UNIVERSITY OF LEICESTER
Archaeological Services

Archaeological Investigations during Restoration Work at Oakham Castle, Oakham, Rutland (SK 86101 08904)

Leon Hunt

ULAS Report No 2016-105

Archaeological Investigations during Restoration Work at Oakham Castle, Oakham, Rutland (SK 86101 08904)

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for

Rutland County Council
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Leon Hunt

with James Earley, Deborah Sawday and Rachel Small

Summary

A series of archaeological investigations and interventions were carried out on the Scheduled Monument at Oakham Castle, Oakham, Rutland (NGR: SK 86200 08950).

Rutland County Council made a successful bid to the Heritage Lottery Fund (HLF) to undertake extensive restoration work throughout the castle, with improvements to visitor facilities, access and interpretation. This would include the restoration of the medieval Great Hall, the construction of a new toilet block, restoration of parts of the curtain walls, new interpretation boards, a new metal fence, new drainage and other groundworks and improved access to the Great Hall, Motte and adjacent car park..

The work was carried out by University of Leicester Archaeological Services (ULAS) between 2015-2017.

Several previous archaeological investigations have taken place within and around the castle grounds, including work in the 1950s that located the remains of ancillary buildings to the east of the Great Hall, and in 2011, a Time Team/ Wessex Archaeology trial trench evaluation, which located the walls of a building to the west of the Hall, most likely a postulated chamber block.

The archaeological work included monitoring of groundworks during the aforementioned enhancements, a trial trench investigation of the area to the west of the Hall where the path was to be widened, excavations within the footprint of a new toilet block and an extension to the Time Team trial trench to the west of the Hall.

It also included archaeological monitoring of contractors' excavations for new drainage and electricity cables, the recording of a disused stone-built well, an evaluation through the northern defences and the monitoring of the restoration of the curtain walls, which were also the subject to a photogrammetry survey prior to repair and repointing.

Excavations within the footprint of the new toilet block revealed early stone yard surfaces, possibly contemporary with the medieval Great Hall, and the remains of a Y-shaped feature, which was interpreted as an in-filled drain, dating to the post-medieval or modern period. There was also considerable disturbance from services and demolition layers and made-up ground in this area.

The extension to the Time Team trench revealed more sections of wall, which did not appear to be directly linked to the western end of the Great Hall, but are likely to suggest a free standing building here, which further work may reveal.

Trenching at the south end of the Great Hall, close to its main door, revealed stonework that may be the foundations of a demolished porch, but most of the small scale intrusions throughout the castle grounds revealed made-up ground and disturbance.

The evaluation through the northern curtain wall and rampart showed that the wall had been cut into the rampart material and the outer face showed seventeen courses of stone, with fewer on the inner face, which had been repaired with modern brick and concrete at some time in the past.

The restoration of the rampart walls was very successful and has enhanced the look of the scheduled monument, although the restoration of the postern gate has not revealed any more information about the feature, mainly as it has been so heavily disturbed by large tree growth and erosion.

The photogrammetry survey was also very successful and has produced high quality 3-D images of the curtain walls.

Introduction

University of Leicester Archaeological Services (ULAS) was commissioned by Rutland County Council to carry out a programme of archaeological work during the restoration of Oakham Castle, Oakham, Rutland (NGR: SK 86200 08950).

This archaeological work has been undertaken in accordance with NPPF Section 12: *Enhancing and Conserving the Historic Environment* and with the Ancient Monuments and Archaeological Areas Act 1979.

Rutland County Council had made a successful bid to the Heritage Lottery Fund (HLF) to undertake extensive restoration work throughout the castle, which would also include improvements to visitor facilities, access and interpretation.

The restoration work was to include the stabilisation and conservation of the Great Hall and the curtain wall, while the improvements would include the construction of a new toilet block, the provision of a staircase access up the remains of the motte and new access across the curtain walls to the car park to the north of the castle. The work would also include new drainage, the widening of the access around the Great Hall to facilitate disabled access, the clearance of trees around the curtain walls and the construction of a new boundary fence between the inner bailey and Cutts Close, a new sensory garden and a bin store, and the erection of new interpretation boards.

As some of the new proposals were to potentially have an impact upon buried archaeological remains within the Scheduled area of the castle, a programme of archaeological work was required to ensure that any remains were appropriately investigated and recorded.

Location and Geology

Oakham is a busy market town and county town of Rutland. The castle lies in the town centre to the north of the market place, and is accessed through a gateway from Market Street (Figure 1).

The British Geological Survey website indicates that the underlying geology comprises Marlstone Rock Formation Limestone. The overlying soils are ferritic brown earths known as Banbury soils. These are well-drained brashy fine and coarse loamy ferruginous soils over ironstone.

The castle lies at a height of approximately 100m aOD and its earthworks enclose an area of around 1.3 hectares.

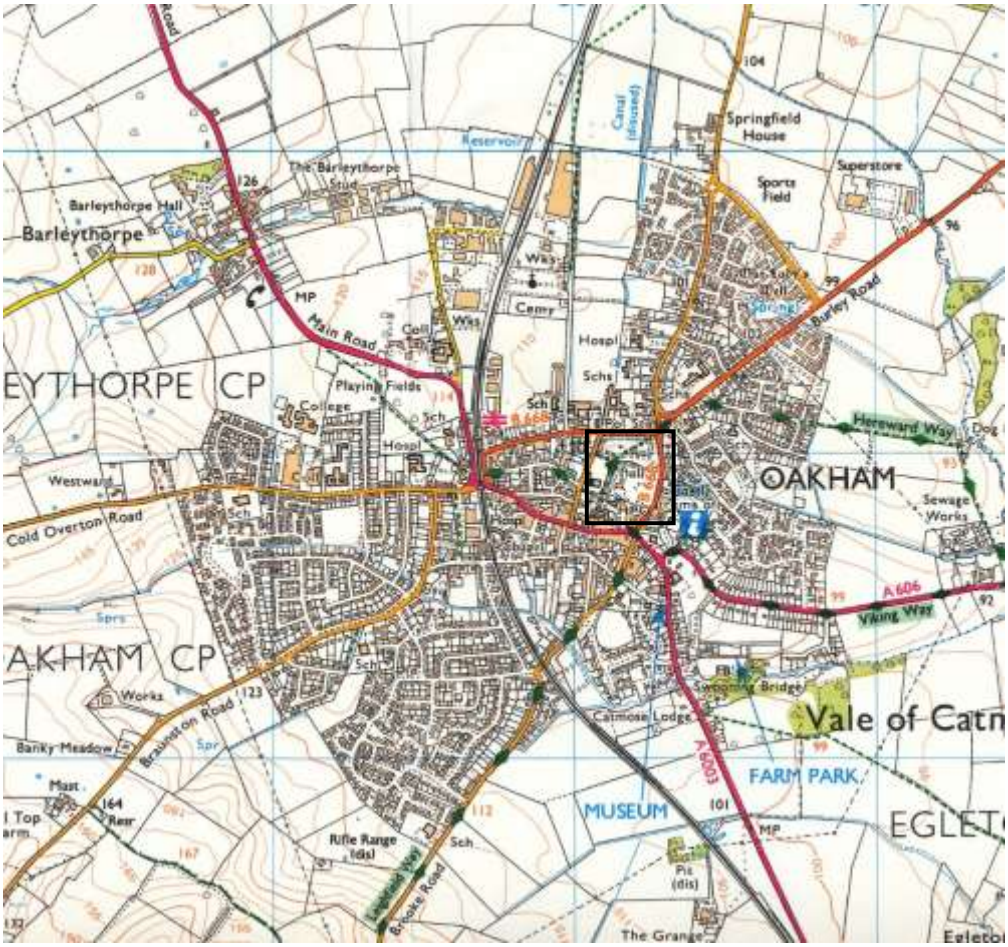

Figure 1: Site Location

Historical and Archaeological Background

The town of Oakham is of Anglo-Saxon origin with the place name derived from the Old English Ocham (AD 1067) or Ocheham (AD 1086), meaning homestead or enclosure of a man called Oc(c)a' (Mills 2003). The manor and castle of Oakham, part of the dowry of the Anglo-Saxon queens of England, came to Edith wife of Edward the Confessor in the mid-11th century. The manor was held by William the Conqueror in 1075.

Domesday shows that the settlement was served by a priest and church, perhaps a predecessor to All Saints, which lies 250m to the north of the castle. Alternatively, there may have been a church or chapel within the bailey of the castle, which has since been demolished (Morgan 1979).

Domesday also records that Albert the Clerk held, under the King, the churches of Oakham, Hambleton and Stamford with associated lands. Although the church and some land were granted to Westminster Abbey by William II (1087-1100), the manor, including the castle, remained in royal hands. It was held by Henry Beaumont, first Earl of Warwick, in the early 12th century, probably passing to the Ferrers family about 1119.

The town grew under the patronage of the castle and had a market by 1249. Its 14th and 15th century prosperity was due to the wool trade. Its late 17th and early 18th century buildings may be connected with the wealth of the then lord of the manor, Daniel Finch, Earl of Nottingham.

The earthworks of the motte and bailey castle are listed in the Scheduled Monument records (SM 17018) and have been assigned an early medieval date. This earliest motte and bailey phase of the castle it thought to have been constructed in about 1075. The motte is still visible in the corner of the ramparts and although its outer edges have been cut away, it is still substantial, measuring at least 11.43m across and 5.56m in height. The bailey, which presumably contained contemporary timber structures, such as hall, chapel, stables and ancillary buildings (of which there is as yet no evidence), was surrounded by an earthen rampart and ditch. The former still survives to a good height, whilst evidence for the latter has been detected through archaeological excavation.

Within the bailey is the late 12th-century Great Hall, used as a court house since the early 13th century and solely as such from at least the 16th century. A stone curtain wall was added to the earthen rampart, perhaps some time in the 13th or 14th century.

The Great Hall of Oakham Castle is dated to *c.*1180-90 on stylistic grounds and is considered to be the finest and most complete example of a secular hall of this period in England (Hill 2013). The Castle was mentioned in a number of documents from the 12th century onwards, most notably during the 14th century. Late 14th century documents indicate that some buildings were deteriorating and in need of repair, and works were being undertaken, including the pargeting and plastering of the 'King's two great chambers' and the 'great chapel' in 1375-77 (Hill 2013). In 1378, a new chamber and chapel were built followed by the construction of a new roasting house in 1380 (*ibid*).

The castle hall is constructed of ironstone and is of four bays, measuring 19.9m (65ft 3in) long by 13.2m (43ft 4in) wide, divided into a nave and two aisles by two arcades with semi-circular arches supported on circular columns with exquisitely carved capitals, above which are figures playing musical instruments. The architectural style is transitional Norman to Early English, with both round and pointed arches (as at Leicester *c.*1150) (Alcock and Buckley 1987). The capitals are believed to have been carved by the same masons who completed work at Canterbury in 1184, and who perhaps came to Oakham later in the 1180s (Hill 2013).

At the east end, four blocked doorways indicate that there was an attached service block for which various theories have been advanced, such as the two-storey cross wing with a solar above service rooms proposed by Faulkner in 1958 (Hill 2013). Excavations by Barber at the east end of the hall in 1956-7 led him to suggest a single-storey service block with buttery and pantry flanking a central passage leading to a detached kitchen (*ibid*). Hill later reinterpreted the evidence at the east end as indicating an early timber lean-to structure with passage, buttery and pantry, with Barber's cross wing being a later replacement (Hill 2013).

Hill similarly suggests a lean-to structure at the west end of the hall, although not functioning as a high-status chamber. Instead, he postulates that the fine doorway at the north-west end of the hall led to a detached chamber block via a pentice corridor (*ibid*). Interestingly, at Leicester too, it is suspected that the Great Chamber was a detached block at right-angles to the high end of the hall, approached by a pentice (Alcock and Buckley 1987).

During the 19th and early 20th century extensions were built onto the aisled hall to accommodate the functions of the court. These include a pair of cells accessed through the west door in the north aisle. Two doors provide access to two cells and these doors include door furniture such as hatches. These elements are likely to date from the early 20th century and are associated with the function of the hall as a courtroom. There is also a lavatory and rest room that are accessed through the west door in the south aisle. The current structure was built sometime in the early 20th century and replaced two smaller gabled extensions.

The largest modern structure attached to the medieval hall is No.1 Court, which lies on the north elevation of the hall. This includes a large meeting room with smaller room, currently in use as a kitchen, to the north accessed externally through a lobby area housed within a lean-to structure on the east elevation, which currently includes a toilet. These later 19th century additions retain many original features, including a fireplace, six panelled doors and vertical sliding sash windows. There is also a boiler room, and associated chimney, that lies on the west elevation of the No. 1 Court. The boiler room was demolished as part of the current modifications, but the chimney has been retained.

To the north of the castle inner bailey is an outer bailey now known as Cutts Close, which is bounded by earthworks and also includes an area of former fishponds. Prehistoric and Roman finds have been identified here, along with the possibility of earlier activity (Sharman and Sawday 1990). It has been suggested that this enclosure may represent the earliest phase of the Saxon town and possibly represents the remnants of a Saxon *burh* or fortified settlement (Radford 1955), although there is as yet no clear archaeological evidence to confirm this.

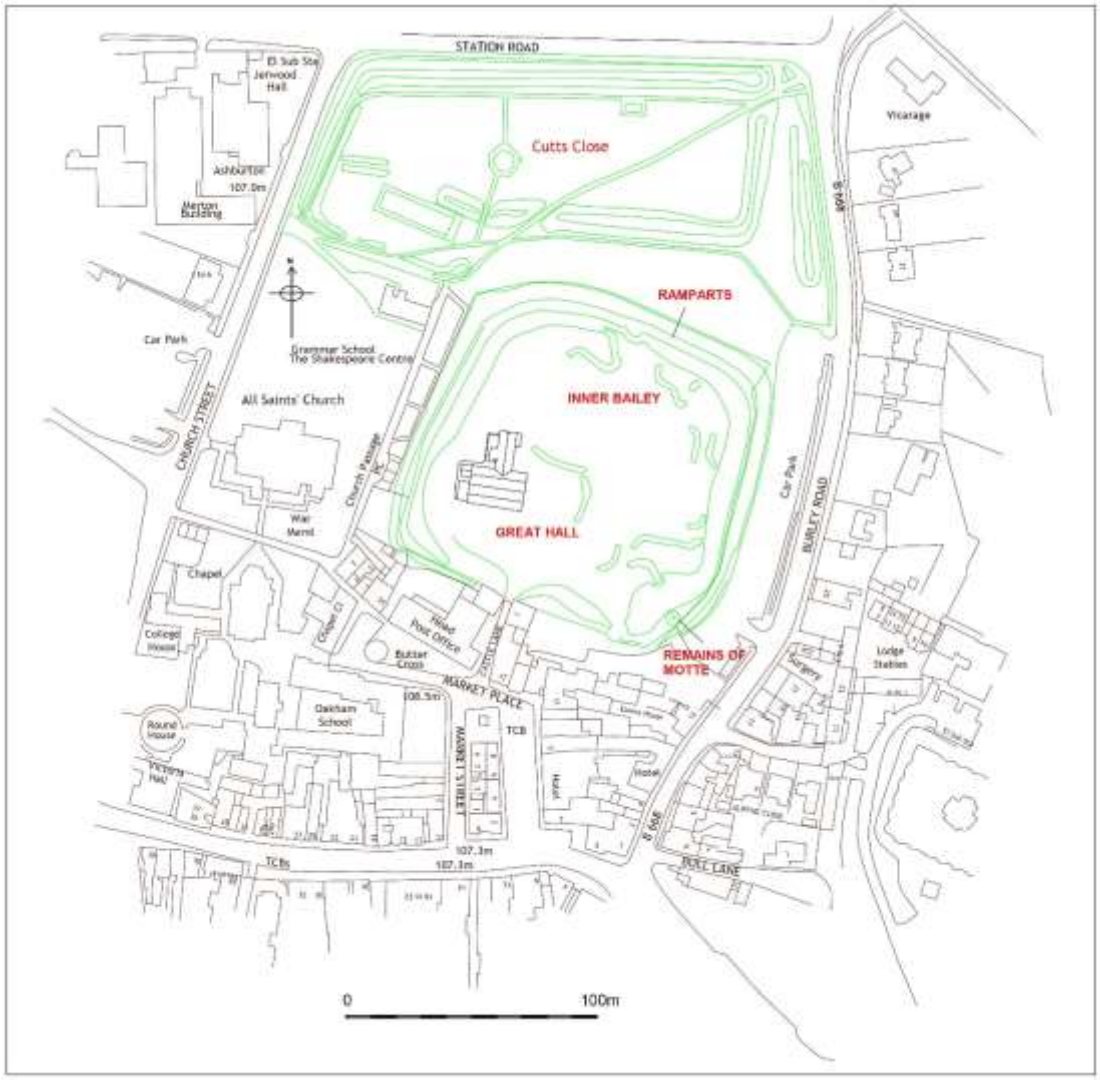

Figure 2: Plan of Oakham Castle and Cutts Close site.
Contains Ordnance Survey Data. Licence number AL 100029495

Previous Archaeological Work

Archaeological knowledge of the site is largely drawn from two excavations, and a series of smaller-scale archaeological interventions. In 1953-4 Peter Gathercole, excavating outside the south gateway entrance in advance of the construction of the Post Office, found a large ditch (interpreted as the castle bailey ditch) and pottery that contained early medieval Stamford ware and St. Neot's ware pottery (Gathercole 1958). Then in 1956-7, a series of trenches, excavated by local schoolmaster John Lewis Barber and his students to the east of the Great Hall located masonry walls of medieval date, which Barber interpreted as service buildings, comprising a buttery and pantry, attached to the Hall, and a free-standing kitchen to the east (Jones and Ovens 2013).

A trial trench was excavated across a section of the bank in Cutts Close in 1989, and Anglo-Saxon pottery was discovered mixed in with much later material suggesting that the bank here was remodelled in the 19th century (Sharman & Sawday 1990).

Geophysical Survey of the castle bailey was undertaken by Stratascan in 2005 on behalf of ULAS and indicated some areas of structural remains or debris and potential linear anomalies in the vicinity of the proposed groundworks (Heard 2005).

An archaeological watching brief was maintained in 2010 on the east side of the Great Hall during the installation of electrical cabling for new lighting (Coward 2010). It appeared from the removed spoil and the cable-trench baulk sections that the area to the east of the Castle Hall has been made up, perhaps with the importation of topsoil for the grass. This topsoil is approximately 25 - 30 cm in depth; fortuitously the shallowness of the cable trench (*c*.30 cm or less) meant that very few archaeological deposits were impacted upon, and those which were uncovered appeared to represent destruction debris rather than in-situ structures or deposits. Some stretches of the cable trench went through deposits which may have represented the disturbed tops of in-situ archaeological deposits; these stretches were assigned context numbers.

There has been a re-evaluation of all the archaeological and documentary evidence, together with a careful examination of the fabric of the standing buildings, and a programme of dendrochronological dating (Hill 2013). Amongst other things, this has resulted in confirmation of the initial construction of the Great Hall in the 1180s, and a reinterpretation of the service buildings to the east of the Great Hall located by Barber.

Time Team and Wessex Archaeology undertook investigations in 2013 and these included geophysical survey and the examination of several trenches. A trench placed across the northern bank of Cutts Close revealed the original ground level but did not find evidence to support Radford's idea of the Saxon *burh*. The Time Team report has suggested that the banks may be related to formal garden boundaries (Wessex Archaeology 2014).

Trench 3 of the Time Team excavation to the west of the Great Hall revealed two phases of a stone wall running on a similar alignment to the hall, along with possibly floor layers, which may represent the remains of a chamber block postulated by Hill (Hill 2013).

There have been several small scale watching briefs carried out during various groundworks at Oakham Castle both within the inner bailey and at Cutts Close. These include the aforementioned monitoring of a new exterior lighting trench within the inner bailey (Coward 2010) and a laser scanning and photographic survey of the whole site (Sheppard and Walker 2011). A watching brief was undertaken in December 2013 during tree planting on the north-west side and the south-east corner of the park but revealed no archaeological deposits (Browning 2013), and in June 2014 a watching brief was undertaken when a trench for a lighting cable was excavated within Cutts Close, Oakham, again no clear archaeological deposits were disturbed (Browning 2014).

A further watching brief was carried out in 2014 by ULAS during groundworks associated with the excavation of two inspection pits (Clark 2015). Within the bailey clear stratigraphy showed the build-up of several layers and in Cutts Close a small portion of the original bank was exposed.

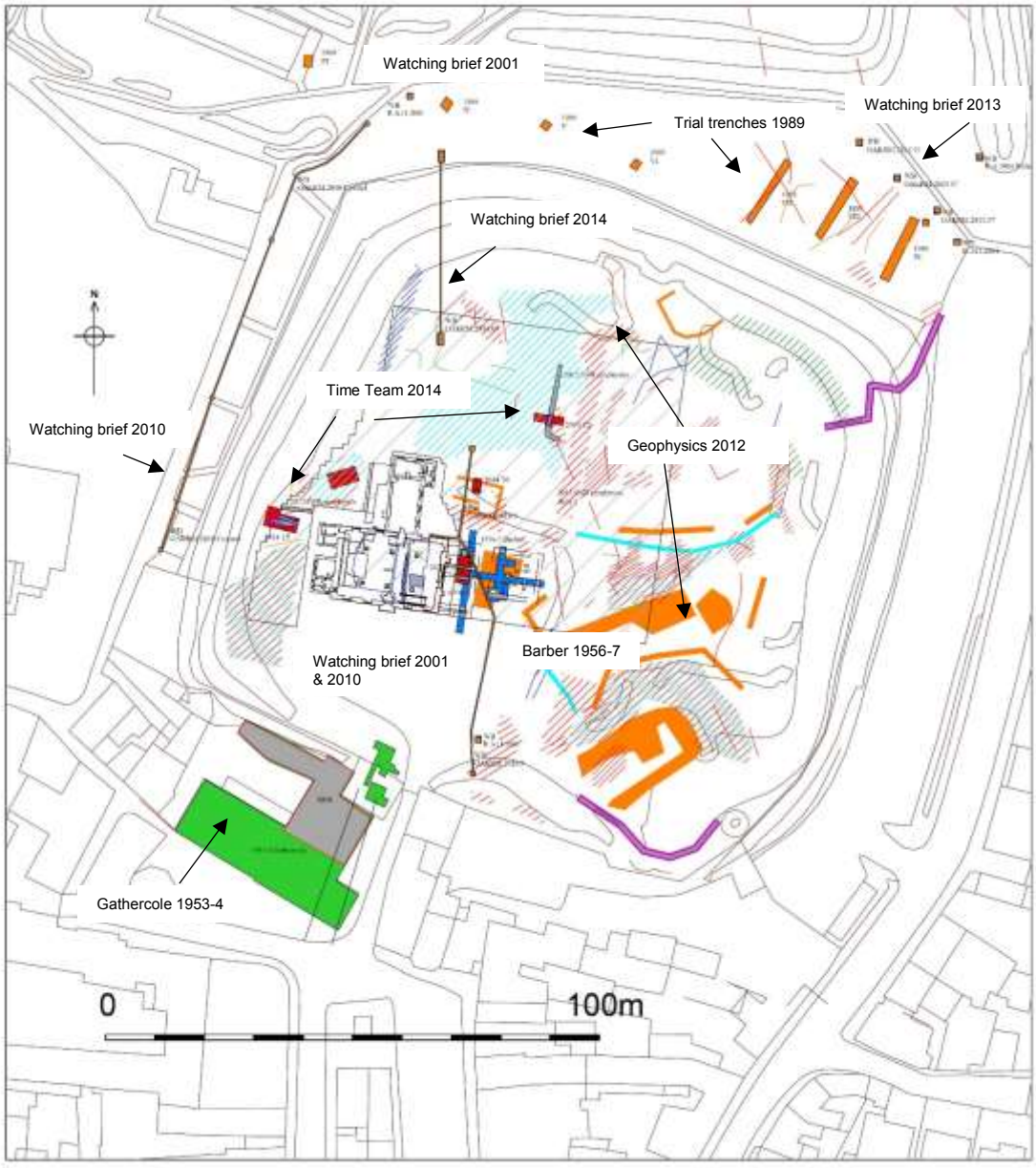

Figure 3: Plan of previous archaeological work

Archaeological Aims and Objectives

The purpose of the archaeological work may be summarised as follows:

- To identify the presence/absence of any archaeological deposits or earlier building remains.
- To establish the character, extent and date range for any archaeological deposits/ structural evidence to be affected by the proposed works.
- To establish the significance of any remains or deposits identified during the course if the works.
- To record any archaeological deposits/ structural evidence to be affected by the works.
- To advance understanding of the heritage assets
- To produce an archive and report of any results.

Methodology

All work followed the Chartered Institute for Archaeologists (CIfA) *Code of Conduct* (2012) and adhered to their *Standard and Guidance for Archaeological Watching Briefs* (2014). The Leicestershire County Council *Guidelines and Procedures for Archaeological Work Leicestershire and Rutland* (1997) were adhered to.

An accession number was obtained prior to commencement of the project and used to identify all records and artefacts. The code for the previous watching brief carried out at the castle in 2014 was maintained (Clark 2014). This was OAKRM: 2014.69.

In order to inform the mitigation strategy in terms of fieldwork and reporting methodologies, Historic England requested the preparation of an overarching archaeological strategy in the first instance (Hyam and Buckley 2015). This summarised the present state of knowledge of the castle from previous archaeological interventions and surveys, set out an overall archaeological research strategy which posed a series of questions which might be addressed by the results of the work and outlined a fieldwork strategy appropriate to the scale of proposed groundworks in individual areas.

