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Salford
MANCHESTER

**Community
Archaeological
Excavation**

Oldknows Lime
Kilns, Marple.

Client: Revealing
Oldknows Legacy

Technical Report:
Sarah Cattell

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Summary

Salford Archaeology (SA) was commissioned by the Revealing Oldknow's Legacy project to undertake community archaeological excavations on the land to the north-east of the standing remains of Oldknow's Lime Kilns, Marple (centred at SJ 962884). The excavations intended to investigate the nature and extent of any remains associated with ancillary buildings to the north of the Lime Kilns and the potential for remains associated with the lime kilns tramway. This work included mapping and understanding the function, phasing and relative significance of the buried remains. The aim of the works was to raise awareness of and engage the community in the discovery and preservation of their local heritage. The excavations were carried out over two seasons in 2016 and 2017.

Excavation areas were located to investigate the nature and extent of the remains associated with the lime kilns tramway, earlier and later 19th century tramway weigh houses, the northern section of the stables and two semi-circular structures which abutted the main kiln bank wall. As a result, trenches were excavated over the sites of the earlier and later weigh houses, an area to the north of the stable building, over three sections of the tramway and an area adjacent to the kiln bank wall to investigate the southernmost semi-circular structure.

Significant remains associated with the tramway and both weigh houses were uncovered in both the 2016 and 2017 seasons, however due to the piecemeal demolition and landscaping of the site in the 20th century no remains were revealed of the semi-circular structure abutting the kiln bank wall. Both weigh houses were found to have been constructed from stone, with brick additions found on the later weigh house. The central section of tramway was revealed to be in a relatively poor state with evidence of patches and resurfacing but the section revealed closer to the standing warehouse (32 Strines Road) retained stone sleepers and part of the bedding layer. All of the trenches produced 19th century finds of pottery, metal and glass, consistent with the occupation of the site as well as 20th century objects deposited during the later period of disuse and demolition.

The excavations were carried out by local volunteers and school children under the supervision of SA staff and were successful in enabling over 250 participants to be involved in the discovery and investigation of their local heritage. The open days following the digs were also able to allow the wider public to view the remains and learn more about Samuel Oldknow and his work in Marple and Mellor.

1. Introduction

Background

Salford archaeology (SA) was commissioned by the Revealing Oldknows Legacy project to undertake community archaeological excavations at Oldknows Lime Kilns, Marple, Stockport.

The purpose of the excavations was to investigate the nature and extent of any remains associated with ancillary buildings to the north of the Lime Kilns and the kilns tramway system. This work included mapping and understanding the function, phasing and relative significance of the buried remains. The aim of the works was to raise awareness of and engage the community in the discovery and preservation of their local heritage.

The project's programme of excavation and presentation focuses on the tramway remains in Year 1 and the Lime kilns and their surroundings in Years 2 and 3. The current report represents the results of the Year 2 and 3 excavations on the site of the tramway.

Location, topography & current land use

The site is bounded by Strines Road (B6101) to the north and east, Lime Kiln Lane to the north and west and the kiln bank wall to the south. The site, centered at SJ 962884, lies at a height of roughly 148m AOD and is located approximately 650m south-east of Marple town centre (Fig. 1).

The geological bedrock for the Lime Kilns site is described by the British geological survey on-line search facility as; Pennine Lower Coal Measures, overlain by superficial deposits of Devensian till - Diamicton (<https://www.bgs.ac.uk>).

Personnel

The project was conducted by professional archaeologists from SA. On-site excavations were conducted by Sarah Cattell, Mandy Burns, Sarah-Jayne Murphy and Penny Dargan-Makin. The report was compiled, written and illustrated by Sarah Cattell, Stuart Harris, Richard Ker and Mandy Burns. The project was managed by Adam Thompson.

Monitoring

Norman Redhead, the Heritage Management Director (Archaeology) for Greater Manchester Archaeology Advisory Service, (GMAAS) monitored the archaeological works throughout.

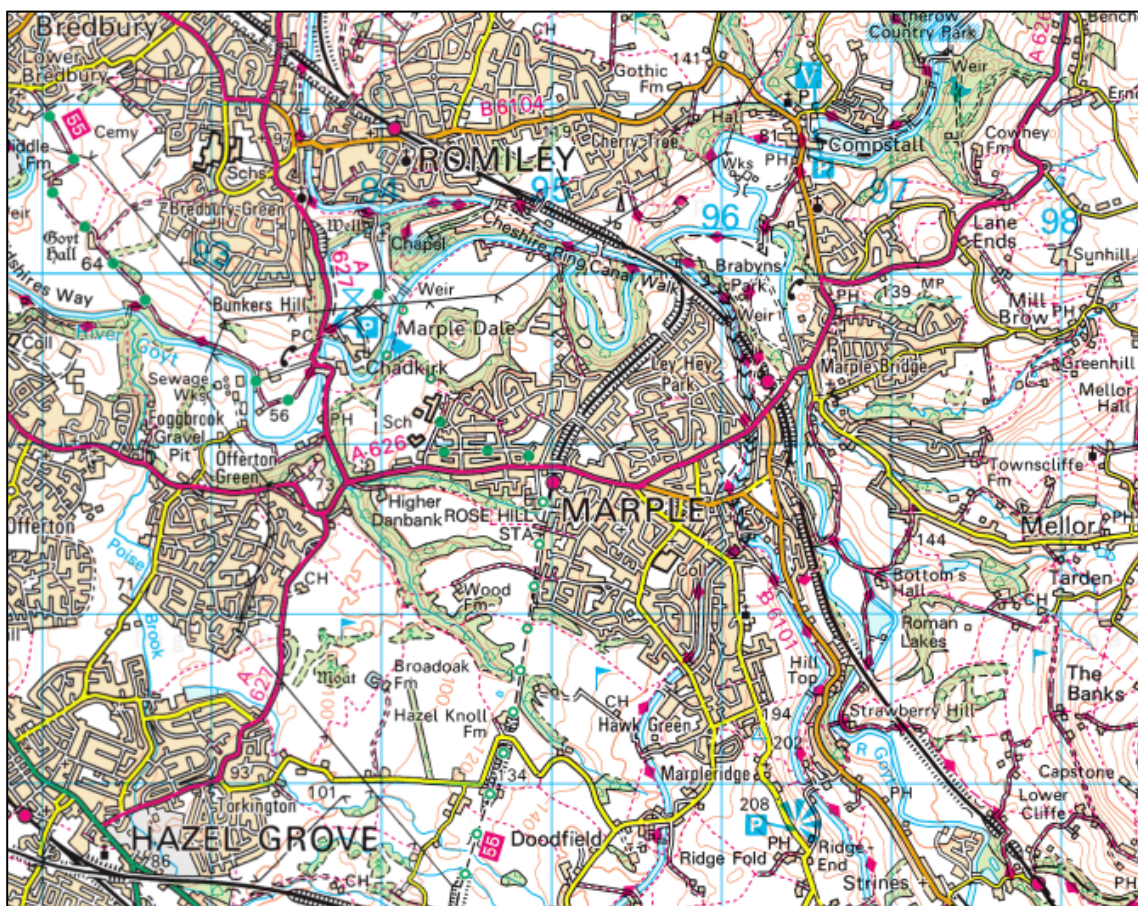


Figure 1: Location map of Marple Lime Kilns (Reproduced by permission, OS Licence Number 100050261).

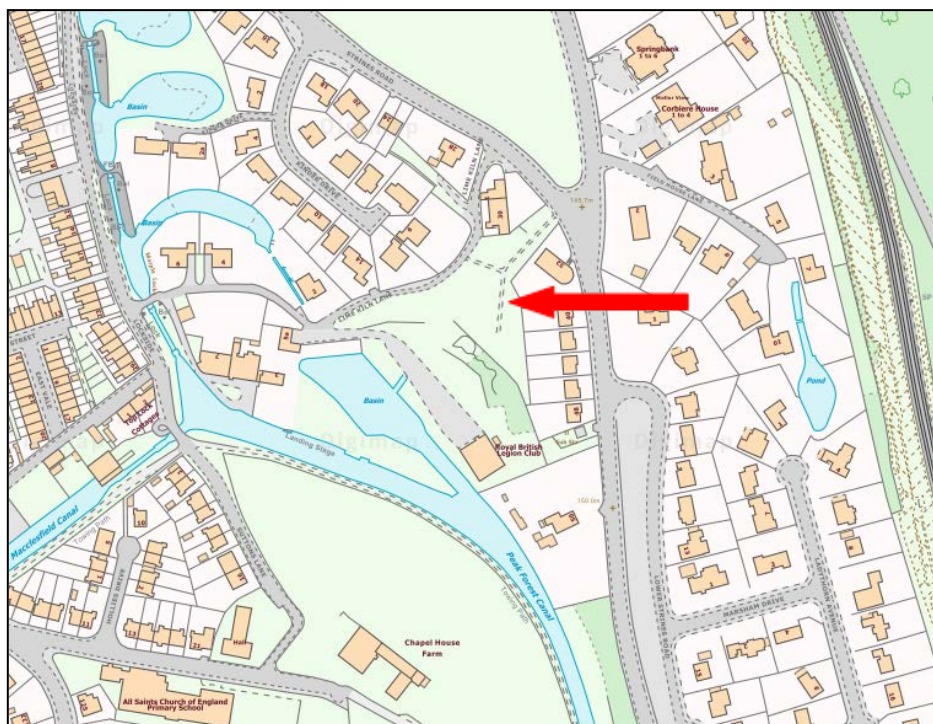


Figure 2. Detailed view of site location centred at SJ 962 884 (Reproduced by permission, OS Licence Number 100050261).

2. Historical Background

Historical Background

Prehistoric & Romano-British

No finds of the prehistoric and Roman periods are known from within the study area. The nearest such sites are the Bronze Age burial mound at Shaw Cairn and the Iron Age/Romano British hillfort surrounding St Thomas' Church, both Mellor.

Medieval

During the medieval period the township of Marple was a largely rural community and remained so until the 18th century. No medieval finds have been made within the study area but a large aisled hall is known to have existed in Mellor on the site of the Iron Age hillfort. During the post medieval period the agricultural economy of Marple and Mellor was supplemented by the cottage industry of handloom weaving which lay the foundation for the town's expansion during the Industrial Revolution.

Post Medieval

An archaeological desk based assessment on Marple Lime Kilns was undertaken by Dr Peter Arrowsmith in October 2015. The DBA successfully outlines the historical background for the Post Medieval period in great detail. In order to avoid repetition, the historical background provided here is an extract from that report.

In 1792 Parliament authorised the construction of a canal linking Manchester with the coal-producing areas of Ashton and Oldham. A further Act in March 1793 allowed the Ashton Canal Company to build a branch to Stockport, and by May of that year the company planned to seek Parliamentary consent for a link with the Derbyshire limestone quarries. However, because of the Ashton Canal Company's existing commitments, in July 1793 a new company was formed to pursue the Derbyshire scheme. Nearly half of its shareholders had previously invested in the Ashton Canal. Oldknow had not been involved in the earlier navigation but was the largest shareholder in the Peak Forest Canal, the construction of which was authorised by Parliament in March 1794. In August of that year Oldknow was elected to the Peak Forest Canal committee and remained a member until his death. During this period, he became the committee's most active member, regularly attending meetings and frequently sitting as chairman.

The Peak Forest Canal was built primarily to transport limestone from the quarries at Dove Holes near Buxton. Burnt lime, produced by heating limestone in a kiln, had a range of uses and by the late 18th century was in increasing demand. Spread on fields

and slaked by rainwater, it improved soil quality, neutralizing acidity and helping to break up heavy clays. Lime was also used in the building industry and textile finishing trades.

Between the canal terminus at Bugsworth and the junction with the Ashton Canal at Dukinfield, the plan from the outset was to build the canal as an upper and lower level, linked by a flight of locks at Marple. The Peak Forest tramway and the upper level of the canal, from Bugsworth to Marple, were formally opened on 31 August 1796. In November 1797 faced with a shortfall in funds, the committee decided to suspend work on the locks and to build instead a horse-drawn tramway linking the two levels. The lower level, which included the Grand Aqueduct over the River Goyt, opened along with the tramway in the spring or summer of 1800. Such was the volume of traffic that in October of that year the committee agreed to the resumption of work on the locks and, in the meantime, had the tramway increased from one track to two. Traditionally the opening of the full length of the canal has been dated to 1804, but recent research argues for a date in late 1805 (Arrowsmith 2015). Even then, further work was required on the locks in the following months and the tramway was not taken up until 1807.



Figure 3. Plan on lease by Samuel Oldknow and Richard Arkwright to the Peak Forest Canal Company of land used for the canal and showing the lime kilns, 7 July 1818 (CRT PKF274/33423).

Samuel Oldknow was able to capitalise on his knowledge of the Peak Forest Canal route by building the Marple lime kilns. These were opened in 1797 by and operated for very nearly a century before their closure in 1896. The kilns were the centrepiece of a lime works which also included loading sheds, stables, private canal arms and a tramway, and of which John Farey wrote in his early 19th-century account of Derbyshire ‘the structure and arrangements of these Lime-works are the most complete that I have seen’. They were built on land which formed part of Oldknow’s

extensive estate in Mellor and Marple created from 1787 to 1792 by the acquisition of several neighbouring properties, some through purchase, some through exchange.

The Marple kilns were ‘draw kilns’, a type which is documented by the mid 18th century and which remained the principal form of lime kiln for large-scale production well into the 19th century. Draw kiln pots usually had a profile which was cone shaped or, as at Marple, resembled an inverted egg with both ends removed, and were lined with hard stone or firebrick. Several such pots could be set within a structure of stone or brick, variously described as a kiln bank, block or battery, which provided insulation as well as structural support. A draw kiln was operated by charging the pot from above with alternative layers of limestone and fuel, and lighting this at the base where one of more ‘draw holes’ allowed a draught to enter the pot and also allowed the burnt lime and ash to be removed. Draw kilns were kept burning by recharging the top of the kiln pot, allowing a continuous process of lime production. Access to draw holes was via a larger opening, usually high enough to allow a man to stand. At Marple these openings took the form of tunnels, large enough to be also accessible by horse-drawn tramway.

Archaeological Background

No previous archaeological works have been undertaken on the site.



Figure 4. The lime kilns as they appeared in the early 20th century.

3. Methodology

Excavation Strategy

The aim of the archaeological excavation was to expose, record and interpret the remains of the weigh houses, semi-circular structure and local tramway directly in front of the Marple Lime Kilns. This work was required in order to raise awareness in the local community of the presence of the Lime Kilns and their associated archaeological remains and promote the investigation and preservation of those remains by local people.

Excavations proceeded using a mechanical excavator to remove topsoil and overburden with all archaeological features below excavated by hand.

Excavation methodology

All archaeological features (stratigraphical layers, cuts, fills, structures) were evaluated by hand tools and recorded in plan at 1:20 or in section at 1:10 using standard single context recording methods with photographs taken as appropriate.

Removal of modern overburden (topsoil and subsoil) was conducted using a mechanical excavator with a toothless ditching bucket under the supervision of a professional archaeologist acting as a banksman. Removed overburden was stored on a mounded spoil heaps located at an appropriate distance away from the main open areas of excavation within the fenced edges of the site.

Machine excavation continued in two areas along the length of the extant earthwork which crosses the recreation ground. Machine excavation remained cautious, with preference for surviving information and hand excavation where possible once interfaces were encountered.

During the machine excavation and until the programme of archaeological works were complete, the open area excavation and spoil heaps were surrounded by Herras fencing, located not less than two metres away from the edges of either.

