



Nixon Street, Castleton, Rochdale, Greater Manchester

Archaeological Strip, Map and Record and Watching Brief Report

March 2023

**Client: Lanpro Services Ltd on behalf of Seddon
Construction**

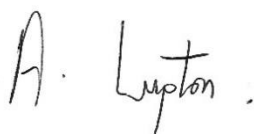
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Nixon Street, Castleton, Rochdale, Greater Manchester

Archaeological Evaluation and Watching Brief Report

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Summary

Oxford Archaeology (OA) North carried out a programme of strip, map and record investigation and archaeological monitoring on land at Nixon Street, Castleton, Rochdale, Greater Manchester, in June, July and October 2022. The fieldwork was commissioned by Lanpro Services Ltd, on behalf of Seddon Construction, as condition 4 of a planning application for a residential development on the site (planning ref.: 20/01429/FUL).

Two areas were subject to strip, map and record investigation, targeted upon the locations of former engine houses and boiler rooms of Marland Mill (Trench 1) and Castleton Moor Mill (Trench 2), both former Industrial Period cotton mills.

Excavation of Trench 1 revealed extensive demolition deposits overlying the natural sand, demonstrating that any surviving mill structures relating to Marland Mill's engine house/boiler room had been completely removed during demolition. In Trench 2, the chimney base and remnants of the associated flue system (with possible evidence of an economiser) were encountered in the south-east corner of the area, underlying a sequence of demolition deposits and hardcore/tarmacadam. Various other structures relating to the boiler house of Castleton Moor Mill were partially exposed; however, areas of asbestos were also uncovered, halting investigations. As a result, the exposed remains could not be fully excavated and recorded. The area was subsequently subject to archaeological monitoring during the removal of the contaminated deposits and mill structures, undertaken under watching brief conditions. This work revealed fragments of probable bases of boilers (likely Lancashire Boilers), a concrete floor layer and remnants of other brick structures, but their layout could not be fully determined. Fragments of metal piping, wiring and other debris relating to the mill's power production system were also noted during the works.

In relation to questions posed by the North West Regional Research Framework, the results of the investigation provided limited evidence of power production at Castleton Moor Mill, and little further insight into twentieth-century factory organisation. As such, the results are of limited local significance.

Acknowledgements

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The project was managed for OA North by Paul Dunn. The fieldwork was led by Andrew McGuire and Selina Dean, who were supported by Matthew Hargreaves, Ashley Joynes, and Alicia Senelle. Survey and digitising was carried out by Andrew McGuire and Mark Tidmarsh.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology (OA) North was commissioned by Lanpro Services Ltd, on behalf of Seddon Construction, to undertake a programme of strip, map and record investigation initially, and then archaeological monitoring on land at Nixon Street, Castleton, Rochdale, Greater Manchester (NGR: SD 87801 11025; Fig. 1).
- 1.1.1 An application was submitted and approved 31st March 2022 for the erection of 102 dwellings together with associated infrastructure (planning ref. 20/01429/FUL). Condition 4 was applied relating to archaeology issued by Greater Manchester Archaeological Advisory Service (GMAAS), as advisors to the Local Planning Authority. Consultation with GMAAS established the scope of the work required, which was set out within a written scheme of investigation (WSI) (*Appendix A*). OA North were subsequently commissioned to undertake the necessary archaeological fieldwork. This document outlined how the specified requirements were to be implemented.
- 1.1.2 All work was undertaken in accordance with appropriate Chartered Institute for Archaeologist (CIfA) guidance documents (CIfA 2020a; 2020b; 2020c; 2022), national guidance documents (HE 2015) and local and national planning policies (NPPF 2023).

1.2 Location, topography and geology

- 1.2.1 The site lies to the west of Castleton, an area to the south-west of the market town of Rochdale, Greater Manchester (centred on NGR SD 87801 11025; Fig. 1). Nixon Street runs through the centre of the site. The site is bounded by residential properties to the north, east and south, and agricultural land to the west.
- 1.2.2 The area of proposed development consists of c 3.56ha of hardstanding and gravel relating to the site's most recent use as car parking. To the south of Nixon Street, on the east side there is evidence of the recently demolished office building in the form of extant perimeter walls and floor surfaces. The south perimeter wall from the former mill also survives, with modern boundary treatments around the west side. To the north of Nixon Street, the former mill perimeter walls to the north and east are still extant with evidence of infilled openings observed along the north wall in the location of the former engine room.
- 1.2.3 The topography of the site is relatively level at approximately 128m above Ordnance Datum.
- 1.2.4 The geology of the area is mapped as mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation, though a band of Old Lawrence Rock sandstone is recorded in the north-east corner of the site, both sedimentary bedrocks formed 319–318 million years ago during the Carboniferous period (BGS 2022). Overlying superficial deposits of sand and gravel of the Devensian Glaciofluvial Deposits cover the majority of the site, with superficial peat deposits recorded in the south-west (*ibid*).

1.3 Archaeological and historical background

- 1.3.1 The archaeological and historical background of the site is discussed in more detail in the desk-based (DBA) assessment (Lanpro Services 2021) and WSI (*Appendix A*) completed for the site and is summarised below.
- 1.3.2 Very limited evidence of prehistoric and Roman has been recorded within the vicinity of the site. Although to the west side of the site an area of peat is known to exist, which due to anaerobic conditions, has the potential to contain preserved organic archaeological and palaeoenvironmental remains.
- 1.3.3 The site is situated beyond the focus of any known medieval settlement. Until the turn of the twentieth century, the area most probably formed part of the agricultural hinterland within a landscape of dispersed farmstead settlements/hamlets, such as Castleton Glebe, Marland, Buersill, Lower Lane and Newbold, many of which were of medieval or early post-medieval origin.
- 1.3.4 The woollen industry played a pivotal role in the area's economy, with Rochdale at its centre. Cotton was introduced to the area at the end of the sixteenth century, with silk being introduced in the later eighteenth century. It was not until the late eighteenth century that the cotton industry began to take hold, particularly with the introduction of the spinning frame in 1799. With the advent of steam power in the early nineteenth century, the siting of new mills was no longer restricted by the proximity to a watercourse.
- 1.3.5 During the mid nineteenth century, the construction of such mills was concentrated around Rochdale and Heywood. Castleton Moor was the nearest settlement to the site at this time, c 270m to the south-west. However, by the late nineteenth century, a new and rapidly developing settlement at Castleton was located on the convergence of the Rochdale to Manchester Turnpike (turnpiked in 1754–5), the Rochdale Canal (opened in 1804) and the Manchester to Leeds Railway (opened in 1841).
- 1.3.6 The well-served transportation and communication network attracted an industrial landscape to Castleton, including the cotton mill complex on the expanding north-west side of the town. This comprised Mars Mill, Marland Mill and Castleton Moor Mill, the latter two of which were within the development site.
- 1.3.7 The precise dates for the construction of both Marland Mill and Castleton Moor Mill are not known, although they are first shown on the Ordnance Survey (OS) map of 1910 either side of the newly laid out Nixon Street with associated streets of terraced workers' housing developing to the east. Castleton Moor Mill is shown with three reservoirs located to its west and south. The chimney shown to the north-west of Marland Mill and one shown to the south-east of Castleton Moor Mill indicate the position of the engine houses. On the east side of the complex are two buildings shown to the north and south of Nixon Street relating to the mills' office blocks. Documentary evidence for the installation of Marland Mill's 1800hp engine in 1907 (Graham 2011) and a planning application submitted by Castleton Moor Spinning Co. for the erection of a cotton spinning mill (dated 27 June 1901; National Archives 2022a; 2022b) indicate that both mills were constructed in the first few years of the twentieth century.

- 1.3.8 The layout of the two mills within the site remained relatively unchanged until the late 1970s, with the exception of the buildings to the east of both mills and to the south of Marland Mill that were extended in the mid twentieth century and with the addition of electricity substations alongside the engine houses. Castleton Moor Mill was demolished, however, in the late 1970s and the reservoirs infilled, leaving only the L-shaped office block on the east perimeter and two unknown structures to the west in the location of a former reservoir still standing, which were recently demolished.
- 1.3.9 During the 1980s, the former site of Castleton Moor Mill was repurposed, although not significantly redeveloped, for car parking facilities for a supermarket constructed to the south-west of the site. The former agricultural field to the west was also incorporated as a car park for the supermarket. Marland Mill was largely demolished in 2005, leaving only two former mill buildings relating to the offices standing, which were recently demolished.

2 AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The overall aim of the archaeological investigations, as stated in the WSI (*Appendix A*), was to determine the extent and nature of the buried archaeological remains associated with the engine and boiler rooms of the two former mill sites (Castleton Moor Mill and Marland Mill) that will be impacted by the proposed development and compile an archival record.

2.1.2 The project objectives were as follows:

- To determine the location, extent, date, character, condition and significance of any archaeological remains associated with power and power transmission;
- To excavate and record identified archaeological features and deposits to a level appropriate to their extent and significance;
- To assess vulnerability/sensitivity of any exposed remains;
- To inform a strategy to avoid or mitigate impacts of the proposed development on surviving archaeological remains;
- To undertake the post-excavation assessment to confidently interpret identified archaeological features; and
- To report the results of the investigation and place them in their local, regional or national context and to make this record available by disseminating the results in an appropriate form.

2.1.3 The fieldwork was conducted within the general research parameters and objectives defined by *The Archaeology of North West England: An Archaeological Research Framework for the North West* (Brennand 2006), recently revised and updated (Research Frameworks 2022). In particular, the investigation aimed to address the following research objectives:

- Ind55: What is the evidence for power production?
- Ind56: How can we improve our understanding of twentieth-century factory organisation?

2.2 Methodology

2.2.1 The archaeological investigations carried out on site comprised the excavation of two areas of strip, map and record, measuring c 35m by 35m (Trench 1; Marland Mill) and c 35m by 30m (Trench 2; Castleton Moor Mill), targeted upon features associated with the power generation and transmission (Fig 2). A programme of archaeological monitoring was also undertaken during the excavation works following identification of asbestos and curtailment of the strip, map and record of Trench 2.

2.2.2 The two trenches were located in accordance with the WSI (Lanpro Services Ltd 2021a) and laid out using GPS (accurate to 0.02–0.03m). Service checks were also carried out prior to excavation. The trenches were stripped of hardstanding and subsoil deposits using a tracked mechanical excavator fitted with a toothless ditching bucket under direct archaeological supervision. Spoil was stored adjacent to, but at a safe distance from, the trench edges. Machining continued in even spits down to the

top of the undisturbed natural geology or the first archaeological horizon, whichever was encountered first.

- 2.2.3 The exposed surfaces were sufficiently cleaned to establish the presence/absence of archaeological remains. As outlined in the WSI (*ibid*), a sample of features and deposits were excavated and recorded to resolve the principal aims of the strip, map and record.
- 2.2.4 Initial excavations within Trench 1 revealed no archaeological remains but instead extensive, backfilled deposits of demolition material mixed with natural sands. After consultation with GMAAS, it was decided that a series of c 2m-wide sondages were to be systematically machine-excavated across the area in order to reveal any potential underlying archaeological deposits or features.
- 2.2.5 Due to the nature of the targeted remains, it was anticipated that insulation materials containing asbestos may be encountered during excavation. Therefore, a full suite of mitigation measures was put in place. During initial excavations within Trench 2, several areas were uncovered where potential asbestos containing materials were identified. Where encountered, excavations were immediately halted and the area barriered off. Any other works within the vicinity were suspended pending the testing of samples for the presence of asbestos. Areas identified for sample retrieval were located within and around the remains of boiler housing and associated flue structures in the eastern half of the trench, as well as a potential engine bed in the north-east corner.
- 2.2.6 After testing, several of the samples were confirmed as containing asbestos. Most notably, materials included insulation board and pipe lagging. As a result, the area was handed over to SOCOTEC/LAR who sealed/monitored any contaminated areas and their arisings. Remains within these areas could not be accessed for further excavation, cleaning and recording. Any uncovered remains outside of these constraints, and where contamination had not been discovered, were fully recorded. No further excavations or cleaning were undertaken in order to reduce the risk of exposure to additional asbestos containing materials and/or further contamination.
- 2.2.7 During the suspension of works within the eastern half of Trench 2, a roughly north/south aligned sondage was excavated along the western extent where unstable demolition deposits were observed to a depth of 2.00m. This was backfilled to a safe working depth as temporary works could not accommodate any mitigation for further excavation.
- 2.2.8 As archaeological works in Trench 2 were restricted due to the presence of contaminated deposits/materials, it was agreed between the client and GMAAS that a programme of archaeological monitoring be carried out during the subsequent removal of the structures in the area. The removal of contaminated deposits and structures were excavated using a tracked mechanical excavator fitted with a toothed ditching bucket.
- 2.2.9 Where possible, all features and deposits were issued with unique context numbers. Results of all field investigations were recorded on *pro forma* sheets. Context

recording was completed in accordance with established best practice and the OA Field Manual. Sample sections of stratigraphy were drawn at a scale of 1:10.

