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# SEDGWICK CASTLE

Nuthurst, West Sussex



**Archaeological Survey**

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## SUMMARY OF PROJECT DETAILS

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Analytical Earthwork Survey (EH level 1-2)

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**Parish:** Nuthurst

**Local Authority:** Horsham District Council

**Planning Reference:** n/a

**Designation Status(s):** Scheduled Ancient Monument – No: 1009579  
Grade II Registered Historic Park and Garden – No: 1001279

**HER Record No:** West Sussex No: MWS4337

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## NON-TECHNICAL SUMMARY

*An archaeological assessment of the surviving remains of Sedgwick Castle in West Sussex has been undertaken by the JESSOP Consultancy as part of a Parkland Management Plan that has been prepared by Historic Landscapes, and funded by Natural England. The survey has been commissioned to increase our understanding of the site, which is a Scheduled Ancient Monument (No: 1009579), in order to assess its significance and heritage value. The remains of the castle are located on the western boundary of the parkland at Sedgwick, which is a Grade II Registered Historic Park and Garden – No: 1001279. The castle is located at NGR TQ 18002 27014 (centered).*

*The site comprises of a double moated earthwork, with banks and ditches, which have a concentric form. To the west there is a narrow causeway, which forms a dam between two large rectilinear ponds. These ponds have been formed by blocking the natural water course of Rushetts Gill, and a substantial earth dam survives to the southwest of the castle, over which is the 18<sup>th</sup> century west-east drive leading up to Sedgwick House to the east. The site is surrounded by grassland to the north and east and woodland to the west.*

*The site has been investigated on two previous occasions, first in 1856 by the Rev. Turner, who published a basic description and a plan of the site. The second occasion was in 1923-4 by S.E. Winbolt, who excavated part of the Inner Ward and sections of the surrounding ditches. The dating of the site is therefore problematic, being derived from the observations during these early investigations and historical accounts, which may only be resolved by the re-examination of the partially back-filled excavation trenches from the 1920s.*

*This survey and overview has successfully demonstrated that there is a degree of complexity to the monument, attributed to multiple phases of development and alteration. The initial phase appears to have been the creation of a moated complex, perhaps little more than a fortified house, surrounded by a circular ditch. This was then made into a pseudo-defensible residence in the 13<sup>th</sup>C, incorporating a D-shaped tower on the west side that overlooked a pair of large rectilinear ponds. A third phase dating to the late 15<sup>th</sup>C involved a re-modeling of the interior layout, including the construction of a new hall, chamber and kitchens. A second outer ditch was excavated, possibly to create an elaborate garden, into which the only access was via the causeway between the two ponds. Subsequent alterations in the 19<sup>th</sup> and 20<sup>th</sup>C to create a garden, adapted the earthworks into a romantic ruin, with walks and exotic planting.*

*Further detailed earthwork survey is recommended to determine the extent of damage from burrowing animals, and disruption to the ground surface by the 1920s excavations.*

# 1 INTRODUCTION

## BACKGROUND

This document describes the results of an archaeological survey of the remains of Sedgwick Castle, in Nuthurst, West Sussex (**Figure 1**). The site is a Scheduled Ancient Monument (No: 1009579) and falls within a Grade II Registered Historic Park and Garden – No: 1001279.

## AIMS OF THE FIELDWORK

The aim of the work has been to provide an overview of the previous elements of archaeological investigations that have been undertaken on the site, to enable its historic significance to be understood as part of a Parkland Management Plan.

To accompany the overview of the previous archaeological work, the earthwork remains have been rapidly recorded in the form of an English Heritage Level 1-2 survey (English Heritage 2007, 23). This record is intended to help guide the proposals for the future management of the site and also, highlight areas of potential archaeological sensitivity, or significance.

## METHODOLOGY

The archaeological methodology that has been employed for this project has incorporated both desk-based and archive research with new field survey of the surviving remains.

The field survey was comprised of a sketch survey of the surviving earthworks to establish their form and relationship to one another, representing a Level 1-2 record (English Heritage 2007, 14). Digital photographs have been taken (**Appendix 3**) and a gazetteer of historic features, or heritage assets has been incorporated within the Park Management Plan that has been prepared for Sedgwick Park (Felus et al. 2014).

## ACKNOWLEDGEMENTS

This report has been prepared by Oliver Jessop MIfA, with the historical research being undertaken by Dr Kate Felus. Illustrations were drafted by Ian Atkins MIfA. The editing has been undertaken by Karen E Walker MIfA, FSA.

The owners of the site, John and Clare Davison and Robin Nugent are acknowledged for their help in arranging access and for sharing their experience of the recent history of the site. Ann Clark and Jo Barnes of Natural England are thanked for overseeing the project and for their advice during the fieldwork and preparation of this report.

John Mills and Paul Blinkhorn have been generous in providing advice and information relating to the site and the similar examples elsewhere. Prof Oliver Creighton has been generous with

his time and is thanked for his comments on an early draft of this report.

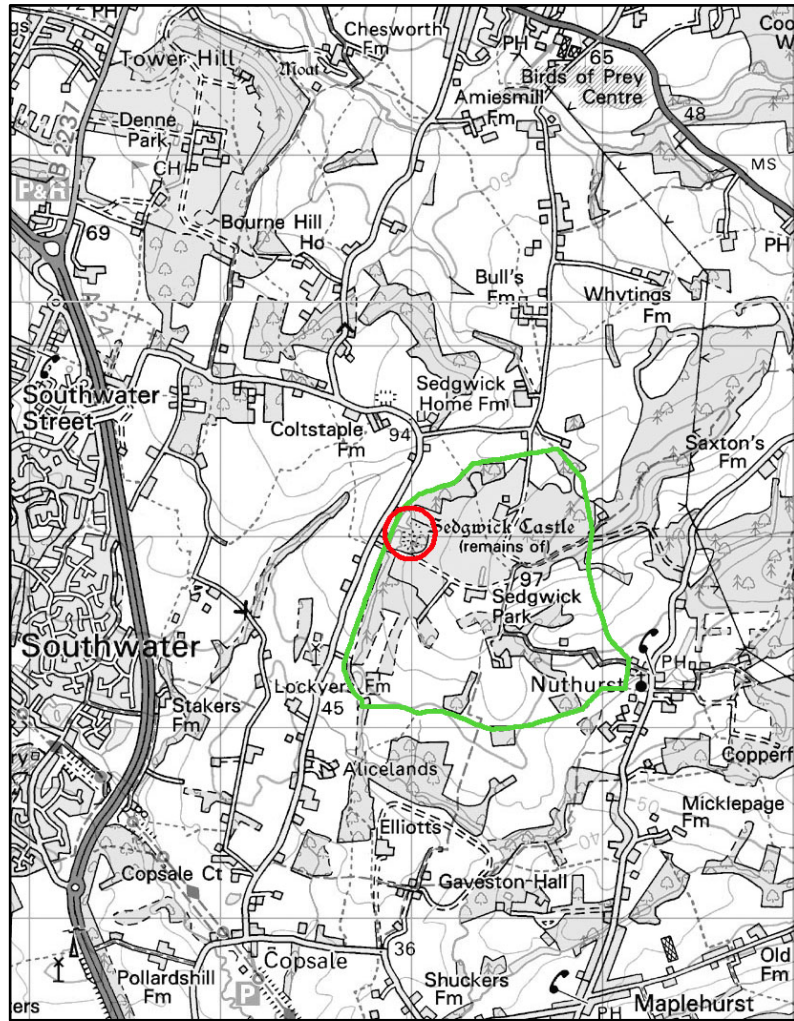
Mark Bowden and Elaine Jamieson of English Heritage made a field visit to help with the interpretation of the monument, and have commented upon a draft text of this report, which has been incredibly helpful in understanding the development and significance of the site.

Staff at both Lewes and Horsham Museums, are thanked for their help and guidance in locating the former excavation archive. Esme Evans, the librarian at the Barbican House Museum, is thanked for her help in locating relevant historical documents associated with Sedgwick.

## 2 SITE LOCATION AND GEOLOGY

### LOCATION OF SITE

Sedgwick Castle is located c.3.5km south of the town of Horsham, in West Sussex. It is c.100m southeast of Broadwater Lane at NGR TQ 18002 27014 (**Figure 1**) within the Sedgwick Park estate, and at a height of c.70m above sea level. The castle is associated with a stream channel known as Rushetts Gill that has been dammed to form two large ponds.



**Figure 1:** Location map of Sedgwick Castle (red circle) and projected extent of deer park (green line).

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### GEOLOGY

The underlying bedrock geology is Horsham Stone Member – sandstone. No superficial deposits are recorded (BGS 2014).

### 3 HISTORICAL BACKGROUND

#### INTRODUCTION

This section of this document considers the readily available historic archives, mapping and photography associated with Sedgwick Castle. A summary of the historic sources is presented first, followed by an analysis of historic mapping (**Appendix 1**) and previous archaeological investigations (**Appendices 2 and 4**).

The principal sources and archives that have been consulted are listed below:

- *West Sussex Historic Environment Record*
- *Sussex Archaeological Society (library)*
- *Barbican House Museum - Lewes*
- *Horsham Museum*
- *The English Heritage Archive – Swindon*
- *The National Heritage List for England – English Heritage*
- *Records held at Sedgwick House*

#### HISTORICAL SOURCES (AFTER FELUS 2014)

The historical development of Sedgwick Castle has been previously examined by a number of authors; notably Turner (1856), Page (1907, 307), Winbolt (1925) and Hughes (1996), Knight (2006, 321-333). The following summary of their works has been sub-divided by historical time periods for ease of reference.

#### *SAXON AND EARLY MEDIEVAL SEDGWICK*

It has been assumed that there was a Saxon settlement at Sedgwick because the name is of Saxon derivation - meaning farmstead by the sedge - which implies a settlement in or near a damp place. This may have been near a stream, or an area of water logged ground, the exact location of which cannot, however, be established with any confidence.

Hughes (1996) discusses the early history of Sedgwick and states that at the time of the Domesday Survey (1086) one of William de Braose's principal tenants was a Robert le Sauvage holding seven manors, including Broadwater (now part of Worthing), of which Sedgwick was in a detached portion. Hughes considers that just as the de Braoses developed the manors at Washington near Horsham and Chesworth only 1.2 miles away, the Sauvage family also constructed a hunting lodge on an already settled site, presumably the site of the castle? Unfortunately, whilst such a use of the early castle at Sedgwick is likely no definitive evidence

for this has yet been identified.

We do not know the date at which the park was enclosed, or if it were enclosed earlier than the building of the castle, perhaps as some sort of enclosure associated with the adjacent St Leonards Forest and the management of its fauna. There were a number of parks associated with St Leonard's Forest, including another de Braose property at Knepp, with which there are many parallels and connections through the early history of Sedgwick; until the early 17<sup>th</sup> century (Page, 1907).

Chesworth was the smallest of the forest parks, 233 acres (by 1608). Edward I and II both stayed Chesworth, but there is no evidence to suggest they visited Sedgwick. It may therefore have held a different status, even though it had received a licence to crenellate by then.

#### *MEDIEVAL SEDGWICK - CASTLE AND DEER PARK: 1205- 1498*

Between 1242 and 1249 Sedgwick was held by Robert Sauvage, Sheriff of Surrey and Sussex. Sometime soon afterwards Sauvage leased Sedgwick to John Maunsell, a close advisor to Henry III. In 1258 Henry allowed Maunsell to strengthen his house at Sedgewicke with fosses and a wall of stone and lime, and to crenellate it.