Subsequently, a series of individual Written Schemes of Investigations (WSIs) were created and submitted to Historic England (HE) to provide strategies for the archaeological work to be carried out.

A total of 3 WSIs were produced. These covered the following phases of work:

Phase 1 (WSI 1) Scheduled Monument Consent Ref: S00090335

The first WSI addressed the archaeological impact of the demolition of the existing boiler/service room and its replacement with a new toilet block together with widening of the existing external path on the west side of the hall to facilitate disabled access. The strategy provided for the initial evaluation of the nature, extent, depth, date and significance of affected archaeological deposits. This was then followed by limited further archaeological investigation to mitigate any damage which might occur from the proposals.

1. Archaeological supervision of the breaking out of existing hard standing and removal of any underlying gravel or sand blinding following demolition of the old service building.

2. Contractors to lift horizontal paving slabs and underlying sand/mortar bedding (with archaeological supervision) along the line of the existing access path, remove vertical revetment slabs against adjacent turf and reduce wall of boiler house by several courses to reveal a section through archaeological deposits (c.300-500mm).

3. Contractors to mark out proposed new path width options of 1m, 1.2m and 1.8m.

4. Archaeologist to clean back section revealed by removal of vertical slabs and boiler house brick wall as far as necessary until undisturbed archaeological deposits are reached, or to the maximum width option of 1.8m for the proposed path (whichever is the least). Archaeologist to clean full extent of ground revealed following removal of horizontal paving slabs and concrete hard standing. Turf to be lifted at the west end of the hall in order to establish a relation with Time Team's Trench 3, where structures have been identified.

5. Archaeologist to record archaeological deposits thus revealed and undertake sample excavation in order to establish date, sequence and significance of archaeological deposits.

Phase 2 (WSI 2) Scheduled Monument Consent Ref: S00090345

The second WSI addressed the potential impact upon archaeological remains from the installation of new motte access, access to the car park, site interpretation and boundary improvements.

1. Installation of viewing platform on motte plus timber walkway & steps up to it

2. Installation of timber walkway and steps over ramparts to NE corner and down into Burley Road car park.

3. Removal of fence to N & E boundary; erection of replacement fence on a new line

4. Tree/vegetation clearance; new tree planting

5. Installation of site interpretation boards, site model, benches & other fixed interpretation elements. Installation of sensory garden, including new planting beds and hard paving

6. Construction of new bin store and enclosure (in the event, not constructed).

Phase 3 (WSI 3) Scheduled Monument Consent Ref: S00090351

The third WSI addressed the potential impact of restoration works to the curtain walls.

1. Archaeological attendance, supervision and recording during groundworks related to repairs and consolidation of the curtain walls

2. Archaeological Field Evaluation of north curtain wall

These phases of works were not necessarily carried out in chronologically in the above ordered phases. Different phases of work were carried out at different times, often not consecutively. The decision was taken while the restoration was ongoing that the proposed bin store and enclosure would not be constructed.

Plate 1: Work in progress on Test Pit 4, where path turns to the east, looking south-west

Results

The first phase of archaeological work was carried out between 30th October 2015 and 1st December 2015.

Prior to the commencement of archaeological works, the proposed access path around the western part of the Great Hall and new toilet block was marked out by the contractors, with path width options of 1m, 1.2m and 1.8m. The slabs covering the base and sides of the path had also been removed exposing the soil and make-up layers below the slabs and the sections of the soil and turf layers around the edges of the path.

Test Pits

A total of 10 test slots of varying sizes were archaeologically excavated around and through the edges and bank around the path (Plate 1). Some were excavated to the full 1.8m mark width of the path (Test Pits 1,2,4,5 & 6) and others were excavated to the 1.2m mark (Test Pits 7-9). Test Pits 3 and 10 were excavated across the base of the path itself.

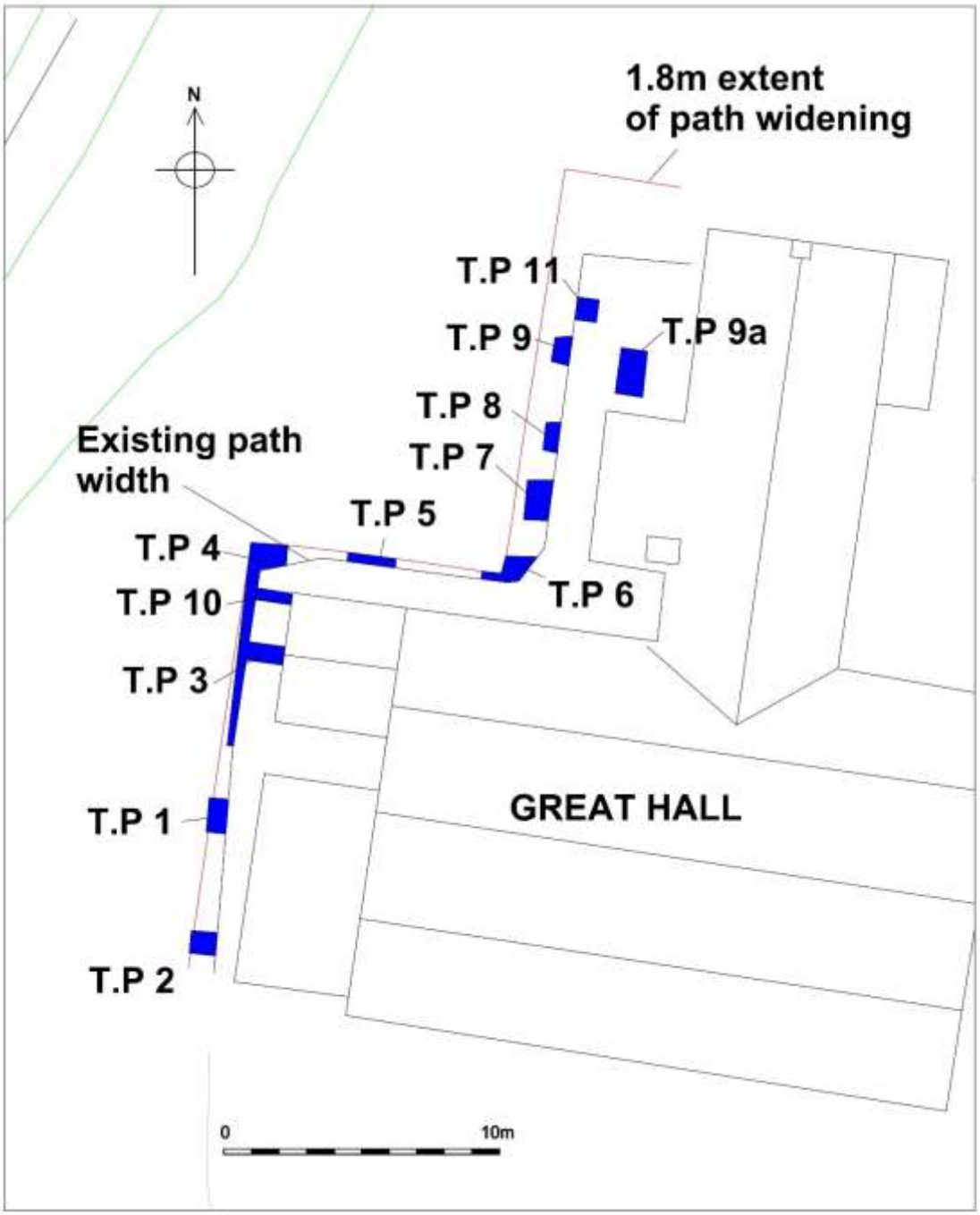

Figure 4: Test Pit Locations

Test Pit 1

This was excavated on the western side of the hall into the shallow bank here where the bank next to the path was low and had no revetment. It measured 1.2m by 0.9m by 0.20m, although it was later deepened along the northern edge to provide a section across to the path (Plate 2). The section revealed 0.10m of turfed topsoil over 0.10m of yellowish-grey subsoil, with inclusions of ceramic building material (CBM), mortar and small stones throughout. At the east edge of the test pit was around 0.16m of concrete and a narrow concrete edging strip (Figure 5).

Plate 2: Test Pit 1, post excavation, looking west

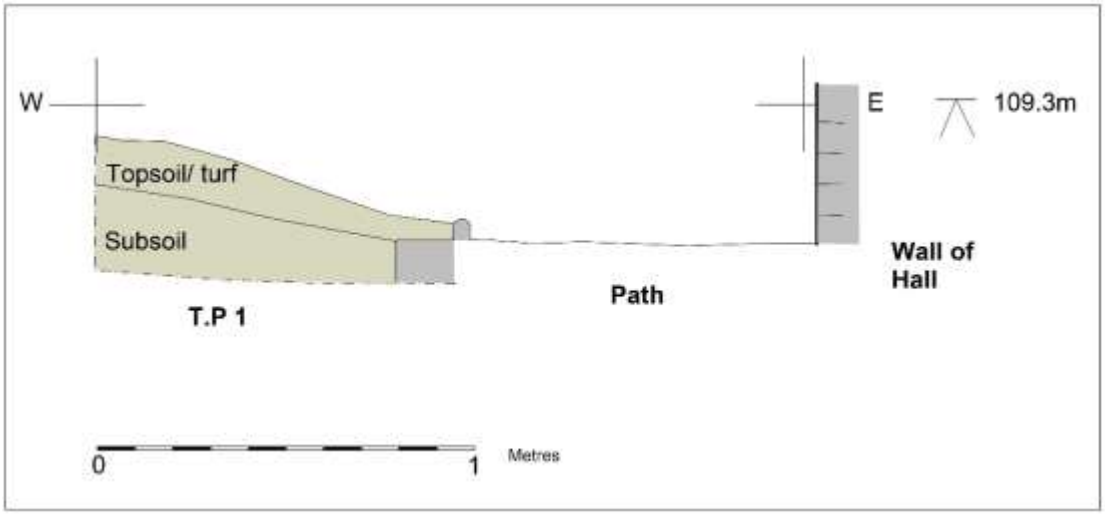

Figure 5: Test Pit 1, south facing section

Test Pit 2

This was also excavated on the western side of the hall into the shallow bank, to the south of Test Pit 1 and the sequence was very similar (Plate 3). The pit measured 0.8m by 0.83m and was 0.30m deep. The section revealed 0.17m of dark-brown topsoil over 0.13m of yellow-brown silty clay subsoil. The concrete and path edging seen in Test Pit 1 was also present here. Both soil deposits contained ironstone fragments and CBM.

Plate 3: Test Pit 2, post excavation, looking west

Test Pit 3

This was a narrow section placed across the path itself from Test Pit 4 (see below) to the hall outbuildings' west wall. It measured 1.60m by 0.70m and was 0.17m deep, oriented east to west. The section revealed 0.10m of mortar, hardcore and CBM over 0.07m of yellowish-brown clay and limestone, with mortar and limestone flecks. The section against the west wall of the outbuilding revealed that the building here sat on a slab with no foundations (Plate 4). The test pit quickly filled with water due to a leaking pipe and was abandoned.

Plate 4: Test Pit 3, post excavation, looking north

Test Pit 4

Although numbered as a test pit, this was a long section of the bank, which was dug back to the full 1.8m extent of the proposed path close to the Time Team Trench 3 to see if the archaeology continued across the path from Trench 3 to the hall (Plate 5). This was 7.30m long, 0.45m wide (1.37m at north end) and between 0.55m and 0.70m wide.

The topsoil (01) was a greyish-brown clayey silt with gravel, limestone and ironstone fragments, plus occasional fragments of charcoal and shell. The topsoil was 0.24m deep here. Under this was a subsoil of yellowish-brown silty clay, visible for around 0.40m in section (02).

At the northern end of the section, under the subsoil, was a roughly rectangular section of wall (03), or the core of a wall, made up of 60% limestone and 40% ironstone of varying sizes, and measuring around 1.75m in length. The average size of the ironstone was 0.17m by 0.08m by 0.10m and the limestone 0.12m by 0.09m by 0.02m. All the ironstone was roughly hewn, but the limestone seemed to consist of tile-shaped pieces, some with obvious peg holes.

Adjacent to (03) was another area of masonry (04), seemingly a collapse from (03) and made up of 70% ironstone and 30% limestone, with similar dimensions to the masonry in (3).

There was a clay matrix between the masonry of (03) and (04). This was a mid yellowish-brown clay (05), with flecks of mortar, and sherds of 15th-17th century pottery. Under the masonry/ collapse (04) was a layer of mid greyish-brown silty clay (06), which a variety of medieval pottery, including several sherds of 15th-17th century pottery, plus modern earthenware (Figure 6: Plate 6).

At the base of the masonry of (03) was a section of yellowish-brown mortar or crushed limestone, measuring 0.5m by 0.10m (07). Under this lay a mid orange-brown clay and crushed limestone with some small ironstone pieces (08).

Cut into the masonry of (03) and (04) was a possible post-hole or beam slot that had been truncated along the eastern edge by the path [09]. The feature was 0.30m in diameter and 0.35m wide, with a fill (10) of mid greyish-brown clayey silt.

Plate 5: Work in progress on Test Pit 4- long section, looking north

Plate 6: Masonry of (03) and (04) exposed in Test Pit 4, looking west.
Post-hole/ slot [09] in centre of picture

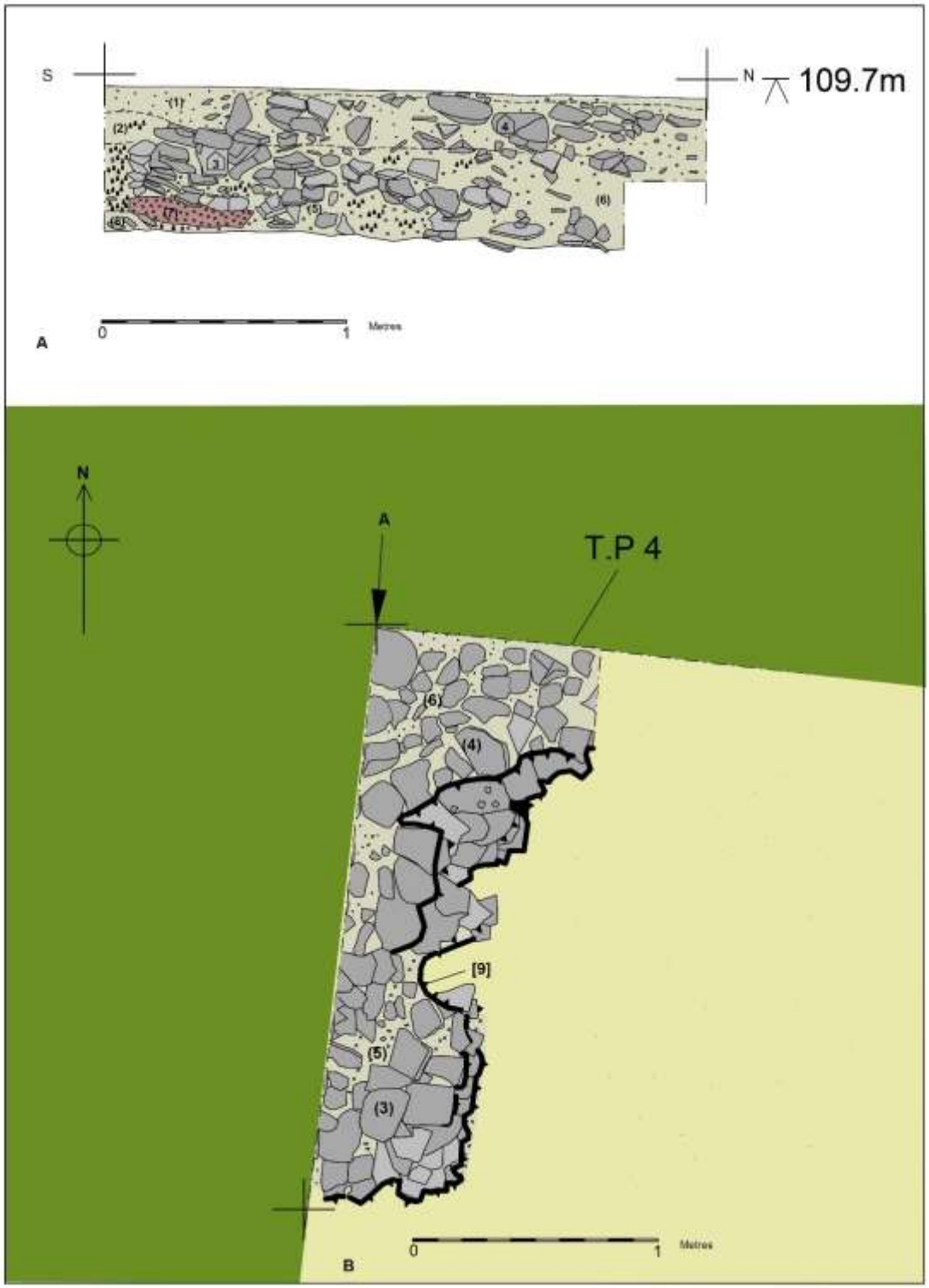

Figure 6: A. East facing section of northern part of Test Pit 4, showing possible wall remains (03) in section. B. Plan of wall remains

Plate 7: Test Pit 5, post excavation, looking north

Test Pit 5

This pit section was excavated into the bank around the access path at one of its wider points as it turns to the east. It was 1.60m long and only 0.44m wide as the path is quite wide here. Behind the removed slabs there were several chunks of concrete that were removed to expose 0.20m of topsoil (01) over 0.26m-0.30m of subsoil, containing a large amount of crushed limestone, particularly in the north-east corner of the section (Plate 7).

Test Pit 6

Test Pit 6 was excavated on the corner of the bank, where the path turns again to the north to the west of the old boiler house.

This was excavated to the full 1.8m extent of the proposed path and therefore was 1.15m wide across the northern edge and 0.4m wide across the western edge. The full length was around 1.85m and the test pit was between 0.45m and 0.55m deep. The topsoil was very shallow under the turf. Under the thin topsoil were a series of stepped concrete pieces of average size 0.25m by 0.15m by 0.06m, and there was a lot of modern material between the pieces, such as plastic and sweet wrappers etc. The concrete pieces were sat on a silty clay subsoil with limestone and ironstone fragments, plus crushed limestone (Plate 8).

Plate 8: Test Pit 6, post excavation, looking north-west

Test Pit 7

Test Pit 7 was excavated into the bank, opposite the remains of the old boiler room, where the new toilet block was to be constructed. The pit was excavated 0.69m into the bank and it was 0.90m long and 0.48m deep. The pit was only excavated to the 1.2m mark for the proposed building. Under a thin turf and topsoil layer there was a similar tumble of material, but this was mainly ironstone and limestone and some pieces of plaster, with silty clay and crushed limestone as a matrix between the stone (Plate 9).

Plate 9: Test Pit 7, post excavation, looking west

Test Pit 8

This test pit was placed just north of Test Pit 7; into the bank opposite the old boiler house. It was 1m long, 0.60m wide and between 0.38m and 0.60m deep. Much of the area was disturbed ground and the pit contained the cuts for two modern services. The thin topsoil was very mixed loamy soil, with CBM and charcoal/ cinders, possibly the remains of fuel from the nearby boiler house. There was some subsoil at the base of the pit, which was similar to (02), with a lot of ironstone fragments. The rest of the pit showed modern backfill (Plate 10).

Plate 10: Test Pit 8, post excavation, looking west

Plate 11: Test Pit 9, post excavation, looking west

Test Pit 9

This pit was also excavated into the bank opposite the old boiler house, a few metres to the north of Test Pit 8. It lay within the footprint of the proposed new facilities block which was later stripped as an evaluation trench after the remains of the old boiler house had been removed. The sequence was 0.20m of topsoil (01) over a 0.19m layer of crushed limestone and silty clay (11), with larger limestone fragments, plus several sherds of pottery, mainly dating from the 15th-17th century, plus part of a roof tile, which may be earlier in date.

Under this was a thin 0.10m layer of silty clay with charcoal flecks and a section of roof tile (12), which lay over an apparent demolition layer, 0.25m deep of limestone and ironstone rubble, charcoal and sherd of roof tile (13). These layers continued into the building footprint area (Plate 11).

Test Pit 9A

This test pit was dug through upper layers of the evaluation area (see below).

Test Pit 10

This pit was placed across the path itself, close to where Test Pit 3 was excavated, in order to provide a complete section across from Test Pit 4 section to the wall of the out building of the Great Hall. It was 1m wide (most of the width of the current path), 0.40m long and 0.18m deep.

The sequence shown consisted of a mid orange brown clay and crushed limestone 0(8) with ironstone pieces, measuring 0.59m in length by a maximum depth visible of 0.08m. This overlay a dark yellowish-grey silty clay (14), with CBM, mortar and small stones.

Plate 12: Test Pit 10, post excavation, looking north

Test Pit 11

This test pit was dug through upper layers of the evaluation area (see below).

Evaluation of footprint of new toilet block

The old boiler house had been demolished prior to the first archaeological attendance, leaving a large amount of hardcore and rubble over the footprint of the proposed new building. The cellar of the boiler room and the boiler room walls (at cellar level) still remained.

After the contractors removed the hardcore and rubble, a mixed clay layer was revealed below, which may have contained earlier archaeological features. A 0.10m layer of made-up ground and soil was removed by the archaeologists by hand and the area was then cleaned to identify any archaeological remains. A further test pit (named Test Pit 9a) was excavated in the centre of the area in order to test for buried remains below the apparent made-up ground above.

The made-up ground or levelling layer (11) overlay much of the exposed area. This overlay a similar layer (12) of mid yellowish-brown silty clay, which was slightly cleaner material than (11), with few inclusions apart from gravel and charcoal flecks. Under (12) was a layer of demolition debris, largely consisting of limestone and ironstone rubble and silty clay (13) (Plate 13).

Plate 13: Footprint of new build, partially stripped, with part of made-up ground (11) removed and Test Pit 9a excavated

Test Pit 9a was excavated within the footprint area. This was originally 1m by 1m, but when possible features were revealed in the base of the pit, it was extended to follow the line of the features.

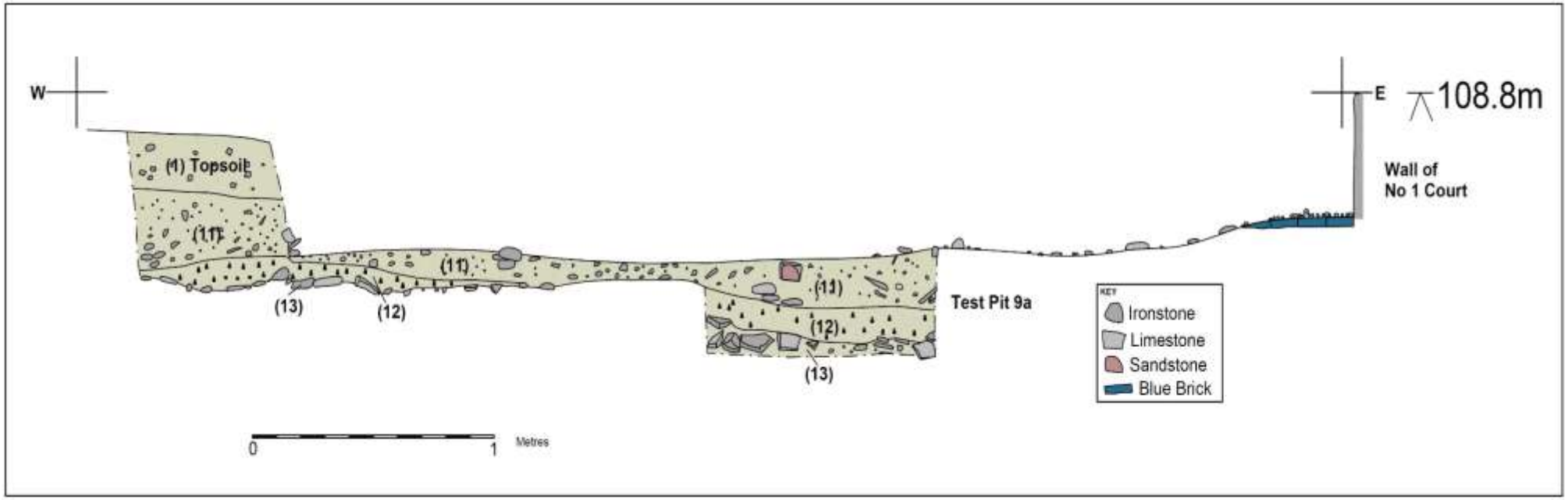

Figure 7: South-facing section across partially excavated trench from bank to building

Once the level of the uppermost archaeological features was confirmed, a mini digger was brought onto the area to extend the trench to the full width of the proposed new building and to the depth of the exposed archaeological layer. The total footprint area measured 12m by 4m, excluding the test pits cut into the bank to the west (T.Ps 7-9) and including the cellar of the old boiler house. A further test pit (T.P 11) was excavated close to the western edge of the trench to test for archaeological remains here. This measured 0.8m by 0.8m and was 0.65m deep. The section showed the sequence of (11) overlaying (12) and (13). Under this was a 0.08m thick layer of yellowish-grey silty clay (21) overlying a 0.20m thick layer of thin whitish-grey limestone, possibly roof tiles (22). There was also a lead water pipe exposed close to the south-east corner of the test pit, running south-west to north-east. The western edge of the trench was excavated to the depth of this test pit along the line of the footprint here as this would be the finished depth for the concrete 'toe' of the new building.

The trench over the proposed new building footprint was excavated to a final depth of around 1m from ground level along the western edge and around 0.5m along the northern edge. A layer of stony garden soil (mid greyish-brown silty clay) lay along the eastern edge of the trench against the brick course here (35).

