



**An Archaeological evaluation, strip,  
map and sample excavation at Thomas  
Estley Community College, Broughton  
Astley, Leicestershire**

**NGR: SK 8656 1392**

Stephen Baker



**ULAS Report No 2016-087**

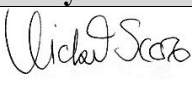
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**For: Thomas Estley Community College**

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**University of Leicester**

**Archaeological Services**

University Rd., Leicester, LE1 7RH

Tel: (0116) 2522848 Fax: (0116) 2522614

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# **An Archaeological evaluation, strip, map and sample excavation at Thomas Estley Community College, Broughton Astley, Leicestershire**

**Stephen Baker**

## **Summary**

*University of Leicester Archaeological Services (ULAS) carried out an archaeological investigation on land at Thomas Estley Community College, Broughton Astley, Leicestershire in 2016, initially through evaluation (5<sup>th</sup> – 6<sup>th</sup> April) and subsequently an excavation (3<sup>rd</sup> -17<sup>th</sup> May) in advance of the proposed classroom building.*

*The excavation revealed a pit alignment of possible late prehistoric date, a series of poorly dated, probably agricultural gullies, along with possibly related discrete features, and a linear feature traversing the site, thought to be a post-medieval gully associated with water meadows visible nearby on aerial photographs.*

*The site archive will be held by Leicestershire Museums Service, under accession number XA48.2016.*

## **Introduction**

An archaeological evaluation and following excavation was carried out on land at Thomas Estley Community College, Broughton Astley, Leicestershire (SK8656 1392; Figs 1-2).

An archaeological evaluation of the site was requested by Leicestershire County Council Historic and Natural Environment Team, as archaeological advisors to the planning authority. The work was required to assess the nature, extent, date and significance of any archaeological deposits which might be present in order to determine the potential impact of the proposed development upon them. This evaluation took place on the 5<sup>th</sup>-6<sup>th</sup> April 2016.

The results of the initial evaluation informed the decision by the Planning Archaeologist for Leicestershire County Council to strip, map and sample excavate the footprint of the proposed and amended classroom development to determine and record the archaeological remains across this area. This phase of investigation took place from 3<sup>rd</sup> – 17<sup>th</sup> May 2016.

In accordance with National Planning Policy Framework (NPPF) Section 12 *Conserving and Enhancing the Historic Environment* this document forms the report for an archaeological evaluation and excavation with an assessment of the potential impact on buried archaeological remains from ground works associated with future development.

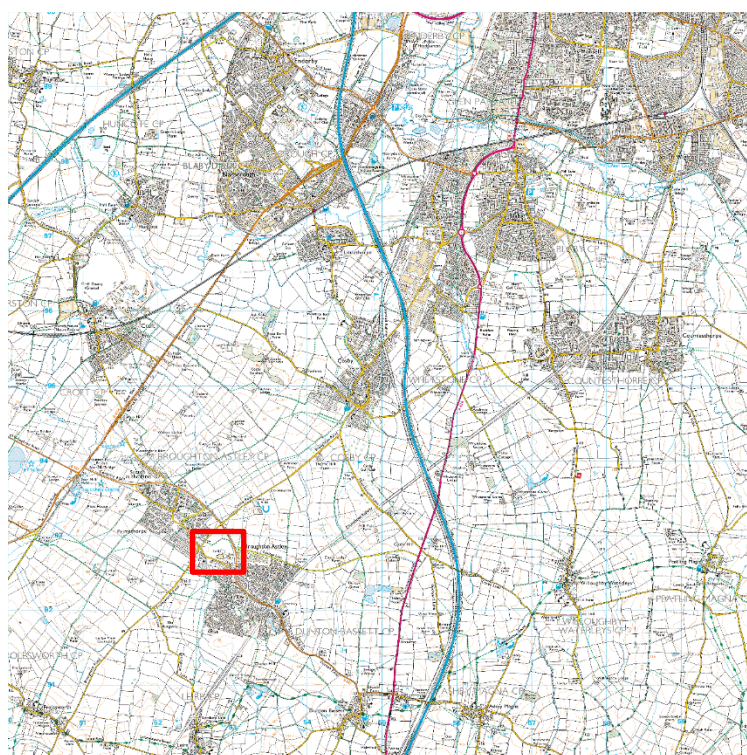


Figure 1: Site Location: Broughton Astley (in red)

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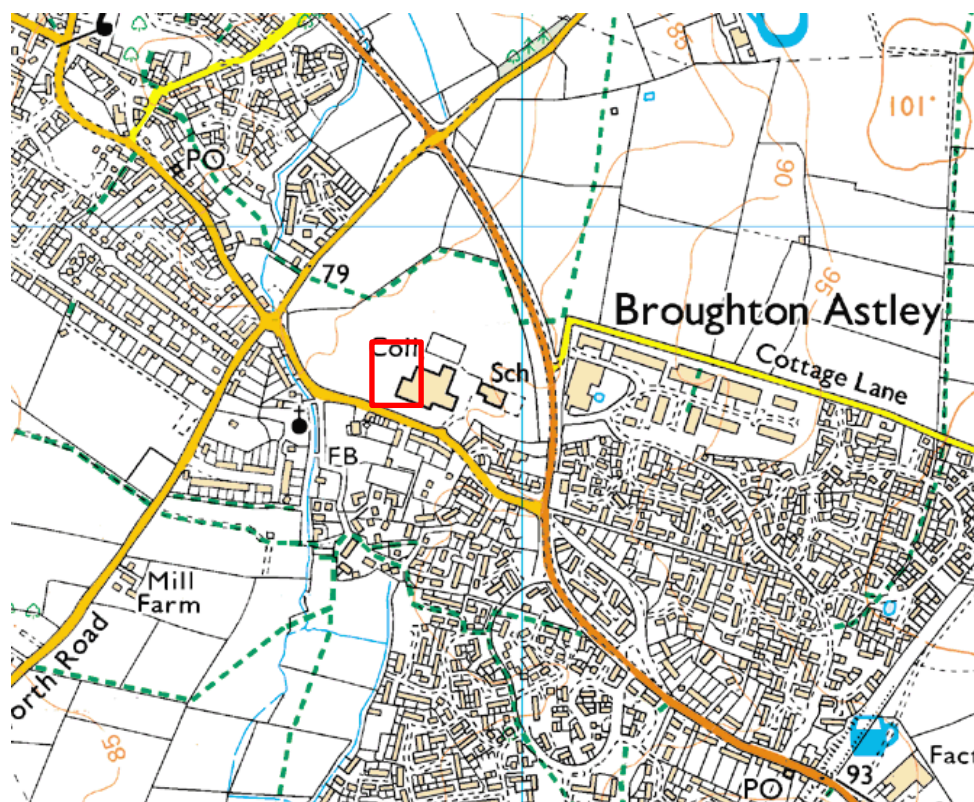


Figure 2: Site Location: Thomas Estley Community College (in red)

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### Site Description, Topography and Geology

Broughton Astley lies to the west of the M1 in the western part of the Harborough District, adjacent to the border with Blaby District. Hinckley is 6 miles to the west of and Leicester city centre approximately 9 miles to the north (Figs 1-2). The site lies on the western side of Thomas Estley Community College on the playing fields.

The proposed development site comprises a rectangular area of approximately 0.05ha. The ground level is *c.*81m OD.

The Ordnance Survey Geological Survey of Great Britain (Sheet 169) indicates that the underlying geology is likely to consist Till, reddish brown pebbly clay (British Geological Survey, 2016).

### Historical and Archaeological Background

A Desk-based Assessment for an area nearby (Hunt 2011), illustrates how the parish of Broughton Astley includes the large village of Broughton Astley itself, together with the villages of Primethorpe and Sutton-in-the-Elms. Broughton Astley is mentioned four times in the Domesday Survey of 1086, where it is referred to as *Brothone*, *Brocktone* and *Brostone*, derived from the Old English *tun* or town on a brook. The principal landowner at this time appears to have been Countess Judith, niece of William I. In 1229 the lord of the manor was

Thomas de Astley, and after the death of his grandson in 1265, the lands were given by King Henry III to Warine de Bassingburne. During the reign of Elizabeth I, the manor of Broughton Astley came to the Grey family.

The Leicestershire and Rutland Historic Environment Record (HER) indicates that the proposed development lies within an area of archaeological interest. There is no evidence for prehistoric or Roman archaeological sites in the vicinity of the application area. However, the application site is situated within the historic core of Broughton Astley. The White Horse Inn, to the west of the application area, is thought to be the site of the medieval manor house, which would have included a dovecote, gardens and a fishpond. Earthworks have been identified on early aerial photographs of the site that appear to represent the periphery of the medieval settlement. Although there has been some superficial levelling of the site for playing fields, it is possible that archaeological remains relating to the medieval settlement might survive below ground level and will be impacted by the proposed development.

### **Aims and Objectives**

The broad aims of the archaeological evaluation trenches and subsequent strip, plan and sample excavation were:

- To determine, as far as is reasonably possible, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains on the site to be affected by the proposed ground works.
- To excavate and record any archaeological deposits that would be affected by the the proposed ground works
- To produce an archive and report of any results.

The detailed objectives of the archaeological excavation was:

- Insofar as possible within methodological constraints, to explain any temporal, spatial or functional relationships between the structures/remains identified, and any relationships between these and the archaeological and historic elements of the wider landscape.
- Where the data allows, identify the research implications of the site with reference to the regional research agenda and recent work in Leicestershire.

### **Methodology**

The work was undertaken in two stages:

#### ***Evaluation***

Three 30m long trenches were excavated across the proposed development area, either side of an active service drain orientated northwest-southeast, using a mechanical JCB excavator with 1.6m wide toothless ditching bucket. Prior to any machining of trial trenches, general photographs of the site areas were taken.

## ***Excavation***

Following the evaluation the *c.*492m square footprint of the proposed classroom (changed from the initial development plans) was stripped using a 360° mechanical excavator with a 1.80m wide toothless ditching bucket.

In both instances the topsoil and overlying layers were removed under full archaeological supervision until either the top of archaeological deposits or the natural undisturbed substratum was reached. The trenches and stripped area were examined for archaeological deposits or finds by hand cleaning. All areas and archaeological deposits therein were sample excavated, recorded and surveyed and tied into the Ordnance Survey National Grid before being backfilled and leveled at the end of the evaluation.

The work followed the approved design specification (Gonzalez 2016) and adhered to the Institute for Archaeologists (Cifa) *Code of Conduct* and adhered to their *Standard and Guidance for Archaeological Field Evaluations* (2013).

## **Results**

### ***Evaluation***

Table 1: Trench details

| TRENCH | ORIENTATION | LENGTH AND WIDTH (metres) | TOPSOIL THICKNESS (metres) | SUBSOIL THICKNESS (metres) | DESCRIPTION        | TRENCH DEPTH (MIN-MAX metres) |
|--------|-------------|---------------------------|----------------------------|----------------------------|--------------------|-------------------------------|
| 1      | NW-SE       | 20                        | 0.18-0.30                  | 0.17-0.30                  | linear             | 0.38-0.64                     |
| 2      | NW-SE       | 20                        | 0.24-0.40                  | 0.19-0.30                  | linears, posthole  | 0.43-0.65                     |
| 3      | NE-SW       | 20                        | 0.22-0.34                  | 0.16-0.45                  | linears, postholes | 0.56-0.71                     |

### ***Trench 1***

Trench 1 was located north of both the known modern service and the footprint of the proposed classroom, orientated north-west/south-east (Fig. 3). It was excavated down to the natural substratum - mid-orange brown sand with gravel patches.

A linear feature [13], *c.*0.20m deep and *c.*1.30m wide, orientated east-west was identified *c.*7.57m from the eastern end and sample excavated. It was *c.*4m in length and ran beneath the north-east and south-west baulk. It had irregular, shallow sides with an irregular base and contained a single mid-grey brown sandy clay fill (14), devoid of finds (Figs 4-5).