It may be more than a coincidence that it was in this year that Henry was forced to agree to the demands of the Barons, who feared he was taking the same course as his father King John, and swear to the Provisions of Oxford, which effectively checked the power of the monarch by putting it into the hands of a council of 24 barons instead. Another permission to crenellate at Sedgwick was granted in 1262, against the backdrop of the immediate run-up to the Second Barons' War (1264-67). Indeed by 1263 the leader of the barons, Simon de Montfort, had captured most of south-eastern England. It was in this year that Maunsell had to flee to France, never to return (dying in France in 1265) and Sedgwick was put into the hands of Peter de Montfort. The Battle of Lewes, at which the king was captured, followed in 1264. Ultimately however, the King defeated de Montfort at the Battle of Evesham in 1265. Sedgwick seemingly passed to Maunsell's son, presumably after the defeat of the Barons, but eventually it reverted to the Sauvage family. The last of the family line was Hawisa Sauvage, and in 1272 the estate passed back to the de Braoses.

In 1281 de Braose was granted the right of free warren, however, the earliest reference to a separate hunting park at Sedgwick is to be found over 20 years later in 1305, although its precise location is not been included within the surviving historical sources. They do however, state that in 1326 it covered 400 acres, and that by the time it was dis-paled in 1603 it covered a total area of 624 acres, which is likely to be a more accurate record of its size at this time.

*TUDOR SEDGWICK: 1498 TO 1602*

During the Tudor period, Sedgwick's fortunes seem to have reflected the ebb and flow of power from one faction to another. Following Henry VII's victory at Bosworth in 1485, and the consequent end of the Wars of the Roses, there came a period of increasing political stability. In 1498 Sedgwick passed into the hands of the Howard family. At this point Thomas Howard was the Earl of Surrey and his principal seat was Framlingham Castle in Suffolk. Although he had supported the defeated King Richard III at Bosworth, he had been rehabilitated and had become an adviser to Henry VII. At the time Sedgwick passed into his hands, he was a very powerful man, and he was created the Duke of Norfolk by Henry VIII in 1514. The Howards held Sedgwick until 1572, but it is understood that they mainly used the larger residence at nearby Chesworth.

In 1547 the 3<sup>rd</sup> Duke of Norfolk was caught up with the plots surrounding the succession of Edward VI, forfeited his lands and was sent to the Tower with his son, the Earl of Surrey. Both were sentenced to death, but the 3<sup>rd</sup> Duke survived because Henry VIII died the day before the execution was set. The Howard lands, including Sedgwick, passed to Thomas Seymour, one of the two brothers of Jane Seymour, and an uncle of Edward VI. In 1549 Seymour was arrested and executed as a result of a potential rebellion, and his estates became forfeit and surrendered to the Crown. An inventory taken at his attainder gives some detail of all the possessions in St Leonard's Forest including Sedgwick, Chesworth and Knepp. We do not know if Seymour ever visited Sedgwick, after Henry VIII's death as Sudeley Castle was his principal seat, but at this date there must have been a functioning deer park, as a surviving inventory noted ten 'porkers' and one hundred deer, with a William Barwyke as keeper (Winbolt 1925).

In Queen Mary's reign (1553-58), the lands comprising St Leonard's Forest were returned to the elderly 3<sup>rd</sup> Duke of Norfolk, who died a year later. He was succeeded by his grandson, the 4<sup>th</sup> Duke of Norfolk, and he spent time at Chesworth. However he was forced to mortgage to Queen Elizabeth I, the manors of Sedgwick, Chesworth, Baybush, Shelley & the Forest of St Leonards 'in them plenty of woods for fortifications and ships' (Page 1907, 309). In 1572 the 4<sup>th</sup> Duke was executed for treason and his St Leonard's Forest including Sedgwick returned to the Crown. The Sedgwick estate was then leased to a variety of people, ultimately with Sir John Caryll acquiring Sedgwick and Chesworth in the last year of the reign of Elizabeth (1603).

In the 1590s a fire, led to the felling of timber for repairs (Hughes 1996), which might suggest that there was still a need for a residence on the site.

## HISTORIC MAPPING

The earliest illustration that survives depicting the layout of Sedgwick castle is an estate plan from 1701 (**Appendix 1.1**). It is a coloured document and details the infrastructure of the field boundaries and track ways that subdivide the immediate landscape surrounding the castle. The castle is depicted with a pair of parallel curved banks that terminate on the west side where they meet two long rectilinear ponds. The inner bank is labelled as 'Casell Banek'. Between the ponds there appears to be a causeway, which correlates with the site of the dam that survives today. The ponds appear to be a uniform width (unlike today), although the south pond is slightly longer. The northern end of the north pond is defined by another narrow causeway, or track, which has a gate on the west bank. Both ponds are parallel with Broadwater Lane, which is located on a northwest-southeast ridge running alongside the castle.

No internal features are illustrated within the curved banks of the castle, although a stylistic symbol indicates that it was wooded. The west bank of the south pond has a row of larger trees, which may be associated with the low bank that survives today. If this feature was planted with trees, it may have been a deliberate attempt to shield the monument from view from Broadwater Lane to the west.

The southern ends of the ponds are defined by a second dam, which has gates at either end, indicating that there was a west-east route leading to 17<sup>th</sup> C Sedgwick House that replaced the castle, in existence at this date. To the west of the gate, two houses are illustrated on Broadwater Lane, with red roofs (**Appendix 1.1**). Whilst they are in the general proximity of the existing West Lodge, no corresponding above ground remains have been located.

The fields to the west and south of the castle are illustrated with thin green brush strokes, most likely representing pasture. In contrast, to the northwest of the curved earthworks are thin rows of dots with curved ends that appear to be cultivated fields, the dots representing ridge and furrow banks. To the north of the double banks that define the castle is a small oval water feature labelled as 'Nunnes Well' (Nuns Well), clearly it was a significant landscape feature to be illustrated in this way. A second curved bank is illustrated to the north of Nuns Well, although this stops at the depiction of the ridge and furrow. To the south and east of the castle the field boundaries respect the curve of the castle banks and if their alignment is projected to the northwest it would meet with the end of the northern bank. It is possible therefore, that this bank may have once formed a third outer circuit around the castle, the course of which being represented by the field pattern in 1701.



The next dated illustration of Sedgwick comes from Richard Budgen's 1724 survey of Sussex (**Appendix 1.2**). The drawing is at a very small scale and executed in a very stylistic fashion, however, Sedgwick Park is clearly defined as sitting within a sub-rectangular enclosure that represents the former deer park. The castle is positioned to the west of the illustration close to the boundary, and depicted as two concentric circles. Interestingly, there appears to be an attempt to include the two ponds, drawn as a 'figure of 8', but depicted on the wrong side of the castle.

At the end of the 18<sup>th</sup> century the area of West Sussex, including Sedgwick, was surveyed by the Ordnance Survey (**Appendix 1.3**), and the resulting map was published in 1813. Their drawing depicts the layout of the field pattern on the estate, including an area of open parkland to the north of the house that contains the formal canal. Curiously, unlike the 1701 map (**Appendix 1.1**) there is no detail for the remains of the castle, although the ponds are depicted as a single large body of water. It is suggested that as the castle was not drawn, then the level of detail captured by the surveyors in this part of the estate was limited, hence the merging together of the two ponds.

Two further maps, from 1838 (**Appendix 1.4**) and 1848 (**Appendix 1.5**) provide further details of the landscape surrounding the castle in the mid-19<sup>th</sup> century. Whilst they are slightly different, they do indicate that the form of the ponds had been adapted from the straight sided banks on the 1701 plan. They also illustrate that to the west of the central causeway between the ponds there was a projecting angle in the field boundary, which corresponds with the site of a large depression that may have been excavated as a quarry and subsequently incorporated into the landscape surrounding the castle. Interestingly, the depiction of the field boundaries to the east and northwest of the castle appear to form an outer arc, which may imply that if there was an outer bank and ditch that it extended as far as Broadwater Lane to the north.

The first detailed illustration of the castle was not published until 1856 by the Rev Edward Turner (**Appendix 1.6**). This drawing focuses upon the extant elements of the castle, being defined by two concentric ditches, the out one connecting to the northwest with the two ponds on either side of a dividing causeway. It is interesting to note that there are no smaller causeways across the ditches, and whilst there may be a degree of artistic licence, the drawing does suggest that the connecting banks across the ditches that exist today were created after 1856. Perhaps the most significant aspect of this 1856 plan is the extent to which standing masonry was surviving surrounding the inner ward, most notably along the west and north sections of the ditch.

The 1875 edition of the Ordnance Survey Map for Sedgwick (**Appendix 1.7**), adds to the detail

drawn by Turner in 1856. The site of the castle is labeled as a wood and is planted with a variety of trees, with a range of conifers, or firs in the north to the southwest of Nuns Well. The north pond appears to be partially silted up and its profile has been adapted. The sluice and bypass channels around the causeway between the ponds are also in existence. The wood appears to have been incorporated into the garden landscape surrounding Sedgwick House, being ornamented with a network of interconnecting paths (coloured brown on **(Appendix 1.7)**). The paths closely correlate with the existing causeways across the ditches. The parkland boundary has also been extended towards the west right up to the edge of the second outer ditch.

The final plan that illustrates the form and layout of the castle, was published following the archaeological excavations by Winbolt in 1923-24 (**Appendix 1.8**). The drawing appears to be slightly schematic, however, does reflect a measured survey of the surviving ditches, causeways and structural remains. The extent of surviving walling directly corresponds with the walls still standing today, which is approximately 60% less than as illustrated by Turner sixty-eight years earlier in 1856 (**Appendix 1.6**). Winbolts plan also incorporates the buried sections of walling that he uncovered during the excavations which were largely in the central part of the inner ward.

#### PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS AT SEDGWICK CASTLE

Prior to the survey presented in this report, two earlier phases of archaeological investigation have been undertaken at Sedgwick Castle. The first was by the Rev E. Turner in 1856 (Turner 1856), and the second by S.E. Winbolt in 1923/4 (Winbolt 1925); see below:

##### *1856 INVESTIGATIONS*

On the 12<sup>th</sup> July 1855 the Rev. Edward Turner gave a lecture in Horsham about his research into Sedgwick Castle, the transcript of his presentation was published in the *Sussex Archaeological Collections* (Turner 1856). The first section of the article provides a detailed historical account of the development of the Castle and places it within its historical context in West Sussex.

##### *DESCRIPTION OF THE MONUMENT*

The second element of his paper provides an important insight into the condition of the monument in the mid-19<sup>th</sup> century, and is accompanied by a site plan (**Appendix 1.6**) drawn by Robert Shepherd of Horsham (Turner 1856, 39). Turner describes that until recently, presumably referring to the 1850s, the site was heavily overgrown and managed as a coppice woodland, although by 1855 that it had been cut back to expose the monument. It can

therefore be inferred that during the first half of the 19<sup>th</sup> century the castle was never intended to be seen from the approach road to the house, nor contributed to the appearance of the landscape at this time.

Turner describes that there were two moats, and the inner one had water washing the walls that extended down into the water and which were splayed at their base; such a feature still remains at the base of the D-shaped tower. Interestingly, the walls from the bottom of the inner ditch along the west section of the castle were relatively intact being 4-5ft in height, and the site plan details that about half of their circumference remained. The stone from the eastern walls had been robbed for use in road construction, an activity that Turner states had been undertaken from at least the 1820s.

