

Post-Medieval Lime Kiln  
at the former Mount Pits  
Thetford Road

Brandon  
Suffolk



**Heritage Asset Recording**



July 2011

**Client: CgMs Consulting**

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**Post-Medieval Lime Kiln at the former Mount Pits, Thetford Road,  
Brandon, Suffolk**

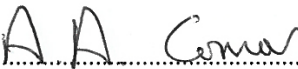
*Heritage Asset Recording*

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## Summary

*On 13th June 2011, Oxford Archaeology East conducted an archaeological survey of the remains of an upstanding lime kiln located at Mount Pits, Thetford Road, Brandon. The kiln is located on the edge of a housing development site on the former Mount Pits quarry which has been subsequently in-filled to allow for the construction of a residential estate of up to 70 houses.*

*The kiln is intended to be retained within the development area, to be protected through infilling and burial with the possible inclusion of an information board. The results of this survey will assist Suffolk County Council Archaeology Service to determine the strategy for clearance, infilling and burial of the kiln and its long-term preservation.*

*The survey revealed the survival of part of a chalk-built kiln, depicted on early 20th century ordnance survey maps as an "Old Lime Kiln". Despite its basic and traditional style of construction, the kiln is thought to date to the mid to late 19th century and to have fallen out of use by 1905. Cartographic evidence suggests it was one of two lime kilns associated with the chalk quarrying in the immediate area and is the last surviving evidence of the quarrying activity on the Mount Pits site.*

*The shape of the structure in plan would indicate that the truncated chamber originally curved around a central void where the kiln "pot" would have been located. The openings on the south and western sides are where part of the chamber has been demolished. The original opening is likely to have been the square-headed opening recorded on the eastern side.*



## 1 INTRODUCTION

### 1.1 Location and scope of work

- 1.1.1 A program of archaeological recording was conducted on the remains of a lime kiln at the former Mount Pits, on the south side of Thetford Road on the outskirts of Brandon, in the Forest Heath district of west Suffolk (Figure 1).
- 1.1.2 This survey was undertaken in accordance with a Brief issued by Abby Antrobus of Suffolk County Councils Archaeology Service (Antrobus 2011) (Planning Application F/97/453), supplemented by a Specification prepared by OA East (Fletcher 2011).
- 1.1.3 The work was designed to assist in defining the character, age and extent of the lime kiln structure, in accordance with the guidelines set out in *Planning Policy Statement 5: Planning for the Historic Environment* (Department for Communities and Local Government 2010). The results will enable decisions to be made by Suffolk County Council, on behalf of the Local Planning Authority, with regard to the treatment of the kiln and its long-term protection.
- 1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

### 1.2 Geology and topography

- 1.2.1 The site geology is glaciofluvial drift and till and the dominant soil type is deep, well drained sandy soils, very acid in places with subsurface pan. The site is located in the corner of the development, which is within a former chalk pit. As a result, the site topography varies significantly, however the kiln lies on the edge of the quarry, at approximately 19.00m OD.



## 2 AIMS AND METHODOLOGY

### 2.1 Aims

- 2.1.1 The objective of this survey was to determine as far as reasonably possible the location, nature, extent, date, quality, condition and significance of the lime kiln structure.
- 2.1.2 The results of the survey will assist Suffolk County Council Archaeological Services to determine a program of backfilling and long-term preservation of the structure *in-situ*.

### 2.2 Site Conditions

- 2.2.1 The kiln structure is located on the edge of the former chalk quarry which has been backfilled and developed for housing. The site was accessed through the development site and via the contractor's site office. The area around the kiln was set back from the development and construction, on a raised soil bank surrounded by shrubs and bounded by trees to the north and east (Plate 1).
- 2.2.2 Prior to the start of the survey, the area around the kiln had been cleared and many of the shrubs and plants removed to allow for access. It was agreed however, that some of the soil, significant roots and trees were in fact supporting the structure and their removal may cause collapse or damage.
- 2.2.3 Internally, the structure had a significant build up of soil, debris and general waste. Although an attempt was made to clear it, total removal was beyond the scope of the survey and may have resulted in structural instability. Although this debris made access difficult, a full internal access was possible and full measured, photographic and descriptive survey was still achieved.

### 2.3 Methodology

- 2.3.1 The survey was carried out using basic recording equipment. All building recording work carried out complied with standards and guidance set out in by the IfA (2001) and was undertaken by an experienced buildings archaeologist.
- 2.3.2 Elevations and plans were recorded at 1:20 and structural techniques and materials used and full descriptions and measurements of the structure were carried out whilst on site.
- 2.3.3 Photographic survey (equivalent to English Heritage Level 2) was carried out by the author using a 35mm camera (monochrome and colour) along with additional digital photographs using a high resolution Canon EOS 450D digital SLR camera.
- 2.3.4 The site was located from scaled plans provided by the developer. Due to the overhead coverage of trees and shrubbery, it was not possible to accurately obtain levels for the elevations using a GPS. The developer's drawings were also used for level data.
- 2.3.5 Site conditions were good, with constant sunshine and little wind.

### 3 HISTORICAL BACKGROUND OF THE AREA

- 3.1.1 The site is located on the south side of the Thetford Road on the edge of the historic core of the town of Brandon (Figure 1). Brandon is located on the north western edge of Suffolk and historically grew at a bridging point on the Little River Ouse. The town later became known as Brandon Ferry as a ferry once replaced the ford across the river. This name survived the demise of the ferry after a wooden bridge was built during the medieval period, later replaced by one of stone construction in the seventeenth century which was in use until the 1950s. The name Brandon Ferry continued well into the late 18th century and references to the High Street area as 'Ferry Street' continued into the 19th century. The Suffolk Landscape character Assessment ([www.suffolklandscape.org.uk](http://www.suffolklandscape.org.uk)) describes this area of Breckland as flat or very gently rolling plateaux with free-draining sandy soil that is chalky in parts.
- 3.1.2 Chalk has been quarried in and around Brandon for several centuries, either for use as building material or for the production of lime ("whiting"). Flint has been mined from the chalk beds within this area since Neolithic times and the well known flint mines of Grimes Graves are located just two and a half miles to the northeast of the town.
- 3.1.3 The chalk beds that spread through the east and south east part of England contain flint of varying quality, however, that found in Brandon was considered the best for the production of gunflints (Karklins 1984). The floorstone flint of the Brandon area was rediscovered in the 18th century and Brandon became the flint-knapping capital of the country by the 1790s (Goodwin 1983). Brandon became the main source of supply of gunflints to the British army and mines were sunk on heathland to the south east of the town. Within the town outhouses were converted into workshops for shaping the flint nodules into gunflints (Shaw, 1981). The defeat of Napoleon in 1815 and the end of the war in France saw the decline in the demand for gunflints and by the mid 19th century, the Brandon gunflint industry had become almost obsolete. A joining together of the Brandon flintmakers resulted in the creation of the Brandon Gunflint Joint Stock Company who found a market for the export of gunflints to South and North America as well as Africa, New Zealand, Spain and Turkey. Decline however continued after the First and Second World Wars and despite a small flourish after World War Two with exports to West Africa, the industry had totally disappeared by the start of the 21st century.
- 3.1.4 The flintmine at Lingheath, less than half a mile to the south east of the site were in use from the 1720s until the late 1930s and is perhaps the best documented and recorded flint mining site in the town.
- 3.1.5 The role of Mount Pits Quarry will be discussed in Section 5.