Over much of the central area of the trench was a spread of roughly laid and irregular-sized ironstone and limestone cobbles, forming a surface, roughly running north to south across the trench (27). The matrix between the stone was a mid to dark reddish-brown with grey mottles of silty clay with gravel and crushed limestone and ironstone pieces (28). To the south of this area, the soil became cleaner with far fewer stones and was formed of a mid greyish-brown silty clay with crushed stone fragments, mortar and 13th- to 14th-century pottery (16). The deeper area to the west showed this in section but the layer was reached along this edge, so the thickness was unknown. This layer was relatively rich in finds compared to other areas of the trench. Cut into this layer were two linear features running north-east to south-west [18] and north-north-east to south-south-west [33] respectively, forming a Y-shape in plan. These features were identified in Test Pit 9a and were sampled with test slots before the area was fully stripped.

The water pipe was shown to continue to the north-east into the building. Across part of the trench the soil had been stained with a blue hue along the line of the water pipe, possibly from a previous leak from the pipe.

Feature [18] appeared to be visible for 1.55m and was 0.55m wide. It was 0.64m deep. The other feature was apparently 1.8m long and 0.8m wide; this part was not excavated.

It could not be ascertained which of the two features cut the other or whether they formed a single feature, but presumably they were back-filled at the same time as both respective fills were very similar consisting of mid orange-brown ironstone (19) with a matrix of mid reddish-brown slightly silty clay (20) and (34). On excavation, feature [18] had an upper fill of a mid yellowish-brown mix of limestone, mortar, silt and clay (15) overlying the main fill (19)/(20). Fill (20) contained early medieval pottery, possibly 12th-14th century or earlier. The clean soil layer (16) appeared to continue to the south-east of feature [33] as layer (17).

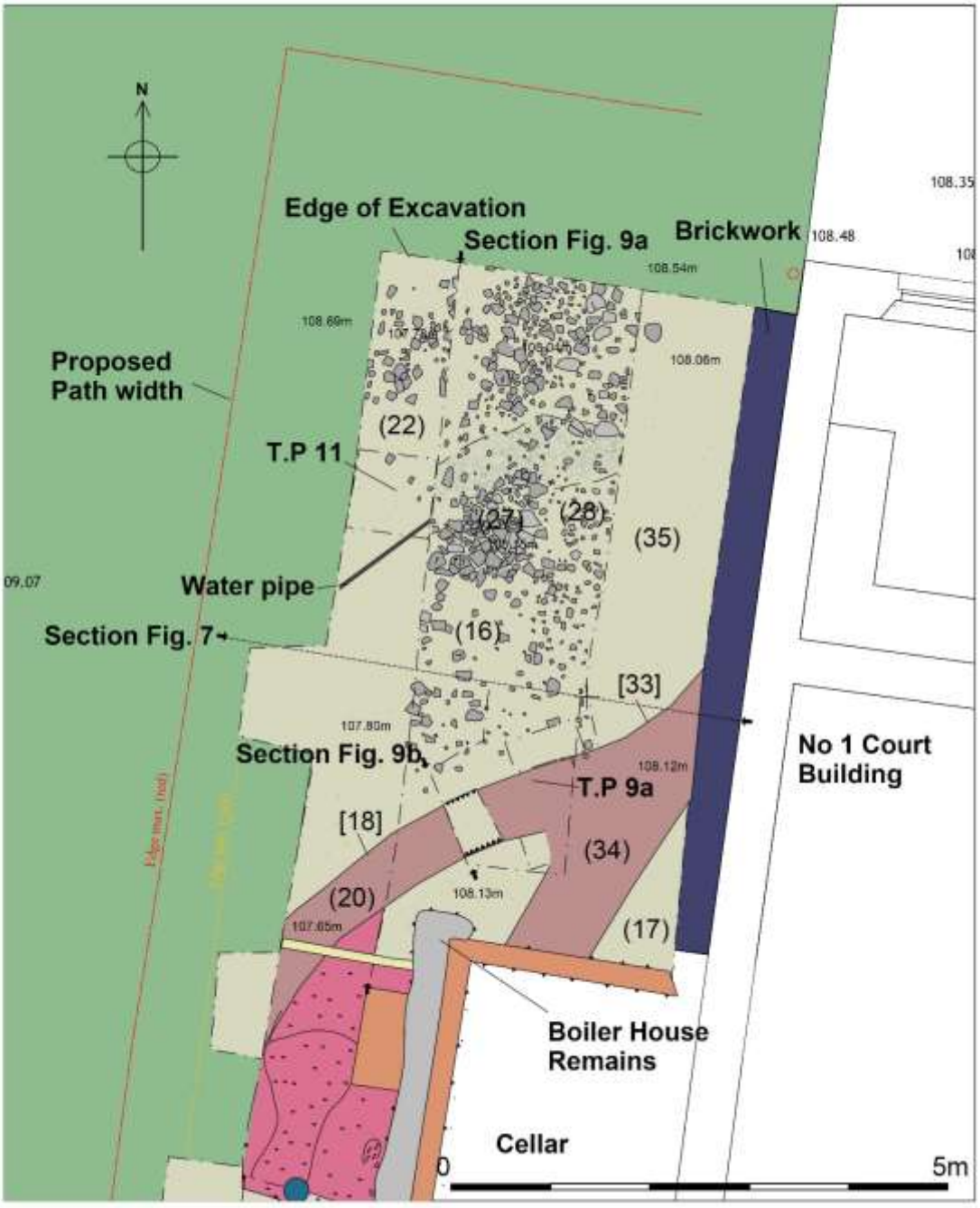

Figure 8: Plan of northern end of proposed new toilet block footprint

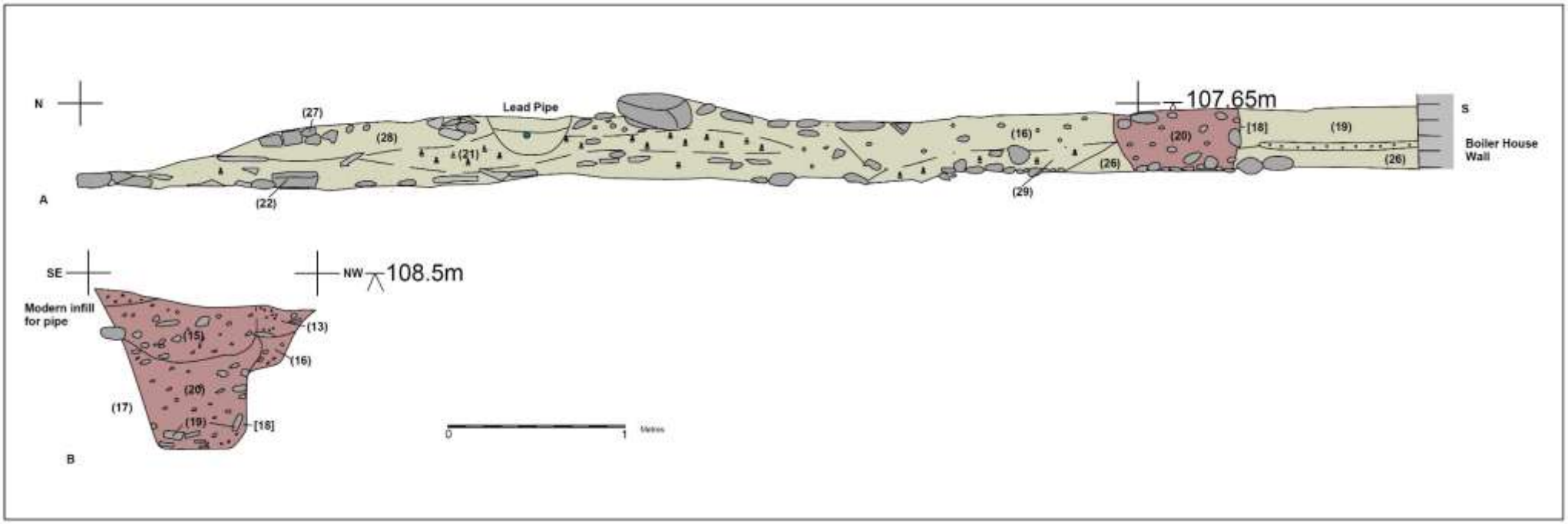

Figure 9: Sections from evaluation trench; footprint of proposed new toilet block

Plate 14: The evaluation trench, from the north, looking south

Along the southern part of the new building footprint, the trench was excavated to a depth of around 0.8m (to accommodate the toe of the new foundation slab) and was very narrow, around 0.45m, due to the extant cellar remains here. A modern yellow plastic gas main ran across the area from west to east and the brick pillar of the boiler house extended into the trench making excavation somewhat awkward (Figure 10: Plate 15).

Despite this it was possible to see the linear feature [18] continue to the south-west and apparently turn slightly southwards as it disappeared into the baulk. It appeared to cut into layer (26) here, which was crumbly reddish-brown silty clay with occasional ironstone pieces and charcoal. This lay under a thin (maximum 0.30m) layer of greyish-brown slightly silty clay (25), which contained mortar fragments and gravel.

At the southern end of the trench, under the turf line and topsoil, was a modern mixed overburden/ made-up ground of crushed hardcore, soil, ironstone and CBM, of between 0.25m and 0.35m thickness. Under this, only visible at the southern end of the trench in section, was a mid reddish-brown ironstone and clay mix, with crushed limestone and charcoal (23). Abutting this, and visible throughout the rest of the east-facing section and base of the trench was a light greyish-brown silty clay with mortar fragments and two sherds of medieval pottery (25). At the base of the trench, under (25) was a further layer of roughly laid ironstone and limestone (24), similar to that seen at the northern end of the trench (27), but at a lower level and clearly, when the sequence was ascertained through the visible sections within the trench, not of the same layer as

(27), but an earlier surface (Figure 11). This appeared to lay over (26) at this point, and therefore, in this area at least the reddish-brown silty clay of (26) was the lowest layer in the sequence, with pottery of an 11th- to 12th-century date.

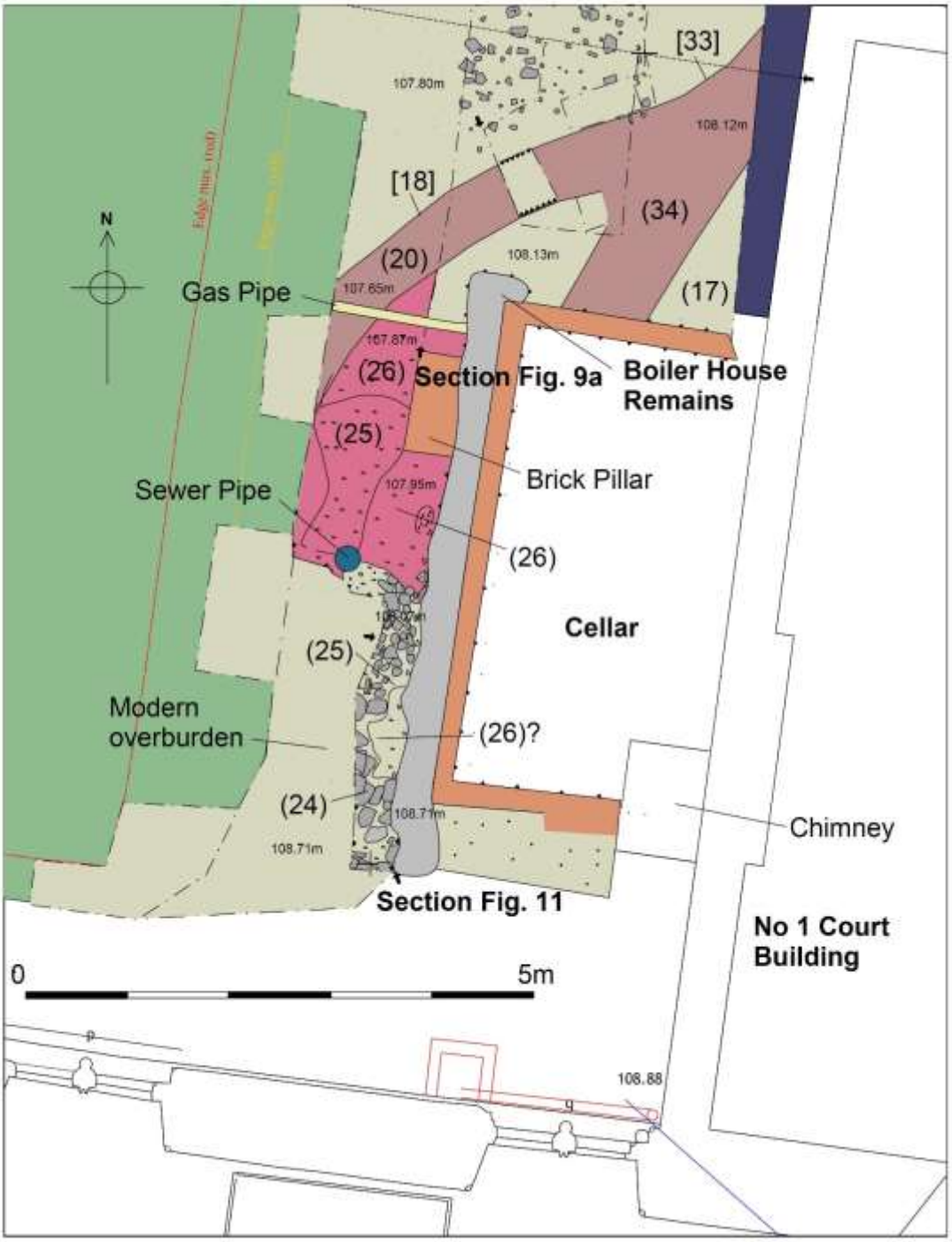

Figure 10: Plan of southern end of proposed new toilet block footprint

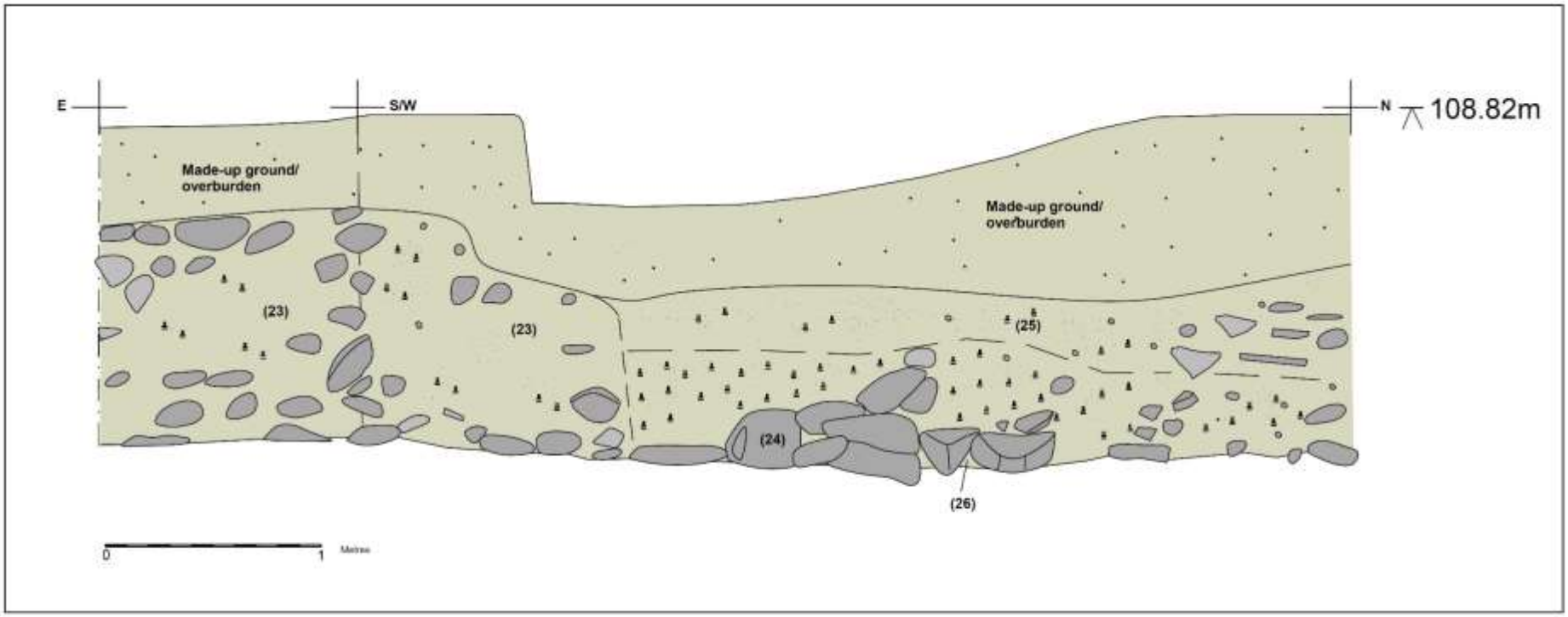

Figure 11: North and east facing section of southern end of trench

Plate 15: The southern end of the footprint trench, looking south, showing surface and clay layers

Subsequently, the cellar of the former boiler house was filled by the contractors and the concrete slab for the new toilet block was laid. The ground around the slab was reduced for the new pathway by between 0.3m and 0.70m. This was monitored by an archaeologist on Friday 17th and Friday 18th of December 2015. Only made-up ground similar to that seen at the southern end of the trench was observed and the works did not penetrate deep enough to uncover any further archaeological features (Plate 17).

Plate 16: Recording the evaluation trench on the footprint of the proposed toilet block, looking south-west from roof

Plate 17: Stripping for pathway, after concrete had been laid, looking south-west

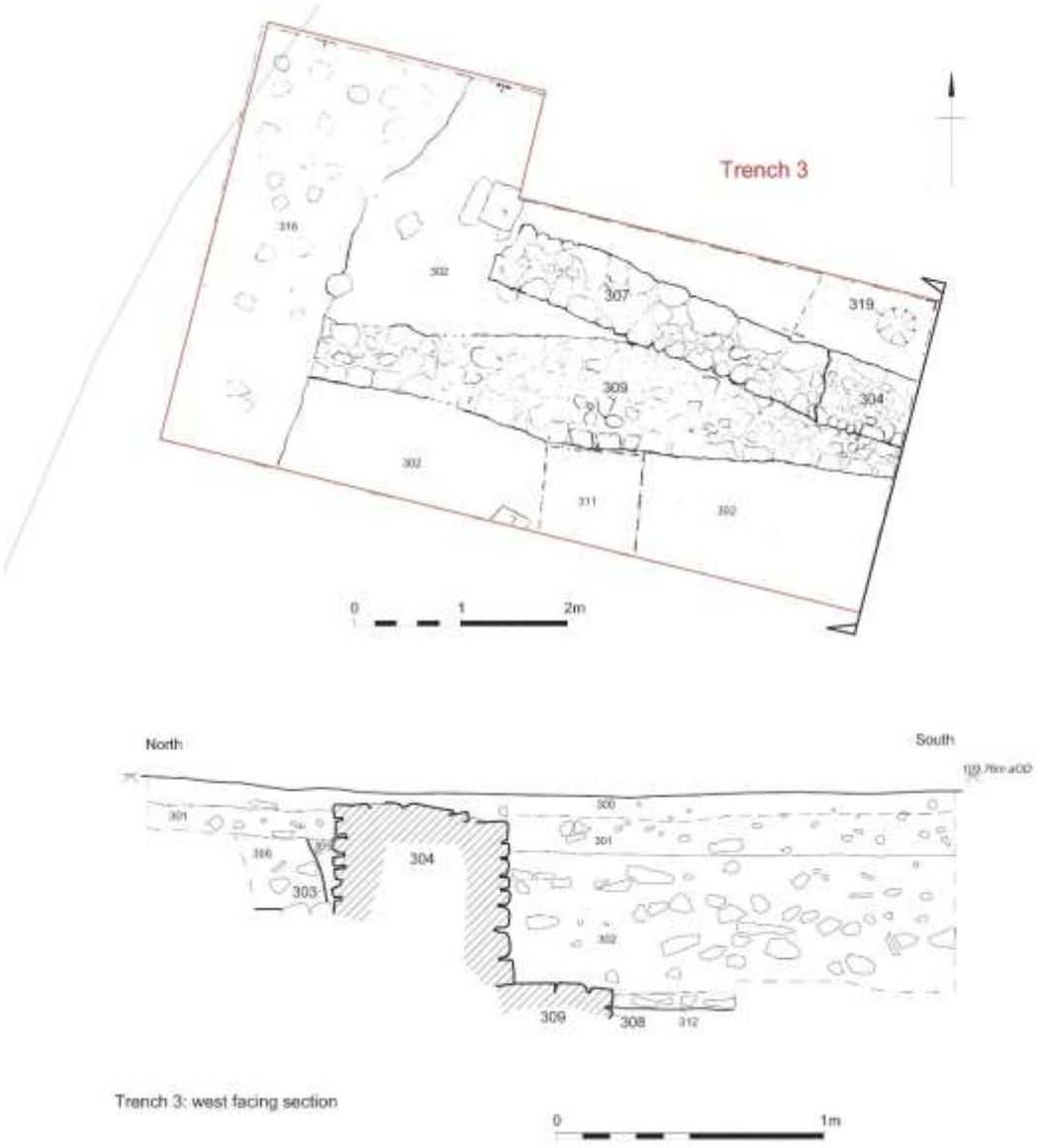

Figure 12: Features from Trench 3 of Wessex Archaeology/ Time Team trenches. From Wessex Archaeology report no. 85206.01

Extension to Time Team Trench

In 2014 Wessex Archaeology was commissioned by Videotext Communications Ltd to undertake a programme of archaeological recording and post-excavation work on an archaeological evaluation undertaken by Channel 4's 'Time Team' at Oakham Castle (Figure 12).

A total of 6 trenches were excavated in the castle grounds. Trench 3 was located just beyond the western end of the Great Hall and was excavated in order to establish whether there were any ancillary buildings in this area of the Castle, and also to attempt to establish the relationship between these buildings and the hall.

The following is summarised from the Wessex report:

The trench yielded evidence of three distinct building phases. The earliest phase comprised wall (309), on an east-west alignment and truncated at the western end by ditch (316). A sondage excavated beside the wall revealed that it was made up of two courses of ironstone blocks. The backfill of the construction trench (310) contained a single pottery sherd, dating to the 15th-16th centuries. Wall (309) was butted by a white sandy mortar layer (312), probably bedding material for a flagstone floor. The latter layer produced pottery sherds of mixed date, the latest dating to the 15th-16th centuries.

It seems likely that this wall was deliberately demolished, and was rebuilt again as wall (304), on a slightly different, north-west to south-east alignment, leaving only the final two courses of (309) and the mortar layer (312). Wall (304) survived as five regular courses of ironstone blocks with a core of smaller ironstone fragments. Wall (304) was itself rebuilt on the same alignment by wall (307). Only the southern faces of walls (304) and (307) were exposed, and there was no evidence for any associated floor surface(s). No dating evidence was recovered for the construction of either (304) or (307).

In the western end of the trench a large north-south aligned ditch (316) appears to have truncated both walls (307) and (309). This was not excavated fully due to time restrictions, and no dating evidence was recovered. Layers (306) and (311) appear to have been levelling layers, possibly pre-dating the construction of, respectively, walls (304) and (309). Pottery of mixed date was found in layer (311), the latest dating to the 13th-14th centuries.

The walls in Trench 3 appear to be considerably later, a 15th/16th century sherd occurring in the construction trench for the earliest wall in the trench.

The Wessex Archaeology evaluation did not establish whether the walls in Trench 3 continued across to the Great Hall. As the Test Pits around the proposed pathway extension had revealed possible structures, or at least the demolition layers or rubble core of possible structures (Test Pit 4; Features (3) and (4) etc) the decision was made to extend a trench from the known eastern end of Trench 3 to Test Pit 4.

The final trench was excavated for around 0.75m within the eastern edge of the backfilled Wessex Trench 3 to the edge of the path around the Great Hall to form a roughly rectangular trench measuring 4.5m by 4m and covering 17.5 square metres.

The turf and topsoil, plus some of the backfill of Trench 3 were removed with a mini digger. Once the masonry or undisturbed layers were reached the area was cleaned by hand.

Much of the western end of the new trench, which had been uncovered before, contained yellowish-brown silty clay soil containing a large amount of ironstone pieces and chunks, along with limestone tiles, modern CBM and various artefacts from a large range of periods. This lay on and around the remains of masonry walls.

At the eastern end of the trench, the sequence consisted mainly of the topsoil (1) and subsoil (2) seen elsewhere, overlying a compacted layer of yellowish-brown clay and silty clay with a large amounts of ironstone rubble (39), of which some fragments had the appearance of being roughly worked. This layer seems to correspond with demolition layer (302) recognised by Wessex Archaeology during their excavation. The subsoil contained 13th- to 15th-century pottery and ridge tile, including part of what might be a chimney, and later 17th- to 18th-century pottery.

Plate 18: The extension to the Wessex Trench, partially excavated, looking north

The eastern ends of the walls revealed within the previous Wessex Trench 3 were soon identified. A further 0.8m of the upper wall (304) was identified (now wall (38)), along with 0.3m of the lower wall (309) (now wall (52)). As in the case of (304) the new section of wall (38) ran approximately east to west with a slight kink to the north-east. It was roughly coursed and roughly earth bonded and was constructed of ironstone (with one or two pieces of limestone) roughly finished blocks of differing sizes, from a few around 0.10m across to many around 0.40m across. The core was of ironstone rubble. It was truncated at the eastern end by what at first appeared to be a robber trench [37]/ (36), but after investigation proved to be the cut for a modern gas pipe. The fill of the gas pipe (36) contained a large amount of pottery and ridge tile including 15th- to16th-century wares, and some earlier 13th- to 14th-century material. This was between 0.26m and 0.48m wide and ran broadly from south to north before turning to the north-east, clearly on the same alignment as the gas pipe identified in the footprint evaluation trench (see above).