Internally within the Inner Ward of the castle he describes each of the sections of standing masonry, including a tiled fire-back, all of which survive today. Turner comments that there were piles of rubbish between the walls, presumably this describes in part, fallen sections of walling remaining as deposits of rubble. Amongst this material were fragments of window tracery and worked stone, a few fragments of which still survive on the site.

Turner states that the approach from the southeast still survived, although as only the carriage drive to the south of the monument is drawn on his published plan, it is unclear whether he is referring to another feature that is not illustrated. In addition, he notes that to the northwest there was an outlet that appeared to have been used as a road to the Nun's Well to the north of the outer moat. Understanding his meaning of the phrase 'outlet', does make some sense if it is referring to a U-shaped stone feature along the circuit walling of the Inner Ward. If this is the case, it is likely that this demarks the site of a bridge and possible gatehouse.

Interestingly, Turner makes no reference to the earth causeways that cross the moats, and it is therefore suggested that they may be associated with the re-modeling of the monument in the 1920s, when Emma Henderson adapted the castle into a Japanese inspired garden. He also describes that the Nun's Well was beautifully constructed from large blocks of hewn stone with a stepped profile. This does not relate to the current appearance, presumably it was also adapted in the 20<sup>th</sup> century to its current form.

#### *1923 TO 1924 INVESTIGATIONS*

In 1925 S.E. Winbolt published an account of his excavations at Sedgwick Castle (Winbolt 1925), a report that can still be regarded as the principal source of reference for understanding the archaeological development of the site.

It should, however, be noted that no site drawings, records or notebooks have been located

associated with these early excavations, and whilst he illustrates the description with plans and photographs, the fieldwork was not executed to the same standards used today and regrettably aspects of the excavations are difficult to interpret.

*PHASED DEVELOPMENT OF THE SITE (ACCORDING TO WINBOLT)*

Resulting from the research and fieldwork undertaken by Winbolt, it has been possible to establish that he subdivided the site into five phases of development (which has been now superseded by this current stage of work – see **Section 4**), as follows:

- Phase 1** Saxon origin; note this is inferred from a possible association with the name 'wick', and that it was located adjacent to the existing road network north-south up and down the Rape, linking Bramber to Horsham.
- Phase 2** A property on the site was founded by Sauvage in the late 12<sup>th</sup> to early 13<sup>th</sup> century. This comprised of a group of central buildings arranged around a quadrangle. A gatehouse and guard-room is ascribed to this to this phase, presumably associated with a bridge. The site was protected with a single circular ditch, effectively forming a moated residence.
- Phase 3** The site was fortified in the 13<sup>th</sup> century, which involved the deepening and widening of the existing ditch and adding an outer ditch, the construction of a stone curtain wall around the central moated island forming an Inner Ward or courtyard, and the construction of a D-shaped tower to the west and new gatehouse to the north.
- Phase 4** At the end of the 15<sup>th</sup> century the site was totally re-modeled and the central quadrangle of buildings was demolished, although with sections of the curtain wall(?). The gatehouse and drawbridge were demolished and the earth causeways were inserted, effectively making the site indefensible. A new stone hall was built on the east side of the Inner Ward, with an attached chamber to the south and a kitchen to the north and other ancillary buildings.
- Phase 5** Period of neglect, abandonment, a fire and demolition.

*HISTORICAL ACCOUNT*

The first section of Winbolt's 1925 article provides a historical description of Sedgwick. Winbolt discusses when the castle was built, and that the excavated evidence indicates a date range of 1066 to 1200 for its foundation. Winbolt also discusses the date when the castle was abandoned suggesting that by the mid-17<sup>th</sup> century Sedgwick House (Lodge) had been built and therefore that any form of continued residency at the castle is unlikely after that date. He also notes in a footnote that extensive evidence for burning was recorded in the excavations along the wall foundations, which he interpreted as the remains of a fire that destroyed the site.

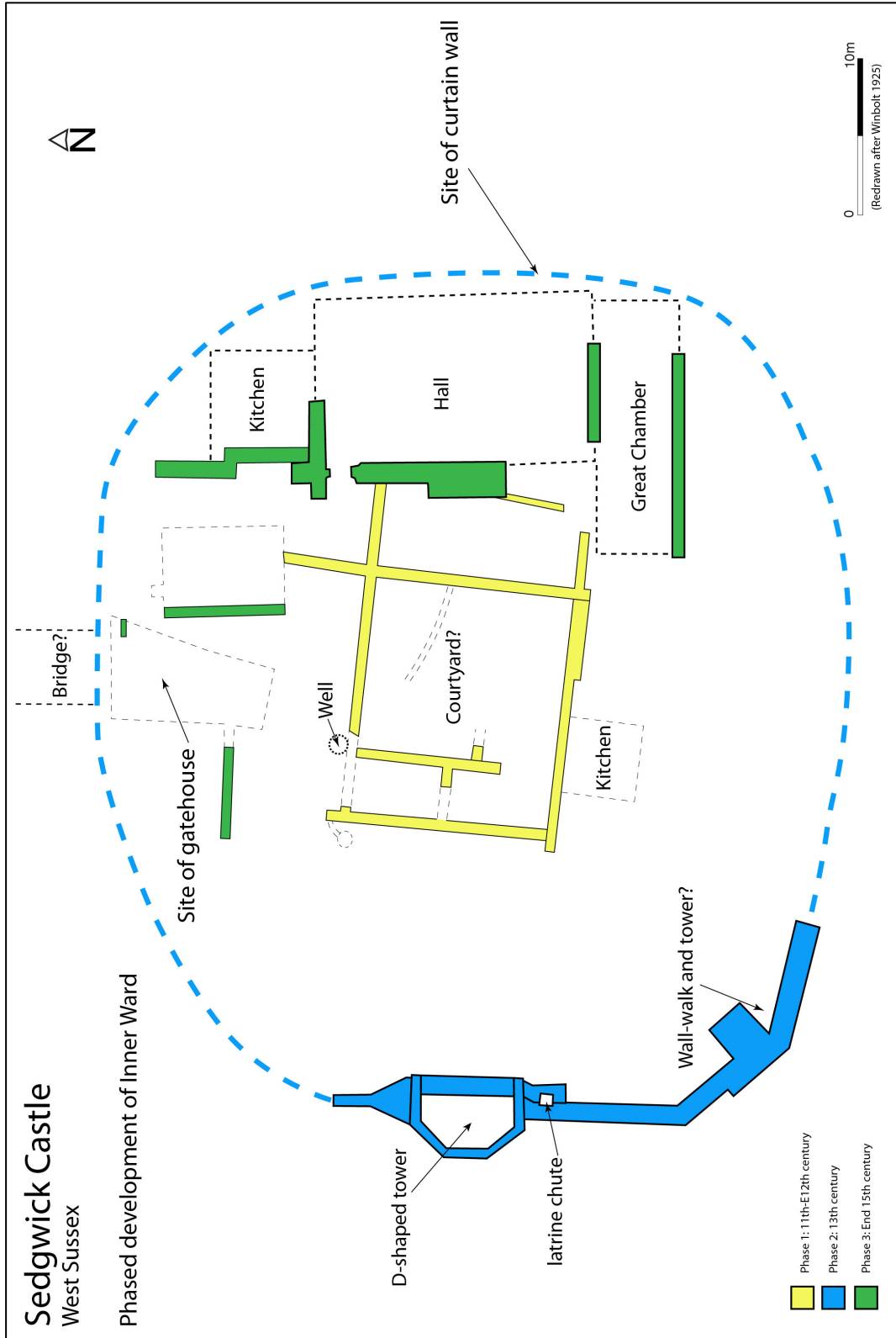


Figure 2: Phased development of the inner ward (after Winbolt 1925).

*DESCRIPTION OF EXCAVATIONS*

The initial season of investigation by Winbolt started with two weeks of vegetation clearance to expose the central part of the site. It is unknown how long was then spent excavating the remains, however, when work re-commenced on 24<sup>th</sup> March on 1924 they were on site for a further two weeks.

Within the center of the Inner Ward a series of wall alignments set at right-angles to one another were exposed (**Figure 2**). They were of relatively narrow in construction and possibly represent the remains of footing for a timber-framed structure, possibly incorporating a courtyard, or quadrangle. The walling was on a different alignment to the standing sections of masonry (see below) and are attributed to Phase 1. Within this structure evidence for a cement floor (possibly lime plaster) was exposed, along with stone capped drains.

Along the south wall of this central structure the excavations exposed an area of intense burning along the foundations, which Winbolt interprets as evidence for the burning of a timber building. Built up against the south wall was a stone floor measuring 15ft x 15ft (4.55m x 4.55) and located at a depth of 1.5ft (0.45m) below ground level. The walling demarking the outline of this building had been robbed, damaging the edges of the paving. Associated with this structure was a large quantity of animal bones, mussel and oyster shells, mixed with fragments of jugs and cooking pots, indicative of the site of a former kitchen. Evidence for a secondary floor surface and thick deposit of wood ash, pottery and animal bones, interpreted as being the site of an earlier kitchen that burnt down, but it may also represent a midden deposit, formed from kitchen/ table waste and ash from cooking fires.

Against the outside of the northwest corner of the courtyard, a circular depression was excavated to a depth of 12ft (3.6m) where water level was reached. The feature had no lining to the sides, and contained only a small amount of rubbish, but it is likely that it was constructed as a well.

The footings of the standing walls in the east part of the site were excavated to try and establish the former size of these structures and robber trenches and partial foundations were exposed. In the middle of the building towards the east, tentatively interpreted as a hall, no evidence for internal dividing walls was identified, although any internal subdivisions could have been timber framed, or wattle and daub construction. Winbolt did however identify two sections of walling oriented north-south to the north of the hall. To the northwest of this a square depression Winbolt suggests that there may have been a kitchen (Phase 3) as immediately to the north a large assemblage of oyster shells, broken jugs and burnt stones were recovered.

In the northern part of the Inner Ward adjacent to the earth causeway across inner moat, at a depth of 2ft (0.6m) a solid floor of big stone slabs was exposed orientated north-south. The floor measured 27ft 6in (8.4m) in length with a tapering width from 20ft (6m) to 14ft (4.26m). A drain was recorded running beneath this floor that exited into the moat, and appears to have continued to the central buildings in the middle of the site. Interestingly, Winbolt describes that the bedrock was at a depth of 3ft (0.9m) below the flagstones, thus the made ground in the north part of the Inner Ward is potentially up to 1.5m thick.

Evidence for walls orientated west-east were also recorded in the north part of the inner Ward, although their full extent is unclear.

#### *THE STANDING WALLS*

The clearance of the vegetation on the site exposed two areas that retained substantial sections of masonry walling. The first was along the west edge of the Inner Ward on top of the ditch. There are attributed to his Phase 2 expansion of the castle and are associated with the construction of a projecting D-shaped tower that he describes as a keep, although is far too small for such a function. This tower is described as having side (curtain) walls running away for c.9m to the north and south. He notes that the base of the tower has sloping walls, although makes no reference to the remains of a splayed opening, representing an arrow slit in the west wall. Built against the southeast side of the tower was a square shaft 4ft x 4ft (1.2m x 1.2m) and is interpreted as a possible latrine chute. The stretch of walling that extends to the south from the tower was notably thicker than the rest, and Winbolt suggests that there may have been a smaller tower, or turret in this location with a parapet walk.