#### 4 ARCHAEOLOGICAL BACKGROUND

A search of the Suffolk Historic Environment Record, Listed Buildings and Historic Parks and Garden sites within a 500m radius of the kiln has returned the following records;

***Game Farm BRD 154 / Mon ID MSF18646***

In March 1999, a Prehistoric, mainly Middle Bronze Age site was discovered during evaluation trenching. The features found mainly included enclosure ditches, pits/postholes and spreads of charcoal containing pottery and flint. Possible Iron Age topsoil and ground surfaces were still intact buried beneath thick windblown sand. An excavation followed in late Summer and Autumn 1999 and recorded significant Late Bronze Age assemblage and features. (Unpublished document: Suffolk Archaeological Service. Evaluation Report. SAU, Gill D, Evaluation Report, SCCAS Report 99/15, March 1999).

***48 Woodcock Rise, Game Farm BRD 165 / Mon ID MSF20364***

Remains of at least two inhumations, one with the skull between its knees were found whilst digging garden terraces on a slope to south of the house. (Suffolk Archaeological Service. Excavation Report. SCCAS, Caruth J & Anderson S, 2002 (SSF50028).

***Taflins Quarry, STN 018 / Mon ID MSF7599***

The site was visited by J. Plouviez following description of galleries 'with antler pick marks on them' in a working chalk pit. Several narrow vertical mine shafts were noted, these probably represented a source of flint for the production of gun flints.

***Findspot, BRD Misc. / Mon ID MSF11196***

In March 1990 a site visit to an area of development and proposed development located a scraper and trimmed blade in spoil.

***Findspot, STN Misc. MSF7478***

Large flake found in June 1976.

***Findspot, BRD Misc. / Mon ID MSF9906***

Bottom stone of pudding stone quern with central spindle hole. Diameter 32 cms. Found in garden of J T Gibson.

***Findspot, BRD Misc. Thetford Road / Mon ID MSF9895***

Leaf shaped arrowhead. Found at Bennetts building site, Thetford Road, Brandon.

***Game Farm, Downham Way BRD 154***

Ten trenches and subsequent excavations ahead of a proposed residential development revealed an extensive and well-preserved Iron Age settlement spanning the 1st millennium BC. (Gill D (1999) Archaeological evaluation report: Game Farm, Downham Way, Brandon Report No 99/15. Suffolk County Council Archaeological Service reports )

***Flint-knapping Workshop (Monument Number 380159)***

A post-medieval flint-knapping workshop was found near Mounts Whiting Works Chalk Pit in 1938.

***Flint Knappers Arms (Monument Number 1306576)***

Constructed in the 19th century, this public house has a steep black and white timber gable over the main entrance. The exterior is a mixture of timber and herringbone brickwork and an outbuilding is the last surviving gun flint knappers workshop, thought to date to the late 18th century. It has been converted to an alternative use.

***Second World War pillbox site (Monument Number 1420750)***

No trace of this structure remains. It was located 300m east of Brandon High Street, between Gashouse Drove and the Brandon - Thetford Road, some 50m north of the Drove.

## 5 BACKGROUND AND DEVELOPMENT OF THE SITE

As part of the background research, a number of historic maps and directories were consulted in order to establish a date for the site and to record its development. Each map is briefly described and evaluated below in chronological order.

### ***Enclosure Map, 1809***

- 5.1.1 The Enclosure Map of 1809 was the earliest cartographic evidence found for the site (Figure 2). The map shows the study site divided into a number of plots leading off Thetford Road and owned/occupied by a number of different individuals.
- 5.1.2 There is evidence of possible chalk quarrying at this time as a square-shaped parcel of land fronting onto Thetford Road is simply labelled “chalk”.
- 5.1.3 There is no representation of the kiln or evidence of the chalk quarry extending any further on the map, nor is there any mention of it in the accompanying Awards description. Information relating to the land owner, Elizabeth Grief, was found in other record office documents. Wills and deeds associated with Elizabeth Grief revealed that she was married to William Grief whose occupation is noted as “flintnapper” and “purchaser of messuages between Thetford Road and Bury Road”. Although described as a “flintknapper” William held considerable amounts of land in Brandon and elsewhere, it is likely that his trade was to supply flint, much of which was sourced from quarrying within the chalk in the area, but there is no suggestion it was sourced from this site.
- 5.1.4 The function and use of the remaining parcels or strips of land which fall within the current housing development area, at this time, remains unclear from this map.

### ***Tithe Map, 1838***

- 5.1.5 The 1838 Tithe Map (Figure 3) shows little detail of the site, land use or any buildings/structures which may be present. The accompanying apportionment can be used to find the land use which corresponds to the plot numbers in this case 698-701. Plot 698 (the square-shaped parcel of land fronting onto the Thetford Road) was under the control/ownership of the “Brandon Overseers” and is described as a chalk pit which corresponds to the previous Enclosure Map. Plot 699 is described as an “Allotment of land”, owned and occupied by Robert Goodrich and its status was listed as “arable”. Plot 700 was owned and occupied by James Green and was known as “New Mill Piece”. Corresponding information for plot 701 could not be found.
- 5.1.6 The cartographic data would imply that other than the square parcel of land adjacent to the road (plot 698), the site was not yet used for quarrying at this time. The purpose of the Tithe map was to record all land used which qualified to pay taxes such as cultivated, industrial or residential land. If used for quarrying at this time, it would most likely be noted.

