includes, or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation". It states that "the level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance".
- 2.3 Paragraph 190 advises local planning authorities "to identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise". The information gathered here should be taken "into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal".
- 2.4 Paragraph 197 states that "The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset".
- 2.5 Paragraph 199 states that "local planning authorities ... should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible". The request for pre-determination works attached to the planning application, and this corresponding WSI, are in accordance with this policy provision of the NPPF.

Guidance

- 2.6 The guidance most relevant to this WSI is provided in:
 - Chartered Institute for Archaeologists 2014, Standard and Guidance for Archaeological Field Evaluation,
 - Chartered Institute for Archaeologists 2014, Standards and Guidance for the Collection, documentation, conservation and research of archaeological materials,
 - Chartered Institute for Archaeologists 2014, Standards and Guidance for the creation, compilation, transfer and deposition of archaeological archives.
 - Historic England, 2015 Management of Research Projects in the Historic Environment (MoRPHE).

November 2018



Monitoring

- 2.7 The implementation of the works outlined in this WSI will be monitored by the Senior Planning Archaeologist at Greater Manchester Archaeological Advisory Service (GMAAS) on behalf of the local planning authority (LPA). The LPA will be kept up to date with progress during all phases of the archaeological works.
- 2.8 All archaeological field work will be undertaken by suitably qualified archaeologists, working under the direction of a full Member of the Chartered Institute for Archaeologists, or equivalently qualified project director.



3.0 Background

Geology and Topography

- 3.1 The British Geological Survey (BGS) shows the underlying geology to be British Geological Survey as Pennine Middle Coal Measures Formation comprising mudstone, siltstone and sandstone overlain by Devensian Till.
- 3.2 The topography of the development site is mostly flat, approximately 134-135m above Ordnance Datum AOD.

Historic Background

- 3.3 A more detailed archaeological background is detailed in the Historic Environment desk-based Assessment (TEP 2018) of the development site, the background outlined below details the post medieval-modern industrial activity on the site.
- 3.4 Up until the 17th century the township of Denton remained part of the manor of Withington, a sub-manor of the manor of Manchester. As lands were sold off in the area, freeholders became wealthier as a result of the textile trade, and coal mining in the area and began to build higher status houses. Denton Hall was further remodelled at this time.

Post Medieval

- 3.5 Felt hat manufacture was recorded in Denton as early as 1702, where production initially operated on a domestic scale, carried out in houses, outbuildings or small workshops, to supplement family income from agriculture. Denton became was one of the six main centres of hat manufacture in England, alongside Atherstone, London, Luton, Manchester and Stockport.
- 3.6 In 1790 Denton Lodge was built to the east of the development site at the junction of Lime Grove and Annan Street by the Peacock family, who were hat manufacturers. The house had large grounds, ornamental ponds, and the carriage drive lined with lime trees (now Lime Grove). Messrs Bond, Bromley and Peacock are listed in the London Gazette in 1814 as partners in a hat manufacturing business, believed to be one of the oldest hat manufacturers in Denton. In 1838 Amelia Peacock was born, and she resided at the lodge with her uncle William Cook. Amelia died in 1842, and it is believed that Amelia Street was named after her.
- 3.7 Cartographic evidence of 1848, seen in the OS County Series maps shows a Wesleyan Chapel which fronted Ashton Road. This building was in use from 1817 to 1872 when a newer chapel was constructed to house the expanding congregation along Hyde Road, to the south of the development site.
- 3.8 The industry expanded rapidly over the early 19th century and hat making factories were soon built to accommodate the growing industry. By 1840 more than two thousand felt hats were being produced each week in Denton. During its peak, Denton was the largest hat manufacturing centre in Britain with 36 firms directly involved in felt hatting production and several dozen undertaking finishing, hat box making, and hat machine manufacture.



