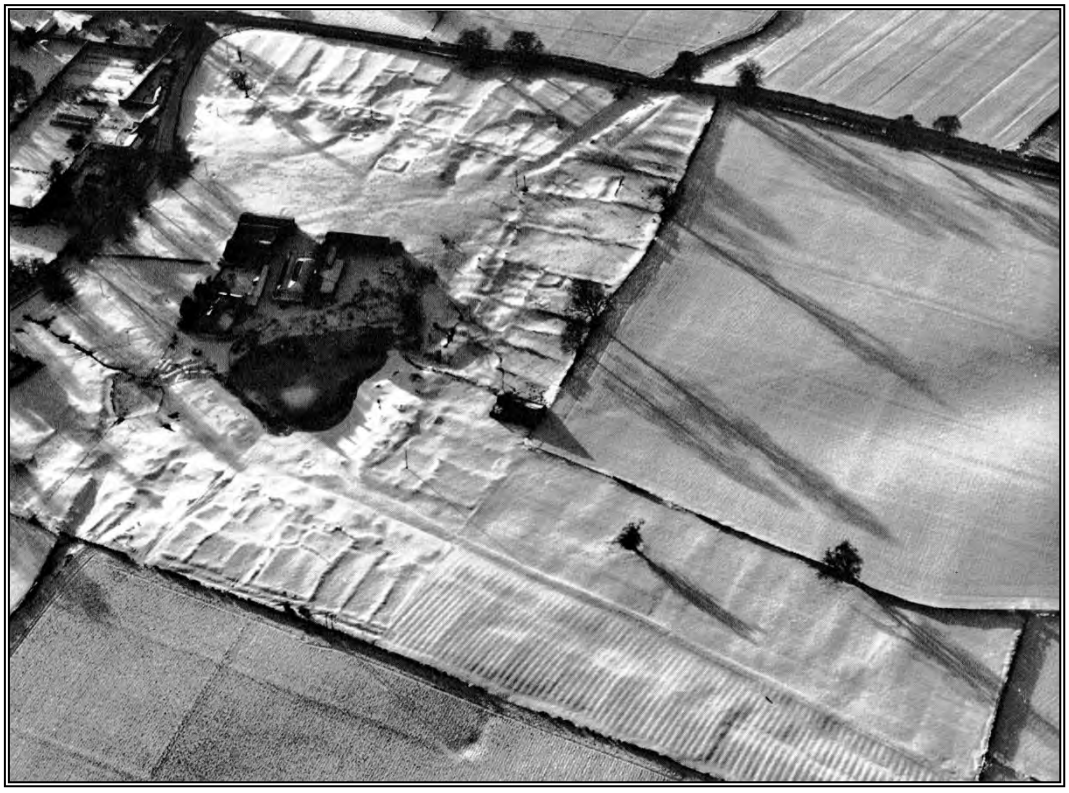
EXCAVATIONS ON THE SITE OF WALWORTH DESERTED MEDIEVAL VILLAGE AT NORTH FARM, WALWORTH, COUNTY DURHAM FOR THE BRIGHT WATER LANDSCAPE PARTNERSHIP PROJECT

~ ARCHAEOLOGICAL EXCAVATION ~

JUNE 2022



Prepared for: *BRIGHTWATER LANDSCAPE PARTNERSHIP*	By: *The Archaeological Practice Ltd.*

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EXCAVATIONS ON THE SITE OF WALWORTH DESERTED MEDIEVAL VILLAGE AT NORTH FARM, WALWORTH, COUNTY DURHAM

REPORT ON AN ARCHAEOLOGICAL EXCAVATION

Prepared by:

The Archaeological Practice Ltd.

***Frontispiece**: Building remains and a kiln at the west end of Trench1, seen from the north-east.*

Grid Reference: *NZ 22813 19183 (centre)*
Date of fieldwork: November 2019
Oasis Number: thearcha2-510254

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SUMMARY

This document, prepared by the Archaeological Practice Ltd. has been commissioned by The Bright Water Landscape Partnership to report on an archaeological excavation carried out in November 2019 to investigate the site of Walworth deserted medieval village (DMV) on the north side of the current, shrunken settlement which is now centred on the castle.

Following background historical research preliminary to the preparation and agreement with Historic England of a site-specific Written Scheme of Investigation (WSI) for the work, a total of five trenches were excavated with Brightwater Project volunteers in November, 2019 in order to investigate sites of likely high archaeological potential. Principal amongst these was a large trench covering 141 sq. metres excavated un the centre of the north part of the site, where the well-preserved remains of buildings and a corn-drying or malting kiln were revealed.

While these excavations sampled only a very small proportion of the area within which earthworks relating to Walworth DMV are visible, the remains encountered through excavation show that significant archaeological remains survive there at shallow depths, relating both to domestic, agricultural and light-industrial practices.

Almost all significant remains were uncovered in primary Trench 1, where the remains of two separate rectangular structures of two main structural phases on different alignments were exposed. The western half of the plot appeared to contain a single building or structure (Building 1) defined by east-west orientated north and south walls, which contained a corn-drying or malting kiln at its west end. The open area to the east of the flue and wing walls of the kiln was covered by an extensive deposit of burnt deposits representing the spread of material cleared from successive firings. Further east, an oval feature formed by a layer of closely packed stones was interpreted as the base of a bread oven, but since this area was not fully exposed it is not clear whether it was a discrete structure or formed part of a larger structure, as suggested by geophysical survey evidence.

In the east part of the plot were the remains of another structure (Building 2), also aligned roughly east-west and defined by its north, east and partially-surviving south and west walls, with the northern wall of the Building 1 apparently abutting its north-west corner. The eastern end of Building 2 contained an area of closely packed cobbles interpreted as hard-standing, while immediately to the west was an area of heavy burning across the upper part of the natural clay interpreted as the base of a possible light-industrial feature.

The two buildings exposed in Trench 1 were probably dwellings or farm buildings laid out at the front of one of the tenements, with Building 2 perhaps the earlier. Subsequently both buildings appear to have been adapted for ancillary functions, notably in the case of the Building 1 where a kiln, probably for corn-drying and malting, was constructed and perhaps also a bread oven, perhaps reflecting the acquisition of multiple tenancies by the surviving members of a failing, late medieval population.

The results of the other two trenches excavated to the east and north-east were significant in that they revealed little structural evidence. The lack of evidence for occupation at the northern end of the linear extension to the village might suggest that this was a planned extension to the rectangular green village (perhaps laid out at the end of the 13th century) which was never occupied, perhaps marking the settlement's 'high water mark' and the beginning of its decline.

The overall impression gained from analysis of the pottery assemblage derived from the site is of activity in the later medieval period which resulted in the creation of contexts dominated by Reduced Greenwares (61.5% of the total) but with a substantial component, probably largely residual, of earlier wares pertaining to earlier phases of medieval occupation in the 12th and 13th centuries. Thus, the majority of the pottery recovered from the site ranges in date from the later 13th century or early/mid-14th century until the mid-15th century, with finer fabrics apparently predominant in the final phase of activity. The absence of post-medieval (c.1450 – c.1720) and later wares would seem to point either to the abandonment of the site or a cessation of activities leading to the deposition of pottery, at least within the areas excavated. Deposits associated with the corn-drying kiln found at the west end of Building 1 principally contained reduced Greenware, characterised by an homogeneous grey fabric and dull green glaze, which dates to the later 13th until mid-14th century, dates which are consistent with those derived from radiocarbon analysis of the fills of kilns of similar character recently excavated in Northumberland.

Little substantive evidence has been derived with which to approach the questions arising from the original topographical and geophysical surveys of the site, regarding how and when the extant plan of the settlement come to be formed. Although at least two phases of building were observed in Trench 1 it is not clear that these relate directly to the findings of pottery analysis, which suggest occupation between at least the later 12th and mid-15th centuries. Thus, while the two phases of building activity may date to an earlier (12 & 13th century) and later (14th & 15th century) phase of occupation, it is quite possible that all of the building remains uncovered relate to occupation in the later medieval period, with the earlier pottery merely residual from an earlier phase which may not have left discernible traces of buildings. No evidence was found in structural or artefactual remains of a putative earlier, Anglo-Saxon or Anglo-Scandinavian phase of activity underlying the currently-visible earthworks.

1. INTRODUCTION - PURPOSE OF EVALUATION

1.1 Project Background

The remains of numerous, well-preserved deserted and shrunken village sites (DMVs & SMVs), dating to the later medieval period and its immediate aftermath survive as earthwork monuments in the area and represent one of the cultural heritage highlights of the Bright Water Landscape Partnership area, which encompasses the catchment area of the River Skerne in south-central County Durham. Although several have been surveyed in detail by the RCHME, little archaeological research has been focussed on these sites and, in particular, very little excavation has taken place prior to the Bright Water programme, with only Ulnaby having been subjected to a co-ordinated programme of documentary analysis, topographic survey and excavation. Hence, the programme of geophysical survey and excavation at Walworth and Archdeacon Newton has provided an opportunity to advance our state of knowledge regarding this class of site and learn more about the lives of medieval rural communities in the region. Standing medieval buildings survive at both sites, including the 12th-century chapel, now a barn, encapsulated with the farm building complex at Walworth North Farm, and parts of the south range of Walworth Castle. This report details the programme of excavation undertaken adjacent to the first of those sites, at Walworth North Farm, site of Walworth DMV.

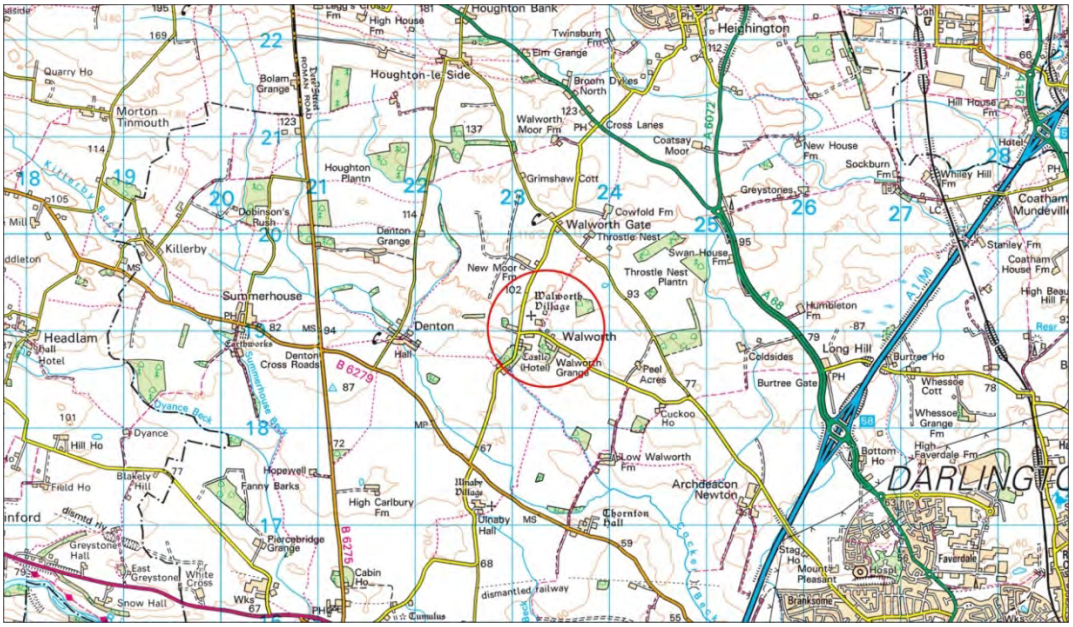
This document, prepared by the Archaeological Practice Ltd., was commissioned by *the Bright Water Landscape Partnership* to report on the archaeological excavation carried out in November 2019, the purpose of which was approach a number of research questions and evaluate the importance and vulnerability to erosion of archaeological remains found to be preserved there.

A Written Scheme of Investigation (WSI), produced by The Archaeological Practice Ltd, was agreed with Historic England in advance of fieldwork. This document (see *Appendix 2*, below) summarises the aims of the work, which were to determine the character, extent, age and degree of survival of archaeological remains in order to evaluate their importance and, if necessary, contribute to the future development of an appropriate strategy for their protection and long-term preservation.

It was agreed with Historic England and the Bright Water partnership, which includes the Durham County Archaeologist as representative of Durham County Council (DCC), to carry out the field investigation using a combination of mechanical and hand excavation of five trenches in positions specified in *Illus. 080*, followed by further excavation and recording by hand, with monitoring by the DCC archaeologist.

1.2 Location

Walworth, a township within the parish of Heighington, stands 7 km north-west of Darlington, on gently-rising ground commanding a wide prospect southwards over the broad valley, or vale, of the Tees. The remains of the DMV are located on the north side of the present-day settlement with Walworth North Farm positioned in the middle of the earthworks. The bedrock here is Magnesian Limestone, a creamy and rather friable stone which here is not of sufficient quality to permit its use as ashlar or cut dressings. There are a number of limestone quarries in the immediate neighbourhood of Walworth which may have supplied material for construction of the castle and village.



Illus. 1: *The location of Walworth north-west of Darlington*

Illus 2: *The location of the scheduled extent of Walworth DMV surrounding North Farm, with the present hamlet settlement to the south and south-east.*

1.3 Description

Walworth Deserted Medieval Village (DMV) is a scheduled ancient monument (Monument No. SM 20872 (old), List No 1011256; DHER H1568). The area within the curtilage of the built farm complex and a separate cottage to the south-east are excluded from the scheduled extent, but the entirety of the four surrounding fields are covered by the scheduling.

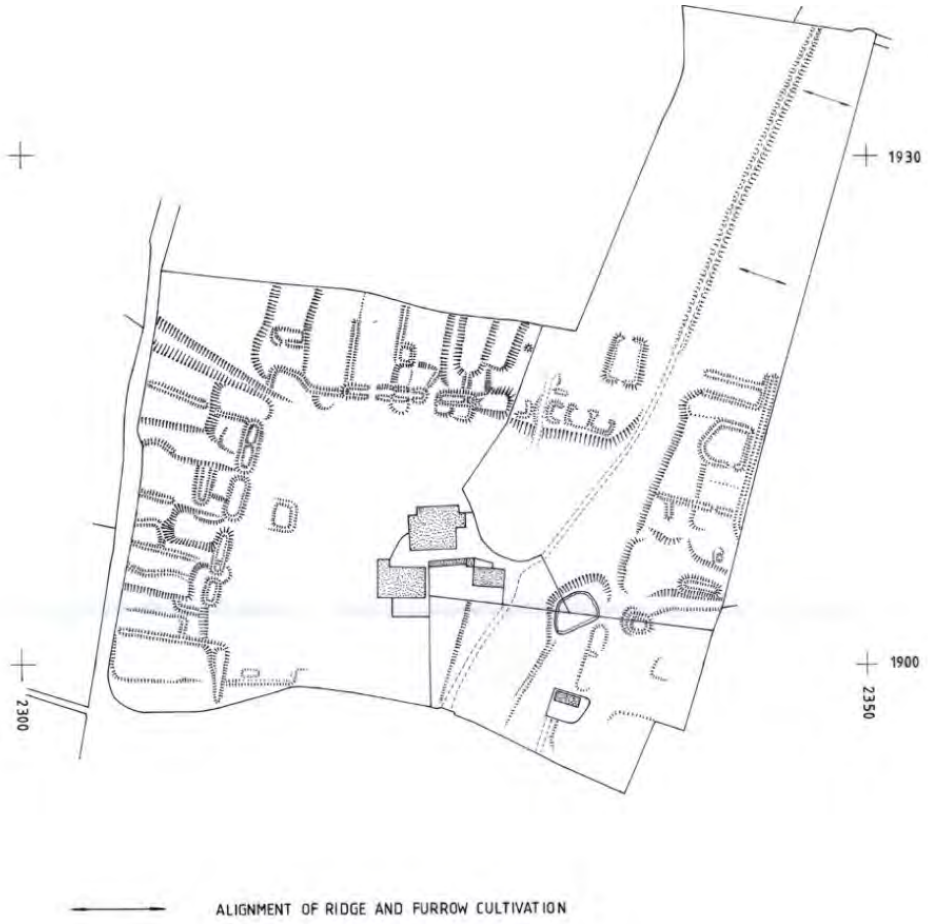
Extensive earthwork remains of the deserted village survive within the scheduled area. A barn to the north of the farmhouse preserves the structure of a 12th-century chapel (DHER H1569/H34588; Grade II Listed Building 1323001) which would have stood in the centre of the village green. Further south, beyond the scheduled area, Walworth Castle (DHER H1565/H36472; Grade I Listed Building 1121175), now a hotel, represents a complex, multi-period house with surviving probable medieval components (one drum tower) plus balancing 16th-century tower and an unusual early Renaissance frontage, now hidden within the inner courtyard.

Illus. 03: Oblique aerial view from the west taken during excavations at Walworth North Farm in November, 2019, showing North Farm in the centre of the earthworks of the deserted medieval village, with the castle lying to the south (right of view).

The monument is described as follows in the Historic England Scheduled Monument List entry (no. 1011256):

> *The monument includes the remains of the deserted village of Walworth surrounding the North Farm complex. It survives in excellent condition in the form of a group of well-defined and well-preserved earthworks. The centre of the deserted village is occupied by a village green measuring 200m east-west by 150m north-south. Surrounding the green on its north, east and west sides are the remains of the streets of the village surviving as rectangular house platforms of varying sizes with their long sides facing onto the street. Gardens, stock enclosures and scooped yards are clearly attached to the back. One building platform, standing at the eastern end of the north row, is larger than the others, measuring 30m by 22m. On the green at its western edge there is a rectangular structure measuring 17m by 15m, the remains of a well-*

preserved pinfold into which straying livestock were herded. Several hollow ways are visible, the most prominent of which measures 15m across and enters the village at its north-western corner. There is what appears to be a later, rectangular extension to the village at its north-eastern corner; although this is now overlain by medieval and later cultivation, the remains of house platforms can be seen fronting an earlier raised street.



Illus. 04: RCHME 1991 survey of the earthwork remains of Walworth DMV.

In plan the village is laid out around a relatively squarely proportioned 'green' measuring c 200 m by 150 m. Although the earthwork remains of the adjoining rows of tenements with their enclosed tofts or crofts and house platforms, are evident today only on the east, west and north sides of the green, it is possible that there was once a comparable row extending at least part way along the south side as well, now covered by the outbuildings of Walworth Castle. The lane which runs east-west along the south side of the DMV may be derived from an ancient trackway which followed a similar course along the southern edge of the green between its south-east and south-west corners. Further south, Walworth Castle probably marks the site of the manorial complex. The SW drum tower and perhaps part of the adjoining south range probably represents part of a defensible medieval manor house modified from the late 16th century onwards when enveloped in Thomas Jenison's mansion. It is uncertain in what way this medieval manorial complex was integrated into the overall settlement plan, but the enclosure, or hallgarth, surrounding the house and its outbuildings and garden, may well have extended up to the south-west corner of the green, perhaps adjoining a short south row to the east, or even completely replacing that row altogether. In addition, there is a narrow, rectangular northern extension at the north-east corner of the green. Though over-

ploughed, with surviving ridge and furrow on the east side, this 'Bondgate' settlement is visible as earthworks on the Lidar Survey plan and on aerial views taken in suitable conditions, and appears to comprise two rows of tenements aligned along either side of a raised street, the line of its street being perpetuated by a footpath towards Heighington.

Other than the castle, the only upstanding remnant of medieval Walworth is the surviving 12th century chapel, now used as a barn, on a slight eminence within the North Farm complex in the centre of the Green (Ryder 1989, 63-4). Inspection of this building during the excavation works held in the fields to the north identified surviving medieval fabric in all four walls, including the remains of arched windows in both gable ends, as well as a south doorway and niches, including a *piscina*, at the east end of the south wall (see below).

Illus. 05: Oblique aerial view from the north-west of North Farm farmstead, with the north former chapel positioned at the west end of the range and detached modern farmhouse to the rear.

Illus. 06: The external north elevation of the former chapel

Illus. 07: The internal west gable elevation of the former chapel

Illus. 08: Piscina and niche at the east end of the internal south wall of the former chapel

Illus. 09: Blocked south doorway of the former chapel

2. CULTURAL HERITAGE BACKGROUND

2.1 Historical and Documentary Background

The oldest form of the place name, 'Waleberge', is thought to imply a settlement of the 'Welsh' or Old people (cf the placename 'Wales' in South Yorkshire), suggesting an early foundation, although no pre-Conquest documentation survives to support such early settlement and there is only limited later medieval documentation relating to Walworth.

By the early post-Conquest period, however, the vill was in the hands of secular lords, specifically the Hansard lineage, who held it from the late 12th century until the early 16th century when it passed to the Ayscough family by marriage to the Hansard heiress during the reign of Henry VIII, and was subsequently purchased by Thomas Jenison c. 1579, remaining in the possession of the latter's heirs for the next 200 years. Consequently, Walworth did not benefit from the enduring institutional continuity and capacity for record-keeping provided by the Bishopric or Durham Priory and its successor the cathedral chapter, which has resulted in a wealth of documentary survival relating to settlements and estates held by those ecclesiastical bodies. The principal surviving records are therefore escheats or inquisitions post mortem, the surveys taken by the bishop's officials, using locally enrolled juries, on the death of his baronial tenants-in-chief. Thus, an Inquisition Post Mortem of 1466 (cited by Surtees 1823, 316) itemised the manor as follows:

- *One chief messuage, with divers outhouses, two granaries, a stable, and sheepfold, value per annum 13s 4d*
- *Twelve cottages, 30s*
- *400 acres of arable land, £24*
- *200 acres of pasture, 100s*
- *20 acres of meadow, 23s 4d*

This would imply that there was still a settlement of at least 12 cottages at Walworth in the second half of the 15th century, along with the manor house and associated complex (which presumably relates to the site of Walworth Castle, where parts of the main house have been identified as originating in the Middle Ages). The licence for Thomas Jennison's purchase of the estate in 1579 listed only six dwellings and six cottages.

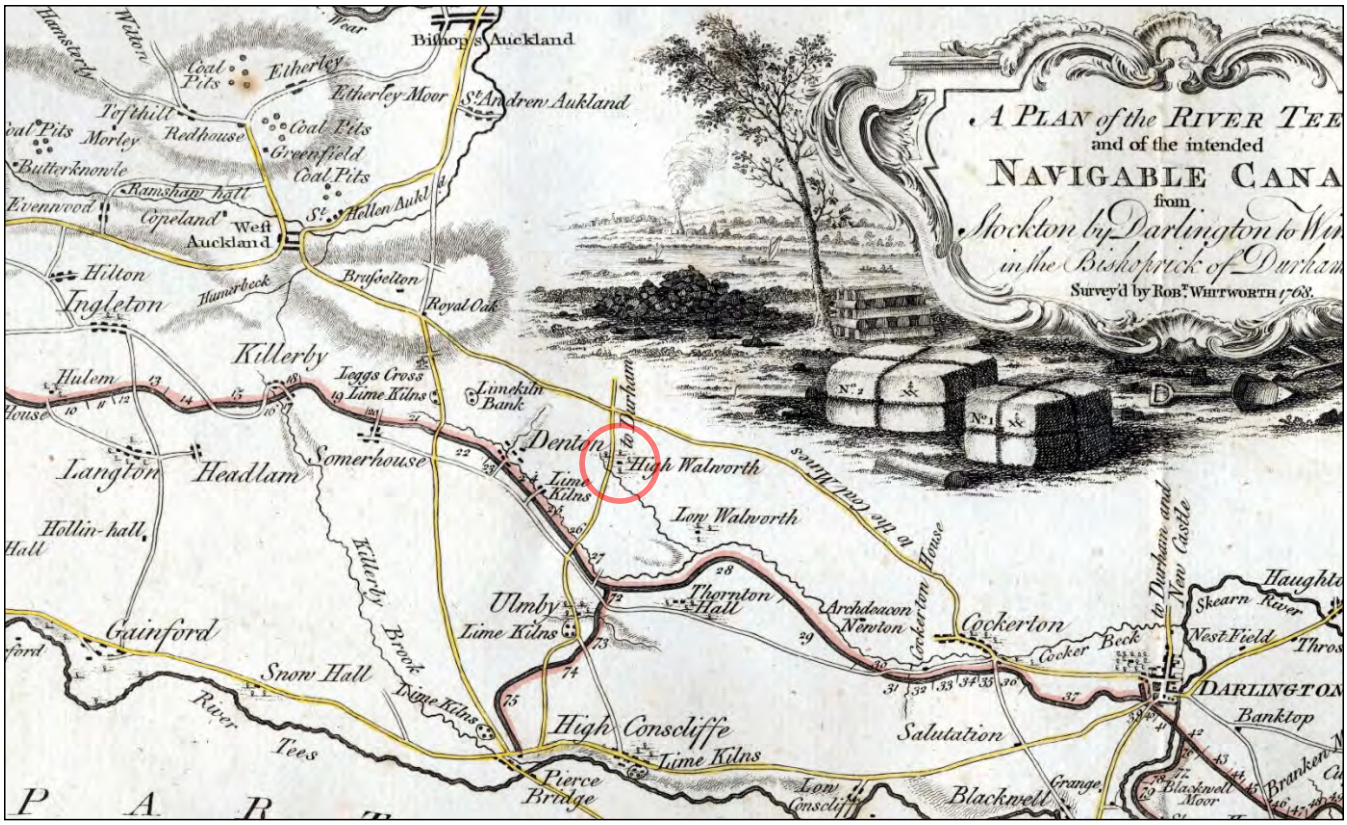
Nevertheless, despite the relative paucity of records, the history of the Hansard lineage, and the trajectory of growth and decline of their lordship in the North East, provides some clues in turn regarding the possible history of Walworth village itself, generating questions which may be tested by further investigation.