### ***1st Edition Ordnance Survey, 1885***

- 5.1.7 The 1st Edition Ordnance Survey Map (Figure 4) provides the first scaled and reliable representation of the site with land use, buildings and structures.

- 5.1.8 This map shows the first evidence of the extent of the chalk quarrying and the first evidence of the lime kiln structure. The map labels many of the plots surrounding the site as “Old Chalk Pit”, implying that they had gone out of use some time ago. However, the plot upon which the kiln is located appears to still be in active use, labelled as “Chalk Pit”.
- 5.1.9 There are several “Old Chalk Pits” represented on this map, indicating that if the land was not being quarried in the time of the previous tithe Map of 1838, the quarries had been opened and fallen out of use in the 47 years between the two mapping dates.
- 5.1.10 There is a small circular structure which is in the location of the recorded lime kiln. It appears to be circular or “doughnut”-shaped in plan, however, little further information can be ascertained from this map.
- 5.1.11 To the immediate north of the kiln, there are a number of small square structures/buildings however no function or use for these is given. They may be outbuildings associated with the Fox and Hounds public house which is now shown, fronting onto the Thetford Road. There are also a number of other buildings shown along the road frontage, including a small row of terraced houses/cottages.
- 5.1.12 The central “triangular”-shaped plot appears to be sub-divided into small, narrow plots and unlike the surrounding parcels of land, shows no evidence of quarrying.

#### ***1888, 1892, 1896, 1900 and 1925 Kellys Directory***

- 5.1.13 The Kellys Directory for Brandon lists Mrs Julia Mounts as “lime burner and whiting manufacturer”, Thetford Road (whiting referring to powdered and washed chalk). This is the first reference found to indicate the origin of the name “Mount Pits” and indicates it was active between 1888 and 1925. By 1900 the directory lists J. Mount and Sons and by 1916 the listing is just for “whiting manufacturers”. It is not clear however exactly which plot or plots on Thetford Road was occupied by the Mounts, but the name of the housing development site as “Mount Pits” indicates it was in the vicinity. The earlier 1874 Whites Directory registers a Joseph Robinson Mount of Thetford Road as a coal merchant; assuming this is the same Mount family, there is no indication of chalk or lime production by them at this time on this site.

#### ***1905 Ordnance Survey***

- 5.1.14 The next map in the sequence is the 1905 Ordnance Survey Map (Figure 5). This is the first map to label the kiln, shown as “Old Limekiln”, indicating it has by this date gone out of use. The extent of the chalk quarry located next to the kiln (on the west side) has extended since the previous map of 20 years earlier, however the lime kiln itself appears to no longer be in use.
- 5.1.15 On the parcel of land which falls into the far western extent of the current housing development area, quarrying appears to have extended to the southwestern corner of the plot and there is now a limekiln located next to this chalk pit. This evidence may imply that kilns were constructed close to the active quarry pits and therefore may only have been in use for the life span of that (or the immediately surrounding) pit/s.

**1950 Ordnance Survey**

- 5.1.16 By the mid 20th century, quarrying on the plots within the area of the kiln appears to have ceased with no evidence of any new areas having been quarried (Figure 6). There is one pit at the western end which may still be in use, and neither of the lime kilns shown on the earlier map are represented. Also, the four small square structures to the north of the recorded kiln have gone by this time.

## 6 RESULTS

### 6.1 External Description

6.1.1 The kiln is located on the edge of the now in-filled quarry, located in the north east corner of the new housing development area (plate 1). The structure is constructed of chalk blocks with a beige coloured, sandy lime mortar with small crushed flint and brick inclusions.

6.1.2 There are two exposed elevation/sides to the structure on the western and southern sides (plates 2 and 3); the rest of the kiln has been covered with a large build up of soil and overgrown with vegetation and shrubs beneath a canopy of large trees which form a boundary on the eastern side. Within the area of the trees and shrubs, the edge of the chalk-quarry face can still be seen.

#### ***West-facing elevation***

6.1.3 The west-facing side of the structure (Figure 7, Elevation 1 and plate 2) has part of an opening allowing access to the inside of the structure. The rough finish of the chalk blocks around the archway suggests they have been cut away and would suggest that the archway or “chamber” continued either to the west or arched around and has been subsequently truncated away. The southern end of this elevation shows a further continuation of the structure which has also been lost. Part of the chalk block-built “wall” which appears to have once continued around to the western side of the structure has also been truncated (plate 8). The evidence on this side of the structure suggests that it was much larger and that part of the western side of the structure has been demolished.

#### ***South-facing elevation***

6.1.4 The southern side of the kiln (Figure 7, Elevation 2 and plates 3 and 4) reveals an exposed “curved” wall (left side of plate 3 and plate 7). The curve of this part of the structure would indicate that it may have been a complete chamber and a continuation of that recorded further along on the right side of the section (plate 4). Here, as on the west-facing side, the archway has been truncated, as evidenced by the rough and uneven finish of the chalk blocks around the opening (plate 4). The evidence on this side suggests the archway or “chamber” was once present around this side in an unbroken continuation.

### 6.2 Internal Description

6.2.1 Internally, more detail of the chalk blocks are revealed. The blocks are various sizes, with the largest used at the base and bottom of the walls (plate 5). The largest blocks measure up to 30cm in length and 15cm in thickness. Many show tool marks and have been laid in a random bond.

6.2.2 Access is restricted due to a significant build up of soil and rubbish. The walls of the structure are very clean inside and there is no evidence of either sooting or of direct exposure to high temperatures. There are signs of repair and re-pointing of the mortar in places.

6.2.3 On the eastern side of the chamber, there is an opening which is barely visible from the outside due to soil and vegetation build-up (plate 6). This opening has a square surround and may have provided original access into the structure.