This had also truncated the rubble layer (39) that lay over most of the trench. When this layer was removed it exposed further similar layers beneath. On the southern end of the site around 0.60m of this rubble was removed. Where archaeological features or layers were not identified the rubble continued, with the ironstone blocks becoming slightly larger but the matrix remaining largely the same as a yellowish-brown silty clay (51).

On the eastern side of the gas pipe trench, on the same alignment as (38), was a small section of wall, mainly rubble core with a few roughly faced stones on the northern elevation (44). This continued for around 0.70m before seemingly petering out. It was 0.83m wide and constructed in the same fashion as (38), and is likely to be the continuation of this feature. This section of wall appeared to have a cut [53] (not visible

with (38)), approximately the width of the wall itself and cut into a mid reddish-brown slightly silty clay layer (54) with charcoal flecking and small angular stones. Given that the wall cut appeared to truncate this layer, it seems to be the oldest deposit in this trench.

Plate 19: Wall remnants (38) and (44) truncated by gas pipe, looking north

A small sondage was excavated to the south of the two sections of wall (38) and (44) in order to see what was below the layers here. A mid greyish-blue silty clay (42) was identified, which overlay a layer of light creamish-brown lime mortar (41) and whitish-brown rounded limestone pebbles (40), which appeared to abut lower wall (52) and were probably the remains of the bedding for an internal floor. This layer corresponds to layer (312) identified in the Wessex trench as a bedding layer for wall (309). A light creamy-brown mortar layer was also identified to the south of wall section (44), which may be the bedding layer associated with this later phase of wall (along with (38)). This layer seemed to be sealed by clay layer (42), which may mean that this layer was simply build-up from some period of abandonment.

On the northern part of the site, the lower layers under demolition deposit (39) were distinctly different suggesting that the ground on each side of the wall represented internal and external contexts, with the area to the south of the wall, which appears to include floor layers as representing the inside of a building.

To the north of wall (38) was a disturbed area containing the remains of the backfilled modern post-hole (319) located by Wessex in the north-east corner of Trench 3. To the north and east of this was a layer of yellowish brown silty clay soil and sparse rubble (45), presumably a demolition layer on the outside of the walls.

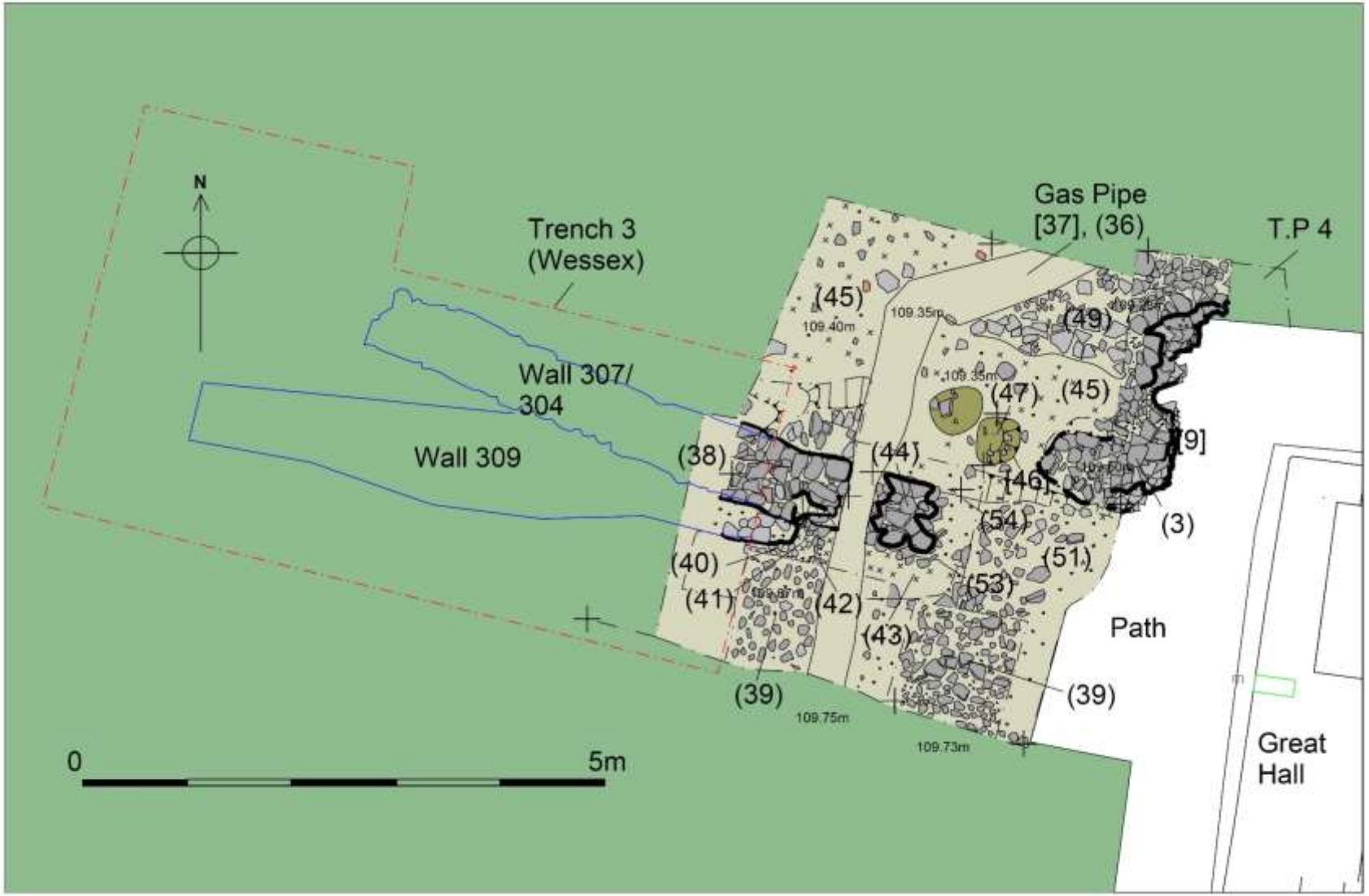

Figure 13: Plan of features in extension to Wessex/ Time Team trench

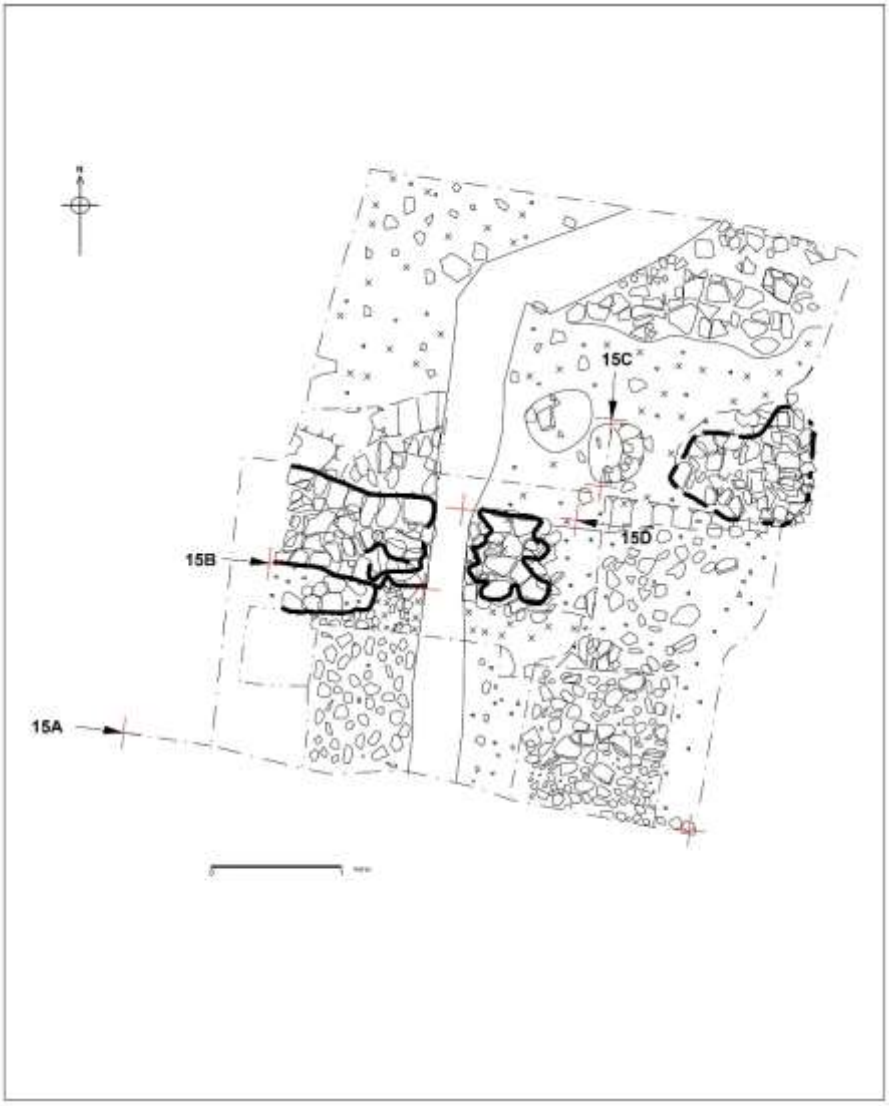

Figure 14: Plan of trench showing positions of sections (see Figure 15)

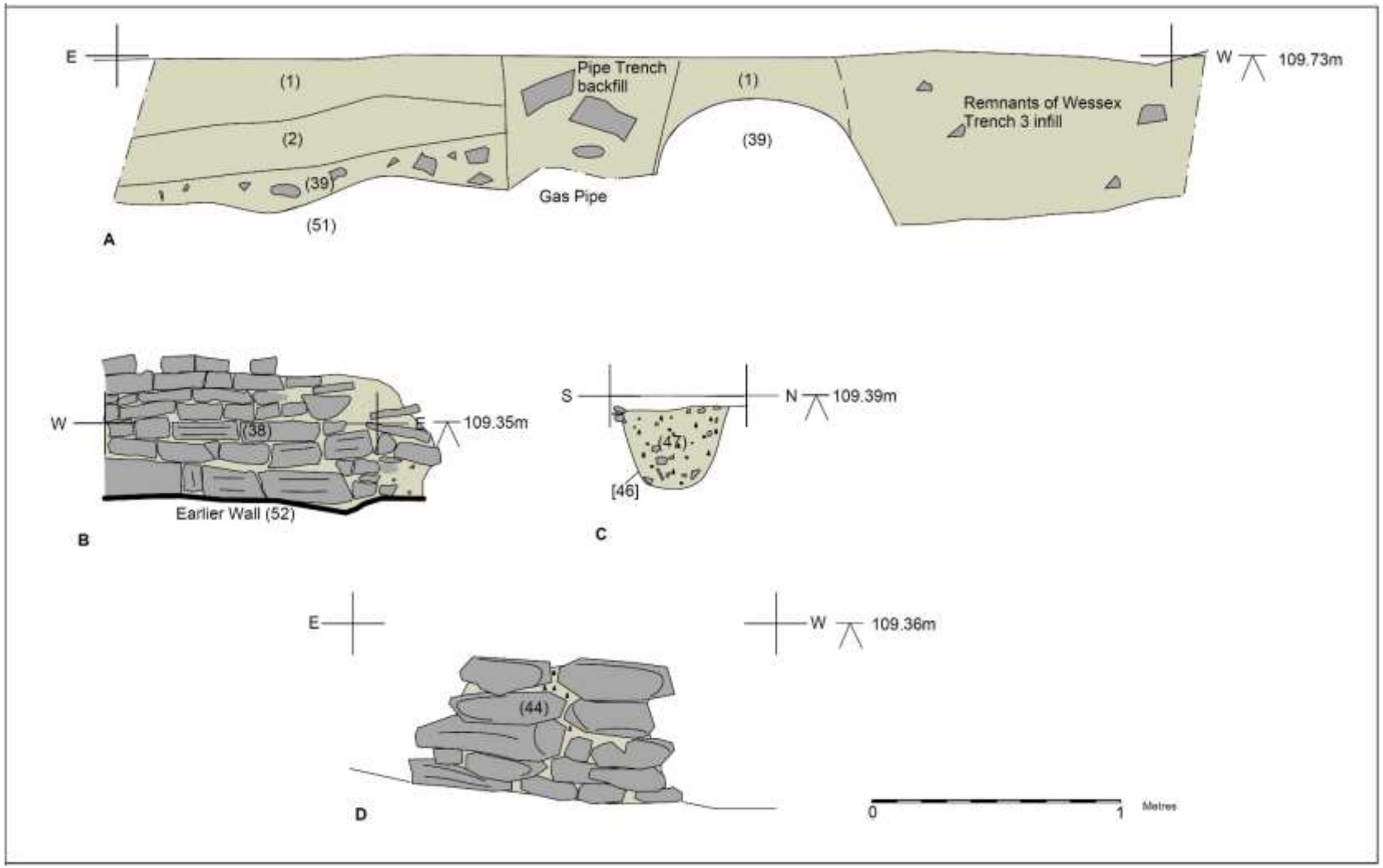

Figure 15: Sections from Wessex trench extension

Cut into this layer just to the north of wall (44) were two post-holes of similar form. One of these [46] was excavated and measured 0.55m in diameter and was 0.32m deep. It had a concave shape and a concave base. The fill (47) was a mid greyish-brown mottled yellow silty clay with limestone and ironstone fragments, and late medieval pottery and modern glass. The second post-hole (48) was not excavated.

In the north-east corner of the trench was a roughly laid surface made up of fragments of limestone slates of varying sizes, laid into the aforementioned silty clay (45) and running broadly east to west and truncated by the gas pipe trench. This 'surface' (although the slate would be too fragile for a path), was under the dump of material seen in Test Pit 4 and labelled (4) as a collapse of masonry related to (4) in some way. After clearing the masonry the layer labelled (4) was revealed as a dump of material mainly consisting of piled up slates and rubble. Both areas of masonry (3) and (4) may be seen as demolition layers relating possibly to a structure, of which the walls discovered by Wessex/ Time Team and during this current work were an integral part.

After recording, the excavation here was backfilled using a small machine and dumper after the spoil was checked over by metal detector.

Subsequently, after the area was backfilled and re-seeded with grass a number of surface finds from the backfill had been picked up by members of the public and visitors to the site. These were retrieved by an archaeologist during a later visit and were washed and analysed along with the finds from the excavations and watching briefs and are listed in Appendix III. They contain a large range of materials from different periods.

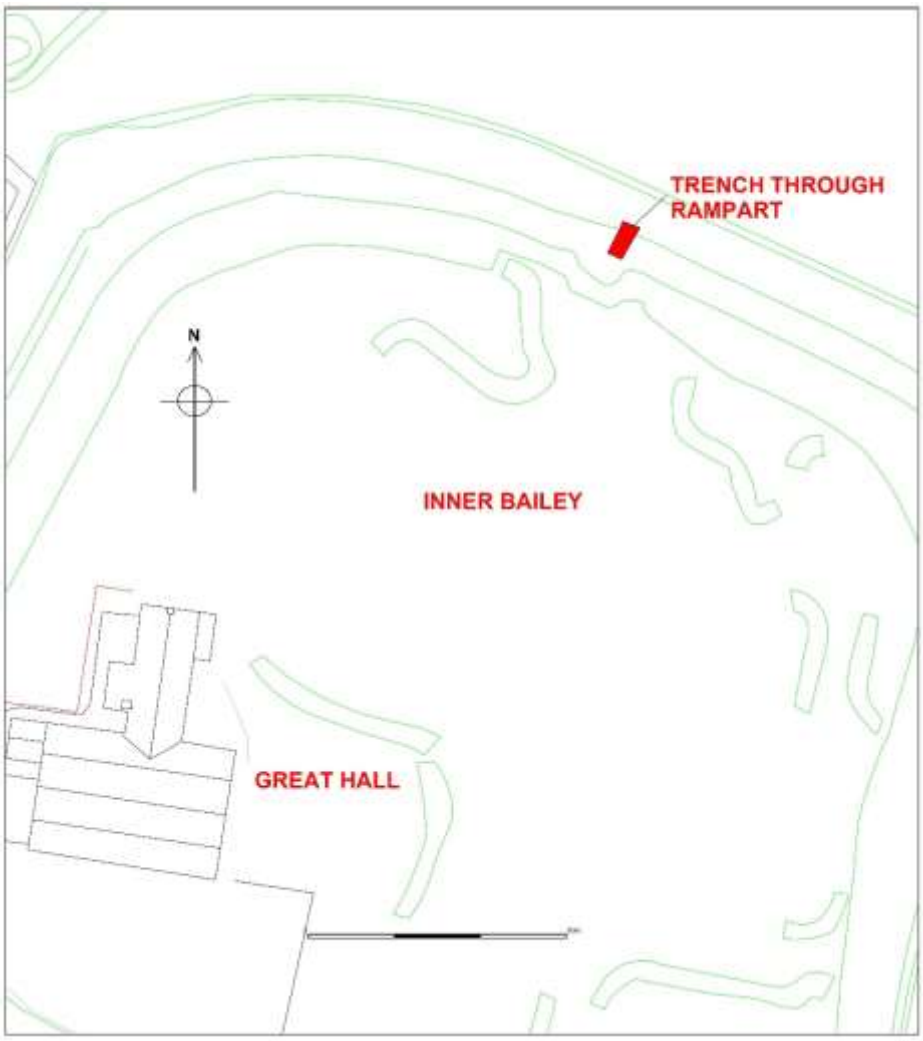

Figure 16: Location of trench through rampart wall

Evaluation trench through north curtain wall

An evaluation trench was cut into the northern section of the ramparts with an aim to see the preservation and extent of the curtain wall on top of the castle ramparts (Figure 16).

The wall was probably built to replace a wooden palisade and runs the full circuit of the castle ramparts. Prior to the excavation of the trench much of the vegetation had been removed. The trench was placed in an area that was relatively safe; as the ramparts were steep and often treacherous after rainfall, in an area where the rampart appeared less damaged and beyond the areas of known badger activity.

The core material and top three courses of the wall on the exterior face were already exposed due to erosion and root damage. The section of wall uncovered (31) was approximately 1.80m wide, but it was unknown whether this is the original width due to the internal face (32) being re-faced with probably displaced stone and concrete, possibly as a blocking measure to prevent the core material from collapsing. Such collapse and erosion was evident across the ramparts.

Plate 20: View of external face of rampart wall, looking south-west

Plate 21: View of internal face of rampart wall, looking north-east

Plate 22: View of rampart wall from above, looking east

The external face of the curtain wall survives fairly well with up to at least seventeen courses exposed during this work (Figure 17). It is constructed of roughly hewn iron stone blocks of differing sizes and shapes, and is roughly coursed and earth bonded. The depth and extent of the wall is unknown. There is a curious gap or void in the lower south-east courses in the wall section exposed, possibly deliberate for drainage or most likely from animal disturbance which has later been patched up with displaced stone.

The rampart itself is made up of eroded and slumped material (50) that has washed down over time, which overlies the original rampart material (30), the curtain wall was cut into the original rampart material (Figure 18).

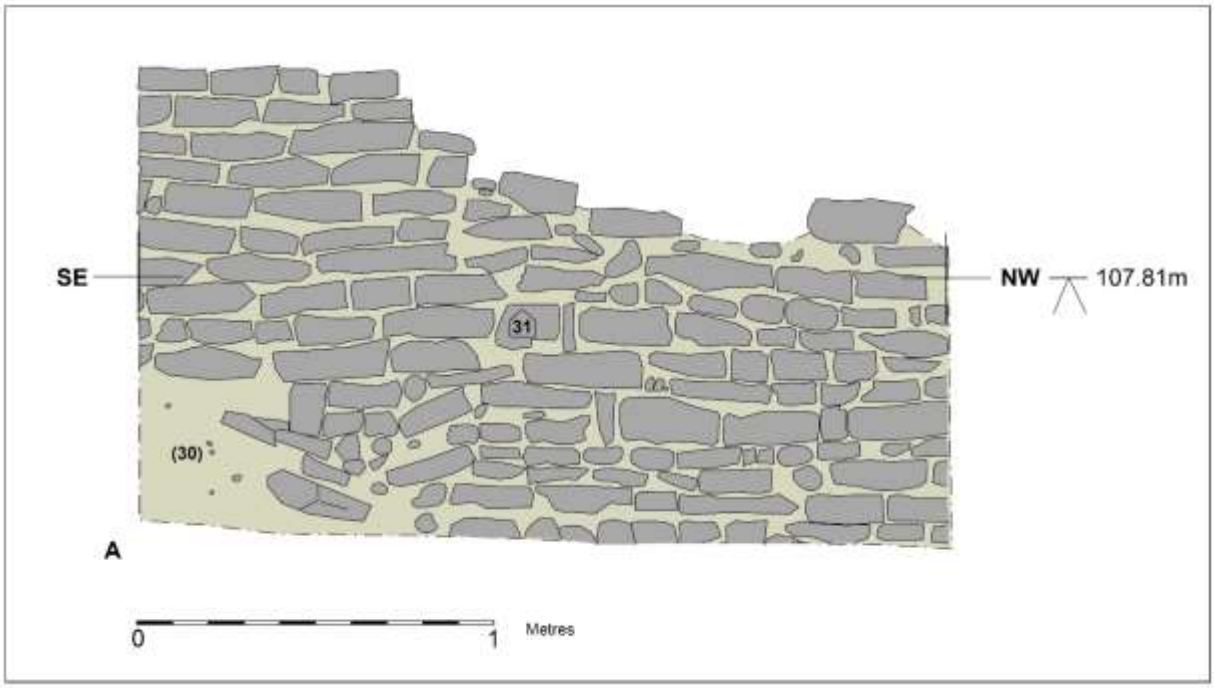

Figure 17: North-east facing elevation of rampart wall

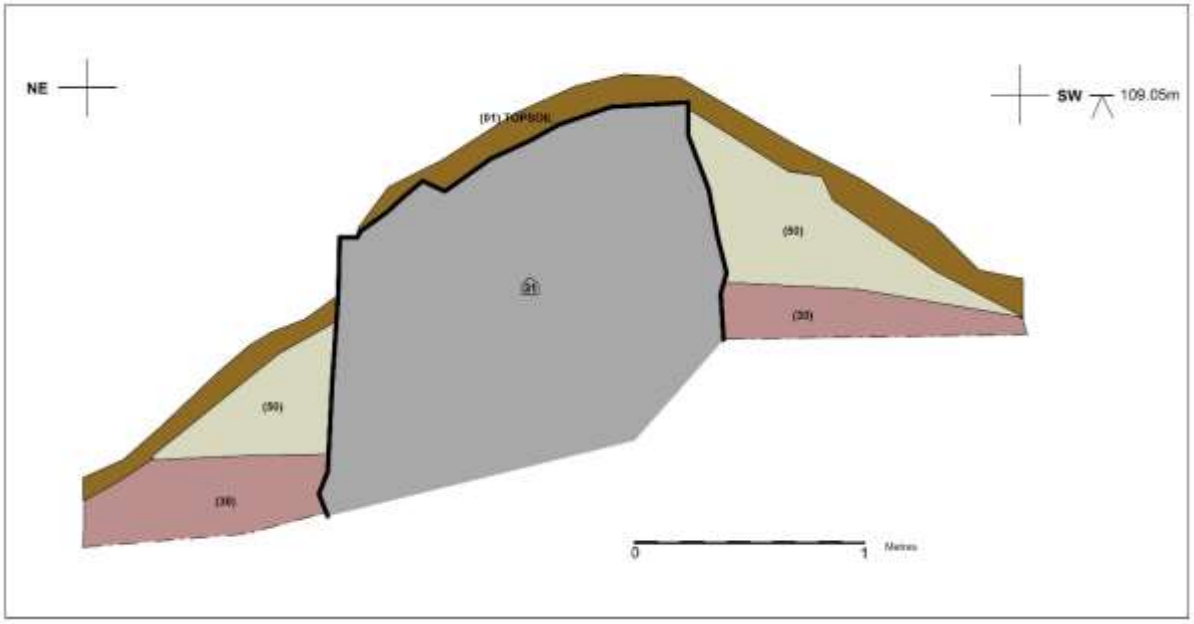

Figure 18: North-west facing profile through rampart wall

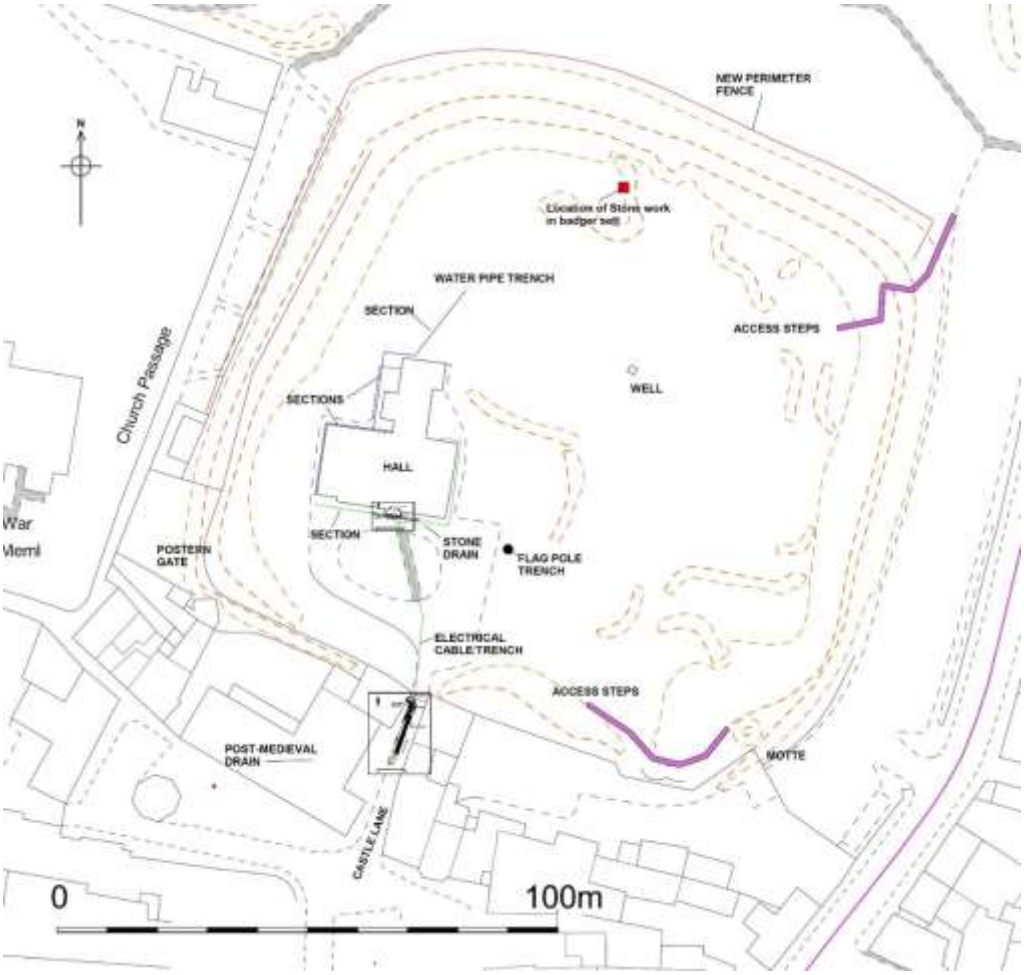

Figure 19: Plan of Oakham Castle with later phases of work

Later Phases of Work

A new perimeter fence was installed 18th December 2015 for which a series of test pits were excavated and then the final phases of archaeological work were carried out between 10th March 2016 and 16th May 2016. The work focussed on the excavation of trenches for a water pipe, trenches for electricity cables, an area within Castle Lane to replace high voltage cables, a photographic survey of the well within the castle grounds, a photogrammetry survey of the rampart walls and a test pit for the installation of a flag pole.