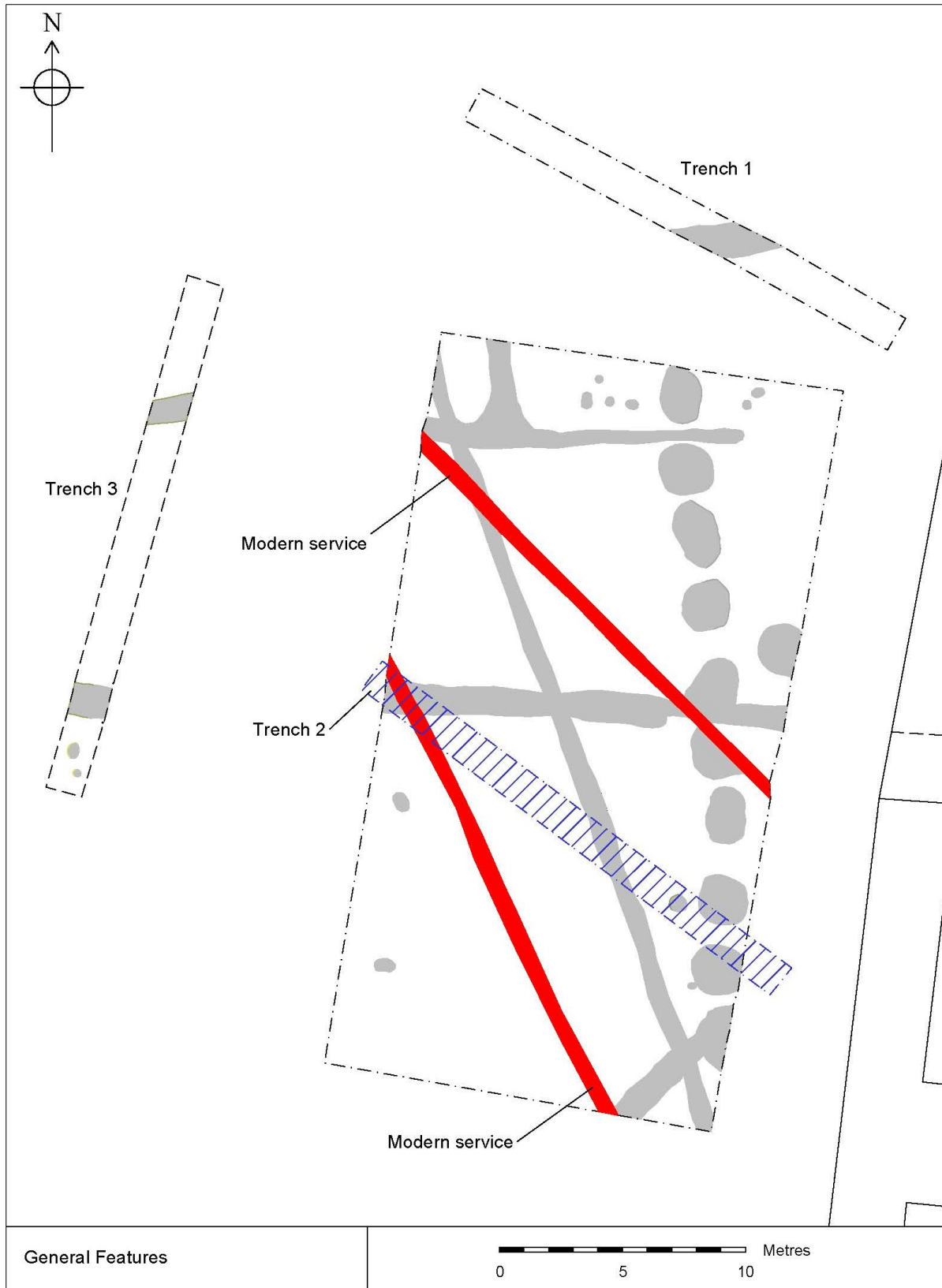


Figure 3: Excavation - archaeological features plan



Figure 4: Trench 01, looking north-west

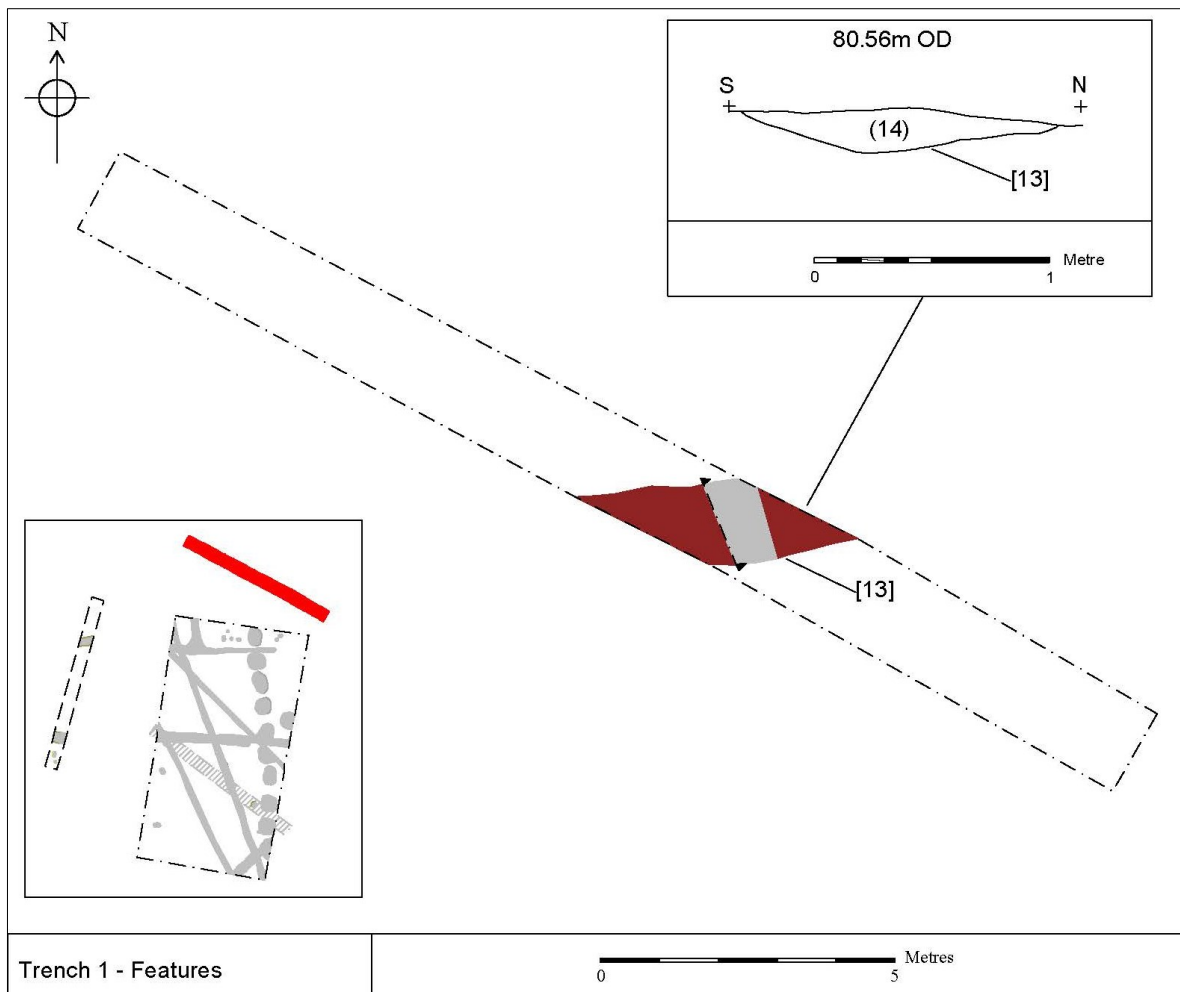


Figure 5: Trench 01 Archaeological features plan

## *Trench 2*

Located south of the service trench and on a similar north-west/south-east orientation, Trench 2 contained two linear features, one a gully truncated by an unknown modern service, and a pit, both subject to sample excavation (Figs 3 & 6-7). The natural substratum was comparable to that of Trench 1. Subsequently the excavation phase incorporated the area investigated by Trench 2.

A circular pit **[01]**, *c.*5m from the south-east end of the trench had straight moderately sloping sides and a concave base. It was *c.*0.19m deep and *c.*0.68m in diameter. The single fill **(02)** comprised a mid-brown sandy silt and was devoid of finds.

Linear feature **[03]** represented a ditch *c.*0.77m wide and *c.*0.30m deep orientated approximately north-south and located *c.*3.5m north-east of the pit. It had straight, moderately sloping sides and a concave base and contained a mid-brown grey sandy clay fill **(04)**, without finds.

At the north-east end of Trench 2, linear feature **[11]** had more irregular, moderately sloping sides and a flat base. With a different approximate east-west orientation, it was *c.*1.50m wide and *c.*0.23m deep with a dark grey-brown silty-clay fill **(12)**. This feature was reinvestigated in the open area excavation (see below).



Figure 6: Trench 02, looking north-west



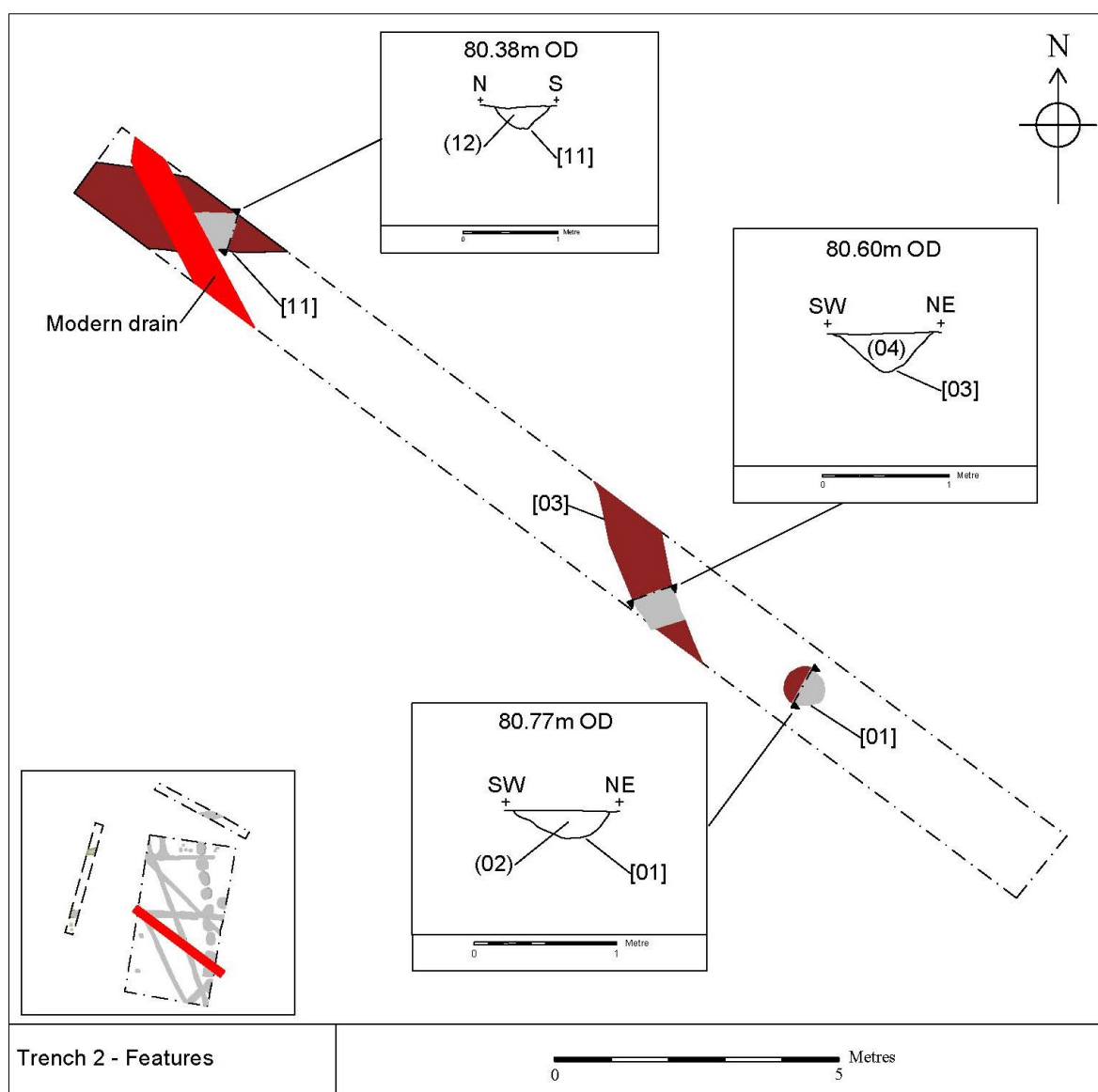


Figure 7: Trench 02 Archaeological features plan

### Trench 3

Orientated north-east/south-west this trench was excavated down to a similar mid-yellow brown silty clay substratum as the other trenches. Trench 3 contained an unexcavated linear feature towards its northern end corresponding with feature [13] in Trench 1 and another linear feature [06] towards the southern end with two proximate postholes [08] [10] (Figs 8-9).

Linear [06] was represented by a ditch *c.*1.30m wide and *c.*0.40m deep. Its profile was “V-shaped” with relatively steep sides and central narrow base. Primary fill (05), mid-grey brown sandy clay, was up to *c.*0.36m deep and contained Iron Age pottery, fired clay (see below) and heat affected stones, and tertiary fill (15), mid-orange grey sandy clay up to *c.*0.10 was devoid of finds. This feature was also investigated in the open area excavation (see below).

Oval posthole [08], with a depth of *c.*0.12m and diameter of *c.*0.40m had concave shallow sides and a “U-shaped” central base. Single fill (07), mid-grey brown sandy clay was devoid of finds.

The smaller of the two, circular posthole [10], with a diameter of c.0.23m and depth of c.0.10m, had steeper concave sides and a concave central base. Single dark grey brown sandy clay fill (09), was devoid of finds.

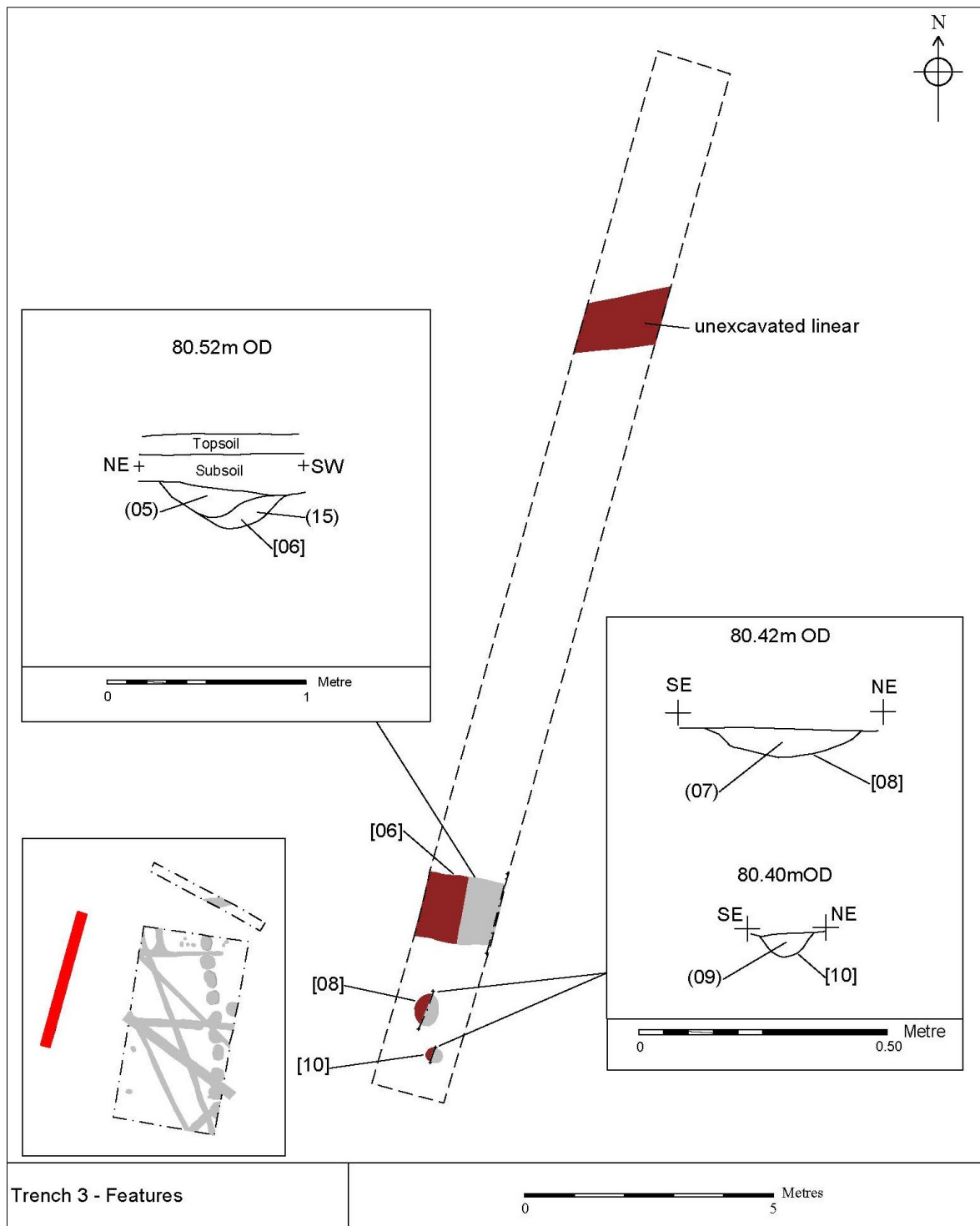


Figure 8: Trench 03 Archaeological features plan



Figure 9: Trench 03, looking north-east

### ***Open Area Excavation***

An area approximately 16m x 31m representing the footprint of the proposed classroom building was excavated to reveal a relatively dense concentration of archaeological features (Figs 4 & 9). Some of these, notably the linear features and discrete postholes had been suggested by the results of the evaluation phase but others, notably the substantial alignment of pits running north-south along the eastern perimeter of the site, had not been identified previously.

A concentration of discrete posthole features appears, in plan at least, to be confined to the northern limits of the area within a terminating east-west gully feature that forms a 'T-shaped' complex in the far north-west corner. Another similarly orientated gully, also terminating, traverses the centre of the same area, possibly a re-cut of an earlier linear in the same place that continues from one side of the site to the other. A linear feature runs diagonally across the very south-east corner of the site, and finally, from the north-west to the south-east corner runs a linear feature.

Two service trenches cross the site, the depth of both being below the level of archaeological survival. The first was a known modern drain and to the south, another uncharted service trench that was initially observed in the north-west end of Trench 2.