## 7 DISCUSSION

### ***The lime kiln***

- 7.1.1 The shape of the structure in plan would indicate that the truncated chamber originally curved around a central void where the kiln “pot” would be located, and the openings on the south and western sides are where part of the chamber has been demolished. The original opening was likely to have been the square-headed opening recorded on the eastern side.
- 7.1.2 The evidence recorded on the two exposed sides of the structure would support the suggestion that a “chamber” continued on both the southern side (plates 7 and 8) and on the western side, which has been removed/demolished. The projected continuation of the chamber would match the circular shape of the kiln as depicted on the 1st Edition Ordnance Survey map of 1885 (Figure 4) with access gained from the eastern side which, at the time would not have been so overgrown. The chamber would have allowed access to a poking hole in the kiln pot to light and stoke the kiln and also to the drawhole at the base of the kiln pot to allow the flow of air and access to rake-out after firing. Although no pokehole or draw hole were recorded, they would most likely be close to the base of the kiln or lower in the chamber wall/kiln pot and therefore may remain buried beneath the soil.
- 7.1.3 It is possible that the removal of the soil would indicate a much lower floor level which would have allowed for easier access and movement within this chamber. The kiln “pot” where the actual burning of the chalk to extract the lime took place, was likely to have been located in the centre, with the chamber “wrapped” around it on the north, east and southern sides. The base of the pot may have had an iron grille or grate which the lime would fall through and for collection after firing.
- 7.1.4 Elements of the kiln pot may be surviving within the earth mound as shown between the chamber openings on the west-facing elevation (Figure 7, Elevation 1 and plate 2). The pot would have been bell-shaped, then tapered at the base and the kiln filled from the top with layers of coal and chalk. The kiln lining would have comprised a thin skin of bricks or lime blocks. Evidence of these were recorded within the west-facing elevation (Figure 7, Elevation 1) which were visible on the left side of the truncated chamber wall at the southern end. Figure 8 shows a diagrammatic section of how such a kiln may have looked.
- 7.1.5 A comparable site has been found in Staffordshire at the Sandon lime kiln site which has been the subject of a recent investigation and restoration as part of a Lottery Heritage grant. The Sandon kiln is thought to have been in use for burning lime and for calcining flint in the late 18th and early 19th century. Like the Brandon kiln, it too has a chamber (Figure 8), however, the Sandon chamber is “L”-shaped. These chambers at the base of the lime kiln have been cleared and build up removed to expose a brick floor. In addition to the entrance passage, there is a larger storage chamber at the same level (forming the L-shape), and then a drop to the innermost chamber with the draw holes and poking hole. The top firing chamber of the kiln, or pot, was cleared of all rubbish as part of the investigations and residue of burnt lime was recorded at the base of the pot, the draw holes and poking hole were also cleared. Only the single central bar of the original metal grid at the base of the kiln remains ([www.staffsia.org.uk/sandon.htm](http://www.staffsia.org.uk/sandon.htm)).

### ***The process***

- 7.1.6 The method used to convert chalk into lime in these kilns was a simple process. The raw material was excavated from the nearby extraction pits and broken into smaller pieces; it was then layered with brushwood or with coal inside the tapering kiln until it formed a mound. Turf, to trap heat within the kiln, was then laid over the opening. The stoke hole, or draw hole, appears to have had at least three functions. Firstly, it provided an access point via which the brushwood at the base of the kiln was lit; secondly, it acted as a flue, drawing smoke from the kiln and thirdly, it provided an access point through which to draw (rake) out the ash and lime (Goodbody 1992). After lighting, the kiln was left to burn continuously at 900° C (Snow 2002) from a few days to weeks depending on the size of the kiln.
- 7.1.7 Despite being a relatively simple industrial activity, the process of lime production was extremely hazardous (Blair, and Ramsey, 2001). During firing, the burning chalk released noxious carbon dioxide gases into the atmosphere, creating a high risk of asphyxiation. After firing, a second danger was from the lime itself. Quicklime is a chemically unstable substance which, when combined with water (to produce slaked lime) releases heat. Burns were probably a common side effect of the job, as were fires - the slaked lime could cause the carts it was transported in to catch alight. Although the risk presented by lime production was high, the end product was in great demand and has been since Roman times, where it was used as the main ingredient in mortars, concretes, plasters, renders and washes. It is not clear what the lime produced at Brandon was for, but it is likely that some was used locally, probably for agricultural use on the nearby fields or in the local building industry. The Mount family listed in the trade directories of the late 19th and early 20th centuries were listed as lime burners and whiting manufacturers indicating the industry was enough to support the family at this time.
- 7.1.8 Lime was a valuable commodity, and had four primary uses; for mortar, render and plaster, lime-wash and agricultural improvement. Lime mortar was used to lay brickwork, building stone and to point roof tiles, crushed brick was often added to improve the setting and for aesthetic purposes. Lime mortar was in use until the middle of the 20th century when cement-based mortar took over after the Second World War. Lime render and plaster was applied to the exterior of buildings and also to plaster the inside and are thought to have been used since the mid 13th century. From the late 18th until the mid 19th century stucco, a fine exterior finish of lime, was very popular in towns and on substantial country houses. Lime-wash was made by adding water to the lime to thin it down and was used from the 13th century to provide a bright, clean finish to the interior walls of buildings. Pigments could also be added to create colourful decoration for application to walls. Used in agriculture, lime was, and still is, applied to land to correct the high levels of acidity in the soil. Acid soils reduce plant growth by inhibiting the intake of nutrients. Some plants, particularly legumes, will not grow in highly acidic soils.

## 8 CONCLUSIONS

- 8.1.1 Cartographic evidence suggests that the kiln was built in the mid to late 19th century and was constructed to extract the lime from the adjacent chalk quarry for use on the fields or in local building, sold through the Mounts family.
- 8.1.2 The location of lime kilns on the edge of chalk quarries was commonplace. Lime was extracted from the chalk by burning blocks of quarried chalk in specially constructed kilns and was produced in large quantities, especially in the 18th and 19th centuries for agricultural improvement, as well as the more traditional use in lime-wash, mortar, render and plaster. Although it is likely that the purpose of the Mount Pits quarry was for the extraction of chalk and lime, it is also a possibility that flint found within the chalk would have been recovered and perhaps used or sold for building material or for the manufacture of gunflint.
- 8.1.3 The kiln recorded at Brandon was one of the most common type of kiln, the flare kiln. It consisted of a brick lined 'pot' or chimney sunk into a bank, narrowing at the bottom to a 'drawhole'. Fed with alternating layers of fuel (bundles of coppiced wood known as faggots, brushwood or coal) the chalk would be poured into the 'pot' and once burnt the resulting lime would be drawn from the bottom via arched brick-lined cavities and then loaded into carts. Lime would have then been used on the nearby fields or transported into the town for building material. Many lime kilns date back to the 18th and 19th centuries when the demand for mortar for building houses increased significantly (Tuson 2004).