- 2.2.10 A full photographic record, in accordance with Section 7.18 of the WSI (*Appendix A*) and Historic England guidelines (HE 2015a) comprising digital images of all archaeological features, deposits and trenches was collated. In addition, a number of photographs representative of the general work on site were taken.
- 2.2.11 All work was undertaken in accordance with local and national planning policies (HE 2015b), and the CifA *Code of Conduct* (CifA 2022), *Standards and Guidance for Archaeological Field Evaluation* (CifA 2020a) and *Standards and Guidance for Archaeological Excavation* (CifA 2020b).

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the investigations are presented below and include a stratigraphic description of the trenches and watching brief area containing archaeological remains. The full details of all dimensions and depths of all deposits can be found in *Appendix B*.

3.2 General soils and ground conditions

3.2.1 The soil sequence in the trenches varied. The natural geology of light orange-brown sand with patches of light blue-grey clay was encountered at depths of between 0.50m (Trench 2) and 2.30m (Trench 1).

3.2.2 In Trench 1, the natural geology **103**, was overlain by approximately 2m of consolidation overburden, **102**, containing brick and concrete demolition material (Plate 1). This was overlain by a 0.20m-thick layer of compacted brick demolition (**101**) and capped with a 0.10m-thick layer of degraded tarmacadam and road planing, **100**.



Plate 1: Stratigraphy encountered in Trench 1, looking south-east (1m scale)

3.2.3 In Trench 2, the natural geology **209**, was overlain by a 0.30m-thick layer of brick demolition, **205**, and initially capped by a layer of light brown hardcore **204**, 0.14m thick, with 0.12m of tarmacadam **203** above. This was, in turn, overlain by another layer of brick demolition, **202**, 0.30m thick in the east and graduating to approximately 2m thick in the west. A final layer of light grey hardcore **201**, 0.10–0.30m thick, was sealed by a second layer of tarmacadam **200**, 0.09m thick.

3.2.4 Ground conditions throughout the fieldwork were generally good and the site remained dry throughout. Archaeological features, where present, were easy to identify against the underlying natural geology.

3.3 General distribution of archaeological deposits

3.3.1 Archaeological features were present in Trench 2 (Fig 2 and 3). Trench 1 contained only demolition and consolidation deposits to depths of approximately 2.50m. This suggests that any remains pertaining to Marland Mill had been completely removed during demolition. Therefore, Trench 1 is not discussed in any further detail.

3.4 Trench 2

3.4.1 Trench 2, aligned east-north-east/west-south-west, was c 35m by 30m and was initially excavated to an average depth of 0.50m. The trench targeted the remains of the engine house and associated structures of Castleton Moor Mill. Several structures were identified along the eastern extent of the trench, underlying demolition deposit **205**. An extensive sequence of demolition deposits and hardcore/tarmacadam, directly overlying the natural, was observed along the western extent of Trench 2.

3.4.2 A chimney base (**206**) was encountered in the south-east corner of the trench (Fig 3; Plate 2). It was 6.70m in diameter and constructed of frogged, machine-made red bricks, bonded using a mid-grey cement, laid as headers approximately 2m wide. The internal flue was aligned east-north-east/west-south-west and measured 5.60m (total) in length, with a circular central opening measuring 2.20m in diameter, creating a 'keyhole' shape in plan. The internal flue comprised one-brick wide, frogged, machine-made, red brick walls constructed using an English Garden Wall (EGW) bond. These were faced with an internal skin of firebrick stretchers. Chimney base **206** was partially truncated by a shallow, modern service, aligned north-east/south-west.



Plate 2: South-east corner of Trench 2, looking west (no scale)

3.4.3 To the immediate west of chimney base **206** were rectangular structures **207** and **208**. Structure **208** was the most northerly and measured 5.5m long by 1.65m wide (Fig 3; Plate 3). This structure had no obvious boundary at its east extent, which appeared to have been truncated, and was bounded by brick walls to the north, west and south. The north and west walls were heavily truncated in places or were obscured by demolition debris, but were generally constructed using frogged, red bricks and internally faced with firebrick. The south wall, also part of structure **207**, was constructed using frogged, red bricks, one and a half bricks wide with an EGW bond and mortared with light grey cement. The north face of this wall was lined with half a bricks width of firebrick that curved northwards at its east extent where it was truncated. Remnants of a red brick floor surface were present with a graduated downwards slope towards chimney base **206**.



Plate 3: Structure 208, looking east (1m and 2m scales)

3.4.4 Structure **207** extended from the southern extent of structure **208** (Fig 3; Plate 4). The western extent of this structure had been truncated, but the south and east walls bounded an area measuring approximately 4.90m by 1.70m. The whole structure was constructed using frogged, red bricks with an EGW bond. The bricks were mortared with a light grey cement and painted on the internal faces with a lime or whitewash. The internal space, although largely obscured by demolition deposit **205**, contained a brick floor surface and a possible brick structure within the south-east corner. Several bricks from this structure were stamped: 'Newhey' and 'Shawforth BK Co Ld Nr Rochdale'.



Plate 4: Structure 207, looking east (1m scale)

3.4.5 Other structures were uncovered during machine excavations to the north of structures **206** and **208** in the north-east corner of Trench 2 (Fig 3). However, this area was later covered due to the presence of asbestos and only partially recorded as a result. Identified features included the east and north perimeter walls of the boiler house, probable elements of boiler bases extending northwards from structure **208**, and the potential remains of an engine base (Plates 2 and 5). Only a single course of the northern perimeter wall of the engine house survived at a maximum depth of 0.95m. A brick floor surface and a large stone base were also noted in this area. These features correspond with the layout of a possible engine house and a square structure extending from its north-east corner of the boiler house as shown on the 1910 OS map (Fig 4).



Plate 5: Other structures uncovered in Trench 2, looking south (no scale)

3.4.6 In the west of Trench 2, a north/south-aligned sondage was excavated along the western extent where unstable demolition deposits were observed to a depth of 2.00m. A concrete floor was encountered at this depth, but the area was subsequently backfilled to a safe working depth and stabilised. The continuation of this concrete floor was exposed during the subsequent watching brief (*Section 3.5.4*).

3.5 Watching brief

3.5.1 During the excavation of Trench 2, asbestos containing materials and deposits were uncovered in several areas, most of which were concentrated in the north and east (Fig 3). Therefore, excavation was stopped and only those archaeological remains exposed in the south-east were recorded (*Section 3.4*). As archaeological features were identified in the contaminated area, archaeological monitoring was undertaken during the removal of the structures as part of the redevelopment of the site.

3.5.2 The affected areas were cordoned off until the safe removal of the contamination deposits was undertaken (Plate 6). The contaminated soil was subsequently removed, disturbing some of the structures that remained. Nevertheless, further excavations in the south-east corner of the area exposed further structural remains relating to chimney base **206** and structures **207** and **208** (Fig 3). Excavations continued down to a depth of over 3m, revealing over 35 courses of machine-made brick of chimney base **206** (Plate 7). As the brick coursing was removed, large concrete blocks with brick inclusions were found at the base of the structures (Plates 8 and 9). These concrete blocks are likely to have formed part of the bed/base for a boiler(s) within the boiler room/engine house of Castleton Moor Mill.



Plate 6: Areas of asbestos contamination in Trench 2



Plate 7: Excavated area following removal of chimney base 206, depth in excess of 3m (no scale)



Plate 8: Example of large concrete block found during excavations in south-east corner of site, looking east (no scale)



Plate 9: Working shot showing bricks, concrete blocks and natural sand (no scale)

3.5.3 Further excavations took place in the south-east corner of the site until the natural sand was reached and all obstructions were removed. Due to various on-site constraints, notably the use of a toothed bucket, deep excavation and the presence of asbestos contamination, the observation point at which the watching brief could be undertaken was defined in the risk assessment and method statement for this element of the works. During monitoring the remaining structures were being

completely demolished and removed. As a consequence, it was impossible to determine the layout of the structural remains.

- 3.5.4 Towards the centre and west of the site area, some truncated structural remains were identified, comprising machine-made bricks, although once again it was impossible to determine their layout during the excavations (Fig. 3). Removal of these structures revealed a concrete layer, approximately 0.4m thick, which directly overlaid the natural sand (Plate 10); this formed a continuation of the concrete floor exposed in the sondage excavated in the western part of Trench 2 (*Section 3.4.6*). This concrete layer differed to the substantial concrete blocks found in the south-east corner of the site, where chimney base **206** and structures **207** and **208** were located. It is likely this concrete layer was related to a floor level of the boiler room, with the larger concrete blocks associated with foundations of the boilers.



Plate 10: Concrete floor towards west edge of the proposed location of Trench 2 (no scale)

- 3.5.5 Extending from chimney base **206** and along the previously recorded flue system (structures **207** and **208**), metal piping was found, further establishing the character of the flue system (Plate 11). In addition, other finds relating to the function and use of the mill's engine house/boiler room were uncovered during the excavation and removal of the mill structures. Material included metal, metal wiring and plastic piping.



Plate 11: Example of metal piping found during excavations, most likely belonging to the flue system running west away from chimney base 206 (no scale)

3.5.6 Once all obstructions had been cleared from the area and the natural sand had been reached, the site area was levelled.

3.6 Finds summary

3.6.1 No finds were collected during the investigations on site, though Industrial Period material and debris relating to Castleton Moor Mill were observed.

3.6.2 No environmental soil samples were collected for environmental analysis, as no suitable deposits were encountered.

4 DISCUSSION

4.1 Reliability of field investigation

- 4.1.1 The trenches provided a good coverage of the site, targeted upon areas that had greater potential to reveal archaeological remains associated with Marland Mill and Castleton Moor Mill, as suggested by historic mapping.
- 4.1.2 The investigations on site demonstrated the presence of archaeological remains associated with the engine room/boiler house of Castleton Moor Mill (Trench 2) and also the absence of surviving archaeological remains in the location of Marland Mill (Trench 1) due to modern truncation/demolition.
- 4.1.3 The reliability of the fieldwork conducted in Trench 2 was affected by the presence of asbestos contamination within below-ground deposits. Excavated areas containing contaminated deposits were subject to additional risk management, required by SOCOTEC/LAR and Redstart, who undertook the contamination removal, and so a full record could not be obtained for the archaeological remains identified, particularly in the north-east corner of the area. This meant that accessible features were not excavated in full and their true extent not realised. When they were fully excavated by mechanical excavator under watching brief conditions, this was only able to be monitored from a safe distance due to the risk of asbestos.
- 4.1.4 The results of the investigation, albeit limited due to on-site constraints, are considered to be a true reflection of the archaeological potential of the site highlighted by the DBA (Lanpro Services Ltd 2021).