Figure 10: Excavation area, looking north-east

#### *Pit alignment*

The north-south pit alignment was recorded for approximately *c.*28.60m before running beneath the northern and southern limits of excavation (Fig. 11). Within the area, ten comparable and relatively consistently shaped and sized pits, were recorded all of which were subject to 50% sample excavation, along with an outlying pit to the east extending beneath the eastern limit of excavation. The average gap between the outer edges of the pits was 0.72m, the largest *c.*1.28m and smallest *c.*0.25. From centre point to centre point the average distance was 2.88m, with the largest *c.*3.34m and smallest *c.*2.59m. The alignment curved slightly outwards to the east. The pits are described in Table 2 and shown on Fig. 12 below.

Two of these pits were in the area investigated by Trench 2 but were not identified during the evaluation stage. Initially only the five northern pits were identified on the ground, the southern pits weathering out after substantial rain and subsequent drying.

The pits were typically sub-circular in plan shape. There was a dearth of datable material recovered and only in two of the features was a relationship with other archaeology established suggesting that the pit alignment may represent one of the earlier phases of activity on the site.



Figure 11: Pit alignment, looking north (2m scale)

Table 2: Pit alignment details

| CONTEXT NO | LENGTH (m) | WIDTH (m) | DEPTH (m) | GAP TO NEXT PIT (EDGE) |  | GAP TO NEXT PIT (CENTRE) | SHAPE        | FINDS?                                      | PERCENTAGE EXCAVATED |
|------------|------------|-----------|-----------|------------------------|--|--------------------------|--------------|---|----------------------|
| 28         | 2.30       | 1.70      | 0.60      | 0.81                   |  | 2.98                     | Sub-oval     | no  | 50                   |
| 65         | 2.10       | 2m+       | 0.63      | 0.26                   |  | 2.66                     | Sub-circular | no  | 50                   |
| 59         | 2.81       | 1.80      | 0.75      | 0.52                   |  | 3.02                     | oval         | no  | 50                   |
| 66         | 2.10       | 1.96      | 0.90      | 1.21                   |  | 3.12                     | Sub-oval     | no  | 50                   |
| 50         | 2.11       | 2.0       | 0.75      | 0.85                   |  | 2.66                     | Sub-oval     | no  | 50                   |
| 73         | 2.69       | 1.42      | 0.36+     | 0.37                   |  | 2.65                     | Sub-oval     | no  | ≤50                  |
| 56         | 2.40       | 1.53      | 0.50      | 1.27                   |  | 3.34                     | Sub-oval     | 2 x flints<br>(secondary flake and shatter) | 50                   |
| 75         | 1.96       | 1.88      | 0.80      | 0.84                   |  | 2.90                     | Sub-circular | no  | 50                   |
| 86         | 2.04+      | 2.0       | 0.78      | 0.51                   |  | 2.59                     | Sub-circular | no  | 50                   |
| 97         | 2.40       | 1.05+     | 0.75      | N/A                    |  | N/A                      | Sub-circular | no  | 50                   |
| 43*        | 2.07       | 1.61+     | 0.79      | N/A                    |  | N/A                      | Sub-circular | Roman Grey ware                             | 50                   |



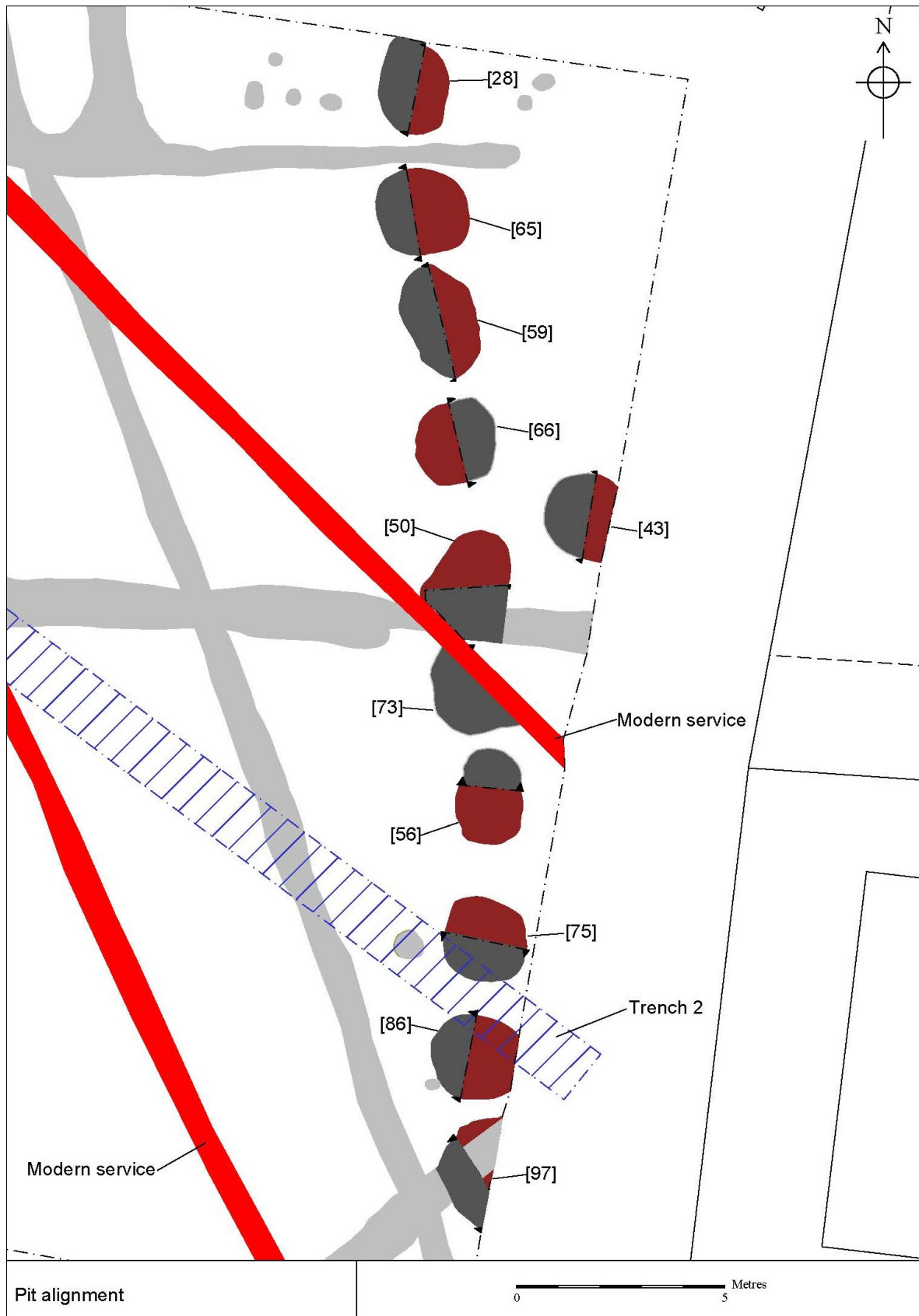


Figure 12: Pit alignment plan

The only pits yielding finds lay in the southern area of the site. Pit [56] was sub-oval and *c.*2.4m long by *c.*1.53m wide (Fig. 13). The sides of feature were sloping with a concave ‘u-shaped’ base. It was only identified after significant weathering on the site and confirmation by sample excavation. Its single yellowish-brown silty-clay fill (57), was *c.*0.5m deep and produced two worked flint flakes, one a secondary flake and another the result of shatter (Cooper pers comm, 2016), amongst a few large cobbles and was sampled for environmental analysis (see below).

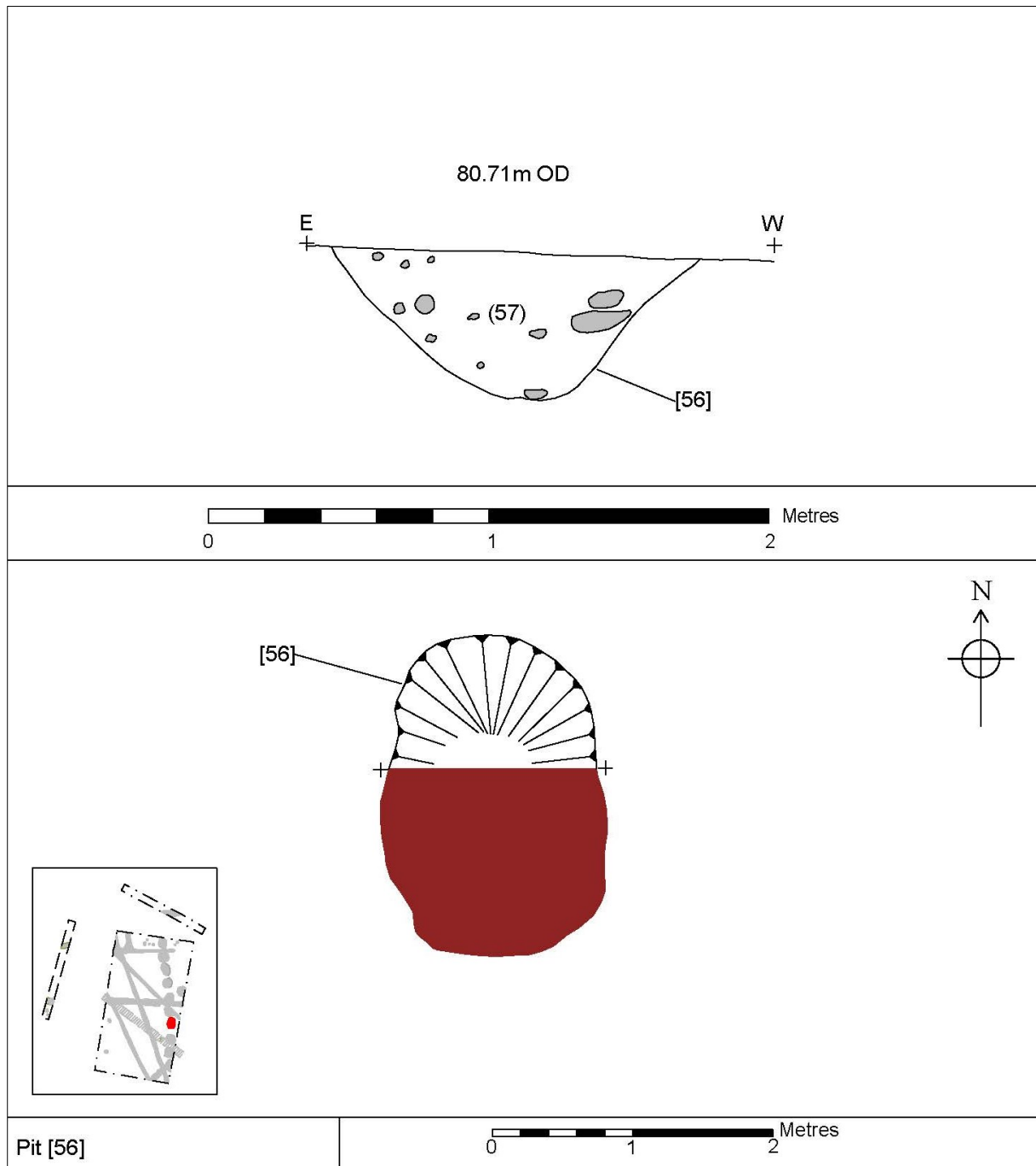


Figure 13: Pit [56], section and plan

Located south of this, Pits [75] and [86] (Fig. 14) shared very similar profiles and shapes. Both being sub-oval with lengths of *c.*2m and slightly shorter widths, with moderately sloping sides and concave bases and similar depths of *c.*0.80. The upper fills (78) and (85) were mid-orange brown silty-clay with occasional small sub-rounded stones. As in some of the other pits in the alignment, a secondary greyish orange silty sand fill was recorded deposited near to the waterlogged base, (76) and (89) respectively, and interpreted as natural silting. Pit [75] also contained a lighter grey silty-clay fill (77) between the upper and primary deposits, and Pit [86], a mid-brown grey relatively sterile primary fill (90), *c.*0.45m deep.

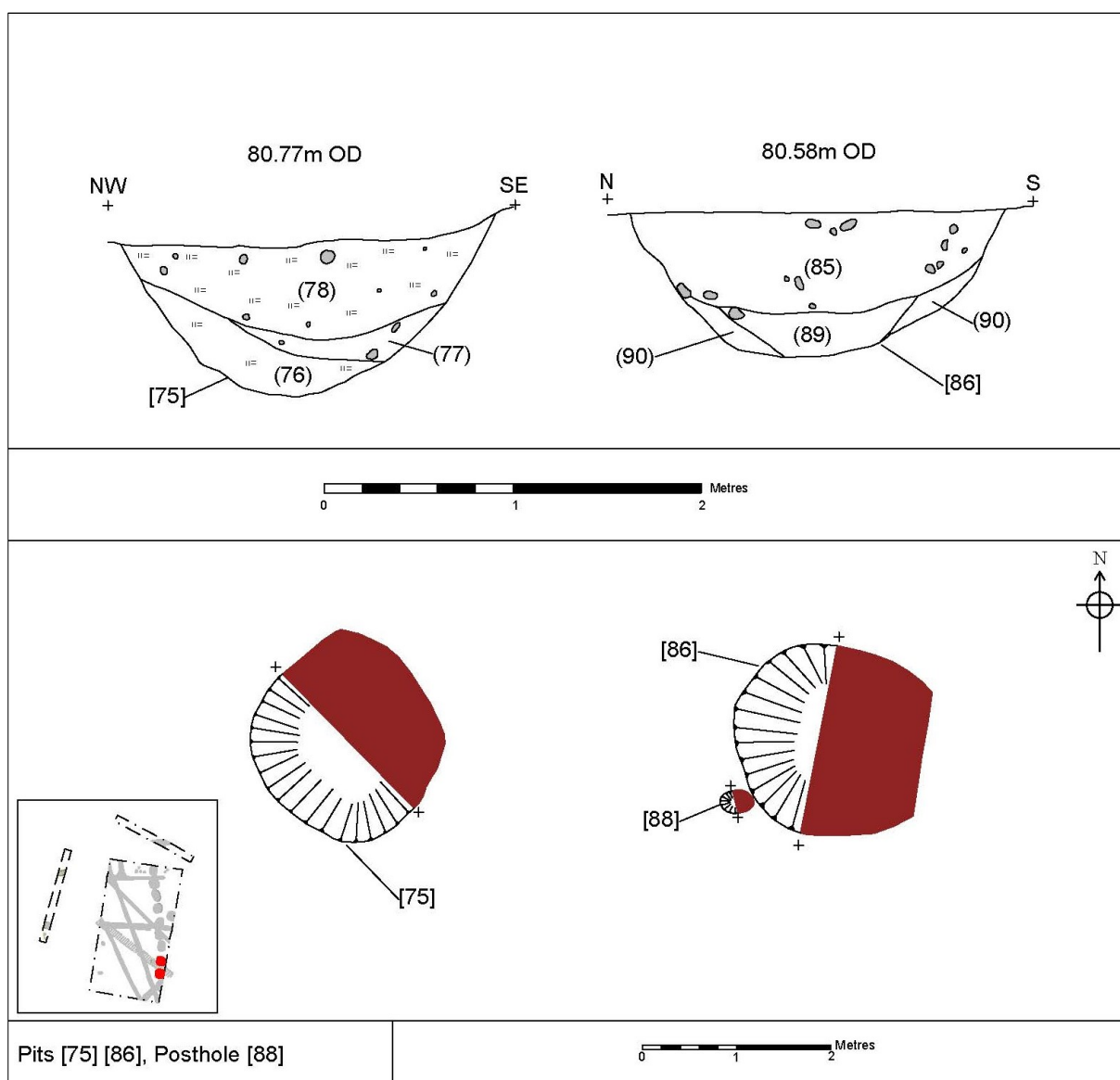


Figure 14: Pits [75] [86], section and plan, posthole [88], plan

The final pit [97] visible in the alignment to the south ran beneath the limit of excavation in the south-east corner of the site and was cut by a later north-east/south-west ditch [33] of unknown date (Figs 15-16). This pit was sub-circular with moderately sloping irregular sides and irregular base. It contained a mid/light grey silty sandy clay primary fill (98), up to *c.*0.28m deep, with a mid-grey brown silty-clay upper fill (99), *c.*0.65m deep and containing 2 secondary flint flakes of general Neolithic/Bronze Age date.