### ***Significance***

- 8.1.4 This survey has addressed the aims of the Brief and has presented a survey of the lime kiln structure in order to allow Suffolk County Council Archaeology Service to decide on the next stage of works and preservation of the structure. It has suggested a date of construction and use as well as outlined and suggested a method of function and use.
- 8.1.5 Although the kiln may be later in date than perhaps initially believed, it provides a good surviving example of a structure which represents the local industrial heritage of the town.

## 9 ACKNOWLEDGEMENTS

The author would like to thank Sally Dicks of CgMs for commissioning OA East to carry out the work and the staff of Suffolk Records Office in Bury St Edmunds for their assistance during the background research. Thanks also to Mr S Pitt of the Staffordshire Industrial Archaeology Society for kind permission to use their data to create Figure 8.

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## MAPS AND OTHER SOURCES CONSULTED

<b>Description</b>	<b>Date</b>	<b>Suffolk Records Office Reference (where sourced)</b>
Brandon Enclosure Map	1809	Q/R1/8
Brandon Tithe Map	1838	T 125/2
1 <sup>st</sup> Edition Ordnance Survey Map, 1888 (1" to 25 miles)	1884	
1905 Ordnance Survey Map	1905	VI.16
1950 Ordnance Survey Map	1950	VI. SE

## WEBSITES CONSULTED

[www.heritagegateway.org.uk](http://www.heritagegateway.org.uk)

[www.old-maps.co.uk](http://www.old-maps.co.uk)

[www.suffolklandscape.org.uk](http://www.suffolklandscape.org.uk)

[www.staffsia.org.uk/index.htm](http://www.staffsia.org.uk/index.htm)

## APPENDIX A. RESULTS OF WATCHING BRIEF

- A.1.1 On 29th June 2011, James Fairbairn from OA East was in attendance during the clearance and infilling of the lime kiln.
- A.1.2 The clearance involved some of the debris and modern rubbish being removed from the inside of the structure and some of the surrounding shrubbery.
- A.1.3 During this process, no additional detail of the kiln structure or function was revealed and no finds were recovered.
- A.1.4 The kiln was then in-filled with sand (plates 9 and 10).

## APPENDIX B. OASIS REPORT FORM

All fields are required unless they are not applicable.

### Project Details

OASIS Number	oxfordar3-103232			
Project Name	Mount Pits Lime Kiln, Thetford Road, Brandon, Suffolk			
Project Dates (fieldwork)	Start	13-06-2011	Finish	13-06-2011
Previous Work (by OA East)	No		Future Work	Unknown

### Project Reference Codes

Site Code	BRD103	Planning App. No.	F/97/453
HER No.	BRD103	Related HER/OASIS No.	n/a

### Type of Project/Techniques Used

Prompt

### Please select all techniques used:

<input checked="" type="checkbox"/> Annotated Sketch	<input type="checkbox"/> Photogrammetric Survey
<input type="checkbox"/> Dendrochronological Survey	<input checked="" type="checkbox"/> Photographic Survey
<input type="checkbox"/> Laser Scanning	<input type="checkbox"/> Rectified Photography
<input checked="" type="checkbox"/> Measured Survey	<input checked="" type="checkbox"/> Survey/Recording Of Fabric/Structure

### Monument Types/Significant Finds & Their Periods

List feature types using the [NMR Monument Type Thesaurus](#) and significant finds using the [MDA Object type Thesaurus](#) together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Lime Kiln	Post Medieval 1540 to 1901		Select period...
	Select period...		Select period...
	Select period...		Select period...

### Project Location

County	Suffolk	Site Address (including postcode if possible)
District	Forest Heath	Thetford Road Brandon Suffolk
Parish	Brandon	
HER	Suffolk County Council	
Study Area		National Grid Reference
		TL 789 862



### Project Originators

Organisation	OA EAST
Project Brief Originator	Suffol County Council, Archaeology Service
Project Design Originator	Taleyna Fletcher
Project Manager	
Supervisor	Taleyna Fletcher

### Project Archives

Physical Archive	Digital Archive	Paper Archive
Suffolk County Stores	OA East Offices	Suffolk County Stores
BRD103	XSFBLK11	BRD103

### Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	<input checked="" type="checkbox"/> Photos
	<input checked="" type="checkbox"/> Plans
	<input checked="" type="checkbox"/> Report
	<input type="checkbox"/> Sections
	<input checked="" type="checkbox"/> Survey

**Notes:**



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Figure 1: Site location with development area outlined (red) and lime kiln (green)





Figure 2: Extract from Brandon Enclosure Map, 1809, showing approximate location of lime kiln (red)



Figure 3: Extract from Brandon Tithe Map, 1838, showing approximate location of lime kiln (red)