4.2 Fieldwork objectives and results

- 4.2.1 The archaeological work carried out on site is considered to have partially achieved its general aims and objectives (*Section 2.1*). The investigations established and recorded (as far as was practicable) the presence and extent of archaeological features and deposits within the trenches and monitored areas. Excavations in Trench 2, on the site of the engine house/boiler room of Castleton Moor Mill, which revealed remains of the chimney base, elements of the associated flue system and parts of the perimeter walls, correspond with historic mapping. Subsequent archaeological monitoring also identified the probable remains of the bed/base of a boiler, likely a Lancashire boiler due to the size of the boiler base encountered and the anticipated age of the mill, being approximately twentieth century in date (*Section 1.3.7*), as well as further brick and stone walls and metal pipework related to the functioning of the boiler/chimney and flue system. Therefore, the results of the investigations provide some evidence of power production at Castleton Moor Mill. Investigation of the engine house/boiler room of Marland Mill in Trench 1, however, revealed that structural remains had been completely removed during the demolition of the mill buildings.
- 4.2.2 Due to the presence of asbestos contamination in the area of the engine house/boiler room of Castleton Moor Mill and the absence of remains relating to similar structures of Marland Mill, the results of the investigations provide little further insight into twentieth-century factory organisation. Due to this the results can only partially assist in answering the relevant research questions posed by the North West Regional

Research Framework (Research Frameworks 2022), particularly question: Ind55: *What is the evidence for power production?* There was obviously no evidence remaining of the boiler house of Marland Mill, however, there were remains surviving of Castleton Moor Mill.

4.3 Interpretation

- 4.3.1 Archaeological remains encountered during the fieldwork comprised a series of structures relating to the former Castleton Moor Mill, although no such evidence was revealed in the targeted area of Marland Mill.
- 4.3.2 Although the evidence revealed on site is incomplete due to the risk posed by asbestos contaminated below-ground deposits, the structures exposed in Trench 2 appear to have been associated with the steam-powered systems of Castleton Moor Mill. The east and north perimeter walls of the mill's boiler house were exposed in the north-east of Trench 2, corresponding with historic mapping. A location of a large stone slab also correlates with a square structure extending from its north-east corner (Fig 4). Structure **208** probably formed part of a flue system connected to the chimney base (**206**), transferring exhaust gasses from the flued boiler house that would have extended to the north. The curved, firebrick structure observed within the south wall of structure **208** may have acted as a baffle for an economiser, which would have been set into the main flue between the boiler and chimney, allowing the exhaust gasses to preheat the water being fed into the boiler system (Phelps *et al* 2018, 29–30), most probably from the adjacent reservoir to the west of the engine house (Fig. 4).
- 4.3.3 Observations during excavation, although limited, suggest the presence of a cylinder-type flued boiler (such as a Lancashire Boiler) set into a brick-constructed base in the south-east of the excavated area, with a flue system running beneath and around the sides of the structure towards structures **207** and **208** and chimney base **206** and also to the north. This layout would suggest that the boiler was stoked/fired from the north. Although there are no known records detailing the size and type of engine(s) in use at Castleton Moor Mill, it has been documented that Marland Mill initially used a 1800hp engine (Grace's Guide Ltd 2022). Assuming that the Castleton Moor Mill engine was of a similar size, it is possible that it would have required more than one boiler to power it and it is therefore possible that structural remains identified during the watching brief relate to additional boiler bases.
- 4.3.4 In addition, the apparent layout of the boiler and potential economiser may suggest that structure **207** was the location of the boiler feed pump. The presence of whitewash on the interior faces suggests that this sub-surface structure was accessible for inspection purposes. The structure was also suitably placed to have pumped water through the economiser into the adjacent boiler system.

4.4 Significance

- 4.4.1 The programme of strip, map and record investigation and subsequent archaeological monitoring identified remains associated with Castleton Moor Mill and the recent demolition of the adjacent Marland Mill, both former early twentieth-century cotton mills.

- 4.4.2 Due to extensive areas of asbestos contaminated deposits and other on-site constraints, the archaeological remains relating to the engine house/boiler room of Castleton Moor Mill were not fully exposed, excavated or recorded under archaeological direction, they were, however, monitored under watching brief conditions, undertaken under strict health and safety constraints, notably the use of a toothed bucket, deep excavation and the presence of asbestos contamination, the observation point at which the watching brief could be undertaken was defined in the risk assessment and method statement for this element of the works. Nevertheless, the chimney base, elements of the associated flue system (with possible evidence of an economiser), fragments of a probable boiler bed/base and the north and east perimeter walls were identified. In addition, a concrete floor layer and various other structures relating to the engine house/boiler room of Castleton Moor Mill were exposed but their layout not fully determined.
- 4.4.3 Together, these remains provide some evidence of power production at the mill, though they are of limited local significance as a consequence of the incomplete archaeological record due to contaminated deposits. Due to this the results can only partially assist in answering the relevant research questions posed by the North West Regional Research Framework (Research Frameworks 2022), particularly question: Ind55: *What is the evidence for power production?* There was obviously no evidence remaining of the boiler house of Marland Mill, however, there were remains surviving of Castleton Moor Mill.
- 4.4.4 Excavations at the location of Marland Mill's engine house/boiler room revealed that any surviving mill structures had been completely removed during demolition.

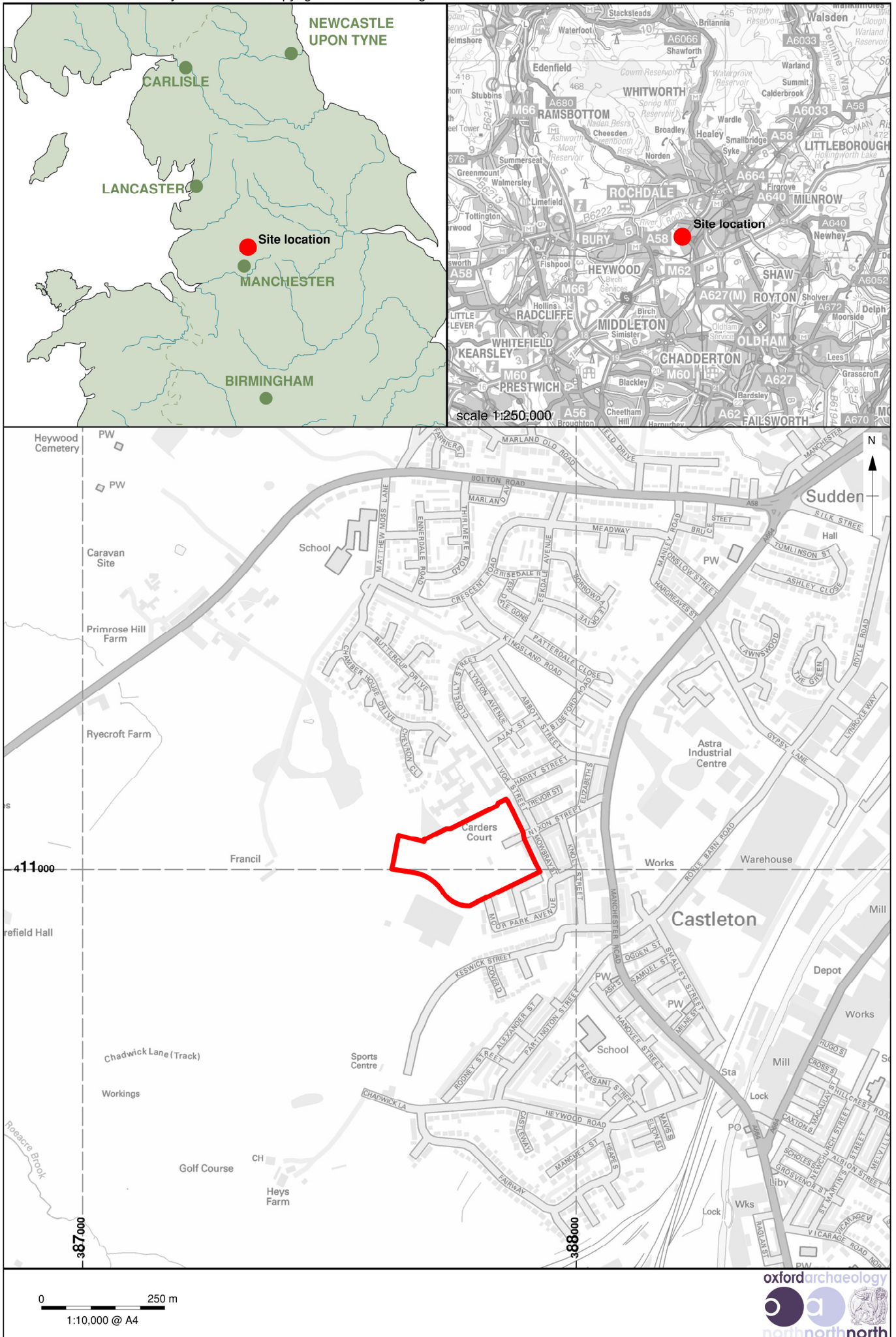


Figure 1: Site location

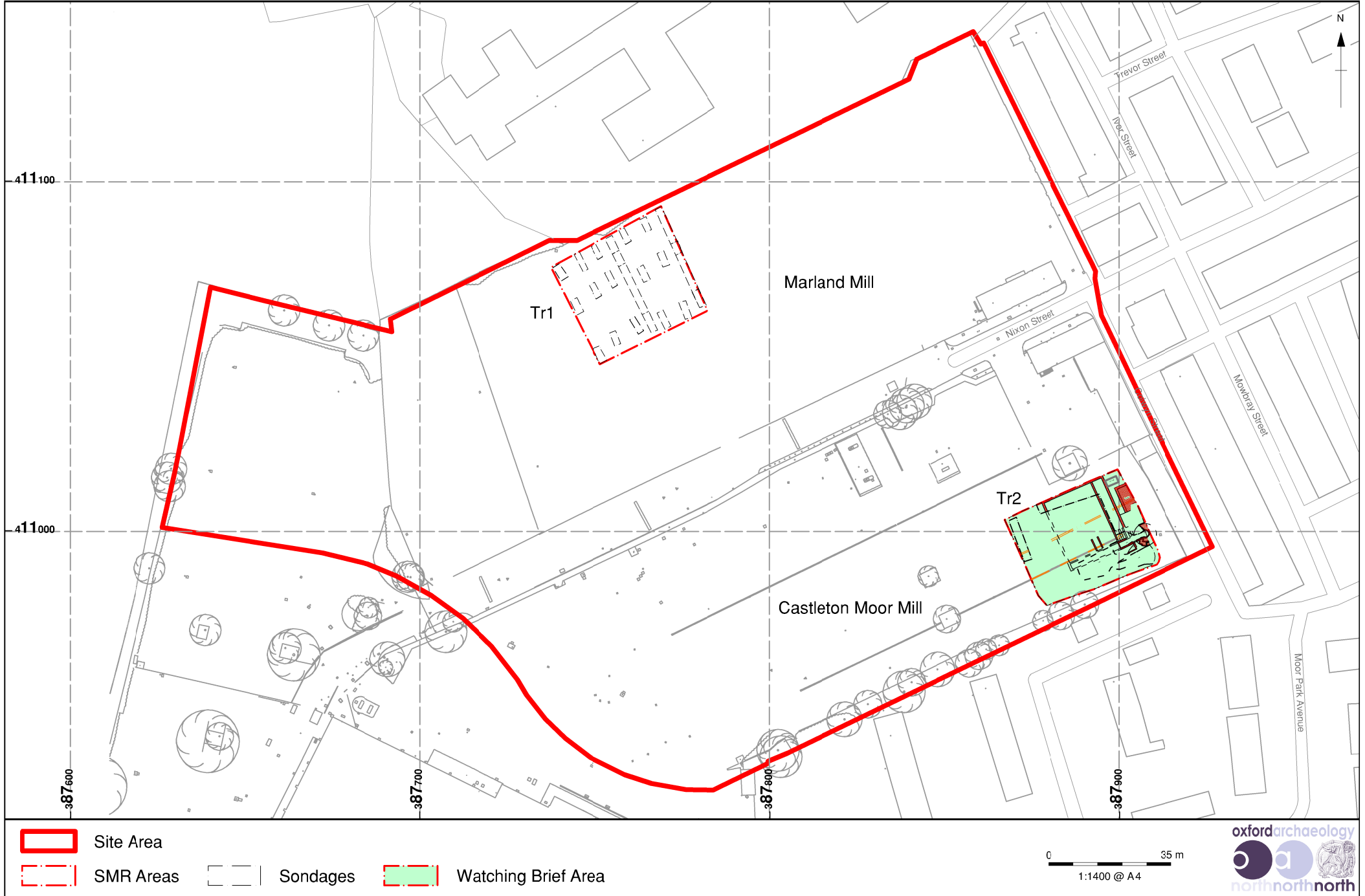


Figure 2: Location plan of strip, map and record trenches and watching brief area