Just within the northern limit of the excavation, sub-oval Pit [28] (Fig. 17) had a width of *c.* 1.7m and length of *c.* 2.3m, corresponding to the direction of the alignment and depth of up to *c.* 0.6m. Both the base and the sides were irregular, the latter relatively steep. It was deemed to contain a single yellowish brown sandy silt fill (29), with frequent gravel and sub-rounded stones of assorted sizes but was devoid of any finds.

At less than a 1m interval to the south, the second pit identified, Pit [65] (Fig. 17) was more sub-circular with a diameter of *c.* 2.0 – *c.* 2.10m. It was *c.* 0.63m deep with straight, moderately sloping sides breaking gently to a relatively flat, central base. The fills were recorded collectively as deposits of mid-grey brown silty clay (65). No finds were recovered but it was sampled for environmental analysis (see below).

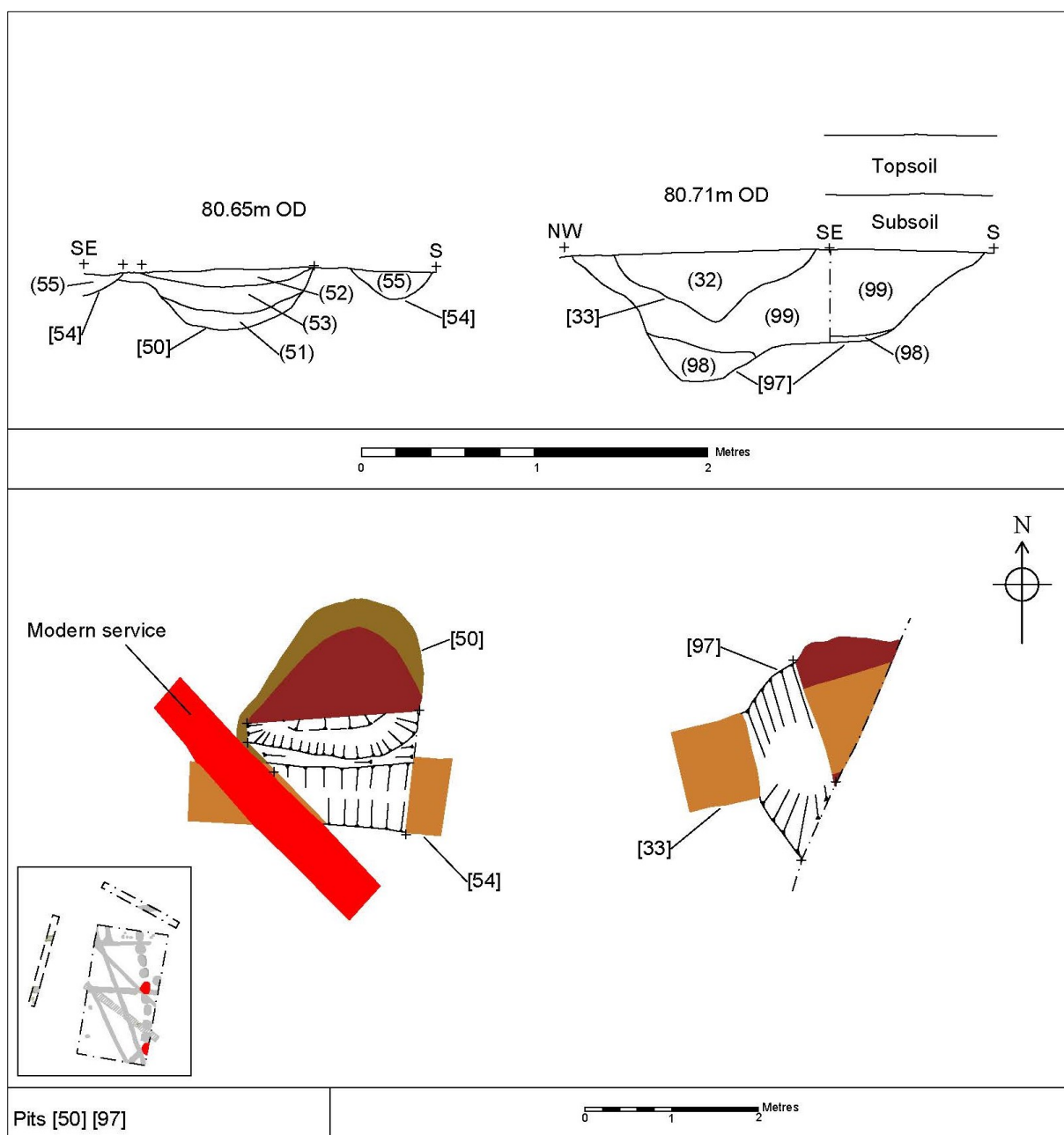


Figure 15: Pit [50] and gully [54], Pit [97] and ditch [33], intersection and plan



Figure 16: Pit [97] and ditch [33], intersection and plan, looking north-east

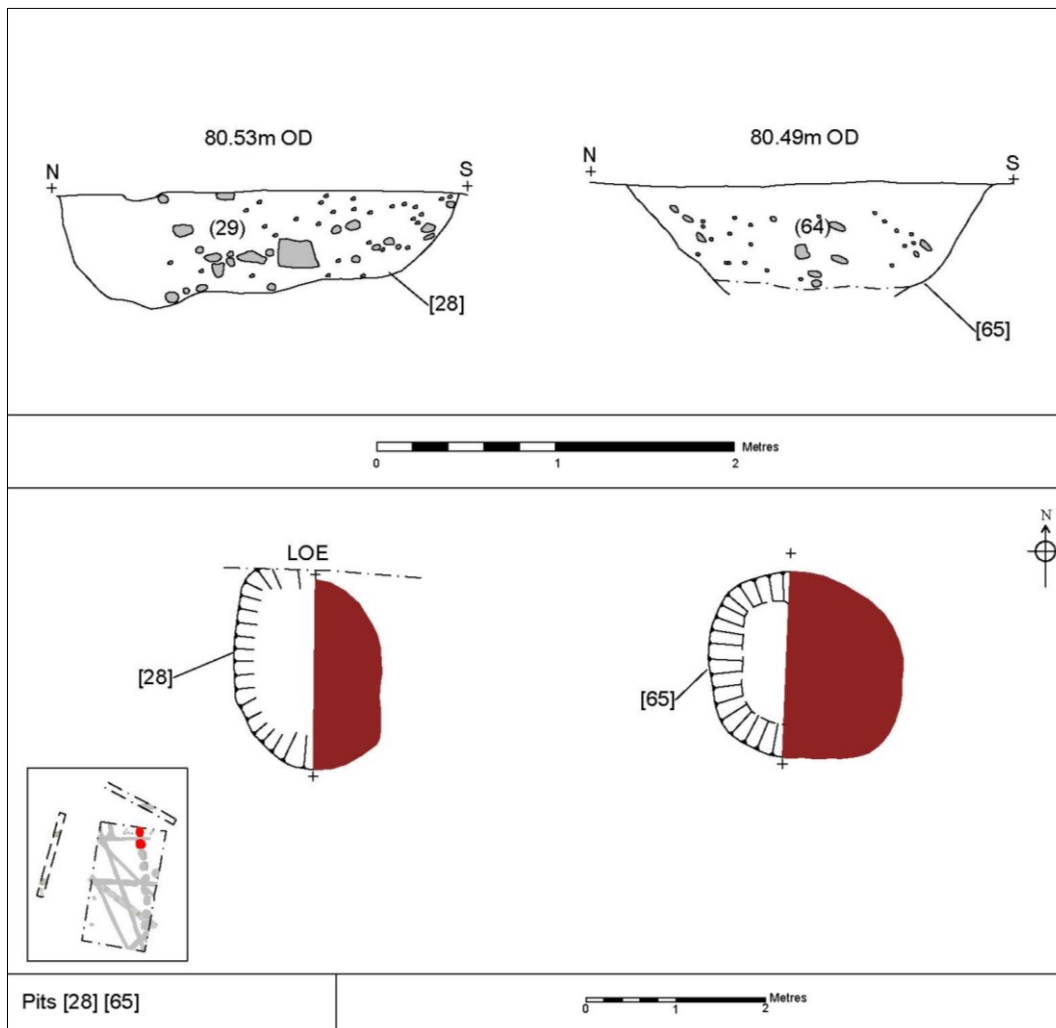


Figure 17: Pits [28] [65], section and plan

Pit [59] and [66] (Figs 18-20) were comparable in plan shape although [59], at *c.*2.81m was significantly more elongated than the latter. They were between *c.*0.75 – *c.*0.90m deep. Both pits contained the sterile mid/light greyish clayey silt primary deposit (60) (67) comparable elsewhere and of a similar thickness. Pit [66] had characteristic concave sides and central base whereas Pit [59] was of more irregular profile. The upper fills (63), (62) and (71) (72) were similar mid/dark brown grey silty clays with occasional small/medium sub-rounded stones. Fill (61), in Pit [59] was a lighter grey brown silty clay with more frequent and typically larger stones. Similar mid/dark grey and brown silty clay fills within [66] were allocated individual numbers (68), (69), (70). They were all sterile, devoid of finds, aside from (63) that yielded a single secondary flint flake, Neolithic/Bronze Age in date but possibly residual.

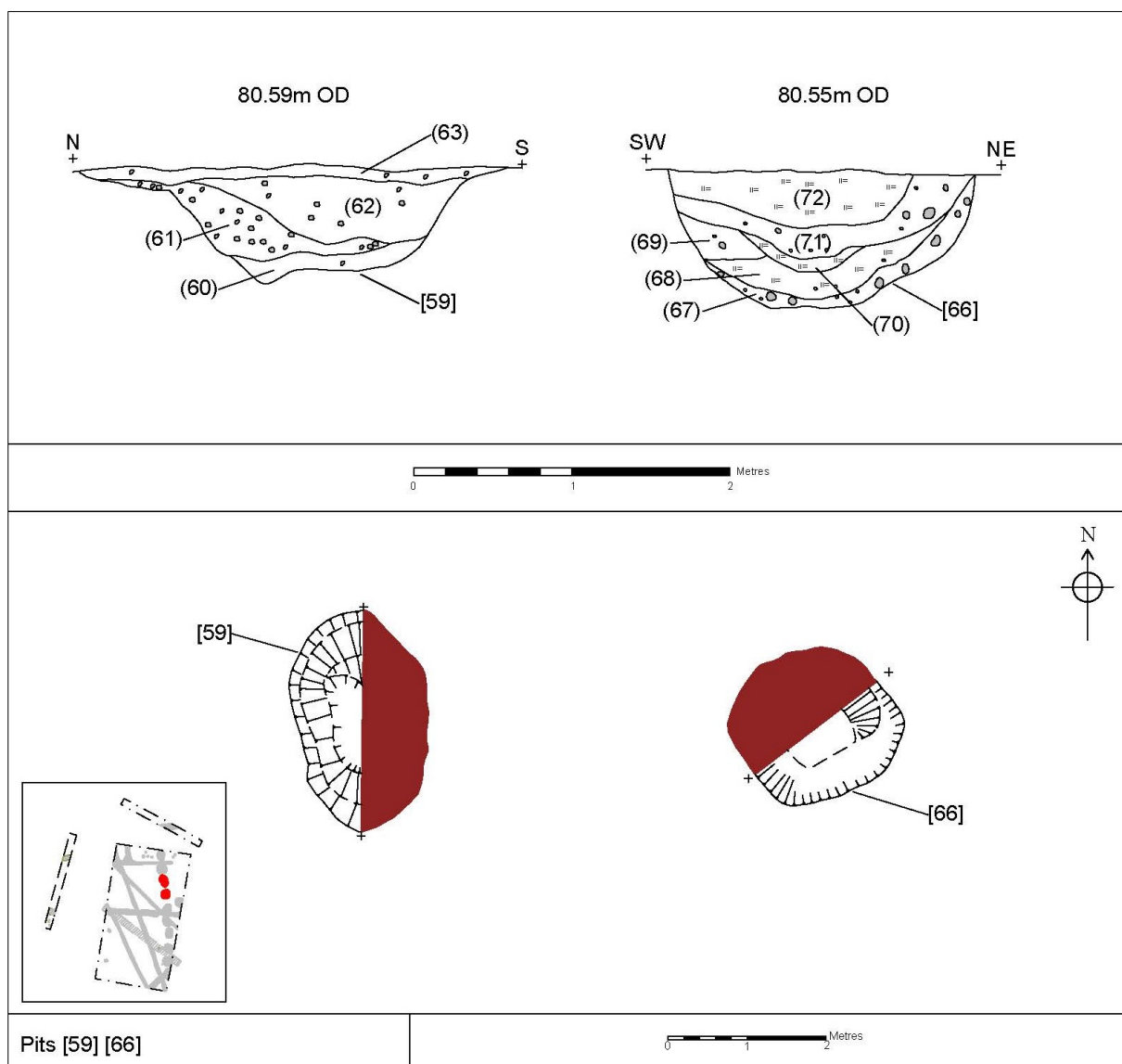


Figure 18: Pits [59] [66], section and plan





Figure 19: Pit [59], looking east



Figure 20: Pit [66], looking north-west

An outlying pit [43] (Figs 21 - 22), offset from the alignment but comparable in plan shape, profile and disposition to the other pits was recorded running beneath the eastern limit of excavation. Also sub-circular it was *c.*2.28m wide and 0.78m deep. The sides were slightly wavy, also moderately sloping and the base was central and flat. Primary and secondary fill, (44) and (45) respectively, were both mid/light orange-brown silty-sands, *c.*0.78m and *c.*0.60m deep respectively and upper fill (34), dark brown-grey silty clay, *c.*0.57m deep, and contained abraded greyware pottery dating to the 2<sup>nd</sup> century AD (see below) and a single residual secondary flint flake of Neolithic/Bronze Age date.