2.2 Previous Archaeological Investigation

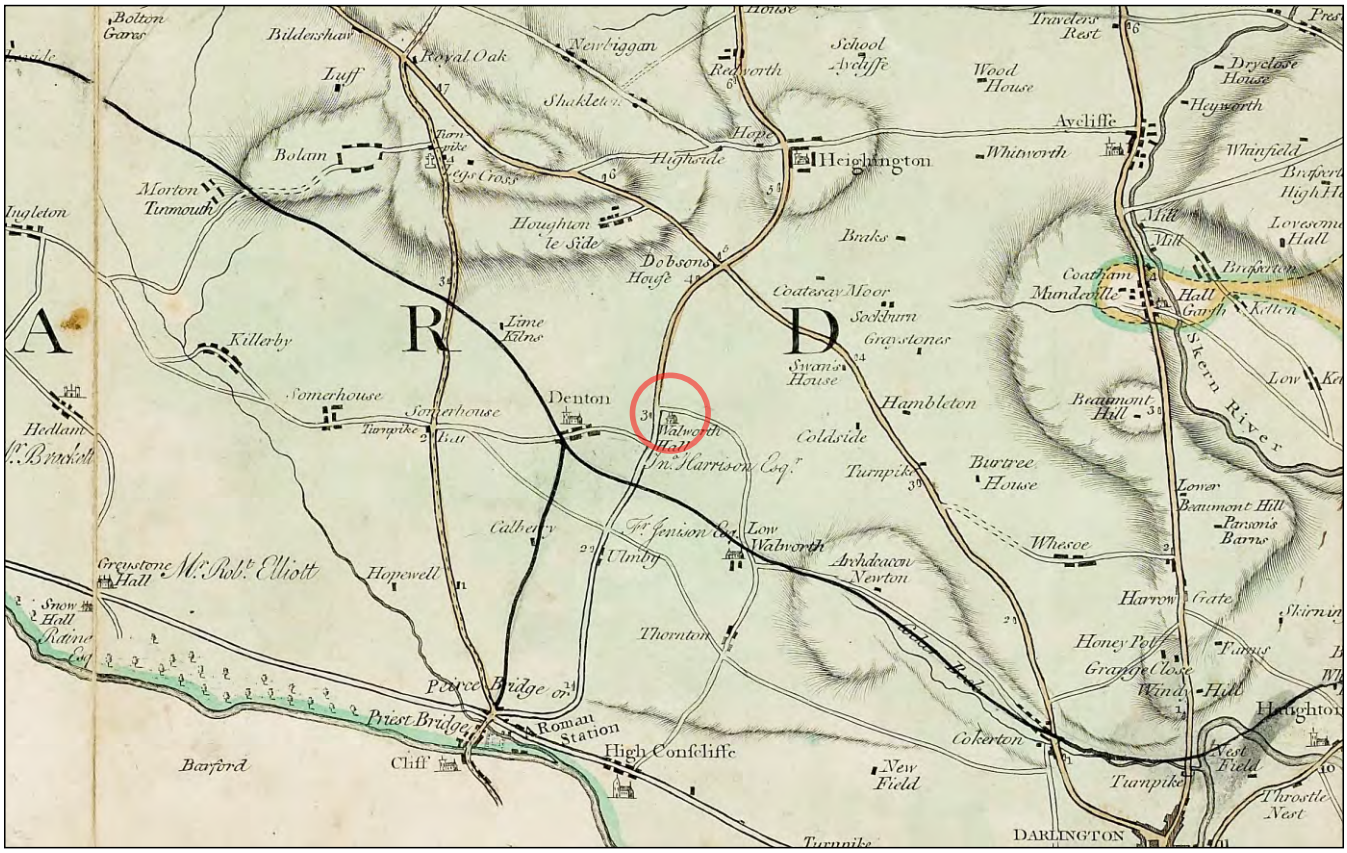
Relatively little archaeological work took place at Walworth prior to the initiation of the Bright Water programme when, as the first component of the Bright Water programme of investigative fieldwork, a geophysical survey was undertaken by Phase Site Investigations between 24th and 29th July 2019. This encompassed the four fields contained within the scheduled monument area, but excluded the farm complex in the centre of the green, the cottage and other buildings to the south-east and adjoining areas where vegetation was too

Illus. 10: *Rudd's 'Y Byshoprick' map of County Durham c.1569. The location of Walworth is circled in red. (Ref: Royal MS. 18. D.III f.70)*

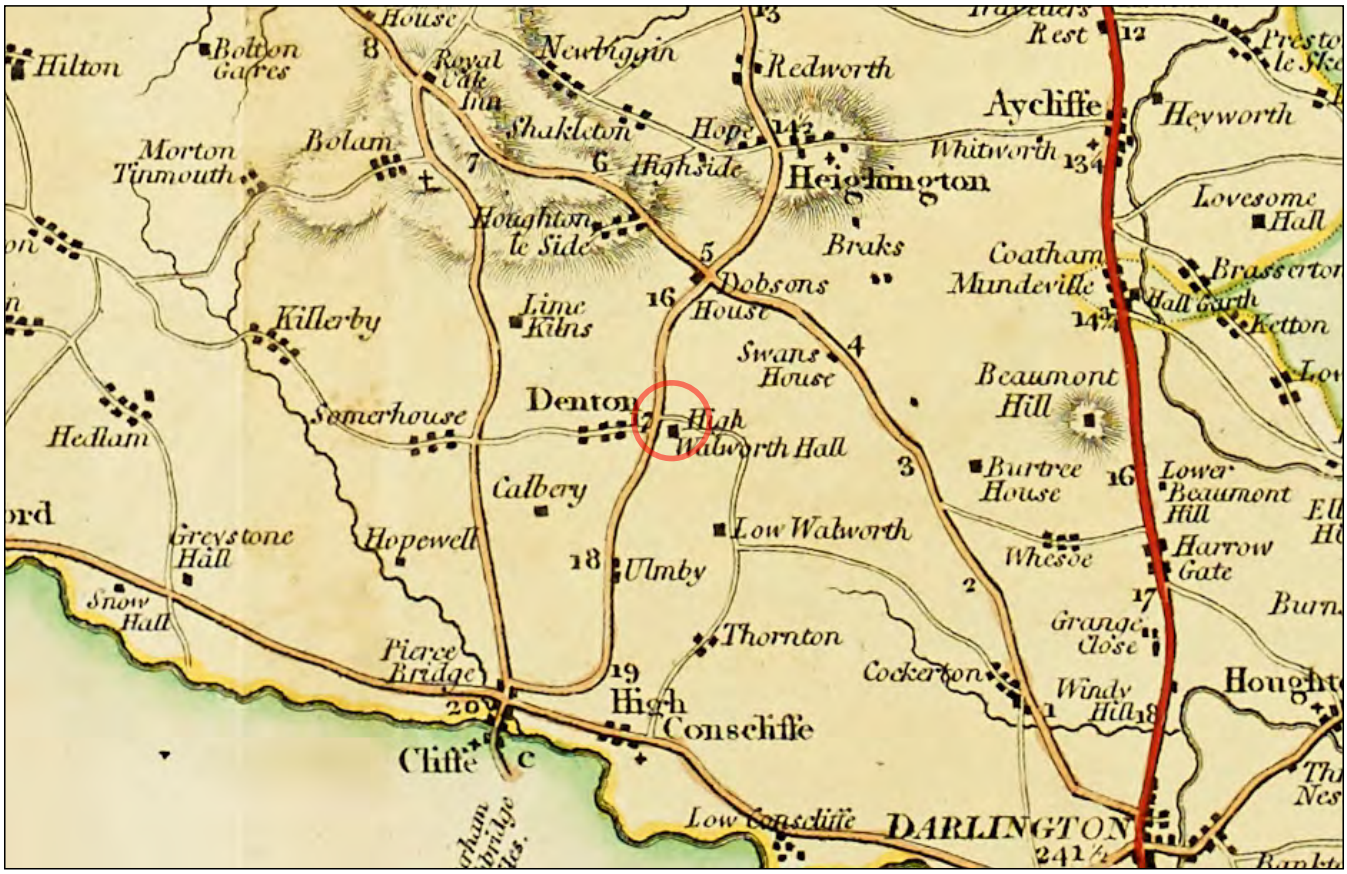
Illus. 11: *Maire's County map of Durham c.1711. The location of Walworth is circled in red.*



Illus. 12: *Whitworth's Plan of the River Tees c.1768. The location of Walworth is circled in red.*



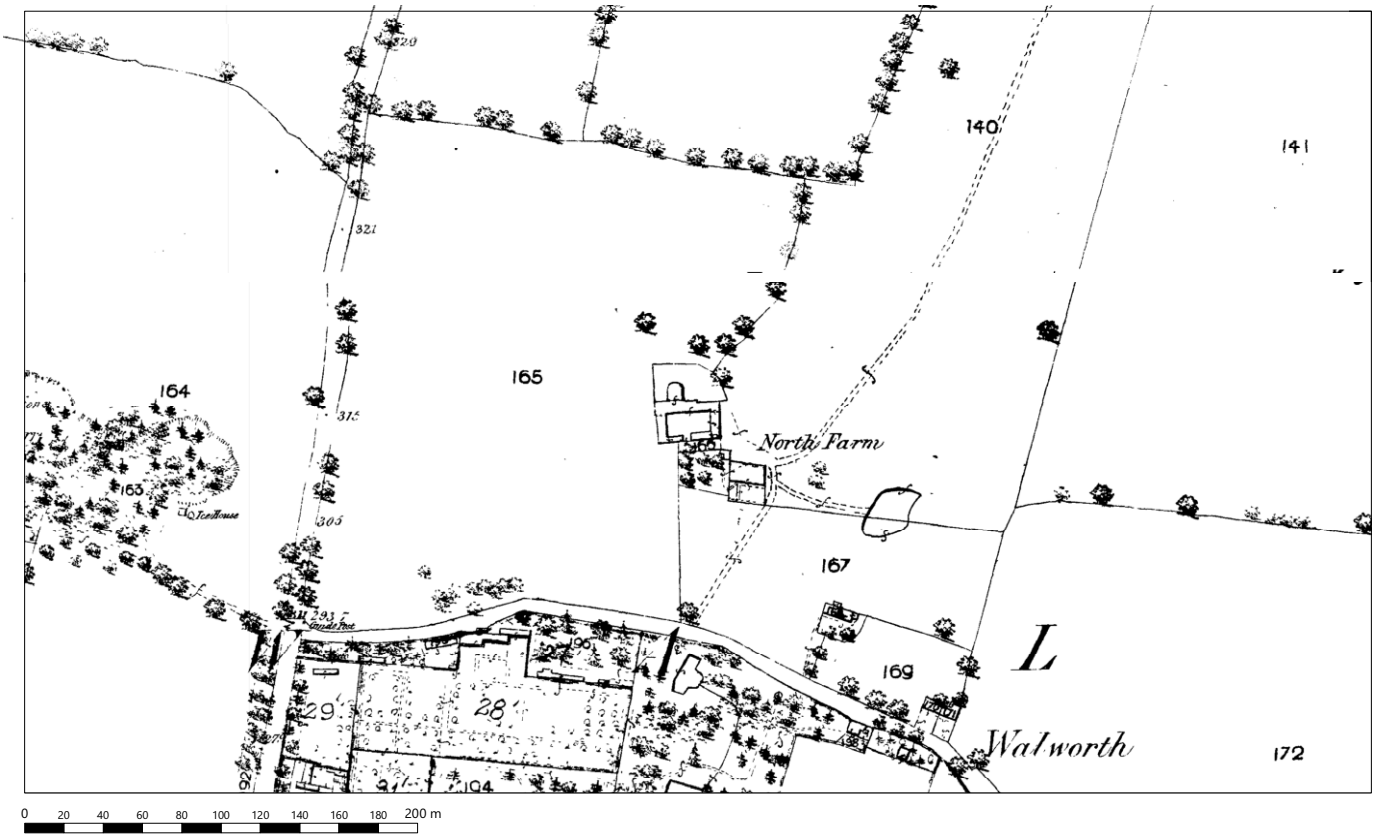
Illus. 13: *Armstrong's County map of Durham c.1791. The location of Walworth is circled in red.*



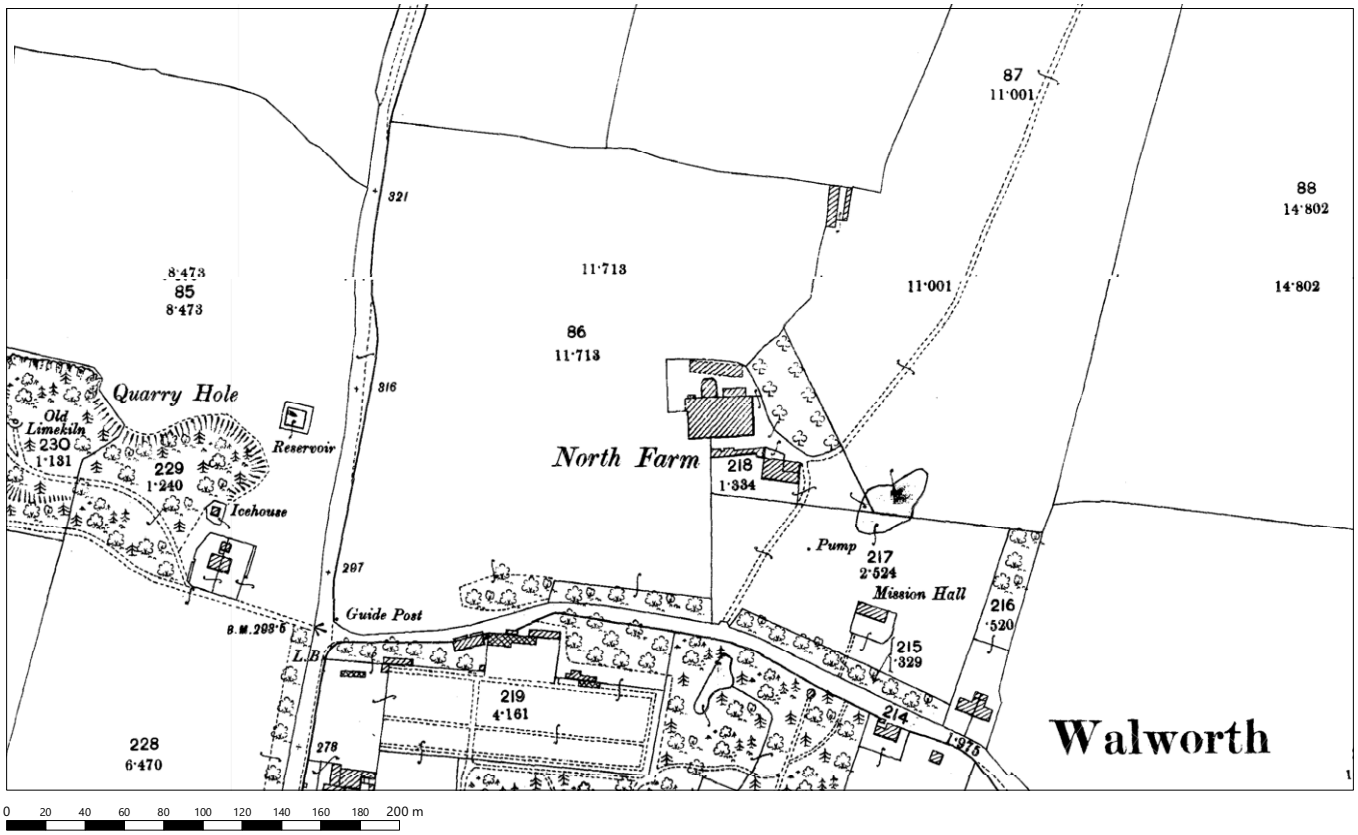
Illus. 14: *Smith's County Map of Durham c.1808. The location of Walworth is circled in red.*

Illus. 15: *Greenwood's County map of Durham c.1820. The location of Walworth is circled in red.*

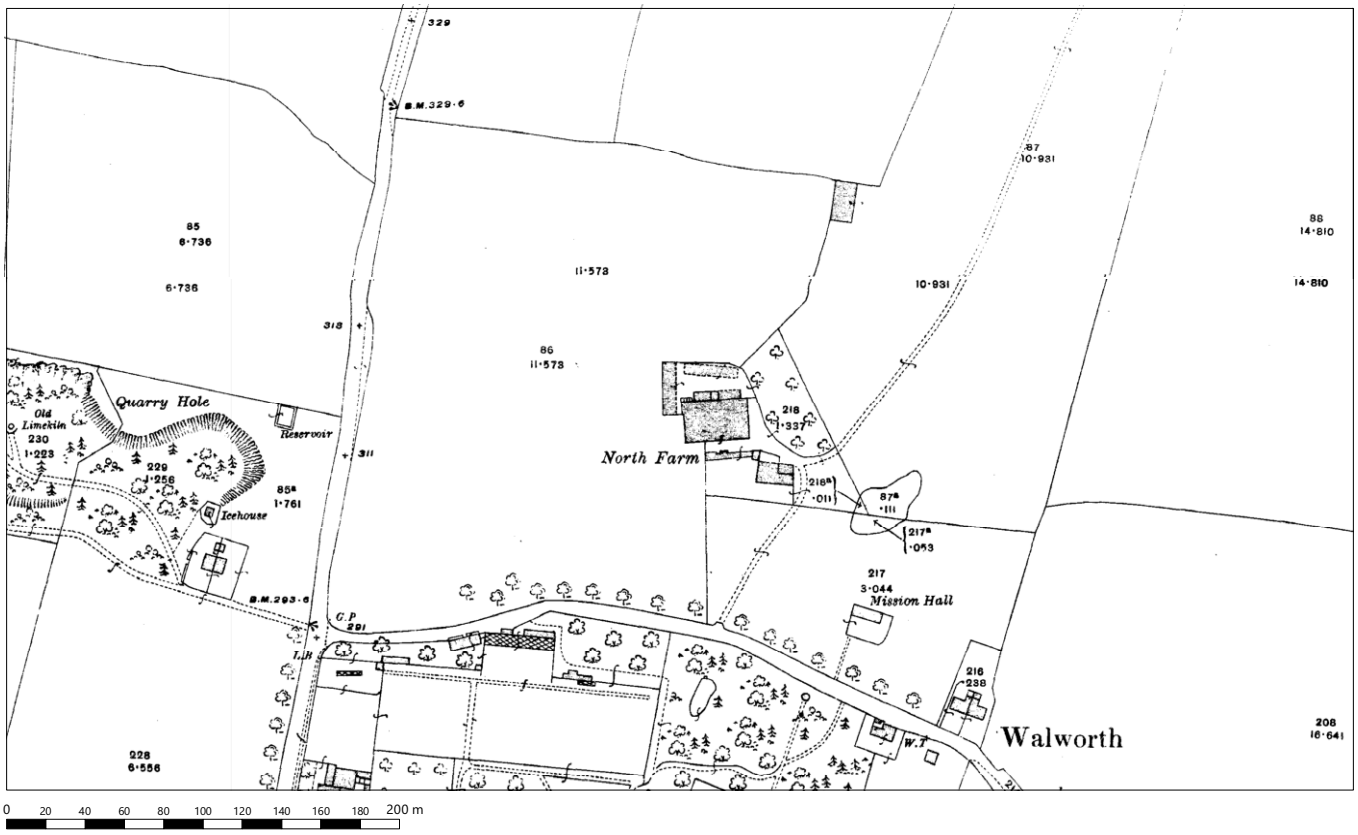
Illus. 16: *Extract from the Walworth Tithe Map c.1838.*



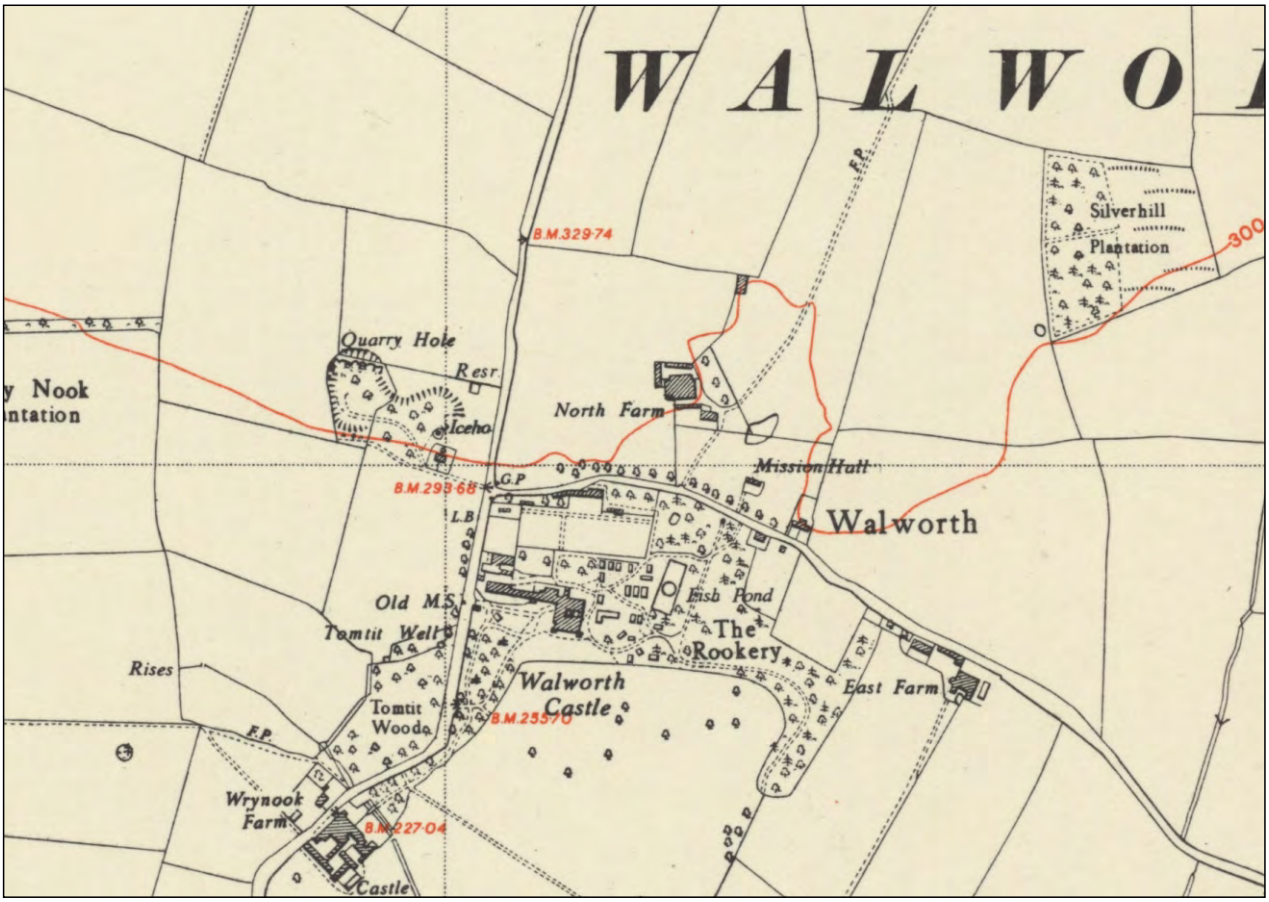
Illus. 17: *Extract from the 1st Edition Ordnance Survey c.1857, 1:2500, showing the site of Walworth DMV.*



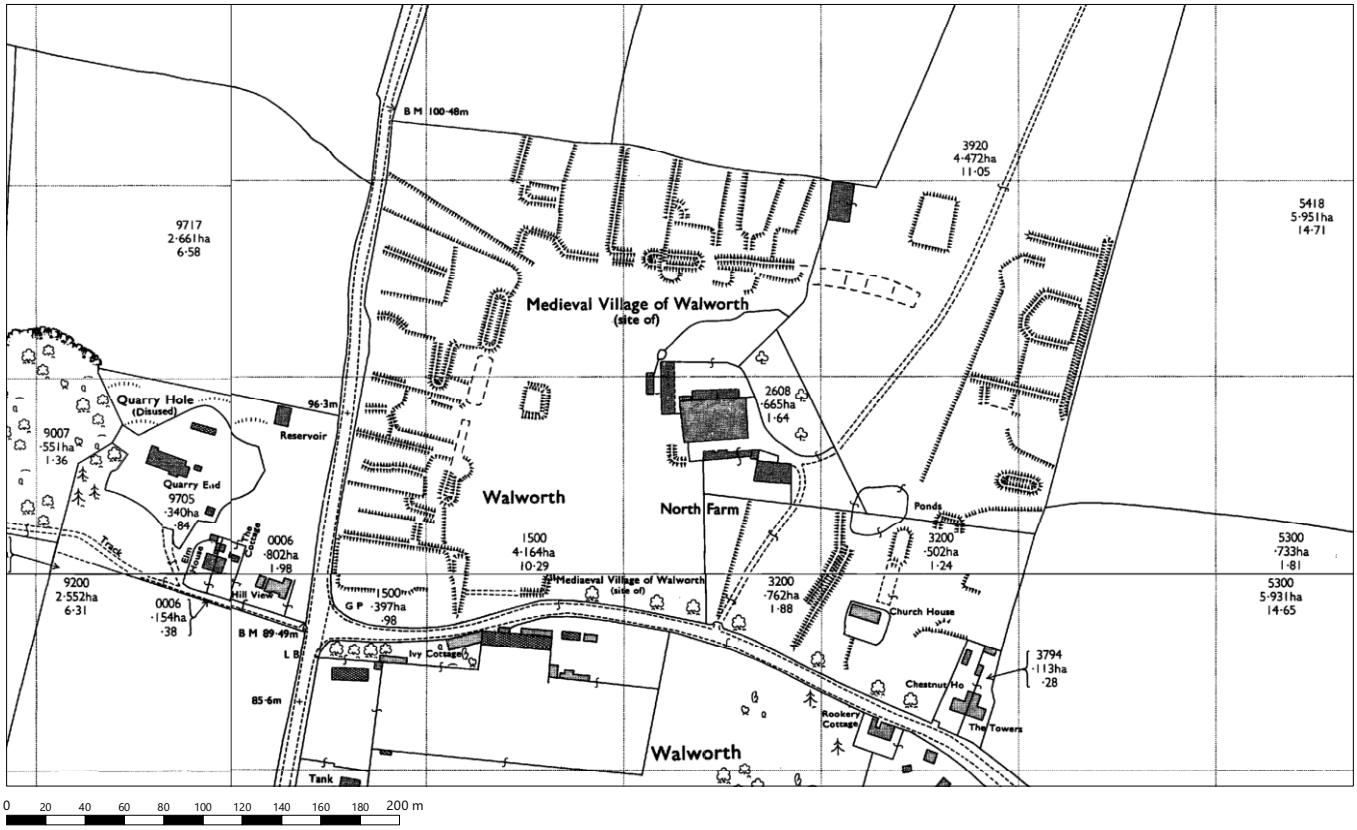
Illus. 18: *Extract from the 2nd Edition Ordnance Survey c.1897, 1:2500, showing the site of Walworth DMV.*