Following machine excavation all areas were cleaned using appropriate hand tools and archaeological features recorded by photography and scaled plan.

During the machine excavation and planning phase Mr Norman Redhead of the Greater Manchester Archaeological Advisory Service (GMAAS) was consulted at regular intervals.

Recording methodology

A unique text-number site code was created prior to the commencement of the programme of works.

Separate contexts were recorded individually on pro-forma context sheets. Plans and sections were recorded on drawing sheets at an appropriate scale of 1:10, 1:20, or 1:50, depending on the complexity of the data and features encountered. All drawings were individually identified and cross referenced, contexts enumerated and principal layers and features annotated with OD level information.

A ‘site location plan’ indicating the site north and based on the current ordnance survey 1:1250 map (reproduced with the permission of the controller of HMSO) was prepared. This was supplemented by a trench plan, which shows the location of the areas investigated in relation to the investigation area and National Grid Reference (**Fig. 30**). The location of the OS bench marks used and the site TBM will also be indicated. The OD height of all principal strata and features was calculated and indicated on the appropriate plans and sections.

Photography of all relevant phases and features was undertaken with digital formats. General working photographs were taken during the duration of the archaeological works, to provide illustrative material covering the wider aspects of the archaeological work undertaken and to contribute to the creation of the heritage park. A copy of the digital photographs will be made available to the curatorial body, GMAAS with the production of the technical archaeological report.

All finds were recorded by context. Significant “small finds” located within three dimensions to the nearest 10mm and bagged and labelled separately, numbered and a simple description made so that they can be identified within the assemblage.

4. Archaeological Descriptions

2016 Season

Three trenches were excavated across the area to the north of the standing kiln bank wall to investigate the potential for remains associated with the localised kiln tramway, the earlier and later weigh houses and a curving structure extending from the kiln wall itself. All three trenches were opened using a mechanical excavator fitted with a toothless ditching bucket and then hand excavated to reveal archaeological features.

Trench 1



Figure 5. General view of Trench 1. Looking northeast.

This trench was located to investigate the site of the earlier, pre-1883 weigh house and measured 2.50m x 5.70m, orientated northeast-southwest. Following the removal of the turf and topsoil a demolition layer comprising a dark brown silty loam with frequent inclusions of broken brick and stone (003) was identified which covered all the features in this trench.

A stone wall (005) was revealed below this deposit which ran northeast-southwest along the eastern side of the trench (Fig. 5 & 7). The wall was constructed from large angular sandstone blocks (0.20m-0.40m) laid with white lime mortar and measured 0.60m x 4.25m. The upper two courses of the wall had been moderately disturbed, although Slot 2, excavated at the far north-eastern end of the wall revealed it to continue to a depth of c.0.80m composed of four irregular courses. The south-western

end of the wall had been truncated by the cutting of a 20th century service trench which removed all courses of this section of the wall. A number of sherds of mid-19th century pottery were identified lying on or close to the wall, indicating occupation during this time.



Figure 6. Southern end of Trench 1 showing walls (005) and (034).

The area to the southwest of the stone wall was dominated by successive deposits associated with a 20th century service trench measuring 0.74m x 2.70m. This comprised a black charcoal rich linear deposit (010) surrounded by a mid-grey-brown sandy silt (009) overlying layer of yellow angular stones set in a yellow sand (031). All three deposits were found to cut (011) a layer of sub-angular stone set in a dark grey-brown silty loam at the far south-western end of the trench. This was similar to (003) and contained fragments of 19th and 20th century ceramic and metal objects. A slot was excavated in the southern corner of the trench to investigate the southern end

Figure 7. West facing section of wall (005). Looking east.



of wall (005) this was able to reveal the presence of a second demolition deposit (008) which was a red-brown sandy silt with frequent inclusions of stone and brick fragments. This in turn lay over a layer of clay mixed with brick dust and mortar (035) which contained several sherds of 19th century pottery, metal and glass.

To the west of this wall lay a compacted grey layer of sandy silt (004) with moderate inclusions of stone and brick fragments and patches of white mortar. At the southern extent of this deposit lay a large (1.00m x 1.20m) lens of black coal and charcoal which lay against walls (005) and (034). Wall (034) was a 2 course handmade brick wall with black mortar, extending 1.20m westwards from wall (005) (Fig. 6). This wall was aligned east-west, abutting (005) to the east and truncated to the west.

Further compacted grey sandy silt deposits were found to underlie (004) on both sides of wall (005) as revealed in Slots 1 and 2. The first of these was (020), a mid-grey layer directly below (004) which was c.0.10m thick with very occasional small fragments of stone and brick and frequent specks of mortar. This lay over (007) a 0.03m-0.05m thick layer of black, friable silt rich in coal, mortar and clinker. This, in turn lay over the final grey sandy silt deposit (006) which was almost identical to (020) except for being slightly lighter in colour and marginally less compacted. Directly below this layer (008) was again encountered.

Trench 2



Figure 8. General view of the northern section of Trench 2. Looking north.

Trench 2 was located to investigate the potential for remains associated with the later post-1883 weigh house and a section of the kilns' tramway line. It was L shaped in plan and measured 5.70m x 6.50m and 2.00m in width.

The northeast-southwest section of the trench contained several features that lay beneath (023), a dark brown layer with frequent inclusions of demolition debris, 19th and 20th century pottery, metal, glass and fragments of tarmac as well as a large collection of ceramic fuses on the southern side of the trench. Following the removal of this deposit, several structures were revealed which were aligned with the eastern wall of the later weigh house as viewed on historic mapping. These features comprised a 0.55m wide x 4.50m long coursed stone wall (022) which ran north-south and was bonded with white lime mortar. At its northern end this wall abutted an arrangement of machine made brick walls (025), (026) and (027) which stood to a height of 0.50m. Wall (025) measured 0.23m x 1.40m, orientated northwest-southeast and was constructed from frogged bricks laid with white lime mortar. This wall was crossed in the centre by wall (026) which ran northeast-southwest and measured 0.23m x 1.80m before being truncated to the south and to the north by a 20th century pipe. This wall survived to a height of 7 courses (0.75m) with a segmented arch forming the fifth course between walls (025) and (027). Again this wall crossed a second northwest-southeast frogged brick wall (027) which had a northeast-southwest return to the north. This was also bonded with white lime mortar and had been truncated to the west by the 20th century pipe. A ceramic drain was identified extending southwards from these walls and running parallel to wall (022).



Figure 9. Walls (025), (026), (027) and floor (028). Looking west.

To the east these walls surrounded a degraded slate surface (028) and to the west they were found to enclose a deeper area filled with demolition debris (036). Surface (028) measured 0.75m x 1.00m extending 0.15m southeast beyond walls (025) and (027) and was composed of broken slates which abutted all three brick walls. Deposit (036) was comprised of whole and broken machine made bricks in a sandy brown matrix which appeared to continue below the level of (028) on the other side of wall (026).

Figure 10.
Eastern corner
of Trench 2
showing wall
(022) and
deposit (023).



Another machine made brick wall (029) was found 2.20m south of wall (025) which intersected wall (022) although did not appear to extend further than 0.20m eastwards. Three rows of stacked 20th century roof slates were found adjacent to this wall which encompassed 3 marginally different styles and appeared to have been deliberately left.

No features were identified in deposit (023) on the eastern, interior side of wall (022) although a number of 19th century whiteware ceramic sherds were revealed in the successive layers of clay which were identified to the west of the wall. The deepest of these was (024) a pinkish-yellow sandy clay which lay against the wall and contained sherds of 19th century stonewares and clay pipe. Overlying this and wall (022) to the northeast was a large deposit of yellow clay with frequent inclusions of degraded sandstone that contained a broken yet near complete 19th century plate.

The area to the southeast of the building was found to have a layer of compacted silty loam mixed with mortar immediately adjacent to the building (023) which lay against (017). This layer was composed of angular stones set in a heavily compacted black-brown gritty silt which had been stained black. This surface had been cut by a trench for a late 19th/ early 20th century cast iron pipe which ran east-west. Other deposits were found to lie against and over this deposit which were also compacted with high volumes of charcoal and clinker (012)-(016). These layers were characteristic of

natural silting following the closure of the lime kilns site and subsequent episodes of demolition and landscaping.

Figure 11. Southern section of Trench 2 showing compacted surfaces including (017). Looking east.



Figure 12. Southern section of Trench 2 showing compacted surfaces including (017) following further excavation. Looking north-east.

Trench 3



Figure 13. Southwest facing section of Trench 3. Looking northeast.

This trench was located to investigate the presence of the remains of one of the semi-circular structures seen on the historic mapping along with a section of the tramway line which extended from the easternmost kiln tunnel. The trench measured 3.00m x 10.00m, orientated east-west.

Due to successive phases of demolition and landscaping on this part of the site, the main deposit encountered in this trench was a mixed silty loam (019) with frequent inclusions of demolition debris containing fragments of 19th and 20th century pottery, metal and glass. This deposit was up to 2.00m in depth in places and as a result, no features were revealed in this trench, although a short section of tramway rail was found in the deepest part of the trench (c.1.90m deep).

2017 Season

Two trenches and three test pits were excavated during the second season of excavation at the lime kilns, the trenches were located to investigate the remains of the later weigh house and tramway section and the test pits were intended to locate the remains of the original northern wall of the stable building.

Trench 1

This trench was located to investigate the potential for remains associated with a section of tramway which led into the warehouse to the northeast of the lime kilns. The trench was orientated southwest-northeast and measured 3m x 6m.

Following the removal of the turf and topsoil, three compacted demolition deposits were encountered, (104), (105) and (106) (**Fig. 14**). Layer (105) was identified at the northern end of the trench and comprised a 2m wide deposit of black clinker and coal fragments. This lay against (106), a compacted mid grey-brown silty loam with lenses of sandy silt and frequent inclusions of sub-angular stones. Set within (106) were large areas of partially degraded concrete c.0.10m thick, containing fragments of brick (104).

Figure 14. Trench 1 showing layers (104) and (106) with (105) in the background. Looking west.



Figure 15. Trench 1 showing layer (116) with cut [121] in the foreground. Looking west.

Directly below these layers was another compacted layer (116), which was dark grey-brown with frequent inclusions of sub-angular stones, brick fragments and occasional flecks of mortar. This deposit was found to be c.0.20m thick in some areas and only 0.10m thick in others.



Figure 16. Stone blocks (020) set within surface (117). Looking north.



Figure 17. Detail of stone blocks (120).



Figure 18. Detail of stone blocks (120) with cast iron pipe. Looking north.

A final compacted deposit (117) was revealed below (116) which comprised a mid reddish-grey sandy silt with very frequent inclusions of sub-angular stone and occasional brick fragments. Five large limestone stone blocks were found to be set within this deposit, each with a single round hole and a shallow groove running northeast-southwest across the surface (120). The blocks measuring between 0.30m-

0.40m x 0.40m-0.55m, were roughly rectangular and were set flush with the top of (117).

A linear feature [121] was found to cut (117) to the south of (120) which measured 0.40m wide and continued beyond the trench edges to the northeast and southwest. The feature was filled with a light yellow compact clay with occasional small stones and excavated to a depth of 0.20m whereupon no artefacts or other fills were encountered (**Fig. 19**).



Figure 19. Linear feature [120]. Looking north.

Trench 2

This trench was intended to uncover further remains of the later tramway weigh house identified in 2016. The trench was located to the west of the one excavated in 2016 and measured 5.50m x 8.30m orientated north-south.



Figure 20. General view of Trench 2. Looking north.



Figure 21. South-eastern end of Trench 2 showing walls (103), (110), (111) and (112). Looking north-west.

Figure 22. Detailed view of walls (110)-(112) and surface (119).



At the eastern end of the trench several walls from the 2016 season were re-exposed; (103), (110), (111) & (112) (context numbers (022), (025), (026) & (027) respectively in the 2016 season). Of these walls, (112) was revealed to extend northwards running parallel to (110) for 1.00m and was truncated to the north by the 20th century pipe

identified in 2016. At its northern extent this wall was found to abut a machine made brick wall (113), which was almost identical to (111) but with no upper arched course of bricks. The brick walls were found to enclose a brick surface (119), composed of three rows of handmade bricks laid flat at a depth of 1.00m. This surface was covered by a deposit of whole and broken bricks in a mid-brown sandy silt with a large volume of 19th and early 20th century ceramic fragments



Figure 23. Wall (114). Looking south.

Figure 24. Section of tramway rail found in-situ within wall (114). Looking east.



In addition to the re-exposed walls found in this trench, a second fragmented stone wall (114) was uncovered extending north from (103) for 2.00m. The wall was constructed from a single dressed course of irregular sandstone blocks laid two courses high with lime mortar. The wall was orientated north-south, sitting within (115) and was cut by a 20th century pipe. A section of cast iron possible tramway rail was found in the central section of the wall.

No features were identified in the northern half of the trench which contained a single deposit of (115) (recorded in previous season as (021)), a compacted reddish-yellow clay with grey lenses and frequent inclusions of degraded sandstone with flecks of lime mortar and stone. Although this was investigated to a depth of 0.50m without any visible changes to its composition, isolated fragments of 19th century pottery found within it suggest that it may possibly be redeposited.

Test Pits 1, 2 & 3

These test pits were excavated by hand to locate the original northern wall of the lime kilns stables prior to its partial demolition in the 1960s. Test Pit 1 measured 1.00m x 4.00m and Test Pit 2 measured 1.00m x 1.00m, both were orientated northeast-southwest. No extant structural features were identified in either Test Pit 1 or 2, although a widespread demolition deposit (107) was found in all three pits to a depth of between 0.30m in Test Pit 3 and 0.60m in Test Pit 1.



Figure 24. Test Pit 3 following excavation. Looking north-west.

Test Pit 3 was the only one of the three to reveal structural remains in the form of a large stone wall (108) which ran north-south across the western side of the test pit. The wall measured 0.60m x 1.60m and was constructed from dressed limestone blocks laid with white lime mortar, the lower course of which projected for 0.10m to the west. The wall was abutted to the north by a second stone wall running east-west (109), which measured 0.50m x 2.00m. The wall was constructed from dressed stone blocks, however these were larger and more randomly shaped than those in (108) with a large rectangular block protruding from the southern face of the wall.

Both walls were surrounded by (107) which in turn lay over a layer of mid-brown silty loam (124), which was very compact with frequent inclusions of small (<0.10m) stone fragments, charcoal and occasional lenses of sandy mortar.



Figure 25. North-eastern face of wall (108). Looking south-west.



Figure 26. Eastern face of wall (109). Looking north-west.

5. Archaeological Results

The excavations were able to reveal significant remains associated with the wider operations of the Marple Lime Kilns, in particular the transport system used at the site. Trenches in both the 2016 and 2017 seasons yielded structural remains which corresponded to buildings seen on the historic mapping of the site, thought to be the earlier and later tramway weigh houses.

The evidence uncovered indicates that both weigh house buildings have surviving foundations in a good state of preservation, despite later clearance and landscaping activities on the site. The results of the excavation indicate that the earlier weigh house, represented by wall (005) in Trench 1 (2016), was constructed from stone laid with lime mortar with a possible rough internal floor surface represented by (004). Sometime later, prior to its demolition in the 1880s or early 1890s, the building seems to have had minor alterations made to the interior with the construction of the east-west handmade brick wall (034).