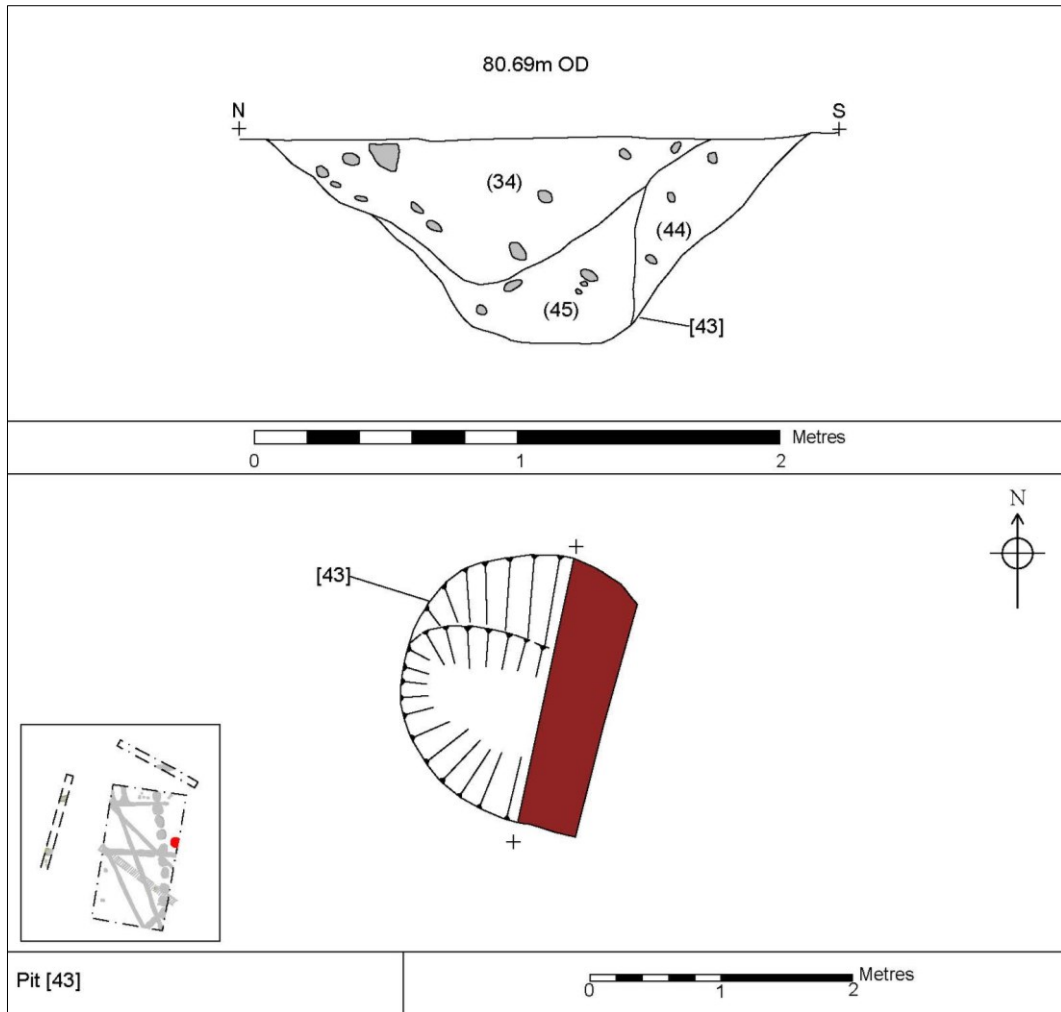


Figure 21: Pit [43], section and plan



Figure 22: Pit [43], looking south-east



The two central pits of the alignment were subject to later truncation. Pit [73] (Fig. 23) was *c.*2.69m long, *c.*1.42m wide and *c.*0.36m deep. Its north-east side was obliterated by a modern service trench traversing the site and was, as a consequence, only partially excavated. What survived of the feature in plan was concordant with the typical sub-oval plan shape and individual orientation and the excavated sides suggested a similar concavity to the other examples. The orange-brown silty-clay fill (74) was sampled for environmental remains (see below).



Figure 23: Pit [73], truncated by the modern service trench, looking north-west

Pit [50] (Fig. 24), similar in shape, size and concave profile to the rest was located at the point where and east-west gully [47]/[54]/[93] traversed the site. It contained three distinct fills. Upper fills (52) and (53), *c.*0.50m and *c.*0.15m deep respectively, were recorded as typical mid/dark orange grey-brown silty-clays with occasional sub-rounded stones and devoid of finds. The primary fill (51), a yellow brown silty sand deposit *c.*0.20m deep with grey lenses, was reminiscent of those seen elsewhere and probably evidence of natural silting taking place. The presence of the related east-west linear feature [47]/[54]/[93] was only confirmed during excavation of the pit but allowed a small section of the backfill to be left in-situ and enabling the stratigraphic relationship - the linear being the later feature - to be recorded.





Figure 24: Pit [50], looking north-east

### *Gully [33]*

This feature running north-east to south-west, truncated the last pit [97] of the pit alignment in the far south-east corner of the excavation area (Fig. 25). It was linear in plan, *c.*0.98m wide and up to *c.*0.30m deep. The gully had moderately sloping sides with a concave base and the fill (32), a dark grey-brown silty-clay contained a worked flint core of general Neolithic/Bronze Age date. It was sampled for environmental analysis (see below). The stratigraphical relationship with pit [97] was apparent on the surface and was confirmed by sample excavation. It was also cut by later ditch [36].

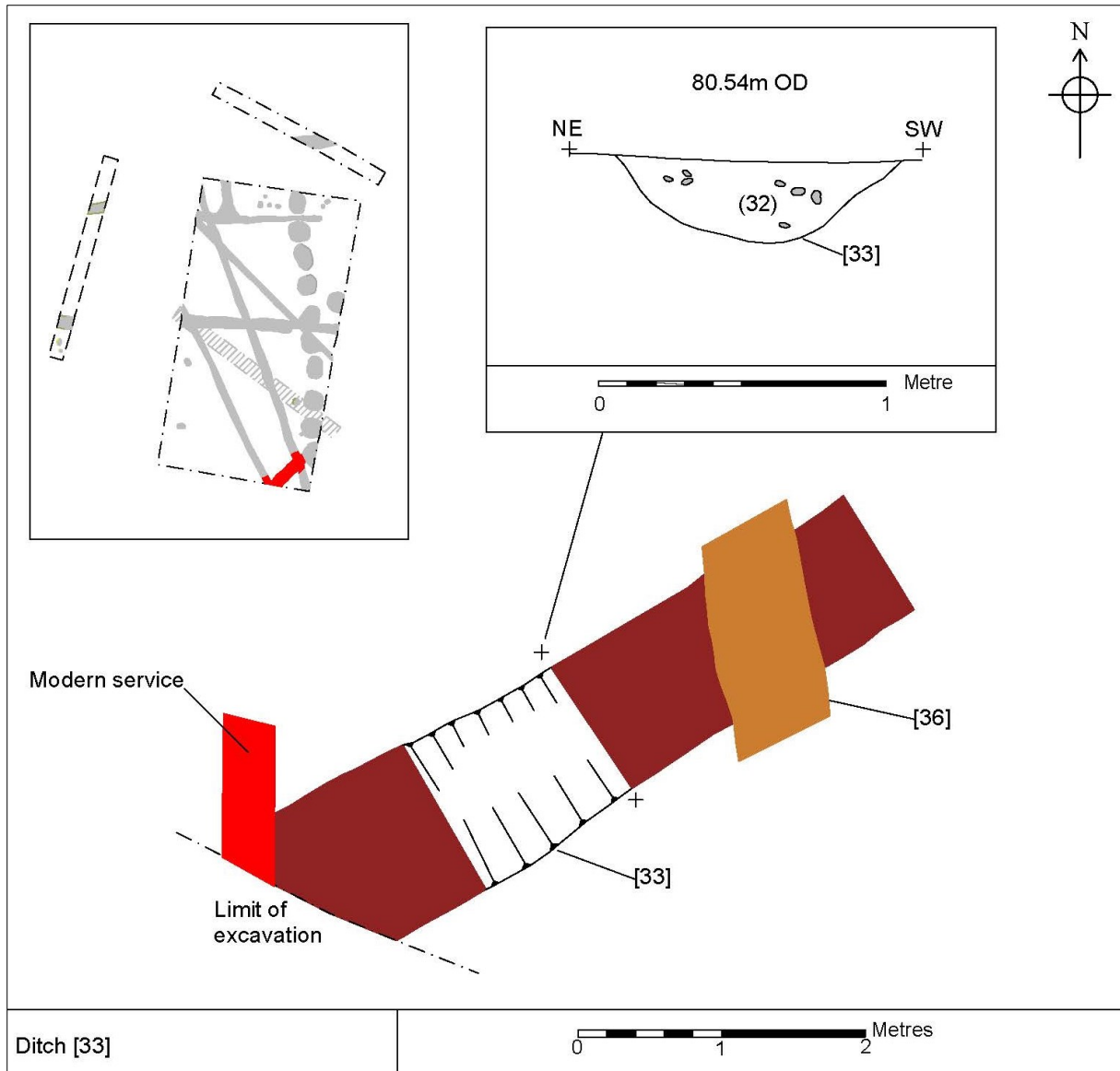


Figure 25: Ditch [33], section and plan

### Gullies [27] [95], [47] [93]

Two inter-related gullies traversed the centre of the site together (Fig. 26). Neither of these features yielded any datable evidence.

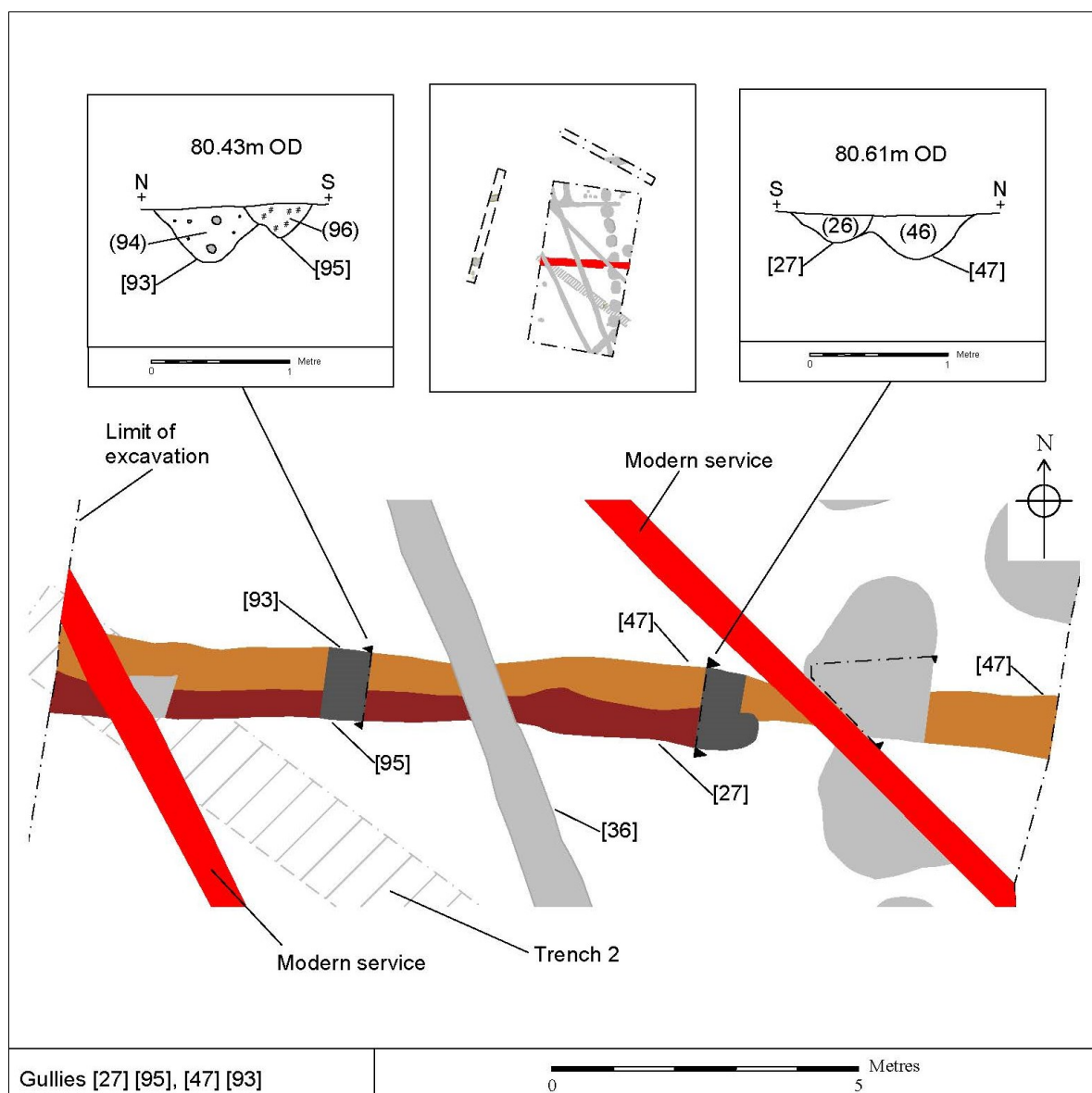


Figure 26: Gully [27] and [47]/[54], section and plan

Gully [27] [95] was investigated at in a total of 5 slots, initially in Trench 2 [11] and Trench 3 [06] (Figs 7 & 9), at its terminus, to determine its relationship with pit [50] and its relationship with gully [47]/[54]/[93].

Between *c.*0.32 – *c.*0.40m deep and *c.*0.74 – *c.*0.80m wide the excavated slots describe a linear feature [47] [93] with moderately sloping sides merging and a ‘U-shaped’ base. This gully is post-dated/re-cut by gully [27] [95] (Fig. 27) and may be a possible recut feature. The fills (46) (94) described a mid-orange-brown silty-clay, devoid of datable finds, although a trace of some crushed fragmentary bone was recorded from (94). This feature spans the whole breadth of the excavation area.



At its terminus, gully [27] had straight sides and a relatively narrow concave base. The feature was between *c.*0.49 – 0.66m wide and *c.*0.23m deep. It contained a single dark brown-grey silty-clay fill (26) (96), containing charcoal flecks with no finds. It was sampled for environmental analysis.



Figure 27: Gully terminus [27] and gully [47], looking west

*'T-shaped' gully junction [37] [41] [49] [81]*

Located in the north of the excavation area was a series of linear forming a 'T-shaped' junction. These were investigated along their lengths and at the intersection with each other and, where applicable, at the terminus. The absence of any definitive relationship in section between them suggests they are contemporary (Fig 28).