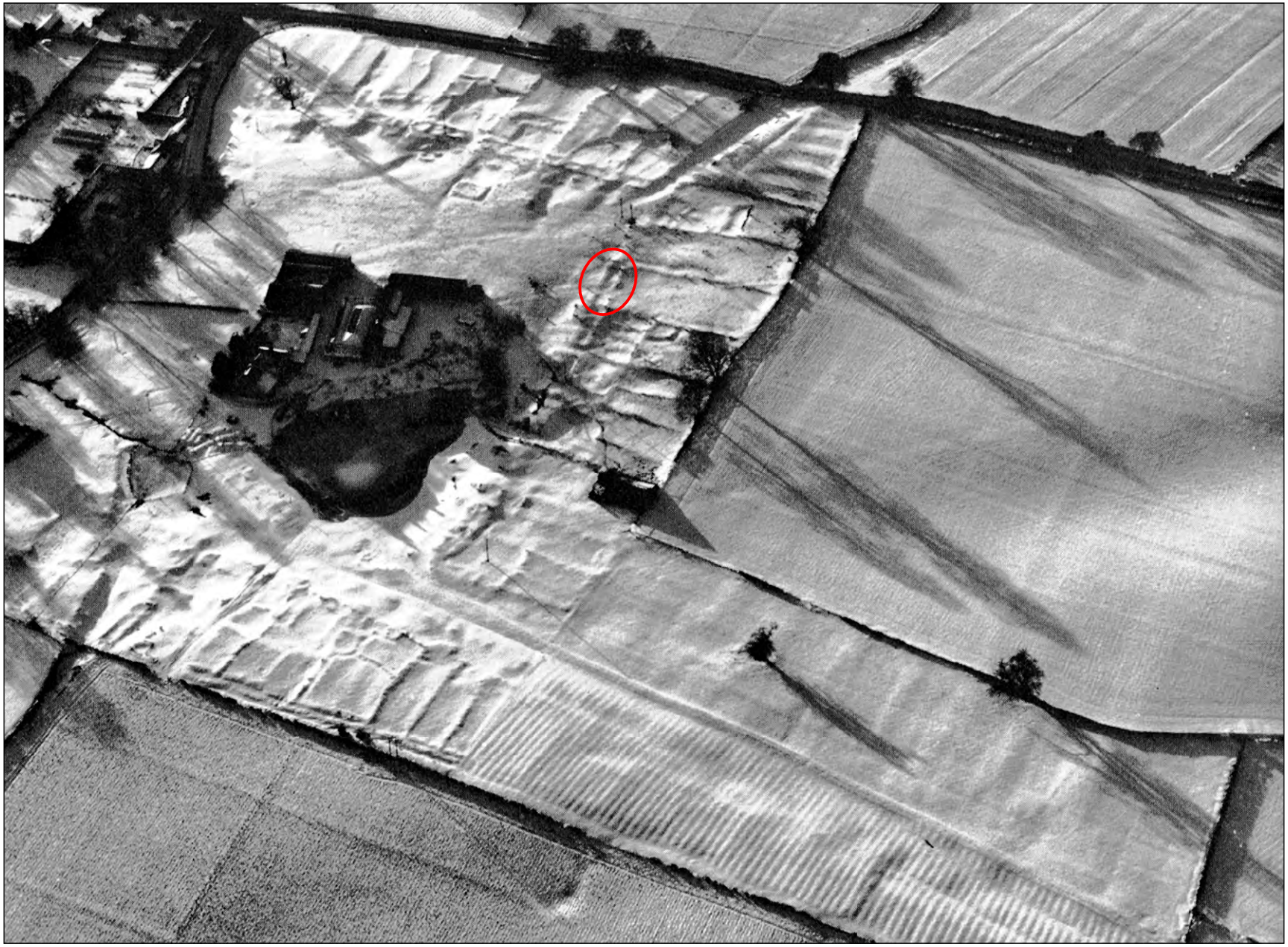
Illus. 19: *Extract from the 3rd Edition Ordnance Survey c.1918, 1:2500, showing the site of Walworth DMV.*



Illus. 20: *Extract from the c.1951 Ordnance Survey Plan.*



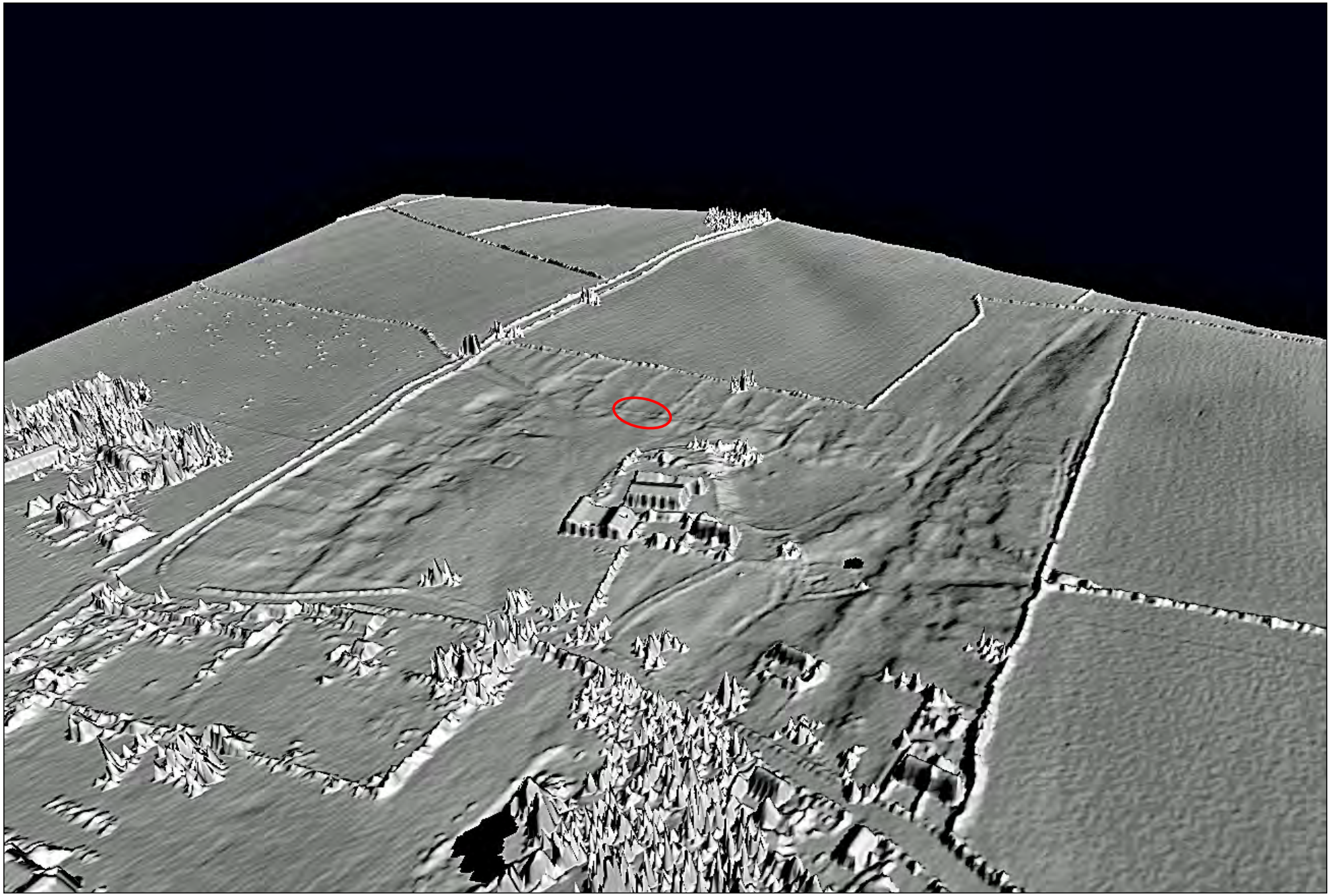
Illus. 21: *Extract from the c.1970 Edition Ordnance Survey, 1:2500, showing the site of Walworth DMV.*



Illus. 22: *Oblique aerial photograph showing Walworth DMV, view looking west. The approximate excavation area is circled in red. Photograph © CUCAP.*

Illus. 23: *Vertical aerial photograph showing Walworth DMV in December 2005. The approximate excavation area is circled in red. Image courtesy of Google Earth.*

Illus. 24: *Enhanced LiDAR image showing Walworth DMV. The approximate excavation area is circled in red.*
© Environment Agency.



Illus. 25: *Enhanced 3D LiDAR image showing Walworth DMV, view looking NNW. The approximate excavation area is circled in red.*
© Environment Agency.

N

Title

Illus 26: *Walworth DMV, Magnetic Gradient Data: Full Site. NB. The approximate area of excavation is circled in red*

1:2000

0 100m

KEY

SITE BOUNDARY

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Scale [A3 Sheet]
1:2000

PHASE SITE INVESTIGATIONS

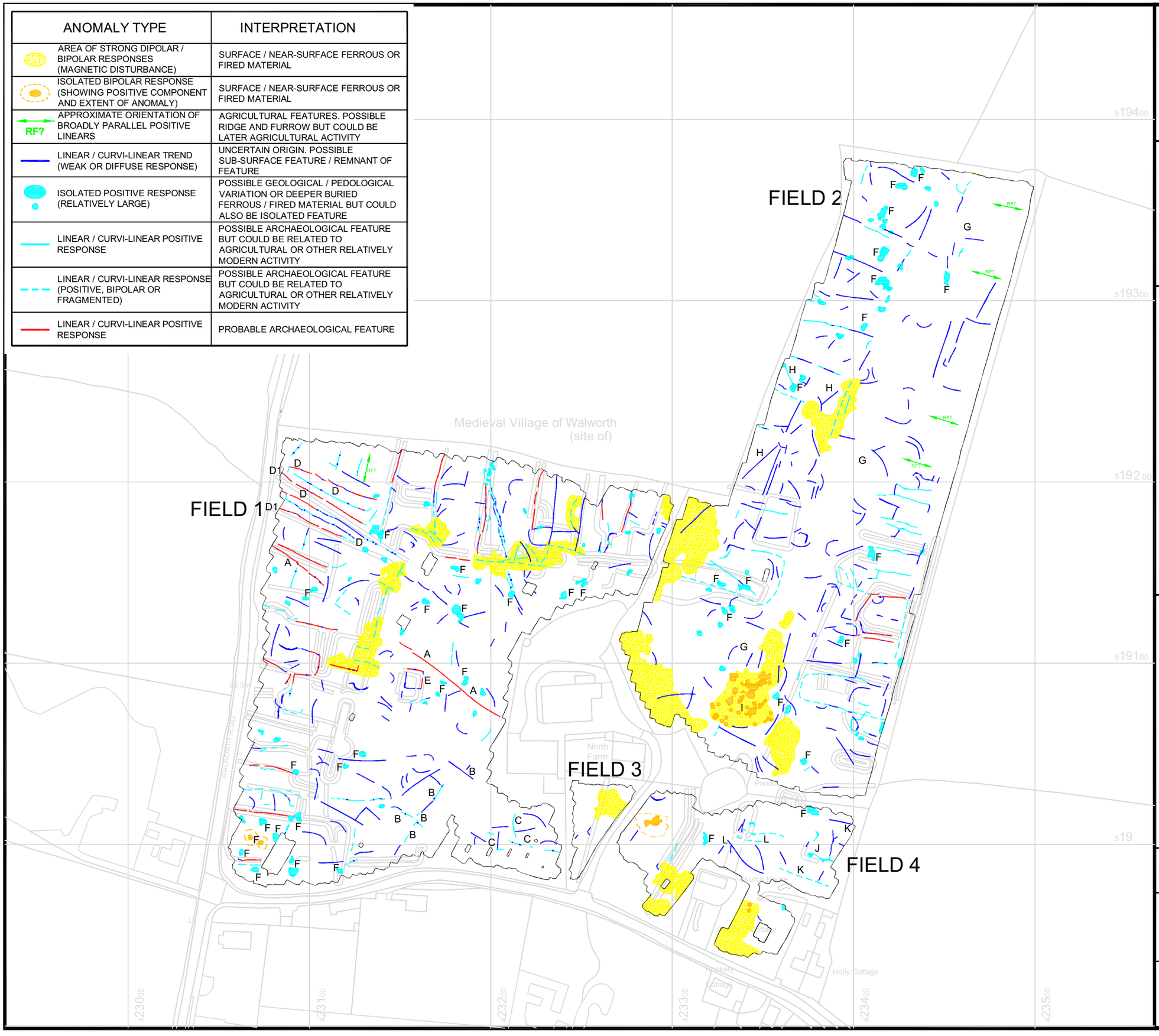
Site WALWORTH DESERTED MEDIEVAL VILLAGE, DARLINGTON COUNTY DURHAM

Base
MAGNETIC GRADIENT DATA: FULL SITE

Illus 26b: *Walworth DMV, Extract of Magnetic Gradient Data. The approximate area of excavation is circled in red*

Illus 21b: *Walworth DMV, Extract of Magnetic Gradient Data. The approximate area of excavation is circled in red*

ANOMALY TYPE	INTERPRETATION
AREA OF STRONG DIPOLAR / BIPOLAR RESPONSES (MAGNETIC DISTURBANCE)	SURFACE / NEAR-SURFACE FERROUS OR FIRED MATERIAL
ISOLATED BIPOLAR RESPONSE (SHOWING POSITIVE COMPONENT AND EXTENT OF ANOMALY)	SURFACE / NEAR-SURFACE FERROUS OR FIRED MATERIAL
RF? APPROXIMATE ORIENTATION OF BROADLY PARALLEL POSITIVE LINEARS	AGRICULTURAL FEATURES. POSSIBLE RIDGE AND FURROW BUT COULD BE LATER AGRICULTURAL ACTIVITY
LINEAR / CURVI-LINEAR TREND (WEAK OR DIFFUSE RESPONSE)	UNCERTAIN ORIGIN. POSSIBLE SUB-SURFACE FEATURE / REMNANT OF FEATURE
ISOLATED POSITIVE RESPONSE (RELATIVELY LARGE)	POSSIBLE GEOLOGICAL / PEDOLOGICAL VARIATION OR DEEPER BURIED FERROUS / FIRED MATERIAL BUT COULD ALSO BE ISOLATED FEATURE
LINEAR / CURVI-LINEAR POSITIVE RESPONSE	POSSIBLE ARCHAEOLOGICAL FEATURE BUT COULD BE RELATED TO AGRICULTURAL OR OTHER RELATIVELY MODERN ACTIVITY
LINEAR / CURVI-LINEAR RESPONSE (POSITIVE, BIPOLAR OR FRAGMENTED)	POSSIBLE ARCHAEOLOGICAL FEATURE BUT COULD BE RELATED TO AGRICULTURAL OR OTHER RELATIVELY MODERN ACTIVITY
LINEAR / CURVI-LINEAR POSITIVE RESPONSE	PROBABLE ARCHAEOLOGICAL FEATURE



N

Title

Illus 27: *Summary Interpretation of Magnetic Gradient Data: Full Site.*

1:2000

0 100m

The Archaeological Practice Ltd.

Tel: (0191) 273 0777

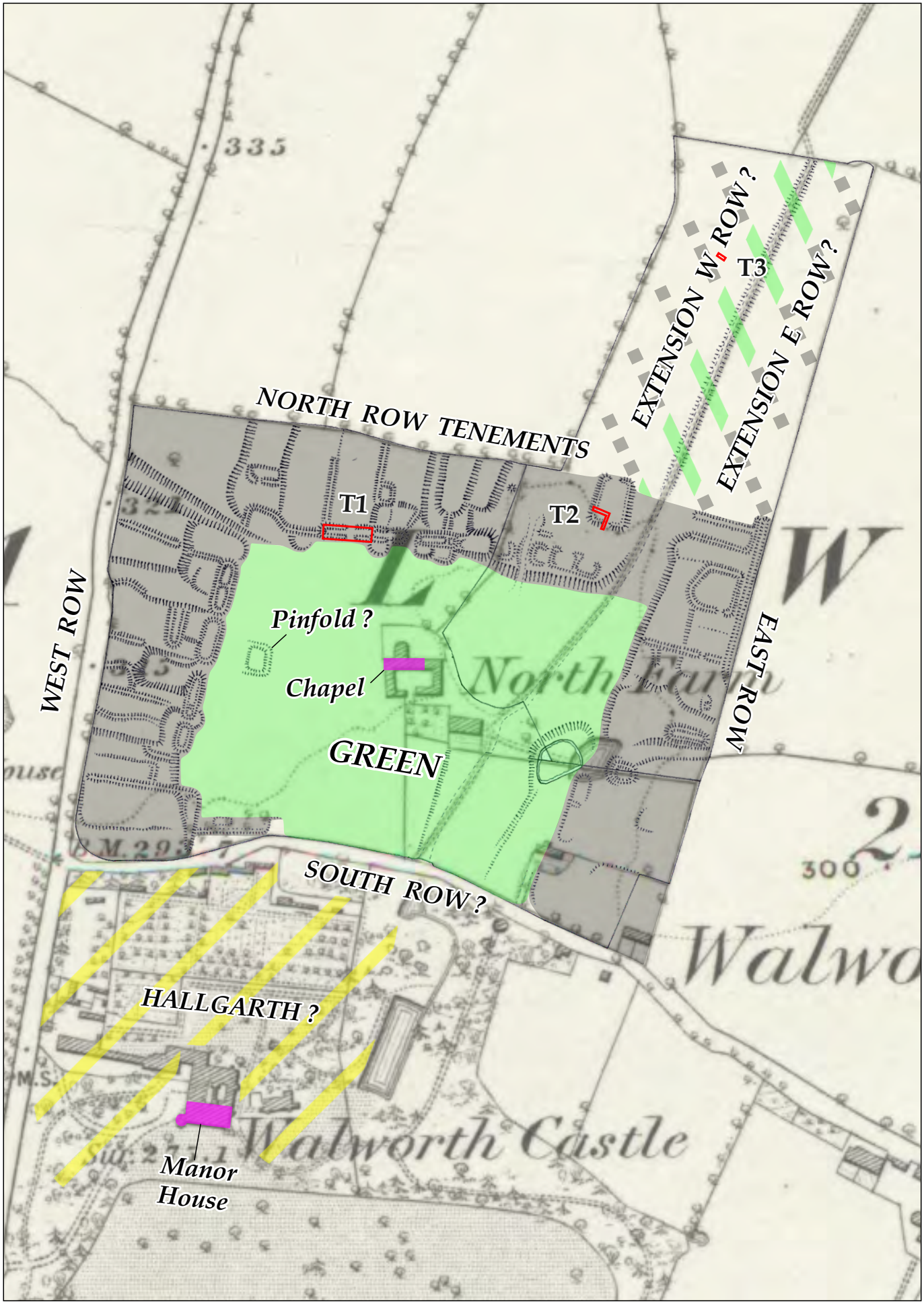
www.archaeologicalpractice.co.uk

Scale [A3 Sheet] 1:2000

PHASE SITE INVESTIGATIONS

Site WALWORTH DESERTED MEDIEVAL VILLAGE, DARLINGTON COUNTY DURHAM

Base SUMMARY INTERPRETATION OF MAGNETIC GRADIENT DATA: FULL SITE



Illus. 28: *Interpretative map, using the 1st Edition OS c.1859 as a base, with the RCHME 1991 earthwork survey superimposed.*

high. The fields were numbered 1 to 4, with **Field 1** representing the large field to the west, NW and SW of the farm, and **Field 2** the other large field situated to the NE, with its long axis aligned NNE-SSW. **Field 3** was the small triangular field immediately to the south of the farmhouse, whilst **Field 4** lay to the SE of the farm and surrounded the cottage.

Key features of interest arising from the survey were anomalies in **Field 1** which do not correspond to the earthworks of the deserted medieval village and follow a different alignment implying they may represent a different period of occupation of the site. In **Field 2** the linear settlement is clearly represented by anomalies representing a row of croft enclosures, not plotted on the 1991 RCHME survey or subsequent Ordnance Survey plans, on the west side of the north-south aligned trackway which are still evident as earthworks on aerial photography and on the ground. The east side is covered by ridge and furrow earthworks and traces of an equivalent row are much less clear. However, anomalies representing possible traces of crofts can be noted towards the southern end of the row – but north of the main village quadrangle surrounding the green – whilst aerial photography suggests croft enclosures are just perceptible along the full length of the east side despite the masking effect the ridge and furrow. **Fields 3 and 4** were both relatively small and were dominated by responses from relatively modern features/material, leading to their rejection as candidates for further field investigation.

A series of specific questions arising from the survey led to the formulation of a number of research questions, some of which are based on Key Research Themes and Priorities from the North-East Regional Research Framework (NERRF: Petts & Gerrard 2006, 158-59, 168-70, 175) concerning themes of rural settlement formation, growth and decline and the relationship between manorial lords and their subordinate communities of agricultural tenants. Site specific questions focused on the following:

- **How did the extant plan of the settlement come to be formed and what is the** chronology of that process? Specifically:

Is it a substantially a single period layout, comprising borough and adjoining bondgate, and, if so, of what date?

Alternatively, is the linear two-row settlement in Field 2 a planned secondary extension? Or part of an earlier layout partially superseded by the rectangular green settlement in Field 1?

- What are the stages and chronology of the settlement's desertion and abandonment? Specifically:

Were some areas such all or part of the linear settlement in Field 2 abandoned and ploughed over while other parts of the village were still occupied?

Was there an earlier, and substantially different, settlement layout, perhaps of Anglo-Saxon or Anglo-Scandinavian date, underlying the visible earthworks, as tentatively hinted at by some of the anomalies identified by the geophysical survey?

2.3 Project Design

2.3.1 Framework

Iin the development of a project design, or Written Scheme of Investigation to answer the above questions by means of fieldwork in 2019, the work was guided by the following overall aims:

- To define and identify the nature of archaeological deposits on site, and date these if and where possible, establishing whether the features/deposits represent part of the medieval settlement and identifying how occupation ceased.
- To characterise the nature of the archaeological sequence and recover as much information as possible about the spatial patterning of features present on the site.
- To address the research questions identified above.
- Provide training in archaeological methods and techniques to volunteers wishing to investigate their area's past, equipping them with relevant new skills.
- Further the understanding of the site and its environment by all members of the community.
- Reinforce and develop the local volunteers' existing sense of place and belonging.
- To provide a springboard for further archaeological community-led initiatives.

2.3.2 Trench Positioning

The positioning of the trenches was based on the results of the geophysical survey combined with scrutiny of the surviving earthworks using previous topographic surveys, aerial photography and walkover examination. This led to an aspirational trench layout intended to allow flexibility to follow up promising results within the 2019 timescale, and also to undertake a further season of investigation if the opportunity and requisite funding were to become available.

All trench locations were designed to elucidate the developmental stages of the village settlement, its origins, duration and desertion, identifying changes in layout and other modifications which may relate to different phases in the occupation of the site and hopefully yield dateable finds and deposits which will provide a chronology for those processes. The locations of 7 initial trenches are shown in the WSI document (Appendix 6, below), each set within a defined area within which the trenches may be extended as deemed appropriate in consultation with the Historic England (HE) Inspector of Ancient Monuments and Durham County Archaeologist in order to further investigate features of interest revealed by the initial trench and answer questions generated (*see* Appendix 1: Archaeological Trench Location Plan).

3. EVALUATION PROGRAMME

3.1 Aims

The fieldwork was designed to investigate the origin, duration of occupation, evidence for re-planning, and date of abandonment of the village, and was carried out in November 2019 following evaluation work, encompassing geophysical survey and aerial photography, which contributed towards determining the location of the excavation trenches.