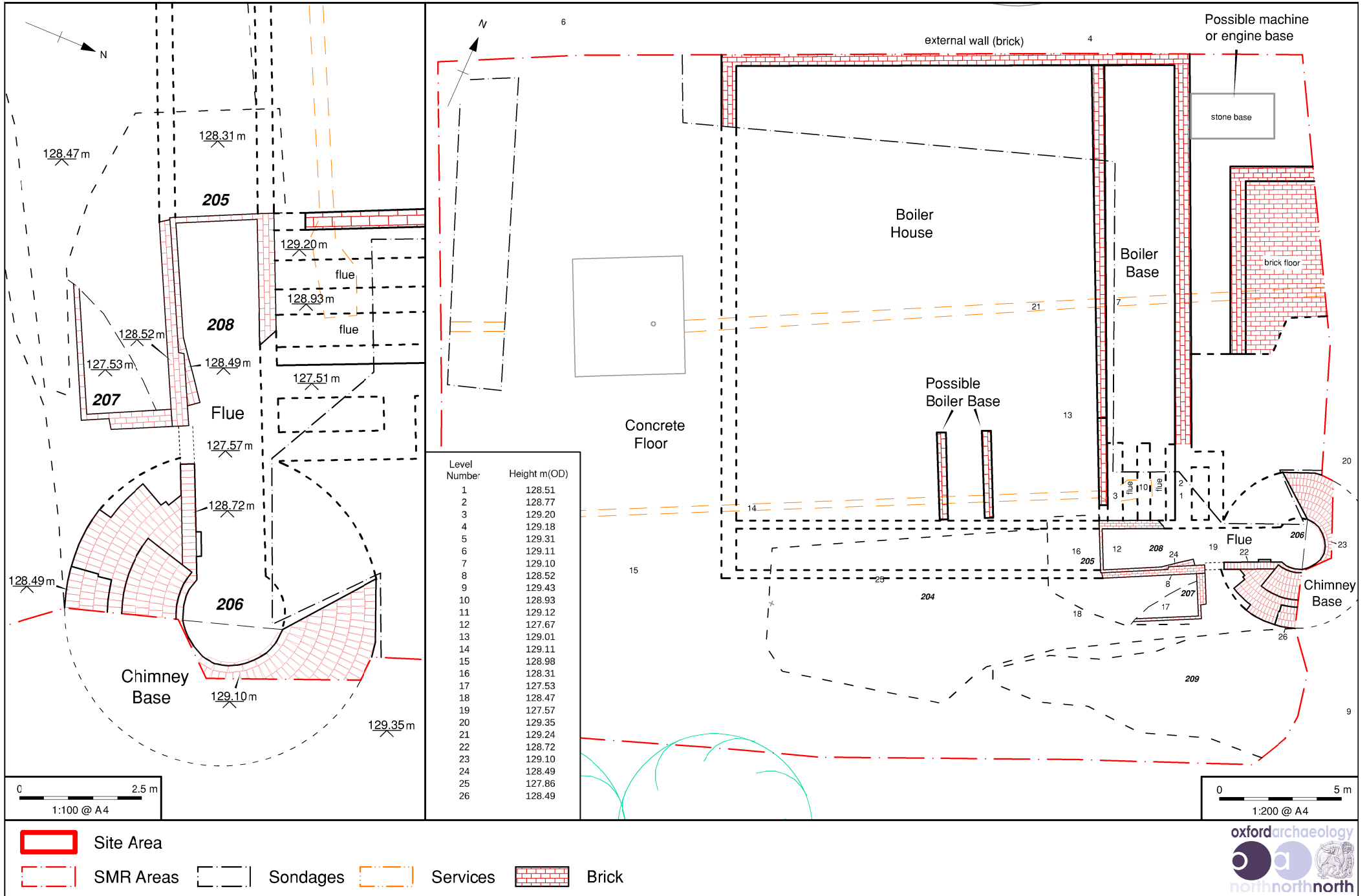


Figure 3: Plan of Trench 2 and walls observed during the Watching Brief

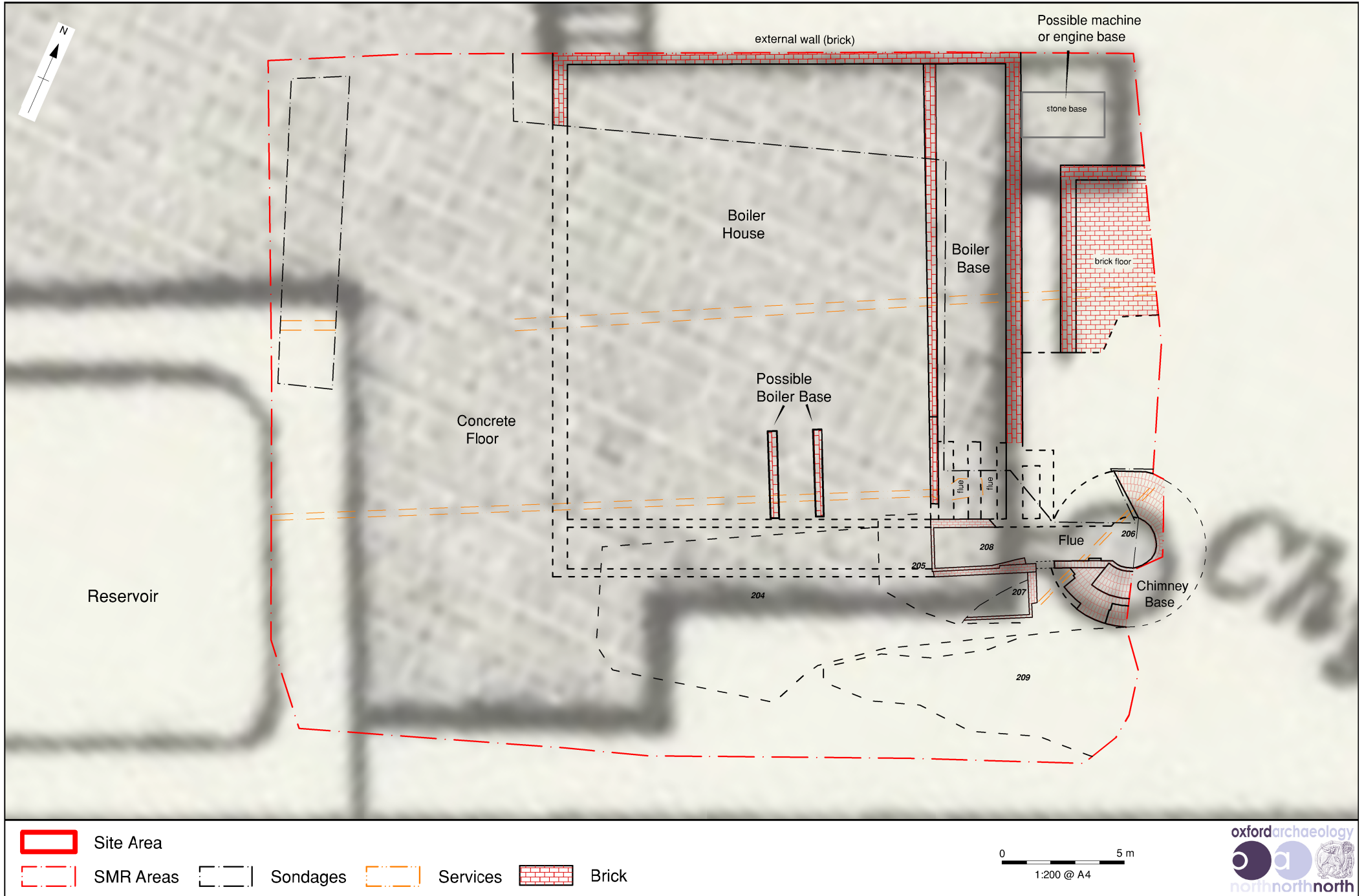


Figure 4: Plan of Trench 2 superimposed on the Ordnance Survey 25":1 mile map of 1910

APPENDIX A

WRITTEN SCHEME OF INVESTIGATION

**WRITTEN SCHEME OF INVESTIGATION FOR
ARCHAEOLOGICAL EVALUATION TRENCHING**

**LAND AT NIXON STREET
CASTLETON
ROCHDALE
GREATER MANCHESTER**

**PREPARED BY LANPRO SERVICES
ON BEHALF OF
HIVE HOMES**

PLANNING REFERENCE: 20/01429/FUL

March 2021



Planning + Development | Design Studio | Archaeology + Heritage

Project Reference: 2612/03

Document Prepared by: Emily Mercer BA (Hons) MSc MCifA

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Figure 1. Location of the proposed development site

Figure 2. Proposed areas of strip, map and record overlying OS 1910 map

1 INTRODUCTION

- 1.1 This Written Scheme of Investigation (WSI) has been prepared by Lanpro on behalf of Hive Homes (the client) and details the methodology for undertaking a scheme of archaeological investigation of a site at Nixon Street, Castleton, Rochdale, Greater Manchester.
- 1.2 Specifically, the archaeological investigation will involve a strip, map and record focusing on the engine and boiler rooms of the former sites of Castleton Moor and Marland Mills to establish the presence or absence of buried archaeological remains and their nature, date, extent and significance. The results of the investigation will be used to inform decisions on the need for any further archaeological mitigation investigation and, should this be required, the scope will be detailed in an additional and separate WSI.

2 SITE DESCRIPTION

- 2.1 The study site is located on the west side of Castleton, to the south-west of the town of Rochdale (centred at NGR SD 8786 1105; see Figure 1). It accessed by Nixon Street, which runs through the centre of the site, although security fencing prevents public access to the study site. It is bound by residential properties on the north, east and south sides and to the west is agricultural land.
- 2.2 The south and west side of the site are laid down to hardstanding for the most recent use as car parking. On the east side there is evidence of the recently demolished former office building in the form of extant perimeter wall remains and floor surfaces. The south perimeter wall from the former mill also survives, with modern boundary treatments around the west side. In addition, pump bases were noted from a fuel station on the south side of Nixon Street.
- 2.3 To the north of Nixon Street the study site is laid down to more of a gravel surface. As with the south side, the former mill perimeter walls to the north and east are still extant. Evidence of infilled openings can be seen along the north wall in the location of the former engine room that abutted the north of the Marland Mill site. Evidence of the location of the demolished former office building was noted during the site visit on the north side of Nixon Street.
- 2.4 The topography of the study site is relatively level at approximately 128m AOD.
- 2.5 The bedrock geology across the study site consists of mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation. This is overlain by sand and gravel of the Devensian Glaciofluvial Deposits for the majority of the study site, with superficial peat deposits over the west side (bgs.ac.uk).