The later weigh house, wall (022)/(103), also displayed evidence of alterations with the addition of machine made brick structures; walls (025)-(028), (113) and surface (119), abutting the main stone wall of the building. It is possible that this part of the structure may have been associated with the weighbridge mechanism itself, with the niche and enclosed space behind formed by the brick walls, possibly constructed to house a steelyard used for taking measurements. Alternatively, historic mapping (Fig. 24) indicates that the later weigh house building remained standing after the lime kilns went out of use and the 1934 OS map shows the building to have been extended to the west (Fig. 38). This secondary occupation of the building may explain not only the addition of the brick walls but also the presence of the early 20th century cast iron pipe which may have been associated with the later use of the structure.

The character of deposits (017) and (117) was very similar to deposits uncovered during the excavation of the Peak Forest Canal Tramway crossing Marple recreation ground to the northwest which revealed the metallised tramway surface (Cattell, 2016). This excavation revealed that the tramway surface was composed of sub-angular stones c.0.12m in size which were set within a compacted sandy silt, into which the stone sleepers were laid. The only differences between this surface and deposits (017) and (117) were that black staining was observed on (017) and (117) was somewhat more heavily compacted and had fewer stones, in general however, the surfaces were very similar in nature. This, along with the location of the deposits, would suggest that both (017) and (117) represented the remains of the kilns tramway bedding layer.

The bedding layer exposed in 2016 was not as well preserved as the adjacent structures which may be due to the laying of later services which cut and distorted the remains. Despite this, a small part of the stone bedding was found in a reasonable

state of preservation which led to the investigation of Trench 2 in 2017. This work was able to reveal deposit (117) at broadly the same height as (017) but with stone sleepers (120) still *in situ*. The sleepers conformed to Outrams description as ‘*of stone in all places where it can be obtained in blocks of sufficient size. They should be not less than 8, nor more than 12 inches in thickness; and of such breadths (circular, square or triangular) as shall make them 150lbs. or 200lbs. weight each. Their shape is not material, so as they have a flat bottom to rest upon, and a small portion of their upper surface level, to form a firm bed for the end of the rails.*’ (Arrowsmith, 2015). Each stone identified had a roughly central fixing hole for the oak plug used to secure the rails as well as shallow channels created by the friction caused by the rails themselves.

The various works carried out at and around the lime kilns, following their closure have resulted in considerable changes to the landscape immediately north of the standing kiln bank wall. It is unclear to what extent this included demolition of the semi-circular structures attached to the kilns although they were already partially demolished when photographed in the 1970s (**Fig. 27**). The lack of features identified in Trench 3 of the 2016 season would suggest that these structures were removed following this date. If any part of these structures, or indeed the tramway line, do survive it is likely to be at a depth in excess of 2.00m below the present ground surface.



Figure 27. The Lime Kilns as photographed by Owen Ashmore 1972 (courtesy of Owen Ashmore Collection, MOSI, Manchester).

Demolition in the mid-20th century was also responsible for the reduction in size of the kilns stable building which had its northern half demolished in 1964. The building originally consisted of 6 bays, each with a circular window at first floor level and arched double door below but was reduced to 3 bays with a later wing added in the 1990s. The purpose of the test pits was to ascertain whether any of the northern end of the structure survived and to what extent. The results of the excavation showed that the foundations of the main outer walls (108) and (109) survived to the current ground level but that the interior of the building had been filled by demolition debris to a depth of at least 0.50m which had removed any internal surfaces.



Figure 28. The Lime Kilns stables during demolition in 1964 (Arrowsmith, 2015).

6. Discussion

The recent work at the site of the Marple Lime Kilns is enabling the rediscovery of not only the functioning of the site itself but also the development of industrialised Marple through the work of Samuel Oldknow and his successors. When Oldknow bought the land that the lime kilns and canal came to occupy, the surrounding landscape was largely dominated by farming with farmhouses and other agricultural buildings as the most common structures in the area. By the time the lime kilns closed in 1896 Marple had become a fully industrialised town producing cotton, coal and lime which was carried on new roads and canals linking it with markets across the country and beyond.

Samuel Oldknow's estate in Mellor and Marple was created by buying up large tracts of agricultural land, some to retain as farms, but with the main intention of expanding his business interests. The construction of the lime kilns was planned in 1795 as a secondary arm to Oldknow's business as a result of the decision to construct the Peak Forest Canal across his land to the south of Marple. The canal company's engineer, Benjamin Outram was instructed to stake out the line of the canal in order for Oldknow to be able to place his lime kilns close to the top of the proposed flight of locks (Arrowsmith 2015).

The Peak Forest Canal was constructed at a time of industrial expansion across the North West in particular. Not only was the textile industry flourishing but also a range of satellite industries on which the manufacturers relied. The most significant of these were the coal producing companies who supplied everything from domestic housing to machinery manufacturers to the textile producers themselves. The demand for raw materials such as coal vastly increased in the early part of the 19th-century, making schemes such as the Oldham/Ashton Canal essential for the economic growth of the Greater Manchester area. Once the infrastructure for the supply of these vital commodities was in place, it could be expanded on and adapted for a range of other materials. It was this which enabled and encouraged the creation of the Peak Forest Canal Company.

Although the original purpose of the canal was to supply the Manchester markets with limestone from the quarries at Dove Holes, it quickly became an important supply route for not only the raw material but also processed lime as well as other products that utilised the direct links it afforded to the town centres of Stockport, Ashton, Oldham, Hyde and Manchester. In the construction of the canal, Samuel Oldknow recognised an opportunity not only to capitalise on the cargo it carried by building his lime kilns, but also to provide a valuable material for both his continuing plan to expand the Mellor mill site and the associated infrastructure it required and his

interest in improving agricultural production, both of which needed large quantities of burnt lime.

The first five years following the opening of the lime kilns saw almost continual expansion in the size of the kiln bank from one bay in 1797 to ten bays by c.1802 indicating a steady growth in trade throughout this period. This was almost certainly seen in the development of the other elements of the kilns complex, particularly the transport system, which would have needed to keep pace with the rate of production of the new kilns. The earliest map of the site from 1818 shows the lime kilns at what must have been their peak with all 12 kilns in operation and what appears to be a fully functioning transport system with five tramway branches from the central line to the bases of the kilns as well as two lines leading to the canal loading shed to the north (**Fig. 3**).

It is therefore surprising that this plan shows no evidence of any weighing machinery associated with the tramway to measure the quantities of lime produced at the site. Indeed the first evidence of a weighing machine comes from much later, on the 1872 OS map, raising the question of how the quantity of lime produced on the site was measured before this point as it is unlikely that loads were not weighed. There are three possible explanations for this, firstly, the historic mapping for the site prior to 1872, comprising estate plans, sales documents and the tithe, does not consistently show the line of the tramway lines crossing the site, which appear on some but not others. It is likely that on those where the tramway is not recorded it was merely seen as an internal feature of the lime kilns complex and not necessary to record individually. It is therefore possible that any small scale structures associated with the tramway weighing machinery were treated in the same way and not recorded. The second explanation may simply be that the operation of the early weighing machinery did not require any standing structures until the 1870s. The final explanation is that no weighing machinery was installed on the site until the later part of the 19th century, sometime before its appearance on the OS mapping.



Figure 29. The later 19th century weigh house as it appeared in the mid-20th century (Arrowsmith,2015)

Although the structural remains found in Trench 1 (2016 season) could not be securely dated to before the 1850s, they appeared to be built in a similar fashion and materials to the other ancillary buildings constructed on the eastern side of the site prior to 1818. In addition, the compacted deposits within the building indicate a reasonably long occupation, almost certainly greater than the 26 years accounted for by the historic mapping. It seems likely, therefore, that the early weigh house was in use before its appearance on the 1872 OS mapping but was not recorded.

Weigh houses have been identified on historic mapping at a number of lime kilns in Cheshire and Lancashire from the 1870s onwards, including at Bellman Park, Red Bull, Newbold Astbury and Bugsworth. Weighbridges were used as a means of quantifying the output of the kilns and assessing the cost of transporting the finished product to markets and customers. The more common type of machinery found in this period saw a ground level cast iron plate set within a pit over which the tramway rails were carried. The weighing mechanism was housed within the pit with an adjacent freestanding steelyard to take measurements (**Fig. 28**). It is likely that the machinery at Marple was a pit weighbridge although the pit itself has not yet been uncovered.

Figure 30. Late 19th century advertisement for a pit weighbridge by Hodgson and Stead showing a mechanism similar to that which was thought to have been used in the later weigh house at Marple.



The phasing of the kilns themselves, as put forward by Arrowsmith, indicates that the kilns were at full capacity by 1802 at the latest and would suggest at least one tramway line was operational by this date (Arrowsmith, 2015). The offer of rails to

Oldknow by the Peak Forest Canal Co. in 1800, however, implies that the tramway was in some degree of use at least two years earlier. It is reasonable to assume that the tramway lines were constructed at the same rate as the kilns were extended with at least the central line in place when the first kiln opened in 1797 and closely followed by the three lines to the north by 1800 and finally the southern line by 1802 (Arrowsmith, 2015). The subsequent closure of several kilns during the mid-19th century meant that the number of tramway lines could also be reduced, with only three visible on the 1872 mapping, one central and one each to the north and south.

That the site underwent several episodes of repair and alteration to its basic layout is clear from the documentary evidence, yet some of these events were also visible in the results of the excavation. The most obvious of these was the replacement of the weigh house and its change of position to the northern side of the central tramway line. The successive occupation layers and additional brick wall in the earlier structure indicate that this building was extensively used and altered during its occupation. Despite these internal changes, it seems that by the 1880s this building was no longer fit for purpose and required replacement. This may also have coincided with the introduction of new weighing machinery, which may have necessitated a more modern building to operate from. It is possible that this was part of a wider trend of weigh house building as new weighing machines were added to several lime works during this period, such as Bugsworth and Red Bull in the 1870s and Bellman Park in the 1880s, suggesting the development of new machinery or weighing systems. The new building may also have been planned to take on other uses, requiring it to be larger than its predecessor.



Figure 31. The semi-circular structures abutting the kiln bank wall as they appeared in the later 20th century. Marple Local History Society.

Not only were the buildings updated, the tramway lines also underwent alterations in the mid-19th century as can be seen on the historic mapping from the time. In particular, changes to the section leading to the canal warehouse saw the point where the lines split to enter the warehouse moved further north, indicating that the track was re-laid before the 1870s. The nature of the stone sleepers identified in Trench 2 (2017) show that despite the reorganisation of the lines the specifications and materials remained the same indicating that the change in course was not a result of faults with lines themselves. Due to the constant use the lines were put to, it is likely that the sleepers were replaced regularly and those found during excavation probably dated to the mid-late 19th century. The changes to the lines entering the kilns themselves, as mentioned above, also indicate reorganising of the tramway at this time, presumably in response to the number of kilns in operation. In addition, evidence from the excavation suggests that the tramway was consistently maintained with several layers of compacted material forming the stone bedding of the tramway line. Areas of clay were also identified within the bedding and appeared to be used to as temporary patches on the surface and were more than likely taken from the adjacent clay pit to the west of the site.

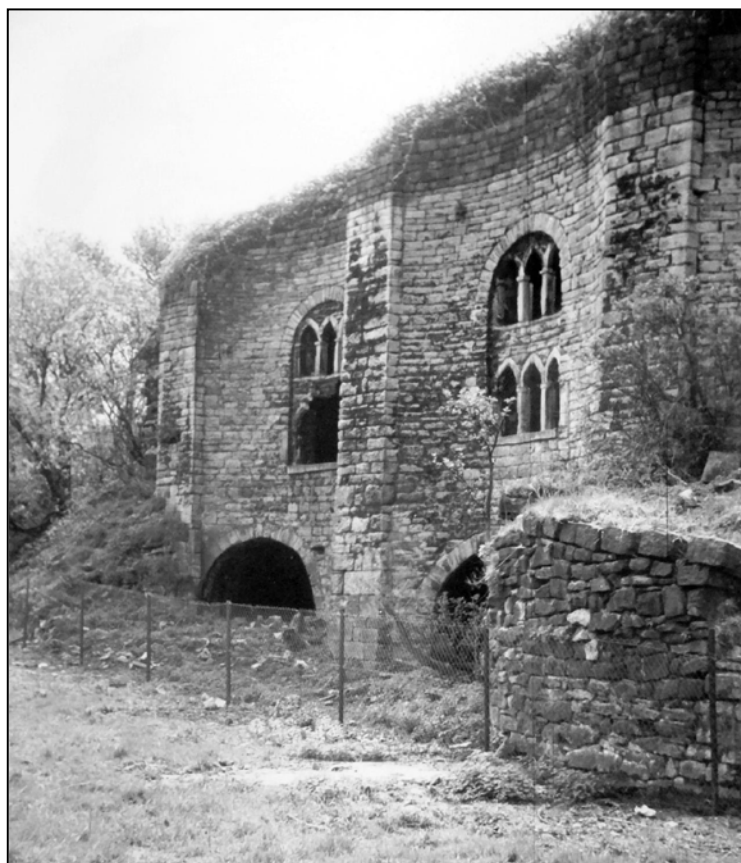


Figure 32. Detailed view of the south-eastern semi-circular structure abutting the kiln bank wall. CRO Lamb Collection D7448/301/127

One feature of the lime kilns complex that the excavation was not able to shed light on was the semi-circular structures abutting the main kiln bank wall. Their appearance on mapping from the 1840s onwards suggests that while not an original feature of the site, they continued in use until the closure of the kilns and remained standing, at least in part, until the 1960s. On photographs from this time (**Fig. 32**) these structures are shown to be standing level with the tunnel openings in Bays 4 and 6 but must have

been subsequently removed, potentially down to foundation level, as no evidence was found in Trench 3. No documentary evidence has been found which explicitly outlines the purpose of these structures and the only contemporary account of them is on the Tymms letterhead showing the complete lime kilns complex. On this, the structures can be seen as unroofed and standing to a similar height as they were on the photos taken 100 years later. In both the photos and the letterhead the tops of the structures appear to slope downwards to the northwest. Based on the scant evidence available, it is possible that these structures may have been used as refuge/passing places or turning places for the horses and carriages on the tramway before entering the tunnels for loading. Further excavation, to a greater depth, has the potential to reveal more about this part of the kilns complex, however the nature of the overlying modern landscaping could be prohibitive to such works.

The various alterations and changes made across the site taken together, all reveal a busy industrial centre which was able to adapt to the fluctuations in the demand for lime. Early production at the site was hindered by rising costs leading Samuel Oldknow to lease out, at first, the lime burning process but later the entire site to other local businessmen, severing his ties to the site by 1811 (Arrowsmith, 2015). Despite this, successive owners were able to strike a balance between reducing the number of kilns in operation while maintaining and updating the site to maximise efficiency and productivity. Both the documentary and excavation evidence suggests that much of this was carried out during the ownership of J & M Tymm who took over the site in 1855 when only 5 kilns were in operation. In spite of the reduced number of working kilns, Tymms were able to produce sufficient quantities of lime to warrant the alterations made to the wider site, such as those identified in the recent research and excavation. As a result the lime kilns were able to continue to be a viable business, albeit reduced from their early 19th century scale, until their final winding up in 1896.