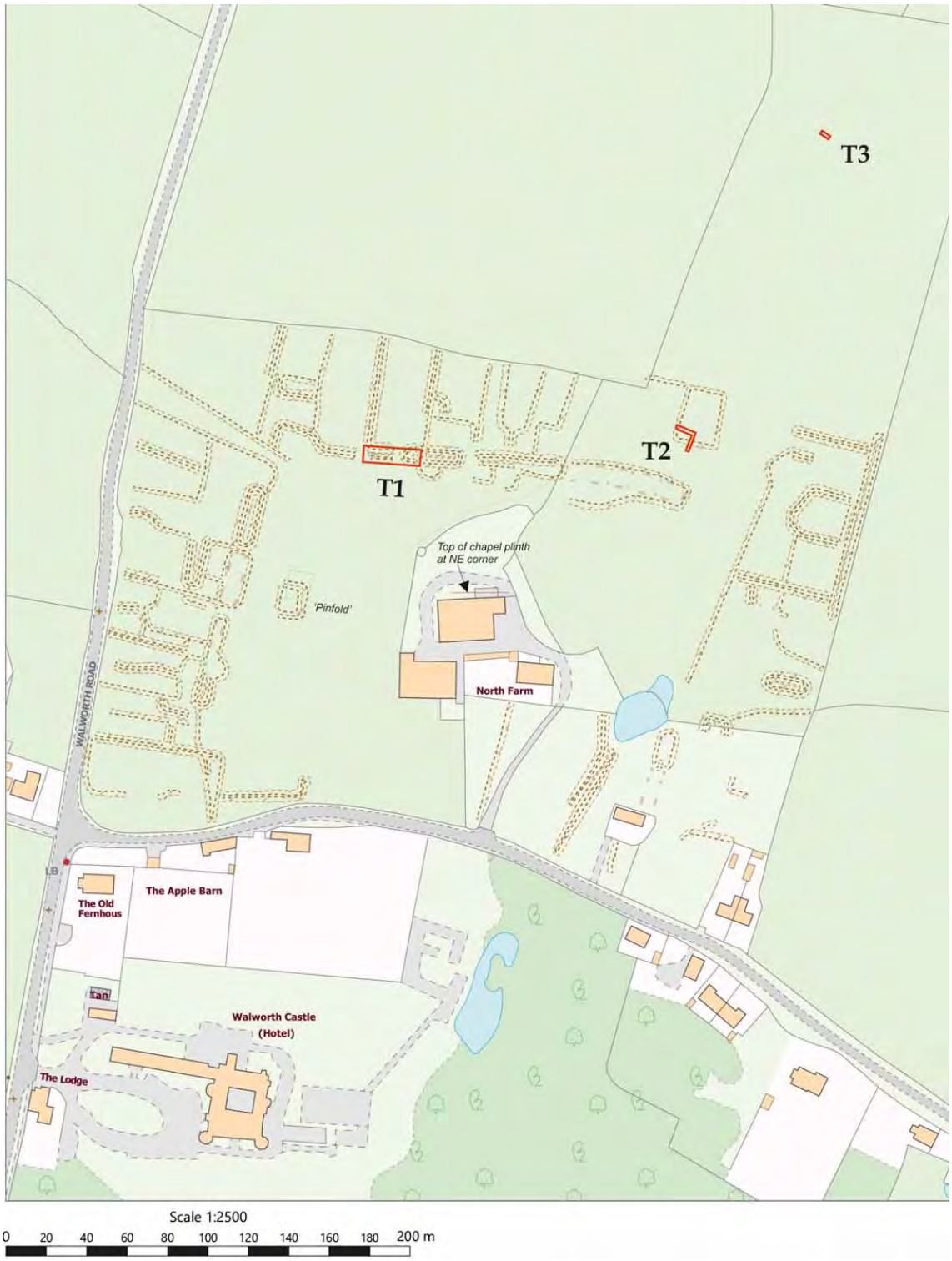
Illus. 29: Aerial view taken during the excavation works showing the site of Trench 1 north-west of North Farm within the extensive earthworks of the Scheduled Monument.

Archaeological excavation was carried out by opening trenches within three of the seven sites chosen on the basis of geophysical survey and permitted by Historic England, the work being undertaken by local volunteers working under the direction of the Archaeological Practice Ltd. The main focus was a trench in the north row (Trench 1; WSI TRENCH 5), directly adjacent to the green, to investigate what appeared to be a typical house platform located at the front of a toft. An L-shaped trench (2; WSI TRENCH 1) was also excavated towards the east end of the North Row, just south of the west row of the adjoining linear extension. It intersected the apparent south and west walls of a sub-rectangular enclosure which clearly survived as a visible earthwork but was not represented by any geomagnetic responses. The trench was designed to investigate whether the two-row linear settlement originally continued further south into the area occupied by the quadrangular green settlement and predated the latter. A third trench (3; WSI TRENCH 3) was excavated further north on the west side of the linear extension to explore this part of the settlement.

All trenches were excavated to a depth sufficient to establish either the presence of natural sub-soil or the presence of any archaeological remains. Overburden on the site was removed by hand, or by mechanical excavator supervised by archaeological staff in cases where surface features were not prominent. Hand excavation, including cleaning of the trench faces to reveal changes in context and potential features, was carried out prior to recording by volunteers under the close supervision of suitably qualified and experienced staff from the Archaeological Practice Ltd.

4. RESULTS

Three trenches were excavated within sites approved by Historic England in the Scheduled Area of Walworth Deserted Medieval Village. Following are the results of investigation of the trenches as excavated (see *Illus. 30, below*).



Illus. 30: Site plan showing the positions of trenches excavated in November, 2019.

4.1 TRENCH 1

The first trench excavated on the site was ***Trench no. 5***, as defined in the WSI document, positioned towards the northern edge of Field 1, north north-west of North farm.

Illus. 31: View of excavations in progress at the west End of Trench 1, with kiln in the foreground.

4.1.1 ***Location and Dimensions:***

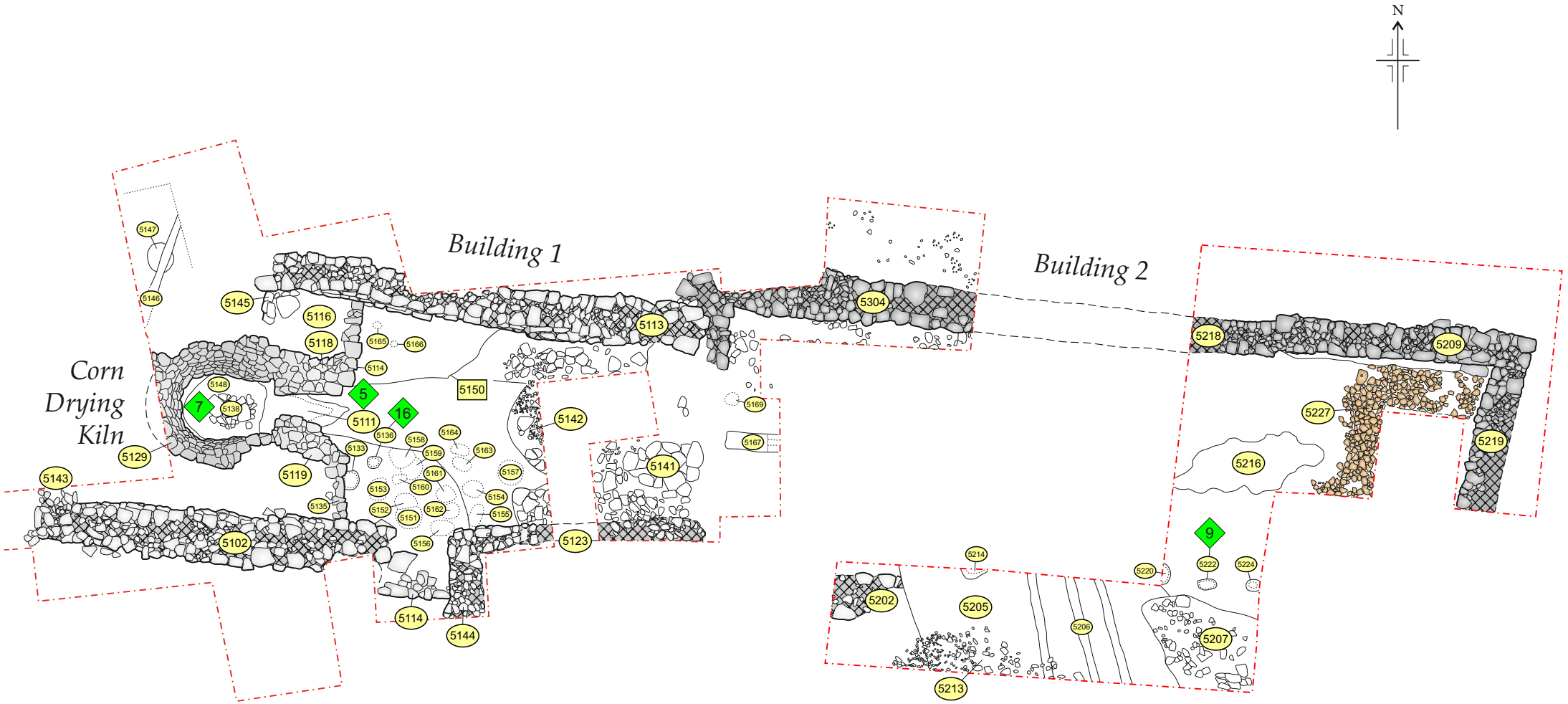
This trench was positioned in the centre of the north row of tofts within Field 1.

Dimensions: 29 m (length) x 10.4 m (width) x 1.30 m (max depth).

4.1.2 ***Stratigraphy and Archaeology:*** (*See Illus. 30-37, and Photos 01-28*)

Prior to excavation, the area of the croft at the front of the plot was broadly defined by a series of east-west and north-south walls, apparent as linear ridges within the grassland. Given the somewhat differing orientations of many of these walls, it seems unlikely that they represent a single structure, or indeed perhaps contemporary structures. It is however possible to define likely individual structures from the surviving walls. It should also be noted that these walls of course represent the latest surviving features on the site and underlying earlier phases – including an initial timber phase, were recorded between and around these wall lines.

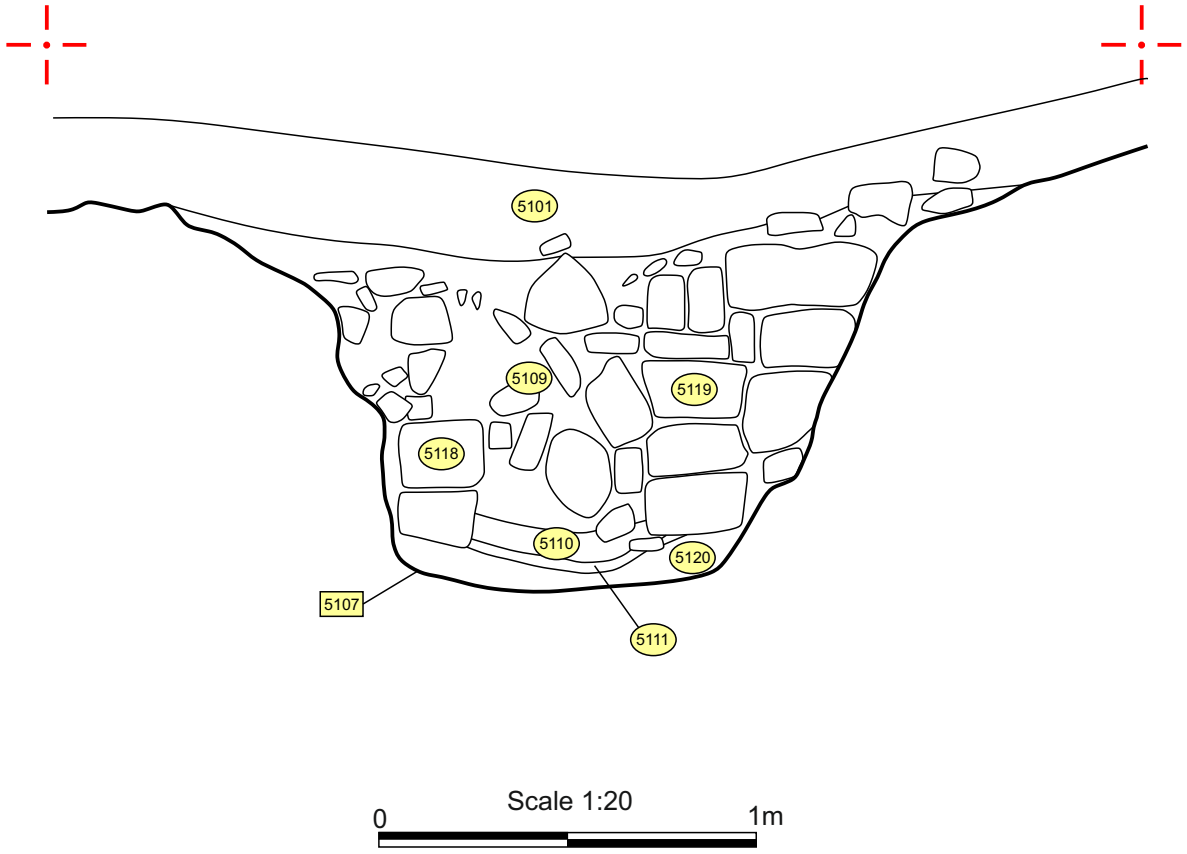
The western half of the plot appeared to contain a single structure defined by east-west orientated north [5113] and south [5102] walls, with a possible north-south wall [5143] marking the western end of the plot. The eastern side of the plot contained another structure defined by a northern east-west wall [5209], a partially surviving southern east-west wall [5202], and a north-south wall [5219] defining the eastern end of the plot. Underling both of



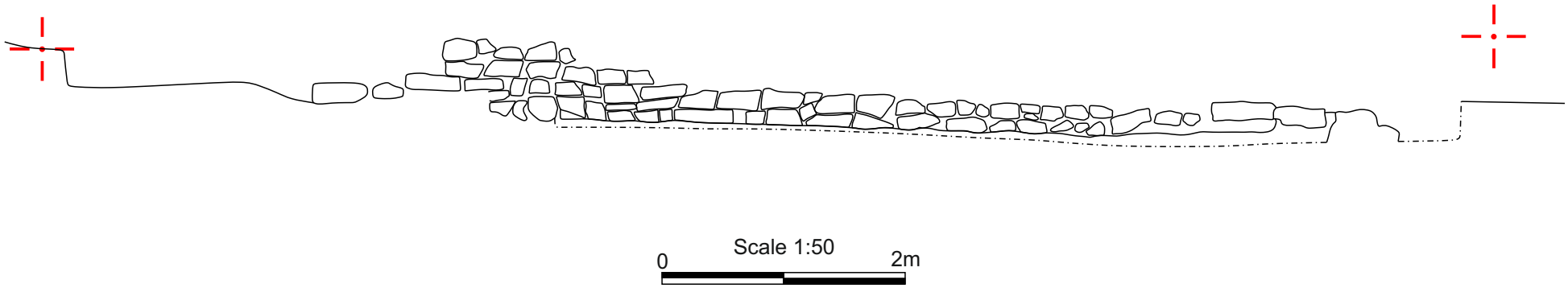
Scale 1:100

0 5m

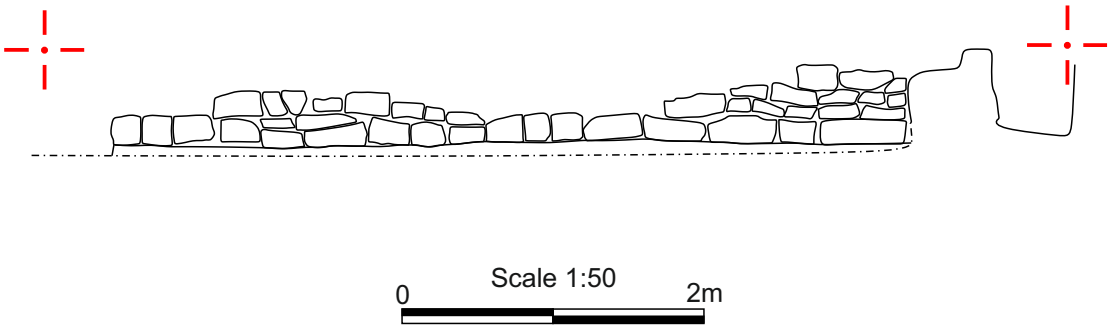
Illus. 32: *Plan of structural features from primary excavation area, Walworth Deserted Medieval Village 2019.*
NB. Context Nos. are bound in yellow; selected Palaeo-environmental Samples are bound in green.



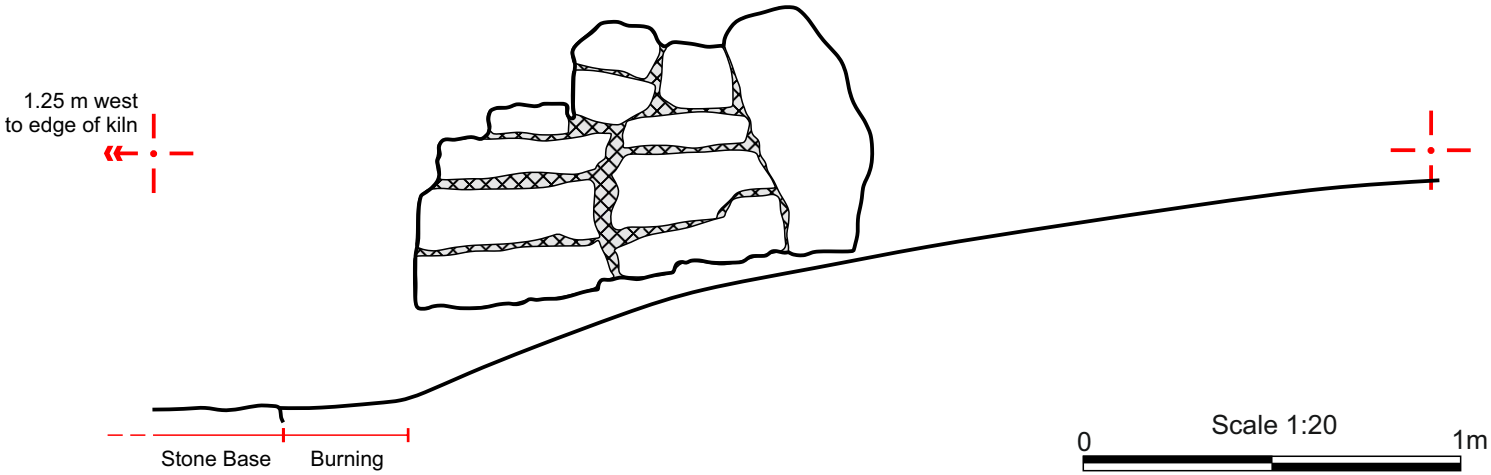
Illus. 33: *West facing profile through Malting Kiln [5129] .*



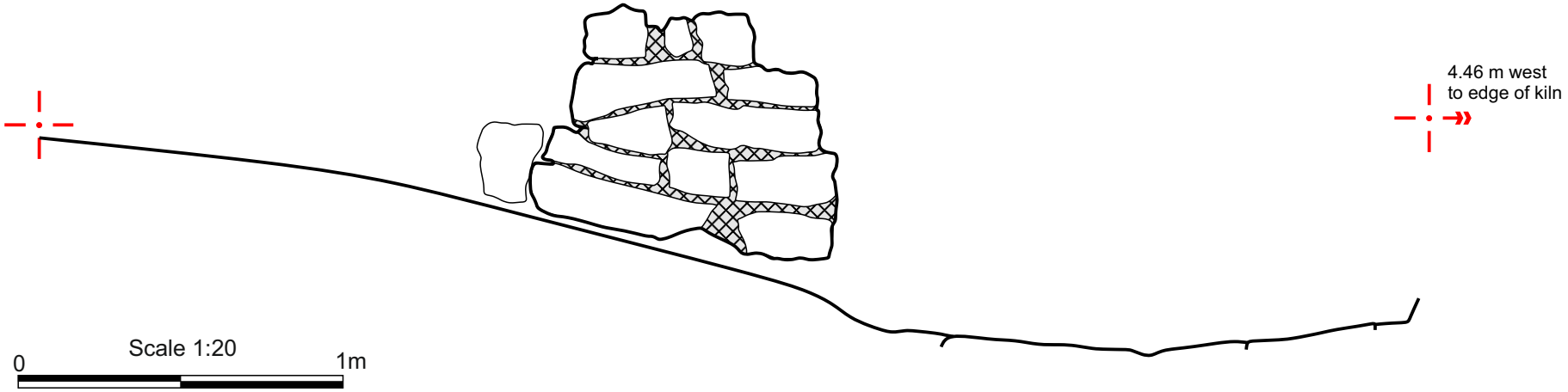
Illus. 34: *South facing profile of Wall [5113].*



Illus. 35: *South facing profile of Wall [5209 and 5218].*



Illus. 36: *South facing elevation of kiln wall [5118].*



Illus. 37: *North facing elevation of kiln wall [5119].*

these structures was a possible primary timber phase defined by a series of postholes [5214], [5220], [5222] & [5224] along the southern side of the croft. Elements of other possible structures are discussed below.

Building 1

At the extreme west end of Building 1 were a number of features, the most notable of which was what has been interpreted on the basis of its form and palaeo-environmental analysis as a malt-drying kiln. This feature was located in the western side of the plot, centrally located between the northern [5113] and southern [5102] walls of the building, and structurally abutting both.

In its original phase the kiln does not appear to have been lined with stones, as the natural clay around the outside of the feature showed a distinct reddening due to burning. Whether this original phase of use was also as a malting kiln is uncertain, but some re-cutting and deepening of the feature is implied in the subsequent phase (see below).

Following this initial phase of burning and use, a sandstone base [5138] was laid within the central part of the kiln floor, set into the natural clay [5120]. This stone base may have dated to the primary phase of the feature, but given that burning [5148] around the stone was localised and did not generally spread to the sides of the kiln, whereas the primary phase saw universal burning of the surrounding natural all around the upper part of the feature, it seems likely that this secondary phase involved some re-modelling and deepening [5107] of the original feature in also to convert it into a malting kiln (where it would be most undesirable for high heat and flames to reach the upper part of the firing pit). As a result of this deepening, fresh, unburnt clay [5120] was exposed at the base of the new kiln.

As part of this suggested re-modelling, a single lining of stones [5129] was set around the inner face of the feature. These stones consisted of both rounded and sub-rounded cobbles of sandstone and limestone, along with others that were sub-rectangular in shape and which may have been re-used from an existing structure or building.

A stone-lined flue provided access to the kiln [5118], [5119] from the eastern side of the feature, with the ground levels on the northern side being built up with a layer of redeposited clay [5116]. This flue sloped up a cut channel [5149] which widened as it reached ground level. Within the channel was a layer of charcoal [5111] from one of the earlier firings of the kiln, sealed by a layer of crushed white mortar [5110], perhaps laid as a later surface leading into the kiln itself. Above this was another layer of charcoal, and an upper layer of mixed charcoal, loam, and small limestone pieces and powder [5130].

This channel led into an open area to the east of the kiln defined by the surrounding walls of the building to the north [5113] and south [5102], and two north-south wing walls [5114]. [5135] attaching the flue of the kiln to the walls of the building. This open area was covered by an extensive deposit of charcoal, coal, and ash [5112], which represent the spreading out of material cleared from successive firings of the kiln.

The remains of two other distinct features also lay within Building 1, to the east of the malting kiln. The first of these was an apparent circular feature [5142], only partly uncovered during the excavation, but containing a layer of small partly crushed pieces of limestone. These were identical in nature to those which spread from this point down the flue channel to the west and seem to have been trampled that way by users of the kiln crossing this area on the way to the firing chamber.

The second feature [5141] has been interpreted as the base of an oven, perhaps a bread oven and was formed by a layer of closely packed stones with the remnants of an outer structure rising from its circumference. Areas of burning upon several of these stones indicated localised high temperatures within this feature.

Building 2

This structure was located within the eastern part of the croft and defined by a northern east-west wall [5209], possibly ending at an entrance point to its western end, and a north-south wall [5219] running from the western end along the plot boundary. The southern east-west wall had been heavily truncated by later post-medieval activity, but survived in part [5202], as well as in areas of rubble [5207] along its projected course. A second entrance point may have been located within this length of wall.

The northern wall [5219] of this structure cut through an earlier feature marked by an area of closely packed cobbles [5227] that had been set into the natural clay to make up an area of hard-standing or a working surface. To the immediate west of this surface was a broadly linear area of heavy burning [5216] across the upper part of the natural clay. This was interpreted as the base of an industrial feature such as a kiln or oven, which would have generated enough heat to bake the underlying clay. Remnants of charcoal [5226] pressed between the upper part of the cobble surface may indicate firing waste from this process. Only these lower levels of this feature survived, with the upper parts presumably having been removed prior to the building of the northern and western wall lines of Structure 03). These walls presumably replaced earlier walls associated with a structure around this industrial feature.

The earliest phase of activity within the area of the croft is represented by a series of post settings running east-west along the southern edge of the plot boundary where the croft would have fronted onto the village green. Three postholes were present towards the eastern end of the plot [5220], [5222], [5224], with a fourth a short distance to the west [5214], and a final one towards the western side of the plot boundary. Each of these postholes contained burning, indicating that the original structure (Structure 01) must have been burnt in-situ.

During the later phases of activity on the site, either in the later medieval or pots-medieval period, a cobbled trackway [5205] was laid across and through the central part of Building 2. This trackway ran south-west to north-east as evidenced by a series of wheel ruts [5206] in its upper surface, in a projected line which would lead directly back to the farm buildings at North Farm within the centre of the former village. A metalled surface [5213] composed of small pebbles pressed into the natural clay may be part of the same pathway extending to the south of the line of tofts along the north side of the village green. This path- or trackway is clearly visible on aerial views of the site and the Lidar Survey, taking a course through the remains of toft walls which implies that it was established following their demolition.

It is possibly within this phase that the former malt kiln was finally backfilled with a combination of rubble from the surrounding walls and structures and the bodies of two dead horses [5109].

4.1.3 ***Interpretation:***

The main trench (TRENCH 1, WSI Trench 5) revealed that what had initially been interpreted as a single longhouse, based on the visible earthworks, in fact represented two separate rectangular structures belonging to different phases, as denoted by the differing alignments of their walls. The western half of the plot appeared to contain a single building or structure (Building 1) defined by east-west orientated north and south walls, plus a possible west wall, only one stub of which could be exposed. Overall, the building was at least 12 m long (E-W) by 6 m broad (N-S), externally, though none of the walls survived in its entirety and no east end wall was found. A doorway with stone threshold was uncovered in the south wall some 6.6 m from its western end. To the east of the entrance, the south wall appeared to deviate northwards from its original line, narrowing the internal width of the building from 4 m to 3 m at its eastern end, and probably representing a later alteration. The eastern side of the plot contained another structure (Building 2), again aligned roughly east-west and defined by its north, east and very partially surviving south and west walls. This measured at least 15 m in length (E-W) and was 6 m broad (N-S). The northern wall of the Building 1 appeared to abut the north-west corner of the Building 2, with the latter's north wall being offset just to the north.

The eastern end of Building 2 contained an area of closely packed cobbles set into the natural clay to make up an area of hard-standing or a working surface. Immediately to the west of this surface an area of heavy burning across the upper part of the natural clay was interpreted as the base of an industrial feature such as a kiln or oven. A row of four postholes was noted along the south side of the building, positioned just north of the line of the south wall where the latter no longer survived. However, it was not possible to determine, stratigraphically, whether these postholes represent part of an earlier timber structural phase or formed part of a later, timber frontage for Building 2, following partial demolition of its south wall.