3 PLANNING BACKGROUND

3.1 An application has been submitted for the erection of 102 dwellings together with associated infrastructure (planning ref. 20/01429/FUL).

3.2 In anticipation of the approval of the application, a draft condition relating to archaeology has been issued:

No development shall take place until the applicant has secured the implementation of a programme of archaeological works. The works are to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by the LPA. The WSI shall cover the following:

1. A programme of archaeological survey to include:

a. A more detailed archaeological desk based assessment/historic research

b. Evaluation through trial trenching

c. Informed by the above, more detailed. Targeted archaeological excavation and recording

2. A programme for post investigation assessment to include:

a. Detailed analysis of finds

b. Production of a final report on the significance of the archaeological interest

3. Deposition of the final report with the GM Historic Environment Record and Rochdale Local Studies Library

4. Dissemination of the results commensurate with their significance

5. Provision for archive deposition of the report and records of the site investigation

6. Nomination of a competent person or persons/organisation to undertake the works set out within the WSI

3.3 Consultation has been undertaken with the Greater Manchester Archaeological Advisory Service (GMAAS), advisers to the local authority, regarding the draft condition and it has been agreed the programme of archaeological work will involve strip, map and record to investigate the boiler and engines rooms within the proposed development site. The location of the areas of strip, map and record is informed by a desk-based assessment undertaken to inform the planning application (Lanpro 2021). This WSI provides a detailed methodology for undertaking required work which is aimed at identifying and recording any archaeological features that may be present and assessing the need for further mitigation excavation if required. Any mitigation will be agreed with the Lead Archaeologist for GMAAS and in consultation with the client.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 4.1 The following archaeological and historical background has been informed by the archaeological desk-based assessment (Lanpro 2021), which should be referred to for further details.
- 4.2 Until the turn of the 20th century, the study site was in agricultural use within a landscape of dispersed farmstead settlements, many of which were of late medieval or early post-medieval origin. The woollen industry had played a pivotal role in the area's economy, with Rochdale at its centre: early corn mills were converted for the fulling of woollen cloth and there was a gradual increase in purpose-built water-powered fulling mills during the 17th and 18th centuries as industrial processes began to develop. However, the industry relied on individual spinners and weavers in their own homes.
- 4.3 Cotton was introduced to the area at the end of the 16th century, with silk being introduced in the later 18th century. It was not until the late 18th century that the cotton industry began to take hold and more with the introduction of the spinning frame in 1799. With the advent of steam power in the early 19th century, the siting of new mills was no longer restricted by the proximity to a watercourse.
- 4.4 During the middle of the 19th century, the construction of such new mills was concentrated around Rochdale and Heywood. Castleton Moor was the nearest settlement to the study site at this time, c. 270m to the south-west, which was still a rural collection of dwellings as opposed to a village. However, by the late 19th century a new and rapidly developing settlement at Castleton was located on the convergence of the Rochdale to Manchester Turnpike (turnpiked in 1754-5), the Rochdale Canal (opened in 1804) and the Manchester to Leeds Railway (opened in 1841). Improvements in the transport system together with increased mechanisation led to large-scale purpose-built mills with dedicated services and supportive industries, including the provision of an abundance associated workers' terraced housing.
- 4.5 The well-served transportation and communication network attracted such an industrial landscape to Castleton, including the cotton mill complex on the expanding north-west side of the town. This comprised the three mills of Mars Mill (HER ref. 5081.1.0), Marland Mill (HER ref. 5284.1.0) and Castleton Moor Mill (HER ref. 17075.1.0), the latter two of which are within the study site.
- 4.6 The details provided in the HER for Marland Mill (HER ref. 5284.1.0) describe it as having been red brick with a steel internal structure, flat-roofed with five storeys with a basement. The main mill building was 13 x 5 bays with three tall windows and flat stone sills per bay. The original engine house was at the north-west corner of the main building; the engine was supplied by J Petrie of Rochdale in 1907 and produced 1800hp, driving a 22' flywheel grooved for 36 ropes at 80 rpm. The main mill building had a tower positioned at its south-east corner. The associated office block to the south-east (HER ref. 5284.1.1), with the entrance

situated on Nixon Street, was single storey with a distinctive roof style and some embellished stonework.

- 4.7 There are few details provided by the HER details for Castleton Moor Mill (HER ref. 17075.1.0) although documentary sources suggest Castleton Moor Mill was of a similar size, scale and construction to the neighbouring mills of Marland and Mars.
- 4.8 The precise dates for the construction of both Marland and Castleton Moor Mill are not known, although they are first shown on the Ordnance Survey map of 1910 (Figure 2) either side of the newly laid out Nixon Street with associated streets of terraced workers' housing developing to the east. Castleton Moor Mill is shown with three reservoirs located to its west and south. The chimney shown to the north-west of Marland Mill and one shown to the south-east of Castleton Moor Mill indicate the position of the engine houses. On the east side of the complex are two buildings shown to the north and south of Nixon Street relating to the mills' office blocks (HER 5284.1.1 and 17075.1.1). The west side of the study site appears to remain in agricultural use.
- 4.9 The two mills within the study site remained relatively unchanged in layout until the late 1970s, with the exception of the buildings to the east of both mills and to the south of Marland Mill extended in the mid-20th century and with the addition of electricity substations alongside the engine houses. Castleton Moor Mill was demolished, however, in the late 1970s and the reservoirs infilled, leaving only the L-shaped office block on the east perimeter and two unknown structures to the west in the location of a former reservoir.
- 4.10 During the 1980s the former site of Castleton Moor Mill was re-purposed, although not redeveloped, for car parking facilities for an Asda store constructed on the south-west of the study site. The former agricultural field on the west side of the study site was incorporated as a car park for the supermarket.
- 4.11 Marland Mill was demolished in 2005, leaving only two former mill buildings extant relating to the offices (HER 5284.1.1 and 17075.1.1) which were recently demolished. Since the demolition of both mills there has been minimal redevelopment of the study site and site observations during the site visit noted masonry and columns disturbed during the excavation of SI trenches. Therefore, there is a high potential for evidence relating to both mill complexes to survive below-ground.

5 RESEARCH DESIGN

Aims and Objectives

- 5.1 The overall aim of the archaeological evaluation will be to determine the extent and nature of the buried archaeological remains associated with the engine and boiler rooms of the two former mill sites (Castleton Moor Mill and Marland Mill) that will be impacted by the proposed development and compile an archival record. This will allow reasoned and informed recommendations to be made regarding any further requirements for mitigation,

the scope of which would be detailed in a subsequent WSI in agreement with the Lead Archaeologist for GMAAS.

5.2 This will be achieved through the following objectives:

- To determine the location, extent, date, character, condition and significance of any archaeological remains associated with power and power transmission;
- To excavate and record identified archaeological features and deposits to a level appropriate to their extent and significance;
- To assess vulnerability/sensitivity of any exposed remains;
- To inform a strategy to avoid or mitigate impacts of the proposed development on surviving archaeological remains;
- To undertake the post-excavation assessment to confidently interpret identified archaeological features;
- To report the results of the investigation and place them in their local, regional or national context and to make this record available by disseminating the results in an appropriate form.

Research Framework

5.3 The programme of archaeological investigation has the potential to contribute to research priorities originally identified in the regional research framework *The Archaeology of North West England - An Archaeological Research Framework for the North West* (Brennand 2006), and recently revised and updated (NWRRF, <https://researchframeworks.org/nwrf/>). In particular, the investigation will aim to contribute to the understanding of 20th century industrial development, focusing on the power generation and transmission areas where possible.

5.4 Findings may contribute to the following updated research questions in some form, although this should be revised following the results of the investigation:

Ind55: What is the evidence for power production?

Ind56: How can we improve our understanding of 20th century factory organisation?

5.5 The archaeological investigation will also take account of the national research programmes outlined in English Heritage's *Strategic Framework for Historic Environment Activities and Programmes in English Heritage* (SHAPE) first published in 2008.

6 STANDARDS AND GUIDANCE

6.1 All work will be undertaken to fully meet the requirements of all nationally recognised guidance for such work, including standards laid down by Historic England and the Chartered Institute for Archaeologists (CIfA).

6.2 The programme of archaeological work will be managed in line with the standards laid down in the Historic England guideline publication *Management of Research Projects in the Historic Environment (MoRPHE): Project Managers Guide* (2015a), as well as to meet the requirements of the National Planning Policy Framework (NPPF; Chapter 16: 'Conserving and enhancing the historic environment'; revised 2019). All excavation will be undertaken using recording standards detailed in the *Archaeological Field Manual* (MOLAS 1994).

6.3 Guidance of particular relevance to the programme of works are:

- *Standard and guidance for field evaluation* (CIfA 2014a);
- *Standard and guidance for archaeological excavation* (CIfA 2014b);
- *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (CIfA 2014c);
- *Management of Research Projects in the Historic Environment: PPN3: Archaeological Excavation* (English Heritage 2008).

7 METHODOLOGY

7.1 The programme of archaeological investigation will comprise:

- two areas of strip, map and record (Trenches 1 and 2) targeting features associated with power generation and transmission;
- post-investigation assessment and report production.

Project initialisation

7.2 Lanpro will inform the Lead Archaeologist for GMAAS at least one week in advance of the commencement of fieldwork.

7.3 The Rochdale Touchstones Museum will be contacted by the archaeological fieldwork contractor to arrange for the project archive to be created and deposited in accordance with their deposition and archiving standards.

7.4 Before fieldwork commences an OASIS online record will be initiated and key fields completed on Details, Location and Creator forms.

Strip, map and record

7.5 The configuration of the areas of investigation has been agreed in consultation with the Lead Archaeologist for GMAAS and presented in Figure 2. The areas for strip, map and record will comprise:

- Trench 1 – 35m x 35m, Marland Mill;
- Trench 2 – 35m x 30m Castleton Moor Mill;

Stripping of overburden and subsequent mapping

- 7.6 The two trenches (Figure 2) will be stripped in a systematic manner and in successive spits using an appropriately sized 360° mechanical excavator, removing the groundslab and/or modern overburden deposits to expose archaeological remains. All such excavation will be undertaken under direct archaeological supervision by a suitably experienced and qualified archaeologist. Mechanical excavation will cease at either undisturbed natural deposits or where archaeological deposits are identified. Mechanically excavated spoil will be scanned by eye during its removal to aid the recovery of artefacts prior to storage in its designated area (see para 13.3, below).
- 7.7 Excavation will proceed using toothless buckets: toothed buckets may only be used in exceptional circumstances and the supervising archaeologist will determine the appropriate bucket required. Any excavation, by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features or deposits which appear to be demonstrably worthy of preservation in situ. Plant will avoid crossing previously stripped areas and potentially damaging archaeological remains or deposits.
- 7.8 Should significant archaeological remains be identified during the stripping exercise, the archaeologist will stop the machine for the purposes of examination. In the very rare event that the findings are extremely fragile, the archaeologist may cease excavation within that part of the site. The archaeological features or deposits will be demarcated and GMAAS consulted.
- 7.9 The stripping team will pay close attention to achieving a clean-stripped surface using the mechanical excavator where practical over the structural remains of the former mill sites to reduce the need for extensive hand-cleaning. Otherwise, the stripped areas will be cleaned sufficiently by hand to enhance the definition of features. The surface of any exposed natural deposits will be inspected for finds and the stripped area will then be rapidly surveyed by experienced surveyors utilising GPS to record the main structural elements of the stripped area according to Ordnance Survey (OS) coordinates. An overall general outline site plan will be produced at an appropriate scale.

Recording of archaeological remains

- 7.10 The above first stage of the investigation will inform discussions with GMAAS to agree on the priorities for and level of the next stage of recording work of significant remains in accordance with research value and the required mitigation resulting from the impact of the proposed development. This may be undertaken as the stripping progresses or following the mapping of the revealed archaeological remains.
- 7.11 Any features that will not be subject to further excavation will be recorded with high resolution digital photography appropriate for archiving purposes both from ground-level and elevated viewpoints.