Plate 23: West facing section of Test Pit A at perimeter fence, looking east

Plate 24: View of the completed perimeter fence, looking north from western rampart

The perimeter fence

A metal perimeter fence was installed around the western and northern sides of the rampart walls, between the ramparts and Cutts Close. It was decided that every tenth post hole would have a 0.50m by 0.50m test pit excavated to record any potential archaeological deposits present. Test Pits A and B were excavated along the Western side of the castle ramparts, Test Pit A revealed approximately 0.20m of topsoil (1) overlaying a layer of mixed dark brownish-grey silty clay (66), most likely eroded rampart material (Plate 23). Before Test Pit B could be excavated, concrete slabs which were part of a short path had to be removed which were sitting on top of the probable eroded rampart material (66). Test Pits C, D, E, F and G were excavated along the North side of the castle ramparts. Test Pits C and D revealed topsoil overlaying a layer of mixed light brownish-grey silty clay (67) which was the backfill surrounding a modern storm drain. Test Pits E and F revealed topsoil overlaying a layer of mixed light greyish-brown silty clay (68), most likely eroded rampart material. Test Pit G was unable to be fully excavated due to compacted, modern made ground beneath the topsoil.

Plate 25: Line of new access steps to Motte marked out, looking east

Plate 26: Steps to Motte partially constructed, looking east

Installation of new access steps to the Motte and rampart walls

Two sets of gravel filled wooden steps were constructed from the inner bailey over the rampart walls to the Motte in the south-eastern corner of the site and over the rampart walls in the north-east corner of the site. The steps were constructed and laid on the ground surface with no impact on the structure of the monument save for a series of metal spikes to retain the wooden planks, which were driven into the rampart structure with a hammer (Plates 25 & 26). Guard rails were added at a later date.

Water pipe Trenches and drains

A 1.60m by 1.30m test pit was excavated to the north of the Great Hall with the aim of finding the existing sewer pipe. Around 0.20m of topsoil was removed and approximately 0.80m of made ground. The sewer pipe was seen to be running north to south with another length of pipe running north-east to south-west, inserted into a hole created in the side and roughly covered with concrete.

Following this the former pathway area to the west of the Great Hall was excavated by machine to lower the ground level by approximately 0.10m and slope the bank leading down to the current footpath. The finished area was around 0.60m wide and only the yellowish brown silty clay layer exposed during the earlier test pit evaluation along here was identified. A lead water pipe was exposed running the whole length of the stripped area from the western elevation of the cell building here to the south.

The proposed route of the water pipe trench around the western side of the Great Hall was then marked out. A mini digger excavated the trench, with a 0.50m-wide ditching bucket, to a depth of 0.60m through a layer of modern backfill (63) (Plate 27; Figures

20 A & B). As the area had previously been excavated during the evaluation of the old boiler house, no archaeological features were uncovered, only residual medieval and post-medieval finds from the backfilling of the area at the end of the previous works were recovered. As the trench continued northwards only 0.20m of topsoil (1) and 0.30m of subsoil (2) were observed (Figure 20C).

The paving stones were removed from the exterior entrance way of the Great Hall to repair an existing drain pipe and install new drains. An area measuring 3.00m by 1.20m was excavated to a depth of 0.30m through previously disturbed ground. No archaeological features were uncovered during this work.

Plate 27: Work in progress on water pipe trench, west side of building, looking north

Test Pit for Flag Pole

A test pit measuring approximately 0.80m wide and 1.20m long was excavated for the installation of a flag pole to the East of the Great Hall. After the Topsoil had been removed it became very clear that the area had previously been truncated due to the presence of a very mixed and disturbed made ground and after encountering a live BT cable (Figure 20D). No archaeological features were uncovered.

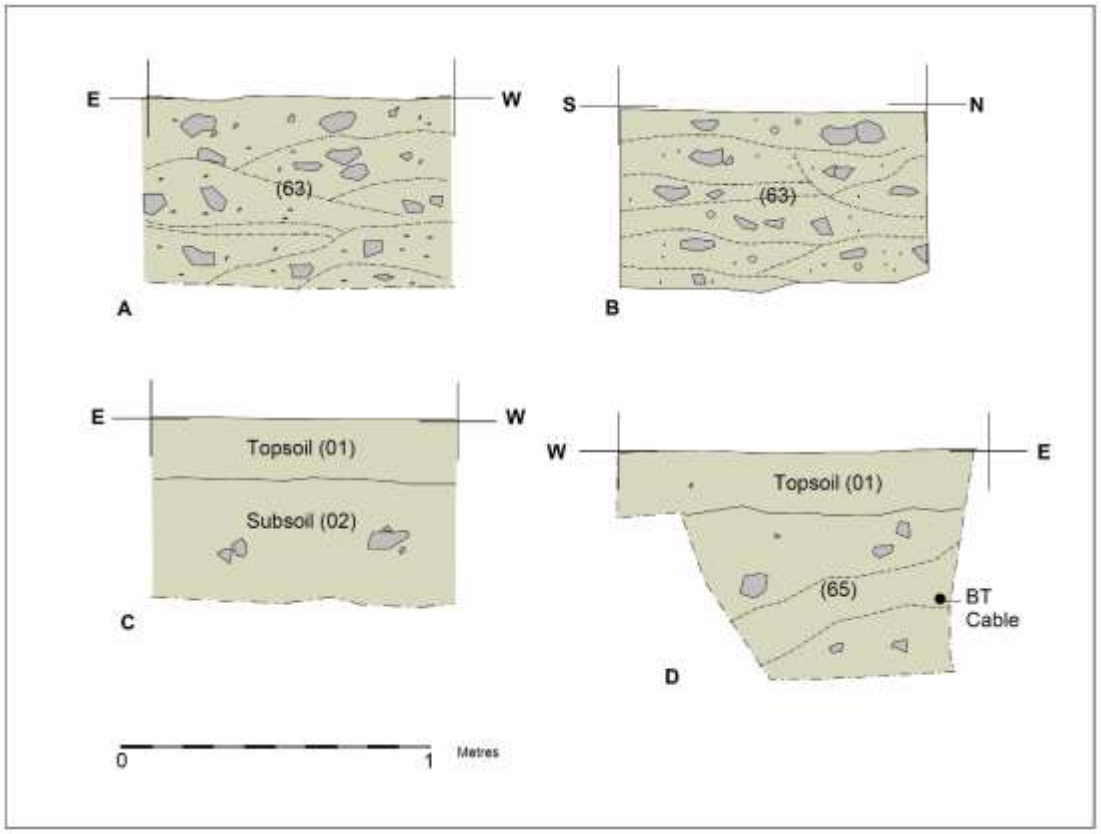

Figure 20: A- C: Sections along water pipe trench. D: Section of flag pole trench

Electricity Cable Trenches

The trenches for the electricity cables to power the external spot lights were excavated by a mini digger, with a 0.50m-wide ditching bucket along the front of the Great Hall to a depth of 0.35m and followed the footpath leading from the main entrance to the castle gateway. After the contractors had removed the Tarmac, a mixed clay and rubble layer was revealed below, which appeared to be a heavily truncated deposit most likely due to landscaping of the area to create the car park and footpaths. This made-up ground or levelling layer (64) continued the entire length of the trenches and contained several sherds of pottery ranging in date from the 18th century to the modern period (Figure 21 A & B).

Underlying this was a stone-lined drain (57) and (58) located directly outside the main entrance to the Great Hall (Plate 28: Figure 22). The drain was constructed with parallel stone walls, the central hollow element covered over with worked masonry, most likely pieces left over when the doorway was moved to its current position. Stone course (57) consisted of 3 or 4 courses of shaped limestone with no mortar with the opposing course (58) consisting of a single course of limestone blocks, plus single ironstone block, which were not as well-dressed as (57). These were laid into yellowish-red sandy silty clay and appeared to run round (57) and headed northwards towards the Hall.

No other archaeological features were uncovered. However, some residual medieval and post-medieval finds from the landscaping of the area were recovered from the trenches.

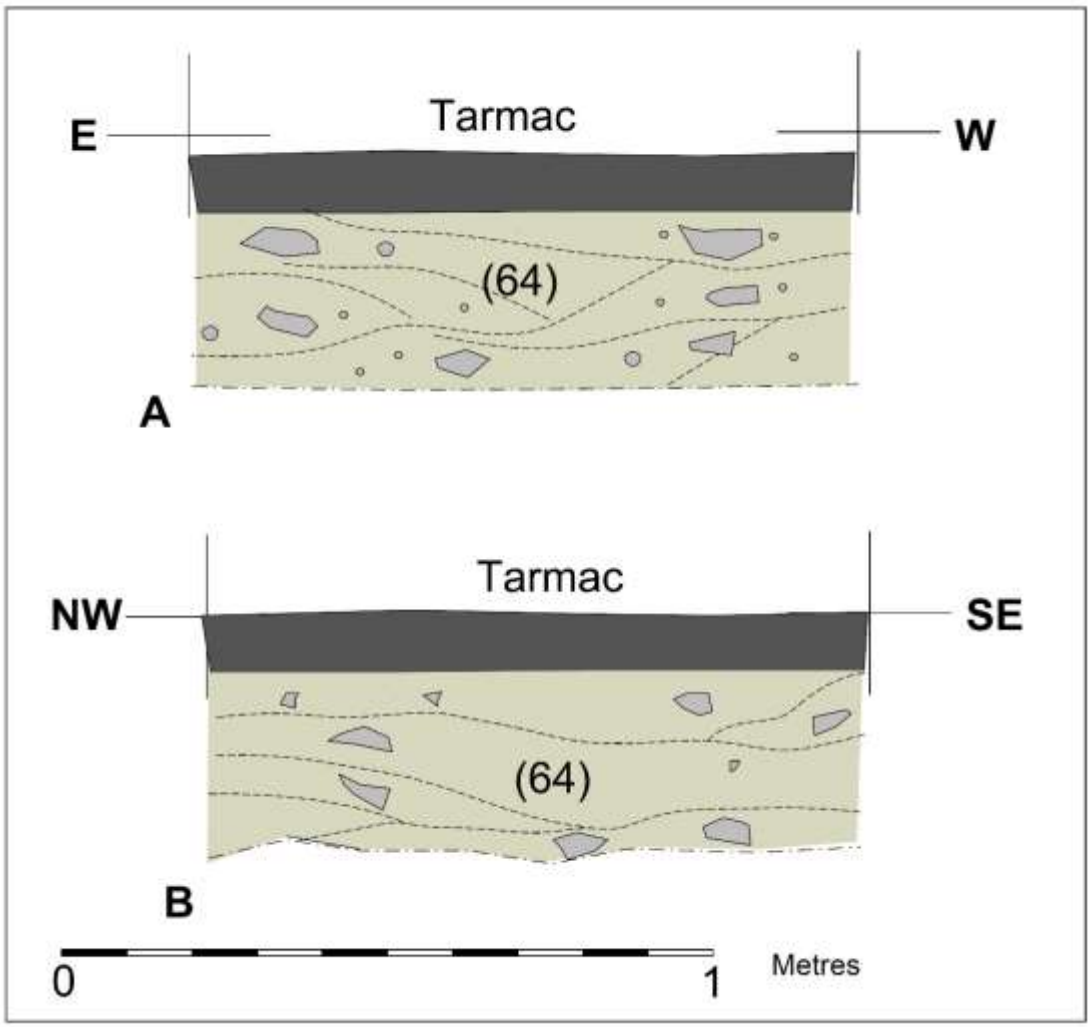

Figure 21: A & B: Sections through electricity cable trench

Plate 28: Stone drain in electrical trench, looking east

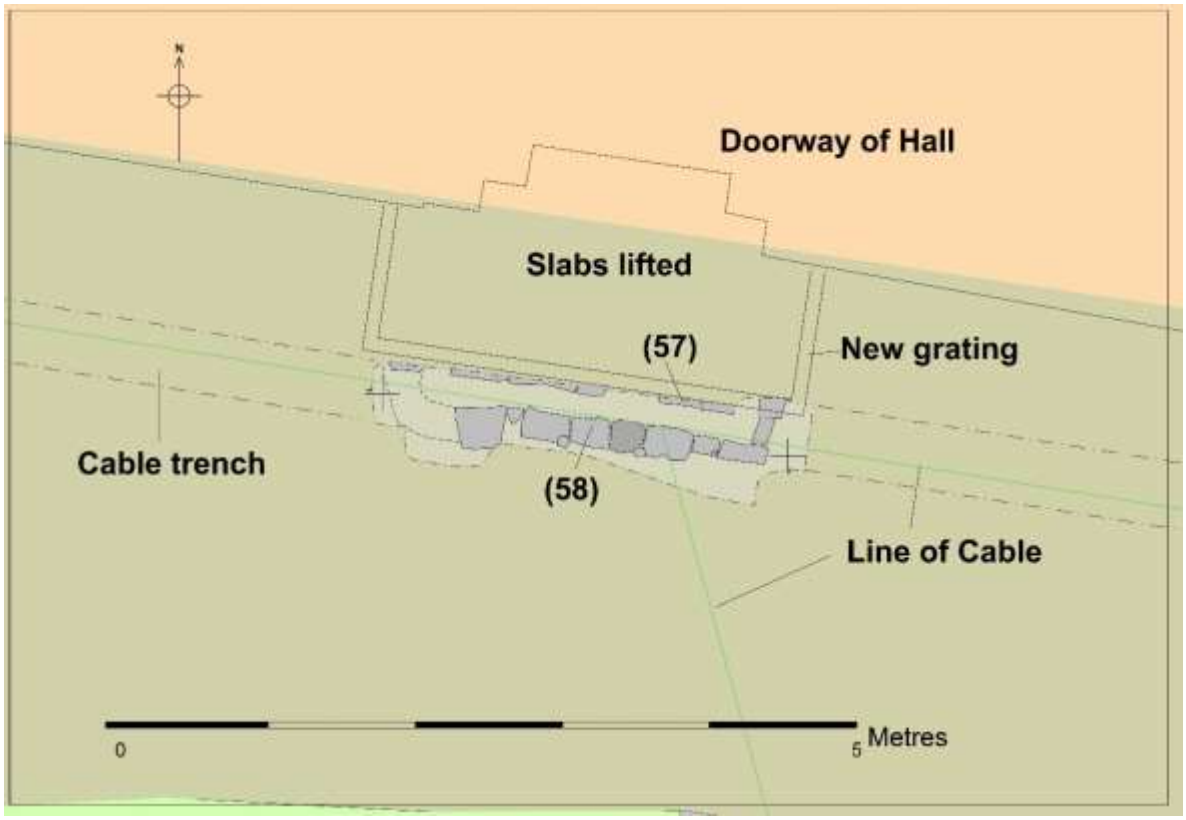

Figure 22: Plan of stone drain to south of main doorway

Plate 29: Work in progress Castle Lane, looking south

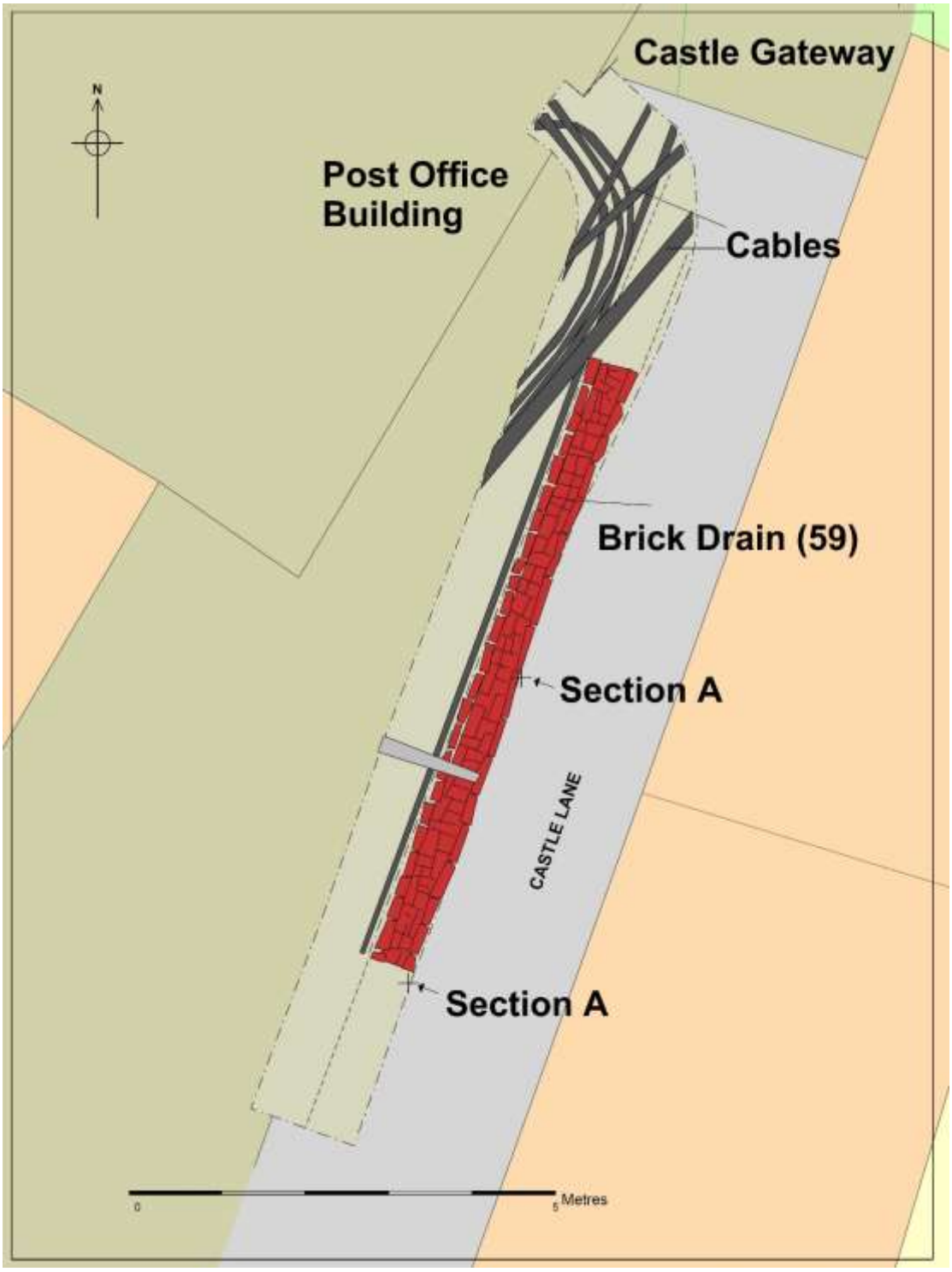

Figure 23: Plan of post-medieval drain in Castle Lane

Castle Lane

An area was excavated in Castle Lane to replace faulty high voltage cables (Plate 29). After the contractors had removed the cobbles, concrete and made ground (62), a brick-built post-medieval drain (59) was revealed running the length of the street (Figures 23 & 24). The drain was approximately 0.50m wide but the full length is unknown due to

the presence of live, high voltage cables. A series of ceramic 'U'-shaped drainage gullies (60) and (61) ran into the drain from the east. It is unknown whether these ceramic gullies continued to the west of the drain due to modern disturbance and the presence of a water pipe running the length of Castle Lane parallel to the drain. Again, some residual medieval and post-medieval finds were recovered from this area, mainly from the made-up ground layer (62).

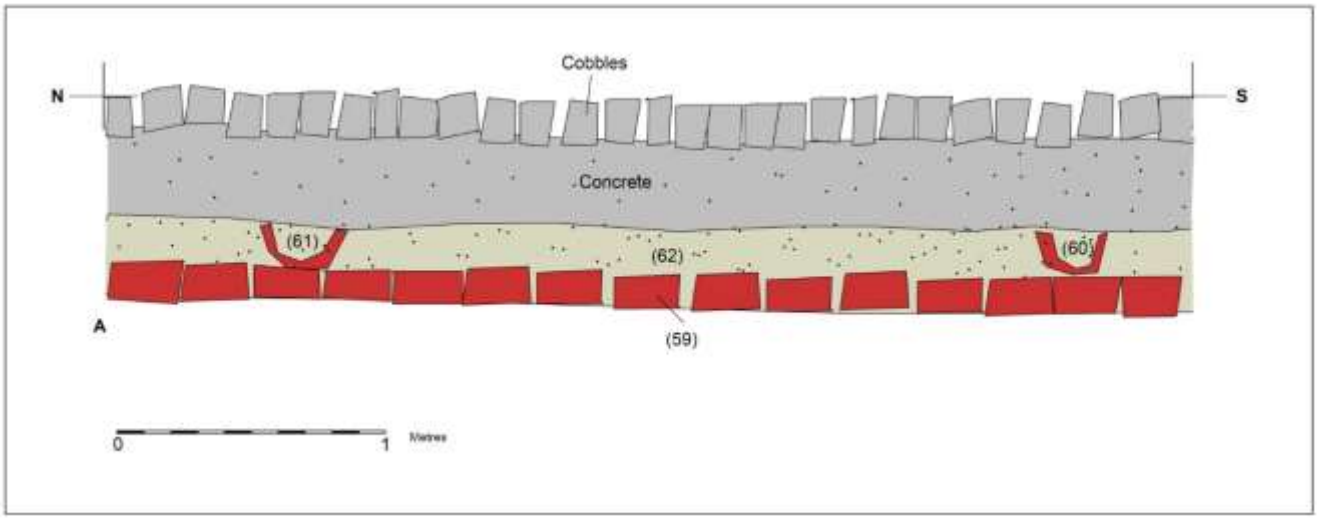

Figure 24: East facing section of drain in Castle Lane

Plate 30: Internal shot of well, cap in place

The Well

The well in the Castle Grounds was scheduled to have the concrete cap removed and to be backfilled with rubble and hardcore. Before this took place a photographic survey of the inside of the well was completed to establish the construction and the level of preservation beneath ground level.

Due to the unstable ground surrounding the well and the risk of the well collapsing, a strategy involving lowering a digital camera on a camera pole through a hole in the concrete cap was proposed and undertaken. The photographs showed that the well was constructed of roughly shaped iron stone blocks with no obvious bonding material. Due to limited access it was not possible to determine the full depth (Plates 30 & 31).

After the concrete cap had been removed it became clear that the walls of the well were very unstable and the western side had already started to collapse inwards (Plate 32). The well was backfilled with mixed rubble and hardcore, then covered with topsoil and grass seed.

Plate 31: Internal Shot of well. It was not possible to include a scale, but the tennis ball measures 6.86 cm in diameter

Plate 32: Well with cap removed and being pumped out

Motte Borehole Survey

Rachel Small and Luis Huscroft

Six borehole cores were extracted from the Oakham Castle motte by Intec Consulting at locations decided by them (Figures 25 & 26). It was felt that their study had the potential to help understand the construction methods, materials used and dating evidence for this feature.

Cores 1, 2 and 3 were taken from the upper levels of the motte and were most likely through recent material and were therefore not studied.