The western Building 1 contained a kiln, probably a corn-drying or malting kiln (see discussion, below). This took the form of a large, horseshoe-shaped pit 1.8 m in max. base diameter, which splayed outwards as it sloped upwards, and a 1 m long flue channel to the east. Sandstone flags were laid in the central part of the base of the pit whilst its sides and those of the flue channel were lined with cobbles and reused rubble from earlier structures. From the eastern end of the flue channel, two wing walls extended north and south to abut the outer walls of the building. An open area to the east of the flue and wing walls was covered by an extensive deposit of charcoal, coal, and ash, representing the spread of material cleared from successive firings of the kiln. There were indications that the kiln may not have been lined with stones initially, as the natural clay surrounding the upper part of the pit showed a distinct reddening due to burning. It is also possible that the pit was deepened when the stone lining was added and was floored with flags at the same time, given that the burning around the stone was localised and did not generally spread to the sides of the kiln.

Further east, a partially-excavated, apparently oval-shaped feature formed by a layer of closely packed stones, with the remnants of an outer structure rising from its circumference, was interpreted as the base of a bread oven. Areas of burning upon several of these stones indicated localised high temperatures within this feature. Removal of a baulk of unexcavated ground between the oval feature [5142] and possible bread-oven base [5141] would have elucidated the interpretation of both as separate features or a single larger feature, but time constraints prevented this.

4.1.4 ***Context list:***

Context	Trench	Description	Notes	Length	Width	Height / depth
5100	5.1	Unstrat				
5101	5.1	Turf and topsoil				
5102	5.1	South E-W wall		6.6	0.95	
5103	5.1	Tumble N side of wall 5102		6.8	2.5	0.3
5104	5.1	Tumble S side of wall 5102		5.5	2.4	0.35
5105	5.1	Layer beneath 5104		5.5	2.4	
5106	5.1	Upper rubble in kiln fill		2	1.5	
5107	5.1	Cut of kiln				
5108	5.1	Stoney spread N end of trench		3.4	1.8	
5109	5.1	Main fill of kiln	post-med?			
5110	5.1	Mortar-rich layer below 5109				
5111	5.1	Charcoal-rich layer below 5110				
5112	5.1	Charcoal/coal layer to E of kiln	spread of kiln waste	3	3.8	
5113	5.1	E-W wall along N of trench	cf. 5135	8.45	0.8	
5114	5.1	N-S wall (N) adjacent to kiln flue		1.5	0.4	
5115	5.1	Rubble spread S of 5113	Equiv to 5122	8.5	2	0.25
5116	5.1	Redeposited clay around NE of kiln		1.5	1.1	
5117	5.1	Tumble over 5112/5113	cf. 5115 / 5121 / 5122	8.5	3	
5118	5.1	Northern flue lining stones				
5119	5.1	Southern flue lining stones				
5120	5.1	Clay at base of kiln	Natural?			
5121	5.1	Tumble N of wall 5113	cf. 5117	1	7.5	0.25
5122	5.1	Tumble S of wall 5113	cf. 5117	8.5	2	0.25
5123	5.1	E-W wall in S Central of trench		2.7	?	
5124	5.1	"Step" wall in S part of trench		1.8	0.5	
5125	5.1	Demo spread over 5124		2	1.2	
5126	5.1	Deposit in base of kiln				
5127	5.1	Surface E of kiln	natural?	3	3.8	
5128	5.1	Charcoal deposit within flue				
5129	5.1	Kiln structure				
5130	5.1	Stone/mortar rich fill	Flue channel and E	4.5	1.2	0.2
5131	5.1	Soil acc. Below 5108		3.4	1.8	
5132	5.1	Mixed burnt deposit below 5131		3.4	1.8	
5133	5.1	Cut of PH against kiln wall 5135				0.04
5134	5.1	Fill of 5133				0.04

5135	5.1	N-S wall (S) adjacent to kiln flue		2.5	0.4	
5136	5.1	Cut of PH E of kiln				0.07
5137	5.1	Fill of 5136				0.07
5138	5.1	Cracked stone at base of kiln				
5139						
5140						
5141	5.1	"pizza oven"		1.45	1	
5142	5.1	Possible kiln or feature - part visible		2.5	2.5	
5143	5.1	N-S wall running from W end of 5102		0.35	0.75	
5144	5.1	N-S wall running from E end of 5123		2.2	?	
5145	5.1	Poss stub of N-S wall, W end of 5113		0.7	0.7	
5146	5.1	Linear cutting 5132/5147		1.5	0.15	
5147	5.1	Poss PH in layer 5132		0.55	0.5	
5148	5.1	Burnt clay in kiln, around 5139				
5149	5.1	Cut of scoop leading into kiln		1.3	0.3	
5150	5.1	Wider cut of channel into kiln	widens to 3.7	1.5	4	
5151	5.1	posthole - unexcavated	joined to 5152			
5152	5.1	posthole - unexcavated	joined to 5151			
5153	5.1	posthole - unexcavated		0.4	0.35	
5154	5.1	posthole - unexcavated				
5155	5.1	posthole - unexcavated		0.4	0.2	
5156	5.1	posthole - unexcavated		0.45	0.3	
5157	5.1	posthole - unexcavated		0.5	0.45	
5158	5.1	posthole - unexcavated				
5159	5.1	posthole - unexcavated				
5160	5.1	posthole - unexcavated		0.3	0.15	
5161	5.1	posthole - unexcavated				
5162	5.1	posthole - unexcavated				
5163	5.1	posthole - unexcavated		0.35	0.2	
5164	5.1	posthole - unexcavated		0.32	0.22	
5165	5.1	stakehole - unexcavated				
5166	5.1	stakehole - unexcavated				
5167	5.1	Linear E-W channel		1	0.4	
5168	5.1	possible posthole, N of 5167				
5200	5.2	Unstrat				
5201	5.2	Turf and topsoil				
5202	5.2	Possible S wall (E-W) of structure		1.2	0.85	0.25
5203	5.2	Tumble S of wall 5203		0.8	1.5	0.25
5204	5.2	Cobble spread around wall 5203	demo reused as surface	2	2	0.15

5205	5.2	Post-med surface across S of trench		4.5	2	0.2
5206	5.2	Wheel ruts in 5205	3 ruts	2	0.15	
5207	5.2	Stone tumble in SW corner of trench		2.5	2	0.3
5208	5.2	Sandy accumulation in centre of building		4.5	3	0.35
5209	5.2	E-W wall in N of trench		4.75	0.7	0.55
5210	5.2	Tumble N of wall 5209		5	1.3	0.5
5211	5.2	Tumble S of wall 5209		5	1.3	0.5
5212	5.2	N side of post-med cobble surface		1.5	1	0.2
5213	5.2	Metalled surface below 5203	S of building area	3	1	0.1
5214	5.2	Cut of PH N of 5213	?Primary phase			0.15
5215	5.2	Fill of 5214				0.15
5216	5.2	Burnt clay - poss. Hearth base?		2.8	1.1	0.08
5217	5.2	Tumble from 5218		2	1.5	0.35
5218	5.2	Offset E-W adjacent to 5209		1	0.65	0.37
5219	5.2	N-S wall at E end of trench		3.25	0.7	0.35
5220	5.2	Cut of PH (W)				0.05
5221	5.2	Fill of 5220				0.05
5222	5.2	Cut of PH (central)		0.4	0.2	0.08
5223	5.2	Fill of 5222		0.4	0.2	0.08
5224	5.2	Cut of PH (E)				0.05
5225	5.2	Fill of 5224				0.05
5226	5.2	Charcoal over cobbles 5227		1.5	0.7	0.03
5227	5.2	Cobble surface	Part of 5216 feature?	2.5	2.5	0.2
5228	5.2	Soil acc. N of wall 5209		6	1.35	0.23
5229	5.2	Cut for wall 5209		4	0.12	
5230	5.2	Yellow clay fill of 5229		4	0.12	
5300	5.3	Unstrat				
5301	5.3	Turf and topsoil				
5302	5.3	Tumble N of wall 5304		2.75	1.3	0.3
5303	5.3	Tumble S of wall 5304		5.5	1	0.3
5304	5.4	E-W wall		5.5	0.75	
5305	5.4	Spread E of wall 5304	Equiv. to 5212			
5306	5.4	Cut of stakehole S of wall 5304				
5307	5.4	Fill of 5306				
5308	5.4	Cut of small stakehole				
5309	5.4	Fill of 5309				

4.2 TRENCH 2

4.2.1 *Location and Dimensions:*

This L-shaped trench was positioned directly north of the North Farm farmstead at the north-east corner of the medieval DMV based around a central green.

Dimensions: 10 m (length) x 1.5 m (width) EW and 10 m (length) x 1.5 m (width) NS x 0.60 m (max depth).

4.2.2 *Stratigraphy and Archaeology:* (*See Illus. 30, and Photos 29-30 & 32*)

Below the turf and loam-based topsoil [201] was a yellowish silty-clay subsoil [202]. In the southern arm of the trench, a linear stone feature [203], comprising a stone face along the south side with rubble behind, was exposed at the point where the trench was intersected by a distinct earthwork lynchet.

4.2.3 *Interpretation:*

In Trench 2, the fragmentary remains of an E-W aligned wall [203], in the form of a stone face along the south side with rubble behind, may represent the revetment for an earthen bank perhaps crowned by a hedge separating the front and rear plots of a tenement. No equivalent remains were observed where the trench intersected the bank forming the west side of the tenement, however.

4.2.4 *Context list:*

[201] Turf and loam-based topsoil
[202] Natural, silty-clay subsoil.
[203] An E-W aligned, linear stone feature, comprising a stone face along the south side with rubble behind, intersecting the southern arm of the trench.

Illus. 38: The locations of Trench 2 (foreground) and Trench 3, north-east of North Farm, seen on an aerial view taken in frosty conditions in November, 2019.

4.3 TRENCH 3

4.3.1 ***Location and Dimensions:***

Oriented E-W on the west side of the long Field 2 to investigate slight traces of linear settlement remains represented by geophysical anomalies representing a row of croft enclosures on the west side of the north-south aligned trackway.

Dimensions: 8 m (length) x 1.5 m (width) x 0.52 m (max depth).

4.3.2 ***Stratigraphy and Archaeology:*** (*See Illus. 30, and Photo. 31*)

Below the turf and loam-based topsoil [301] was an orange, silty-clay subsoil [302].

4.3.3 ***Interpretation:***
No features whatsoever were identified in the E-W trench (3) dug across an apparent tenement plot towards the north end of the linear extensions west row. The lack of occupational deposits or structural features within the toft (the bounds of which are clearly identifiable in aerial photography and LiDAR imagery, and suggested by the geophysical survey) raises the possibility that this northern arm of the settlement represents a planned extension of the village which never came to fruition.

4.3.4 ***Context list:***
[301] Turf and loam-based topsoil
[302] Clean, silty-clay subsoil.

5. CONCLUSIONS

The excavation of three trenches – one being a large open area and the others, more modest slot-trenches - revealed substantial remains of medieval settlement and light industrial practices in one of the three areas examined, the other two producing relatively few structural or other remains of note.

The main trench (TRENCH 1) revealed that what had initially been interpreted as a single longhouse, based on the visible earthworks, in fact represented two separate rectangular structures belonging to different phases, as denoted by the differing alignments of their walls. The western half of the plot appeared to contain a single building or structure (Building 1) defined by east-west orientated north and south walls, plus a possible west wall, only one stub of which could be exposed. To the east of the entrance, the south wall appeared to deviate northwards from its original line, probably representing a later alteration.

The western Building 1 contained a corn-drying or malting kiln, while an open area to the east of the flue and wing walls was covered by an extensive deposit of charcoal, coal, and ash, representing the spread of material cleared from successive firings of the kiln. Further east, an oval feature formed by a layer of closely packed stones, with the remnants of an outer structure rising from its circumference, was interpreted as the base of a bread oven. Areas of burning upon several of these stones indicated localised high temperatures within this feature.

The eastern side of the plot contained another structure (Building 2), again aligned roughly east-west and defined by its north, east and very partially surviving south and west walls, with the northern wall of Building 1 apparently abutting the north-west corner of the Building 2. The eastern end of Building 2 contained an area of closely packed cobbles set into the natural clay to make up an area of hard-standing, while to the west of this was an area of heavy burning across the upper part of the natural clay interpreted as the base of an industrial feature such as a kiln or oven.

The two buildings exposed in Trench 1 were probably dwellings or farm buildings laid out in one of at the front of one of the tenements. Their differing alignments may hint that they were not contemporary, and the manner in which the north wall of Building 1 appeared to abut the NW corner of Building 2 might suggest the latter was the earlier structure, though this is not necessarily conclusive. Subsequently both buildings appear to have been adapted for ancillary functions, most noticeable in the case of the western Building 1 where a corn-drying kiln was constructed and perhaps also a bread oven. This process of adapting the earlier buildings probably involved the demolition of some walls. These changes may reflect the process known as engrossment whereby the surviving tenants in villages with falling populations acquired multiple tenancies. Not all tenements were required to house individual peasant farm complexes and might be turned over to other functions as tenants sought to intensify their operations in order to reap a profit in the challenging economic circumstances of the later Middle Ages.

The results of the other two trenches excavated to the east and north-east were significant in that they revealed little structural evidence. No features whatsoever were identified in the E-W trench (TRENCH 3; 'WSI 'Trench 3') dug across an apparent tenement plot towards the north end of the linear extensions west row. In TRENCH 2 (WSI 'Trench 1') the fragmentary remains of an E-W aligned wall, in the form of a stone face along the south side with rubble

behind, may represent the revetment for an earthen bank perhaps crowned by a hedge separating the front and rear plots of a tenement, but no equivalent remains were observed on the west side of the putative tenement.

The lack of evidence for occupation at the northern end of the linear extension to the village might suggest that this was a planned extension to the rectangular green village (perhaps laid out at the end of the 13th century) which failed, at least partially, with some of the demarcated toft plots – evident on aerial photography and the geophysical survey – never being occupied. This could thus mark the settlement's 'high water mark' and the beginning of its decline.

The overall impression gained from analysis of the pottery assemblage derived from the site (see *Appendix 4*) is of activity in the later medieval period which resulted in the creation of contexts dominated by Reduced Greenwares (61.5% of the total)but with a substantial component, probably largely residual, of earlier wares pertaining to earlier phases of medieval occupation in the 12th and 13th centuries, notably represented by conjoining sherds in an iron-rich sandy fabric decorated with splashed glaze, from demolition Context 5125, suggesting a date in the later 12th or 13th centuries. Thus, the majority of the pottery recovered from the site ranges in date from the later 13th century or early/mid-14th century until the mid-15th century, with finer fabrics apparently predominant in the final phase of activity. The absence of post-medieval (c.1450 – c.1720) and later wares would seem to point either to the abandonment of the site or a cessation of activities leading to the deposition of pottery, at least within the areas excavated.

Deposits associated with the corn-drying kiln found at the west end of Building 1 principally contained reduced Greenware, characterised by an homogeneous grey fabric and dull green glaze, dating to the later 13th until mid-14th century. Notably, Context 5126, a deposit in the base of the kiln, contained five sherds of Reduced Greenware with a distinctive dark green mottled glaze and applied ridge decoration, although the fabric was somewhat sandier than typical of Reduced Greenware and a date earlier in the sequence, perhaps late 13th century, is probable. These dates are consistent with those derived from radiocarbon analysis of the fills of a kiln of similar character at Linbrig, Coquetdale, which produced 14th century dates (ASUD 2022, 2) as did an archaeobotanical assemblage recently derived from a corn-dryer excavated at Longframlington, Northumberland (Archaeological Services 2021b).

Illus. 39: View of the excavation site from the north, with toft and croft boundaries prominent in frosty conditions and the site of the modern North Farm at the centre of view.

Little substantive evidence has been derived with which to approach the questions arising from the original topographical and geophysical surveys of the site, regarding how and when the extant plan of the settlement come to be formed – whether it is substantially a single period layout, or if there was an earlier, Anglo-Saxon or Anglo-Scandinavian element, and whether the linear two-row settlement in Field 2 was added later or was part of an earlier layout partially superseded by the rectangular green settlement in Field 1 - and whether all of the settlement was abandoned at the same time, or that in Field 2 abandoned while other parts of the village were still occupied. Although at least two phases of building were observed in Trench 1 it is not clear that the relate directly to the findings of pottery analysis which suggest occupation between at least the later 12th and mid-15th centuries. Thus, while the two phases of building activity may date to an earlier (12 & 13th century) and later (14th & 15th century) phase of occupation, it is quite possible that all of the building remains uncovered relate to occupation in the later medieval period (14th and 15th century) with the earlier pottery merely residual from an earlier phase which may not have left discernible traces of buildings. The limited evidence gained from trenches 2 and 3 suggests that the development of the village in Field 2, to the east, may have been a planned, but never fully-executed extension of the existing village, but at which stage in its development remains unclear pending further intrusive investigation. No evidence was found in structural or artefactual remains of a putative earlier, Anglo-Saxon or Anglo-Scandinavian phase of activity underlying the currently-visible earthworks.

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APPENDIX 1:

PHOTOGRAPHIC RECORD OF THE WALWORTH DMV EXCAVATION, 2019

Photo 01. Trench 1 (East), wall clearing.

Photo 03. Trench 1 (East), uncovering Building 2 seen from East.

Photo 02. Trench 1 (East), walls appearing.

Photo 04. Trench 1 (East), exposing walls and cobbled surface.

Photo 05. Trench 1 (East), aerial view looking south.

Photo 06. Trench 1 (East), aerial view looking east at walls [5209[[5219] and cobbled surface [5227].

Photo 07. Trench 1 (West), aerial view of west end with kiln in the early stages of investigation.

Photo 08. Trench 1 (West), cupmarked stone in-situ., adjacent to the north side of the kiln.

Photo 09. Trench 1 (West), view of Building 1, looking south-west.

Photo 10. Trench 1 (West), northern kiln blocking wall [5114].

Photo 11. Trench 1 (West), south facing elevation of central part of Building 1 north wall [5113].

Photo 12. Trench 1 (West), view from the south-west across Building 1 Wall [5113], with kiln flue in the foreground.

Photo 13. Trench 1 (West), showing the dark fills of sub-circular features with burnt rims, possibly postholes or small fire pits east of the kiln.

Photo 15. Trench 1 (West), final oblique view from the East, showing kiln to rear and possible (bread-)oven base in the foreground.

Photo 14. Trench 1 (West), final oblique view from the East, showing sub-circular features cutting the natural sub-soil east of the kiln.

Photo 16. Trench 1 (West), final vertical aerial view (north uppermost).

Photo 17.
Trench 1 (Kiln), lime-based upper fill containing animal bone.

Photo 19. Trench 1 (Kiln), upper-middle fill.

Photo 18. Processing animal bone recovered from the upper infill deposits of the kiln.

Photo 20. View from the east of the west end of Trench 1, including kiln to rear.

Photo 21. Trench 1 (Kiln), vertical view.

Photo 22. Trench 1 (Kiln), oblique working view showing rings of burning around the central stone component of the floor.

Photo 23. Trench 1 (Kiln), oblique aerial view from the east.

Photo 25. Trench 1 (Kiln), internal south-facing north side of the kiln wall.

Photo 24. Trench 1 (Kiln), vertical view of the kiln floor, showing patterns of burning.

Photo 26. Trench 1 (Kiln), internal view of entrance, looking east.

Photo 27. Trench 1 (Kiln), external view of kiln east opening before cleaning the floor deposits.

Photo 28. Trench 1 (Kiln), external view of kiln door showing charcoal deposit sitting on natural sub-soil within the entrance.

Photo 29. Trench 3 viewed from the west.

Photo 30. Trench 2 viewed from the south.

Photo 31. Trench 2. viewed from the east.

Photo 32.
Oblique aerial view of Trench 2, seen from the south-west sitting within earthworks revealed on a frosty morning in low light conditions.

APPENDIX 2:

WALWORTH DMV COMMUNITY EXCAVATION: FINDS CONCORDANCE TABLE

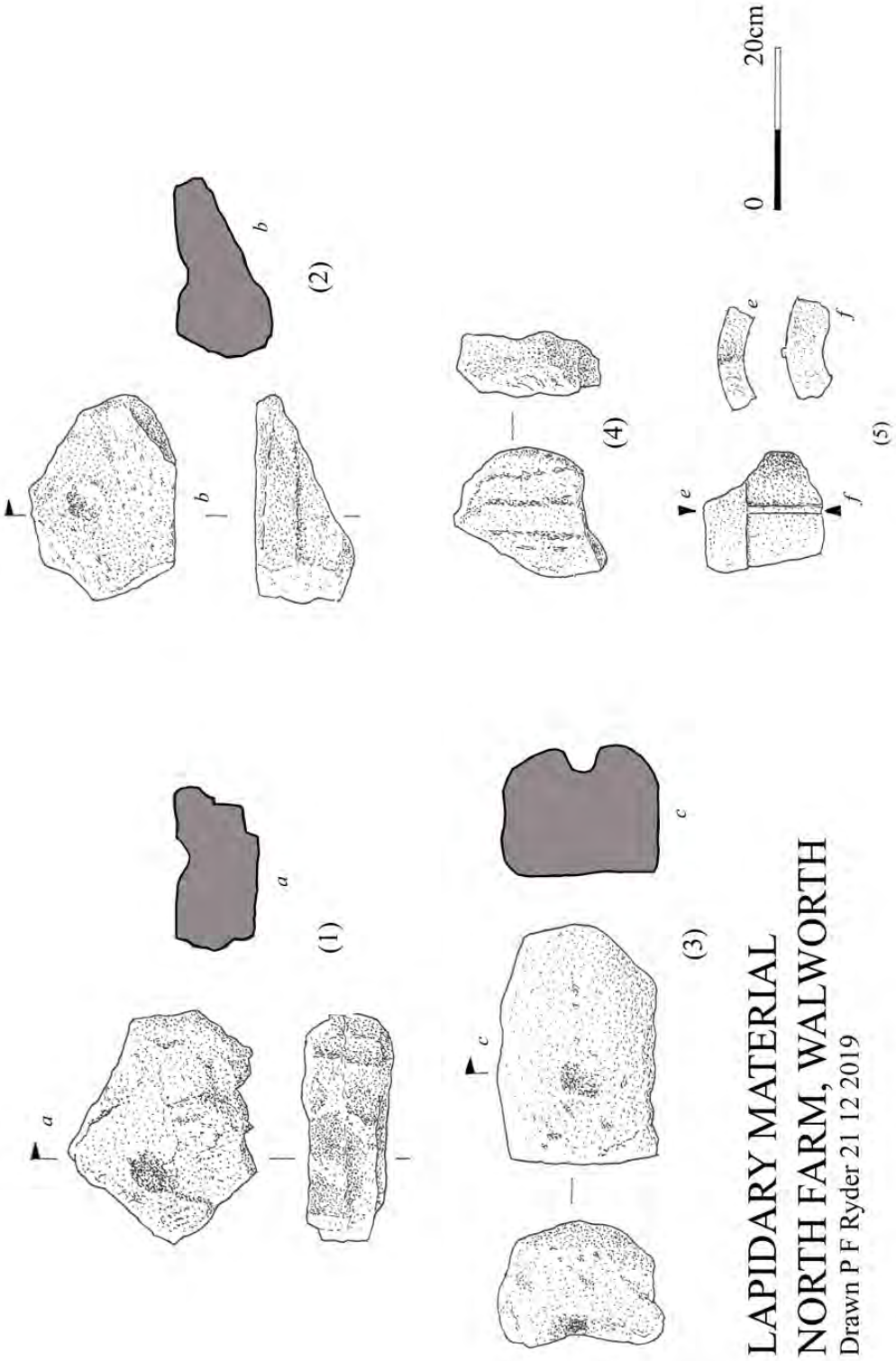
Feature	Context	Description	Trench	Pottery (sherds/g)	CBM (g)	Animal Bone (g)	Flint (flakes/g)	Other
	5000	Unstratified	5 5.1, S End 5.1, W End	(73) 785g (8) 37g (3) 25g	1948 Sewer Pipe - 892g 1	501 2		Fe. Chain Links (3) - 62g Fe. Fragments (24) - 193g Glass (4) - 11g Vitrified Material - 213g
	5100	Unstratified (Trench 5.1)	5.1	(2) 9g				
	5101	Turf and Topsoil	5.1	(6) 27g		65		Clay Pipe Stem (1) - 8g Vitrified Material - 154g
	5103	Tumble on north side of wall 5102	5.1	(2) 6g	13	7		Glass (2) - 7g
	5104	Tumble on south side of wall 5103	5.1	(1) 6g		52		
	5105	Layer beneath 5104	5.1	(9) 50g		28	(1) 1g	
5107	5106 5109	Cut of kiln Fill of kiln	5.1	 (1) 8g		641 627 19725		Vitrified Material - 200g **SF3** Stone - c.3150g **SF3** Stone - c.5300g Vitrified Material - 51g

	5110 5111 5126	Mortar-based fill of kiln below 5109 Charcoal fill of kiln below Deposit in base of kiln		(25) 214g (10) 127g		165		Fe. Nail - 13g
	5108	Stony spread	5.1	(13) 150g		415		
	5112	Charcoal layer to E of kiln	5.1	(4) 29g		136		Slag/Clinker - 3g Vitrified Material - 440g
	5121	Tumble on north side of wall 5113	5.1	(18) 257g				Fe. Nails (3) - 45g
	5122	Tumble on southside of wall 5113	5.1	(17) 209g	67			Cu. Alloy Fragment - 3g Fe. Fragment - 5g
	5125	Demolition spread above 5124	5.1	(3) 50g				Fe. Nail (1) - 13g
	5131	Soil accumulation below 5108	5.1	(4) 28g		25		Charcoal - 14g Fe Fragments (4) - 28g Fired Clay - 5g
	5132	Mixed burnt deposit below 5131	5.1					**SF1** Fe. Fragments (2) - 251g
	5201	Turf and Topsoil	5.2	(1) 2g		15		Cu. Alloy Button - 1g ?Glass 'gem' - <1g
	5205	Surface across south of T5.2	5.2	(7) 31g	1			Fe. Objects (5) - 25g
	5206	Wheel ruts in 5205	5.2		8			Slag - 5g
	5210	Tumble on north side of wall 5209	5.2	(33) 198g	29	322	**SF6** (1) - 1g	Cu. Alloy Handle - 52g

								Fe. Fragments (4) - 81g
	5211	Tumble on south side of wall 5209	5.2	(63) 745g	4	376		**SF7** Whetstone - 228g Coal - 78g Fe. Fragment (1) - 8g Fe. Nail (1) - 3g Glass (1) - 7g
	5213	Metalled surface below 5203	5.2	(6) 37g		30		Slag - 40g
	5226	Charcoal over cobbles 5227	5.2	(8) 105g				
	5228	Soil accumulation north of wall 5209	5.2	(16) 125g				
	5302	Tumble on north side of wall 5304	5.3	(3) 16g				
	5303	Tumble on south side of wall 5304	5.3	(23) 260g	5	16		Fe. Fragments (4) - 33g
	5305	Spread east of wall 5304	5.3	(2) 10g				
5306	5307	Fill of stakehole	5.3	(2) 15g				
		LAYER UNDER 5205		(2) 30g				

APPENDIX 3:

THE WORKED STONE, BY PETER RYDER



APPENDIX 4:

MEDIEVAL POTTERY FROM WALWORTH DESERTED MEDIEVAL VILLAGE, DARLINGTON (WDMV19)

C.G. Cumberpatch BA PhD

Introduction

The pottery assemblage from the deserted medieval village of Walworth (WDMV19) examined by the author consisted of 359 sherds of pottery weighing 3481 grams, representing a maximum of 338 vessels. The data are summarised in Table 1. Table 2 summarises the composition of the assemblage in terms of the estimated (maximum) number of vessels (ENV). A small quantity of stone and ceramic building material was included with the pottery and is listed in Table 3.