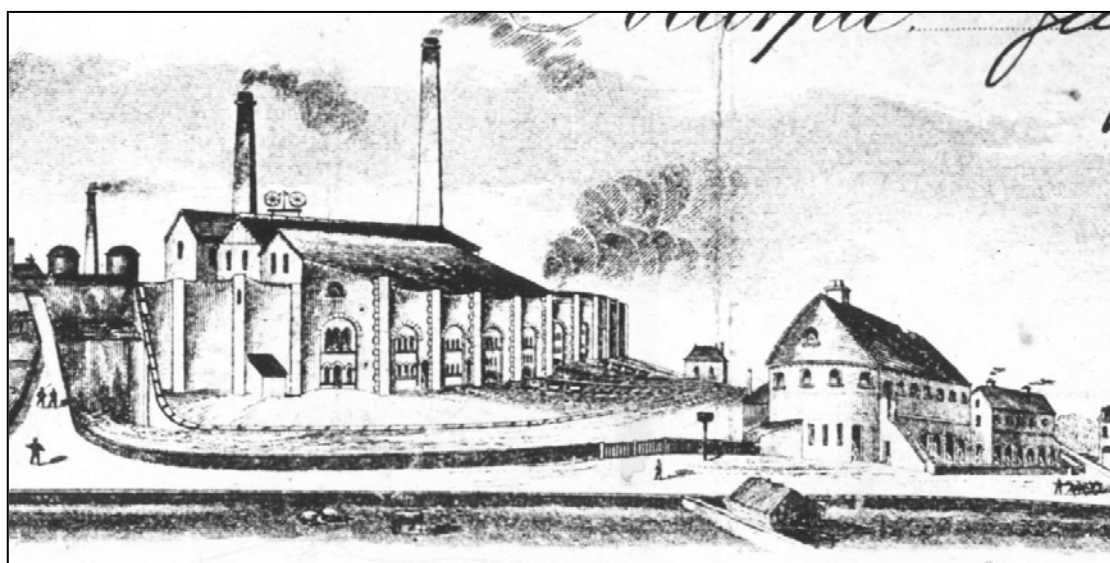


Figure 33. Detail of letterhead of J & M Tymm showing the lime kilns in the mid 19th century. Marple Local History Society.

7. Archive

The archive comprises archaeological photographs, drawings and research notes as well as a large collection of ceramic, metal and glass finds. This archive is currently held by Salford Archaeology and a copy of this report will be forwarded to the client following the publication of the site report.

A copy of this report will be deposited with the Greater Manchester Historic Environment Record held by the Greater Manchester Archaeological Advisory Service.

8. Acknowledgements

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The on-site excavations were conducted by Sarah Cattell, Mandy Burns, Sarah-Jayne Murphy and Penny Dargan-Makin. This report was written and illustrated by Sarah Cattell, Richard Ker and Stuart Harris.

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Grace's Guide – Hodgson and Stead. http://www.gracesguide.co.uk/Hodgson_and_Stead Accessed 18/01/2017

Mapping.

Plan of the Township of Marple in the County of Chester, c 1821 (CRO D 4693/1).
Plan of the Township of Marple in the Parish of Stockport in the County of Chester, 1850 (CRO EDT 262/2).
OS 6in to 1 mile Derbyshire sheets V.NW & V.SW, surveyed 1871-9, published 1882.
OS 1:2500 Cheshire sheet XX.2, surveyed 1872.
Marple Colliery Mountain Mine, 1883 with additions to 1896.

OS 1:2500 Cheshire sheet XX.2, Edition of 1909, surveyed 1907.
OS 1:2500 Cheshire sheet XX.2, Revision of 1934, revised 1934-5.
OS 1:2500 SJ 9688-9788 & SJ 9688-9788, revised 1969, published 1972.

OS licence no: 100050261.

Appendix 1: Figures

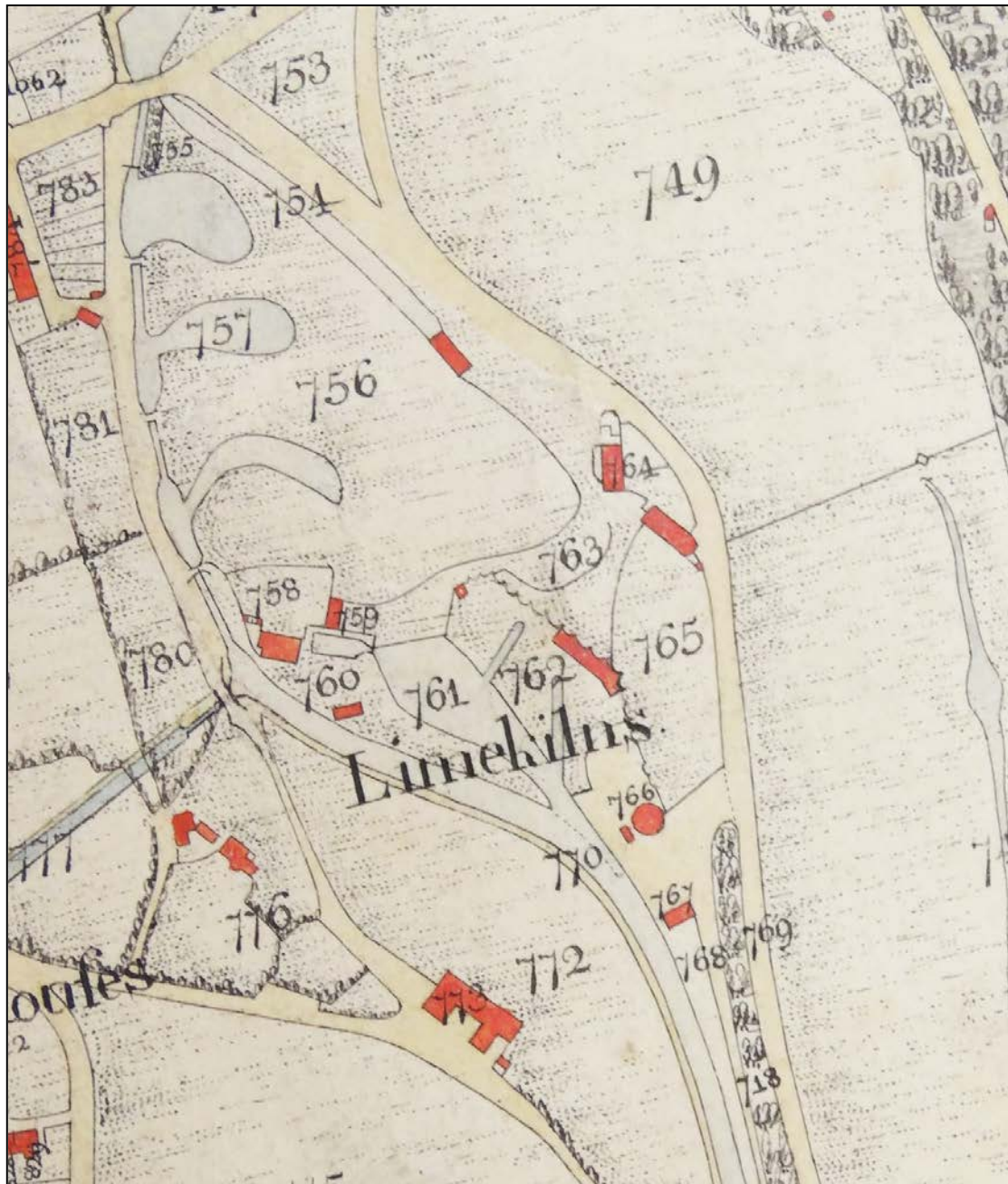


Figure. 34. Lime kilns and vicinity on the Plan of the Township of Marple in the County of Chester, *c* 1821 (CRO D 4693/1). After Arrowsmith, 2015.



Figure. 35. Lime kilns and vicinity on the Marple tithe map (CRO EDT 262/2). After Arrowsmith, 2015.



Figure. 36. Lime kilns and vicinity on the 1867 sale plan for the estate of Peter Arkwright (GMCRO Q15). After Arrowsmith, 2015.

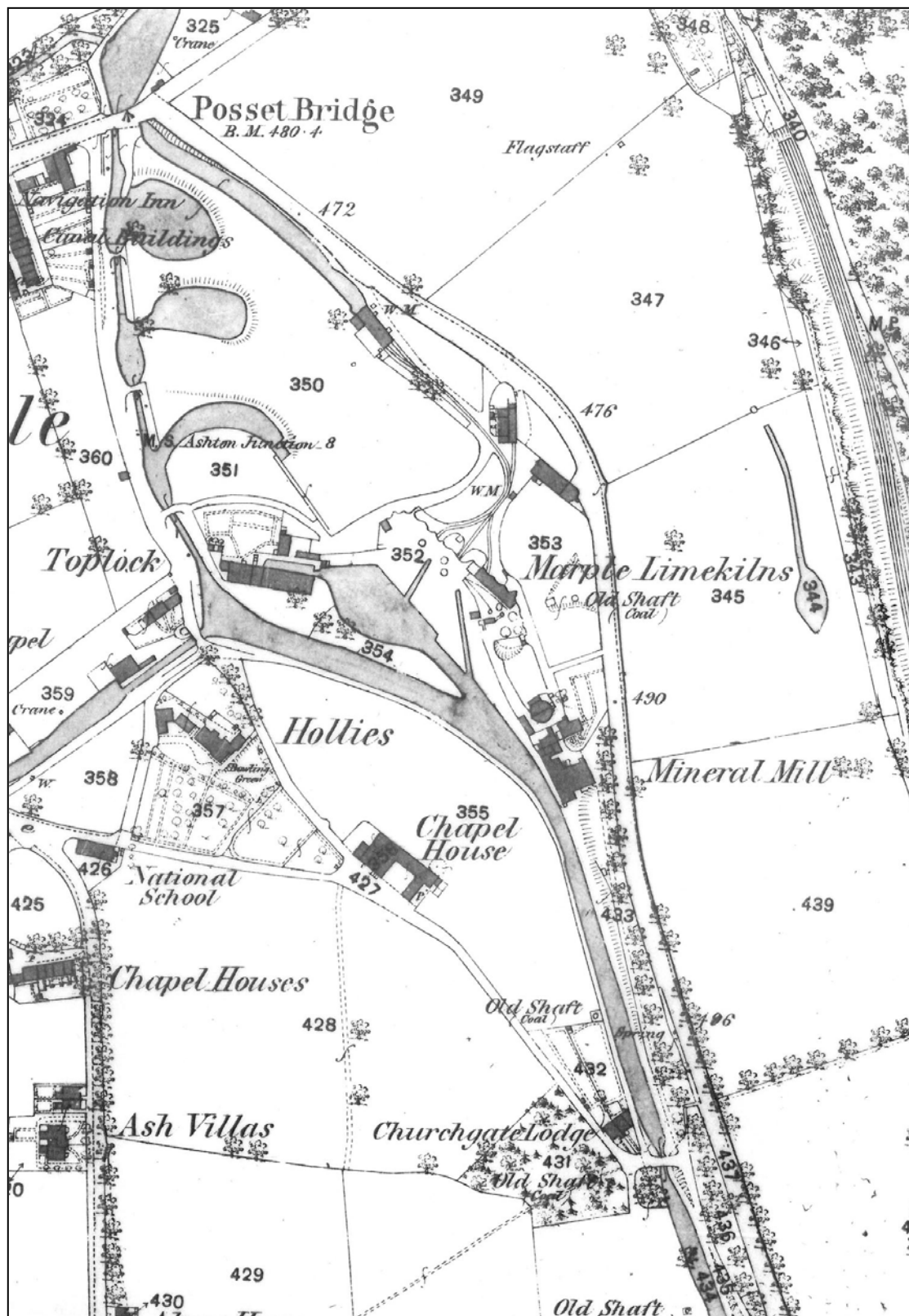


Figure. 37. Lime kilns and vicinity, including coal shafts, on OS 1:2500 Cheshire sheet XX.2, surveyed 1872. After Arrowsmith, 2015.



Figure. 38. Lime kilns on plan of Marple Colliery, 1883. After Arrowsmith, 2015.

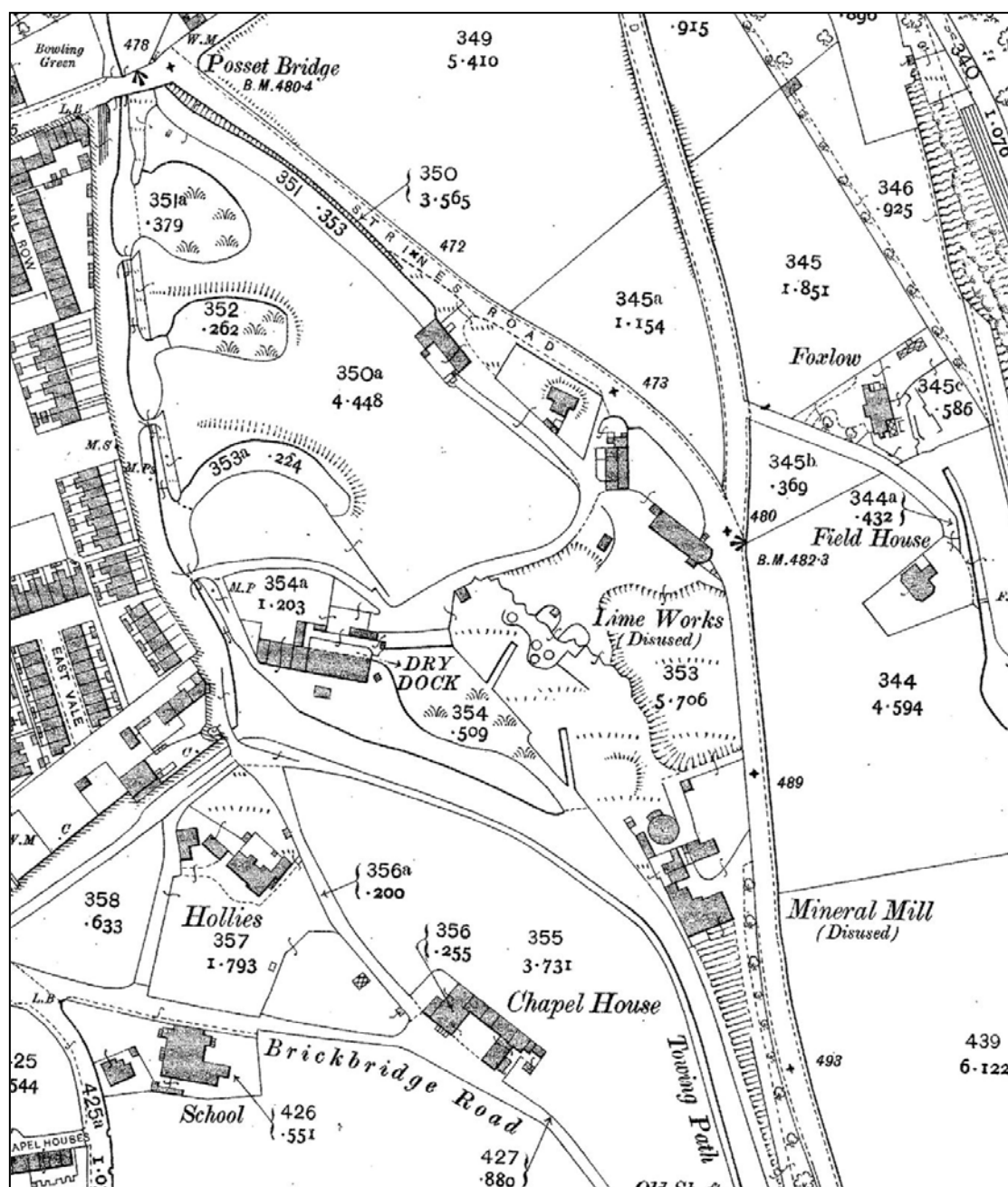


Figure. 39. Lime kilns and vicinity on OS 1:2500 Cheshire sheet XX.2, Edition of 1909, surveyed 1907. After Arrowsmith, 2015.