The second area with standing walls is the east part of the Inner Ward (**Figure 2**), that are dated to the Phase 3 re-modeling of the site. Four sections of wall were recorded, all of which remain today. They are interpreted by Winbolt as representing a large Hall measuring 30ft x 50ft (9m x 15.25m) and orientated on a north-south alignment. To the south was a second wall orientated west-east, and which is interpreted as an attached chamber. The entrance to the hall was at the north end of the west wall, and Winbolt uncovered the remains of carved door jambs that were still *in situ*, and four loose fragments from a flat segmental arch. To the south of this opening, the wall thickened and on the east face was a section of herringbone tiles that represent a fire-back and fireplace.

#### *THE MOATS*

Winbolt discusses at length the design and operation of the moats, including whether they were wet or dry. He concludes that the only effective way of keeping them wet, would have been if

they were fed from a steam flowing out of the park to the east and also in conjunction with the three barrages (Causeways) that span the moats. The causeways are however interpreted as being later 20<sup>th</sup> century insertions and thus Winbolt concludes that, like most moats from the 11<sup>th</sup> century they were dry, apart from the short stretch in front of the D-shaped tower.

Winbolt excavated a linear trench across the eastern ditches from the park to the Inner Ward, approximately on a west-east alignment, although its exact location is unknown. The trench was 6ft (1.8m) wide and involved the removal of 1ft (0.3m) of soil from the sides of each ditch, and 4ft (1.2m) from the base of each. He illustrates a profile across this transect and the ditches have sloping sides and a flat bottom. Winbolt states that the faces of the ditches would have been walled with stone, although, the evidence for this is unclear. He also suggests that the raised bank to the east of the Inner Ward is likely to have been formed by the dumping of the excavated material from the two moats.

#### *MATERIAL CULTURE (THE FINDS)*

The final section of the article lists the range of artefacts and items of material culture that were recovered during the excavations. There are no quantities listed, detailed descriptions or illustrations within Winbolts account, so it is only possible to get an overview of material that was recovered.

The article states that a variety of animal bones were recovered including oxen, sheep and deer. Metal artefacts included a lead spindle whorl, lumps of lead (possibly associated with roofing material that was melted during the destruction of the building). A thin thread (strip) of copper alloy with eyelets spaced at intervals along its length was found, perhaps associated with a belt. Also recovered was a thin section of curved copper alloy plate (sheet) that once covered the base and sides of a round vessel.

The pottery assemblage included 12<sup>th</sup>-century cooking pots, loose textured black ware, green glaze ware, reddish brown wares and a green glaze with a frilled base. A worked carpal, or wrist bone was also found, which had been polished and cut flat on one side. This artefact is interpreted by Winbolt as a gaming piece, Saxon in date, being similar to examples in the Devizes Museum. This date however, should be treated with caution as this form of worked bone has been found on sites dating to all the centuries encompassed by the medieval period.

#### *WINBOLTS SITE ARCHIVE*

In an attempt to understand as much as possible in regards to the 1920s excavations, contact with the West Sussex museum service identified two possible locations for relevant materials – Horsham Museum and the Barbican Museum in Lewes. Unfortunately, no paper records



survive at either archive, although Horsham does curate a box of artefacts labeled as being from Sedgwick. Further research, however, has concluded that this material which was accessioned in 1931, is likely to have originated from Winbolt's later excavations at Southwick in the 1930s and has been miss-labelled.

The museum in Lewes, however, does contain a single box of 30 sherds of pottery and a hand written note from Emma Henderson providing a provenance for Sedgwick Castle (see **Appendix 4**). Unfortunately, there is no accompanying paperwork to explain the location of this material within the excavated trenches. This pottery can be divided into seven fabric types, spanning the 13<sup>th</sup>-15<sup>th</sup> centuries. Included are fragments from cooking pots, storage vessels and decorated green glazed jugs.

#### *Winbolt's excavation techniques*

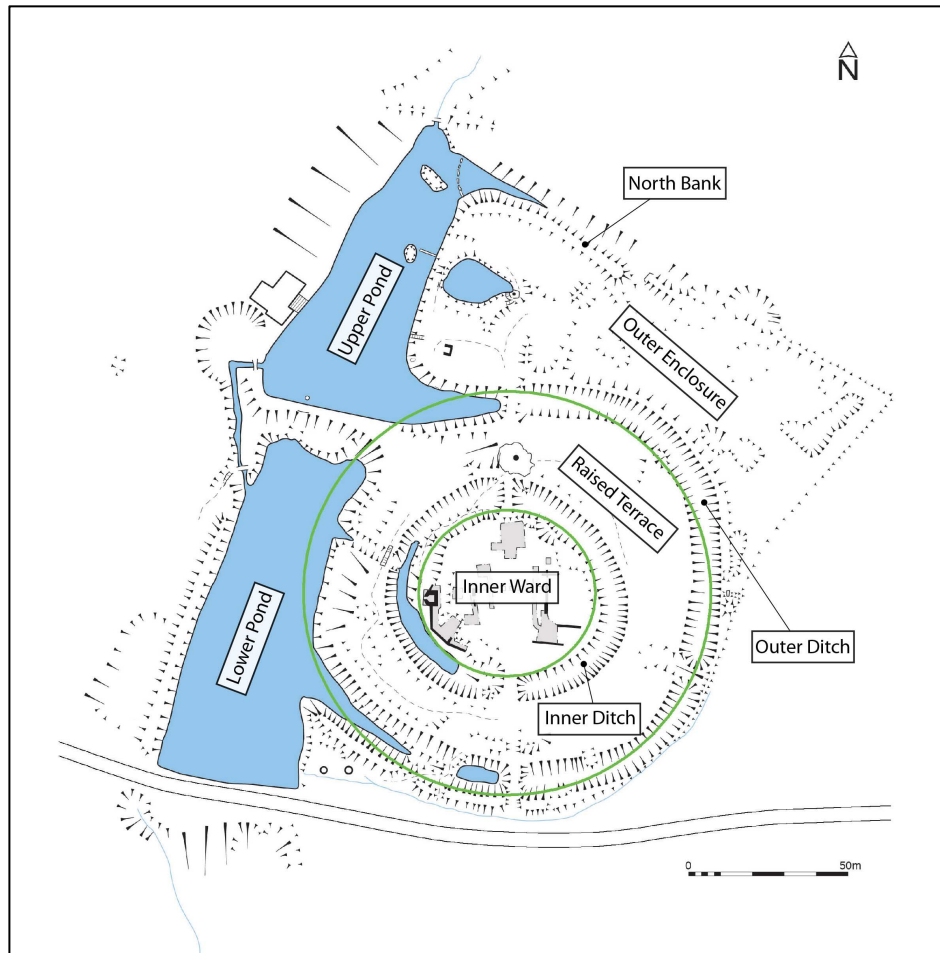
The exact methodology employed by Winbolt to excavate Sedgwick Castle is unknown, however, it can be inferred that he kept some form of records, or notes detailed enough to allow him to interpret the site. In addition, it is likely that measured drawings were produced on site to plot the positions of the various sections of walling, and profiles across the ditches. In addition, Winbolt was clearly an experienced archaeologist, being able to formulate a detailed interpretation of the development of the site, including a phasing sequence for the excavated features.

Unfortunately, the lack of site records make it difficult to establish whether the trenches were numbered, excavated by stratigraphic layer, or even located to target specific features. An examination of the monument today, suggests that some, if not all of the trenches were located around the standing sections of walling, or were cut to follow (or chase) buried wall alignments. Many of the trenches can still be traced on the ground and it would appear that they were only partially back filled. It can also be inferred from his article that the phasing of the different sections of walling, or floor surfaces that were uncovered, was largely attributed to the relative depth of the feature below the ground surface, rather than through an analysis of their physical stratigraphic relationship with the sequence of deposits.

## 4 ARCHAEOLOGICAL SURVEY

### INTRODUCTION

This section of the report details the results of a rapid assessment of the earthworks that comprise the moated site of Sedgwick Castle. To aid with describing the various elements of the monument, the castle has been subdivided into a series of compartments (**Figure 3**).



**Figure 3:** Individual compartments that comprise Sedgwick Castle.

The central section of the castle is referred to as the 'inner ward', being defined by a deep ditch, the 'inner ditch'. Surrounding this is a broad flat area, which is referred to as the 'raised terrace', which is in turn defined by a second ditch, labeled the 'outer ditch'. To the north of the outer ditch is another large bank and ditch, the 'north bank', and which partially encloses an area to the northeast of the castle, which is referred to as 'the outer enclosure'. To the west of the castle are two ponds, the 'upper (north) pond' and lower (south) pond'.

SUMMARY OF ARCHAEOLOGICAL PHASES OF DEVELOPMENT

*PHASE 1: c.1200AD*

First circular enclosure created with a ditch, to protect a central range of buildings, with access via a gatehouse and bridge in the form of a moated site; possibly contemporary with an outer enclosure; i.e. the remains of a substantial bank and ditch survive along north edge of site.

*PHASE 2: c.MID-13<sup>TH</sup> CENTURY*

External boundary wall to the inner ward strengthened and D shaped tower constructed, thus adapting the earlier moated site into a more imposing structure, more in keeping with the appearance and size of a castle.

*PHASE 3: c.LATE 15<sup>TH</sup> CENTURY*

The castle was re-modelled and central buildings replaced with a large hall, chamber, and kitchens all arranged around a central courtyard; a second concentric ditch was excavated forming a broad terrace possibly intended for use as gardens that overlooked the castle.

*PHASE 4: c.EARLY 17<sup>TH</sup> CENTURY*

The abandonment of the site and removal of stonework for local buildings and roads; parts of the outer bank and ditch were removed and fields established to the east and in the north of the site; localised quarrying also took place in this northern area.

*PHASE 5: MID-19<sup>TH</sup> CENTURY*

Antiquarian interest in the site included a survey by Turner. The creation of access routes with earth causeways across the ditches.

*PHASE 6: EARLY 1920S*

Excavations in 1923-24 by Winbolt and publication of findings.

*PHASE 7: MID TO LATE 1920S*

The castle site was re-invigorated, being converted into an out-lying Japanese influenced garden by Emma Henderson. A pumping plant was installed to supply the gardens south of the mansion.

*PHASE 8: L20<sup>TH</sup> CENTURY*

Construction of house on west bank of north pond and insertion of horse jumps.