- 3.9 In 1838 Joseph Howe moved from London to Denton to start his business of dyeing for the hat trade. The business premises were built on Annan Street, which Joseph named after the town of Annan in Scotland where the Howes family originated. The business had humble beginnings, as Joseph originally took the dyed hats for sale on the back of a donkey. After a few years Joseph began to manufacture hats, and his six sons entered the business. In 1869, the Howe sons purchased a piece of land from the Denton Lodge grounds to build the hat works, which occupied a large part of Annan Street, to the entrance of Amelia Street. The 1871 census confirms that Annan Street had been built by this time. Built of brick, the hat making factory was a group of two and three storey workshops along Annan Street, where the hat trimming and finishing would have taken place. The boiler house and chimney were located on the Annan Street side, behind the Co-operative Store and Hall. A single storey workshop on the Amelia Street side, where the planking process of hat making would have taken place. The factory was designed so that if the business failed, it would be easily converted into a row of terraced houses. The ground floor windows on the street side alternated with round-headed and square headed windows so that the round-headed windows could be converted into doorways.
- 3.10 In 1858 a beerhouse named Silver Springs Arms was built at the corner of Ashton Road and Annan Street. The rectangular building was of brick construction with gable ends and had both a cellar and attic. The name for the beerhouse was derived from a spring located behind the building, which rose below the Joseph Howe & Sons Ltd hat factory. Trade directories between 1858 and 1914 list the owners of the Silver Springs Arms.
- 3.11 Later in the 19th century Denton Lodge was bought by James Bevan, another hat manufacturer in Denton, who consequently sold the house and grounds in 1888 for money to put into his hat business.
- 3.12 The Denton & Haughton Co-operative Store was built in 1893 on the east side of Ashton Road, on the corner of Amelia Street and abutted the Silver Springs Arms. The building was constructed of Accrington Nori brick and had ornate Dutch gables on the façade. The building also incorporated a hall, which was accessed from Amelia Street. The building housed local meetings, tea parties and dances. Members of the society obtained dividends from purchases made at the store and tokens were issued which were exchanged for cash when the quarterly dividend was declared. The office building where the bank operated from was constructed on Amelia Street in 1903.

Modern

3.13 By 1920 the hat making business on the development site was run by Joseph Howe's three grandsons, and became a limited company, by then named Joseph Howe & Sons Ltd. In 1922 J. W. Howe was the president of the British Felt Hat Manufacturers Federation.



- 3.14 In 1925 Denton Lodge and grounds were sold to Oldham & Son Ltd, as an expansion of their engineering business to the north of Hyde Road. The company was first established in 1865 making machinery for the hatting and mining industries, when they moved north to their new location, the company specialised in the manufacture of batteries. Denton Lodge was used by the company as an office building and the ornamental ponds were filled in for building land. The expansion of the business continued to support the war effort during the Second World War, temporarily converting the buildings into a munitions works.
- 3.15 In the early 20th century the original Silver Springs Arms beerhouse was demolished and replaced by a large more ornate style building, comprising a mix of Edwardian and medieval style architecture. The name of the new public house was changed to just 'Silver Springs'.
- 3.16 The hatting industry continued to dominate the town until the late 20th century, when it severely declined due a number of factors. These included the shift in fashion away from the everyday wearing of hats, rising raw material prices for both fur and wool and overseas competition. Decreasing demand for the traditional wool and fur felt hat led to redundancies, mergers, and closures across the industry during the 1950s. In 1966, Joseph Howe & Sons Ltd joined together with five hat manufacturers to form Associated British Hat Manufacturers Ltd (ABHM Ltd). The company remained independent for some time, but in a declining market it could not compete and so closed in 1973.
- 3.17 In 1978 Oldham & Sons Ltd became part of the Hawker Siddely group, and the battery factory was expanded further to cover a site of 120ha with 950 employees. In 1989 Denton Lodge was demolished as part of the engineering works expansion.
- 3.18 In 1993 the Denton & Haughton Equitable Co-operative Society Ltd building on Amelia Street was severely damaged by fire and never repaired.
- 3.19 After the closure of Joseph Howe & Sons Ltd the buildings were incorporated into industrial units, until the whole site was demolished in 2004. The remains of the post medieval hat factory buildings were extant at this time, as a wall along the south side of Amelia Street, a section of office wall on the northern side of Amelia Street and the lower courses of the workshop along Annan Street.
- 3.20 In 2016, the Silver Springs public house closed and along with the Denton & Haughton Co-operative Society Ltd building on Ashton Road, was later demolished in June 2017.