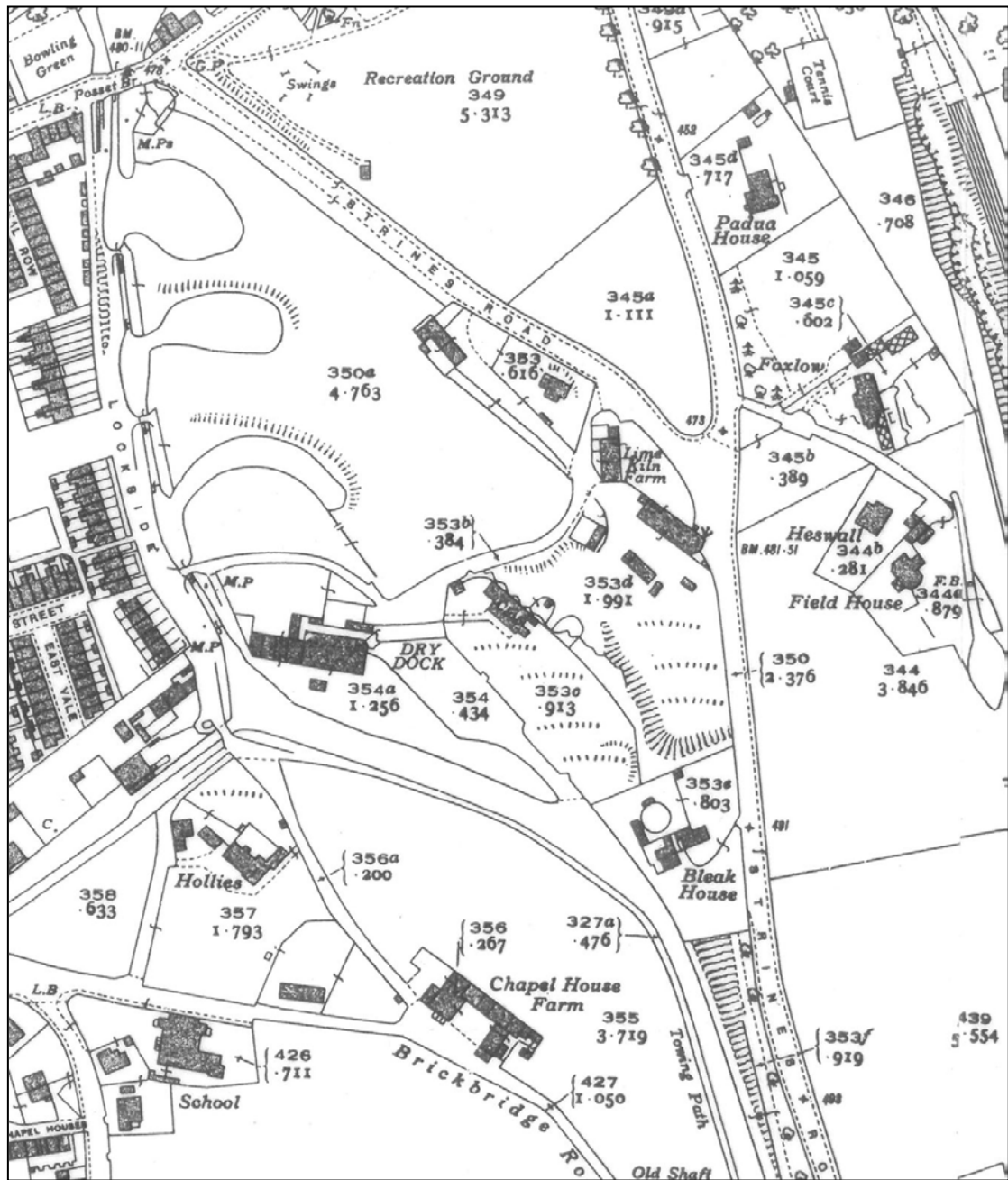


Figure. 40. Lime kilns and vicinity on OS 1:2500 Cheshire sheet XX.2, Revision of 1934, revised 1934-5. After Arrowsmith, 2015.

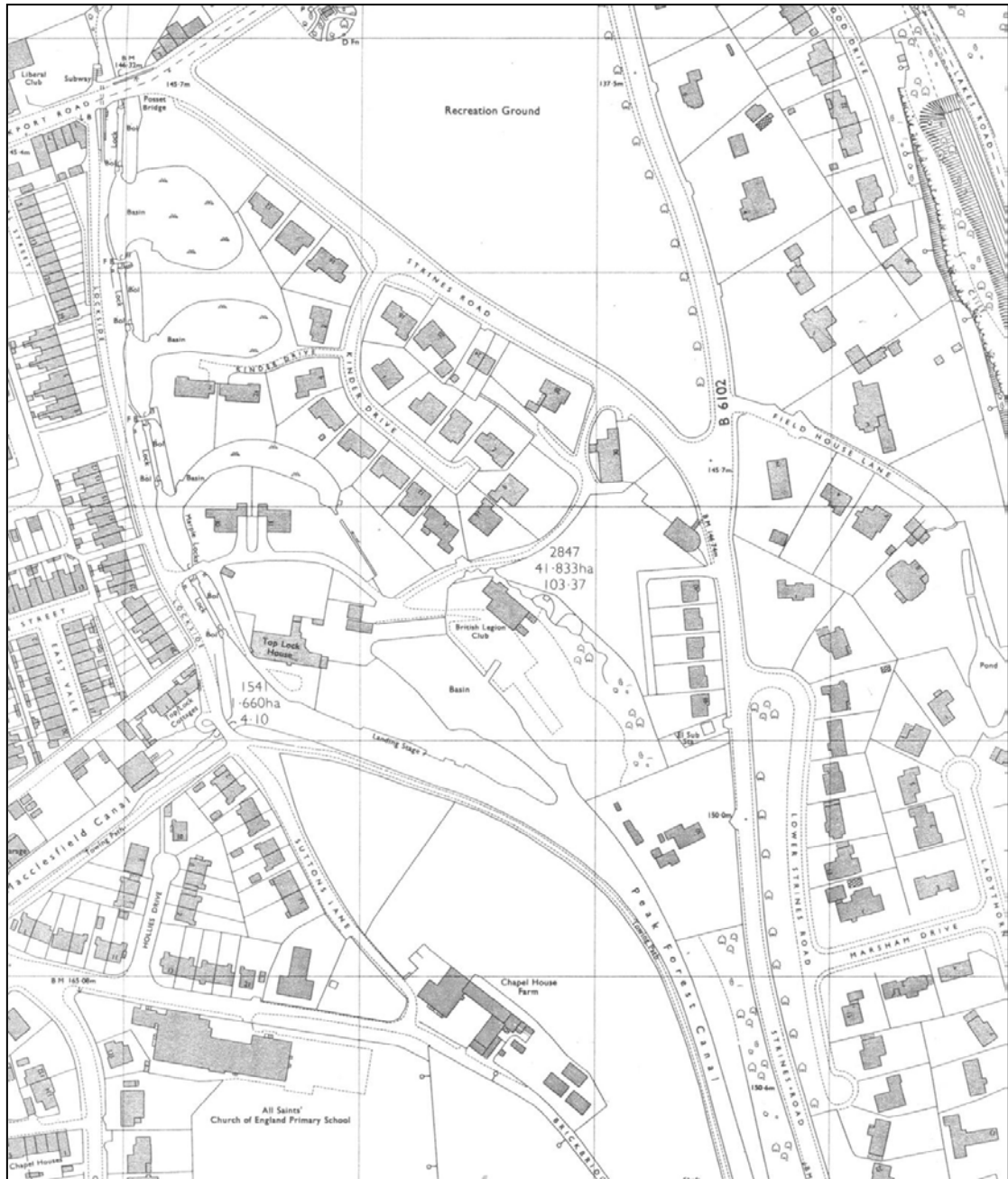
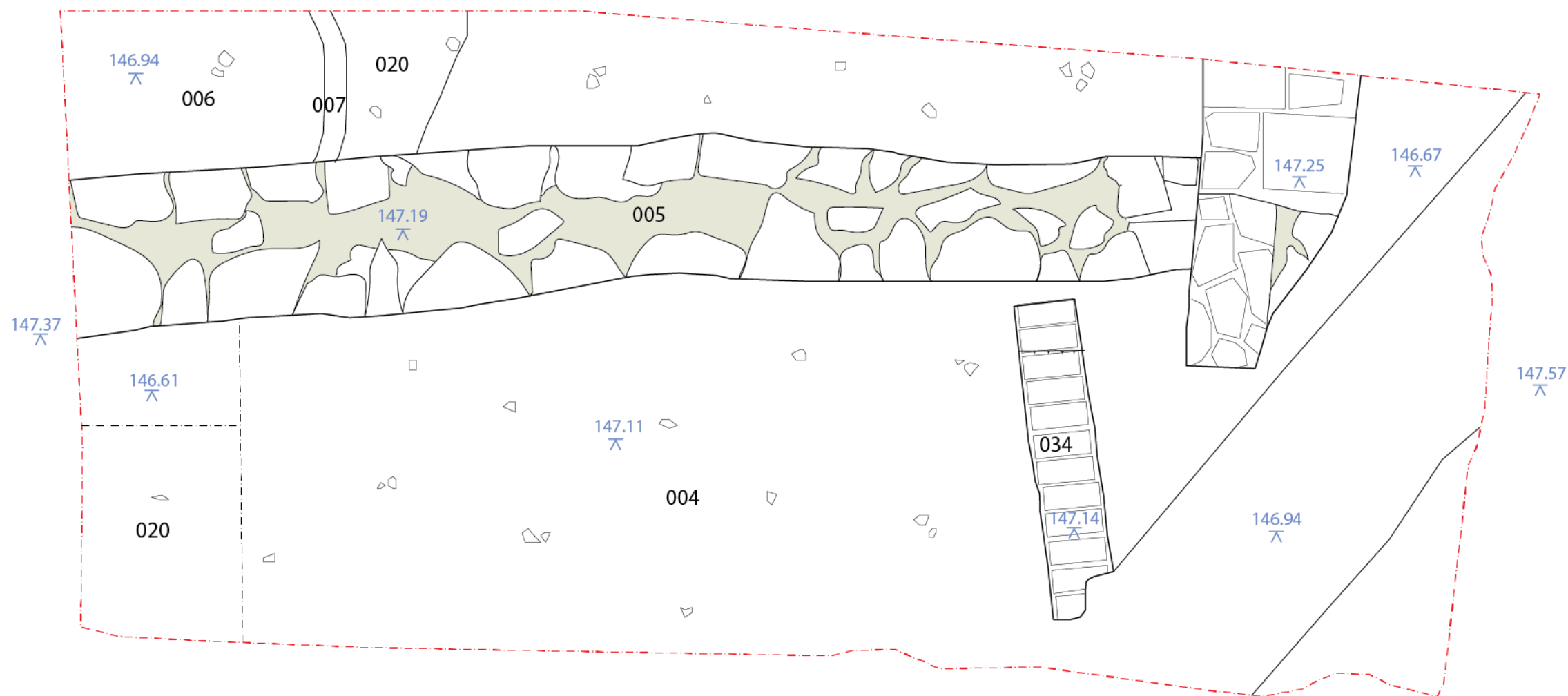
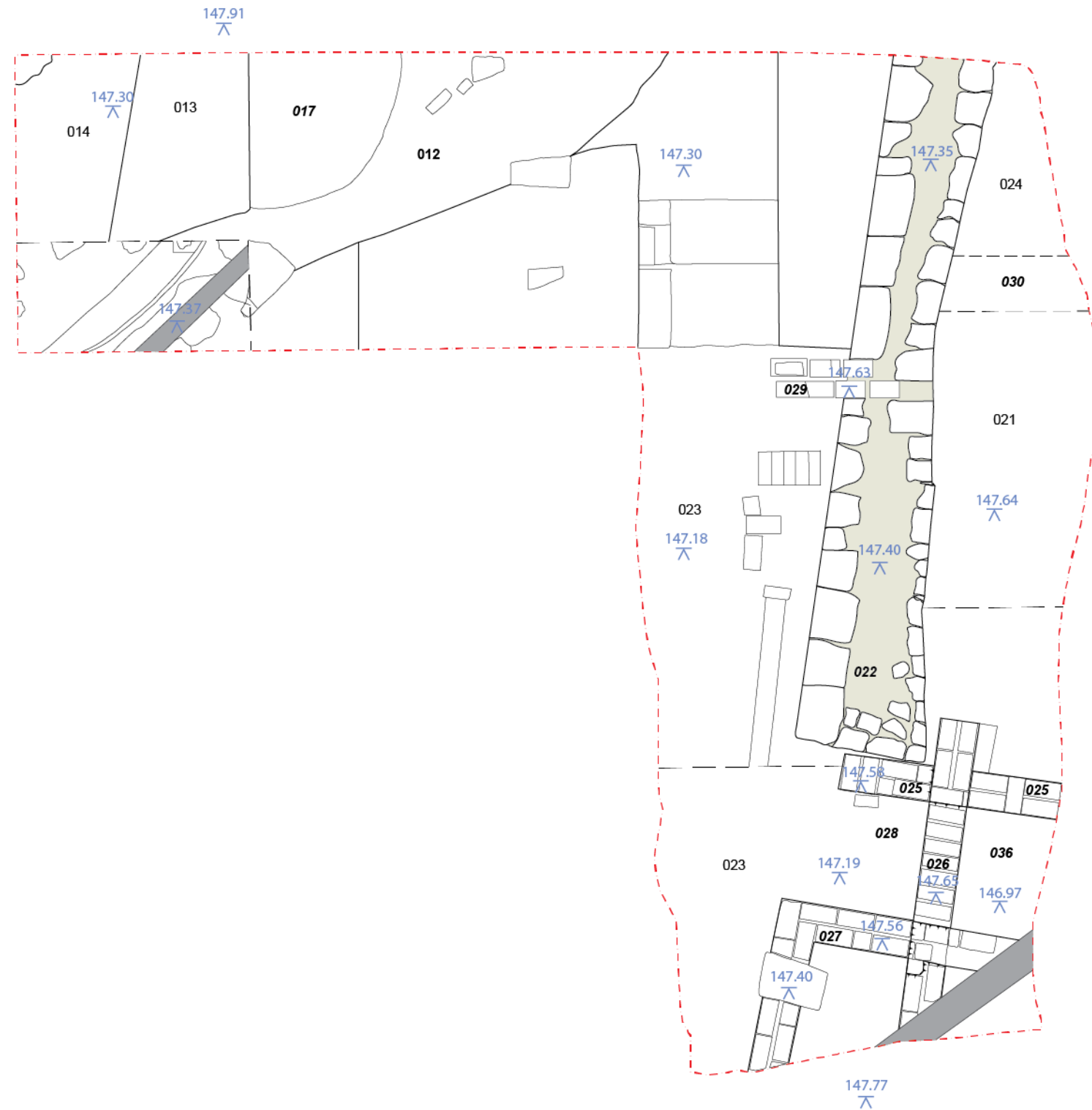
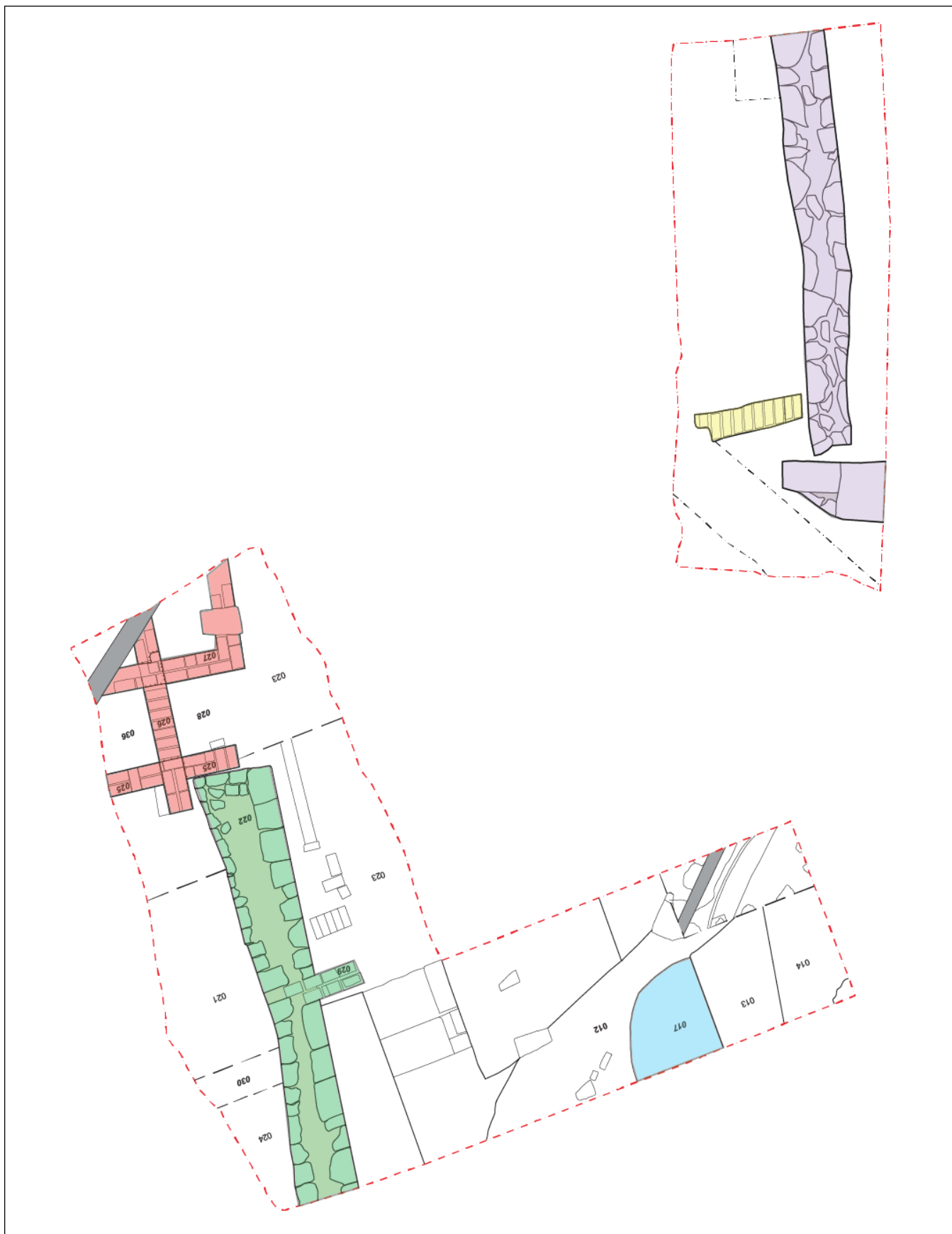