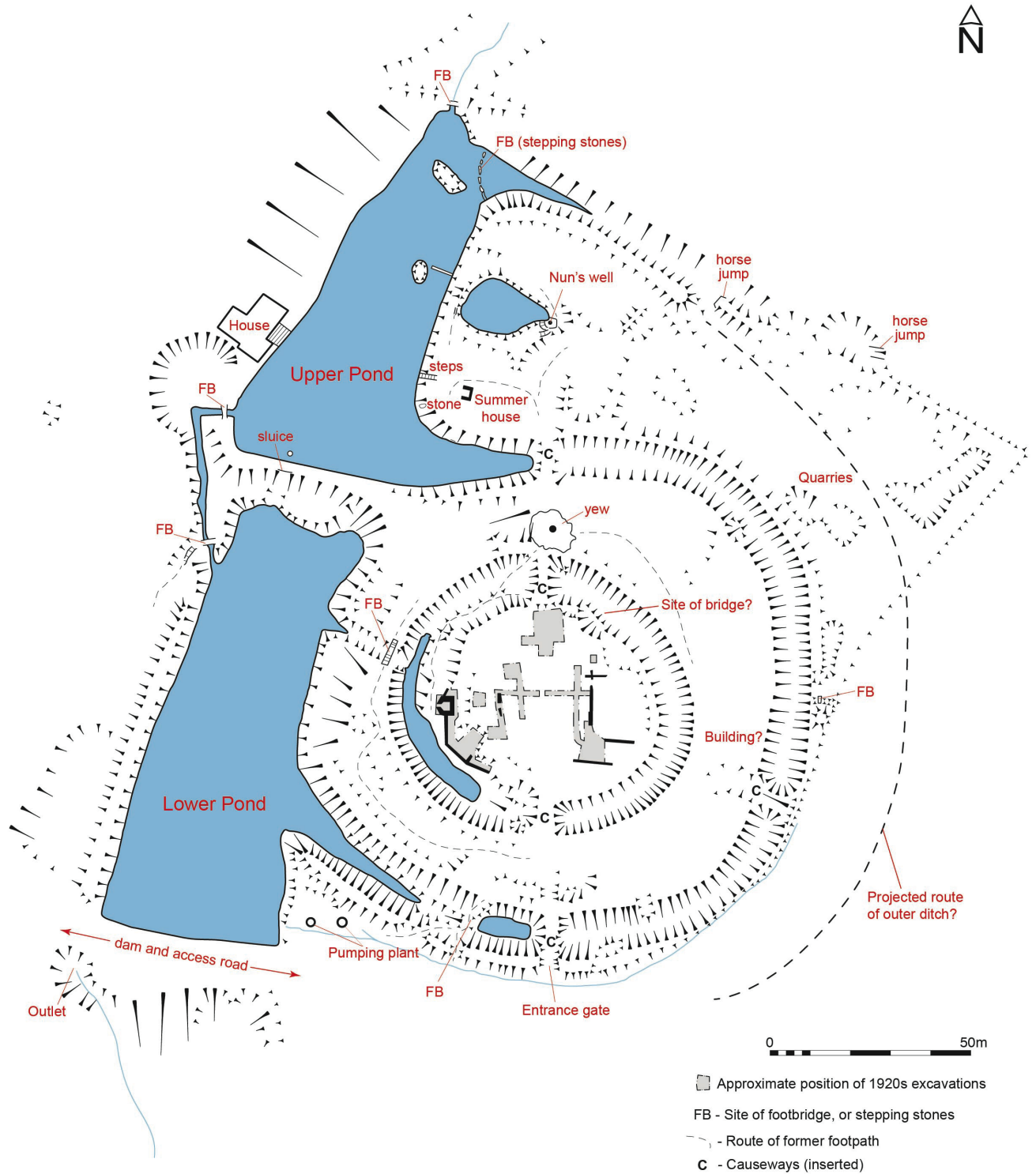


Figure 4: Archaeological earthwork survey of Sedgwick Castle.

## EARTHWORKS

The earthworks that comprise the Scheduled Ancient Monument of Sedgwick castle were recorded as part of this current re-assessment of the archaeological evidence for the site in the form of a rapid sketch survey (**Figure 4**), making use of a topographic outline drawing provided by Robin Nugent (one of the owners of the site).

The site comprises of two roughly concentric ditches, with the partial remains of an outer ditch to the north (**Figure 3**). The inner ward is relatively level and has an almost circular plan, being c.42m in diameter. The west side is defined by a series of angled facets, apparently associated with a stone curtain wall, of which only the southwest section still remains (**Appendix 3.8**). Along the northwest section of the inner ward, there is a slightly lower embankment apparently adapted into a footpath. In this area the 1856 survey published by Turner (**Appendix 1.6**) indicates that the walling was more extensive at this date, and it is possible that the embankment may represent where the wall has collapsed, thus removing it as an upstanding feature today.

The remains of partially back-filled trenches can be traced throughout this part of the castle (**Figure 4**), forming linear depressions and artificial steps in the ground surface. The inner ditch (**Appendix 3.5**) has a steeply angled profile, forming a flat base, in places still retaining small amounts of water. Access into the inner ward is over two earth causeways, to the north and south that form a linear walk across the monument and illustrated on the 1875 Ordnance Survey map (**Appendix 1.7**). These causeways are inferred as being later additions to the monument, c.Mid 19<sup>th</sup> century in date. On the east of the north causeway the ground level has been partially excavated. On the opposite bank traces of masonry were noted, and this may indicate that there was a crossing point in the form of a bridge in this location.

Surrounding the inner ward is a broad terrace c.24m wide to the northwest and c.16m to the southwest. This terrace is defined by a second outer ditch that is suggested as being a secondary insertion, attributed to the phase 3 re-modelling of the site, although this is only a supposition. The outer diameter of this ditch is c.125m and it is notably higher than the inner ward, especially along the east side, over c.3-4m in height from the base of the ditch to the top of the bank. This raised terrace would have rendered the site indefensible, hence the interpretation that its purpose was not as a fortified stronghold at the time of its re-modeling. There are traces of slight hollows and scarps along the terrace, but the encroaching vegetation has made it difficult to establish whether there were any formal structures, apart from a possible building outline towards the southeast. The southwest section of the terrace has a low bank along the west side forming a slightly hollow within appear to be the remnants so of a

serpentine path. This continues northwards and crosses a narrow gully (**Appendix 3.13**) that functions as a drain from the inner ditch to the lower pond.

This outer ditch is crossed by three further earth causeways, two of which are on the central north-south alignment that cuts across the castle. The third causeway, is to the southwest and has a sloping profile, unlike the others that are level with the inner ward. The outer ditch is 3-4m in depth (**Appendix 3.2**) and has a more angled profile than the inner ditch. The underlying topography in the southwest section of the castle, forced the builders to create a much deeper ditch at this point, up to c.4-5m in depth from the base to the top of the bank. Built within the ditch and up-against the south causeway is a shallow pool. This appears to be part of the adaptation of the castle in the 19<sup>th</sup> century for a circuit of walks, and traces of the footpaths, survive as cuttings through the earthworks on either side of this pool.

To the northwest the raised terrace extends to meet with the causeway that crosses between the upper and lower ponds. This feature has been extensively adapted, with a brick retaining wall to the north and a central sluice supplied by the Guest and Chrimes foundry in Rotherham, (phase 5). The causeway is c.40m in length and 10-12m in width with a sloping profile towards the south, as the level of the lower pond is c.2-3m lower than the upper pond. The west side of the causeway opens out into a large hollow (a possible quarry), through which a by-pass channel for the upper pond has been constructed.

To the north of the outer ditch is a sub-rectangular area that extends across the northeast part of the monument. The west edge is defined by the upper pond, and to the north is a prominent earth bank and ditch c.45m in length and c.2-3.5m in height on the external north face. This area appears to form an outer enclosure, although the eastern section of any bank no longer survives, measuring c.50m x c.125m. Faint traces of linear banks were noted in this area that may correspond with arable production detailed on the 1701 estate plan (**Appendix 1.1**), and there is extensive intrusive damage caused by shallow quarry scoops for the underlying deposits of Horsham stone. The former extent of this large curved outer bank may survive as a shallow bank to the southeast of the Outer Ditch. This area is now uncultivated grassland, but a slight feature, possibly ploughed-out, does correlate with a curved field boundary on the 1701 plan. A further northwest field boundary on the 1838 parish Map (**Appendix 1.4**), may be regarded as further evidence for an outer alignment of a ditch, of bank.

The western section of this enclosure has slight banks and ditches, although their form is somewhat ambiguous. The principal feature, however, is a small pool c.12m x c.20m and that is associated with 'Nun's Well', the origins of which may be medieval in date.

## STANDING MASONRY

Located within the inner ward are five large sections of upstanding stone masonry (**Appendices 3.7-3.10**), and two low sections of walling exposed within one of the former 1920s excavation trenches. All of the masonry is in a state of partial collapse and covered to varying degrees with encroaching vegetation, which not only obscures the historic fabric, but appears to be partially responsible for its continued decay.

The largest wall extends along the west side of the inner ward and represents a section of curtain walling on either side of the base of a D-shaped tower (**Appendix 3.8**), dated to the Mid-13<sup>th</sup> century. The walls are c.1m in thickness and have an internal measurement of c.1m. The tower is partially built into the sloping bank of the castle, surviving to a height of c.1.2m - 1.5m, although internally, the walling within the tower is lower, being 2.5m - 3m in height. The thick vegetation has made it difficult to assess whether any damage has occurred since Winbolt published his account in 1925.

The remaining sections of standing walls that are exposed above the ground are in the east part of the inner ward. They represent at least two different structures that are generally interpreted as being part of a large hall and an attached chamber block. All of these walls are dated to the phase 3 re-modeling of the castle at the end of the 15<sup>th</sup> century. The surviving walling from the chamber, would suggest that the building was over 14m long and c.4.5m wide (**Appendix 3.7**), whilst the size of the hall would be c.16m x c.10m in width. The remains of a doorway (**Appendix 3.9**) with a carved jamb survive in the north end of the west wall of the hall. In the central part of this wall, the masonry thickens representing the position of a chimney stack and fireplace. Internally the remains of a tiled fire-back with a herringbone design survive (**Appendix 3.10**).

## WATERCOURSES

The underlying topography of Sedgwick Park generally falls towards the south and south-east, being positioned on the brow of a long ridge (**Figure 5**). The landscape is defined by a series of prominent narrow valleys and stream channels; Rushett's Gill and the stream that feeds the water system are prominent natural features. Over time this water course has been dramatically adapted for the needs of the owners of Sedgwick, in particular during the development of the Castle from the 12<sup>th</sup> to the 16<sup>th</sup> centuries.

The creation of a large water feature, the lower pond, was achieved by damming the stream with a massive earth dam (**Appendix 3.1**). The water level is maintained in the lower pond via an E 20<sup>th</sup> C concrete overflow structure in southwest corner and that exits below the dam into

Rushett's Gill. The west edge of the lower pond is defined by a linear bank (**Appendix 3.17**), that has an adjacent hollow to the west (a possible quarry scoop) although the exact date this excavation occurred is unclear. The estate plan from 1701 (**Appendix 1.1**) illustrates what appears to be a substantial row of trees along this edge, presumably on top of the bank, the effect of which would have been to screen that Castle from the road to the west.

The second water feature of significance, the upper pond, is retained by a smaller dam, which has a central sluice, and secondary bypass channel that functions as an overflow. The date that the upper pond was created is ambiguous, as only one pond is depicted on the Ordnance Survey Surveyors Drawings from 1813 (**Appendix 1.3**), but this could be a cartographic error, as it contradicts with the earlier estate plan from 1701 (**Appendix 1.1**). It is also suggested that the edges of the pond have been adapted in the 19<sup>th</sup> and early 20<sup>th</sup> centuries, but that the dam was always intended to form a causeway link to the Castle to the east. At the north end of the upper pond the remains of a smaller earthwork, survives, which closely correlates with the position of another access causeway on the 1701 estate plan. There are two small islands within the north section of the lake, and a curved line of stepping stones (**Appendix 3.14**). These islands are not illustrated on the pre-Ordnance Survey maps and may be a later creation, however, if this is a cartographical error and they do originate from an earlier period they may have been associated with a Swannery.