The proposed development

3.21 The development comprises the erection of a New Wellness Centre, 123 associated parking spaces and landscaping.



4.0 Archaeological Fieldwork Method

Archaeological Open Area Excavation

- 4.1 The development site comprises an area of demolished buildings and associated hardstanding, there is also a number of stockpiled and soil bunded areas, material around the site which is classed as hazardous and also areas of Japanese knotweed. The field work will comprise areas of open area excavation designed to adequately characterise and record any archaeological remains relating to the former 19th century hat factory and terraced housing recorded in the trial trench excavation undertaken in November 2018.
- 4.2 All field work will be carried out by suitably qualified archaeologists, working under the direction of a full Member of the Chartered Institute for Archaeologists, or equivalently qualified project director.
- 4.3 The excavation comprises three open areas targeting the former hat factory and housing recorded in the evaluation phase. The areas of investigation will be excavated by a suitably sized machine. The precise dimensions and location of the open area excavation have been confirmed in consultation with Senior Planning Archaeologist for GMAAS.
- 4.4 The excavation areas will be mechanically excavated using a machine fitted with a toothless ditching bucket. A breaker may have to be fitted to the machine to break any concrete or hard surfaces on the development site. Under instruction from the designated excavation supervisor, the machine will operate in 'spits', removing only an appropriate amount of overburden with each action. The supervising archaeologist will give the command to stop should archaeological deposits or structures become visible. At each soil horizon change, the supervising archaeologist will indicate to the machine driver that each stratum should be stored separately.
- 4.5 The archaeological works will provide an accurate record of any archaeological and paleo-environmental finds, features, artefacts or ecofacts identified.
- 4.6 Excavations will be undertaken by hand. Any archaeological surfaces that are present will be cleaned sufficiently to enhance any features, site levels will be related to the Ordnance Survey National Grid and Datum. The general site plans will be hand drawn at a scale of 1:50 or 1:100.
- 4.7 Discrete features will be half-sectioned, or fully excavated if features are part of recognisable structures, contain deposits or artefacts of particular value, or likely to hold significant artefact or environmental assemblages. Intersections will be investigated to establish strategic relationships. Representative sections of linear and curvilinear features will be sample excavated away from intersections or other features or deposits, to obtain unmixed samples of material. Sections will be drawn at a scale of 1:10 or 1:20, as appropriate. Environmental bulk samples (usually 40 litres) will be taken where the deposit is likely to contain significant environmental assemblage. All records will be undertaken using pro form record sheets.



- 4.8 Sampling strategies will be in accordance with the archaeological sub-contractor fieldwork manual and described in their method statement as well as be the requirements of GMAAS.
- 4.9 The archaeological contractor will make appropriate pre-and post-excavation site records. All finds and features will be accurately located and planned accurately at appropriate scales. All site photographs will be taken using a digital SLR camera with a sensor of a minimum of 12 megapixels and supplemented with black and white film photography. All photography will be undertaken in accordance with Historic England guidance, Digital Image Capture and File Storage: Guidelines for Best Practice, 2015.

General

Finds

- 4.10 All finds or environmental samples recovered during the archaeological works will be assessed and reported on by internal and external specialists of the archaeological contractor. A list of specialists for the project will be provided in a method statement from the appointed archaeological contractor prior to works commencing.
- 4.11 All finds will be treated in accordance with current best practice as set out in Chartered Institute for Archaeologists and Historic England guidance.

Human Remains

4.12 If human remains are encountered during the excavation, they will be left in situ and the coroner notified. If it is deemed appropriate to excavate human remains, this will be done in accordance with appropriate Historic England and Chartered Institute for Archaeologists guidance (e.g. ClfA Technical Paper 13 Excavation and Postexcavation Treatment of Cremated and Inhumed remains). Excavation, removal from site, analysis and final placing will all be subject to the requirements of the appropriate Ministry of Justice licence.

Treasure

4.13 If any artefacts are encountered that would constitute 'treasure' as defined by The Treasure Act, 1996, they will be reported to the local Coroner and relevant Finds Liaison Officer. Any artefacts deemed to be Treasure should be excavated on the day they are discovered and removed to a secure site. If this is impractical then appropriate security provided until full excavation and removal can occur.

Paleo-environmental sampling and analysis

- 4.14 The paleo-environmental assessment aims to identify areas within the development footprint where conditions are such that deposits suitable for the study of past environments are preserved. These most commonly occur in the form of subsurface peat layers, but are also taken to include all waterlogged deposits. The identification of any suitable areas will take place during the archaeological evaluation.
- 4.15 Should any such deposits exist within the area of impact, samples will be taken by a suitably qualified specialist sub-contractor.