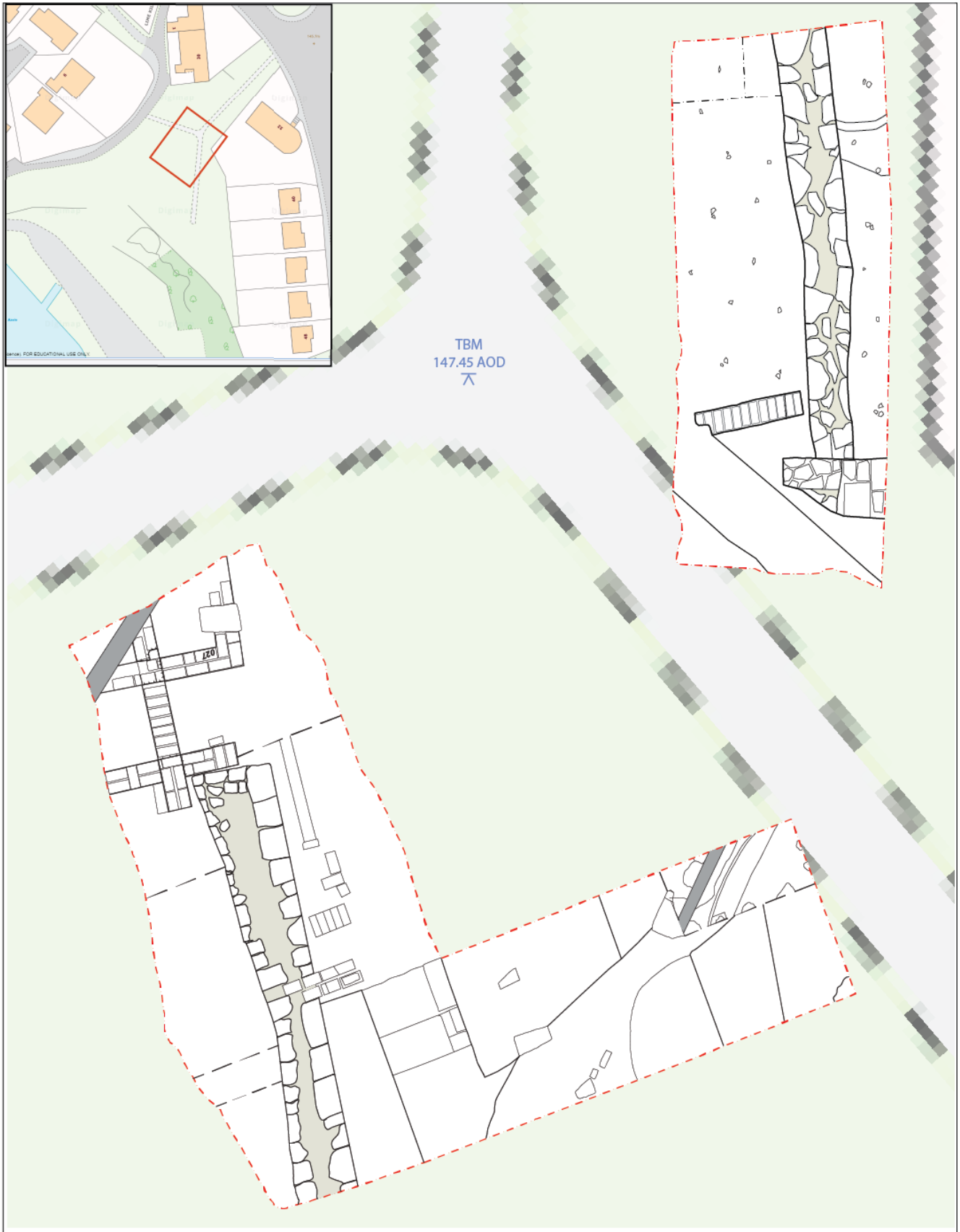
Figure. 41. Lime kilns and vicinity on OS 1:2500 SJ 9688-9788, revised 1969, published 1972. Reproduced by permission OS Licence No. 100050261



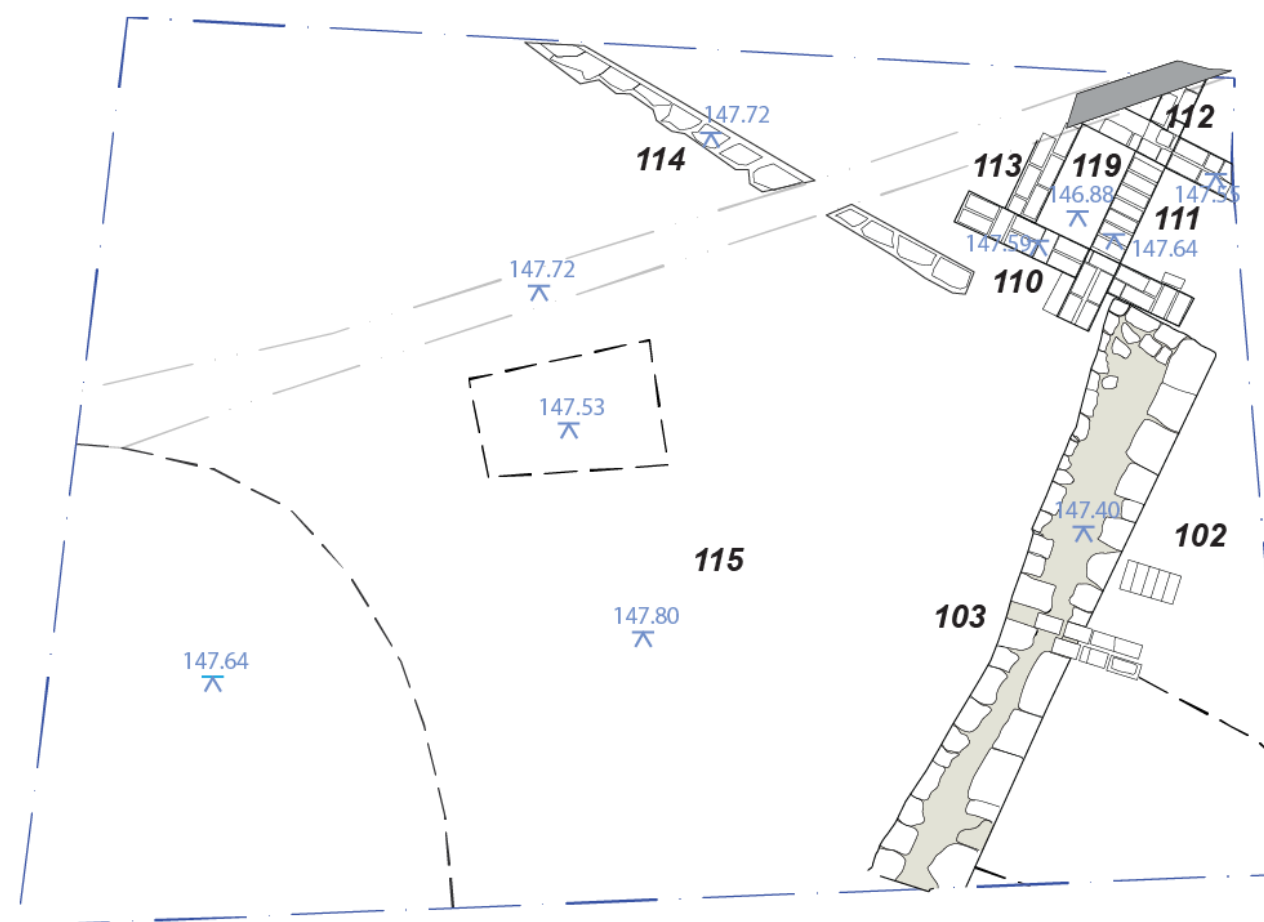


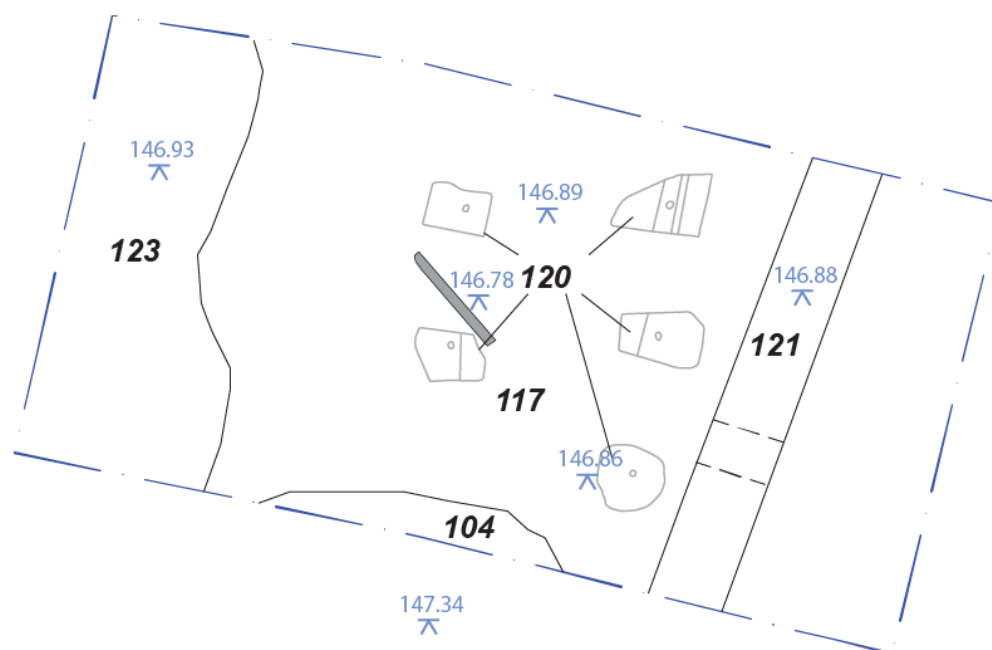


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The Centre for Applied Archaeology	Centre for Applied Archaeology College of Science and Technology The Crescent Salford M5 4WU	Title: Composite Plan of Trenches 1 and 2 based on current OS mapping. Licence No. 100050261	Site Name: Marple Lime Kilns Site Code: MLK16 Drawing Ref: Fig.45 Date Drawn: 12/12/16 Drawn By: SH & SC	







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College of Science and Technology
The Crescent
Salford
M5 4WU

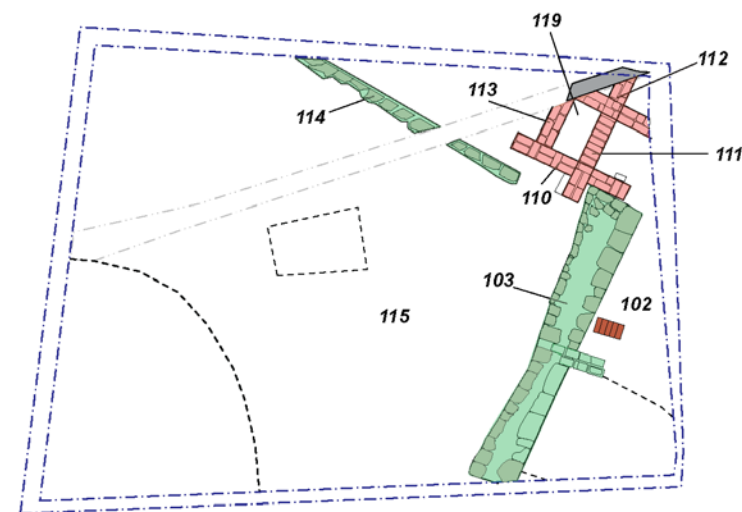
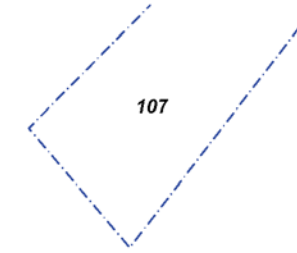
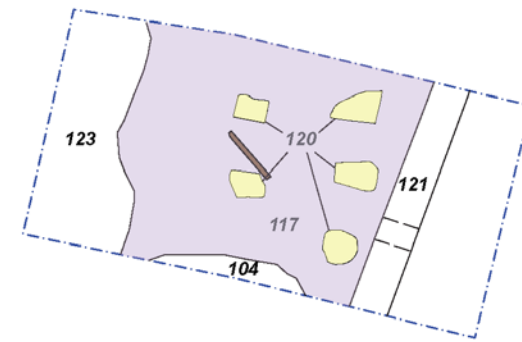
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2017 season**