The pottery

The assemblage was predominantly of medieval date although smaller quantities of later pottery (mainly of recent date) were also present. Post-medieval and early modern pottery was notable by its scarcity or absence.

The earliest pottery was unidentifiable to a specific type or source and has been catalogued using generic, descriptive, names. These focus on the colour and texture of the fabrics with Buff Sandy ware the commonest type and smaller quantities of both sandy and gritty wares (Brown Sandy ware, Buff Gritty ware, Buff-Brown Sandy ware, Buff-Grey Sandy ware, Buff-Orange Sandy and Gritty ware and Buff-White Sandy ware. Such wares are common across Yorkshire and the north-east in the earlier part of the medieval period (later 11th to mid/late 13th century) and were probably produced in numerous local potteries across the region. Few of these have been identified or investigated and even fewer have been published (notably Ruswarp Bank and Aldin Grange). The fabrics vary in colour, presumably in response to varying concentrations of iron in the clay and the firing conditions, and all contain abundant quartz inclusions, although these vary in size from a finer sandy grade to a coarser gritty grade. Red or black grit also occurs in varying proportions and sizes. Putative date ranges, based upon the characteristics of individual sherds and vessels are given in the data tables. Taken together, these wares formed 10% of the total assemblage.

One regional industry which appears to belong to the earlier medieval tradition and to have a greater degree of internal homogeneity than some is that which produced the Tees Valley wares (Wrathmell 1987, 1990, Didsbury 2010). Tees Valley ware A has a buff-firing fabric and vessel forms include the very distinctive bifid jar rims, examples of which were noted in context 5000. One of the bifid rims from this context is very similar to examples from Hartlepool illustrated by Wrathmell (1987: Figure 16; 2, 3 and 4).

The slightly later Tees Valley B ware is orange to red in colour while the B/C variant is highly distinctive as a result of a B type body being combined with buff slip, presumably to replicate the surface colour of the A wares. As a technique, this has similarities with those used by northern French and Flemish potters (Vince, pers. comm.).

Tees Valley wares together formed 15% of the total assemblage but it is possible that some minor variants have been included with the Buff Gritty ware and IR (Iron-rich) Sandy ware groups as the range of variation within the type is not well established.

To date, no potteries producing Tees Valley ware have been excavated and the area of distribution (as mapped by Didsbury; 2010: Fig 8.10) is unusual in that sites on the edge of the zone (including Richmond Castle and Thornton-le-Street) have produced assemblages dominated by the type.

The term 'Iron-rich' (IR) has been used by Vaughan to refer to orange or red-firing medieval wares dating to the 13th and early 14th centuries (2007). As such it might be considered to encompass the Tees Valley ware B group as well as material from as-yet unidentified potteries.

Four groups of IR wares were identified in the assemblage (IR Coarse Sandy ware, IR Sandy ware, IR Sandy ware type and splash-glazed IR Sandy ware) totalling 5% of the total. While the distinction between iron-rich and iron-poor fabrics is an interesting one, recent work on assemblages in Durham and Whitby (Cumberpatch 2018, 2021, in prep 1) has suggested that in some cases at least the suites of inclusions in both types are remarkably similar which raises the question of the exact nature of the distinction between the two groups. Further work is required to more closely define specific ware types and to establish robust parameters for distinguishing between them.

The largest group of medieval sherds were of the Reduced Greenware type (61.5% of the total). This type of pottery, characterised by its homogeneous grey fabric and dull green glaze which covers most of the external surface, appears in the later 13th century and by the early/mid 14th century has become the most common type across the region. Quite why the buff and orange firing wares fell from favour is unclear but the Reduced Greenwares seem to have been produced on a very large scale, probably in large multi-flue kilns such as those used by the Humberware potters in south-eastern Yorkshire at around the same time. Within the Reduced Greenware group there seems to be a general tendency for the finer fabrics to be later in date with particularly coarse sandy examples forming a distinct group (Early Reduced Greenware). The rate of change is, however, unclear and although later 15th and 16th century examples from Newcastle are particularly fine, the relative coarseness of individual sherds or vessels is only broadly indicative of the date range rather than being in any way precise.

The majority of sherds were rather undistinguished body sherds that could have come from jars, jugs or cisterns, all forms which are very common in Reduced Greenware. Context 5122 produced an unusual and distinctive part of a vessel. This was cylindrical vessel with a narrow external diameter and even narrower internal diameter. It appeared to be a small bottle with thick walls and a thick base although closer examination of the 'base' suggests that it may have been part of a larger object, possibly a candlestick.

Post-medieval pottery (c.1450 – c.1720) was absent from the assemblage. Early modern wares (c.1720 – c.1840) were represented by a possible sherd of Creamware and by one, perhaps two, sherds of Late Blackware. It is possible that the sherd of Brown Glazed Coarseware and some of the Yellow Glazed Coarseware may also be of early modern date but it is generally difficult to distinguish early modern from recent examples of these types and they could be of later 19th century date.

Later 19th and early 20th century pottery was represented by a small number of badly abraded sherds including Bone China and Whiteware (plain and transfer printed), Sponged ware, Unglazed Red Earthenware and Brown Salt Glazed Stoneware. These wares are amongst those generally found on 19th century sites of all types.

Discussion

Context 5000, an unstratified context, contained eighty-two sherds weighing 829 grams representing a maximum of seventy-nine vessels. As might be expected, the assemblage was diverse in character and included a wide range of medieval wares including both Tees valley wares and Reduced Greenwares with smaller quantities of other medieval types, as detailed in the Table 1. It also contained a high proportion of the later sherds in the assemblage, most of them of recent date.

Trench 5.1

The pottery assemblage from Trench 5.1 consisted of eighty-six sherds weighing 904 grams representing a maximum of seventy-eight vessels.

Context 5101, a turf and topsoil layer contained just one small sherd of Reduced Greenware.

Contexts 5103 and 5104, tumble related to a wall (5102), contained a small mixed group of sherds which included individual sherds of Reduced Sandy ware and IR Sandy ware with a small rim sherd in a Reduced Greenware type fabric. None of the sherds weighed more than 8 grams and the date range appeared to be wide.

Layer 5105, beneath 5104, contained a small group of sherds with Reduced Greenware the commonest type alongside three sherds of Tees Valley ware B type, including part of a jug handle.

Context 5108 produced a very mixed assemblage which included both earlier medieval wares (Buff Sandy ware) alongside IR Sandy wares, Tees Valley B wares and Reduced Greenware. The latter type was represented by a number of jug (possibly cistern) rims. Context 5131, below 5108, contained two sherds of Reduced Greenware alongside the rim of a jar in a Buff-Orange Gritty fabric.

Despite being noted as of possible post-medieval date, context 5109 contained three sherds of medieval type. Spanning the 13th and 14th centuries, these sherds were all small (no larger than 8 grams) and could be residual in nature. The context was associated with a corn-drying kiln, as were contexts 5111 and 5112. Context 5111 produced a single sherd of Reduced Greenware while, in contrast, 5113 contained four sherds of various sandy wares spanning the period between the later 12th and 13th centuries. Context 5126, a deposit in the base of the kiln, contained five sherds of Reduced Greenware, probably from the same vessel, with a distinctive dark green mottled glaze and applied ridge decoration externally. The fabric was somewhat sandier than typical of Reduced Greenware and a date earlier in the sequence is probable.

Contexts 5121 and 5122 were associated with the tumble from wall 5113. Both contexts produced assemblages that were, by the standards of the assemblage as a whole, rather large (eighteen and sixteen sherds respectively). The group from 5121 consisted

exclusively of Reduced Greenwares but that from 5122 was much more diverse with IR Sandy ware, Tees Valley B type and Buff Sandy ware alongside Reduced Greenware.

Context 5125 contained three joining sherds in an IR Sandy fabric decorated with splashed glaze suggesting a date in the later 12th or 13th centuries.

Trench 5.2

The pottery assemblage from Trench 5.2 consisted or 191 sherds weighing 1748 grams representing a maximum of 181 vessels. Generally speaking, the quantities of pottery from individual contexts was larger than those from individual contexts in Trench 5.1.

The turf and topsoil layer (5201) contained just one small flake of Reduced Greenware while 5205 contained a small, mainly medieval group with the shoulder of a small bottle in Brown Salt Glazed Stoneware.

Contexts 5210 and 5211, associated with wall 5209, both contained substantial assemblages. Both groups consisted primarily of medieval wares (Reduced Greenware with a variety of earlier types including Tees Valley B ware) but 5210 also contained early modern and recent wares including Whiteware, Yellow Glazed Coarse ware and possibly Creamware.

Context 5228 was also associated with wall 5209 and contained an assemblage that, in terms of its composition, closely resembles that from context 5211 with Reduced Greenware, Tees Valley ware B and various sandy wares, as detailed in Table 1.

Contexts 5213 and 5226 were alike in that both contained assemblages consisting entirely of Reduced Greenware. How far this is significant, given the small size of both groups (six and eight sherds respectively) is unclear.

Contexts 5302, 5303 and 5305 were all associated with wall 5304. Contexts 5302 and 5305 contained just three and two sherds respectively, all of medieval date. In contrast, 5303 contained a larger assemblage which included sherds of transfer printed (TP) Bone China and Whiteware amongst a larger, mixed medieval group.

Context 5307, the fill of a stakehole, produced two sherds; one in an unusual Buff-Grey Sandy ware, the other in Reduced Greenware.

The overall impression gained from this assemblage is of activity on the site in the later medieval period which resulted in the creation of contexts dominated by Reduced Greenwares but with a substantial component, probably largely residual, of earlier wares pertaining to the earlier medieval occupation of the site. The absence of post-medieval and later wares would seem to point either to the abandonment of the site or a cessation of activities leading to the deposition of pottery, at least within the areas excavated.

Archiving and curation

The assemblage should be deposited in the appropriate local museum or finds depository where it will be available for further work in the future. As should be clear from the report, much remains to be learned about the medieval pottery industry in north-east England and until a comprehensive programme of work aimed at resolving the outstanding issues, there should be no question of discarding, downsizing, dispersing or destroying pottery assemblages.

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APPENDIX 5: Walworth Deserted Medieval Village, Walworth, County Durham - Palaeo-environmental assessment by Archaeological Services University of Durham [report 5334], July 2020.

1. Summary

The project

1.1 This report presents the results of palaeo-environmental assessment of four bulk samples taken during archaeological works at Walworth Deserted Medieval Village, County Durham.

1.2 The works were commissioned by The Archaeological Practice, and conducted by Archaeological Services Durham University.

Results

1.3 An archaeobotanical assemblage typical of a later medieval settlement in northern England is present, with evidence for the cultivation of cereals (bread-type wheat, hulled barley, common oat) and pulses (pea, bean). Possible evidence for malt production/brewing has been identified. Several different wood species and coal were used as fuel sources.

Recommendations

1.4 Further analysis of the charcoal assemblages is recommended for deposit [5112] and kiln/corn-drying oven fill [5111], together with AMS dating if artefactual evidence does not provide close dating. This would provide information on the local environment, woodland exploitation practices and fuel use. A palaeo-environmental assessment of further unprocessed samples from [5112] may produce stronger evidence for malt production/brewing. If additional samples are processed, the results of this assessment should be updated and added to further data produced.

2. Project background

Location and background

2.1 Archaeological works were conducted by The Archaeological Practice Ltd at Walworth Deserted Medieval Village, County Durham. This report presents the results of a palaeo-environmental assessment of four bulk samples taken from the fill of a kiln/corn-drying oven [5111], a charcoal/coal rich spread of material [5112] and two postholes [5107, 5222].

Objective

2.2 The objective of the scheme of works was to assess the palaeo-environmental potential of the samples, establish the presence of suitable radiocarbon dating material, and provide the client with appropriate recommendations.

Dates

2.3 The samples were received by Archaeological Services on 21st March 2020. Assessment and report preparation were conducted between 30th June and 22nd July 2020.

Personnel

2.4 Sample processing, assessment and report preparation was conducted by Dr Ed Treasure.

Archive

2.5 The site code is **WDMV20**, for **W**alworth **D**eserted **M**edieval Village 20**20**. The flots and finds are currently held in the Palaeo-environmental Laboratory at Archaeological Services Durham University awaiting collection. The charred plant remains will be retained at Archaeological Services Durham University.

3. Methods

3.1 The bulk samples were manually floated and sieved through a 500μm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ7.5 stereomicroscope. Identification of these was undertaken by comparison with modern reference material held in the Palaeo-environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (2010). Habitat classifications follow Preston *et al.* (2002).

3.2 Selected charcoal fragments were identified, in order to provide material suitable for radiocarbon dating. The transverse, radial and tangential sections were examined at up to x500 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Schweingruber (1990), Gale & Cutler (2000) and Hather (2000), and modern reference material held in the Palaeo-environmental Laboratory at Archaeological Services Durham University.

3.4 The works were undertaken in accordance with the palaeo-environmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Petts & Gerrard 2006; Hall & Huntley 2007; Huntley 2010).

4. Results

4.1 The samples produced varying quantities of charcoal, charred plant remains, coal and clinker/cinder. Finds in the samples comprise small fragments of pottery, bone and fired/heat-affected clay.

4.2 The fill [5111] of kiln/corn-drying oven [5107] produced a moderate-sized and well-preserved charcoal assemblage with several different species present, alongside coal and clinker/cinder. Charred plant remains comprise low numbers of bread-type wheat grains and a bean.

4.3 Deposit [5112], adjacent to kiln/corn-drying oven [5107], produced a large flot, with abundant clinker/cinder and occasional coal. Charcoal is frequent and dominated by ash stemwood alongside some hazel. The assemblage of charred plant remains includes a pea, hulled barley grains, bread-type wheat grains and germinated large oat grains. A diagnostic floret base confirms the presence of common oat (*Avena sativa*). Several detached coleoptiles (cereal sprouts) are also noted. Other charred remains include wild/weed taxa (sedges, daisy family, grass family, buttercup, vetches, cabbage family, ribwort plantain).

4.4 Posthole [5136] contains two tiny fragments of oak charcoal together with occasional fragmented (mainly <4mm) coal and clinker/cinder.

4.5 Posthole [5222] produced a tiny flot, with trace quantities of fragmented (<4mm) clinker/cinder, coal and charcoal.

4.6 The results of the palaeo-environmental assessment are presented in Appendix 1. Appendix 2 lists material available for radiocarbon dating for fill [5111] of kiln/corn-drying oven [5107] and adjacent deposit [5112].

5. Discussion

5.1 The assemblage of charred plant remains is typical of a later medieval rural settlement in northern England, with a range of cereals recorded (bread-type wheat, hulled barley, common oat), alongside limited evidence for pulses (Hall & Huntley 2007). Numerous germinated oat grains and detached coleoptiles in deposit [5112] may reflect malting waste related to brewing, although this is difficult to confirm given the small size of the assemblage since such remains could also reflect a spoilt crop. Deposit [5112] probably reflects a rake-out from the kiln/corn-drying oven, containing a mixture of material from several sources (e.g. fuel waste, crop-processing by-products, background occupation debris). Kilns, or corn-drying ovens, are thought to have been multi-functional structures, being used to cease the germination of grains in the production of malt, to dry crops and to facilitate de-husking/milling (Monk & Kelleher 2005).

5.2 The charcoal assemblage indicates the use of several different wood species as a fuel source in the kiln/corn-drying oven, with both branchwood and stemwood present. Coal use is also indicated and consistent with a later medieval date.

6. Recommendations

6.1 Further analysis of the charcoal assemblages is recommended for deposit [5112] and kiln/corn-drying oven fill [5111], together with AMS dating if artefactual evidence does not provide close dating. This would provide information on the local environment, woodland exploitation practices and fuel use. A palaeo-environmental assessment of further unprocessed samples from [5112] may produce stronger evidence for malt production/brewing. If additional samples are processed, the results of this assessment should be updated and added to further data produced.

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Appendix 1: Data from palaeo-environmental assessment

Sample	Context	Feature	Feature type	Volume processed (l)	Flot volume (ml)	C14 available	Rank	Notes
5	5112	F1507	Deposit adjacent to kiln/corn-drying oven	11	1000	Y	***	Abundant clinker/cinder, occasional coal in flot/residue. Small amount of fired clay and pottery. Charcoal common, dominated by ash stemwood (weak ring curvature, >20 very narrow growth rings), some hazel. Charred plant remains common, cereal grains (hulled barley, bread-type wheat, large/small oat grains including frequent germinated grains), detached coleoptiles (cereal sprouts) common oat floret base, pea, range of wild/weed taxa. Rare burnt-cracked stones in residue. Possibly malting waste? Potential for charcoal analysis.
7	5111	F1507	Fill of kiln/corn-drying oven	9	700	Y	***	Occasional clinker/cinder, rare coal in flot/residue. Fired clay. Charcoal common and well-preserved (fragments up to 25mm), several different species present with stemwood and roundwood noted. Occasional charred plant remains, cereal grains (pitted/degraded bread-type wheat), cereal culm node, bean, trace of charred rhizomes/tubers. Potential for charcoal analysis.
9	5223	F2222	Posthole	2	5	N	*	Trace of fragmented (<4mm) clinker/cinder and coal. Charred plant remains/charcoal absent. Several fragments of? pot/? fired clay (coarse/magnetic).
16	5137	F5136	Posthole	2.5	20	N	*	Occasional fragmented (mainly <4mm) clinker/cinder and coal. Trace of charcoal (tiny fragments of oak). Charred plant remains absent.

[Rank: *: low; **: medium; ***: high; ****: very high potential to provide further palaeo-environmental information]

Appendix 2: Material available for radiocarbon dating

Context	Sample	Single Entity recommended	Weight	Notes	Single Entity recommended	Weight	Notes
5112	5	Charred large oat grain	12mg	Moderate condition, germinated	Pea	20mg	Good condition
5111	7	Willow/Poplar charcoal	25mg	Good condition 9 even growth rings (insect tunnels) small calibre roundwood	Bread-type wheat grain	9mg	Poor condition, pitted
5223	9	-	-	Nothing to date	-	-	-
5137	16	-	-	Nothing to date (oak charcoal too small for C14)	-	-	-

APPENDIX 6: THE KILN, DISCUSSION

The kiln uncovered at the west end of Building 1 is almost-certainly identified as a corn-drying kiln, or malting kiln, on the basis of palaeo-environmental evidence for a typically late-medieval assemblage of sprouted grains in its burnt floor deposits. A number of other domestic and industrial activities also required the generation of heat in an oven or kiln, but most can be dismissed on the basis of the form of the structure and nature of deposits associated with it. Thus, for example, its form and size do not appear conducive to use as a bread-oven, smokery or forge, and the lack of pottery on the site means that it was not a pottery kiln. This process of elimination leaves two options: that it was indeed used as a corn-drying kiln, alternatively as a malting kiln and thirdly that it was a lime kiln.

In favour of the first option is its size and form which are similar to others excavated, or visible as ruined structures, in northern England and Scotland. It bears close similarity to one of the few to be fully excavated, at Davyshiel in Redesdale (ASUD 2005; Hale 2007), where the sub-circular kiln was built into the side of a low bank and comprised a sub-circular drying chimney with a short linear stoke hole/passage exiting the bowl on its south-west side. The internal base consisted of rough flagstones, and built into the lowest course of the internal face were two small niches of uncertain function. Low walls attached to the kiln seemed to form the sides of a walled enclosure. While interpreted as a corn drying kiln, no charred plant macrofossils were found within the structure, which may indicate that the bowl was thoroughly cleaned following its last use as a drying kiln, but leaves the possibility of an alternative function open. A similar kiln of post-medieval origin was recorded by Charlton and Day at Loaning Burn near Elsdon in 1980-81. Here the kiln was built into a slope, allowing the hearth area to be at a lower level than the kiln floor, with hot air rising through a flue. At Linbrig a structure of similar size, also at the end of a larger structure of some kind, was partially excavated by Coquetdale Community Archaeology in 2019 & 2021, but here, as at Walworth, the source of heat was directly upon or over the kiln floor, which but may be suited to purpose in terms of avoiding over-heating.

Illus. A5_01 & A5_02: Medieval and early 19th century kilns at Linbrigs (left) and Barrow Mill, Coquetdale, seen in 2019.

These examples fall into the earlier of two distinct forms of medieval and post-medieval corn-drying kilns in northern England (Frodsham 2004), the earlier ones being these stone-lined bowls dug into an earthen bank, normally on the periphery of a small settlement or farm, while later kilns of the 18th and 19th centuries are free-standing, incorporated within a farm complex or corn mill. On structural grounds the kiln excavated at Walworth seems to lies within the earlier group, represented by the kilns recorded at Davyshiel, Linbrig and Loaning Burn, as well as others for which earthwork evidence is known at Dumbhope, Wanlass Durtrees, Rennies Burn and Sills Burn (Charlton 1996). Overall dimensions vary, but both the Walworth and Linbrig examples, at c. 1.8 and 2.8 m maximum internal floor diameter are smaller than the majority of other examples of this type recorded until recently, although recent examples fund at Rainton, Dinnington and Acomb in south Northumberland are all comparable with the Walworth example. All recorded examples are sub-circular in shape with a sub-rectangular stokehole or flue radiating from one side, sometimes orientated away from the earthen bank, as at Loaning Burn, elsewhere constructed into the earthen bank, as at Davyshiel. Evidence for superstructures is sparse, but it is assumed that a wooden platform was constructed over the bowl and a mat of horsehair or brushwood placed on it to hold the grain. At Acomb corn-drying kiln [135] and at East Rainton, kiln [158] both preserved postholes/stakeholes around the internal perimeter of the floors for a wattle & daub structure which would have supported the drying floor (PCA 2017 a & b), but these timbers would have been integral to the kiln walls rather than separate features associated with the upper floor.

The purpose of such corn-drying kilns was to dry corn prior to threshing, to dry and harden damp grain for storage or milling and/or to malt grains prior to brewing, as suggested here by the presence of sprouted or germinated grains. The high concentration of charred cereal grains here is also consistent with the interpretation of the feature as a corn-dryer, but these tended to be multi-functional structures, used variously to dry crops for storage or transportation, to halt grain germination in the production of malt and to harden grain prior to milling (Monk & Kelleher 2005). The ability to successfully dry crops, or harden them prior to threshing and milling, was particularly important in northern England due to the high incidence of damp harvests, especially so from the early to middle 14th century which saw increases in cooler, damper weather (ibid.). The range of crop plants, including oats, recorded here is consistent with other medieval sites in northern England **(Hall & Huntley 2007) and bears similarity with an archaeobotanical assemblage recently derived from a corn-dryer excavated at Longframlington, Northumberland dating to the 14th century (Archaeological Services 2021). Oats is an important fodder crop and increases in its use have been linked with intensive animal-rearing (Hamerow 2002);** however, it can also be used in brewing as suggested here by the presence of some sprouted examples. The well-preserved charcoal recovered from kiln samples may largely be remnants of fuel, but the presence of small twigs and branches of hazel and possibly willow may represent the burnt remains of a wattle/brushwood structure. Hazel was a common component of such woven structures due to the flexibility of their young stems and the ease with which they coppice. Further with respect to fuel, it possible that some of the wild plants typical of rough pasture represented in the palaeo-environmental flots could derive from turves used as a fuel source, a suggestion given weight by the presence of charred underground plant parts (tuber/rhizomes) in Sample 7 [5111].