#### GARDEN FEATURES

The historic mapping indicates that during the 19<sup>th</sup> century the profile of the upper and lower ponds was gradually adjusted (**Appendices 1.4, 1.5**) and that the layout depicted on the 1875 Ordnance Survey map (**Appendix 1.7**) closely corresponds with what remains today. The mapping suggests that there were three stages of adaptation associated with creating a new setting for the castle.

The first stage introduced a series of routes, connected to the inner ward and raised terrace by narrow earth causeways (**Appendix 3.6**) that crossed the inner and outer ditches, although this may have not been a conscious attempt for a garden setting to the Castle, simply a means of enabling new walks to be introduced. Interestingly, four of the causeways are on a linear alignment orientated north-south across the site. Associated with the causeways, which have similar profiles, are angled cuts through each of the earth banks surrounding the inner and outer ditches (**Appendix 3.3**). The creation of these new paths, included a new entrance to the castle from the south, the iron gates of which are still *in-situ*.

The main period of adaptation of the castle ruins as a garden dates to the mid to late 1920s, following the archaeological investigations by Winbolt in 1923-24. Emma Henderson introduced



a Japanese themed layout, and likely remnants of her planting still remain. It is difficult to establish with certainty the date of many of the surviving hard landscaping features, but those that are not located on the footpaths illustrated on the 1875 Ordnance Survey map, are likely to be associated with the 1920s scheme. An additional path was created around the west side of the raised terrace, involving the excavation of a slightly sunken area to the southwest and the insertion of a stone footbridge and steps (**Appendix 3.13**). The use of stepping stones to cross over corners of the lakes (**Appendix 3.14**), appears to be a particular characteristic of this period of design.

The east bank of the upper pond was further enhanced by the construction of a summer house dated 1929 (**Appendix 3.12**), a small platform on the waters edge and a set of steps leading to the water possibly for boating. It may also be at this time that the setting of the Nun's Well was improved. Surrounding the well is a circular platform, with a curved flight of steps towards the southwest and further steps leading down to the west down into a shallow pool. This pool may have originally been formed from a quarry scoop, but has sections of stone walling and an overflow into the Upper Pond towards the east.

The third phase of adaptation of the garden setting of the castle was on the west bank of the upper pond involving the construction of a garden house (**Appendix 3.11**) at the start of the 1980s, which dramatically changed the character of this side of the pond. The use of elaborate stone carvings from a former church in South London incorporated large plinths (**Appendix 3.15**) and a new entrance on Broadwater Lane. A pair of low stone piers (**Appendix 3.4**) flanking the south entrance to the Castle and an access bridge at the north end of the upper pond (**Appendix 3.16**) are also attributed to this period of activity.

#### LATE 20<sup>TH</sup> CENTURY ACTIVITY

The outer earthworks forming the north boundary bank have been partially adapted to form a series of horse jumps using wooden railway sleepers. These are associated with further jumps and a dilapidated stable building in the surrounding parkland and are attributed to the late 20<sup>th</sup> century.

## 5 CONCLUSION

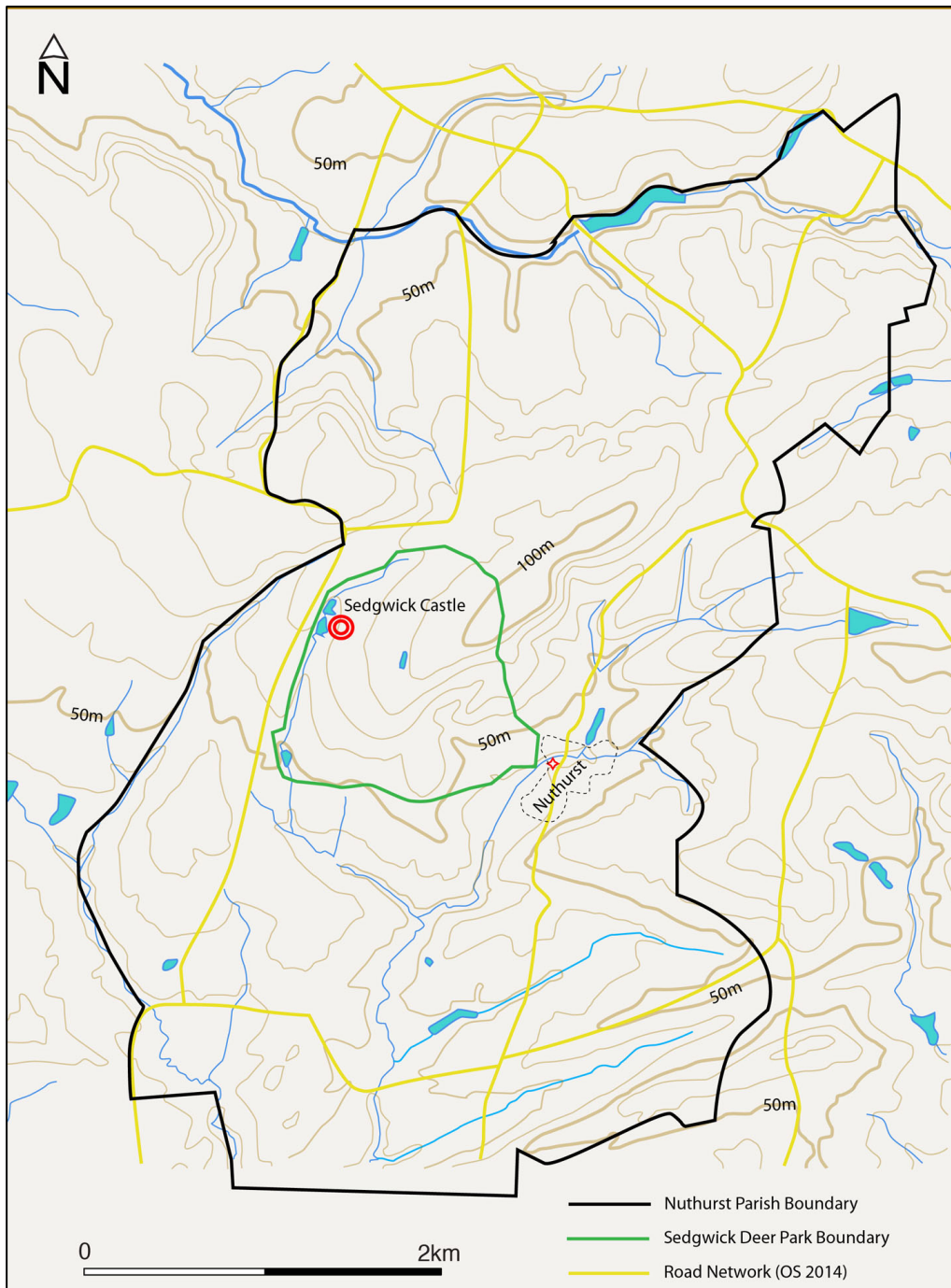
### DISCUSSION

The numerous forms of archaeological and historical evidence that have been examined during this assessment of Sedgwick Castle have enabled a greater understanding of the monument, which is of considerable importance and, unusually, has only received limited academic discussion in recent years. This is demonstrated by a visit in 2005 by the Castle Studies Group, where the only reference to the site in their conference notes was the 1925 excavation report published by Winbolt. In addition, it does not even receive a mention in recent synthetic books, or monographs by authors such as Creighton (2002, 2009), or Goodall (2011).

Sedgwick Castle is positioned on the east side of Rushett's Gill on the 80m contour (**Figure 5**). This is on the edge of the long prominent linear ridge that defines the character of this part of the Weald to the south of Horsham, famous for its numerous quarries for roofing and building stone. This choice of site was clearly deliberate, and may have been chosen with the intention to adapt the existing water course to the west to form the ponds, or equally in order to use water to ornament the setting of the castle. Another reason is likely to have been that one of the north-south transport routes from the coast up to Horsham (now Broadwater Lane) is only 100m to the west. In regards to the visibility of the castle, the ground does continue to slightly rise to the north and east, and there is in fact a more prominent, and higher hilltop to the east on the other side of the Sedgwick Estate. The main zone of visibility would therefore be to the south, especially when approach along the north-south road leading to Horsham. It is suggested therefore, that the castle was not located with defense as its primary purpose, although a strategic intention is likely. Its position would effectively control traffic along the N-S route to Horsham and hence its location with extensive visibility to the south may be an important consideration.

There is known to have been a deer park at Sedgwick since at least 1305, although it is likely to have been created earlier. The exact route of the former park pale is unknown (**Appendix 1.2**), although by extrapolation of footpath and field boundaries, the conjectured circuit of a possible park pale has been drawn (**Figure 5**). It encompasses an area that includes the lower slopes below the ridge, rising up to the high point of the estate, thus providing a greater diversity of landscape in terms of topography. The castle is positioned close to what is interpreted as the western boundary, a characteristic that has been discussed in relation to other sites by Creighton (2002, 185), commenting that the proximity to hunting resources was an important influence to the location of castles and that those intended for association with hunting, were often in isolated and secluded locations remote from other settlements. The common form of a

park was in the shape of a lobe that was appended to the castle; this form correlates with the outline of the conjectured deer park at Sedgwick.



**Figure 5:** Topographic plan of the landscape surrounding Sedgwick Castle.

The creation of a deer park was an important aspect of a lordly residence, with the park intended to have a dual purpose; forming a backdrop to the castle, and forming an element of designed landscape when viewed from within the castle (Creighton 2002, 188), although this would only be partially possible at Sedgwick. Deer parks were important aspects of elite medieval landscapes. They were more than simple hunting reserves, or places to stock with deer: they acted as a physical reminder of power and control Creighton (2009, 122). The right to empark was a jealously guarded privilege and badge of lordly authority, and the conversion of the land to such a use was often unprofitable compared to farming, thus demonstrating that the owner had considerable disposable wealth to lavish on the creation and maintenance of a hunting park.

In the later medieval period, licences to empark often coincided with phases of rebuilding, or refurbishment to residences (Creighton 2009, 127). If the phased development suggested by Winbolt is correct, then and this may have been a factor in the mid 13<sup>th</sup> century when the walls of the inner ward were enlarged and the D-shaped tower built at Sedgwick. The upper rooms of parkland residences would have provided views of the surrounding parkland, and this may have been part of the intended effect at Sedgwick. The lack of absolute dating evidence is unfortunate at Sedgwick, although if the surviving fragments of moulded stone can be accurately attributed to a specific period, this will help refine the sequence.

One site which has many similarities to Sedgwick is the fortified manor at Stokesay in Shropshire and that was upgraded in 1280s to a pseudo-fortified site, the owner receiving a licence to crenellate in 1291 (Creighton 2009, 70). The ornamental setting included a shallow lake and series of (fish) ponds, intended to be viewed from within the Castle, and without. Here the visitor made their approach along a road that provided views of the castle which was enhanced by the water features, but also a causeway like earthwork was necessary to navigate access on to the site. The angle of the Solar Tower at Stokesay hid the manor house behind, giving the false impression of a fortified castle all of these elements can be identified at Sedgwick.