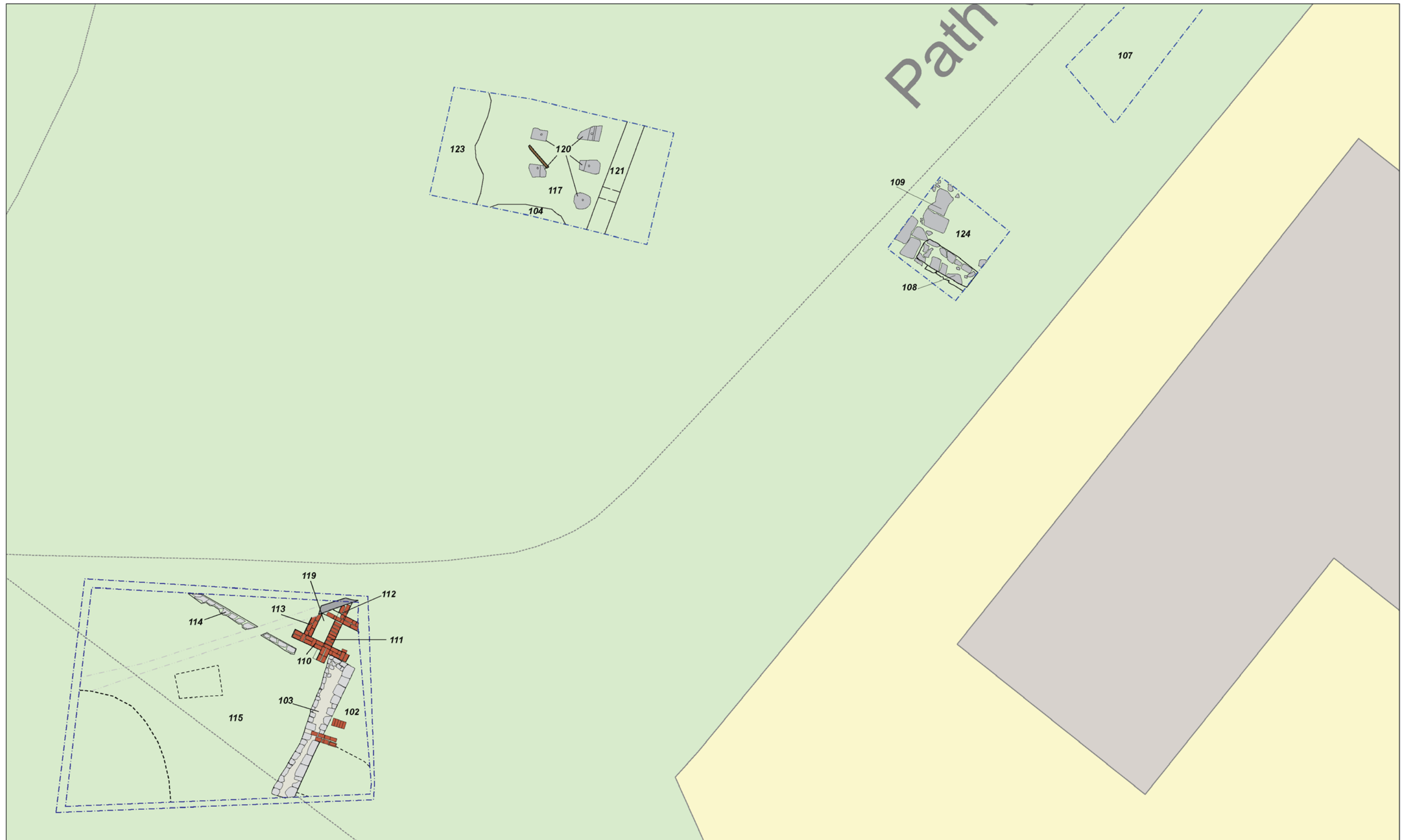
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Site Code: MLK17
Drawing Ref: Fig 47
Date Drawn: 31/06/17
Drawn By: RK & SC





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The Centre for Applied Archaeology	Centre for Applied Archaeology College of Science and Technology The Crescent Salford M5 4WU	Title: Plan of Test Pit 3 2016 Season	Site Name: Marple Lime Kilns Site Code: MLK17 Drawing Ref: Fig. 48 Date Drawn: 31/06/17 Drawn By: SC & WO		





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M5 4WT

Site plan superimposed on the
modern ordnance survey map

Site Name: Marple Lime Kilns
Site Code: MLK17
Drawing Ref: Fig 50
Date Drawn: 30/06/17
Drawn By: RK & SC

0 5 m
Scale at A3 1:100



Key:

Mortar	Brick
20th C pipe	102 Context No.
Stone	— — — Sondage

Appendix 2: Context Lists

2016 Season

Context Number	Trench	Description
(001)	All	Topsoil
(002)	All	Subsoil with frequent inclusions of stone and brick fragments with lenses of yellow.
(003)	1	Compacted dark brown silty loam with frequent inclusions of angular brick and stone that covered all of Trench 1.
(004)	1	Light grey compact grainy sandy silt with frequent inclusions of medium stones and brick with patches of mortar. Lies directly below (003). Large iron bolt found to the east.
(005)	1	Stone wall, moderately disturbed and truncated to west. Constructed from yellow sandstone of varying sizes, larger to west.
(006)	1	Second, lower light grey layer (lighter than (004)) with frequent inclusions of mortar and small brick fragments. Lies below (007).
(007)	1	Thin black, friable layer between (006) and (020) rich in coal and clinker. No more than 0.05m thick.
(008)	1	Red-brown compact sandy silt with frequent small fragments of stone, brick and mortar at the eastern end of Trench 1.
(009)	1	Mid-grey-brown sandy silt with frequent tiny pebbles and occasional large stones. Cut by (010) and lies against (004) at western end of the trench.
(010)	1	Loose black charcoal rich linear. 0.30m wide and runs NE-SW across (009). No inclusions.
(011)	1	Layer of medium sized (<0.10m) sub-angular stones lying along the western edge of Trench 1.
(012)	2	Very compacted dark black-brown silt with areas of black staining. Frequent inclusions of clinker and coal and lenses of yellow clay.
(013)	2	Purple compacted sandy silt with occasional inclusions of mortar and clinker fragments. Lies against (012).
(014)	2	Layer of grey gritty silt at southern end of Slot 3, very similar to (004).
(015)	2	Light grey gritty layer with frequent inclusions of

		mortar and small brick fragments.
(016)	2	Dark grey-brown silty layer with frequent inclusions of large stone and brick fragments at southern end of Slot 3.
(017)	2	Compact layer of flat stones set in dark black-brown gritty silt with frequent inclusions of very small (<0.05m) pebbles. Possible tramway bedding surface.
(018)	2	Yellow-brown sand with frequent inclusions of small (<0.10m) stones. Viewed in north facing section of Trench 2.
(019)	3	Demolition layer of bricks, stones and 20 th century debris below (002). Same as (003).
(020)	1	Dark grey compacted sandy silt with very occasional fragments of small stones and bricks and frequent specks of mortar. Lies above (007).
(021)	2	Compacted yellow clay with frequent inclusions of degraded sandstone with flecks of lime mortar and stone.
(022)	2	Dressed stone wall with rubble and lime mortar core. Runs E-W at a depth of 0.70m. 0.60m wide.
(023)	2	Dark brown silty loam with frequent inclusions of stone, mortar, brick, tarmac and 19 th and 20 th century ceramics, metal and glass. Covers all of Trench 2 below (002).
(024)	2	Pinkish-yellow sandy clay with lenses of yellow sand and flecks of grey clay. Contained fragments of clay pipe. Lies against (022) and 0.34m thick.
(025)	2	Machine made frogged brick wall. 2 courses wide and 4 high with lime mortar. Aligned N-S and lies against (022), (028) and (036).
(026)	2	Machine made brick wall. 2 courses wide and 5 high laid with lime mortar with segmental arch on top course. Abuts (025) and (027) 0.23m wide and 0.75m long.
(027)	2	L shaped machine made frogged brick wall with lime mortar. Cut to N by pipe and abuts (026). 0.23m wide and ex length 1.40m.
(028)	2	Degraded slate surface between (025), (026) and (027). Extends 0.10m beyond ends of (025) and (027).
(029)	2	Short section of machine made brick wall set within and extending southeast from (022). 2 courses wide and 4 high 0.23m wide. Truncated c.0.20m SE of (022).

(030)	2	Sandy grey clay rich in degraded mortar with flecks of lime and charcoal. Lies below (021) and against (024).
(031)	1	Layer of yellow sandstone fragments below (009). 0.20m thick.
(032)	1	Demolition layer below (031) visible at the western end of Trench 1 with frequent inclusions of stone and brick fragments.
(033)	1	Area of black clinker/charcoal with flecks of lime between (034) and (005).
(034)	1	Handmade brick wall. Extends north from (005). 2 courses wide with black mortar.
(035)	1	Friable mixture of brick dust, mortar and clay, inorganic area to the west of (034). Demolition layer containing tiles glass and pottery.
(036)	2	Dark grey-brown friable sandy demolition layer between (025) and (027) to the west of (026). Contains a high volume of whole and fragmentary machine made bricks and charcoal.
[037]	2	Cut of cast iron pipe filled by (012).
(038)	2	Patch of black clinker covering (017) on eastern side of Trench 2 with frequent inclusions of charcoal fragments.

2017 Season

Context Number	Trench	Description
(101)	1 & 2	Topsoil
(102)	1 & 2	General demolition deposit covering whole site containing brick, stone, mortar, coal and clinker.
(103)	2	Dressed stone wall with rubble and lime mortar core. Runs E-W at a depth of 0.70m. 0.60m wide. Recorded in previous season as (022).
(104)	1	Layer of fragmented concrete c.0.20m thick in patches across the trench. Fragments of brick set within.
(105)	1	Layer of dark blackish-brown clinker on the northern side of the trench. c.1.20m wide and extends the full width of the trench. Frequent inclusions of coal, charcoal and occasional brick and stone fragments.
(106)	1	Second layer of compacted demolition debris

		directly below (002). Comprises densely packed sub-angular stones in a mid brown sandy loam.
(107)	TP1, 2 & 3	Demolition layer containing a large proportion of handmade bricks and sub-angular stones with mortar and 19 th and 20 th century ceramic, glass and metal. Lies below (001) in all three test pits.
(108)	TP3	Stone wall with dressed outer courses and projecting foundation to west. Rubble core with white lime mortar. Runs NW-SE at depth of 0.10m and measures 0.60m x 1.60m
(109)	TP3	Stone wall abutting (008) to the south. Partially exposed, continues beyond northern trench edge. Similar construction to (008) but without foundation course. Excavated measurements 0.50m x 2.00m.
(110)	2	Machine made frogged brick wall. 2 courses wide and 12 high with lime mortar, aligned N-S. Recorded in previous season as (025).
(111)	2	Machine made brick wall. 2 courses wide and 9 high laid with lime mortar with segmental arch on top course and rubble at base. Abuts (010) and (012) 0.23m wide and 0.75m long. Recorded in previous season as (026).
(112)	2	Machine made frogged brick wall with lime mortar. Cut to N by pipe and abuts (011) and (013) to west. 0.23m wide and ex length 1.00m. Recorded in previous season as (027).
(113)	2	Machine made, frogged brick wall abutting (010) to the west. 2 courses wide and 9 high, bonded with lime mortar. 0.23m wide x 0.75m long. Encloses (018) and (019).
(114)	2	Fragmentary remains of stone wall, runs N-S and abuts (003) to south. Single dressed course of irregular sandstone blocks laid 2 courses high with lime mortar. Sits within (015) and cut by 20 th century pipe. Section of cast iron rail found in central section of wall.
(115)	2	Compacted reddish-yellow clay with grey lenses and frequent inclusions of degraded sandstone with flecks of lime mortar and stone. Possibly redeposited. Recorded in previous season as (021).
(116)	1	Dark grey-brown compacted silty loam with frequent inclusions of stone & brick fragments,

		charcoal and mortar. Lies below (006) and over (017), cut by [021].
(117)	1	Compacted layer of small (<0.10m) stones in a dark grey-brown silt. Cut by cast iron pipe and had stones (020) set within. Possible tramway bedding.
(118)	2	Demolition layer of whole and broken machine made bricks and mortar lying between walls (010), (011), (012) and (013).
(119)	2	Laid brick surface contained by walls (010), (011), (012) and (013) at a depth of c.1.00m.
(120)	1	Two alignments of limestone blocks running NE-SW spaced 0.80m apart. Each stone lay 0.50-0.60m from the previous and all had a single central hole Ø 0.05m which lay within a linear groove. Size ranges from 0.30/0.40m x 0.40/0.55m. Possible tramway sleepers.
[121]	1	Cut of NE-SW linear feature crossing southern end of T1. Ex depth 0.20m x 0.40m wide.
(122)	1	Compacted reddish-yellow clay fill of [121] with few inclusions of small stones
(123)	1	Mid yellow sandy silt lying against (117) at northern end of T1, directly below (105). Frequent inclusions of stone fragments (>0.05m). compacted but loose when trowelled.
(124)	TP3	Mid-brown silty loam, very compact with frequent inclusions of small (<0.10m) stone fragments, charcoal and occasional lenses or sandy mortar.

Appendix 3: Finds Assessment

Excavation Statement, Lime Kilns Marple.

K.Whittall

Introduction

This statement concerns the archaeological material recovered from the Lime Kilns, Marple Excavations, carried out by the Centre for Applied Archaeology, University of Salford on behalf of Mellor Archaeological Trust. The works will formed part of the Old Knows Legacy Project and the aims of the works was to further assess the identified archaeological remains with an aim of furthering the understanding of the origin of the site and its subsequent development and abandonment. The findings from these works will inform the future treatment of the area and enhance the presentation to the wider public, and the material assemblage collected pertains to the materials recovered during excavation.

Assessment Aims and Objectives.

The principal aim of the present statement is to outline all classes of archaeological artefact data generated during the excavations at the site of Marple Lime Kilns. A statement of significance of the result from each element of the artefactual assemblage is given below based on the assessment work undertaken, and the original research themes expressed in the project design.

The objectives of the assessment correspond to and are prescribed to English Heritage MoRPHE guidelines project planning note 3 Archaeological Excavation, “3.7 Analysis and Report Production” [English Heritage:2008] and “Selection, Retention and Dispersal of archaeological collections guidelines for use in England, Wales and Northern Ireland” chap 4 pp24-29. [Society of Museum Archaeologist : 1993: PP 24-29]

- To assess the quantity, provenance and condition of all classes of stratigraphic artefactual and environmental data, with a view of retention and dispersal of materials in line with the stated Guidelines
- To comment on the range and variety of the material, with a view of expanding the collected archaeological data and formulating new archival resources of artefactual information.

- To formulate any further questions arising from the assessment of the excavated data, in line with the research agenda set out in the North West Research Framework.

Material Assessed.

The entirety of the stratigraphic archaeological artefact data along with a brief overview of the unstratified archaeological data was viewed and assessed for the production of this report. The quantifications are incorporated into each individual assessment.

Procedure of Assessment

The methodologies adopted for the assessment varied depending on the class of the material under examination. All classes of find were examined in full, with observations supplemented by the finds records generated during the course of the excavation.

Methodology

The assessment was carried out in accordance with the guidelines set out by English Heritage in the document Management of Research Projects in the Historical Environment [English Heritage : 2008] Planning Policy Note 3 and with reference to the Medieval [Newman and Newman :2007] and Post Medieval Research Agendas drafted by the North West Region Research Framework [Newman and McNeil: 2007]. The Selection, Retention and Dispersal of Archaeological Collections: Guidelines for use in England, Wales and Northern Ireland [Society of Museum Archaeologist: 1993], and “The Post Medieval Research Agenda” [Newman and McNeil: 2007] were also consulted for the formation of this report.