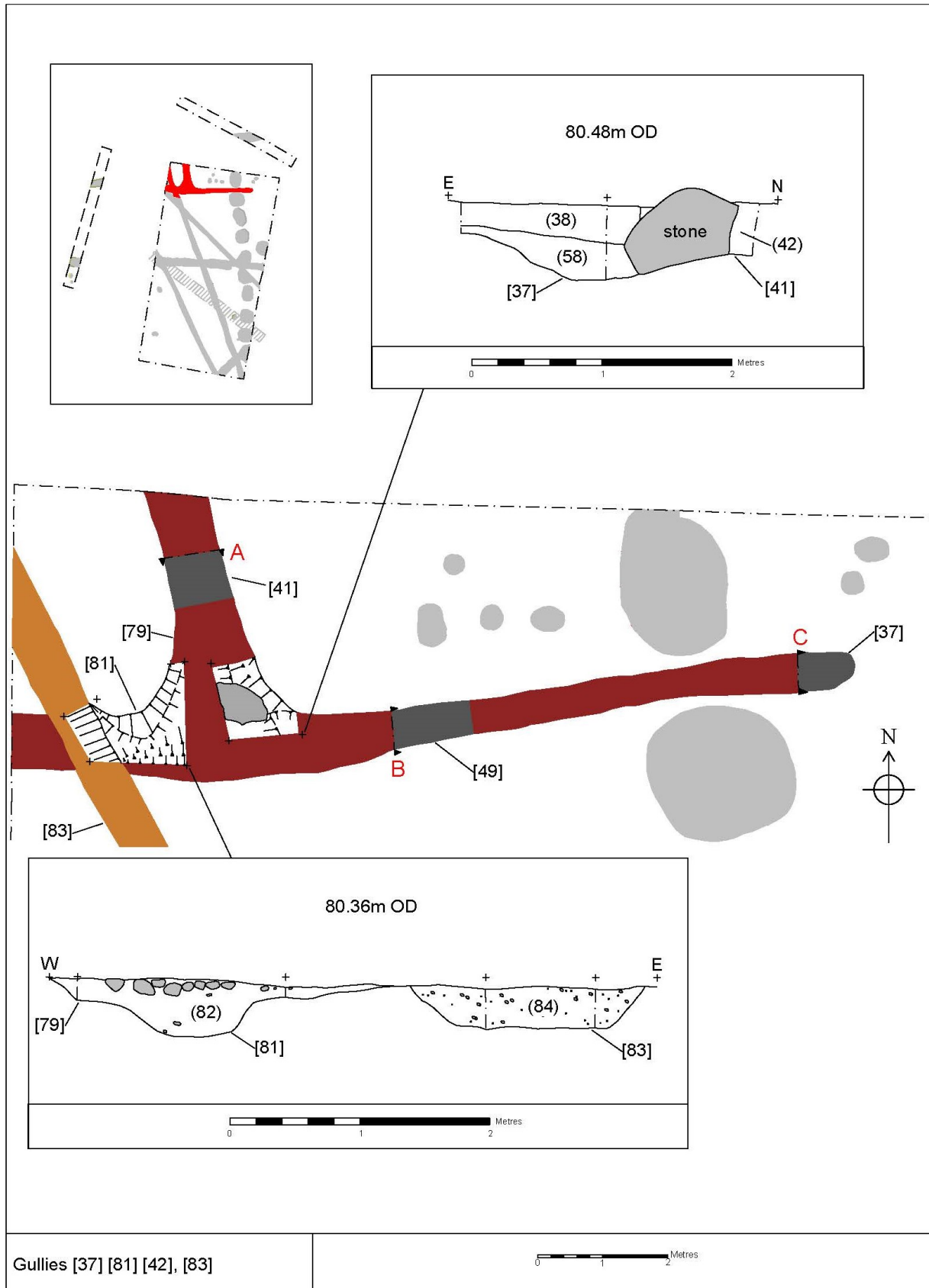


Figure 28: Gullies [37] [81] [42] [83], intersection and plan



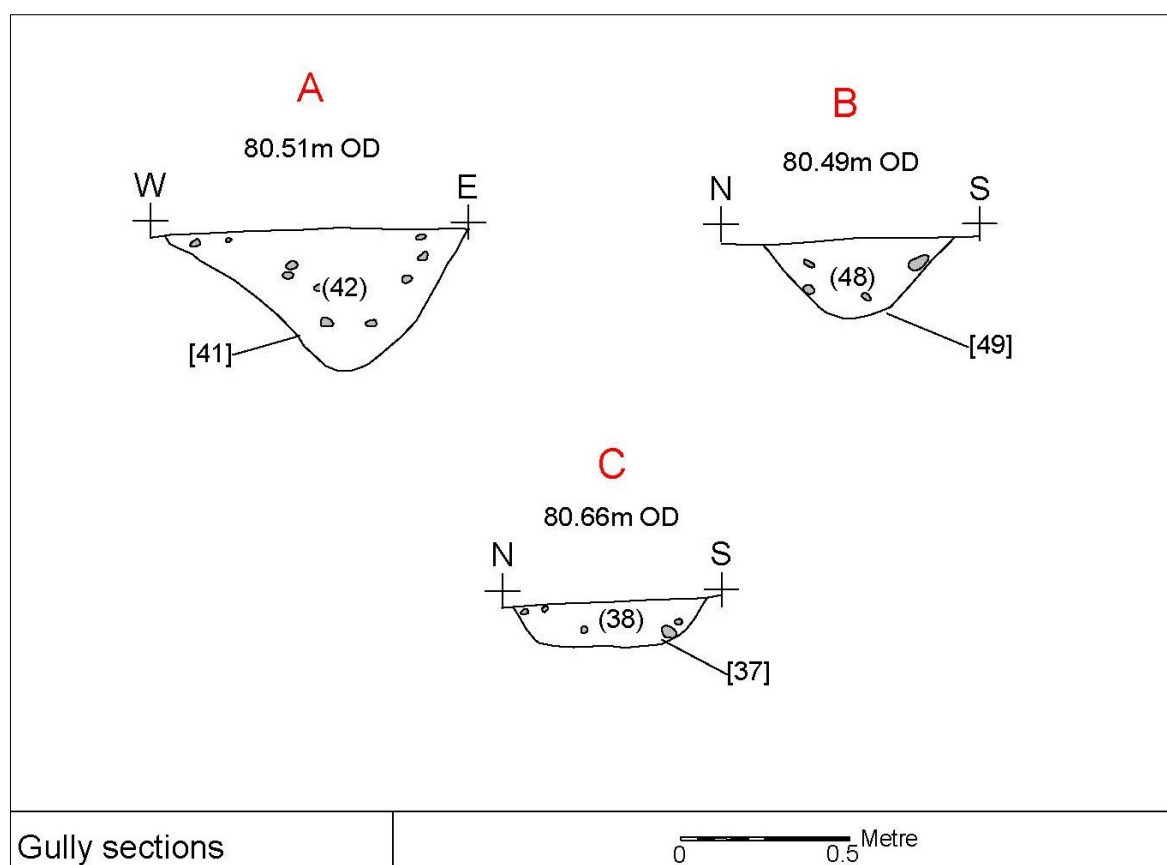


Figure 29: Gullies [37] [41] [49], sections

Linear feature [37] [49] was *c.*0.14m deep at its terminus (Figs 28 – 29; C) and up to *c.*0.23m along its length. It ran east-west across the site for approximately 13m, terminating *c.*3.66m from the eastern limit of excavation and was between *c.*0.43 – *c.*0.87m wide. At each point of investigation the sides were observed to be straight with a moderate slope and along its length the base was concave and flatter at the terminus. A primary fill (58) was recorded at the intersection with linear [41]; this was a mid-orange brown silty-clay. The main fill (38) (48), observed in all slots, was mid/dark brownish grey silty-clay with sub-rounded stones. Fill (48) (B) (Fig. 29) yielded grey ware pottery dated to the 2<sup>nd</sup> century AD (see below) and was sampled for environmental analysis (see below). The feature appeared to continue beneath the western baulk. It was truncated by later ditch [36], a relationship clear in plan but reiterated by sample excavation.

Linear [41] [81], interpreted as a ditch, was recorded as the north-south protrusion of this complex of linear running *c.*3.4m and beneath the northern baulk of the excavation area. Ditch [41] (Figs 28 – 29; A) was *c.*0.92m across and *c.*0.40m deep, with sloping sides and a relatively narrow, concave base. The profile was difficult to determine in the intersection with [37] to the south. The single fill (42) was a mid/dark brownish-grey silty-clay, comparable to (38). It was devoid of any pottery but contained a flint subject to retouched shatter and of general Neolithic/Bronze Age date. Fill (82) was a similar dark grey-brown silty-clay which contained a significant number of large rounded granite cobbles. Possibly associated with these and at the junction of the two features was located a very large sub-rounded granite boulder (Fig. 30). It was impossible to determine which deposit this was from, further evidence, perhaps, for contemporaneity.



Figure 30: Gullies [37] [41], looking north

*Discrete features associated with northern gully [16] [18] [20] [22] [24] [30]*

A series of discrete features were proximal to the east-west gully junction in the north-west corner of the site. These were all sample excavated and although logic would tempt the suggestion they are related and structural, the absence of any dating or evidence from the wider area makes this conjecture. The discrete features identified were in two tentative groups located either side of pit [28] (Figs 31-32).

In the first group, circular posthole [16] had a diameter of *c.*0.30m and depth of *c.*0.12m with ‘U-shaped’ sides, moderate/steep sides and a slightly concave base. There was a single mid-yellow brown sandy-silt fill (17). Oval pit [18] had irregular sides with shallow slopes and a flat base. It was *c.*0.64m in length, *c.*0.40m wide and between 0.05-0.09m deep. It contained a single yellow-brown silty-clay fill (19). Posthole [20], circular in plan had a depth of *c.*0.07m and diameter of *c.*0.30m. It contained a single fill (21), mid/dark yellowish-brown sandy-silt. Circular posthole [22], with a diameter of *c.*0.2m and depth of *c.*0.15m had sloping sides, and a rounded central base. The fill was a similar sandy silt (22).

To the east of the pit alignment, sub-circular posthole [24], with a length of *c.*0.50m, a width of *c.*0.38m and depth of *c.*0.10m had a single dark yellow-brown sandy-silty fill (25). To the

south-west, another slightly elongated posthole [30], with a length of *c.*0.38m and depth of *c.*0.17m contained a lighter yellowish-brown sandy-silt fill (31) (Fig. 32).

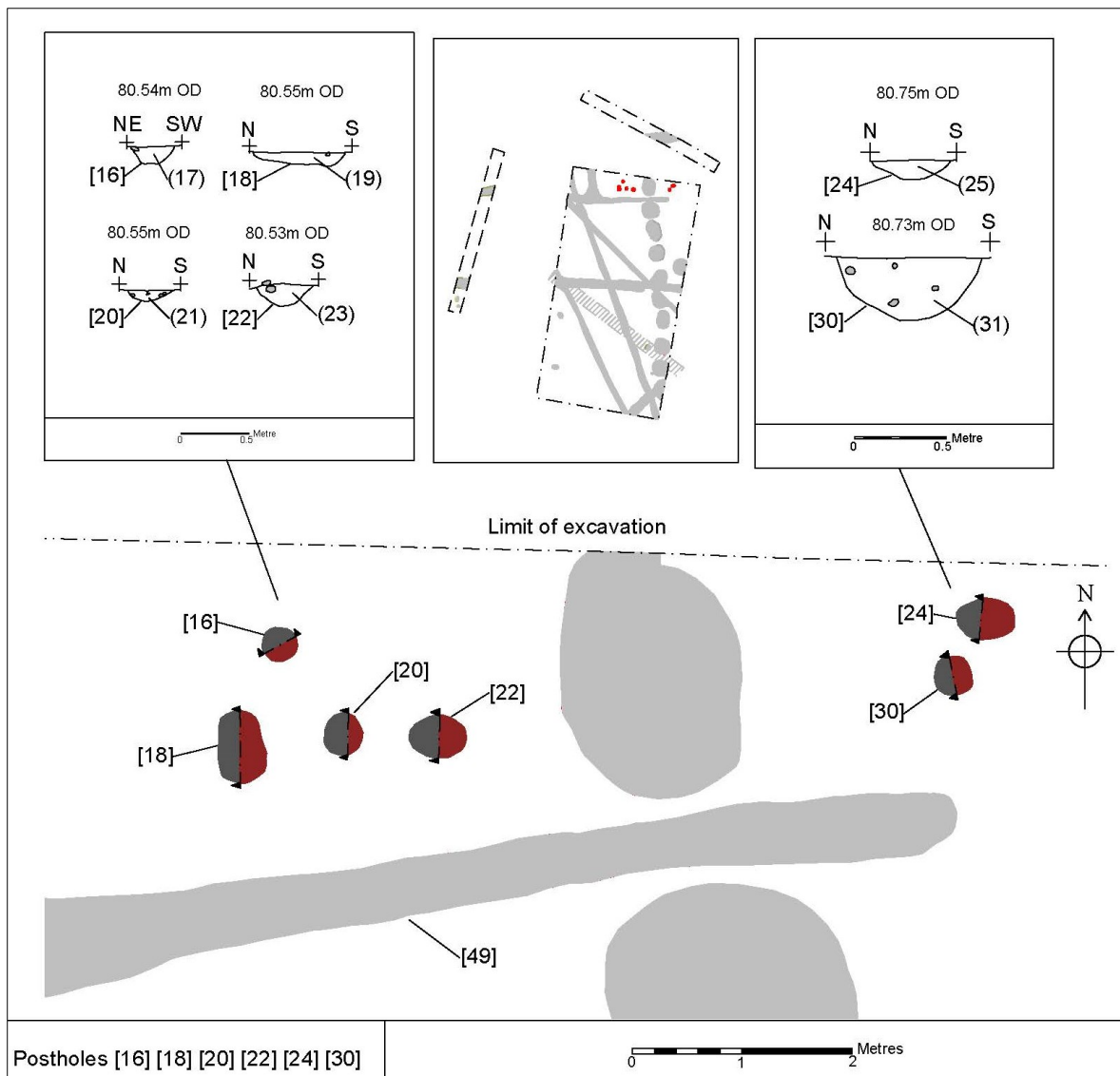


Figure 31: Postholes, north of site, section and plan





Figure 32: Postholes [30] and [24] (top), looking south-east

*Other discrete features [40] [88] [92]*

Three other discrete features were identified and recorded within the excavated area although it is hard to determine their association with the other features or to speculate upon their wider function (Fig. 33).

On the south-west edge of Pit [86] a small sub-circular posthole [88] was identified, *c.*0.25m in diameter and *c.*0.20m deep, with steep, straight sides and a concave base. The fill was a mid/dark grey-brown silty-clay fill (87) with no finds.

Approximately 4m from the south-west corner of the site, sub-circular pit [40] contained a mid/dark grey-brown silty-clay fill (39). This was also devoid of finds but was sampled for environmental analysis (see below). The pit was *c.*0.82m wide and *c.*0.20m deep, with straight sides and flat base.

Sub-circular pit [92] was *c.*0.75m long and *c.*0.60m wide with shallow sloping sides and a concave base. The fill (91) was *c.*0.11m deep, consisted of mid-grey brown silty clay and had no finds.



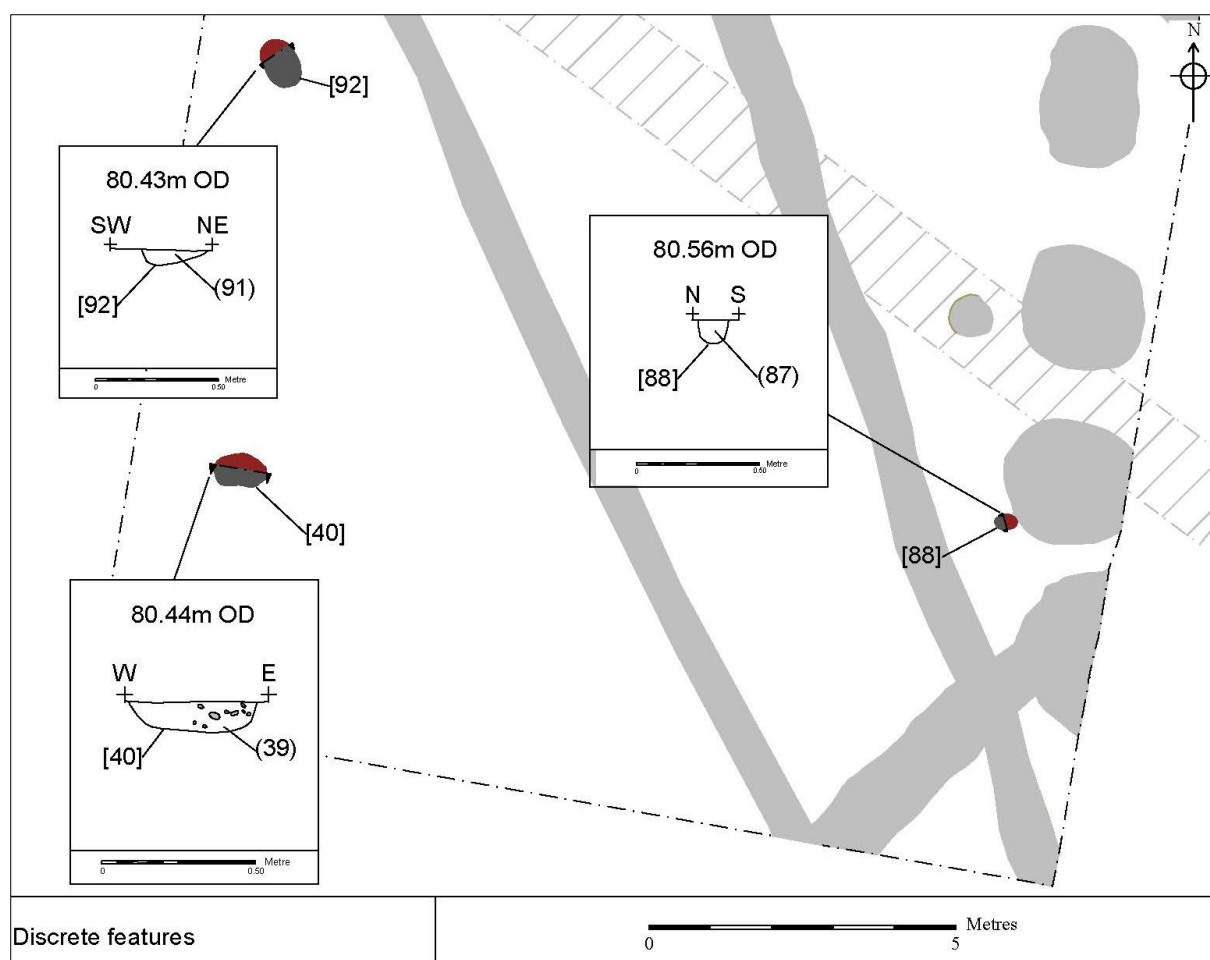


Figure 33: Discrete features, section and plan

Ditch [36] (**Error! Reference source not found.**,*Figure 34)*

Ditch [36] [03] was *c.*34m+ in length and traversed the site diagonally from the north-west to the south-east corner. It was apparent from its plan and confirmed through excavation that this feature was the latest phase of archaeological activity, post-dating the east-west gullies (A) in the north and ditch [33] in the south-east corner (Figs 34 - 35). It was also truncated by both modern service trenches. The Potters Marston medieval pottery it yielded, albeit nominal, points to a date for this feature between 1100 and 1300 AD. It was initially identified and investigated in Trench 2 [02] (C) during the evaluation stage of the work.