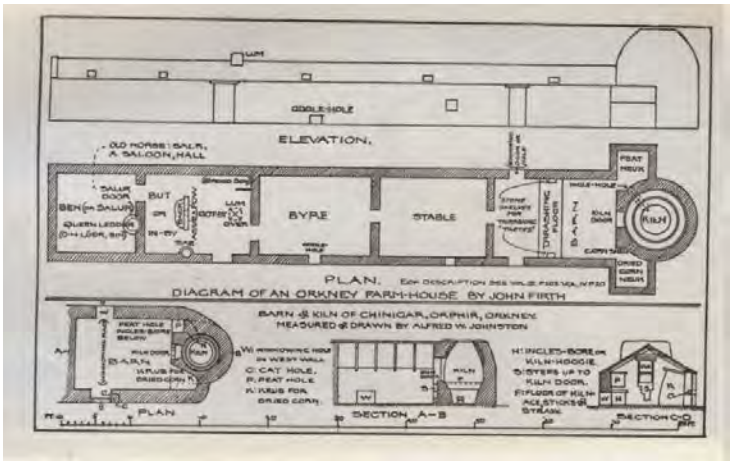
Despite the known benefits of drying grain before milling, the use of 'corn-driers' in the medieval period has recently been questioned, particularly since they are not mentioned in late medieval documents (Moffett 2006, 52). Atkins and Webster (2012) suggest that some structures previously interpreted as medieval corn-driers may, in fact, have been malting ovens, which were often placed within back-plot buildings, such as at the combined bake- and

brew-house in Brackley, Northamptonshire (Atkins *et al*. 1998/1999) and within other settlement areas such as manorial farms. At the manorial farm found at Lime Street, within the medieval village of Irthlingborough, Northants, the thirteenth/fourteenth-century malt house produced large quantities of malt for internal consumption as well as probably for export (Chapman *et al*. 2003). Such malting kilns also formed part of post-medieval whisky distilleries, such as those 18th and early 19th century examples reported in upper Coquetdale by Phillipson (see below).

Illus. A5_03 A malting kiln used in the production of whiskey at Rory's Still, Upper Coquetdale (unpublished photo. Taken in 1956 by Captn. Walton, used courtesy of BrightWater volunteer, Barbara McCabe)

Since the purpose of malting kilns is not to kill or dry the seed corn, but to induce sprouting, the temperatures attained are lower and more carefully controlled than in corn-driers, although neither should achieve very high temperatures, the purpose being to heat rather than burn. However, this subtle difference between the two functions makes it more likely that corn driers would have been detached from settlement to minimise the risk of spreading fire, while malting kilns were more likely to have formed part of built ensembles, often attached to, or part of breweries and bakeries. Historical records show that only limited numbers of medieval households had their own bread oven and brewhouse, often the manor house in rural areas, and the lord would charge for others to bake their bread or brew beer on his premises (Brown and Hardy 2011, 287).

With respect to the Walworth example, its position within a complex of buildings and the presence of sprouted grains in the ecofactual assemblage are in favour if its identification as a malting kiln, while the possible presence of a bread-oven floor adjacent is perhaps more in keeping with its identification as a corn-drying kiln. Standing against its identification as a malting kiln is the absence of a long flue feeding hot air into the kiln opening, which is the sort of arrangement used recently on Orkney, and seen in archaeologically excavated examples from the bronze age to early medieval periods, to avoid the risks entailed in heating directly from below.



Illus. A5_04a & b: Ground plan of Orkney farmhouses with drying kilns, showing a traditional Orcadian farm house, byre, stable, grain barn and kiln, from Firth, J, Reminiscences of an Orkney Parish.

The possibility that a flue did in fact once exist on the east side of the door, linking the kiln with another possible hearth/kiln feature some 4 m away, seems unlikely given that it would have to have been made of non-combustible materials and no traces for such exist in that area. The length of the existing flue comprising the kiln wall thickness and an extra metre of walling joining onto north-south branch walls, is comparable to the arrangement made at the 19th century Barrow Mill corn-drier in Coquetdale, but the evidence for burning on the kiln floor does not seem in keeping with the way in which corn driers or malting kiln are normally expected to operate. There is increasing local evidence, however, that medieval corn driers/malting kilns did not operate in this way and that the fire could be, indeed often was, placed directly below the drying floor. A recently-excavated stone-lined kiln at Acomb, Northumberland (PCA 2017a), of very similar form and size to the Walworth example, provides such evidence for intense heating on the floor of the kiln, while this and two other wattle & daub built kilns on the same site also displayed similarly short flues to the Walworth example which also sloped steeply downwards towards the bowl, with no evidence for an external heat source. Similar evidence was discovered at East Rainton, Sunderland (PCA 2017b), where three of four kilns displayed evidence for heating on the base of the bowls and all were associated with short projections, which lacked evidence of heat exposure, leading upslope from the bowls

Also lacking at Walworth in terms of expected criteria for a malting kiln/corn drier is any obvious means to fix a wooden platform onto its inner wall face, which in the Orkney examples is achieved by means of a protruding ledge in the masonry, but could otherwise by achieved by means of stone or wooden posts fixed into holes in the masonry, perhaps aided by a central column. However, if the kiln chamber had once been much higher, perhaps up to 2 or 3 metres in height, such features, along with vents and an access door onto the upper floor, may have been part of the formerly upstanding upper tier of the structure. In that case, of course, the additional height between stoking hearth/chamber floor and drying/malting platform could have been beneficial in reducing the inherent overheating and fire risks.

While the kiln at Walworth is considered most likely a corn drier or malting kiln, a final option to consider is that it performed neither function but is, instead, a lime kiln of a type fairly commonly attested in the Roman, medieval and early post-medieval periods, but rarely excavated. In the medieval period such kilns, considerably less complex that later 18th and 19th century estate and industrial kilns producing lime for land improvement, supplied the copious

quantities of lime mortar and limewash required for the construction of castles, manor houses, monastic buildings and bridges and are well-attested in medieval and post-medieval documents. Accounts from Lindisfarne Priory over the medieval period indicate that the monks there burnt their own lime, as did the crown and private landowners when constructing defensible structures and residences. Some such kilns have been revealed by excavation, as at Beadnell Point in Northumberland where a late 15th or early 16th century lime kiln at, revealed by winter storms and excavated in 1995 (Williams and Williams 1996, 109-117), may have been used to provide lime for the refurbishment of the thirteenth-century Ebba's Chapel. In Newcastle, an extensive battery of 14th century limekilns, possibly providing lime for the completion of the medieval town walls, was excavated during redevelopments on the eastern edge of the town in 1991 (Ellison *et al* 1993, 151-234). The lime-burning industry there flourished during the fourteenth century when it was based on imported raw materials linked to the coal trade. At Caherduggan castle near Cork a smaller example of similar internal diameter to the Walworth kiln was revealed in 2011 (see below) and interpreted as probably associated with the Norman or later phases of medieval building at the castle.

Illus. A5_05: Medieval lime-kiln excavated at Caherduggan castle, Cork

[https://headlandarchaeology.wordpress.com/2011/10/28/the-big-dig-at-caherduggan-castle-/]

Recent research in the Yorkshire Dales National Park [http://www.outofoblivion.org.uk/lime.asp] has identified a number of such early kiln sites which are mostly built into slopes and are identifiable as low circular earthworks about 1 m deep and of about 2 m diameter, with a narrow neck or funnel leading into the central bowl. None of these kilns have been excavated in the Dales so understanding of them is based on work carried out elsewhere, including places where they are still used, such as the Western Balkans (see below), where stone is stacked in such a way as to leave a space for use as the firing chamber underneath, allowing separation of the fuel and limestone, unlike in the later, 'continuous' kilns where layers of stone and coal are interleaved. Such a kiln, of 17th century origin, was excavated near Ingleton in 2003 and found to consist of a bowl c 1 m deep and 2 m in dimeter with a horizontal stoking hole on one side.

Illus. 05_06 a&b: Traditional European flare kilns. Although superseded in Northern & Western Europe, traditional flare kilns of the form once used in Northumberland are still used by small-scale producers in Southern and Eastern Europe, where they are used to produce pure forms of lime, often from superior forms of limestone, untainted by the by-products of burnt fuel. The pure lime products are often sold in small quantities directly to consumers, or in larger quantities to middlemen or professional builders, the majority of whom use it as lime wash. The upper photograph shows two kilns built into a road embankment with a supply of limestone dumped by the roadside. The kilns, of 1-2 tonnes capacity, are being fired with beachwood stoked through an opening into the firing chamber, over which the limestone blocks are stacked to form a temporary vaulted floor. The top of the kiln is loosely covered with tiles and metal sheeting during firing, which takes approximately a day and night of continuous stoking, towards the end of which flames shoot out of the top of the kiln. The lower photograph shows an empty kiln with brick lining and ledge from which the temporary limestone vault is sprung.

In conclusion, the purpose of the kiln structure uncovered at Walworth remains unclear, but is considered most likely to be associated with corn-drying or malting. In terms of its position in association with buildings it fits well with malting, as does the 'inefficient' nature of heat provision (with hearth/flue structure uphill of the kiln floor) and presence of sprouted grains in associated deposits, but its diameter is rather smaller than most other known examples and the evidence for quite intensive burning on the kiln floor seems to sit better with alternative functions. Its size and form - e.g. absence of a long flue - seems to fit more closely with a potential alternative identification as a lime kiln. A layer of lime-based material found deposited in the kiln was thought at the time to be associated with a later animal burial but could, conceivably, have been part of a late lime-burning, perhaps on top of a partially-infilled floor. This raises the possibility that the structure may have been constructed and conceived as a malting kiln or corn-drier but re-used in the later medieval or early post-medieval periods, perhaps in the context of a shrunken village, for construction or repair of buildings within or associated with the current North farm farmstead.

APPENDIX 7:

WALWORTH DESERTED MEDIEVAL VILLAGE, DARLINGTON, COUNTY DURHAM - Written Scheme of Investigation for an Archaeological Excavation, Prepared for Bright Water Landscape Partnership & Durham County Council, Archaeology Section, by The Archaeological Practice Ltd.

1. INTRODUCTION AND BACKGROUND

1.1 Deserted and Shrunken Medieval Villages of the Bright Water landscape area

The numerous, well-preserved deserted and shrunken village sites (DMVs & SMVs), dating to the later medieval period and its immediate aftermath, which survive as earthwork monuments in the area, represent one of the cultural heritage highlights of the Bright Water Landscape Partnership area, which encompasses the catchment area of the River Skerne in south-central County Durham. Yet surprisingly little archaeological research has been focussed on these sites. Though several were surveyed in detail by the RCHME, very little excavation has taken place, with only Ulnaby having been subjected to a co-ordinated programme of documentary analysis, topographic survey and excavation (the latter a Time Team excavation of limited scale). Hence, the proposed programme of geophysical survey and excavation at Walworth, Archdeacon Newton and Woodham represents an outstanding opportunity to advance our state of knowledge regarding this class of site and learn more about the lives of medieval rural communities in the region. Standing medieval buildings survive at both Walworth and Archdeacon Newton in the form of the 12th-century chapel, now a barn, encapsulated with the farm building complex at Walworth North Farm, and of course Walworth Castle, and the remains of the manor house, again now serving as a barn, at Archdeacon Newton. This document outlines the programme of excavation proposed at the first of these DMV sites, Walworth, providing a full written scheme of investigation.

1.2 Walworth DMV

1.2.1 Location

The hamlet of Walworth is situated *c.* 2.5 miles north-west of Darlington conurbation in the south-central part of County Durham. The remains of the DMV are located on the north side of the present-day settlement with Walworth North Farm positioned in the middle of the earthworks.

Illus. 1: *The location of Walworth north-west of Darlington*

Illus 2: *The location of the scheduled extent of Walworth DMV surrounding North Farm, with the present hamlet settlement to the south and south-east.*

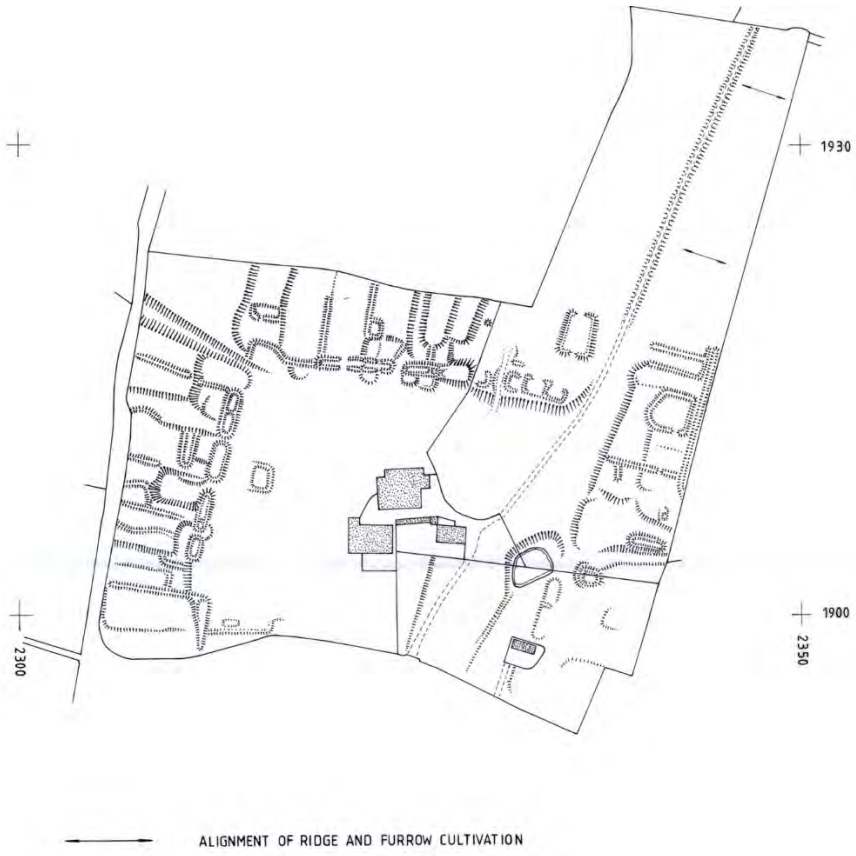
1.2.2 Description

Walworth Deserted Medieval Village (DMV) is a scheduled ancient monument (Monument No. SM 20872 (old), List No 1011256; DHER H1568). The area within the curtilage of the built farm complex and a separate cottage to the south-east are excluded from the scheduled extent, but the entirety of the four surrounding fields are covered by the scheduling.

Extensive earthwork remains of the deserted village survive within the scheduled area. A barn to the north of the farmhouse preserves the structure of a 12th-century chapel (DHER H1569/H34588; Grade II Listed Building 1323001) which would have stood in the centre of the village green. Further south, beyond the scheduled area, Walworth Castle (DHER H1565/H36472; Grade I Listed Building 1121175), now a hotel, represents a complex, multi-period house with surviving probable medieval components (one drum tower) plus balancing 16th-century tower and an unusual early Renaissance frontage, now hidden within the inner courtyard.

The monument is described as follows in the Historic England Scheduled Monument List entry (no. 1011256):

> *The monument includes the remains of the deserted village of Walworth surrounding the North Farm complex. It survives in excellent condition in the form of a group of well defined and well preserved earthworks. The centre of the deserted village is occupied by a village green measuring 200m east-west by 150m north-south. Surrounding the green on its north, east and west sides are the remains of the streets of the village surviving as rectangular house platforms of varying sizes with their long sides facing onto the street. Gardens, stock enclosures and scooped yards are clearly attached to the back. One building platform, standing at the eastern end of the north row, is larger than the others, measuring 30m by 22m. On the green at its western edge there is a rectangular structure measuring 17m by 15m, the remains of a well preserved pinfold into which straying livestock were herded. Several hollow ways are visible, the most prominent of which measures 15m across and enters the village at its north-western corner. There is what appears to be a later, rectangular extension to the village at its north-eastern corner; although this is now overlain by medieval and later cultivation, the remains of house platforms can be seen fronting an earlier raised street.*



Illus. 03: RCHME 1991 survey of the earthwork remains of Walworth DMV.

1.2.3 Morphology

In plan the village is laid out around a relatively squarely proportioned green. Although the earthwork remains of the adjoining rows of tenements with their enclosed tofts or crofts and house platforms, are evident today only on the east, west and north sides of the green, it is possible that there was once a comparable row extending at least part way along the south side as well, now covered by the outbuildings of Walworth Castle. The lane which runs east-west along the south side of the DMV may be derived from an ancient trackway which followed a similar course along the southern edge of the green between its south-east and south-west corners. Further south, Walworth Castle probably marks the site of the manorial complex. The SW drum tower and perhaps part of the adjoining south range probably represents part of a defensible medieval manor house modified from the late 16th century onwards when enveloped in Thomas Jenison's mansion. It is uncertain in what way this medieval manorial complex was integrated into the overall settlement plan, but the enclosure, or hallgarth, surrounding the house and its outbuildings and garden, may well have extended up to the south-west corner of the green, perhaps adjoining a short south row to the east, or even completely replacing that row altogether.

In addition there is a narrow, rectangular northern extension at the north-east corner of the green. Though over-ploughed, with surviving ridge and furrow on the east side, this appears to comprise two rows of tenements aligned along either side of a raised street.

1.2.4 Discussion and Interpretation

Walworth is thus larger and more complex than the regular two row villages so common in County Durham which typically exhibit a more linear form, with a green which, while often relative regular and rectangular, is much more narrowly proportioned (cf. Roberts 1972 and

1977 for example). With its broader and more squarely proportioned green, probably surrounded by rows of tenements on all four sides, Walworth resembles the nearby villages of Heighington and Aycliffe, or Easington in East Durham, all relatively large settlements which were the centres of very extensive ancient parishes. A 12th-century chapel was situated the centre of the green, a similar position to that of St Michael's parish church at Heighington, and is now incorporated amongst the outbuildings of Walworth North Farm (formerly Chapel Garth Farm).

The extent and form of these remains have prompted multiple interpretations to explain their formation. Thus one suggestion is that the core of the village laid out around the large green may represent a medieval borough established by the baronial lord, with the northern appendage representing a vill of bond tenants who would have farmed the bulk of the land in the township (Pevsner rev. Williamson 1983, 483). Parallels cited for this development are Darlington and Bishop Auckland, both boroughs established by the bishop of Durham comprising four rows around a square market area with a two-row settlement called Bondgate extending off it (cf. Cookson 2003, 11-17). On the other hand Taylor (1983, 156, fig. 59) has argued that the northern adjunct represents a planned extension to the village, probably of the 13th century. Yet another possibility is that village was originally smaller, comprised of two rows laid out on a north-south axis, this being replaced or enlarged by the larger settlement surrounding the rectangular green. Certainly the ridge and furrow overlying the apparent traces of tenements on the east side of the northern adjunct might imply that this area went out of use before the rest of the village.

1.2.5 Historical and Documentary Background

There is only limited medieval documentation relating to Walworth. The vill was in the hands of secular lords, specifically the Hansard lineage, who held it from the late 12th century until the early 16th century when it passed to the Ayscough family by marriage to the Hansard heiress during the reign of Henry VIII, and was subsequently purchased by Thomas Jenison c. 1579, remaining in the possession of the latter's heirs for the next 200 years. Consequently, Walworth did not benefit from the enduring institutional continuity and capacity for record keeping provided by the Bishopric or Durham Priory and its successor the cathedral chapter, which has resulted in a wealth of documentary survival relating to settlements and estates held by those ecclesiastical bodies. The principal surviving records are therefore escheats or inquisitions post mortem, the surveys taken by the bishop's officials, using locally enrolled juries, on the death of his baronial tenants-in-chief. Thus an Inquisition Post Mortem of 1466 (cited by Surtees 1823, 316) itemised the manor as follows:

- *One chief messuage, with divers outhouses, two granaries, a stable, and sheepfold, value per annum 13s 4d*
- *Twelve cottages, 30s*
- *400 acres of arable land, £24*
- *200 acres of pasture, 100s*
- *20 acres of meadow, 23s 4d*

This would imply that there was still a settlement of at least 12 cottages at Walworth in the second half of the 15th century, along with the manor house and associated complex (which presumably relates to the site of Walworth Castle, where parts of the main house have been identified as originating in the Middle Ages). The licence for Thomas Jennison's purchase of the estate in 1579 listed only six dwellings and six cottages.

Nevertheless, despite the relative paucity of records, the history of the Hansard lineage and the trajectory of growth and decline of their lordship in the North East provides some clues in

turn as to what possible history of Walworth village itself, generating questions which may be tested by further investigation.

1.2.5.1 The Hansards- the rise and fall of a northern lordship

The first member of the family to figure in the region, Gilbert Hansard I – or 'Bert the Knife' as he was christened by the distinguished former Durham University historian, Hilary Offler (1996, XIII, 8 –Hansard is thought to derive from the O.F. *hausart* – a dagger or pruning tool) – was one of the principal lieutenants and baronial subordinates of Hugh du Puiset, bishop of Durham during the second half of the 12th century (Scammell 1956, 225; Offler 1996, XIII, 7-9). An active and acquisitive agent of a politically ambitious bishop, Hansard built up an extensive land holding encompassing estates in Lincolnshire, Yorkshire and Northumberland, as well as County Durham, between c. 1165 and 1184. In the bishopric itself he held two main complexes of manorial estates, a block of lands centred on Hurworth and Embleton, covering the north-eastern headwaters of the Skerne, plus a second group of vills in south-west Durham, held directly from the bishop, namely Walworth itself, Evenwood and Morley (Offler 1996, XIII, 7).

It is tempting to suppose that an individual like Gilbert I determinedly engaged in building up a substantial lordship might also have been involved reorganising the settlements in his new estates, enlarging or remodelling village communities and perhaps even establishing a borough from which he could derive further revenue. A hundred years later, however, there are signs that the Hansard's collection of lands north of the Tees was beginning to be dismantled (ibid., 16-17). Gilbert III, great-grandson of Gilbert I, divided his Durham estates between his eldest son and heir, John, and his younger son, Robert. Walworth was one of the Durham manors included in Robert's share, along with lands in Yorkshire and Lincolnshire. Although Robert seems to have retained these lands intact – unlike his elder brother who sold his manors in the south-west of the county to the bishop in 1295 – the erosion of the Hansard estate north of the Tees continued under his heirs. When the manor of Newton Hansard, with its subordinate vills of Swainston and Embleton, was quitclaimed to Sir John Neville of Raby, a distant relative, in 1371, Walworth was left as the family's sole estate in Durham. The Hansards' interests were henceforth focussed predominantly in Lincolnshire, where their principal seat, South Kelsey, was located and where they held most of the county offices in the 15th century (ibid., 17; Liddy 2008, 62). Thus deprived of seigneurial attention, it is not difficult to see how the impetus for Walworth's development might have dwindled from the later 13th century onwards, even without the demographic crisis caused by the Black Death in the mid-14th century. If Gilbert I did establish a borough at Walworth it is likely to have failed by this stage.

1.2.6 Previous Archaeological Investigation

Relatively little archaeological work has taken place at Walworth prior to the initiation of the Bright Water programme.

HER no.	Date	Investigation
	08-1991	**Survey**: The Ordnance Survey plan of the DMV was revised by the RCHME in as part of the Durham SAMs programme.
E3620 S22290	03-2003	**Walworth Parish Landscape Survey:** Report on an archaeological landscape assessment of the civil parish of Walworth by B. Edwards.
E9998	20-03-2007	**Watching brief** undertaken by Tyne and Wear Museums Archaeology for Balfour Beatty during upgrade of the electricity supply to North Farm. Excavation of 6 trenches monitored. No remains of archaeological significance were observed.

	Sept & Nov 2018	**Watching brief** undertaken by The Archaeological Practice for Philip Eade during excavation of percolation test pits and water main supply trench for North Farm (S of the farmhouse). A C19 cobbled surface was revealed on the S side of the farmhouse garden boundary wall.

In addition, some work has taken place in the vicinity of Walworth Castle Hotel to the south of the DMV site.

HER no.	Date	Investigation
E9559	26-12-1991	**Evaluation Trenching**: 5 small trenches excavated in advance of the extension to the hotel's West Wing. No evidence of any occupation was identified in the extension area.
E8096	2002	**Photographic Recording**: Colour photographs take showing the survival of flagstones in the cellars/basement area of Walworth Castle, prior to their lifting.
E45098	23-08-2012	**Heritage Statement & Evaluation Trenching**: Heritage Statement and excavation of 3 trial trenches in the Walled Garden N of Walworth Castle. Remains of C18 glass house and related finds recorded.

1.3 Geophysical Survey 2019

As the first component of the Bright Water programme of investigative fieldwork, a geophysical survey, specifically comprising a magnetic gradient survey, was undertaken by Phase Site Investigations between 24th and 29th July 2019. This encompassed the four fields contained within the scheduled monument area, but excluded the farm complex in the centre of the green, the cottage and other buildings to the south-east and adjoining areas where vegetation was too high. The fields were numbered 1 to 4, with **Field 1** representing the large field to the west, NW and SW of the farm, and **Field 2** the other large field situated to the NE, a quite narrowly proportioned and roughly rectangular field enclosure, with its long axis aligned NNE-SSW, which encompassed the northern linear 'arm' of the village beyond the main quadrangular green settlement. **Field 3** was the small triangular field immediately to the south of the farmhouse, whilst **Field 4** lay to the SE of the farm and surrounded the cottage, and again was relatively small (though larger than 3).These field numbers are retained in this document for ease of reference.

1.3.1 The Geophysical Survey Results

The full report of the geophysical survey is attached as a supplementary document. This discussion is designed to highlight some of the results which may have a bearing on the research questions set out below. Many of the surviving earthwork features were represented as geomagnetic anomalies, but some were not, whilst other anomalies did not correspond to visible earthworks. Many of these are related to relatively modern features/activity but some are suggestive of archaeological features and could indicate the presence of features that pre-date the medieval village.

Key features of interest are those anomalies in **Field 1** which do not correspond to the earthworks of the deserted medieval village and follow a different alignment implying they may represent a different period of occupation of the site. Notable are the series of linear **Anomalies A** crossing the west row and continuing into the green at an oblique angle to the row, and the more fragmented **Anomalies B** in the southern part of Field 1.

In **Field 2** the linear settlement is clearly represented by anomalies representing a row of croft enclosures on the west side of the north-south aligned trackway. These were not plotted on the 1991 RCHME survey or subsequent Ordnance Survey plans, but are still evident as earthworks on aerial photography and on the ground though evidently somewhat denuded

by relatively modern ploughing. The east side is covered by ridge and furrow earthworks and traces of an equivalent row are much less clear. However, anomalies representing possible traces of crofts can be noted towards the southern end of the row – but north of the main village quadrangle surrounding the green – whilst aerial photography suggests croft enclosures are just perceptible along the full length of the east side despite the masking effect the ridge and furrow.