- 7.12 Further machine excavation may be necessary. This is considered appropriate only for the removal of homogenous low-grade deposits and that it might provide an insight into underlying levels, such as rubble infilled cellars, or for characterising features where there is no danger of removing important stratigraphic relationships. Large post-medieval or industrial deposits or features will be fully recorded and machine-removed, such as cobbled or flagged surfaces. Other features may therefore be revealed in the process that prove worthy of detailed excavation, although this will be subject to additional consultation with GMAAS.
- 7.13 All structures, deposits and finds will be recorded according to accepted professional standards. Individual descriptions of all archaeological strata and features exposed or excavated will be entered onto prepared pro-forma recording sheets. Sample recording sheets, sample registers, finds recording sheets, access catalogues, and photo records will also be used.
- 7.14 Should the excavation of the two trenches be deemed necessary beyond 1.2m in depth (or limit of safe working depth), suitable stepping out will be employed. Features such as cellars containing demolition debris may be present, requiring excavation below 1.2m. Stability of the trenches will be continually assessed and excavation will be abandoned if safe excavation beyond 1.2m is not achievable. Any areas below 1.2m will require demarcation with heras or netlon-type fencing as appropriate.
- 7.15 All identified finds and artefacts will be collected and retained, and then bagged and labelled according to their context. Finds of significant interest will be given a 'small finds' number, and information on their location in three dimensions will be entered on a separate pro-forma sheet. No finds will be discarded without assessment by an appropriate finds specialist.
- 7.16 A full written, drawn and photographic record will be made of all features revealed during the course of the archaeological evaluation. The location and extent of archaeological features will be recorded by GPS. Plans will be completed at a scale of 1:20 (as appropriate), with section drawings at a scale of 1:10. All plans will be tied in with the Ordnance Survey National Grid with levels given to above OD.
- 7.17 A photographic record of the project will be maintained, illustrating the detail and context of the principal features and finds discovered. The photographic record will also include working shots to illustrate more generally the progress of the programme of archaeological works.
- 7.18 All photography will follow the Historic England guidance for digital image capture (HE 2015b). All images will have accompanying metadata specifying; photo ID, capture device, converting software, colour space, bit depth, resolution, date of capture, photographer, caption, and any alterations made to the image.

Finds

- 7.19 Finds will be cleaned, conserved, marked, bagged and stored in accordance with the guidelines set out in United Kingdom Institute for *Conservation's Conservation Guidelines No. 2* (1990) and the ClfA guidelines *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2014c).
- 7.20 In accordance with appropriate procedures, significant iron objects, a selection of non-ferrous artefacts (including all coins), and a sample of any industrial debris relating to metallurgy will be X-radiographed before issue of the final report.
- 7.21 All material will be packed and stored in optimum conditions, as described in *First Aid for Finds* (Watkinson and Neal 1998). Any waterlogged organic materials will be dealt with in line with the English Heritage guidance documents, *Waterlogged Organic Artefacts. Guidelines on their Recovery, Analysis and Conservation* (2018) and *Waterlogged Wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood* (2010).
- 7.22 The preservation state, density and significance of material retrieved will be assessed, following the English Heritage guidelines *Environmental Archaeology: A guide to the theory and practice of methods from sampling and recovery to post-excavation* (2011).
- 7.23 Any finds for dating will be submitted to specialists promptly, so as to ensure that results are available to aid development of a project design for the analysis stage, if required.
- 7.24 Any finds of gold and silver will be moved to a safe place. Where removal cannot be undertaken immediately, suitable security measures will be taken to protect the artefacts from theft or damage. All finds of gold and silver, and associated objects, will be reported to the coroner according to the procedures relating to the Treasure Act 1996 (and the act's amendment of 2003).

Human remains

- 7.25 The discovery of human remains is not anticipated during the evaluation fieldwork. However, should these be encountered then the archaeological contractor must contact the Ministry of Justice for an appropriate licence and GMAAS will be informed. The contractor will comply with all statutory consents and licences under the Disused Burial Grounds (Amendment) Act, 1981 or other Burial Acts regarding the exhumation and interment of human remains.
- 7.26 If human remains are encountered, they will be cleaned with minimal disturbance, prior to recording and removal, following receipt of the required Ministry of Justice licence. Investigation and excavation of human remains will be undertaken by, or under supervision of, suitably experienced specialist staff and in accordance with former Institute of Field Archaeologists (IFA) guidelines *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains* (McKinley and Roberts 1993) and the *Updated Guidelines to the standards for recording human remains* (Mitchell and Brickley 2017). Assessment of excavated human remains will be undertaken in line with English Heritage guidelines *Human Bones from archaeological sites: Guidelines for the production of assessment documents and analytical*

reports (English Heritage 2004). The archaeological contractor will comply with all reasonable requests of interested parties as to the method of removal, re-interment or disposal of the remains or associated items. Every effort will be made, at all times, not to cause offence to any interested parties.

- 7.27 If required a qualified and experienced osteoarchaeologist will undertake site visits to discuss the recording and assist in the removal of any human skeletal remains.

Scientific dating

- 7.28 Although not anticipated for this site, provision should still be made to recover any appropriate material suitable for radiocarbon, archaeomagnetic, dendrochronological and other scientific dating. Where material suitable for dating is recovered, sufficient dating will be undertaken to meet the aims of the evaluation.

Palaeoenvironmental sampling strategy

- 7.29 Soil samples will be taken from all suitable features or deposits for palaeoenvironmental sampling should any appropriate features be discovered. This will comprise the removal of a bulk sample from every securely sealed and hand-excavated context, excepting those with excessive levels of residuality or those with minimal 'soil' content (such as building rubble).
- 7.30 Bulk samples will comprise representative 40 litre samples. Where a context does not yield 40 litres of material, smaller samples will be taken (generally the maximum amount of material practicable to collect). Bulk samples will be used to recover a sub-sample of charred macroplant material, faunal remains and artefacts where necessary, as well as any industrial residues.
- 7.31 If buried soils or other deposits are encountered, column samples may be taken for micromorphological and pollen analysis. Environmental material will be stored in a controlled environment and specialists consulted during the course of the work if necessary.
- 7.32 The post-excavation processing of all palaeoenvironmental samples will be undertaken in line with the requirements of the former English Heritage's (now Historic England) *Environmental Archaeology: A guide to the theory and practice of methods from sampling and recovery to post-excavation* (2011).

Unexpectedly significant or complex discoveries

- 7.33 Should unexpectedly extensive, complex or significant remains be uncovered that warrant, in the professional judgment of the archaeologist on site and in consultation with GMAAS, more detailed recording than is appropriate within the terms of the WSI, the scope of the WSI will be reviewed.

Plant and equipment

- 7.34 The archaeological contractor on site will be responsible for the provision of all required welfare, plant, and health and safety equipment during the trial trenching.

8 POST-FIELDWORK

- 8.1 Upon completion of the fieldwork, the archive will be assessed for its potential and significance for further analysis if required and the relevant parties notified accordingly. Otherwise, a grey-literature report on the fieldwork will be produced within 4-6 weeks following completion.

Conservation

- 8.2 If required, conservation will be undertaken by approved conservators in line with the *First Aid for Finds* guidelines (Watkinson and Neal 1998). Material considered vulnerable will be selected for stabilisation after specialist recording. Where intervention is necessary, consideration must be given to possible investigative procedures.

Environmental Sample Processing

- 8.3 The processing of any palaeoenvironmental samples will be undertaken in line with the requirements of the English Heritage publications (2006b and 2011).
- 8.4 The samples will be processed, and ecofacts collected and assessed with regard to the potential for detailed analysis of pollen, charred plant macrofossils, land molluscs, faunal remains (including small mammals and fish) and soil micromorphology. Samples suitable for radiocarbon, or other dating methods, will also be identified. The environmental assessment report will include proposals for full analysis if required. Unprocessed sub-samples will be stored in conditions specified by the appropriate specialists. Samples for dating will be submitted to specialists promptly, so as to ensure that results are available to aid development of the project design for any further analysis stage if required.

Report

- 8.5 The scope of the report will ultimately be determined by the remains uncovered. However, as a minimum the report shall contain the following information:
- A title page, with the name of the project, the name of the author(s) of the report, the title of the report and date of the report;
 - A non-technical summary of the scope, methodology and results of the work;
 - Introduction which includes site code/project number, dates when the fieldwork took place and grid reference;
 - Description of the topography and geology of the site;
 - Description of the archaeological background to the site;
 - Description of the aims, methodology and extent of fieldwork completed;
 - Factual assessments of stratigraphic, artefactual and environmental evidence;
 - An assessment of the archaeological potential of the stratigraphic, artefactual and environmental records;

- If this has not been completed already, a proposed programme for further analysis and reporting if required, including the identification of specialists;
 - Conclusions;
 - Details of archive location and destination (with the museum accession number), together with a catalogue of what is contained in that archive;
 - Copy of the OASIS entry form and any entry updates;
 - Appendices, illustrations and figures, as appropriate; and
 - References and bibliography of all sources used.
- 8.6 A draft copy of the report will be provided to the Lead Archaeologist for GMAAS in PDF format for comment.
- 8.7 Following approval, copies of the final reports will be produced and submitted to the Greater Manchester HER in a PDF/A or hard copy format as required.
- 8.8 It is required that the results be disseminated which will be dictated by the significance of the findings which will be discussed with the Lead Archaeologist at GMAAS following the completion of the fieldwork or subsequent reporting: it is possible that the results of the work will be worthy of publication. The form of dissemination will result from consultation with GMAAS and the client.

9 ARCHIVING

- 9.1 The appointed archaeological contractor will contact the Rochdale Touchstones Museum in advance of commencing any fieldwork to determine the preparation, and deposition of the archive and finds, and obtain an accession number for all archaeological works. The landowner will be encouraged to transfer ownership of the finds to the museum.
- 9.2 Adequate resources will be provided during fieldwork to ensure that all records are checked and internally consistent.
- 9.3 The archive will contain all the data collected during the archaeological works, including all digital and paper records, finds and environmental samples. The archive will be prepared in accordance with the ClfA guidelines (ClfA, 2014c), the United Kingdom Institute for Conservation (1990), and the Museums and Galleries Commission (1994), and in accordance with museum's archive deposition guidelines. Provision will be made for the stable storage of paper records and their long-term storage.
- 9.4 Digital copies of the assessment report and associated data will be submitted to the Greater Manchester HER, together with OASIS and ADS to allow the results of the work to be accessible on-line to the wider archaeological community and general public.

10 TIMETABLE

- 10.1 The configuration of the areas of strip, map and record (Trenches 1 and 2) has been agreed in consultation with the Lead Archaeologist for GMAAS who will be provided with at least one week's notice of the fieldwork commencement date. The timetable for excavating the trenches will be provided.
- 10.2 The Lead Archaeologist for GMAAS will monitor implementation of the programme of archaeological works on behalf of Rochdale Borough Council. The Lead Archaeologist will be afforded the opportunity to inspect the site and all records of the appointed archaeological contractor at any stage of the work.

11 STAFFING

- 11.1 Emily Mercer (Principal Heritage Consultant, Lanpro) will be in overall charge of the management of the project on behalf of Hive Homes.
- 11.2 An appropriately qualified archaeological sub-contractor will be responsible for undertaking the trial trenching and post-excavation assessment reporting. The sub-contractor will be experienced in the excavation of industrial archaeology and a ClfA Registered Archaeological Organisation (RAO). Once appointed, CVs can be provided to all interested parties upon request.

12 INSURANCE

- 12.1 The archaeological contractor will produce evidence of Public Liability Insurance to the minimum value of £5m and Professional Indemnity Insurance to the minimum of £5m.