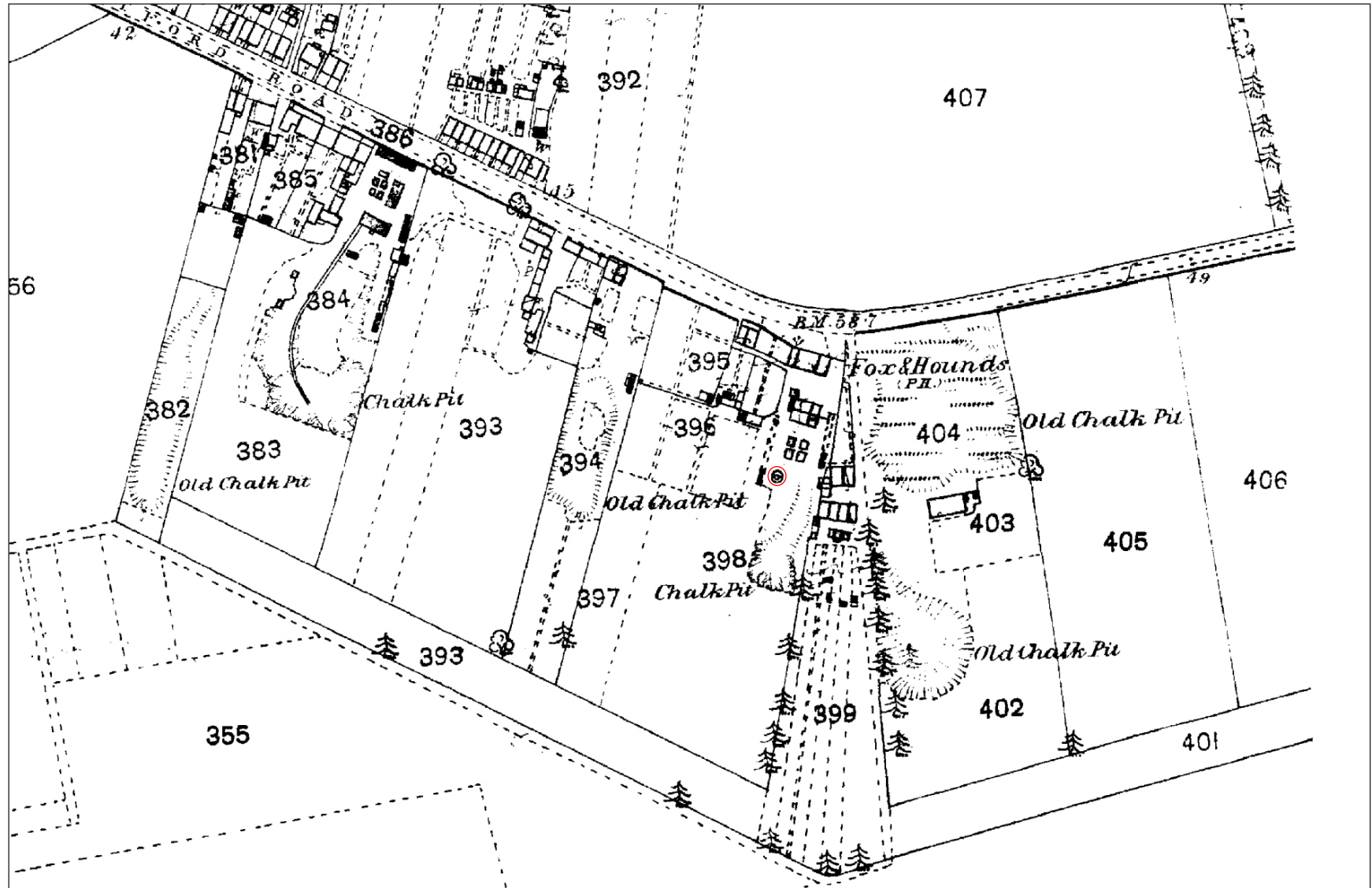


Figure 4: 1885 Ordnance Survey map, showing location of lime kiln (red)