Fields 3 and 4 were both relatively small and were dominated by responses from relatively modern features/material. A number of anomalies in Field 4 either broadly correspond to a visible earthwork (**Anomaly J**) or in the case of two other linear responses (**Anomalies K**)have similar orientations and therefore probably also relate to the medieval village. In other cases (**Anomalies L and F**) it could not be determined whether the responses relate to archaeological features/material or later activity. In general these two fields are not considered the most promising candidates for further investigation by means of trial trenching.

A series of specific questions arising from the survey are highlighted in the report:

- Do the differences in responses between linear anomalies reflect differences in the composition of the underlying features?
- Is the noisier magnetic background across most of Field 1, compared to Field 2, caused by relatively modern activity / material or is some of this caused by archaeological activity? If the latter does this signify a difference in the use or duration of occupation for the area around the village green compared to the north-eastern area?
- Are the areas of magnetic disturbance all related to relatively modern material or are some of them associated with archaeological activity?
- Has the trackway in the north-west been recut or extended (in width) or do some of the linear anomalies in this area relate to other features (such as croft boundaries)?
- Possible ridge and furrow is present in the north-west and north-east of the site. Does this post-date the desertion of the village or is any of it contemporary?

1.4 Research Questions

1.4.1 Regional Research Agenda Questions

The Bright Water programme to investigate the DMVs in the Skerne Catchment in South Durham will address the following Key Research Themes and Priorities from the North-East Regional Research Framework (NERRF: Petts & Gerrard 2006, 158-59, 168-70, 175):
Early Medieval research priority: EMii. Settlement.
Later Medieval research theme: MD3. Medieval vernacular architecture;
Later Medieval research priorities: MDi. Settlement; MDxi. The medieval to post-medieval transition.

1.4.2 Project Research Questions

The geophysical survey results, the overall plan of the DMV and the history the settlement and its lords give rise to a number of site specific questions. These in turn feed into broader themes of rural settlement formation, growth and decline and the relationship between manorial lords and their subordinate communities of agricultural tenants:

1. How did the extant plan of the settlement come to be formed and what is the chronology of that process? Specifically:
   1.1 Is it a substantially a single period layout, comprising borough and adjoining bondgate, and if so of what date?

1.2 Alternatively is the linear two-row settlement in Field 2 a planned secondary extension?

1.3 Or part of an earlier layout partially superseded by the rectangular green settlement in Field 1?

2. What are the stages and chronology of the settlement's desertion and abandonment?

2.1. Specifically were some areas such all or part of the linear settlement in Field 2 abandoned and ploughed over while other parts of the village were still occupied?

3. Was there an earlier, and substantially different, settlement layout, perhaps of Anglo-Saxon or Anglo-Scandinavian date, underlying the visible earthworks, as tentatively hinted at by some of the anomalies identified by the geophysical survey?

2. PROJECT DESIGN – 2019 EXCAVATION PROGRAMME

2.1 Overall Project Aims

The excavation project is guided by the following overall aims:

- To define and identify the nature of archaeological deposits on site, and date these if and where possible, establishing whether the features/deposits represent part of the medieval settlement. A particular focus for the team will be identifying how occupation ceased.
- to attempt to characterise the nature of the archaeological sequence and recover as much information as possible about the spatial patterning of features present on the site.
- To address the research questions identified in the previous section of this document (*see* 1.4)
- Provide training in archaeological methods and techniques to volunteers wishing to investigate their area's past, equipping them with the relevant new skills.
- Further the understanding of the site and its environment by all members of the community.
- Reinforce and develop the volunteers' existing sense of place and belonging within the area.
- To provide a springboard for further community-led initiatives in the field of archaeology.

2.2 Excavation Strategy and Trench Positioning

The positioning of the trenches is based on the results of the geophysical survey combined with scrutiny of the surviving earthworks (using previous topographic surveys, aerial photography and walkover examination). The scope of work proposed is aspirational and it is conceivable that not all trenches will be excavated in the 2019 season, but it is intended to allow flexibility to follow up promising results and also to undertake a further season of investigation if the opportunity and requisite funding were to become available.

2.2.1 Location and Purpose of Trenches

General: All trenches are designed to elucidate the developmental stages of the village settlement, its origins, duration and desertion, identifying changes in layout and other modifications which may relate to different phases in the occupation of the site and hopefully

yield dateable finds and deposits which will provide a chronology for those processes. The locations of 7 initial trenches are given below. Each of these trenches is set within a defined area within which the trenches may be extended as deemed appropriate in consultation with the Historic England (HE) Inspector of Ancient Monuments and Durham County Archaeologist in order to further investigate features of interest revealed by the initial trench and answer questions generated (*see* Appendix 1: Archaeological Trench Location Plan).

It is envisaged that excavation will begin in the western part of the site (Trenches 4-7) with the focus shifting to the NE area (T1-T3) later in the excavation though it is likely there will be a degree of overlap between the two zones.

The **order of priority** of trench excavation is as follows: T5, T6, T1, T2, T7, T4 & T3.

Trench 1
Dimensions and orientation: L-shaped trench aligned NNE-SSW (measuring 20m x 1.5m) and ESE-WNW (10m x 1.5m), within a wider area box measuring 30m NNE-SSW x 20m ESE-WNW (**Area 1**).
Location: Field 2 towards the east end of the North Row and S of the west row of the adjoining linear extension. The trench intersects an E-W aligned linear positive response and, further north, the south and west walls of a sub-rectangular enclosure which clearly survives as a visible earthwork but is not represented by any geomagnetic responses.
Research purpose: The trench is designed to determine whether the two-row linear settlement originally continued further south into the area occupied by the quadrangular green settlement and predated the latter. This might be indicated by remodelling in this area changing the alignment of the crofts from E-W (facing E towards the street/narrow green) to north-south (facing S towards the quadrangular green).

Trench 2
Dimensions and orientation: NNE-SSW aligned trench measuring 20m x 1.5m within a wider area box measuring 25m NNE-SSW x 20m ESE-WNW (**Area 2**).
Location: Towards the N end of Field 2 on the E side of the field. Intersects a short, E-W linear response which may represent an over-ploughed croft boundary suggested by aerial photography.
Research purpose: Designed to test the existence/degree of survival of an east row associated with the linear settlement, beneath the ridge and furrow, and provide chronological data regarding the formation of this part of the settlement, and in particular when it might have been abandoned and ploughed over.

Trench 3
Dimensions and orientation: An L-shaped trench aligned NNE-SSW (15m x 1.5m) and ESE-WNW (10m x 1.5m), within a wider area box measuring 20m NNE-SSW x 20m ESE-WNW (**Area 3**).
Location: Towards the N end of Field 2 on the W side of the field. Intersects an E-W linear response probably representing a croft boundary. The trench will be located towards the likely east frontage of croft enclosure to try to locate any possible house platform not represented by geomagnetic responses or surviving earthwork remains.
Research purpose: Designed to investigate the degree of survival of remains associated with the linear settlement west row beneath the ridge and furrow and provide chronological data regarding the formation and abandonment of this part of the settlement, whether that differed from the east row and the quadrangular green settlement.

Trench 4
Dimensions and orientation: NE-SW aligned trench measuring 15m x 1.5m, within a wider area box measuring 20m NE-SW x 15m SE-NW (**Area 4**).
Location: In the western part of the green in Field 1. Intersects NW-SE linear positive response Anomaly A and the N side of the square enclosure interpreted as a pinfold.
Research Purpose: Designed to ascertain whether Anomaly A represents a pre-village feature and to characterise the type of activities to be found within the green.

Trench 5
Dimensions and orientation: E-W aligned trench measuring 20m x 5m, within a wider area box measuring 30m E-W x 20m N-S (**Area 5**).
Location: Field 1 trench in the N row to investigate a typical house platform.
Research Purpose: Date of origin, duration of occupation, evidence for alterations and re-planning, and date of abandonment of a house associated with the green settlement.

Trench 6
Dimensions and orientation: NNE-SSW aligned trench measuring 30m x 1.5m, with option to extend 20m further SSW, all within a wider area box measuring 60m NNE-SSW x 15m SE-NW (**Area 6**).
Location: NW corner of Field 1, to intersect multiple linear positive responses (Anomalies D) possibly associated with the trackway passing between the N and W rows and entering the NW corner of the green.
Could be extended southward to intersect Anomaly A and test the relationship of that feature to the structures and occupation levels in the W row.
Research Purpose: Test linear positive responses identified by geophysical survey and interpretation as related to a trackway entering the green.

Trench 7
Dimensions and orientation: Trench aligned NW-SE, measuring 25m x 1.5m with option to add a branch extending 20m to SW to form a T-shaped trench (**Area 7**).
Location: the southern part of Field 1 corresponding to the SW area of the green. Intersects the fragmented responses (Anomalies B) which run obliquely to the orientation of the row earthworks.
Research Purpose: To test whether Anomalies B represent features predating the occupation of the village or even part of an earlier (Anglo-Saxon?) village settlement.

2.3 Excavation Timetable & Duration
The excavations are currently scheduled to be undertaken over a four week period from late-October 2019 to late-November 2019, with the working weeks running from Monday to Friday with one additional Saturday also to be worked and a family day to be scheduled on one Friday. The total number of days spent on site, therefore, will be 21.

2.4 Site management and volunteer supervision
The excavation will be run by a site director. Groups of excavators will work under supervisors, in a ratio of not more than 7:1, with a minimum of 2 professional staff on site at all times during working hours. Excavators will include experienced volunteers acting as informal supervisors who will be paired with less experienced volunteers. The tasks of the excavators will include recording as well as excavation, with the supervisor providing training in both excavation and recording to volunteers who will, as far as possible record the same contexts that they have excavated.

In order to organise volunteers and balance numbers, volunteers will be asked to notify Bright Water of which days they are intending to be on-site. A data-base will be held in Excel recording the number of projected participants for each day, including the names of participants and any particular requirements they may have. This will be backed up by paper attendance sheets (attached to the site risk assessment and health & safety statements) to be filled in by volunteers when they arrive on site. An attempt will be made to ensure that volunteers can be best matched with the nature of work required and the division of tasks available for each day. The constituent specialised tasks, besides general excavation, are set out below:

2.5 Finds Processing

A team of two/three volunteers will be required at all times for finds processing, intermittently supervised by a designated member of the supervisorial team. Tasks here will involve collection of finds from the excavators, washing, basic sorting, drying and bagging and labelling by context.

2.6 Visitor Guide

A volunteer guide will be available at all times to assist with guiding visitors around the site, explaining the purposes and background of the work and advising on finds up to date. This will reduce the pressure on supervisorial staff when monitoring critical aspects of the excavation process. The visitor guides will be monitored and trained by the project team.

2.7 Archaeological Survey

In addition to the excavators-recorders, a survey team will be required intermittently, but regularly, to carry out survey work to record the location and heights aOD of excavated features and finds. This work will be carried out using professional survey equipment (EDM), assisted at any one time by a single volunteer.

2.8 Additional Specialist Photography

Elevated views of the excavation trenches will be taken at its conclusion using a UAV, where appropriate.

2.9 Fieldwork Skills Training

A programme of training and assistance will be delivered to the volunteers through training sessions, guided walks, project meetings and on-site advice. Specific training will include:

Fieldwork techniques; recording & surveying methods – to be carried out on-site, enhanced by two training workshops, each up to ½ day in duration, run by individual members of the project team concurrently with the excavations.

Recognition and treatment of small finds and ecofacts – A session to be held during the excavation using finds recovered from the fieldwork or, if necessary, brought in from research collections.

2.10 Guided Walks

During the initial stages of the excavation Peter Ryder and Alan Rushworth will lead the volunteers around the adjacent surviving medieval standing buildings, the adjacent 12th-century chapel and nearby castle (defensible manor house) at Walworth so that the volunteers can gain a clear impression of the relationship of the elite residences and ecclesiastical buildings to the rural village settlements and a fuller understanding of these sites overall.

2.11 Monitoring of Community Engagement

Separate lists, compiled on a daily basis, will be compiled for three categories of participants: Fieldwork Volunteers, Training Recipients and Visitors. The lists will be maintained on paper forms with the results regularly updated to a database.

'Fieldwork volunteers' include those people volunteering on a daily basis for fieldwork activities, while 'Training recipients' include those people attending any training events, guided walks or dissemination events organised during or following the fieldwork phases, including work with schools or societies. 'Visitors' are those attending site in an organised, pre-arranged capacity or casually - it is proposed to organise an 'open access' site, allowing visitors to view the excavations from a temporary site barrier and to speak with staff and finds processing volunteers.

In addition to monitoring by recording numbers, it is proposed to monitor the quality of volunteer experience, in terms of learning and enjoyment, by asking each participant to complete a simple form in advance of, and following, their involvement in the project, using a similar approach to that taken during recent projects managed by the Archaeological Practice in County Durham, Northumberland and southern Scotland. The aim of this is to introduce a qualitative as well as quantitative element to the process.

2.12 Outreach

Outreach work to be carried out during the course of excavation will include visits to local history groups or other local societies by members of the project team, who will tailor their visits according to the nature of finds from the excavation. At least two local schools will be contacted in order to seek to involve the schoolchildren in aspects of the project, potentially including excavation.

2.13 Dissemination

Archaeological Practice staff will assist Durham County Council Archaeology Section (DCCAS) and Bright Water Landscape Partnership in preparing press releases during the course of the excavations and regular updates via social media. A closing, celebratory event for the excavations will be held on the last day of fieldwork. The venue will be on the site of fieldwork (weather permitting) or a local venue and will include a poster exhibition of interim findings, a pottery making/firing demonstration replicating finds from the excavation.

Archaeological Practice senior staff will give at least two public lectures locally in each year of the project and will offer another at the annual County Durham Archaeology Day.

A **website** which will include the final report as well as additional material derived from the excavations. **Social media** will be used, as exemplified by the Wheatley Hill-Thornley Atlas Project the Flodden 1513 project and numerous others in which The Archaeological Practice Ltd is participating, in order to disseminate interim results on a daily basis through site reports and illustrated blogs written by participants. This work will be carried out and co-ordinated by Marc Johnstone who, in addition to facilitating schools involvement with this aspect of the project, will engage adult community volunteers in basic web-management training – as carried out for the *Epiacum* project, amongst others.

2.14 Reporting

An interim report on the excavations will be produced within two weeks of completion of the fieldwork and a final report produced according to the timetable of the Project Brief. The final

report will be in a loose leaf, A4 format, illustrated with appropriate maps, drawings and photographs selected from the project archive. This may form the basis for a subsequent publication in a local journal, if the HE Inspector of Ancient Monuments and DCC principal archaeologist determines that it is merited by the results, as well as summary reports for popular dissemination, including short articles in *Archaeology County Durham*.

3. WRITTEN SCHEME OF INVESTIGATION

[The archaeological works will be carried out in full compliance with the project brief and according to archaeological best practice as set out in the following publications: Yorkshire, the Humber and the North-East: A Regional Statement of Good Practice for Archaeology in the Development Process (WYAAS 2009) and Standard and Guidance: an archaeological evaluation (IFA 2008)]

3.1 Excavation – general

3.1.1 The archaeological trenches will be excavated in the locations specified in the preceding section (*see* 2.4), determined by the requirements of the project's research agenda (*see* 1.4). Excavation, recording and sampling procedures will be undertaken using the strategies indicated below.

3.1.2 The setting out of the trenches will be undertaken by the Archaeological Practice in consultation with the landowner, farm tenant, HE, DCCAS and the geophysical contractor, Phase SI.

3.1.3 Unstratified modern overburden may be removed by hand or mechanically (depending on site sensitivities, soil depth and landowner/farm tenant permission), the latter using an appropriate machine with a toothless ditching blade under strict archaeological supervision. The removal of modern overburden above the first significant archaeological horizon will be executed in successive level spits. All mechanical excavation will be supervised by archaeologically competent staff. Manual excavation will be undertaken by volunteers under close supervision of trained archaeological staff.

3.1.4 Turf and spoil will be kept close-by and rapidly backfilled into the trenches at the conclusion of this work. The site is private property without public access, but signs will be displayed in the case of any deep excavations on the site. It is not, however, envisaged that any excavations will attain a hazardous depth.

3.1.5 On removal of turf and unstratified topsoil, all excavation of archaeological horizons and trench faces will be carried out by hand and every effort will be made to leave all nationally important remains *in situ*.

3. 1.6 All excavation of archaeological horizons will be carried out by hand and every effort will be made to leave all nationally important remains *in situ*.

3.1.7 Sufficient of the archaeological features and deposits identified will be excavated by hand through a sampling procedure to enable their date, nature, extent and condition to be described. Pits and postholes will normally be sampled by half-sectioning although some features may require complete excavation. Linear features will be sectioned as appropriate. No archaeological deposits will be entirely removed unless this is unavoidable.

3.1.8 Assuming an S42 licence is granted, a suitable metal detecting survey of the open trenches prior to archaeological excavation will be carried out; in addition, all spoil from the excavations will be examined.

3.2 Recording

3.2.1 Archaeological stratigraphy revealed by excavation will be recorded by the following means:

3.2.2 **Written descriptions.** Each archaeological context will be recorded on a pro-forma sheet. Minimum recorded details will consist of the following: a unique identifier; an objective description which includes measurements of extent and details of colour and composition; an interpretative estimate of function, clearly identified as such; at least one absolute height value; the identifiers of related contexts and a description of the relationship with such contexts (for preference, executed as a mini Harris matrix); references to other recording media in which representations of the context are held (plans, sections, photographs).

3.2.3 **Measured illustrations.** Detail plans and sectional profiles of archaeological features will be at appropriate scales (sections: 1:10; plans: 1:20 or 1:50). Archaeological contexts will be referenced by their unique identifiers. All illustrations will be properly identified, scaled and referenced to the site survey control.

3.2.4 **Photographs.** Digital photographs will be taken for purposes of record. Any features of archaeological note will also be recorded on colour film stock. A system will be used for identifying the archaeological features photographed.

3.2.5 An appropriate control network for the survey of any archaeological remains revealed in excavation will be established.

3.2.6 The survey control network will be related to the OS grid.

3.2.7 The survey control network and the position of recorded structures, features and finds will be located on a map of an appropriate scale (1:2500 or 1:500)

3.2.8 At least one absolute height value related to OD will be recorded for each archaeological context.

3.2.9 All processing, storage and conservation of finds will be carried out in compliance with the relevant IFA and UKIC (United Kingdom Institute of Conservation) guidelines.

3.2.10 Portable remains will be removed by hand; all artifacts encountered will be recovered.

3.3 Environmental Sampling and Scientific Dating

3.3.1 The investigations will be undertaken in a manner consistent with Historic England's *Management of Research Projects in the Historic Environment* – MoRPHE (2015) and with *Archaeological Science at PPG16 Interventions: Best Practice for Curators and Commissioning Archaeologists*, English Heritage, 2003. The following strategy for environmental sampling has been confirmed with Don O'Meara, Historic England Regional Advisor for Archaeological Science (0191 2691250).

3.3.2 Deposits/fills with potential for environmental evidence will be assessed by taking up to two bulk samples of 30 litres from any context selected for analysis by the excavator from

suitable (i.e. uncontaminated) deposits. Deposits/fills totalling less than 30 litres in volume will be sampled in their entirety. Samples which are judged to be most suitable on grounds of being derived from uncontaminated and reasonably well-dated deposits and/or recognisable features will be selected for full analysis, reporting and publication. In the event of a large number of deposits potentially being available for sampling, the advice of the Historic England Regional Science Advisor will be sought.

3.3.3 Deposits will be sampled for remains of pollen, food residues, microfossils, small boned ecofacts (e.g. fish & insects/micro-fauna), industrial residues (e.g. micro-slags - hammer-scale and spherical droplets), cloth and timber. Flotation samples and samples taken for coarse-mesh sieving from dry deposits will be processed at the time of fieldwork wherever possible.

3.3.4 Any significant ecofactual assemblages will be assessed by a recognised specialist.

3.3.5 Deposits will be assessed for their potential for radiocarbon, archaeo-magnetic and Optically Stimulated Luminescence dating. As well as providing information on construction techniques, timbers will be assessed for their potential for dendrochronology dating, in which case sampling will follow procedures in *Dendrochronology: guidelines on producing and interpreting dendrochronological dates* (Hillam 1998) and *Guidelines on the recording, sampling, conservation and curation of waterlogged wood* (R. Brunning 1996). A maximum of 5 samples of material suitable for dating by scientific means (e.g: Radiocarbon, Luminescence, Remnant Magnetism, etc.) will be collected.

3.3.6 In the event that hearths, kilns or ovens (of whatever period, date or function) are identified during the watching brief, provision will be made to collect at least one archaeo-magnetic date to be calculated from each individual hearth surface (or in the case of domestic dwellings sites a minimum of one per building identified). Where applicable, samples will be collected from the site and processed by a suitably trained specialist for dating purposes. In the event that such deposits or structures are identified, HE and DCCAS will be contacted to discuss the appropriate response.

3.3.7 Information on the nature and history of the site, aims and objectives of the project, summary of archaeological results, context types and stratigraphic relationships, phase and dating information, sampling and processing methods, sample locations, preservation conditions, residuality/contamination, etc. will be provided with each sample submitted for analysis.

3.3.8 Laboratory processing of samples shall only be undertaken if deposits are found to be reasonably well dated, or linked to recognisable features and from contexts the derivation of which can be understood with a degree of confidence.

3.4 Human Remains and Treasure

3.4.1 Human remains will be treated with care, dignity and respect, in full compliance with the relevant legislation (essentially the Burial Act 1857) and local environmental health concerns. If found, human remains will be left in-situ, covered and protected, and the police, coroner, Inspector of Ancient Monuments and County Archaeologist informed. If it is agreed that removal of the remains is essential, the Archaeological Practice Ltd, will apply for a licence from the Home Office. Analysis of the osteological material will take place according to

published guidelines, *Human Remains from Archaeological Sites, Guidelines for producing assessment documents and analytical reports (*English Heritage 2002).

3.4.2 If anything is found which could be Treasure, under the Treasure Act 1996, it is a legal requirement to report it to the local coroner within 14 days of discovery. The Archaeological Practice Ltd. will comply with the procedures set out in The Treasure Act 1996. Any treasure will be reported to the coroner and to The Portable Antiquities Scheme Finds Liaison Officer, Benjamin Westwood (03000 267011 or benjamin.westwood@durham.gov.uk), for guidance on the Treasure Act procedures. Treasure is defined as the following:

- Any metallic object, other than a coin, provided that at least 10% by weight of metal is precious metal and that is at least 300 years old when found
- Any group of two or more metallic objects of any composition of prehistoric date that come from the same find
- All coins from the same find provided that they are at least 300 years old when found, but if the coins contain less than 10% gold or silver there must be at least ten
- Any object, whatever it is made of, that is found in the same place as, or had previously been together with, another object that is Treasure
- Any object that would previously have been treasure trove, but does not fall within the specific categories given above. Only objects that are less than 300 years old, that are made substantially of gold or silver, that have been deliberately hidden with the intention of recovery and whose owners or heirs are unknown will come into this category

4. WSI - POST-EXCAVATION ANALYSIS, REPORTING & ARCHIVING

4.1 Analysis and Reporting of Recovered Data

4.1.1 Following the completion of the Field Investigation and before any of the archaeological post-excavation work is commenced, an archive (the Site Archive) containing all the data gathered during fieldwork will be prepared. This material will be quantified, ordered, indexed and rendered internally consistent. It will be prepared according to the guidelines given in Historic England's MoRPHE: https://historicengland.org.uk/images-books/publications/morphe-project-managers-guide/ and D.H. Brown *Archaeological Archives: A guide to best practice* (2011) - http://www.archaeologyuk.org/archives/aaf_archaeological_archives_2011.pdf

4.1.2 Following completion of the Field Investigation and Site Archive, a report will be prepared collating and synthesizing the structural, artefactual and environmental data relating to each agreed component part of the evaluation and recording process.

4.2 Production of Final Report

4.2.1 Copies of the report will be provided within two months of the completion of fieldwork to Bright Water, Historic England, the Durham County HER and HLF.

4.2.2 Three copies of the report will be provided. Each will be bound, with each page and heading numbered. Any further copies required will be produced electronically. The report will include as a minimum the following:

SMC reference no, S42 licence no and Oasis no.
A summary statement of methodologies used.

A location plan of the site and any archaeological discoveries of note.
Summary statements of results and Conclusions
A table summarizing the deposits, features, classes and numbers of artefacts encountered and spot dating of significant finds.

4.2.3 Following completion of the analysis and publication phase of the work, an archive (the Research Archive) containing all the data derived from the work done during the analysis phase will be prepared. The archive will be prepared to the standard specified by Historic England (MoRPHE 2011) and in accordance with the United Kingdom Institute of Conservation guidelines.

4.2.4 Arrangements will be made to deposit the Site Archive (including Finds) and the Research Archive with the designated museum, Sevenhills Repository, Spennymoor , within 6 months of the end of the fieldwork. Additionally, a copy shall be offered to the National Monuments Record (NMR).

4.3 Dissemination and Publication of Results of Archaeological Works

4.3.1 An entry for inclusion in the Durham County HER will be prepared and submitted.

4.3.2 Summary reports of the project will be prepared, if necessary, for inclusion in the appropriate Notices, Annual Reviews, Reports, etc.

4.3.3 In particular a summary of the results of the investigation will be prepared for *Archaeology County Durham* and submitted to DCCAS, by December of the year in which the work is completed.

4.3.4 A summary report on the work will be submitted to a local academic journal.

4.3.5 **OASIS:** The Archaeological Contractor will complete the online form for the Online Access to Index of Archaeological Investigations Project (OASIS), following consultation with HE and DCCAS. The Contractor agrees to the procedure whereby the information on the form will be placed in the public domain on the OASIS website, following submission of the final report (see 3.6) into the Durham County HER.

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