Cores 4 and 5 appeared closer to pre-motte ground levels and were analysed, although it was thought possible that they may have gone through slippage on the southern side of the motte or ditch fill. Core 6 was taken from a similar location but was incomplete and was therefore not studied.

The maximum height of the motte above Ordnance datum was about 114.75m and the base was probably around the 107m mark, but this was difficult to measure accurately.

Methodology

Cores 4 and 5 were spilt longitudinally using a saw. The two halves studied were photographed and drawings completed to illustrate stratigraphy (Figure 27: Plate 33 & 34). Associated soil descriptions were made following ULAS (2015) recording guidelines. Sub samples were taken, approximately 250ml from each deposit. The exception was deposit H, from which three sub samples were taken - top, middle and bottom - as the deposit was thick. Modern top soils and sub soils were not sub sampled.

Each sample was processed using the bucket flotation method. The deposit was placed in a bucket, water added and the mixture agitated. The water was then poured off into 0.3mm mesh sieve, and the process repeated until the water ran clear. 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 sorted for artefacts.

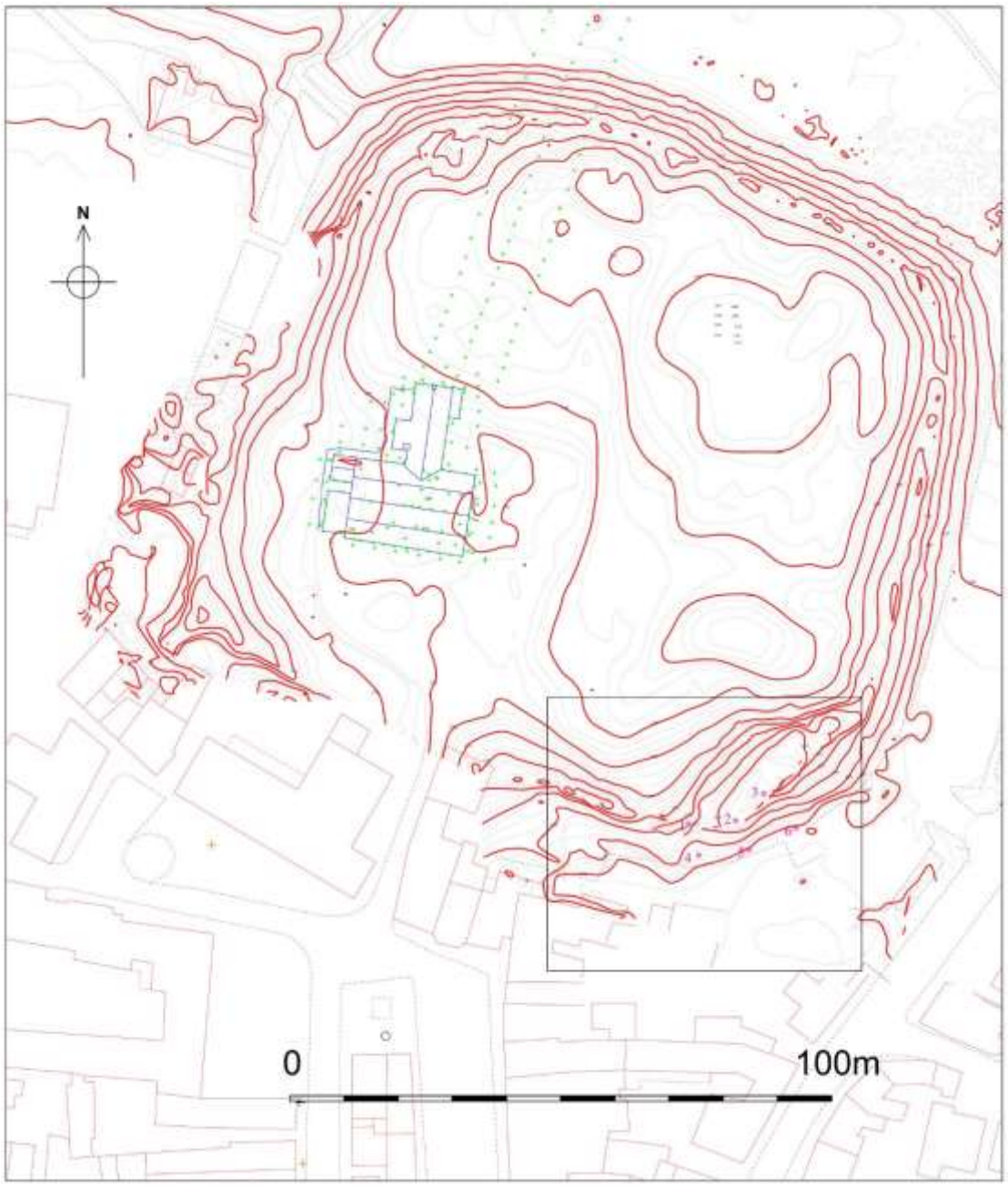

Figure 25: Location of motte and borehole survey

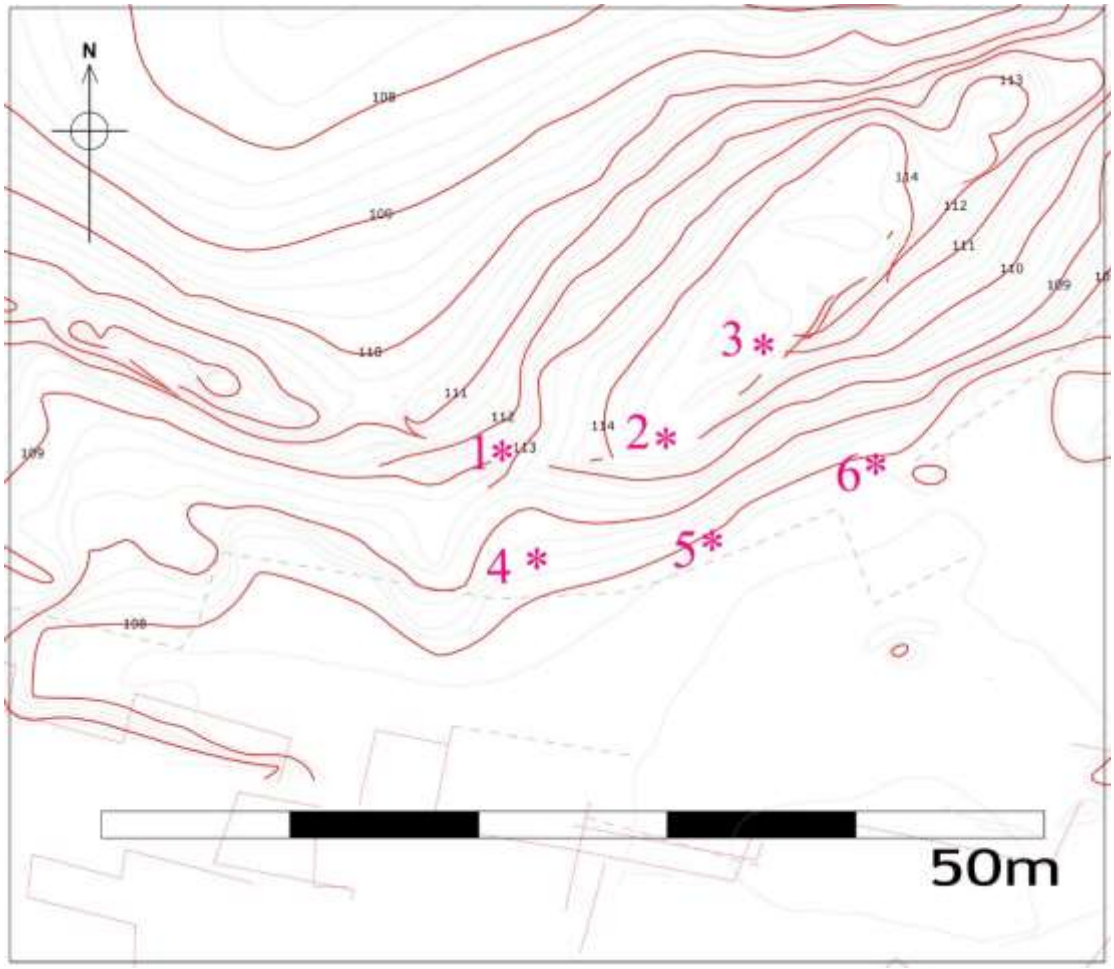

Figure 26: Locations of boreholes on Oakham Castle motte

Borehole	Length	Top height (aOD)	Bottom Height (aOD)
1	1.10m	112.75m	111.65m
Topsoil, yellow/brown sandy deposit becoming compact to base. Close to top of motte.			
2	1.20m	114.50m	113.30m
Top tube only. 150mm topsoil over yellow-brown sand. Near top of motte.			
3	2.00m	114.50m	112.50m
Dark grey-brown topsoil above fine grained friable light grey-brown material which continues in 2nd tube. Had some potential but very top of motte.			
4	2.00m	108.50m	1.6.50m
300mm topsoil above yellow/br friable deposit with brick dust, above homogeneous grey/br silty deep which continues in 2nd tube to 1.5m.			

Some potential. Theoretically at base of motte, although much depends on whether there is a ditch – could be into ditch fill.			
5	2.00m	107.75m	105.75m
100mm of dark brown humic material above mixed grey-brown sandy silt to 740mm. In 2nd tube, finer and lighter in colour. This is potentially near base of motte – but same caveats as 4 apply.			
6	1.50m	107.75m	106.25m
Looks like an aberration – only 1 tube with 300mm silty material.			

Soil descriptions

Borehole 4

The horizons in core 4 were distinct. The first 20cm was modern top soil (E), a dark black-brown humic material. Located underneath was building debris (F) containing large concrete fragments, brick and mortar dust (10cm), with very little 'soil' present. Next was a mid-greyish brown silty clay (G) (25 cm) with rare charcoal inclusions. This was followed by a large void (90cm) representing material lost during the extraction process.

Under this was a light orange-brown silty clay with rare iron stone fragments (I) was then present (25cm). Mid orange-brown silty clay (J) (20cm) with iron stone inclusions which were common and poorly sorted followed. The final deposit (K) was a mid-orange brown silty clay deposit (5cm) with rare iron stone inclusions. It is possible the base of the motte or ditch was not reached (Figure 27).

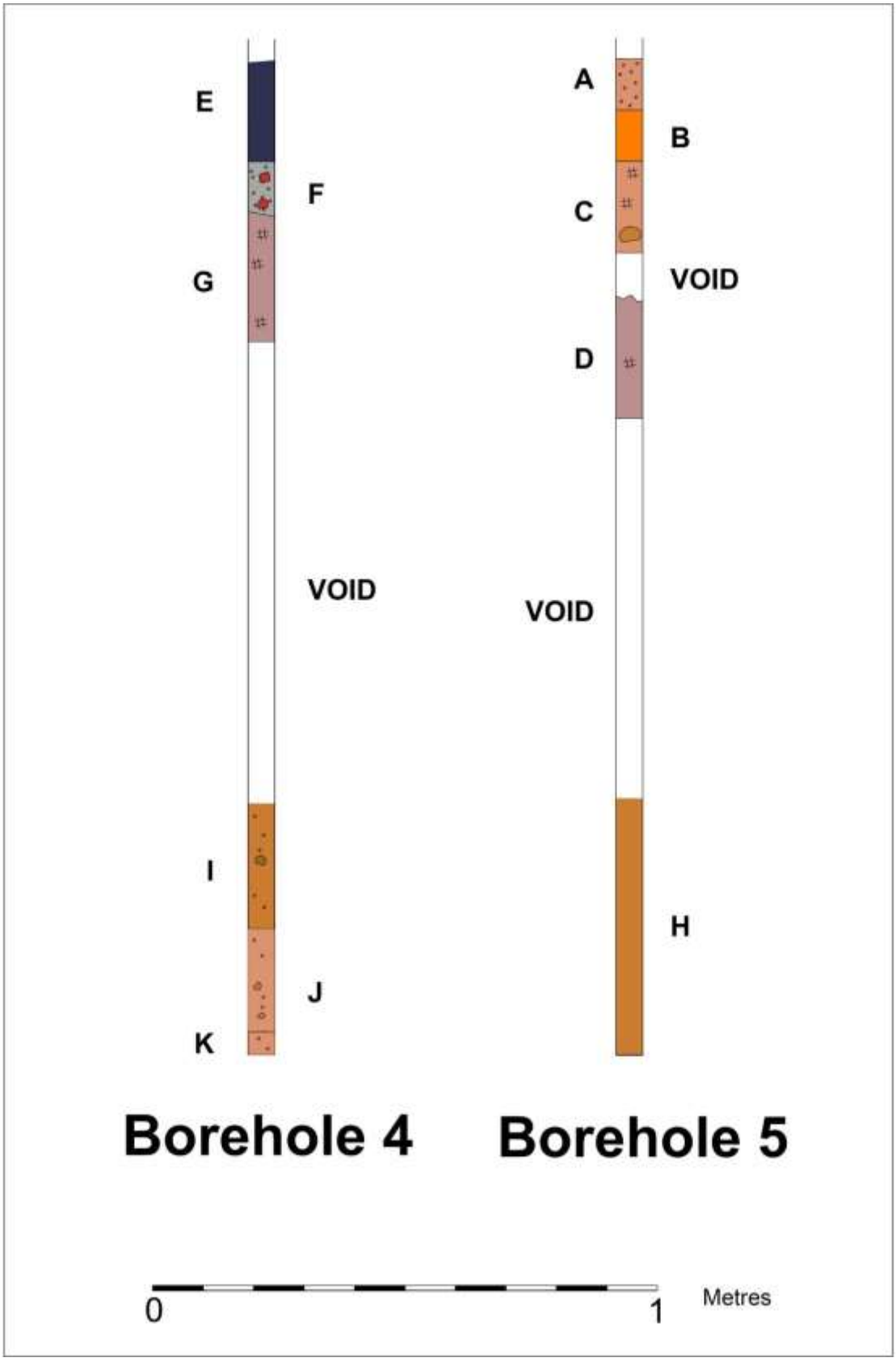

Figure 27: Illustrative section of boreholes

Borehole 5

Like borehole 4, the horizons in borehole 5 were distinct. Mid brown sub soil (A) (10cm) was present. Below this was a mid-orange brown silty clay layer (B) (10cm). This was followed by mid-brown silty clay (C) (17.5 cm), which contained charcoal flecks and rare poorly sorted iron stone inclusions. Fragments of post-medieval glass were obtained from the residue of this deposit. A small void circa 10cm was present where a large stone had been removed. A deposit (D) (25cm) similar to the previous and likely associated then followed. A large void (75cm) was below this representing material lost during the extraction process. The final deposit (H) was very large (50cm) and homogenous, it was light orange-brown silty clay. Like borehole 4, it highly possible that the base of the motte or ditch was not reached (Figure 27).

Plant remains and charcoal

All of the flots had very little material (Table 1). Very small charcoal fragments (under 2mm in length) were present but were rare (under 10 fragments). The 'larger' fragments which were visible in deposits C, D and G must have disintegrated during flotation. No charred plant remains were recorded in any of the flots. Modern rootlets were present in all of the flots from bore hole 4. Modern seed casing was present in the flots taken from borehole 5 sub samples B and H (top). Both types of remains suggest bioturbation within the different soil types.

Borehole	Sub sample	Volume (ml)	Notes
4	E	250	Sub sample not taken
4	F	250	Sub sample not taken
4	G	250	Modern rootlets and charcoal rare
4	I	250	Modern rootlets
4	J	250	Modern rootlets
4	K	250	Modern rootlets
5	A	250	Sub sample not taken
5	B	250	Charcoal rare and modern seed casing
5	C	250	Charcoal rare
5	D	250	Charcoal rare
5	H - Top	250	Modern seed casing
5	H - Middle	250	Charcoal rare
5	H - Bottom	250	Charcoal flecks

Recommendations for further work

The charcoal fragments present are not suitable for C14 analysis. The fragments are too small for speciation (pers. comm. Graham Morgan 2016).

It is not recommended that further work is undertaken by a geo-archaeologist on the soils. Firstly, there is no dating evidence to contextualise the results, and it is likely that

the motte is highly disturbed. The boreholes were also incomplete, with large voids, and are unlikely to have reached the base, not giving a full picture of the sequence of construction/deposition. Secondly, the exact locations of the bore holes, are not fully understood – whether boreholes 4 and 5 are from the motte, its slippage or from the ditch fill.

If further soil surveying is undertaken at the site in the future, it is recommended that transects are conducted across the motte and ditch.

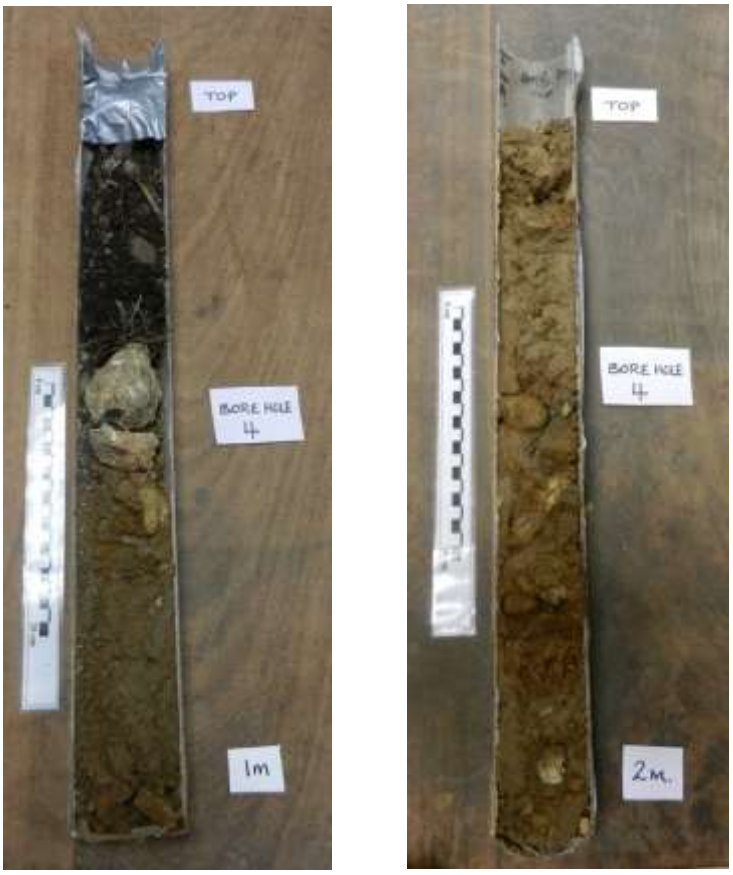

Plate 33: Borehole core 4

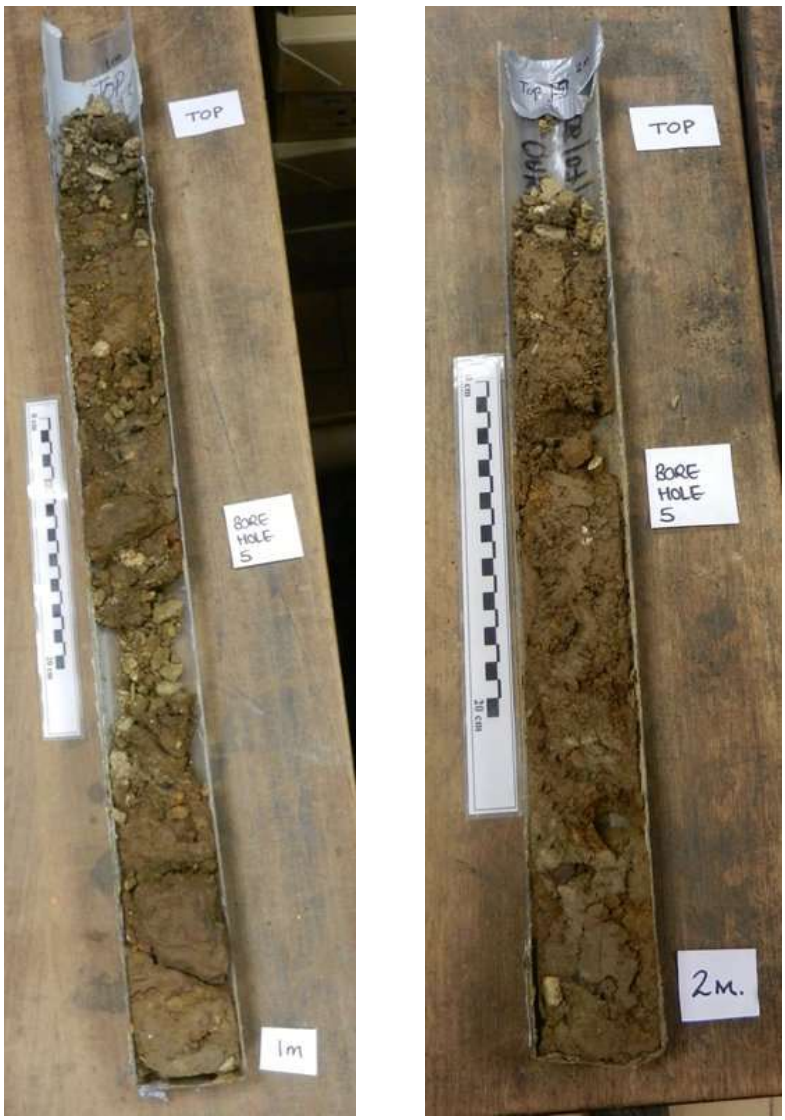

Plate 34: Borehole core 5

Photogrammetry Survey

Multi-image photogrammetry is a versatile and rapid tool for recording and analysis of objects and surfaces. Recent advances in computing power and software have resulted in a technique able to produce results similar to those of laser scanning. Multi-Image Photogrammetry is a powerful method of capturing high-resolution 3D surfaces with complete texture with sub-centimetre accuracy.

The Motte Area

A photogrammetry survey took place from the Whipper Inn Car Park, to the south-east of the castle on 30th October 2015 by Leon Hunt and Mathew Morris of ULAS. This was a preliminary survey to ascertain whether a photogrammetry survey would be an appropriate way to record the curtain walls as a whole. Furthermore, given that the Motte area was eroding and the stonework was considered unsafe, it was felt that it would not possible to approach the area closely and record drawn sections of the structure.

A series of photographs were taken from a variety of heights and angles, initially from ground level and then from a higher level using a boom lift, or 'cherry picker', working from left to right (west to east).

As this was mainly an exercise in using the new procedure and software, no survey points or geo-referencing aids were used and therefore there is no actual scale or accurate survey point for the photogrammetry survey of the Motte.

Despite this the survey was reasonably successful (Plates 35 & 36).

Plate 35: 3D Model of Motte south-eastern elevation, looking north-west

Plate 36: 3D Model of Motte south-eastern elevation, looking north

The Curtain Wall

A photogrammetry survey took place to record the eastern section of the curtain wall and the western section around the postern gate prior to renovation work (Figure 28). The survey team consisted of Dr Gavin Speed and Richard Huxley of ULAS.

Conditions of Survey

The photogrammetry survey was undertaken on 9th and 11th May 2016. The weather conditions were bright and sunny, with some shade on parts of the walls. The wall was obscured by contractor's scaffolding in the north-east corner of the wall. Photos were taken in this area, but the 3D modelling was not possible due to the scaffolding. Trees were present along the length of the east wall, many were in spring blossom (Plate 37)

and so obscured parts of the wall. Closer photos of the wall were taken to avoid missing areas.

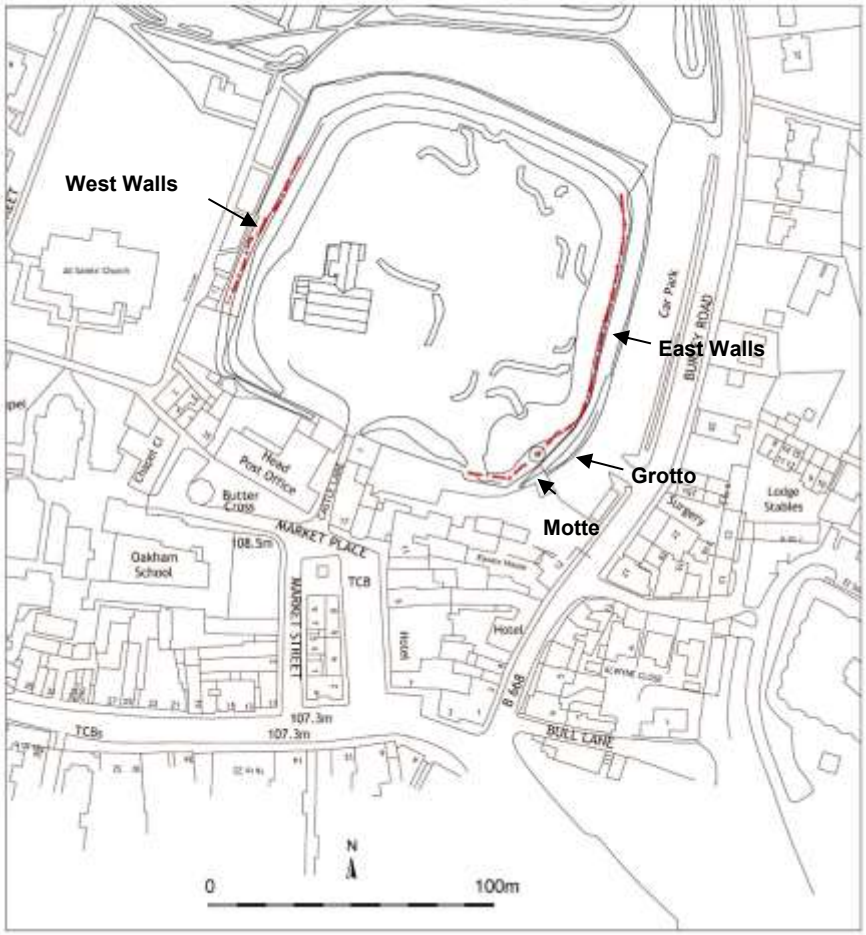

Figure 28: Location of photogrammetry survey (red line on east and west sides)

Method of recording

Photographs were taken using a Nikon Coolpix L310. Photos were taken with good focus of the entire subject area. This increased the amount of points that can be detected, and therefore increasing the quality of the model. Lighting was not an issue as weather conditions were bright, a flash was not used. There was an overlap of at least 60% between the photos, this is the most important rule of photogrammetric recording (the higher the percentage of matched area, the more points the software can match, creating a higher quality model). Due to the size of the curtain wall, a cherry picker was used to get high and overhead photographs, remaining perpendicular to the surface. Over 250 photos were taken of the east side, over 100 photos were taken of the west side. The photogrammetry survey was georeferenced by photographing survey points (5m intervals), that were subsequently surveyed in using Topcon dGPS Hyper V, with a <1cm accuracy, tied into Ordnance Survey data.