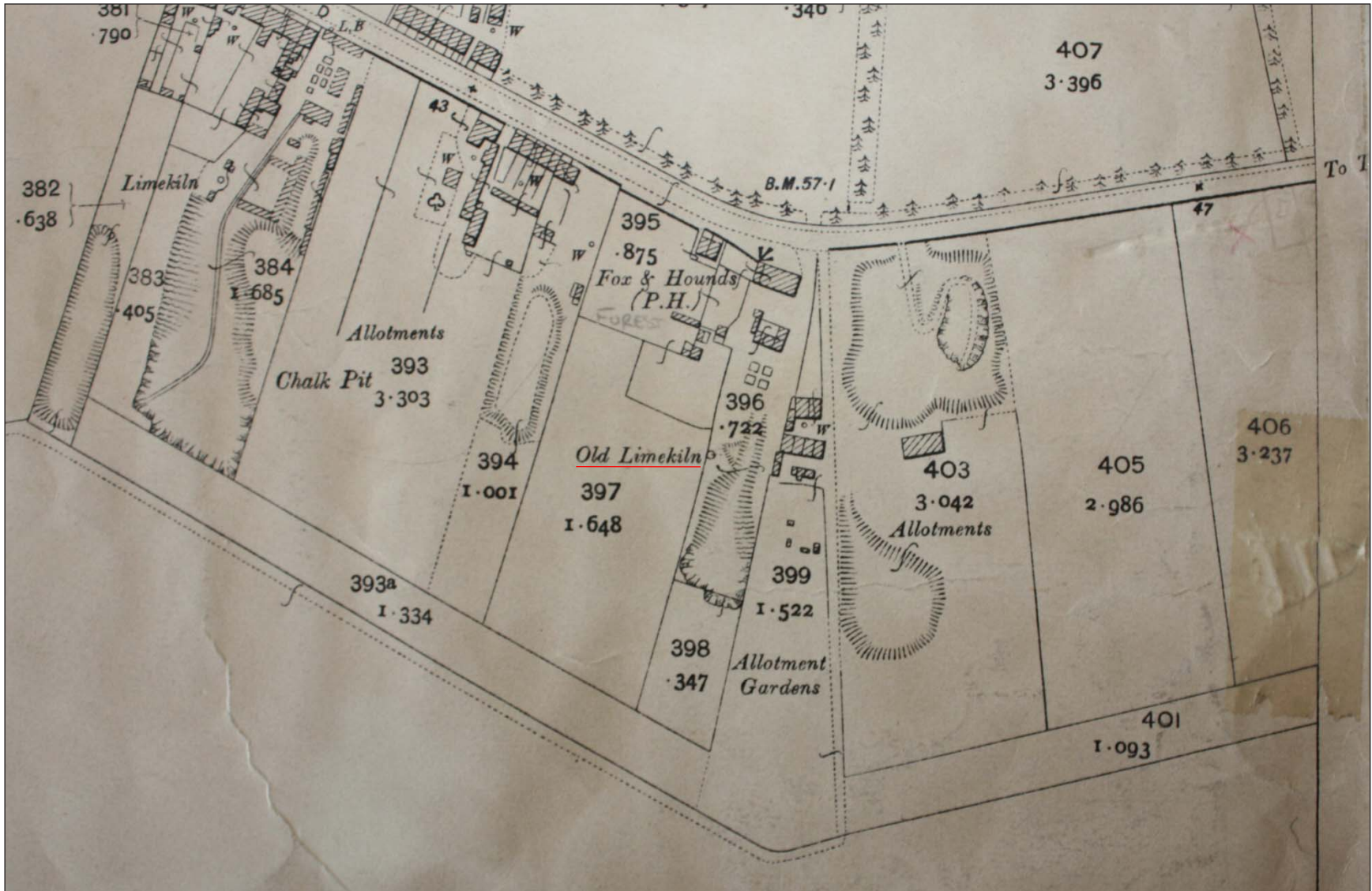


Figure 5: 1905 Ordnance Survey map, showing location of lime kiln



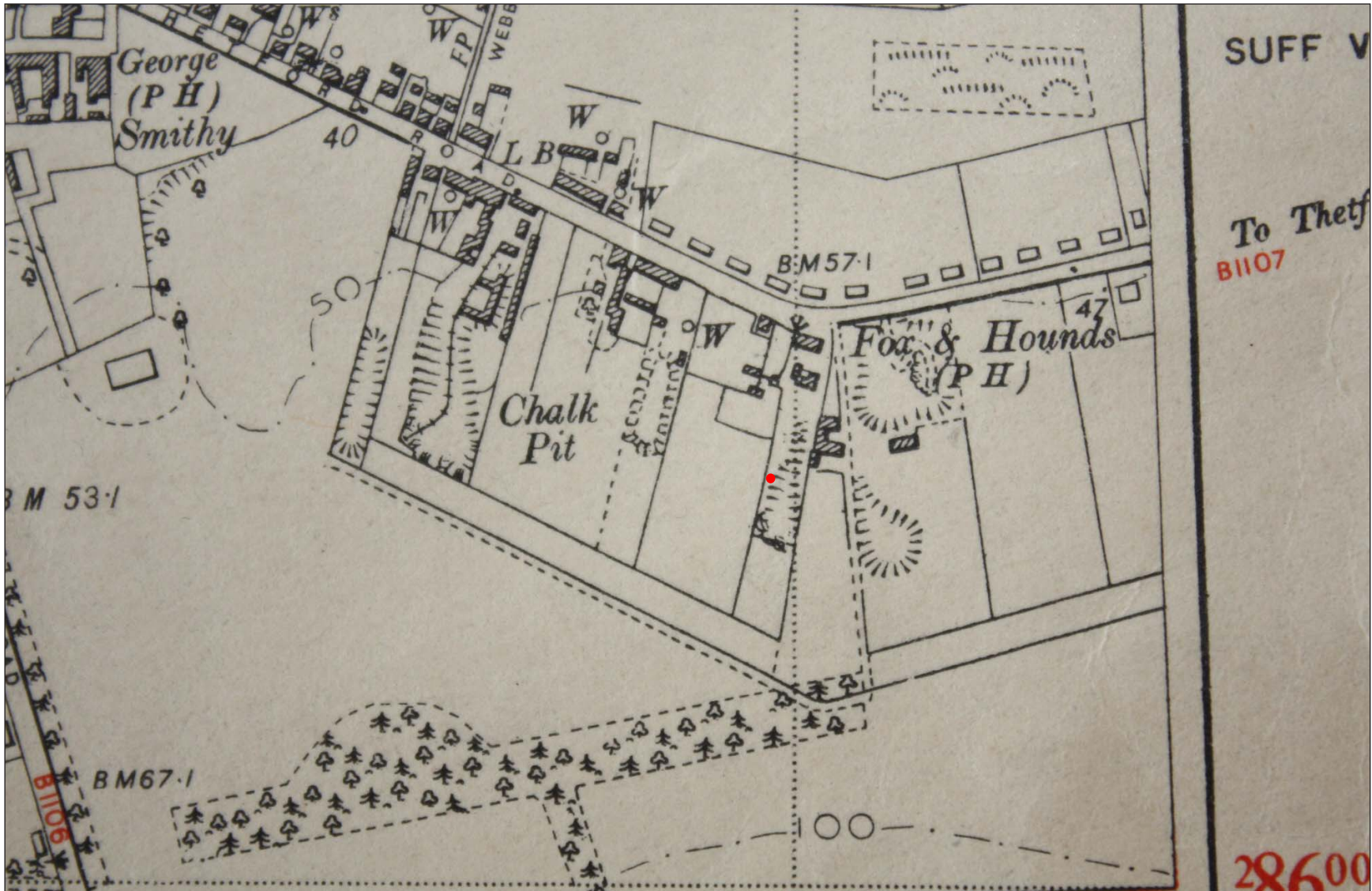


Figure 6: 1950 Ordnance Survey map, showing approximate location of lime kiln (red)