One site with similar double moated arrangement of concentric rings is the Manwar Ings at Swineshead in Lincolnshire. The outer ditch has a diameter of c.56m which is comparable to Sedgwick, but it does not have a similar arrangement of water features and its landscape setting is more pronounced, being in a relatively low lying area. Antiquarians have suggested that it was associated with Turkil the Dane during the early 11<sup>th</sup>C, although its use as a motte and bailey castle from the 11<sup>th</sup> to 13<sup>th</sup>C is also a credible interpretation.

The possibility that the ponds were deliberately created to form a watery garden is worth

considering, and the intention would have been to use the reflective qualities to transform the setting of the castle when viewed from the west. Water helped to influence the way a residence was viewed, experienced and approached by outsiders, whilst created a landscape setting when viewed from within (Creighton 2009, 79). There appears to have been two basic forms of this type of site, either water swept right up to the walls and earthworks surrounding a building as at Sedgwick, or water features were self contained and peripheral to the residential complex.

The use of large ponds, or lakes, connected by causeways was specifically engineered to create a dramatic and carefully controlled approach to a building, and notable examples include Kenilworth Castle (Warwickshire), Framlingham Castle (Suffolk), Leeds Castle (Kent), Bodiam Castle (East Sussex) or, Stow Park (Lincolnshire) had series of large ponds to north, with rectilinear moat and narrow causeway (Creighton 2009, 78). Whilst many of these examples are much grander and larger scale residences than Sedgwick, the principle that access to the inner ward was along a pre-defined route is a possibility. It has already been mentioned that the main views would have been to the south and from the north-south road to Horsham and as such an access from this direction over the causeway would seem logical, and the ponds would have provided reflections of the D-shaped tower when approached from the southwest.

The site at Sedgwick can therefore be considered as a castle, but it would never have been very effective for defensive site. The granting of two separate licences to crenellate, does not however, imply that battlements were physically constructed at Sedgwick, but they confirm that it was a site of considerable status. Its position within the landscape and the construction of the raised curved terrace around the east, would have negatively impacted upon the security of the inner ward. It is therefore suggested that the site would have functioned as a high status residence, largely associated with hunting. The use of curtain walls, towers, moats and even a gatehouse would have been an accepted means to present such a property, which may have been as much about display and maintaining a fashionable appearance, rather than being effective against standing up to from an offensive force – the traditional functional explanation of a castle.

## CONCLUSION

This project has undertaken an assessment of the previous archaeological investigations at Sedgwick Castle, in conjunction with an appraisal of the surviving earthworks in the form of a rapid earthwork survey. Whilst the site is relatively unknown in the wider field of medieval castle studies, this overview of the surviving remains has successfully demonstrated that whilst there is a degree of complexity to the monument attributed to multiple phases of development, there is still a lack of dating evidence to confirm the sequence of expansion.

The survey has concluded that the initial phase of castle is likely to have begun as little more than a fortified house, surrounded by a circular ditch. This was then made into a pseudo-defensible residence in the 13<sup>th</sup> century, incorporating a D-shaped tower on the west side that overlooked a pair of large rectilinear ponds. A third phase dating to the late 15<sup>th</sup> C involved a re-modeling of the interior layout, including the construction of a new hall, chamber and kitchens. A second outer ditch was excavated, possibly to create an elaborate garden, into which the only access was via the causeway between the two ponds. Subsequent alterations in the 19<sup>th</sup> and 20<sup>th</sup> centuries to create a garden, adapted the earthworks into a romantic ruin, with walks and exotic planting.

The final form of the castle, comprising of a series of double concentric moats with a partially raised terrace in-between is an incredibly uncommon layout and very comparable parallels have been found to exist elsewhere. The circularity of the ditches is important and appears does not follow the existing landform, which has been cut into and adapted to create the raised terrace between the two moats.

The association of the castle with the Nun's Well, which appears to be of considerable antiquity, and more recent alterations in the early 20<sup>th</sup> C to form an early example of a Japanese inspired garden by the then owner Emma Henderson, collectively give the site considerable archaeological and historic significance, thus its designation as a nationally important Scheduled Ancient Monument is appropriate.

## RECOMMENDATIONS

Resulting from this overview of the archaeological remains the following recommendations are suggested to help increase our understanding of the use of development of the earthworks and masonry walls, and enable better informed management decisions to be made regarding its future use and maintenance:

- A detailed record (drawn and photographic) of any loose, and in-situ fragments of architectural worked stone on the site should be made, including establishing their date. Following their survey, a decision regarding their future storage should be made, possibly including re-burial on the site (under archaeological supervision).
- The assemblage of pottery within the Lewes Museum should be examined by a pottery specialist who has a good understanding of the fabric type series, and range of forms within this part of West Sussex.
- The true extent of damage caused by burrowing animals and trees roots is still unclear and it is recommend that a detailed analytical earthwork survey at a scale of 1:1000, with

additional detail recorded at 1:500 should be undertaken. Following this, selective vegetation clearance will ensure that sensitive parts of the monument are protected.

- If more of the vegetation is cleared from the raised terrace or inner ward, non-invasive techniques such as geophysics (resistivity and magnetometry) might be beneficial to plot former wall alignments, and excavated features, although the results will be affected by areas of fallen rubble and tree roots.
- Consideration should be given to using this opportunity to reopening of a selection of Winbolt's trenches to accurately record the stratigraphic relations of the buried deposits within the exposed sections, thus providing the opportunity to potentially establish a more accurate sequence of development for the castle and causing minimal damage to the monument. The remains of all the excavation trenches from the 1920s should then be backfilled (under archaeological supervision) with an appropriate material, and in accordance with an approved methodology from English Heritage to ensure that any buried archeological remains are protected.
- The results of this initial phase of archaeological investigations, and any future work, should be published in an appropriate format, such as the *Sussex Archaeological Collections*.

## 6 REFERENCES CONSULTED AND BIBLIOGRAPHY

### PRIMARY SOURCES CONSULTED: MAPPING

- 1701 – *Map of Sedgwick* © West Sussex Record Office
- 1724 – *Richard Budgen's survey of Sussex*
- 1813 – *Ordnance Survey drawing, sheet 94, 3" to 1 mile* © British Library
- 1838 – *Broadwater Parish Map* © West Sussex Record Office
- 1848 – *Little Broadwater Tithe Map* © West Sussex Record Office
- 1856 - *Plan of Sedgwick Castle published by Turner (Sussex Archaeological Collections)*
- 1875 - *Ordnance Survey Map, 1:2,500*
- 1925 – *Plan of Sedgwick Castle published by Winbolt (Sussex Archaeological Collections)*
- 2013 - *Ordnance Survey Mastermap, 1:1,250*
- 2014 - *British Geological Map of Britain (digital data)*

### SECONDARY SOURCES: PUBLISHED WORKS AND GREY LITERATURE

Castle Studies Group (CSG). 2005. *Castles of Sussex* (Unpublished notes from Conference).

Creighton, O.H. 2002. *Castles and landscapes*. Continuum: London

Creighton, O.H. 2009. *Designs upon the Land*. Boydell Press: Woodbridge

English Heritage. 2007. *Understanding the Archaeology of Landscapes: A guide to good recording practice*. English Heritage: London

Felus, K. Jessop, O. Mackenzie, S. and Edgar, J. 2014. *Parkland Management Plan for Sedgwick Park*. (Unpublished)

Goodall, J. 2011. *The English Castle 1066-1650*, Yale: London

Hughes, A. 1996. *Sedgwick Park, Nuthurst*. (Unpublished)

Knight, J. 2006. *Horsham's History, Vol.2. 1790-1880*. (Unpublished)

Page, W. (ed). 1907. *Victoria Country History of the County of Sussex, Vol II*. Archibald Constable: London.



Pearce, H. 2012. *Hammer and Furnace Ponds*. Pomegranate Press: Lewes

Turner, E (Rev). 1856. 'On Sedgwick Castle', in *Sussex Archaeological Collections*, Vol.8, 31-40

Winbolt, S.E. 1925. 'Sedgwick Castle', in *Sussex Archaeological Collections*, Vol.66, 83-110

#### INTERNET RESOURCES

- ADS: [www.archaeologydataservice.ac.uk](http://www.archaeologydataservice.ac.uk)
- British Geological Survey: [www.bgs.ac.uk](http://www.bgs.ac.uk)
- Heritage Gateway: [www.heritagegateway.org.uk](http://www.heritagegateway.org.uk)
- National Heritage List: <http://www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/>

## 7 APPENDICES

Appendix 1: Historic mapping

Appendix 2: English Heritage – National Heritage List

Appendix 3: Record photographs

Appendix 4: Catalogue of pottery in Lewes museum

**Appendix 1:**  
**Historic mapping**



Appendix 1.1: Extract from 1701 map of Sedgwick.



Appendix 1.2: Extract from 1724 Richard Budgen's survey of Sussex.



Appendix 1.3: Extract from 1813 Ordnance Survey drawing (British Library).