- 4.16 The samples would be assessed for their potential by internal or external specialists of the archaeological contractor, and suitable techniques applied to sub-sample from select cores to determine the preservation and taxonomic diversity within the samples. This is likely to include assessing for one or more of the following:
 - Pollen (focussing on organic units)
 - Diatoms (focussing upon lithological transitions within and at the base of the Holocene sediment stack)
 - Foraminifera (focussing on mineral strata and in particular on transitions)
 - Plant macro-remains (focussing on organic units)
- 4.17 Having assessed the potential for analysis a project design will be produced that will provide a detailed proposal for analysis (including, for example, C14 dating, loss-on-ignition to measure organic carbon content, humification and mass specific magnetic susceptibility) of any present selected samples.
- 4.18 If necessary and appropriate the advice of the Historic England Science Advisor for the North West will be sought.

Programme

- 4.19 It is anticipated that the works will happen in accordance with the following programme:
 - November 2018 submit WSI for approval by GMAAS
 - November 2018 undertake excavation
 - +4 weeks report
 - +8 weeks deposit archive

Organisation and Key Personnel

- 4.20 TEP is a Registered Organisation with the Chartered Institute for Archaeologists (ClfA). The heritage team is under overall management of Ian Grimshaw BA (Hons) MA (LM) MSc CMLI MRTPI, Director
- 4.21 The archaeological works will be undertaken by Oxford Archaeology North (OAN) and will be managed by Jason Clarke BSc MA MClfA, Principal Historic Environment Consultant (TEP).



5.0 Reporting

- 5.1 In accordance with the principles of Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2015) and the Management of Archaeological Projects, 2nd Ed (MAP2) (English Heritage 1991), a programme of post-excavation assessment and reporting will be undertaken, to commence on completion of the archaeological evaluation fieldwork.
- In the event of negative, or non-complex findings, a report will be produced detailing the results of fieldwork within four weeks of the end of fieldwork and archived within six months. The report will include;
 - a front cover to include the NGR, and HER reference number
 - a concise, non-technical summary of the results,
 - the circumstances of the project and the dates on which the fieldwork was undertaken,
 - description of the methodology, including the sources consulted,
 - a very brief summary of the historical background of the study area,
 - a statement, where appropriate, of the archaeological implications of the impact.
 - a copy of this project design, and indications of any agreed departure from that design,
 - the report will also include a complete bibliography of sources from which data has been derived, and a list of any further sources identified but not consulted,
 - a site location plan related to the national grid,
 - appropriate plans showing the location and position of features or sites located.
 - plans and sections showing the positions of deposits and finds,
 - illustrative photographs as appropriate,
 - coordinates (latitude/longitude) of relevant sites if archaeological remains have been discovered.
- 5.3 In the event of archaeologically significant finds, the results of fieldwork will also be published in a relevant and appropriate journal, or other publically disseminated publication, as appropriate.
- 5.4 Pottery reports will refer to the appropriate type series.



6.0 Archive

- 6.1 A copy of the report provided as a PDF on disk, and as hard copies, will be submitted to the Greater Manchester Historic Environment Record.
- An archive of the results of the archaeological work will be produced, in accordance with current English Heritage guidelines (Management of Archaeological Projects, Appendix 3, 2nd edition, 1991) and Chartered Institute for Archaeologists Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (ClfA 2014). The archive will contain any site matrices, and summary reports of the artefact record, context records, and any other records or materials recovered.
- 6.3 Greater Manchester HER will be informed of field work commencing and of the arrangements made for deposition of the project archive.
- The original record archive of projects (paper, magnetic and plastic media), and a full copy of the record archive (microform or microfiche), together with the material archive (artefacts, ecofacts, and samples) will be deposited with the relevant local archive.
- 6.5 Any relevant archive generated will be deposited with an appropriate regional depository, it is understood that a charge may be made for this and that the depository will need to be contacted to agree to the deposition of any archive in advance.
- 6.6 Details of the work will be entered on the OASIS database at http://ads.ahds.ac.uk/projects/oasis.



7.0 Health and Safety

- 7.1 All work on site would be undertaken strictly in accordance with the project health and safety plan and task specific risk assessments. All companies working on the project will adhere to the client's required quality, health, safety and environment controls.
- 7.2 Access routes to working areas would be specified by the client and access would only be permitted to those routes and the area of the fieldwork.
- 7.3 All site staff, including subcontractors and visitors, will prove that they have attended a site induction and have the necessary competencies (e.g. CITB training for machine operators) and any other necessary health and safety qualifications.



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