13 HEALTH AND SAFETY

- 13.1 The management of all health and safety on site during the investigation will be the responsibility of the appointed archaeological contractor. All works will be undertaken by the contractor in compliance with the Health and Safety at Work Act (1974) and all applicable regulations and Codes of Practice, in particular in relation to advice on site working during the Covid-19 pandemic.
- 13.2 Former industrial brownfield sites have a high potential for asbestos contamination throughout the made ground and soil matrix. It is therefore required that an asbestos monitoring watching brief is undertaken during the evaluation fieldwork for which the archaeological contractor will be responsible.
- 13.3 To this end, the spoil removed during the strip and excavation will need to be stored away from the archaeological investigations in a location to be agreed with the client. Reinstatement will therefore also be the client's responsibility. The spoil will be tamped down by the mechanical excavator

- 13.4 All archaeological staff will undertake their operations in accordance with safe working practices and will be CSCS certified. At least one First Aider will be present on site at all times. A site-specific risk assessment will be produced by the appointed archaeological contractor, prior to the commencement of work on site, which will be subject to regular review.
- 13.5 Suitable Personal Protective Equipment (PPE) and welfare facilities will be provided by the archaeological contractor, including hi-visibility coats/vests, hard hats, safety boots and gloves, as well as safety glasses and masks if required.
- 13.6 All staff will receive a health and safety induction prior to starting work on site to be provided by the archaeological contractor.
- 13.7 Regular audits of health and safety practices will be carried out during the course of the project by Lanpro and the archaeological contractor in consultation with the site workforce. Toolbox talks on health and safety issues will be conducted at minimum weekly intervals and/or after changes in working practices or identification of new threats/risks. The risk assessment will be reviewed and updated as necessary. Control measures will be implemented as required in response to specific hazards.
- 13.8 Safe working will take priority over the desire to record archaeological features or remains, and where it is considered that recording is dangerous, any such features will be recorded by photography at a safe distance.
- 13.9 All areas of excavation will be scanned with a Cable Avoidance Tool (CAT) prior to ground works commencing. Necessary measures will be taken to avoid disturbing any services.
- 13.10 Plant operators will be required to produce evidence of qualification within an industry accepted registration scheme. Sub-Contractors health and safety performance will be kept under review and action taken if necessary. All spoil will be stored and managed safely in line with the standards of the *Construction Code of Practice for Sustainable Use of Soils on Construction Sites* (DEFRA 2009).
- 13.11 Site welfare accommodation and car parking should be located within the site and the location of these facilities will be agreed between the archaeological contractor, Lanpro and the client in advance of the commencement of work.

14 COPYRIGHT AND PUBLICITY

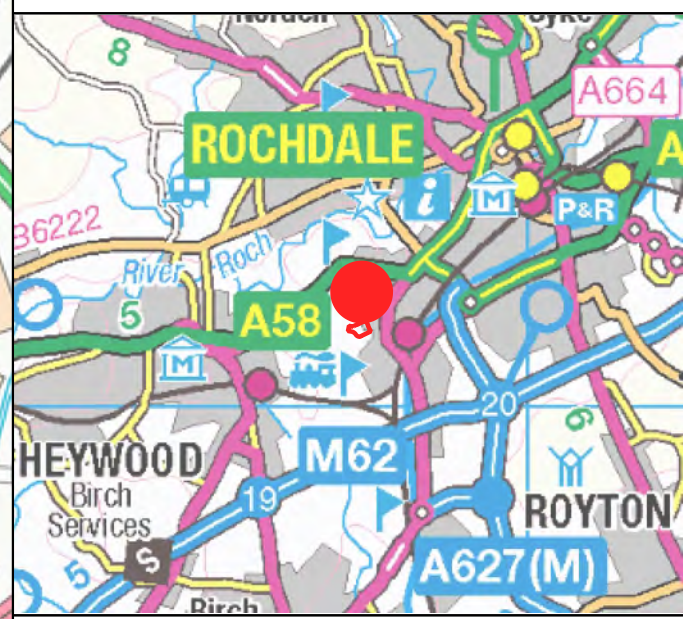
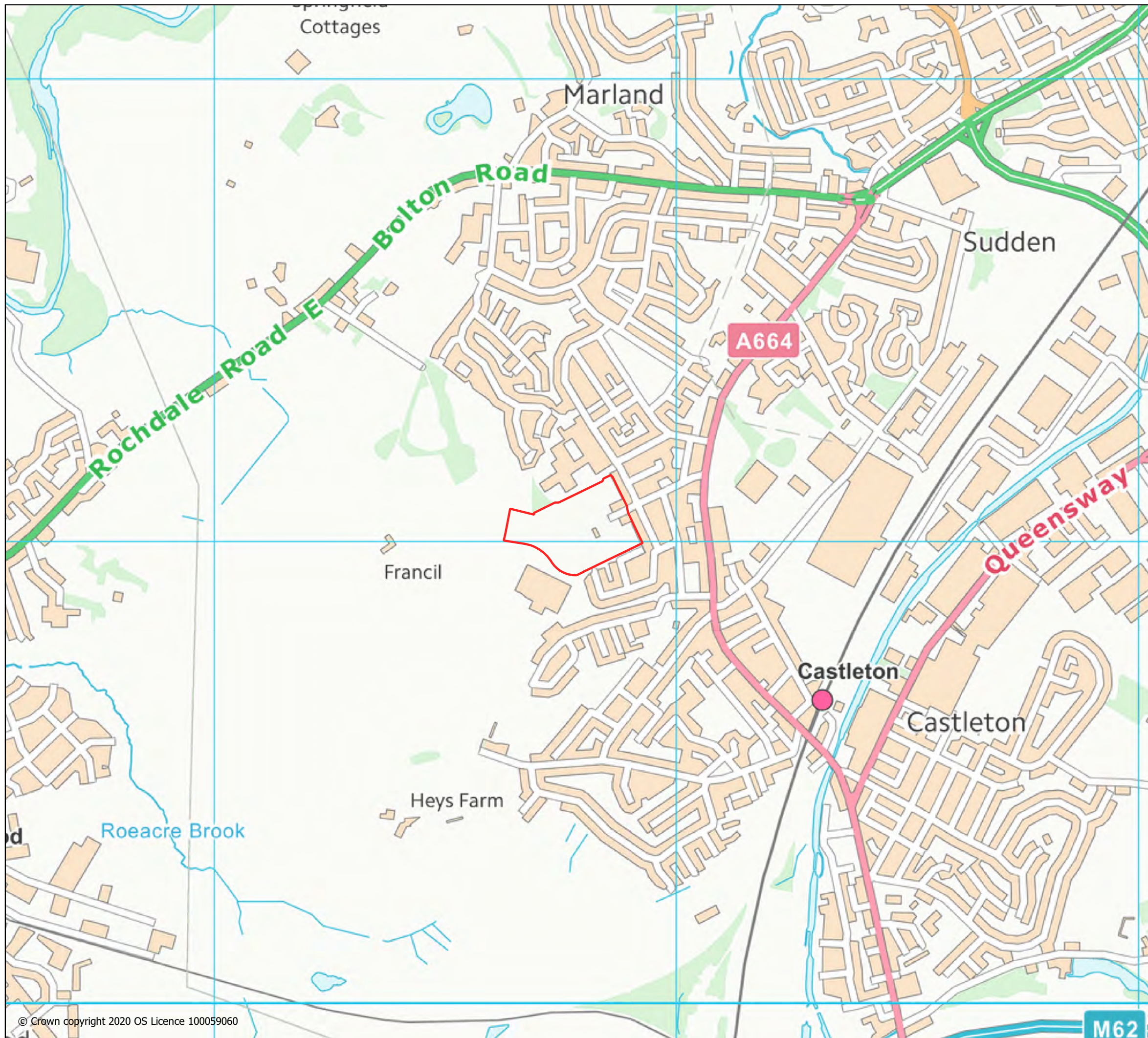
- 14.1 Copyright of the documentation prepared by the archaeological contractor and specialist sub-contractors should be the subject of additional licences in favour of the client and the Greater Manchester HER to use such documentation for their statutory and educational functions, and to provide copies to third parties as required.
- 14.2 Under the Environmental Information Regulations (EIR 2004), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'.

- 14.3 It is recognised that the project may identify remains which are of interest to the public and these may be publicised through appropriate media. Any publicity for the project proposed by the archaeological contractor should be approved by the client in advance.
- 14.4 The appointed archaeological contractor will not issue any information on the work through media, internet or social media without prior agreement of the client. Care will be taken to ensure that any publicity does not compromise the security of archaeological remains that may have been identified or recovered. Any approaches by the press to the archaeological contractor should be referred to the client in the first instance.

15 BIBLIOGRAPHY

- British Geological Survey website, www.bgs.ac.uk/data/mapViewers/home.html
- CIfA 2014a (updated 2020), *Standard and guidance for field evaluation*
- CIfA 2014b (updated 2020), *Standard and guidance for archaeological excavation*
- CIfA 2014c (updated 2020), *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*
- English Heritage, 2004 *Human Bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports*
- English Heritage, 2011 *Environmental Archaeology: A guide to the theory and practice of methods from sampling and recovery to post-excavation*
- European Archaeological Council, 2016 *Guidelines for the Use of Geophysics in Archaeology*
- Historic England, 2015a *Management of Research Projects in the Historic Environment. The MoRPHE Project Managers' Guide*
- Historic England, 2015b, *Digital Image Capture and File Storage. Guidelines for Best Practice*
- Historic England, 2018, *Waterlogged Organic Artefacts: Guidelines on their Recovery, Analysis and Conservation*
- Mitchell, P.D. and Brickley, M., 2017, *Updated Guidelines to the Standards for Recording Human Remains*, Chartered Institute for Archaeologists
- MOLAS, 1994 *Archaeological Field Manual*
- MPRG, 2001 *Minimum Standards for the Processing, Recording, Analysis and Publication of Post Roman Ceramics*, Medieval Pottery Research Group Occasional Paper 2
- Museums and Galleries Commission, 1994 *Standards in the museum care of archaeological collections*
- Society of Museum Archaeologists, 1993 *Selection, Retention and Dispersal of Archaeological Collections*
- The North West Regional Research Framework (NWRRF) website, <https://researchframeworks.org/nwrf/>, accessed 25/02/21
- United Kingdom Institute for Conservation, 1990 *Guidelines for the preparation of Excavation Archives for long-term storage*
- Watkinson, D. And Neal, V., 1998 *First Aid for Finds*