The finds recovered from the excavation comprised various categories of material including: Glass, Ceramic, Bone, Metal and Miscellaneous.

All categories of finds were examined in full, with observations in regards to the level of preservation, condition and any observable anomalies, such as decoration being noted. All categories of finds were given individual accession numbers in line with the Standard Operating Procedures [Whittall : *forthcoming*] for Salford Public Archaeological Resource Centre (SPARC), and all finds were photographed digitally using a Canon Power Shot G12 with a Canon 6.1 – 30.5mm zoom lens.

All images were then downloaded on to Digital archives held at the Centre *for* Applied Archaeology.

The Assemblage

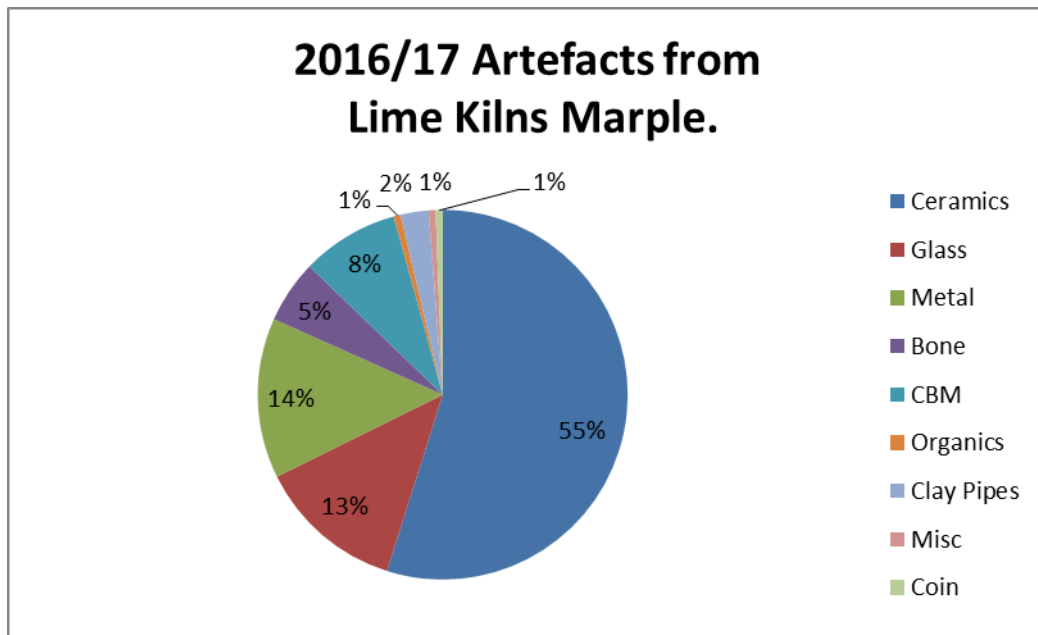
The artefacts recovered from the excavations at the Lime Kilns in Marple are consistent with this era of rapid industrial growth in this area. The finds are more reflective of the day to day living of the society at this time. The materials recovered from the combined years of excavation at the Lime Kilns are show in the table below.

Material	Count
Ceramics	180
Glass	42
Metal	46
Bone	18
Building Materials (CBM)	28
Organics (Shell/Leather)	2
Clay Pipes	8
Misc	2
Numismatics	2
Total	328

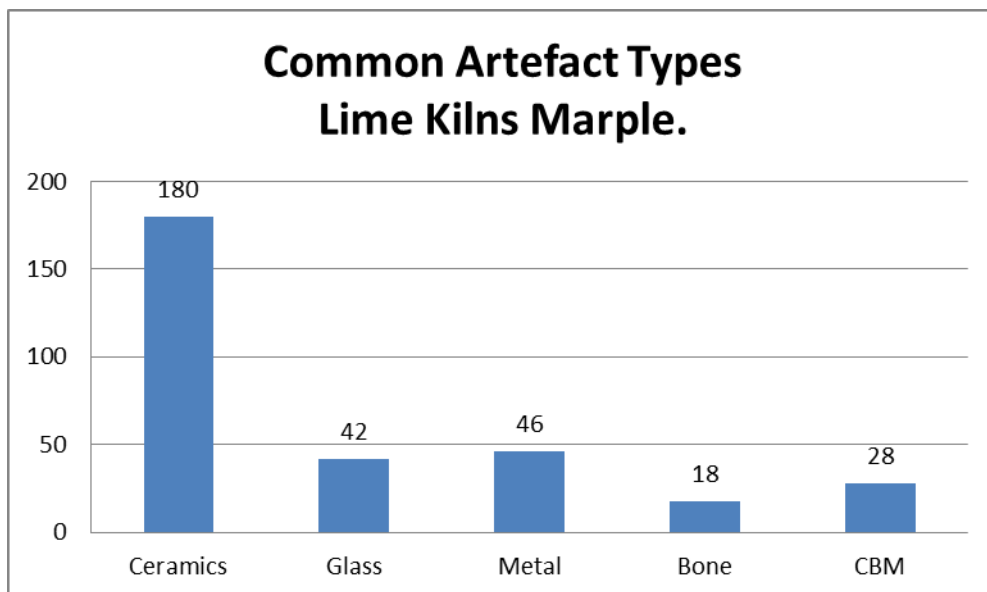
Table showing the combined years of materials recovered from the site of the Lime Kilns in Marple.

The combined assemblage from both years of excavation at the Lime Kilns reflects that the site is highly disturbed. Based in a public area, there is little to prevent artefact movement by foot fall or removal. Although the site was used as housing during some periods, the low levels of artefact recovery mean that this assemblage is not a true reflection of the artefactual remains with the site.

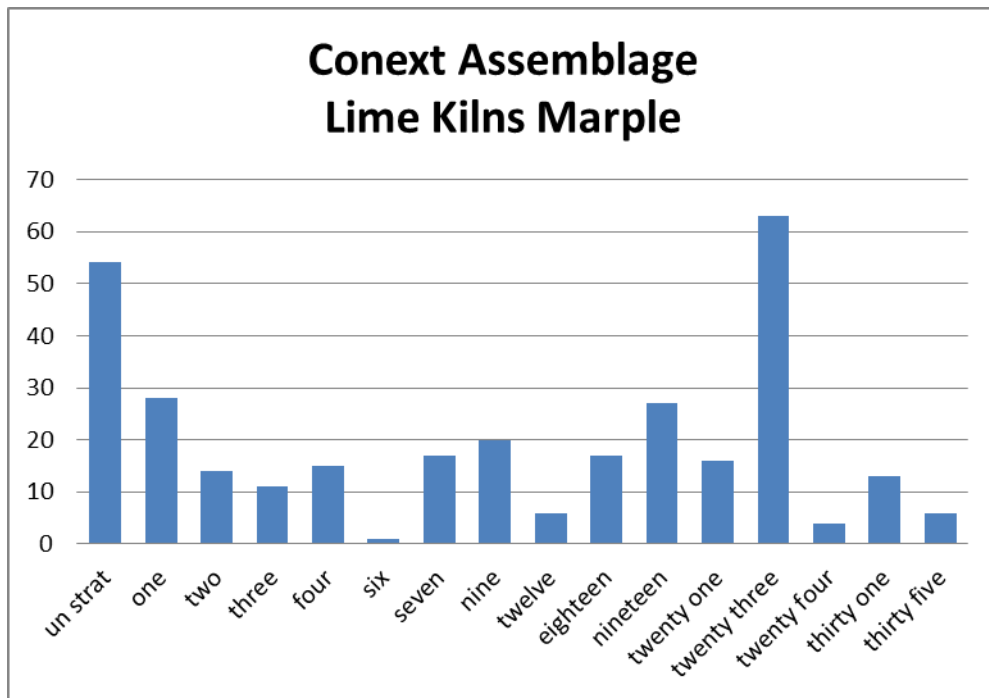
The majority of the assemblage is ceramics accounting for 55% of the total assemblage, is was an expected outcome of the excavation along with a predominance of glass (13%) and metals (14%). A material breakdown of the Lime kilns assemblage can be found in the chart below.



The bar graph below outlines the commonality of the items recovered from the lime kilns excavation, which show a similar pattern to the pie chart, a dominance of ceramics followed by glass and metal.



The below chart outlines the productivity of the contextual record in regards to artefact recovery, this allows us to ascertain the potential significance of the sites stratigraphy.



To conclude this statement, the assemblage and distribution of artefacts recovered from the excavations at the Lime Kilns number far fewer than anticipated, however, given consideration of the ease of access to this site, the assemblage does reflect some detail of the activities around and within the Lime Kilns during their use. This assemblage would be expected to increase with depth, however, these items do not reflect the industrial heritage of the area, and this assemblage presents a more social over view of the workers within the Lime Kilns.



Example of the fine Ceramic tiles recovered from the Line Kilns in 2016



Clear glass bottle with teaspoon measurements, possibly medicinal from 2017 excavations



Delicate green transfer cup with tree design, recovered from 2016 excavations



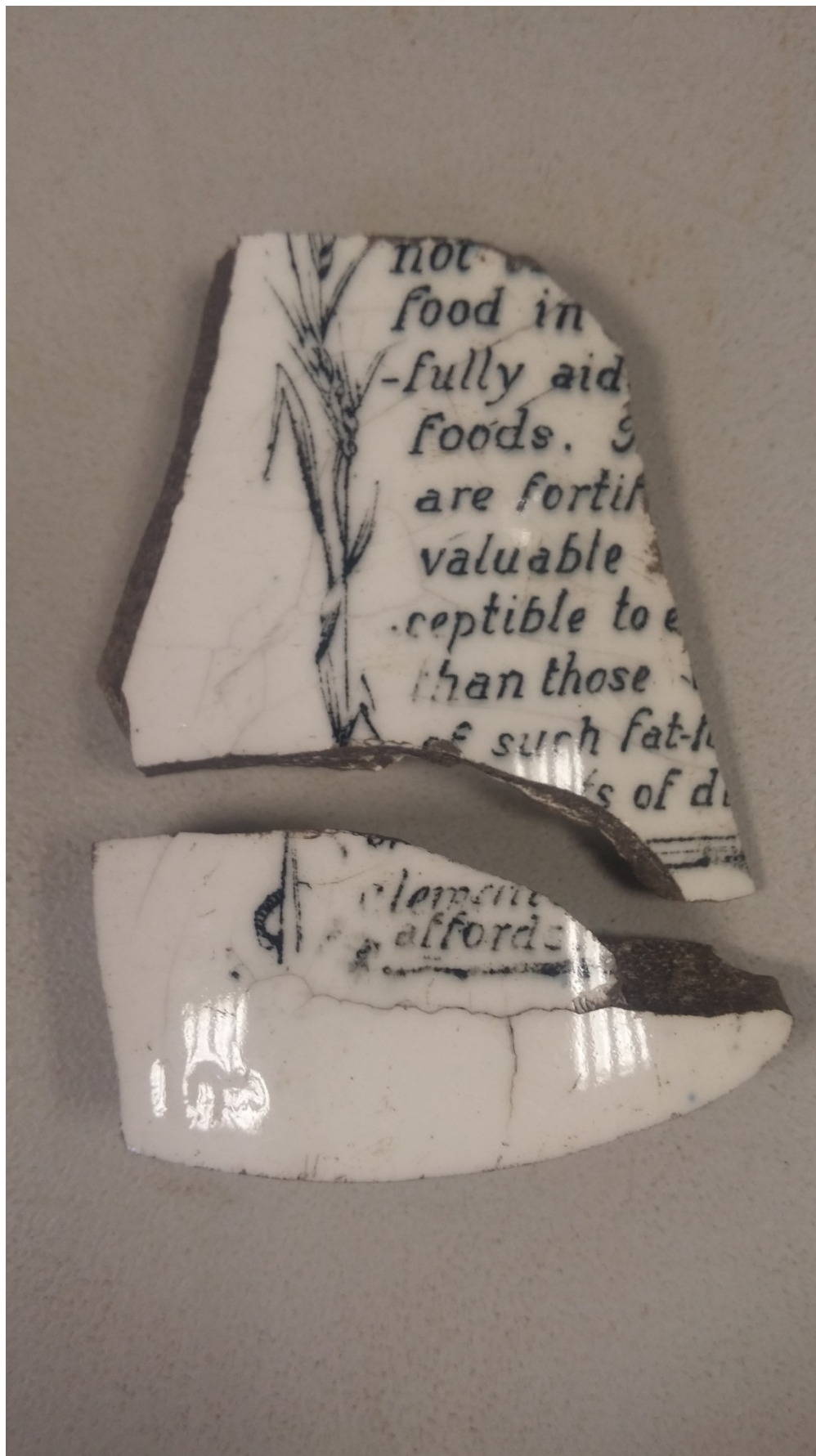
Part of the upper section of a leather shoe/boot recovered from 2017 excavations



Possible medicine bottle with liquid still present and measurements set out along the side, recovered from the 2016 excavations

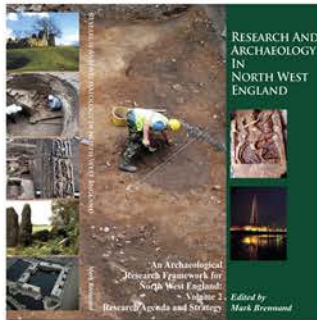


Small OXO bottle recovered in 2016

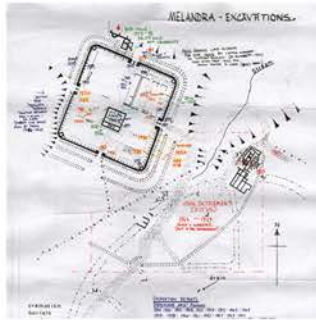


Part of a cup recovered from 2017 excavations.

CONSULTANCY



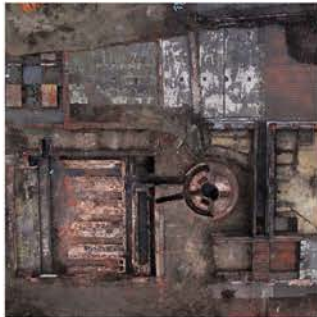
DESK BASED ASSESMENTS



WATCHING BRIEF & EVALUATION



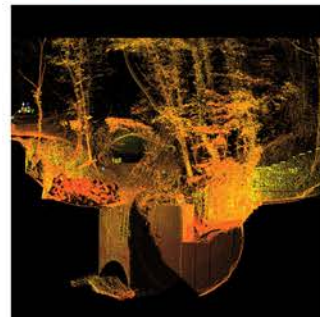
EXCAVATION



BUILDING SURVEY



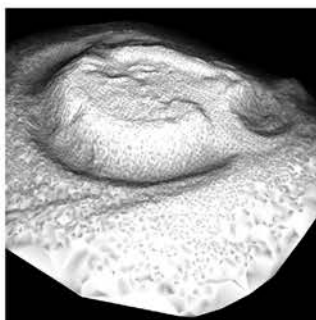
3D LASER SCANNING



COMMUNITY INVOLVEMENT



LANDSCAPE SURVEYS



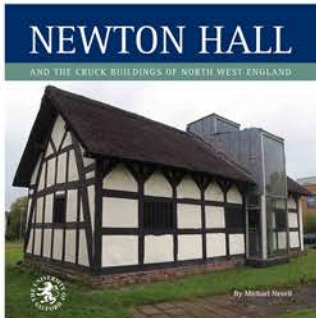
GEOPHYSICAL SURVEYS



WORKSHOPS & VOCATIONAL TRAINING



RESEARCH PUBLICATIONS



SEMINARS, DAYSCHOOLS CPD EVENTS