Plate 37: Photogrammetry survey in progress

Method of processing

The data was processed using AgiSoft LLC Photoscan Professional. There are three steps to create a photogrammetric model (alignment, meshing, texturing). Prior to the first stage a visual inspection was undertaken to eliminate photographs which were inadequate (unsuitable standard). The alignment stage works by applying a content aware algorithm to detect key features in the images, this was set to high accuracy. These are then matched / aligned across the different images. The software then calculates the camera and point spatial positions. The boundary box can then be refined if needed. Based on the estimated camera positions, each camera is combined into a single dense point cloud (high quality setting). The mesh of the model can then be generated (arbitary surface, dense cloud, high face count). Following this a texture can be added (generic mapping mode, mosaic blending). After the model is created, non-target model elements can be manually removed ('mask photos', or this can be done at an earlier stage). The model can then be georeferenced. This transforms the coordinates into Ordnance Survey x y z real world points. The finished model is best viewed in Photoscan, but can be exported as a PDF, or placed into GIS.

Photogrammetry Survey Results

The photogrammetry survey was successful on both the east and west walls, though on the east wall part was not possible as it was obscured by scaffolding (Plates 38-41). The survey data (photos, Photoscan files, and GPS survey) will be deposited in the site archive as digital data.

Plate 38: 3D model view of east side, looking north-west

Plate 39: 3D model of west side, looking south-east

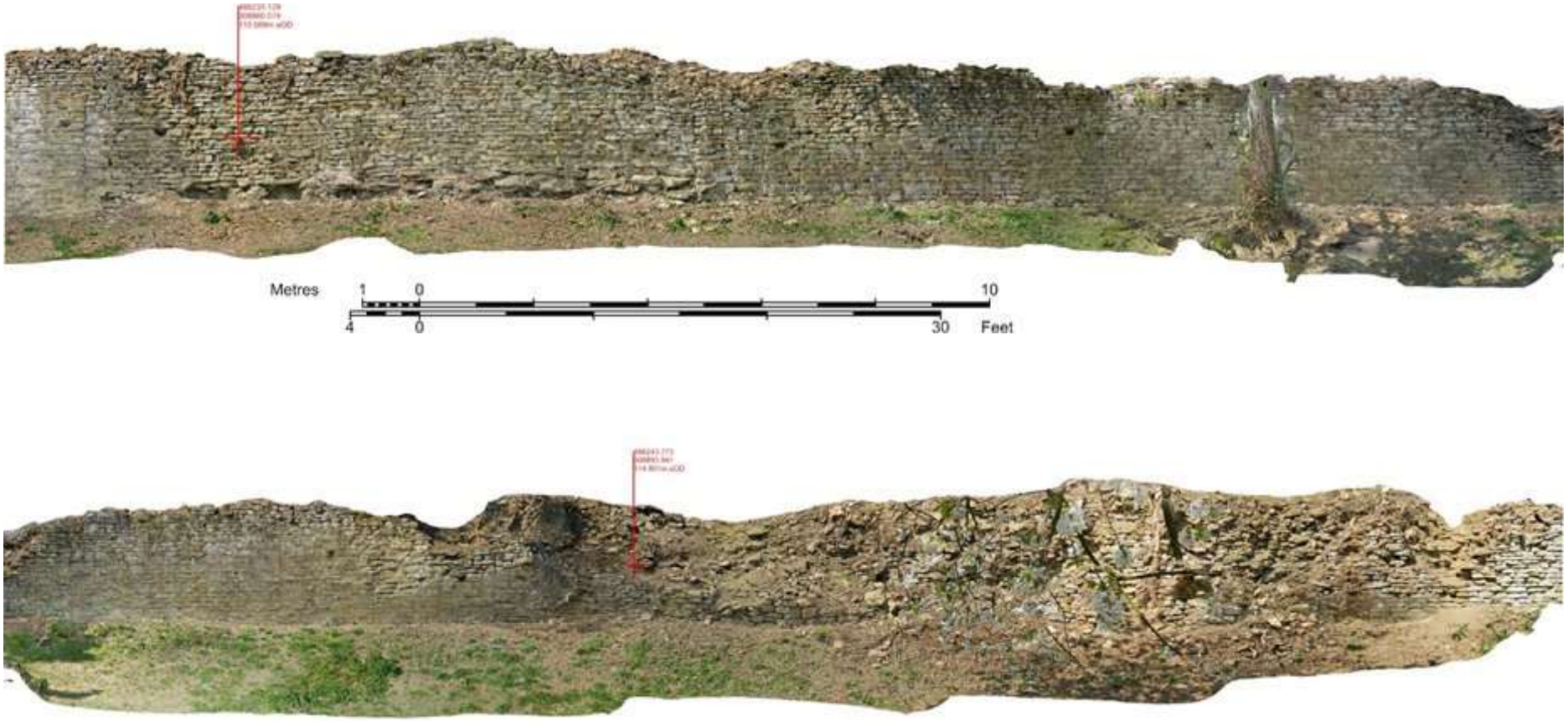

Plate 40: Part of east curtain wall (left to right = south to north)

Plate 41: Part of west curtain wall (left to right = north to south)

The restoration of the rampart walls

Introduction

The restoration of the rampart walls, including the postern gate, was undertaken by the contractor between May and October 2016. The work was observed by an archaeologist intermittently during this period, mainly between 28th June and 2nd September 2016. A large number of photographs were taken to record the process and the results.

The work involved the removal of plant growth on the masonry without causing the structure to be undermined or collapse, followed by the repointing of the stone-work and the replacement of loose or missing masonry with suitable stone (Plate 42). Replacement materials were to be of an appropriate stone type and the mortar was to be of a 1: 2.5 lime/aggregate mix with sand from a previously agreed source. The walls were to be topped with soft turf capping.

Plate 42: Work in progress of restoring curtain wall

Plate 43: General shot of east side of walls, showing scaffolding, looking north

Postern Gate

A second entrance or postern gate is said to have existed on the western side of the walls, close to the south-west corner, where there is a noticeable outward bulge. This secondary gate may have provided access between the castle and the church, most likely leading to a footbridge over the moat. It may also have been designed as a sally port, where enemies could be attacked by the soldiers within the castle unseen. It is shown on some early maps but not on the later Ordnance Survey editions.

A photograph from 1903 shows a small archway entrance at this point.

Prior to the restoration programme, the area was very overgrown with a large tree growing from the northern side of the feature. It was very indistinct and damaged and obscured by the aforementioned vegetation (Sheppard and Walker 2011).

Some intact stone-work still existed low down and there was a definite section of faced walling that could be identified. John Barber, excavating in the 1950s reports two sides of a projecting tower and subsequent clearing of vegetation has shown evidence of a semi-circular tower, but it was difficult to ascertain the exact shape of the original.

It was felt that it may have been possible to re-establish the feature's plan by the removal of debris at its base and rebuilding upwards to a low height, to both help support the upper structure and to explain and display it better.

Results

A series of visits between the 28th June and 2nd September 2016 took place to monitor the restoration works on the curtain wall in the Burley Road car park and the postern gate area. Scaffolding was erected in both areas to gain access to the higher sections of the wall and was constructed in a way that did not impact on the archaeology or damage any part of the walls (Plate 43).

The works in the Burley Road car park mainly consisted of re-pointing the exposed stonework to the external face of the walls and making the collapsed areas safe (Plate 44). The most invasive work the masons undertook was to remove a part of the outer face of the northern section of the wall which had been badly damaged by tree root and animal disturbance and had started to collapse and had large voids appearing behind the face.

Once this was completed the masons made the core material of this section structurally safe by replacing the stonework and inserting metal rods to strengthen the wall, they were then able to re-lay the external face which needed moving back by approximately 0.20m to ensure it lined up correctly with the rest of the wall once again (Plate 45). The masons decided to leave the collapsed sections as they were but laid mortar around the exposed core material to make it safe and prevent further collapse. Once the re-pointing of the external face had been completed rolls of turf (soft capping) were laid over the top of the walls to cover the exposed stonework and to make it more in keeping with the Castle ramparts (Plate 46).

Plate 44: Section of wall showing before and after restoration

Plate 45: Metal pins inserted into wall structure for strength

Plate 46: Soft turf capping upon restored walls

Plate 47: The restored grotto feature, looking west

Plate 48: Restored putlog holes in castle walling

Plate 49: Close-up of putlog holes

The works around the Postern Gate was less invasive and mainly consisted of re-pointing the exposed stonework and making the collapsed sections of the wall safe.

There is a small grotto or shelter which was built into the south-east walling at some point in the 19th century. This was constructed of stone on the outside with brick walling and an arched roof within. Its interior is 2.15m x 1.28m in size. There is no evidence for former seating within it. The wall restoration was very effective on this feature (Plate 47).

There are also a number of putlog holes located throughout the wall structure, which were made to receive the ends of poles or beams to support scaffolding. These have been preserved within the structure by the restoration work (Plates 48-49).

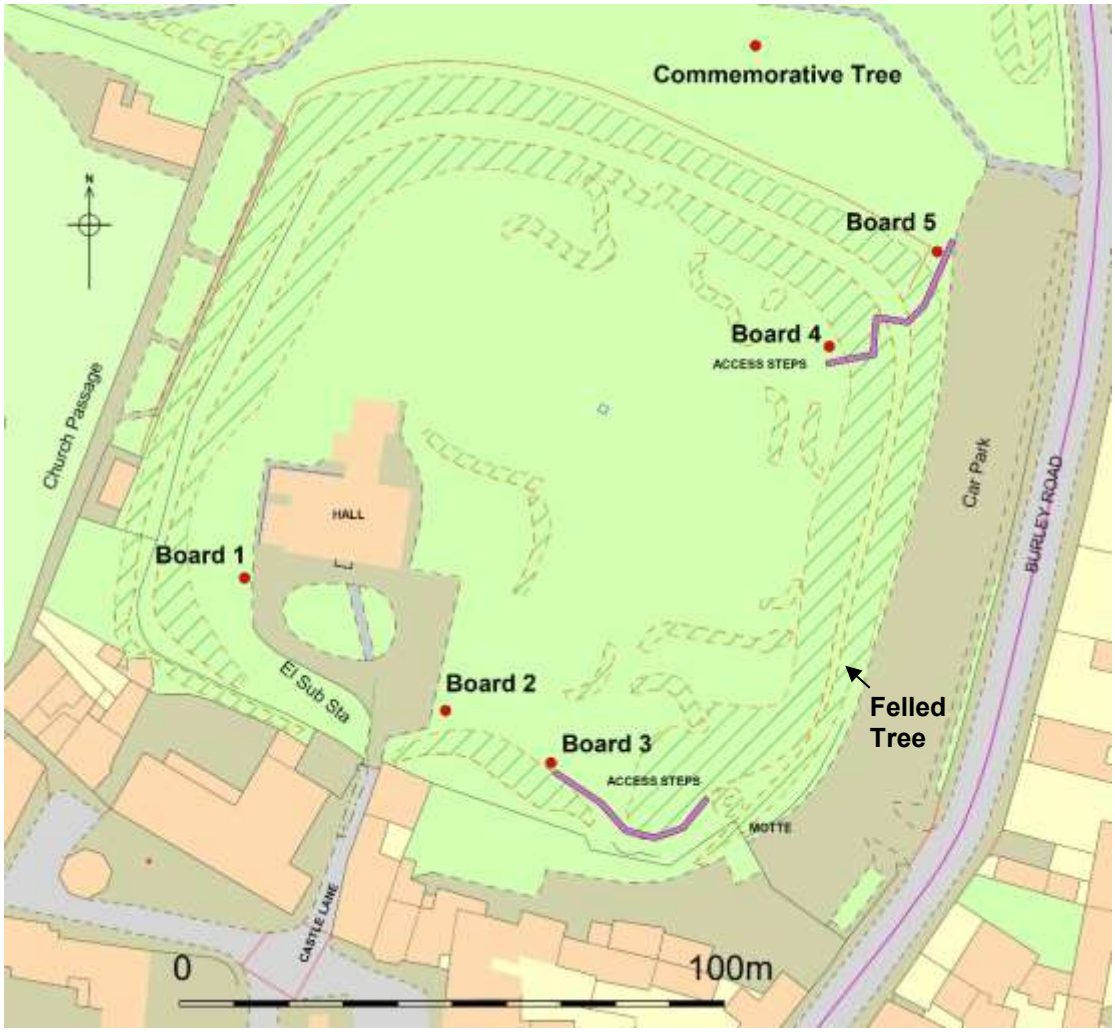

Figure 29: Plan of position of interpretation boards and trees

Interpretation Boards

The final piece of intrusive work to be carried out within the castle grounds was the erection of a number of interpretation boards. Two of these were to be situated outside the castle grounds within the town and as they are outside the Scheduled area were not subject to a watching brief.

Five were to be situated within the castle grounds (Figure 29). Board 1 was positioned to the east of the castle within the car park. Board 2 was to the west in a spot previously occupied by an older interpretation board. Board 3 lay at the foot of the new steps to the Motte and Board 4 was at the base of the steps of the new steps to the Birley Road car park. At the base of these steps within the car park lay Board 5.

Plate 50: Work in progress on interpretation board holes

Plate 51: Finished holes of Board 1, looking west

All the boards consisted of a metal frame in the shape of a stylised horseshoe, with three feet (two front and one rear) to be concreted into the ground at a depth of around

600mm. Board 5 only had two feet due to its restricted position between the base of the steps and the metal fencing.

All holes were excavated by hand; de-turfed with a spade and then excavated with a post-hole digger (Plate 50). All were excavated to around 600mm, with the exception of the rear feet holes of Boards 1 and 3, which were excavated to 700mm due to the change of incline being situated slightly into a bank. The holes of Board 5 were only 500mm as the ground level here was 100mm below the last step of the Birley Road access, where the viewer would stand.

The sequence identified within each hole was largely 0.15m-0.25m of topsoil over disturbed yellowish brown subsoil with small to medium pieces of ironstone. Modern pot, a piece of animal bone, a section of clay pipe and a section of slate were recovered from the holes of Board 2 and were not retained. The holes of Board 3 contained a larger amount of limestone and ironstone chunks and were therefore more difficult to excavate. A modern brick was found at the edge of one hole of Board 5 and was possibly in situ.

Plate 52: Close-up of foot hole for interpretation boards

Plate 53: Finished interpretation Board 3 at base of Motte steps, looking east

Plate 54: Excavated hole for commemorative tree, Cutts Close

Battle of Agincourt Commemorative Tree

To commemorate the Battle of Agincourt in 1415 an oak tree, donated by Her Majesty the Queen was planted in Cutts Close to the north of the castle grounds on 30th March 2017. A watching brief was undertaken during the work.

A circular hole measuring approximately 0.5 in diameter and around 0.30m deep was excavated by hand, with the turf removed first (Plate 54). The sequence revealed was very similar to that seen during the excavation of the holes for the notice boards consisting of 0.15m of topsoil over disturbed yellowish brown subsoil with small to medium pieces of ironstone. A small piece of chicken bone and a sherd of modern white pottery was retrieved from the subsoil.

Plate 55: The large conifer root bole being removed, looking south

Storm Damage

During February 2017 Storm Doris brought 94 mph winds and rain to the UK, causing destruction throughout the Midlands, and this included Oakham. Parts of a large oak were damaged in Cutts Close and a large conifer fell in the Birley Road Car Park, damaging a number of cars. The main part of the trunk and branches were removed soon afterwards leaving a large stump and roots.

On 8th May 2017 the stump and roots were removed and the work was attended by an archaeologist.

The felling of the tree in the wind had lifted the base of the tree proud of the soil and so the soil and stone was cleared between the large roots with a mattock and spade. The smaller and medium sized roots were then severed by mattock or chainsaw. The main root bole was then pulled out using a chain and a crane and the largest roots severed by chainsaw (Plate 55).

After the root bole was removed the remaining root system was cleared leaving a shallow hollow around 0.10m deep (Plate 56). No archaeological features were observed and only a pair of modern beer bottles were retrieved from the upper soils.

Plate 56: The hollow left by the removal of the root bole

Conclusion

Test Pits

The test pits excavated on the western side of the Hall after the removal of the slabs and flagstones largely revealed thin topsoil (01) of between 0.10m-0.25m overlaying a subsoil (02) containing brick, tile, mortar and other materials, suggesting that much of the underlying material here is made-up or disturbed ground.

At the edges of the bank, behind the sloped flagstones that formed the revetment of the bank to the path around the Hall at this point, were groups of broken concrete slabs (mainly in Test Pits 5, 6, 7), which were likely to have been part of former landscaping here, broken up and dumped behind the slabs when the area was re-formed at some point.

An apparent wall (03) and tumble (04) were discovered within Test Pit 4 at the north-west corner of the path, but later the excavation of the area revealed this to have possibly been either all a tumble or a dump of material, mainly slates, relating to the possible building discovered during the extension to the Time Trench to the west.

The test pits through the material under the former flagstone path itself (T.Ps 3 & 10), also revealed made-up layers, mainly consisting of yellowish-brown clay with crushed stone, mortar and small flecks of crushed ceramic building material.

After the work here the pathway here was widened and a new surface laid to provide access to the western side of the hall (Plate 57).

Plate 57: The new access path around the western side of the Great Hall, looking north

Footprint of Toilet Block

The evaluation of the area around the old boiler house to the west of the No.1 Court northern extension to the main hall, revealed several layers of demolition or made-up ground, of similar form to the layers revealed during the test pit evaluation (11)-(13).

Beneath these layers at the northern end of the trench was a rough surface of limestone and ironstone cobbles (27) set into a yellowish-brown clay (28). There were also layers of rubble (22) and apparent surface material (24) at a lower depth, suggesting that the area had contained yard surfaces at various junctures. However, these could not be clearly dated to any particular period of the Hall's history and may possibly pre-date the construction of Court No. 1.

The main features to be revealed by the footprint evaluation were the two linear features [18] and [33]. These formed a Y-shaped feature, initially thought to be a wall when identified within Test Pit 9a, but full stripping of the area revealed a narrow steep sided infilled pair of curved linear features.

The most likely explanation, given that the features seem to run between No. 1 Court and the main Hall building, is that are drainage features, cutting through the earlier yard surfaces and most likely dating from the 19th century, although the dating evidence from the fills is mainly 12th-13th century, but this is presumably as the feature has cut

through earlier layers. The earliest surface in this trench appeared to be (24), overlaying a silty clay layer (26) containing 11th-12th century pottery.

Following the archaeological work here; work started on the new toilet block and facilities (Plate 58).

Plate 58: Completed new toilet block, looking east

Extension to Time Team Trench 3

The extension to the 2011 Time Team evaluation trench to the west of the hall covered an excavated area measuring 4.5m by 4m and covering 17.5 square metres.

The original trench was excavated in order to locate a possibly chamber block in this area postulated by Hill (2013).

The 2011 trench had revealed two phases of walling, with a later phases (304) and (307) overlying an earlier demolished phase (309), on a different alignment. There was also evidence of bedding layers for floors within the trench (312).

The 2011 evaluation had not confirmed whether the walls extended to the western end of the Great Hall itself as the trench was not of sufficient length and so it was hoped that the new extension might reveal whether the possible chamber block here was attached to this end of the hall. Test Pit 4 (see above) had revealed a possible structure as (03), which may once have continued to the hall, but had been truncated by the laying of the path around this side of the building.

The new trench was full of large amounts of soil and demolition debris, mainly ironstone and limestone blocks, some of which appeared partially roughly dressed. This

layer (39) and the identical layer beneath (51) were most likely the same as layer (302) found throughout the 2011 excavation within Trench 3.

The eastern ends of the Time Team walls (304) and (309) were revealed (re-numbered (38) and (52) respectively), along with a very small section of the continuation of wall (38) as (44), which had been truncated by a modern gas pipe, which ran through the width of the trench from south to north, turning north-east towards the end of the new trench and continuing north-east to the new toilet block. The wall did not appear to continue towards the hall, although it could easily have been truncated at the eastern end. The feature (03) revealed in Test Pit 4 did not appear to be a wall, but was simply a dump or tumble of limestone tiles.

The evidence from this evaluation would suggest that the building has either been heavily truncated at the eastern end or did not extend to the hall and did not directly join onto it at this point. It is more likely that the building was detached and maybe was entered via a pentice corridor, as postulated by Hill (2013).

Other features were revealed during the evaluation here including the continuation of the mortared areas revealed in the original trench as (312) and recorded in the new section as (41). There also appeared to be post-holes to the north of the wall (44), [46] and (48), of which [46] was excavated and contained late medieval pottery. These may be part of a structure here, which may have included post-hole [09] revealed in Test Pit 4, cut into the limestone tumble (03)/(04).

What was clear was that the demolition material was largely confined to the southern side of the walling, with the northern side clearer of the large limestone blocks, suggesting that the southern side of the walling, with the bedding layers for floors also along this edge, representing the inside of a building and the northern side with the lighter tumbled material, such as (03), (04), clearer soil (47) and layer of limestone tiles (49), representing the outside of the building.

Further work here, extending the excavated area to the south, may reveal the southern side of this building and possibly part of the eastern end of the chamber block.

Evaluation trench through the northern defences

The evaluation through part of the northern defences revealed a section of the wall and rampart of around 1.8m wide, but it was unknown whether this is the original width due to the internal face being re-faced with probably displaced stone and concrete, perhaps as a blocking measure to prevent the core material from collapsing. Sections of wall had collapsed and eroded across the ramparts.

The external face of the curtain wall had survived fairly well with up to at least seventeen courses exposed during the evaluation (Plate 59). It was constructed of roughly hewn ironstone blocks of differing sizes and shapes, and was roughly coursed and earth bonded. The depth and extent of the wall is unknown, but appears to have been cut into the rampart material.

Plate 59: The curtain wall in the evaluation trench, looking south-west

Later Phases of Work

Later work on the castle included test holes for the location of drainage, for the erection of a new fence, a flag pole, interpretation boards and the construction of wooden steps to the Motte area and into the Burley Road car park to the north-east. These had a low impact on the Scheduled Monument on the whole, mostly revealing made-up ground, or at least disturbed ground close to where services had previously been installed.

The electricity cable trenches within the castle grounds and in Castle Lane revealed post-medieval/ modern features. A stone feature (57)/(58) lay close to the door of the Great Hall and was most likely a stone-lined drain. No dating evidence was retrieved during this work to date this feature however (Plate 60).

A large brick and ceramic drain was revealed in Castle Lane close to the entrance to the castle. Although medieval and post-medieval finds were recovered from both features neither could be closely dated.

The borehole survey was inconclusive, mainly showing only the upper soils within the motte area. Most of the boreholes could not be used and those that were studied did not penetrate deep enough to reveal the whole sequence through the feature. There was also no dating evidence for the individual layers encountered within the cores to contextualise the results and the charcoal fragments present were too small for C14 analysis.

Plate 60: Stone drain found during excavation of cable trenches in front of Great Hall, looking north-west

No archaeological features were observed in the interpretation board holes or the hole for the commemorative tree and the holes were rather too small to be worthy of archaeological observation. Only disturbed subsoil and a number of modern artefacts were recovered from the fills.

The Rampart Walls

The rampart walls have been successfully restored and pointed to preserve them. They have been rebuilt in the areas where collapse was imminent and strengthened in some places using metal pins. The putlog holes and other features have been preserved and the vegetation growth removed and restricted from causing more damage (Plates 61 & 62).

The modern grotto and the postern gate area have been preserved, although the restoration of the postern gate has not revealed any more information about the feature, mainly as it has been so heavily disturbed by large tree growth and erosion.

Plate 61: The restored east wall in 2017, looking north

Plate 62: The restored postern gate in 2017, looking east

The photogrammetry survey was very successful and has produced good 3D models of large sections of the eastern and western walls. Surveys of the motte area and the

evaluation through the northern rampart walls were also undertaken and, although more basic in their execution have also provided a good quality 3D record of these features.

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The photogrammetry work on the rampart walls was carried out by Gavin Speed, with processing by Gavin Speed and Mathew Morris.

The pottery report was compiled by Deborah Sawday and Rachel Small and Luis Huscroft worked on the borehole cores and report. Richard Buckley managed the project.

Publication

Since 2004 ULAS has reported the results of all archaeological work through the *Online Access to the Index of Archaeological Investigations* (OASIS) database held by the Archaeological Data Service at the University of York.

A summary of the work will also be submitted for publication in a suitable regional archaeological journal in due course.