Figures



 Site



Figure 1. Location of the proposed development site

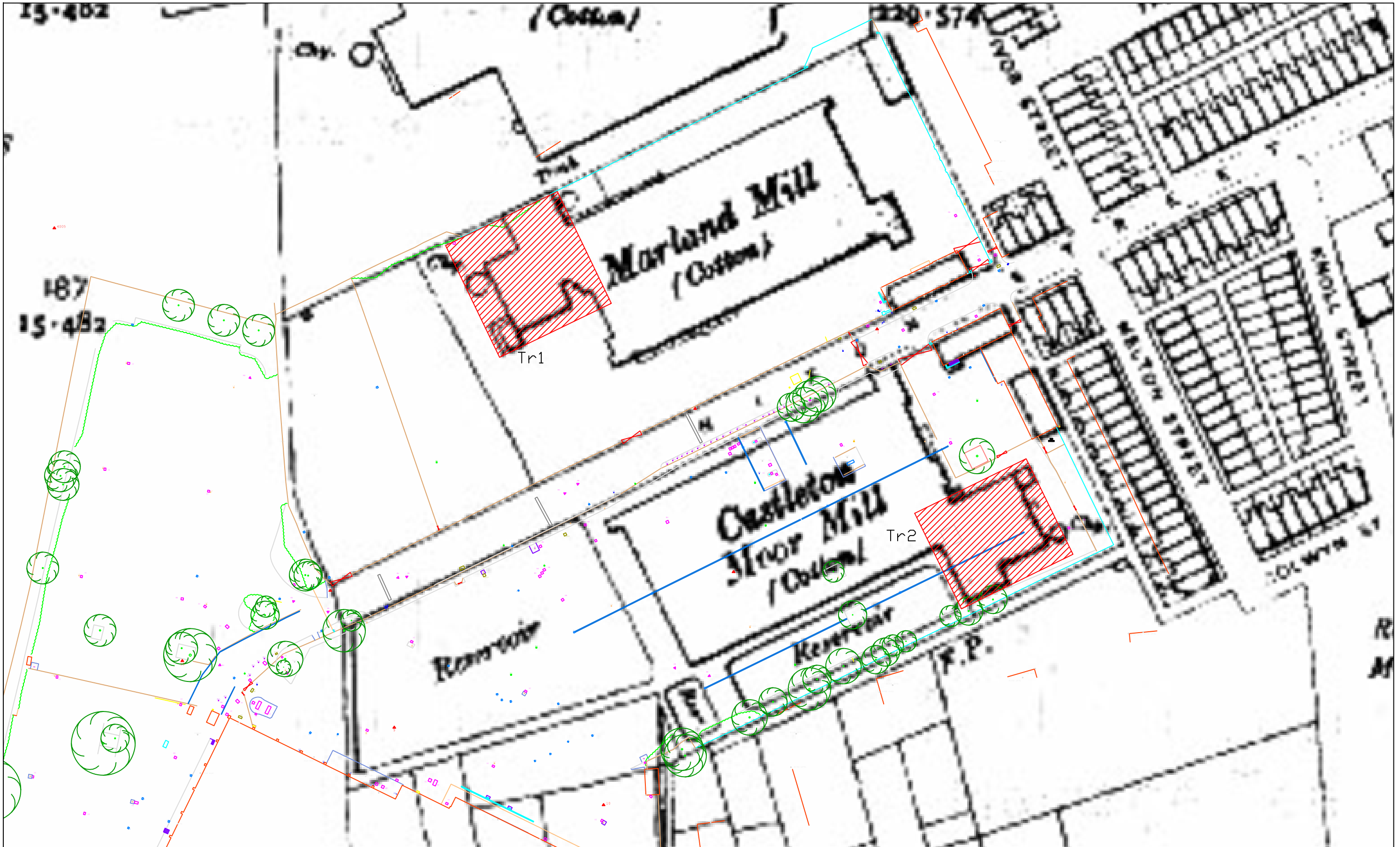



Figure 2. Proposed areas of strip, map and record overlying OS 1910 map



 Area of strip, map and record



Norwich:

Brettingham House
98 Pottergate,
Norwich
Norfolk
NR2 1EQ
01603 631 319

London:

70 Cowcross Street
London
EC1M 6EL
020 3011 0820

Retford:

Retford Enterprise Centre
Randall Way
Retford
DN22 7GR
01777 552 001

York:

Blake House
18 Blake Street
York
Y01 8QG
01904 803 800

Manchester:

Peter House
Oxford Street
Manchester
Greater Manchester
M1 5AN
0161 711 1740



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APPENDIX B DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description					Orientation	ENE/WSW
Trench devoid of archaeology. Consists of tarmac and demolition material overlying natural geology of sand.					Length (m)	35
					Width (m)	35
					Avg. depth (m)	2.5m
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
100	layer		0.10	Other layer. Tarmacadam.		Modern
101	layer		0.20	Other layer. Demolition material, compact.		Modern
102	layer		2.00	Other layer. Mixed sand and demolition layer.		Modern
103	layer			Natural. Natural sands ranging in colour from light orangish brown to orange, with occasional patches of light blue/grey clay.		

Trench 2						
General description					Orientation	ENE/WSW
Trench contained industrial archaeology associated with the power systems of Castleton Moor Mills. Observable features were located along the eastern edge and generally contaminated with asbestos. The western extent seems to have been truncated during demolition.					Length (m)	35
					Width (m)	30
					Avg. depth (m)	0.50
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
200	layer		0.09	Other layer. Tarmacadam		Modern
201	layer		0.10–0.30	Other layer. Hardcore below tarmacadam 200 .		Modern
202	layer		0.30–2.00	Other layer. Demolition rubble below 201 . Mid reddish brown silty sand with abundant brick fragments.		Modern
203	layer		0.12	Other layer. Tarmacadam.		Modern
204	layer		0.14	Other layer. Hardcore under 203 , above 205 .		Modern
205	layer		0.30	Other layer. Earliest demolition layer. Partially made up of factory demolition. Found across site sealing archaeology. Dark greyish brown/red, with coarse grained rubble and red brick demolition.		Modern

206	structure	6.70	1.20	Other structure. Chimney base and internal flue with recess filled with soot. Flue extended west into 208 with a brick floor slopping east. Approx 13 courses and observable construction cut. Truncated by 0.10m diameter plastic cable pipe on NE–SW orientation.		Industrial Period
207	structure	1.70	1.00	Other structure. E–W rectangular sub/basement structure comprising machine-made red brick. Bricks 0.225m x 0.115m. Seven courses (EGW) of bricks observed on upper part of wall on eastern side. Three courses of stacked/ mortared brick below the upper seven courses – possibly truncated (could suggest internal structure within 207). Surface of bricks lime washed.		Industrial Period
208	structure	1.65	0.80	Other structure. Flue structure		Industrial Period
209	layer			Natural. Light orange-brown sand.		

APPENDIX C BIBLIOGRAPHY

Brennand, M (ed.), 2006 *The archaeology of North West England: an archaeological research framework for the north-west region, volume 1: resource assessment*, Archaeology North West **18**

British Geological Survey (BGS), 2022 *BGS geology viewer*, [online] available at: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/> (accessed 03 November 2022)

Chartered Institute for Archaeologists (CIfA), 2020a *Standard and guidance for archaeological field evaluation*, revised edn, Reading

CIfA, 2020b *Standard and guidance for archaeological excavation*, revised edn, Reading

CIfA, 2020c, *Standard and guidance for the creation, preparation, transfer and deposition of archaeological archives*, revised edn, Reading

CIfA, 2022 *Code of conduct: professional ethics in archaeology*, revised edn, Reading

Grace's Guide Ltd, 2022 *Grace's guide to British Industrial History: Marland Mill*, [online] available at: https://www.gracesguide.co.uk/Marland_Mill#cite_note-2 (accessed July 2022)

Graham, S C 2011, *Steam engine research resources*, eBook,

Historic England (HE), 2015a *Digital image capture and file storage: guidelines for best practice*, London

HE, 2015b *Management of research projects in the historic environment: the MoRPHE project managers guide*, London

Lanpro Services Ltd, 2021 *Archaeological desk-based assessment: land at Nixon Street, Castleton, Rochdale, Greater Manchester*, unpubl rep

National Archives, 2022a *Castleton Moor Spinning Company*, [online] available at: https://discovery.nationalarchives.gov.uk/results/r?_q=castleton+moor+spinning (accessed July 2022)

National Archives, 2022b *Marland Spinning Company*, [online] available at: https://discovery.nationalarchives.gov.uk/results/r?_q=marland+spinning (accessed July 2022)

Phelps, A, Gregory, A, Miller, I, and Wild, C, 2018 *The textile mills of Lancashire: the legacy*, Lancaster, [online] available at: <https://historicengland.org.uk/images-books/publications/textile-mills-lancashire-legacy/textile-mills-lancashire-legacy/> (accessed 04 November 2022)

Research Frameworks, 2022 *North West Regional Research Framework* [online] available at:
<https://researchframeworks.org/nwrf/introduction/> (accessed 04 November 2022)

APPENDIX D SITE SUMMARY DETAILS

Site name:	Nixon Street, Castleton, Rochdale, Greater Manchester
Site code:	NSC22
Grid Reference	SD 87801 11025
Type:	Strip, map and record and watching brief
Date and duration:	June–July and October 2022
Area of Site	c 3.56ha
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 Touchstones Rochdale in due course.
Summary of Results:	<p>A programme of strip, map and record investigation and archaeological monitoring were carried out on land at Nixon Street, Castleton, Rochdale, Greater Manchester, in advance of residential development.</p> <p>Two areas were subject to strip, map and record investigation, targeted upon the locations of the engine houses/boiler rooms of Marland Mill (Trench 1) and Castleton Moor Mill (Trench 2), both former Industrial Period cotton mills.</p> <p>Excavation of Trench 1 revealed that any surviving mill structures relating to Marland Mill's engine house/boiler room had been completely removed during recent demolition. In Trench 2, the chimney base and remnants of the associated flue system were encountered in the south-east corner of the area, underlying a sequence of demolition deposits and hardcore/tarmacadam. Other mill structures were partially exposed; however, areas of asbestos were also uncovered. The area was subsequently subject to archaeological monitoring during the removal of the contaminated deposits and mill structures. This work revealed fragments of a probable bed/base of a boiler (possibly a Lancashire Boiler), a concrete floor layer and remnants of other brick structures, but their layout could not be fully determined. Fragments of metal piping, wiring and other debris relating to the mill's power production system were also noted.</p>

APPENDIX E

OASIS SUMMARY

Summary for oxfordar2-503987

OASIS ID (UID)	oxfordar2-503987
Project Name	Nixon Street, Castleton, Rochdale, Greater Manchester Archaeological Strip, Map and Record and Watching Brief
Sitename	Nixon Street, Castleton
Activity type	Strip Map And Sample
Project Identifier(s)	L11412
Planning Id	20/01429/FUL
Reason For Investigation	Condition
Organisation Responsible for work	Oxford Archaeology North
Project Dates	17-Jan-2022 - 21-Apr-2023
Location	Nixon Street, Castleton NGR : SD 87801 11025 LL : 53.5956535109552, -2.18578944489267 12 Fig : 387801,411025
Administrative Areas	Country : England County : Greater Manchester District : Rochdale Parish : Rochdale, unparished area
Project Methodology	Oxford Archaeology (OA) North carried out a programme of strip, map and record investigation and archaeological monitoring on land at Nixon Street, Castleton, Rochdale, Greater Manchester, in June, July and October 2022. The fieldwork was commissioned by Lanpro ServicesLtd, on behalf of Seddon Construction, as a condition of a planning application for a residential development on the site. Two areas were subject to strip, map and record investigation, targeted upon the locations of former engine houses and boiler rooms of Marland Mill (Trench 1) and Castleton Moor Mill (Trench 2), both former Industrial Period cotton mills.
Project Results	Excavation of Trench 1 revealed extensive demolition deposits overlying the natural sand, demonstrating that any surviving mill structures relating to Marland Mill's engine house/boiler room had been completely removed during demolition. In Trench 2, the chimney base and remnants of the associated flue system (with possible evidence of an economiser) were encountered in the south-east corner of the area, underlying a sequence of demolition deposits and hardcore/tarmacadam. Various other structures relating to the engine house/boiler room of Castleton Moor Mill were partially exposed; however, areas of asbestos were also uncovered, halting investigations. As a result, the exposed remains could not be fully excavated and recorded. The area was subsequently subject to archaeological monitoring during the removal of the contaminated deposits and mill structures undertaken under watching brief conditions. This work revealed fragments of probable bases of boilers (likely Lancashire Boilers), a concrete floor layer and remnants of other brick structures, but their layout could not be fully determined. Fragments of metal piping, wiring and other debris relating to the mill's power production system were also noted during the works. The results of the investigation provided limited evidence of power production at Castleton Moor Mill but little further insight into twentieth-century factory organisation.
Keywords	Cotton Mill - 20TH CENTURY - FISH Thesaurus of Monument Types

Funder	
HER	Greater Manchester HER - noRev - LITE
Person Responsible for work	Charlotte, Howsam, Selina, Dean, A, McGuire
HER Identifiers	
Archives	Digital Archive - to be deposited with Archaeology Data Service Archive;



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