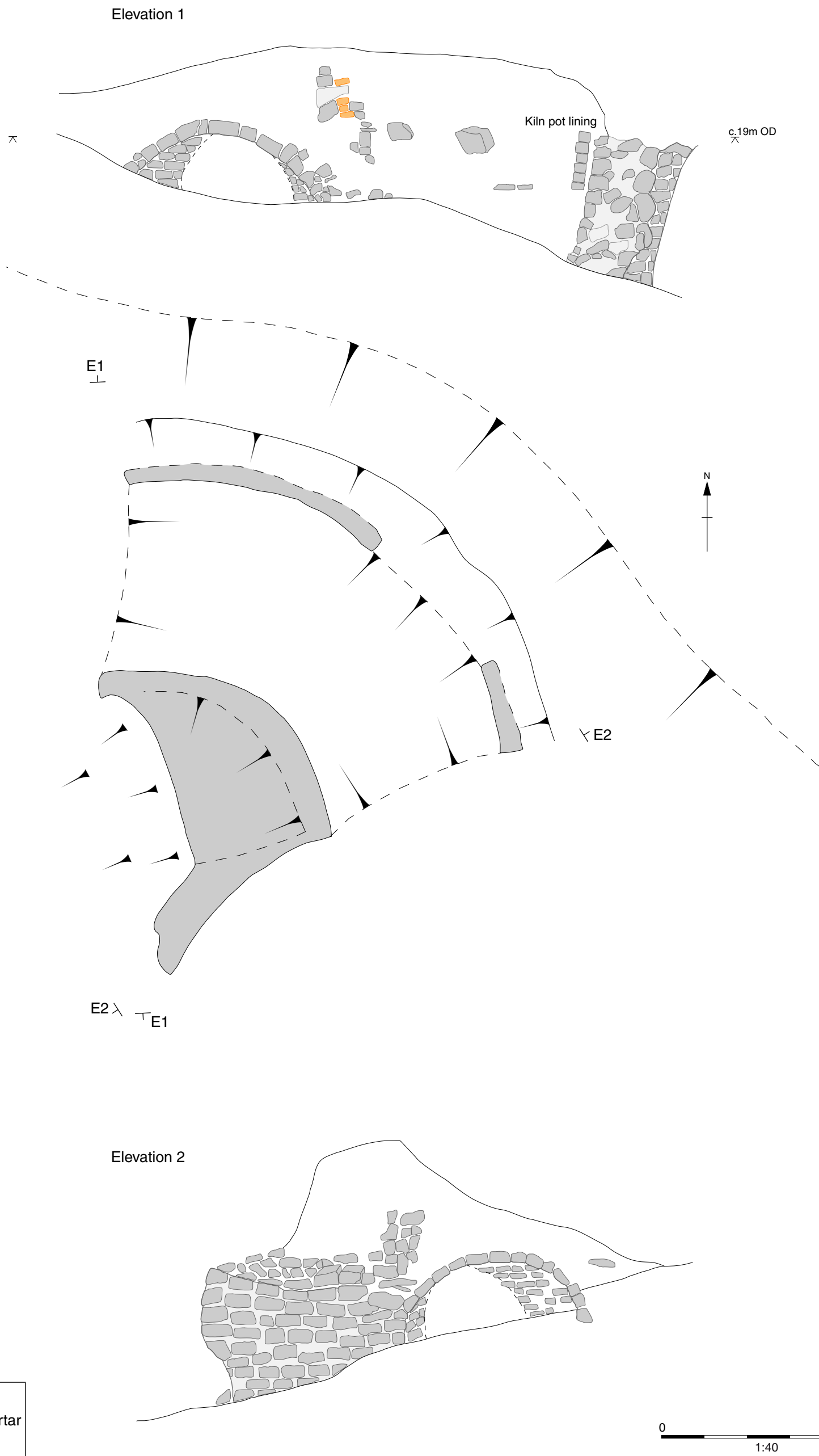


Figure 7: Plan and elevations of lime kiln



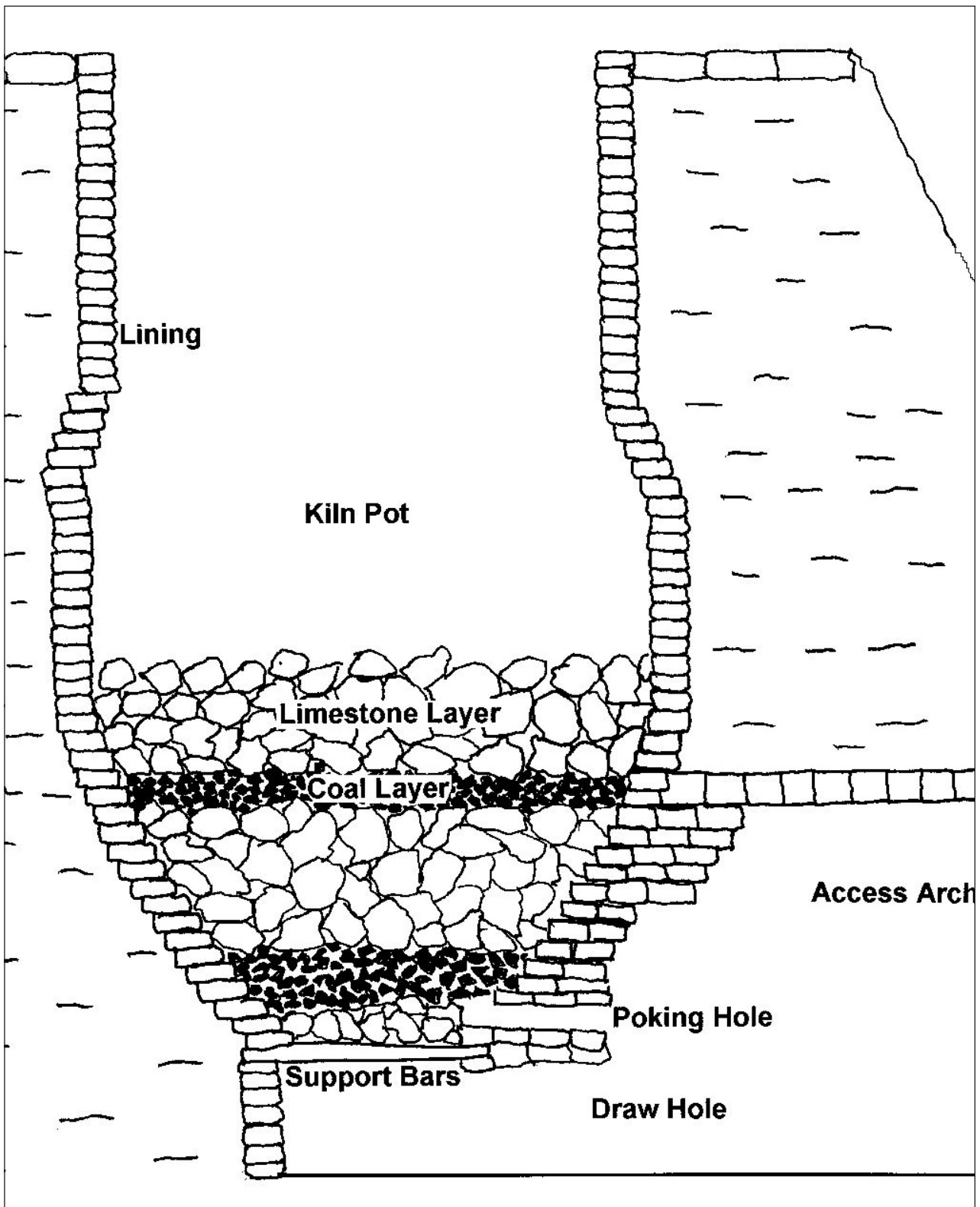


Figure 8: Diagrammatic section of the Sandon Lime Kiln, Staffordshire (reproduced with kind permission by the Staffordshire Industrial Archaeological Society)



Plate 1: Position of lime kiln on quarry edge (from south)



Plate 2: View of lime kiln (from west)





Plate 3: View of lime kiln (from south)



Plate 4: Detail shot of kiln opening (from south)





Plate 5: Internal view of kiln structure (from south)



Plate 6: Detail of opening on the east side of kiln structure (from south)





Plate 7: Detail of arch on southern side of kiln structure (from south)



Plate 8: Detail of arch on southern side of kiln structure (from north west)





Plate 9: Kiln infilling



Plate 10: Kiln infilling



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