Ditch [36] had straight sides, sloping moderately with a concave base and was *c.*0.90m wide where investigated along its length (Fig. 35, B) in the excavation, with, at *c.*0.37m, a marginally greater depth and width than the evaluation slot (C). The fill (35) (04) was a mid-brown grey silt- clay, consistent in both slots.

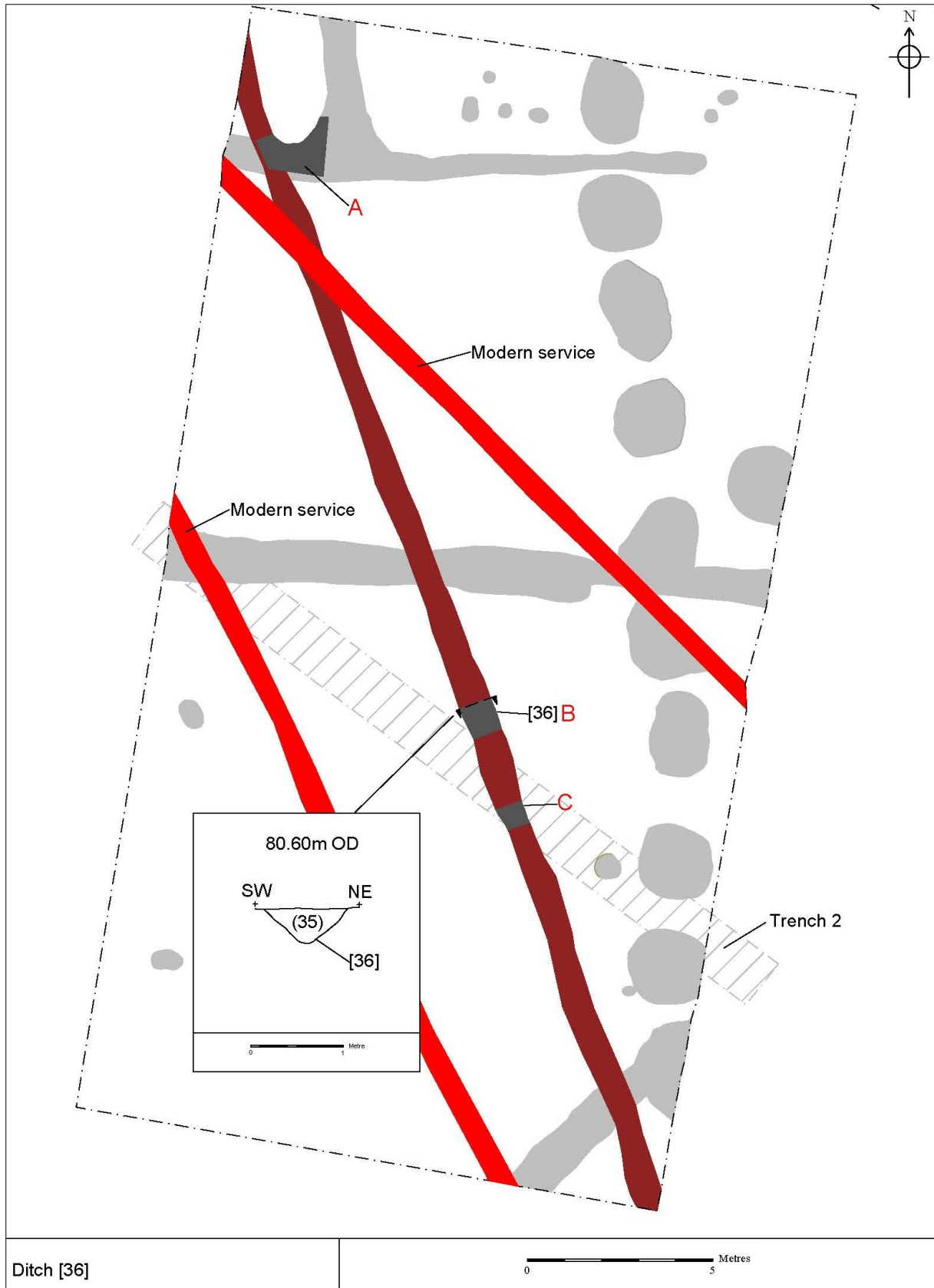


Figure 34: Ditch [36], section and plan



Figure 35: Ditch [36], looking north-west

## **Iron Age, Roman and Medieval Pottery and Iron Age Fired Clay - *Nicholas J. Cooper***

### ***Iron Age pottery and fired clay***

Two joining sherds (12g) from the base of a jar manufactured in a quartz sand-tempered fabric (Leicestershire Prehistoric Fabric Q1 Marsden 2011, 62, Table 1) and with a lightly burnished external surface, was recovered from context (5). This context also contained seven amorphous fragments of fired clay (130g) probably deriving from wattle and daub buildings in the vicinity that had been destroyed by fire.

### ***Roman Pottery***

Two abraded sherds of grey ware pottery (20g) were recovered singly from context (34) and (48) [49]. They both derive from jars manufactured in a medium sandy grey ware (Leics. Roman fabric GW5, Pollard 1994, 110) and probably date to the second century AD.

### ***Medieval Pottery***

Two abraded sherds of Potters Marston medieval pottery were recovered from context (35) [36] (Leics. Medieval fabric PM, Davies and Sawday 1999, 166, Table 30), dating between 1100 and 1300 AD.



## The charred plant remains - *Rachel Small*

### Introduction

This report presents the study of the charred plant remains recovered during a strip, map and sample excavation at Thomas Estley Community College, Broughton Astley. Nine samples were processed and came from pit fills thought to be prehistoric in date and gullies and ditches thought to be Roman in date (secure dating was only achieved for sample 6 which was Roman). The recovery and study of plant remains, which may include cereal grains, chaff, and weed seeds, provides important evidence for past food production, consumption, agricultural practices and environment.

### Method

One part of each sample was processed in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve. The flotation fractions (flots) were transferred into plastic boxes and left to air dry; they were then sorted for plant remains using a x10-40 stereo microscope. The residues were also air dried and the fractions over 4mm sorted for all finds. The fractions below 4mm were scanned for artefacts and the abundance of the remains was recorded. Plant remains were identified by comparison to modern reference material available at ULAS and names follow Stace (1991). Quantification followed Van der Veen (1992, 25): for grains only the embryo was counted; for chaff, each rachis internode and glume base was counted as one; and weed seeds were counted as one, even when broken, with the exception of large weed seed fragments that clearly represented parts of the same.

### Results

Four pit fills were sampled and only one contained charred plant remains – sample 4 (39). This sample contained a glume wheat grain (*Triticum* spp.), a barley grain (*Hordeum vulgare* L.) and an indeterminate cereal grain.

Sample 2 (26) from a gully, contained possible bread wheat type grains (*Triticum aestivum/turgidum* L.), a fragment of possible rye rachis (*Secale cereale* L.), and probable oat grains (*Avena* spp.), along with other specimens (see Table 3). These species are typical of later dating assemblages (Saxon period onwards) rather than the Roman era.

The remaining samples from gullies and ditches all contained charred plant remains (table 1) typical of the Roman period. Glume wheat grains, barley grains and indeterminate cereal grains were present. Two glume bases, most likely of spelt wheat (*Triticum spelta* L.) were present in sample 3 (32). Weed seeds typical of areas of arable and disturbed land were present and included stinking mayweed (*Anthemis cotula* L.), goosefoot (*Chenopodium* spp.) and dock (*Rumex* spp.). Other seeds present included large grass (Poaceae) and vetch (*Vicia* spp.).

On the whole the plant remains were not well preserved as they were abraded and fragmentary. Modern seeds and rootlets were present in all flots along with earthworm egg shell capsules suggesting bioturbation within the contexts.

Table 3: charred plant remains present in samples. *Key: + is rare (approximately zero to ten items); ++ is common (approximately ten to fifty items); +++ is abundant (approximately fifty plus items).*

| Sample | Context | Feature description | Date     | Sample volume (l) | Flot volume (ml) | Grain | Chaff | Seeds | Charcoal | Notes   |
|--------|---------|---------------------|----------|-------------------|------------------|-------|-------|-------|----------|---|
| 2      | 26      | Gully               | Un-dated | 10                | 15               | +     | +     | +     | +        | 4 x barley grain, 5 x cf. bread wheat type grain, 18 x cereal grain, 1 x cf. rye rachis, 21 x large grass seed/oat, 1 x vetch.<br>Total 50, equivalent to 5 items per litre.  |
| 3      | 32      | Ditch               | Un-dated | 10                | 10               | +     | +     | +     | +        | 2 x glume wheat grain, 3 x barley grain, 9 x cereal grain, 2 x glume base, 6 x large grass seed, 1 x stinking mayweed.<br>Total 23, equivalent to 2.3 items per litre.        |
| 4      | 39      | Pit                 | Un-dated | 9                 | 5                | +     |       |       | +        | 1 x glume wheat grain, 1 x barley grain, 1 x cereal grain.<br>Total 3, equivalent to 0.3 items per litre.   |
| 5      | 46      | Gully               | Un-dated | 10                | 5                | +     |       |       | +        | 1 x cereal grain/large grass seed.<br>Total 1, equivalent to 0.1 items per litre.   |
| 6      | 48      | Gully               | Roman    | 10                | 5                | +     |       | +     | +        | 1 x barley grain; 4 x cereal grain; 1 x large grass seed; 1 x vetch seed; 1 x goosefoot; 1 x dock; and, 2 x stinking mayweed.<br>Total 11, equivalent to 1.1 items per litre. |
| 7      | 57      | Pit                 | Un-dated | 10                | 20               |       |       |       |          | No plant remains.   |
| 8      | 42      | Ditch               | Un-dated | 10                | 10               | +     |       | +     | +        | 2 x barley grain; 9 x cereal grain; 3 x large grass seed; 4 x goosefoot; 2 x dock; and, 3 x stinking mayweed.<br>Total 24, equivalent to 2.4 items per litre.                 |
| 9      | 74      | Pit                 | Un-dated | 10                | 2                |       |       |       | +        | No plant remains.   |
| 10     | 67      | Pit                 | Un-dated | 10                | 5                |       |       |       | +        | No plant remains.   |

## Discussion

The remains are typical of waste from preparation and consumption of barley and glume wheats (most likely spelt) in the Iron Age and Roman periods. The remains, compared to other sites in the region, are low in density (containing 0 – 5 items per litre) (Monckton 2011, 134). It was concluded that sample 2 (26) from which possible bread wheat type grains, rye rachis and oats were recovered most likely dates to a later period.

## Recommendations for further work

No further work is necessary on the samples that have been considered. If further excavation is carried out at the site or in the vicinity it is suggested that a suitable environmental sampling strategy is implemented. With further remains from samples which are securely dated, there is the potential for changes over time in diet, agricultural practice and environment at the site (from the Iron Age to Post-medieval period) to be understood.

## **Discussion**

### *Pit Alignment*

The well preserved albeit poorly dated stretch of pit alignment at Thomas Estley Community Collage indicates the existence of boundary demarcation in the vicinity. These features are often one of the earliest landscape features of the 1<sup>st</sup> millennium BC and are a fairly ubiquitous feature in the later prehistoric period (Thomas 2008, 144, Willis 2006, 122). Their origin may lie in the late Bronze Age/early Iron Age (Hingley 1989) and they are commonly associated with the development of field systems and track ways and a movement away from a more ‘open’ landscape to a parcelled and secularized one (Thomas 2011).

The Thomas Estley pit alignment is not untypical of other examples found in the Midlands. The pits in the monument at Lockington Quarry, where over 40 individual features were identified, were more rectangular in plan shape but of comparable dimensions (typically c.0.84m deep, c.1.80m diameter) and displayed evidence for re-cutting. The higher number of pits in this example also produced a proportionally greater number of finds (10 sherds of Iron Age pottery) and the upper fills produced pottery from both the late 1<sup>st</sup> and occasionally the 2<sup>nd</sup> century AD (Thomas 2011). On the whole however, pit alignments, like the example here, are generally lacking in finds; the only pit deposit dated here being Roman and from an outlying and possibly unrelated pit. The nature and proposed purposes of the monuments mean they are often located at a distance from the focus of any settlement. If objects are recovered it has been suggested that these are “special deposits”, although this is not supported by the Thomas Estley example. Hingley asserts that the plan shape of pits may change over time (Hingley 1989), those more sub-rectangular representing an earlier Bronze Age and sub-circular a later Iron Age date. Approximately 500m north-east of the Thomas Estley site a relatively isolated Iron Age enclosure site has recently been excavated (Fig. 36), including evidence of structural remains and possible livestock pens (Higgins, forthcoming), proximal to where a projection of the alignment would head. It is not inconceivable that the pit alignment monument was associated with this activity.