OASIS data entry

PROJECT DETAILS	**Oasis No**	Universi1_298948
	Project Name	Archaeological investigations during restoration work at Oakham Castle, Oakham, Rutland (SK 86101 08904)
	Start/end dates of field work	02-11-2015 to 30-03-2017
	Previous/Future Work	Yes/ not known
	Project Type	Evaluation/ Excavation/Watching Brief
	Site Status	Scheduled Monument
	Current Land Use	Museum, Hall and Grounds
	Monument Type/Period	Wall: Medieval Yard Surface: Medieval/ Post-medieval Ramparts: Medieval Drain: Post-medieval/ Modern Post-hole: Medieval/ Post medieval
	Significant Finds/Period	Pottery: Medieval Pottery: Post medieval Pottery: Modern Tile: Medieval Tile: Post medieval Glass: Medieval Glass: Post medieval Modern Lead: Medieval Animal Bone: Undated Brick: Modern Clay Pipe: Post medieval Flint: Undated
	Reason for Investigation	NPPF
	Position in the Planning Process	Post-determination
	Planning Ref.	2014/0395/LBA
PROJECT	**Site**	Oakham Castle, Castle Lane, Oakham, Rutland

LOCATION	**Address/Postcode**			
	Study Area	1.3 hectares		
	Site Coordinates	SK 86101 08904		
	Height OD	100m aOD		
PROJECT CREATORS	**Organisation**	ULAS		
	Project Brief Originator	Local Planning Authority (LCC)		
	Project Design Originator	ULAS		
	Project Manager	Richard Buckley		
	Project Director/Supervisor	Leon Hunt		
	Sponsor/Funding Body	Rutland County Council		
PROJECT ARCHIVE		**Physical**	**Digital**	**Paper**
	Recipient	Rutland County Museum	Rutland County Museum	Rutland County Museum
	ID (Acc. No.)	OAKRM-2014.69	OAKRM-2014.69	OAKRM-2014.69
	Contents	Pottery Bone Tile Glass Lead Flint Clay Pipe Mortar Brick	Photographs	Report Field Notes Drawings
PROJECT BIBLIOGRAPHY	**Type**	Grey Literature (unpublished)		
	Title	Archaeological investigations during restoration work at Oakham Castle, Oakham, Rutland (SK 86101 08904)		
	Author	Hunt, L and Earley, J		
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	Date	2017		
	Publisher/Place	University of Leicester Archaeological Services / University of Leicester		
	Description	Developer Report A4 pdf		

Archive

The archive for this project will be deposited with Rutland County Museum with accession number OAKRM.2014.69. This includes the work carried out during the previous watching brief in 2014.

The archive will consist of the following:

1 Unbound copy of watching brief report (ULAS Report Number 2015-001)

1 Unbound copy of strategy report (ULAS Report Number 2015-069)

1 Unbound copy of this report (ULAS Report Number 2016-105)

23 Watching brief recording sheets

12 Test Pit recording sheets

2 Context list sheets (total of 68 contexts)

11 Masonry recording sheets

43 Layer recording sheets

7 Cut sheets

7 Fill sheets

1 Drawing sheet index (1 sheet)

1 Drawings index (1 sheet)

16 sheets of permatrace with primary drawings

1 Photographic record (13 sheets)

1 set of B&W contact sheets (2 sheets)

1 set of B&W negatives (2 sheets)

1 set of contact sheets of colour digital photographs

1 CD of colour digital photographs

1 Small finds record sheet

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The Post Roman Pottery and Tile

Deborah Sawday

Table 1: The pottery and ridge tile fabrics

Fabric	Common Name/Kiln & Fabric Equivalent where known	Approx. Date Range
ST1-3	Stamford ware – coarse, fine and very fine fabrics (1)	c.850/900 – 13th C.
LI	Lincoln Kin type/Late Saxon Shelly ware (2)	c.870–early 12th C.
OS	Oxidised Sandy ware - local	c.12th-13th C.
CS	Coarse Shelly ware Northampton fabric T1/2, T2, Northants CTS 330 (3)	c.1100-1400
CG	Calcite Gritted/Limestone tempered ware – source uncertain	c.1100-1400
OL	Oolitic ware –Lincoln fabric SLEMO (2)	c.1100-c.1300
LY1	Lyveden/Stanion type Northants CTS fabric 320 (4)	c.1200/1225-1400
CC1	Chilvers Coton A/Ai ware,(5) Warwick fabric WW01,?WW012, ?SQ51 (6)	c.1250-1400
NO/3	Nottingham Light Bodied/Reduced Green Glazed ware NOTGL/NOTGR (7)	Early/mid 13th c.1350
BO2/3	Bourne A/B wares/type ware (8)	c.1250-1450
MS	Medieval Sandy ware – misc. fine quartz tempered fabrics	c.1200-1400+
MS8	Medieval Sandy ware – misc. sandy fabrics - ? including under fired Midland Purple ware, fabric MP2 (9)	c.1300-1550
MP2	Midland Purple ?Ticknall, Derbyshire	c. 1375-1550
BO1	Bourne D ware/type ware (8)	c.1450-1650.
CW/2/MB	Cistercian ware -? Ticknall, Derbyshire/Nottingham/Staffs (10)	c.1450/1475-1750
MY	Midland Yellow ware - ?Ticknall, Derbyshire (11)	c.1500-1725
RW	Red ware (12)	c.1450-1550
EA1	Earthenware 1 – Coarse Post Medieval Earthenware - Chilvers Coton/Ticknall, Derbyshire (13)	c.1500-1750
EA2	Earthenware 2 – 'Pancheon ware', Chilvers Coton/Ticknall, Derbyshire (13)	17th C-18th C. +
EA3	Mottled ware/Staffs	1680-1780
EA9	Pearl ware	1750-1830
EA10	Fine White Earthenware/China	1750+
EA	Earthenware	Modern
SW4	White Salt Glazed Stoneware	1730-1770
SW5	Brown Salt Glazed Stoneware	1670-1900+
U/C	Unclassified	Medieval

(1) Kilmurry 1980, Leach 1987	(8) Healey 1973, Young *et al* 2005.
(2) Young *et al* 2005	(9), Coppack 1980, Cumberpatch 2002-2003, Ford 1995, Soden & Ratkai 1998
(3) McCarthy 1979, Northants CTS	(10) Spavold and Brown 2005
(4) Northants CTS	(11) Spavold and Brown 2005, Woodfield 1984

(5) Mayes & Scott 1984	(12) Jennings 1981, Spoerry and Hinman 1998.
(6) Soden & Ratkai 1998.	(13) Mayes and Scott 1984, Sawday 1989
(7) V. Nailor pers. comm./ Nailor & Young 2001, Nailor 2005	

Condition

Much of the pottery was fragmentary and abraded, with an average sherd weight of only approximately 17.0 grams, and few conjoining sherds. The ridge tile was similarly fragmentary, with an average weight of only just over 55 grams.

Methodology

The pottery assemblage was made up of 146 sherds, weighing 2.469 kg, and representing a maximum of 101 vessels. The ridge tile comprised 89 fragments and weighed 4.911kg.

These assemblages were examined under an x20 binocular microscope and catalogued with reference to recent guidelines, (MPRG *et al* 2016) and the ULAS fabric series (Sawday 2009). The results are shown above (table 1) and below (tables 2-4). A catalogue of the material is listed by context below (table 5).

Table 2: The medieval and early post medieval pottery by fabric, sherd numbers, weight (grams), and maximum vessel numbers.

Fabric	Sherds	Weight	Maximum Vessel Nos	Sherd nos. as % of total	Average Sherd Weight
Late Saxon/Early Medieval					
ST1-3	6	43	6		
LI	1	7	1		
OS	1	9	1		
CS	9	102	5		
CG	1	3	1		
Sub-total	18	164	14	23.68	20.50
Medieval/Late Medieval					
LY1	4	22	3		
NO2	3	15	2		
NO/3	8	110	8		
MS	1	28	1		
MS8	1	29	1		
MP2	5	100	5		
U/C	1	4	1		
Sub-total	23	398	21	30.26	17.30
Late Medieval/Early Post Medieval					
BO1	16	173	12		
CW2/MB	11	110	10		
MY	2	22	2		
RW	3	156	1		
EA1	3	82	3		
Sub-total	35	543	28	46.05	15.51
Totals	76	1015	63	99.99	

The Pottery and Tile Record

The medieval and early post medieval pottery and the medieval ridge tile have been grouped into ceramic phase groups based on the range of fabrics present (tables 2 and 3).

Approximately 24 per cent of the pottery assemblage by sherd numbers was made up of late Saxon and/or early medieval fabrics, including a fine walled lipped vessel, probably part of a table ware, in ST1 and a rouletted bowl rim in ST3/2. Apart from a jar fragment in CS, no identifiable vessels were present in the calcareous LI or CG fabrics, nor in fabric OS.

The pottery in the medieval and later medieval period, which made up just over 30 per cent of the total, was dominated by fine sandy wheel thrown table wares. The glazed sherds in the Nottingham fabrics NO and NO3 were most probably from jugs as were the four glazed fragments decorated with white slip and grid stamps in the oolitic fabric LY1. The later medieval finds included two cistern or jar rims in the medieval sandy wares MS and MS8. The late medieval and early post medieval pottery assemblage included the remains of at least three Cistercian ware cups in CW and CW2. Another jar was identified in the early post medieval coarse earthenware EA1. Together this group accounted for just 46 per cent of the total by sherd count

Table 3: The medieval and early post medieval ridge tile, by fabric, sherd numbers, and weight (grams), ASW (average sherd weight).

Fabric	Sherds	Weight	Fragments nos. as % of total	Average Sherd Weight
Early Medieval/Medieval/Late Medieval				
CG	1	49		
OL	1	27		
LY1	35	2092	39.32	
CC1	2	58		
BO3	18	854		
MS	1	44		
MP2	3	142		
Sub-total	61	3266	68.53	53.54
Late Medieval/Early Post Medieval				
BO1	28	1645	31.46	58.75
Sub-total	28	1645	31.46	
Totals	89	4911		55.17

Much of the medieval ridge tile also dated from this period, with that in fabric LY1 making up almost 40 per cent of the total by fragment numbers. The later medieval/early post medieval fabric BO1 also made up a not insignificant proportion of the total. However, the tile, unlike the pottery, with its generally high breakage rate, would of course have been subjected to a much longer period of use and possibly re-use, given the different phases of structural activity associated with the castle and its ancillary structures (Allin 1981, Moorhouse 1988) and much of the earlier material may have been incorporated into later structures. At least one tile fragment showed evidence of the piercing typically found on Lyveden products (Adams 1969), whilst one of the two surviving crests could also be paralleled at this production centre (Steane 1967).

Fragments of the fine Bourne ware/type ware, BOI whose period of production spans the late medieval and early post medieval periods, were present, representing approximately 31 per cent of the tile assemblage as a whole.

Not surprisingly perhaps, given the degree of modern disturbance on site, over 47 per cent of the pottery by sherd count dated from the early modern period; accounting for 70 sherds in all out of a total of the 146 sherds from the excavations as a whole. This assemblage was characterised by wide mouthed bowls or pancheons in the coarse earthenware, EA2, of a type which was ubiquitous throughout the country during this period. Single examples of an earthenware flower pot in fabric EA and jars in the red ware fabric RW and the salt glazed stoneware SW5 were also recorded. Fragments of dishes, a pedestal based vessel probably a bowl, and part of a plate made up the identifiable vessels in the pearl ware fabric EA9, and the fine white earthenware or china, EA10.

Table 4: The modern pottery by fabric, sherd numbers, weight (grams), and maximum vessel numbers.

Fabric	Sherds	Weight	Maximum Vessel Nos	Average Sherd Weight
EA2	12	407	11	
EA3	3	45	2	
EA9	9	77	4	
EA10	24	285	7	
EA	3	26	2	
SW4	1	38	1	
SW5	11	88	7	
SW	7	398	4	
Totals	70	1364	38	19.48

Discussion

In terms of the medieval assemblage, Stamford, was a major pottery making centre during the late ninth to the early to mid-thirteenth centuries. Other production centres included Lincoln and as yet unknown, probably local and small-scale industries, generally situated to the east on the Jurassic. Sources dating from the twelfth and thirteenth centuries and later comprised the Lyveden Stanion complex of kilns in north Northamptonshire, also on the Jurassic, Bourne and associated manufacturing centres in Lincolnshire, and Nottingham. The origins of the Medieval Sandy and Midland Purple and Cistercian/Black wares also remain uncertain, although one possibility is Nottingham (Nailor 2005) or production centres in the east Midlands, notably Warwickshire and Derbyshire.

Conclusion

The range of medieval pottery and tile fabrics is typical of that found across the region, and is also very similar to other material recorded by the author at Oakham Castle. This is a reflection not only of the relatively low status pottery would have had with within such a household (Woolgar 1999) but also of the generally relatively local trade and distribution patterns of pottery and medieval tile in the medieval period. The pottery vessels are typically domestic in nature, with jars, jugs and bowls all present.

The late Saxon/early medieval pottery assemblage; eighteen sherds, weighing 164 grams may be associated with earlier phases of activity on the site, dating from the 11th or 12th centuries. However, the bulk of the medieval ceramic finds including the ridge tile, date from the later 13th and 14th centuries and later, presumably reflecting the continuous refurbishment and rebuilding of much of the castle complex over time.

Unfortunately the high levels of post medieval and modern activity means that few, if any, of the historic finds were recovered from undisturbed archaeological levels.

Table 5: The medieval and later pottery and ridge tile by fabric, sherd/fragment, maximum vessel number (where appropriate) and weight (grams) by context.

Context	Fabric	No.	Gr.	Max. Vessel no.	Comments
POTTERY					
2	EA2	2	85	2	Misc.
2	EA10	1	121	1	
5	BO1	3	4	1	Join, abraded
6	BO1	2	18	1	Join – lead glazed
6	BO1	1	6	1	abraded
6	CW2	1	6	1	brown glaze
6	EA	1	8	1	
6	SW4	1	38	1	
6	SW	1	12	1	One salt glazed
11	BO1	1	6	1	Green glazed over white slip
11	CW	1	10	1	With prominent white clay inclusions
11	CW2	1	7	1	
11	CW	1	4	1	Cup rim, reversed, white bodied, 1 spot brown clay
11	EA1	1	21	1	Jar rim
11	CW/MB	1	12	1	Rilled body
16	NO	1	3	1	Green glazed coarse white sandy fabric
16	UC	1	4	1	Unclassified abraded
17	LY1	1	6	1	Decorated grid stamp in white clay under green glaze
20	ST2/1	2	17	2	
20	CS	1	16	1	
20	OS	1	9	1	
22	ST1	1	4	1	Lip – table ware
22	CG	1	3	1	Fine wheel thrown shell & limestone
25	CS	2	25	2	
26	ST3/2	1	18	1	rouletted bowl fragment – $11^{th}/12^{th}$ C
28	CW2	2	36	1	Cup base, join
28	BO1	1	2	1	
30 TP12	LY1	2	13	1	Decorated white clay strips under green glaze, join
30	EA2	1	4	1	
30	EA3	2	42	1	Rilled mug body join
30	SW5	5	28	1	join
30	EA9	8	34	3	Including dish/saucer
30	EA10	20	122	3	Including plate
36	MP2	2	55	2	
36	MS8	1	29	1	Jar/cistern rim fragment
36	CW	1	11	1	Cup with white clay pad
36	MY	1	6	1	

36	EA2	1	21	1	
36	BO1	3	76	2	
51	MS	1	28	1	Jar/cistern rim, abraded
62	MY	1	16	1	
62	RW	3	156	1	Internally glazed jar, min 1 pot
62	SW5	1	24	1	Jar - Nottingham
62	EA10	1	126	1	profile small bowl
62	EA10	1	12	1	Handle fragment
62	SW	4	349	1	bottle
64	EA2	3	73	2	
64	EA	1	12	1	Modern wt flower pot
64	SW	1	25	1	Ribbed handle, modern
64	EA9	1	43	1	Pedestal based vessel, transfer printed under glaze
TP3	EA2	1	53	1	Wide mouthed bowl rim
TP3	EA2	1	23	1	
TP4	CS	5	51	1	Jar with flat topped rim
TP4	CS	1	10	1	Curvilinear dec.
TP4	NO3	1	16	1	Rilled jug rim
TP9	LI	1	7	1	
TP9	NO3	1	1	1	
TP9	EA1	1	20	1	Jar rim
TP9	EA2	1	37	2	Wide mouthed bowl rim
TP9	EA3	1	3	1	
TP9	SW5	1	2	1	
TP9	SW5	1	4	1	modern
U/S	NO3	5	90	5	Green glazed jug fragments, one with stub of rod handle, two with external rilling, all white and/or pale grey bodied
U/S	NO2	3	15	2	glazed
U/S	ST1	1	3	1	
U/S	ST3	1	1	1	
U/S	BO1	4	19	4	
U/S	BO1	1	42	1	Strap handle
U/S	LY1	1	3	1	Highly decorated jug fragment
U/S	MP	3	45	3	
U/S	CW	2	7	2	
U/S	CW/MB	1	17	1	
U/S	EA1	1	41	1	
U/S	EA2	2	26	2	
U/S	SW5	2	14	2	Machine decorated
U/S	SW5	1	16	1	Bottle fragment
U/S	SW	1	12	1	
U/S	EA10	1	3	1	
U/S	EA	1	6	1	Flower pot
Context	**Fabric**	**No.**	**Gr**	**glaze**	
RIDGE TILE					
2	CC1	1	35		
2	BO3	1	140	y	v. thick walled, max 19mm – possibly a chimney or similar
4	MP2	1	19		
6	OL	1	27		abraded
11	MS	1	44	y	Fine sand + mica + organic + fe, probably Bourne variant
12	BO1	1	21	y	
13	BO1	1	126		
16	LY1	1	40	y	

16	BO3	1	16	y	
16	BO3	1	6		
36	LY1	6	212	y	Possibly all one tile, mortared and occasionally pierced on underside but not right through as noted on one example at Lyveden (Adams 1969, fig. 13.h).
36	LY1	5	218	y	Misc.
36	BO1	2	12	y	
36	BO1	1	20		
36	BO3	5	164	y	Misc.
36	MP2	1	106		
51	BO1	1	19	y	abraded
51	LY1	1	521	y	Crest - continuous line of clay along top of tile with cut wedges and single thumb smear at end, (Steane 1967, fig.9 e and f)
51	BO3	1	139	y	Crest l- line of clay triangular in section with cut vertical edge
64	LY1	1	118	y	
TP4	CC1	1	23	y	
TP4	LY1	1	91	y	
TP7	BO3	1	105	y	
TP8	BO3	1	12	y	
TP8	LY1	1	32		
TP9	LY1	1	34	y	
TP9	LY1	1	69	y	Triangular crest fragment
TP9	BO3	1	17		
TP9	CG	1	49	y	Sand + ?limestone
U/S	LY1	17	757	y	Misc. frags
U/S	BO1	22	1447	y	Misc. frags
U/S	BO3	6	255	y	Misc. frags
U/S	MP	1	17	y	Misc. frags

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The Miscellaneous Finds from the investigations

Deborah Sawday

The miscellaneous finds are listed below (table 6). I am indebted to Lynden Cooper and Rachel Small for their comments on the flint and animal bone respectively.

Table 6: The miscellaneous finds by material, number and weight (grams) where appropriate, and context.

MISCELLANEOUS		No	Gr.	Comments
20	EA	2	499	Brick, moulded - ?post med
U/S	EA	2	66	Misc. pot-med/modern
CLAY PIPE				

62	China clay	1		Tobacco pipe stem
64	China clay	2		Tobacco pipe stems
TP6	China clay	1		Tobacco pipe stem
FLINT				L. Cooper
U/S	Flint	1		Secondary flake
U/S	Flint	1		Scraper
20	Flint	1		Flake fragment
GLASS				
TP4		1		Window glass
TP4		1		Modern
TP6		2		Modern
TP7		1		17th -18th C bottle glass
TP9		7		Modern
MORTAR				
TP9		3		
ANIMAL BONE				R. Small
2		1		Large mammal vertebrae wing/spine – chop marks
3		1		Large mammal bone shaft
3		1		Small dog tibia (complete)
16		1		Carnivore canine
16		1		Cattle dp4 (mandibular)
16		1		Cattle dp3 (mandibular)
16		1		Cattle thorax vertebrae spine
16		1		Medium mammal; long bone shaft
16		1		Medium mammal maxilla/mandible
16		1		Indeterminate fragment
36		1		Cattle molar ½ (mandibular)
U/S		1		Large mammal pelvis – chopped/butchered
U/S		1		Large/medium mammal pelvis, gnawed2
U/S		2		Indeterminate
U/S		1		Medium mammal indeterminate.

Site/ Parish: Oakham Castle, Rutland Accession No.: OAKRM.2014 69 Document Ref: Oakham castle7.docx Material: pot/cbm/misc. Site Type: castle	Submitter: L. Hunt Identifier: D. Sawday/L. Cooper/R. Small Date of Identification: 19.07.2016/JAN 2017 Method of Recovery: ULAS evaluation/excavation – test pits Job Number: 16-018

The Miscellaneous Unstratified Finds

Deborah Sawday

Table 1: The Miscellaneous Finds.

Material	Quantity (g)	Notes
Clay pipe	21	7 stems- 1 bowl – Midland spur type, late 17th C +(Higgins 1985, fig.1)
Slate	1497	Colly Weston- 4 with peg holes
Brick/cbm	1119	modern
Drain pipe	1305	
Glass	2	Fragment later 17th – 18th C bottle
Glass	46	modern beer
oyster shell	200	
Stone unworked	1896	
Fossils	90	5
Iron	55	modern iron
Lead	6	Includes a piece of window came
snail	5	

The Pottery and Ridge Tile

Unstratified material, mostly modern, deriving from machined spoil was collected by ULAS staff, museum staff and School groups and is reported on here. The pottery, together with the ridge tile, was examined under a x20 binocular microscope and catalogued with reference to recent guidelines, (MPRG 1998, MPRG *et al* 2016) and the ULAS fabric series (Sawday 2009). The results are shown below, (tables 2-4)

Table 2: The pottery and ridge tile fabrics.

Fabric	Common Name/Kiln & Fabric Equivalent where known	Approx. Date Range
CS	Coarse Shelly ware	c.1100-1400
CG	Calcite Gritted/Limestone tempered ware	c.1100-1400
LY1	Lyveden/Stanion type Northants CTS fabric 320	c.1200/1225-1400
BO2	Bourne A/B wares/type ware	c.1250-1450
BO1	Bourne D ware /type ware	c.1450-1650.
CW/2/MB	Cistercian ware -? Ticknall, Derbyshire/Nottingham/Staffs	c.1450/1475-1750
EA2	Earthenware 2 – 'Pancheon ware', Chilvers Coton/Ticknall, Derbyshire	17th C-18th C. +
EA10	Fine White Earthenware/China	1750+
EA	Earthenware	Modern
SW4	White Salt Glazed Stoneware	1730-1770
SW5	Brown Salt Glazed Stoneware	1670-1900+
SW	Unclassified Stoneware	Modern

The Pottery

Table 3: The medieval and later pottery by fabric, sherd numbers, weight (grams), and maximum vessel numbers.

Fabric	sherds	weight	Vessel Nos	comments
CS	1	10	1	Jar simple everted rim
CS	3	24	3	body
LY1	2	65	2	Includes a slipped and glazed jug body
BO2	1	40	1	
CW/MB	1	3	1	Body – hollow ware vessel
BO1	4	39	4	Body - slipped and glazed
BO1	2	9	2	One glazed
SW4	2	2	2	
SW5	1	15	1	Bottle base
SW	3	306	3	Body/base – 2 salt glazed
EA2	6	162	6	Body/base – 5 slipped and glazed –pancheon rim
EA	1	19	1	Body – flower pot
EA10	2	9	2	Plate rim, painted blue under glaze
EA10	7	15	5	Body/base - transfer printed blue or black under glaze
EA10	4	18	4	Body/base
Totals	40	736	38	

The range of fabrics and identifiable vessel forms was limited by the relatively small size of the assemblage but was not dissimilar to that recovered from the excavations.

The Medieval Ridge Tile

Table 4: The medieval ridge tile by fabric, fragment numbers, and weight (grams).

Fabric	**Nos.**	**Weight**
CG	3	207
LY1	12	531
BO1	5	120
Total	20	858

Three of the LY1 tiles showed evidence of crests but these were too fragmentary to identify. Other fragments in the same fabric had been pierced; a characteristic of the products of the Lyveden industry (Adams 1969).

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The Animal Bone

Rachel Small

Table 5: The Animal Bone

Context	No	Comments
U/S	1	Cattle phalange fused
U/S	1	Cattle metatarsal proximal end fused/gnawed by canine
U/S	1	Cattle radius ?proximal end
U/S	1	Sheep/goat distal tibia fused
U/S	1	Indeterminate large mammal
U/S	2	Distal femur articulation, large mammal
U/S	1	Medium mammal humerus shaft fragment
U/S	1	Large mammal indeterminate
U/S	1	Sheep/goat molar m1/m2
U/S	1	Mammal incisor
U/S	1	Large mammal calcaneus fragment
U/S	1	Rabbit metapodial
U/S	1	Medium mammal tibia shaft fragment
U/S	1	Medium mammal metapodial shaft fragment, gnawed
U/S	1	Large mammal rib
U/S	7	Indeterminate large mammal
U/S	2	Bird bones
U/S	4	Large mammal long bone shaft fragments

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Material: U/S pot/ridge tile/animal bone/misc.	Method of Recovery: community dig
Site Type: castle	Job Number: 16-018

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