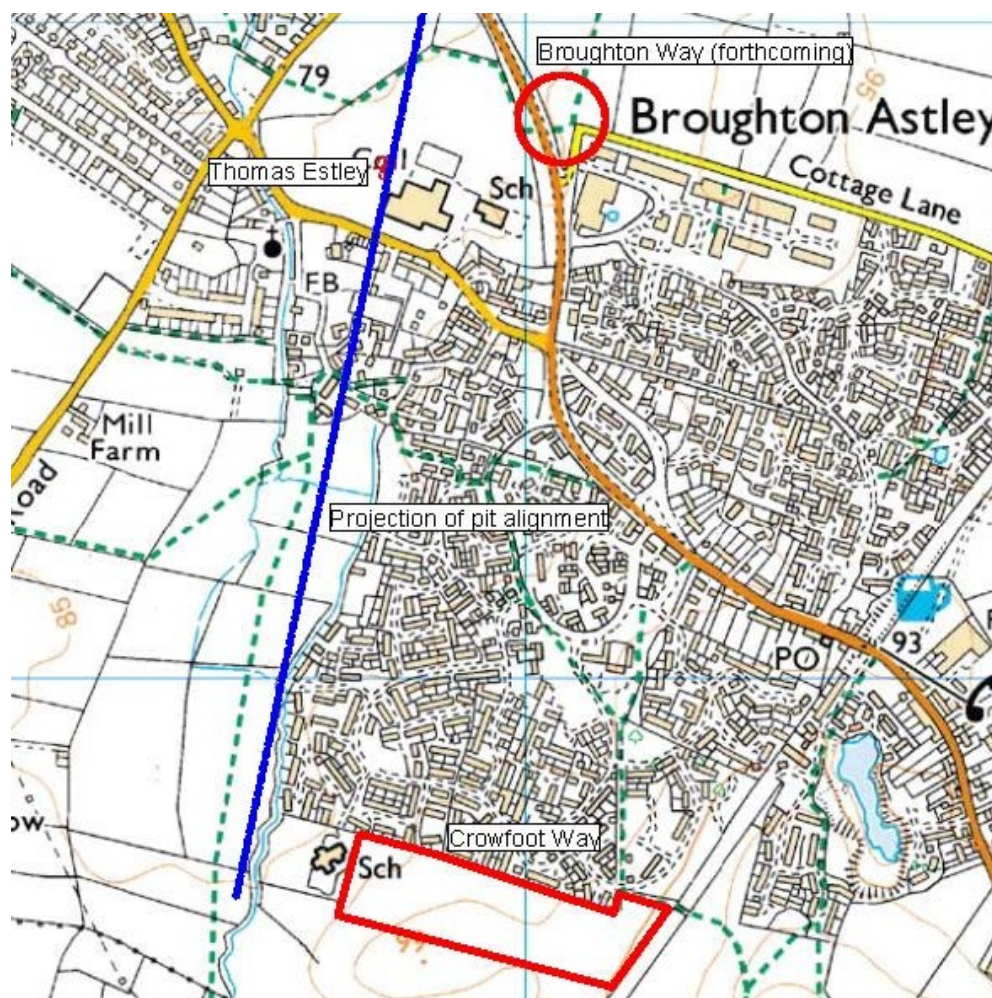


Figure 36: Nearby sites in relation to the College and the projected pit alignment.

It has been suggested that pits are aligned in respect of natural geological or topographical features in the nearby landscape (Rylett and Berran 2007, Thomas 2008) and even to define the areas next to streams or watercourses, particularly at right-angles to them (Hingley 1989, Thomas 203, 83-84). The alignment here is approximately 220m to the east of a stream meandering north – south through present day Broughton Astley albeit parallel to it, providing tentative support for this. Approximately 1km south of the site recent excavations, c.250m east of the same stream, at Crowfoot Way, Broughton Astley have revealed mid/late Iron Age settlement including enclosures and roundhouses (MOLA, Clarke, 2014) and it has been suggested elsewhere (Thomas 2011) that pit alignments can act as a “spine” for subsequent linear arrangements of roundhouse and enclosures.

There are many other typical mid/late Iron Age sites identified and recorded on the clay geology of the Midlands nearby, notably the large sites of Enderby (Clay 2004), 13 miles north-east and Humberstone, east of Leicester (Thomas 2011) along with smaller representative sites such as at Market Harborough (Clarke 2010), 15 miles to the south-east, where two enclosure were linked by a trackway. With the shortage of datable material finds from the Thomas Estley Community College site it remains conjecture as to whether these other sites were contemporary with or part of the wider landscape in the mid/late Iron Age.



### *Water Meadows*

One of the only reasonably well dated features on the site was the straight diagonal medieval ditch running between the north-east and the south-east corner. Evidence for ridge and furrow suggests that, where surviving, this would have been on a north-south orientation but it appears that plough truncation and/or levelling has removed all trace of earthworks from the site. A series of aerial photographs of the area immediately north of the site show clear linear cropmarks (

Figure 37) running parallel to each other, curving slightly and linked by shorter perpendicular internal dividing linear cropmarks. These disappear at the hedgerow boundary, probably a result of ploughing or levelling of the lands in the next field. It has been suggested (Clarke, pers comm) that these may represent the remains of, albeit small scale and if so, notably early, water meadow gullies/gutters. These represent part of a commonly used agricultural technique, with origins in the medieval period but a relative heyday in the post-medieval period, particularly in the southern chalkland counties of England including Wessex, Norfolk and Dorset and evident elsewhere in Europe. They are less well known in the geologically unsuitable and colder areas of northern England but are known to have been constructed in the Midlands with nearby examples identified in Warwickshire (Cook et al 2003, 155-62). The orientation of the cropmarks could conceivably correspond with that of the diagonal ditch recorded in the excavation (Fig. 38) although the exact position of them in the ground is difficult to determine without further investigation.



Figure 37: Cropmarks, aerial photograph, looking north-west

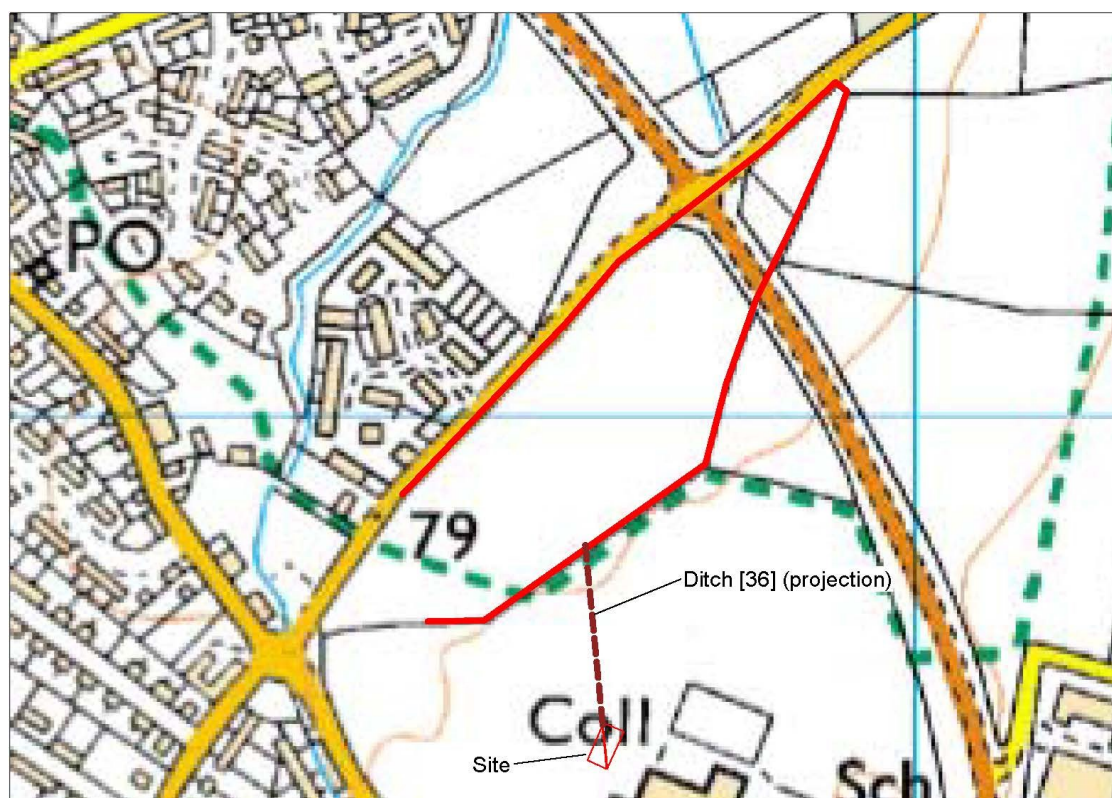


Figure 38: Projection of water meadow "gutter"

Water meadows are an agricultural system of irrigating grasslands, usually beside a river, stream or watercourse, and sometimes referred to as “floating”, to encourage and facilitate the growth of lush grazing and/or a rich hay crop. It typically involves variations on the process of digging a series parallel channels usually upon and along ridges to allow water to flow along them and thereafter down the sides and steadily through the grass depositing nutrients. From its origins in the medieval period, possibly as early as the 12<sup>th</sup> century, through the probably economically induced heyday of the 17<sup>th</sup> and 18<sup>th</sup> century AD, they declined from the 19<sup>th</sup> century AD onwards in the face of foreign grain imports, new grass strains and developments in fertilizers, the technique being abandoned by the 1960’s. The layout and survival of these scantily studied features depended upon the date of construction, land ownership, tenancy arrangements, space and topography and the archaeological remains can be of the infrastructure to regulate the water or the remains of the channels or gutter themselves (English Heritage. 2013). A stream meanders north-south through the present day village of Broughton Astley as near as *c.*220m to the west of the site, a pre-requisite for the irrigation system. The system was also associated with manors and estate and water mills, often the same raised water being used for both features. A water mill is described on the 1<sup>st</sup> edition OS map of Broughton Astley *c.*200m south-east of the excavation area.

#### *Other features*

The other features identified in the evaluation and subsequent excavation are less easy to interpret. It is likely that they represent the remains of agricultural activity on the periphery of what was the core of the village of Broughton Astley; the exact nature or function of which remains conjecture. The site is proximal to the core of the village; the church lies *c.*220m to the south-west, the White Horse Inn, on a raised platform, a possibly ‘moated’ site, *c.*260m to

the west, a three-sided moat exists to the west of the rectory in the vicinity of the church and the corn mill and millpond mentioned above is alluded to in the Domesday Book. The concentration of archaeology on the site, intercutting and of apparent differing phases, the recovery of fired clay from potentially from a wattle and daub building in the vicinity, clearly reflects the presence of occupational activity nearby and presumably agricultural activity on the site, somewhat supported by the environmental evidence, over a significant period of time.

## **Conclusion**

The archaeological deposits from the trial trench evaluation and subsequent sample excavation present direct evidence for past activity peripheral to the modern day village of Broughton Astley and by association, its preceding settlements, and the relative continuity of this from prehistoric through to post-medieval times. It provides us, in the form of the pit alignment and in conjunction with similar archaeological evidence from nearby, with evidence for the organisation of the wider landscape in the past and suggests that settlements located within it may have been connected. Despite the confined extent and lack of datable material remains recovered from the deposits, the features survive well and point to further survival of similar deposits in the immediate vicinity of the site which any future investigation, may add to the information obtained here.

## **Archive**

The site archive will be held by Leicestershire Museums Service, under accession no. *XA.48.2016*.

The archive contains:

- 3 trench recording sheets
- 4 context summary records, 82 context sheets
- 3 photographic recording sheet
- 1 Sample records sheet
- 1 Drawing Index sheet
- 1 CD containing digital photographs and report
- Survey data
- Unbound copy of this report

## **Publication**

A summary of the work will be submitted for publication in the local archaeological journal *Transactions of the Leicestershire Archaeological and Historical Society* in due course. The report has been added to the Archaeology Data Service's (ADS) Online Access to the Index of Archaeological Investigations (OASIS) database held by the University of York.

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### **Author contact details:**

Stephen Baker  
University of Leicester Archaeological Services  
University Road  
Leicester  
LE1 7RH

[sb390@le.ac.uk](mailto:sb390@le.ac.uk)

Tel: 0116 252 2848  
Fax: 0116 252 2614

24/06/2016

## Appendix 1: OASIS data

|                             |   |   |                       |   |
|-----------------------------|---|---|-----------------------|---|
| <b>PROJECT DETAILS</b>      | <b>Oasis No</b>                         | universi1-253372  |                       |   |
|                             | <b>Project Name</b>                     | An Archaeological Excavation at Thomas Estley Community College, Broughton Astley, Leicestershire |                       |   |
|                             | <b>Start/end dates of field work</b>    | 05-04-2016 – 06-04-2016 (Evaluation)<br>03-05-2016 – 17-05-2016 (Excavation)                      |                       |   |
|                             | <b>Previous/Future Work</b>             | No  |                       |   |
|                             | <b>Project Type</b>                     | Evaluation/Excavation   |                       |   |
|                             | <b>Site Status</b>                      | None  |                       |   |
|                             | <b>Current Land Use</b>                 | Playing Fields/recreation   |                       |   |
|                             | <b>Monument Type/Period</b>             | Pits (uncertain – prehistoric), postholes (uncertain), gullies (uncertain), ditch (post-medieval) |                       |   |
|                             | <b>Significant Finds/Period</b>         | Flint (uncertain – prehistoric), pottery (Iron Age, Roman)  |                       |   |
|                             | <b>Development Type</b>                 | Educational   |                       |   |
|                             | <b>Reason for Investigation</b>         | NPPF  |                       |   |
|                             | <b>Position in the Planning Process</b> | Pre-planning  |                       |   |
|                             | <b>Planning Ref.</b>                    | 14/01727FUL   |                       |   |
| <b>PROJECT LOCATION</b>     | <b>Site Address/Postcode</b>            | LE9 6PT   |                       |   |
|                             | <b>Study Area</b>                       | 551 square metres   |                       |   |
|                             | <b>Site Coordinates</b>                 | SK 8656 1392  |                       |   |
|                             | <b>Height OD</b>                        | 81m OD  |                       |   |
| <b>PROJECT CREATORS</b>     | <b>Organisation</b>                     | ULAS  |                       |   |
|                             | <b>Project Brief Originator</b>         | Local Planning Authority (LCC)  |                       |   |
|                             | <b>Project Design Originator</b>        | ULAS  |                       |   |
|                             | <b>Project Manager</b>                  | Vicki Score   |                       |   |
|                             | <b>Project Director/Supervisor</b>      | Stephen Baker   |                       |   |
|                             | <b>Sponsor/Funding Body</b>             |   |                       |   |
| <b>PROJECT ARCHIVE</b>      |   | <b>Physical</b>   | <b>Digital</b>        | <b>Paper</b>  |
|                             | <b>Recipient</b>                        | LCC<br>MusService   | LCC<br>MusService     | LCCMusService   |
|                             | <b>ID (Acc. No.)</b>                    | XA48.2016   | XA48.2016             | XA48.2016   |
|                             | <b>Contents</b>                         | Pottery, flint  | Photos<br>Survey data | Trench sheets,<br>context records,<br>drawings<br>Field Notes |
| <b>PROJECT BIBLIOGRAPHY</b> | <b>Type</b>                             | Grey Literature (unpublished)   |                       |   |
|                             | <b>Title</b>                            | An Archaeological Excavation at Thomas Estley Community College, Broughton Astley, Leicestershire |                       |   |
|                             | <b>Author</b>                           | Stephen Baker   |                       |   |
|                             | <b>Other bibliographic details</b>      | ULAS Report No 2016-087   |                       |   |
|                             | <b>Date</b>                             | 2016  |                       |   |
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|                             | <b>Description</b>                      | Developer Report A4 pdf   |                       |   |

## Contact Details

Richard Buckley or Patrick Clay  
University of Leicester Archaeological  
Services (ULAS)  
University of Leicester,  
University Road,  
Leicester LE1 7RH

**T:** +44 (0)116 252 2848

**F:** +44 (0)116 252 2614

**E:** [ulas@le.ac.uk](mailto:ulas@le.ac.uk)

**w:** [www.le.ac.uk/ulas](http://www.le.ac.uk/ulas)



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