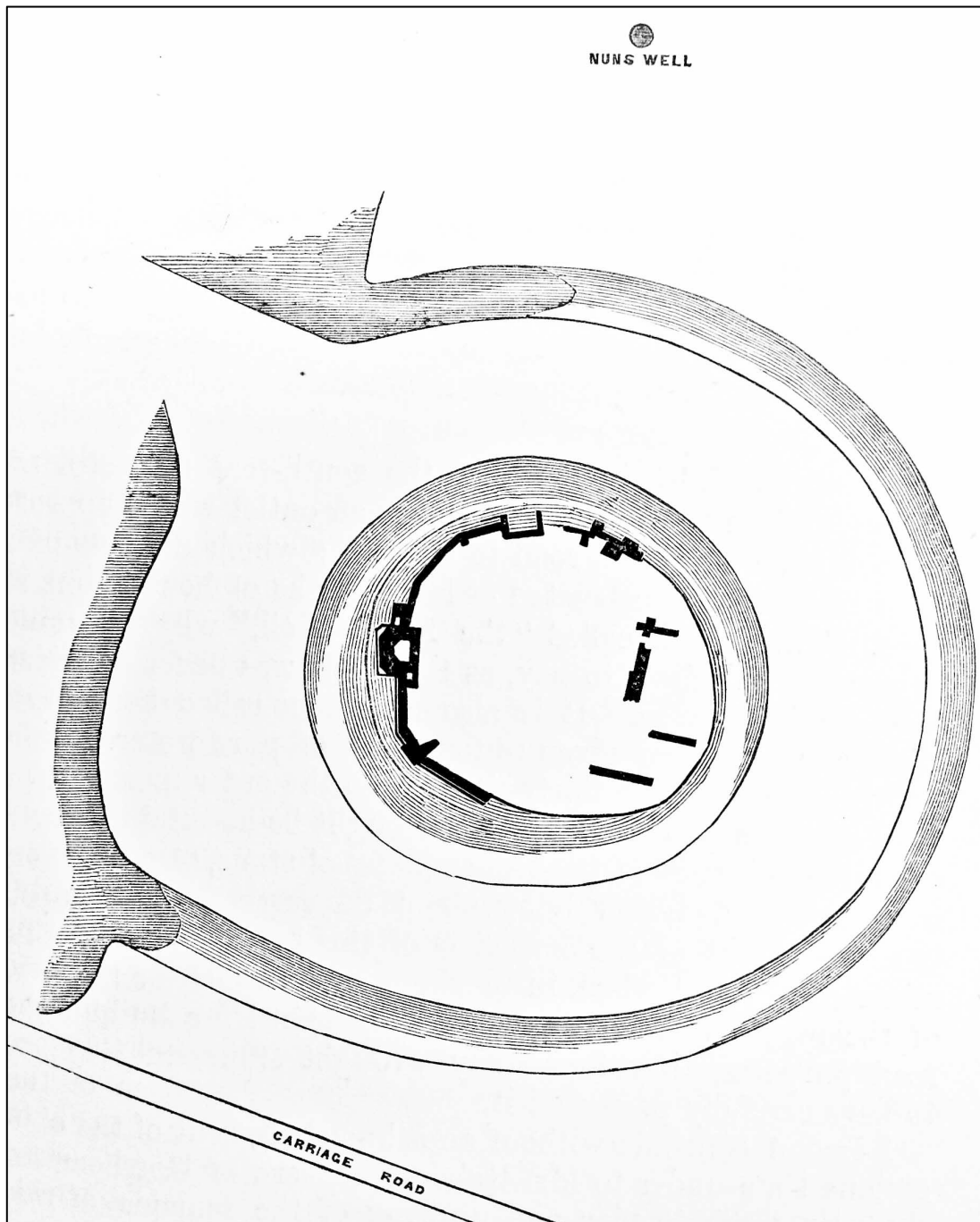




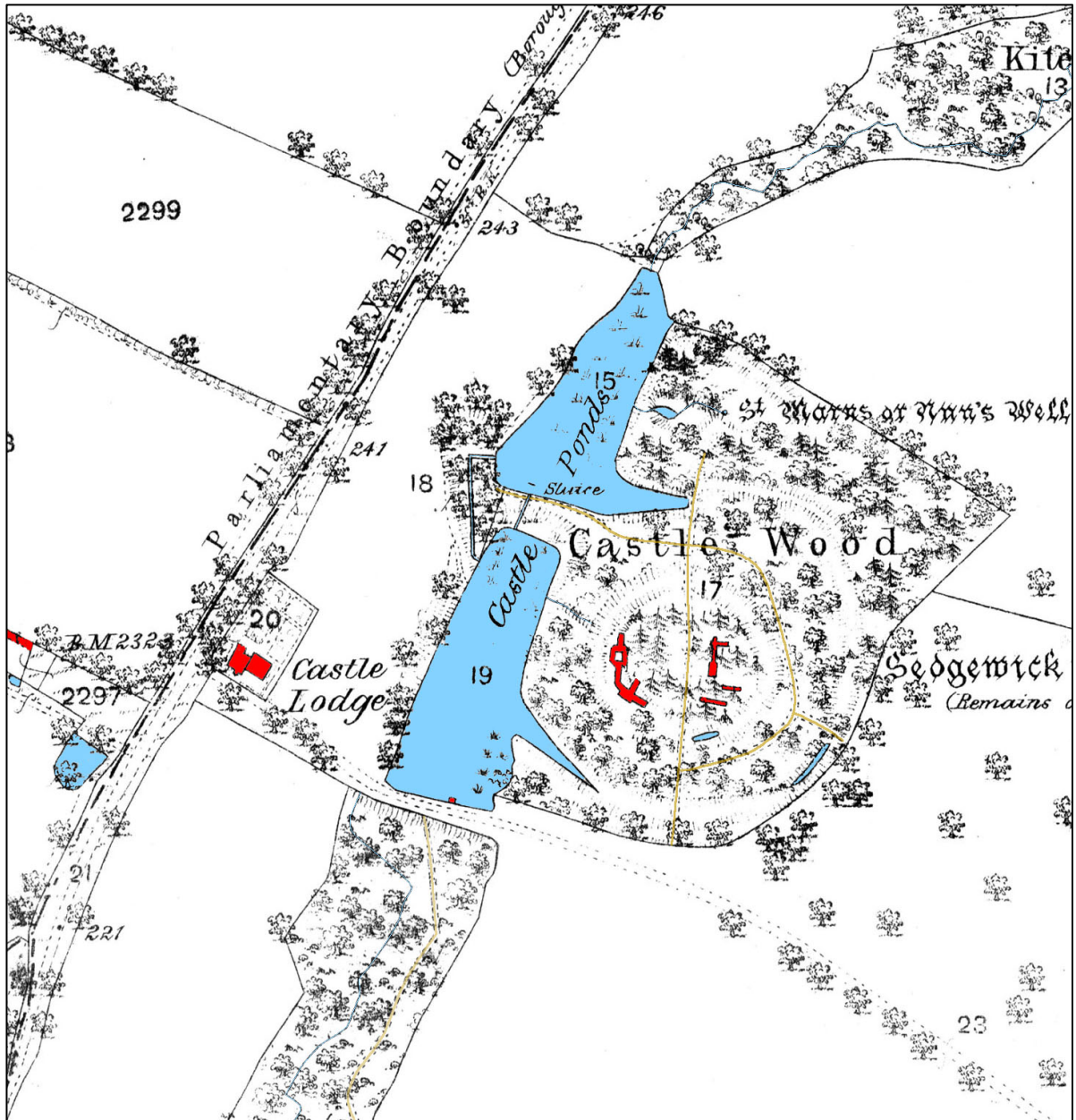
Appendix 1.4: Extract from 1838 Broadwater Parish Map.



Appendix 1.5: Extract from 1848 Little Broadwater Tithe Map.

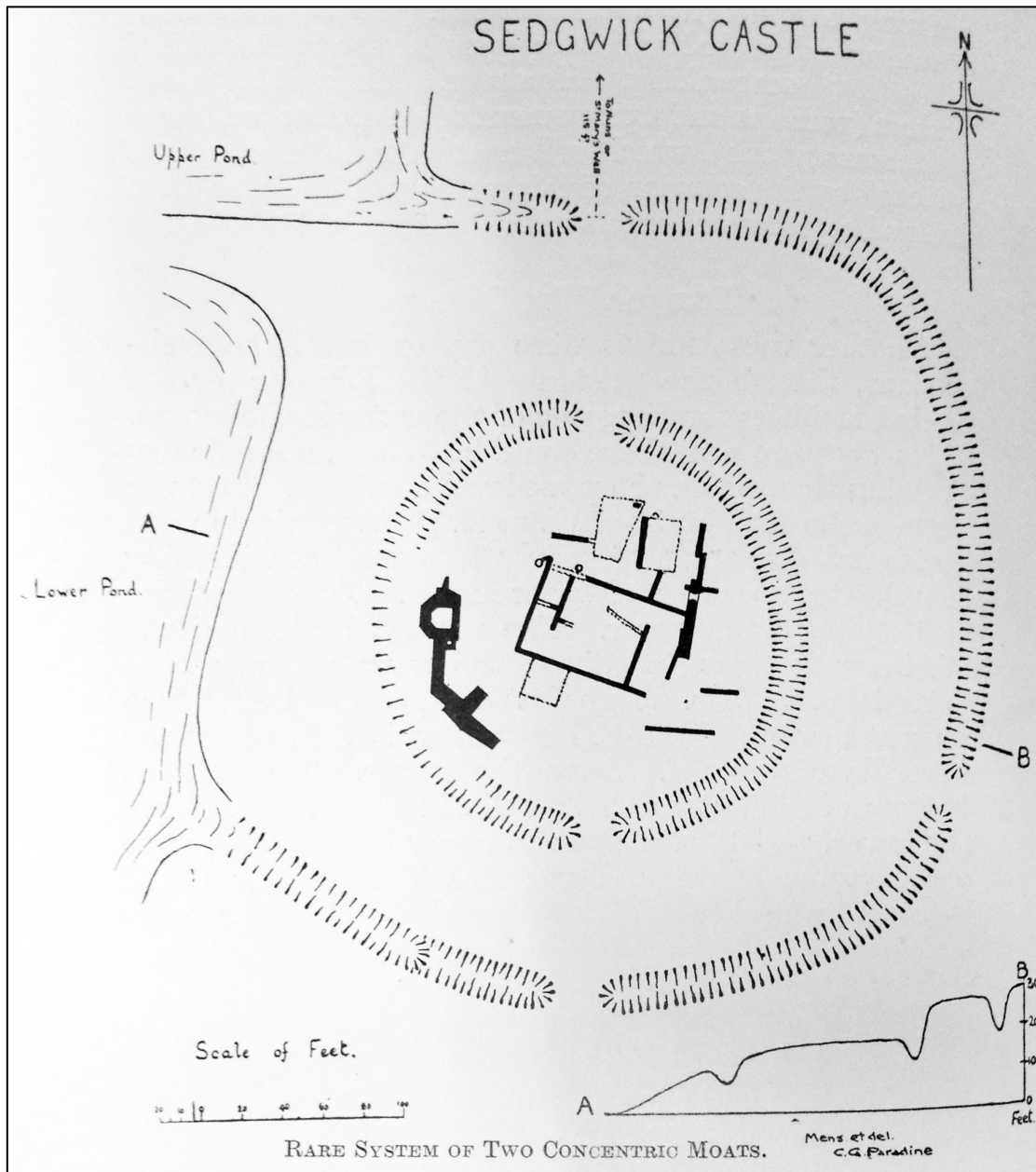


Appendix 1.6: 1856 plan of Sedgwick Castle published by Rev E. Turner.



Appendix 1.7: Extract from 1875 Ordnance Survey map of Sedgewick (colour added 2014).





Appendix 1.8: 1925 plan of Sedgwick Castle published by Winbolt.

## **Appendix 2:**

### **English Heritage – National Heritage List**

## National Heritage List Entry for Sedgwick Castle

## List entry Summary

**This monument is scheduled under the Ancient Monuments and Archaeological Areas Act 1979 as amended as it appears to the Secretary of State to be of national importance. This entry is a copy, the original is held by the Department for Culture, Media and Sport.**

**Name:** Medieval moated site at Sedgwick Castle

**List entry Number:** 1009579

## Location

The monument may lie within the boundary of more than one authority.

County	District	District Type	Parish
West Sussex	Horsham	District Authority	Nuthurst

National Park: Not applicable to this List entry.

**Grade:** Not applicable to this List entry.

**Date first scheduled:** 23-Feb-1933

**Date of most recent amendment:** 27-Sep-1991

## Legacy System Information

The contents of this record have been generated from a legacy data system.

**Legacy System:** RSM

**UID:** 12871

## Asset Groupings

This list entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

## List entry Description

## Summary of Monument

Legacy Record - This information may be included in the List Entry Details.

## Reasons for Designation

Around 6,000 moated sites are known in England. They consist of wide ditches, often or seasonally water-filled, partly or completely enclosing one or more islands of dry ground on which stood domestic or religious buildings. In some cases the islands were used for horticulture. The majority of moated sites served as prestigious aristocratic and seigneurial residences with the provision of a moat intended as a status symbol rather than a practical military defence. The peak period during which moated sites were built was between about 1250 and 1350 and by far the greatest concentration lies in central and eastern parts of England. However, moated sites were built throughout the medieval period, are widely scattered throughout England and exhibit a high level of diversity in their forms and sizes. They form a significant class of medieval monument and are important for the understanding of the distribution of wealth and status in the countryside. Many examples provide conditions favourable to the survival of organic remains.

The site at Sedgwick Castle is unusual in form and illustrates the wide diversity of layout of moated sites. Despite the disturbance caused by partial excavation, the site survives well and exhibits a wide variety of component features. It holds considerable archaeological potential for evidence of the development of the manorial buildings, both from the island area and from the ditches.

## History

Legacy Record - This information may be included in the List Entry Details.

## Details

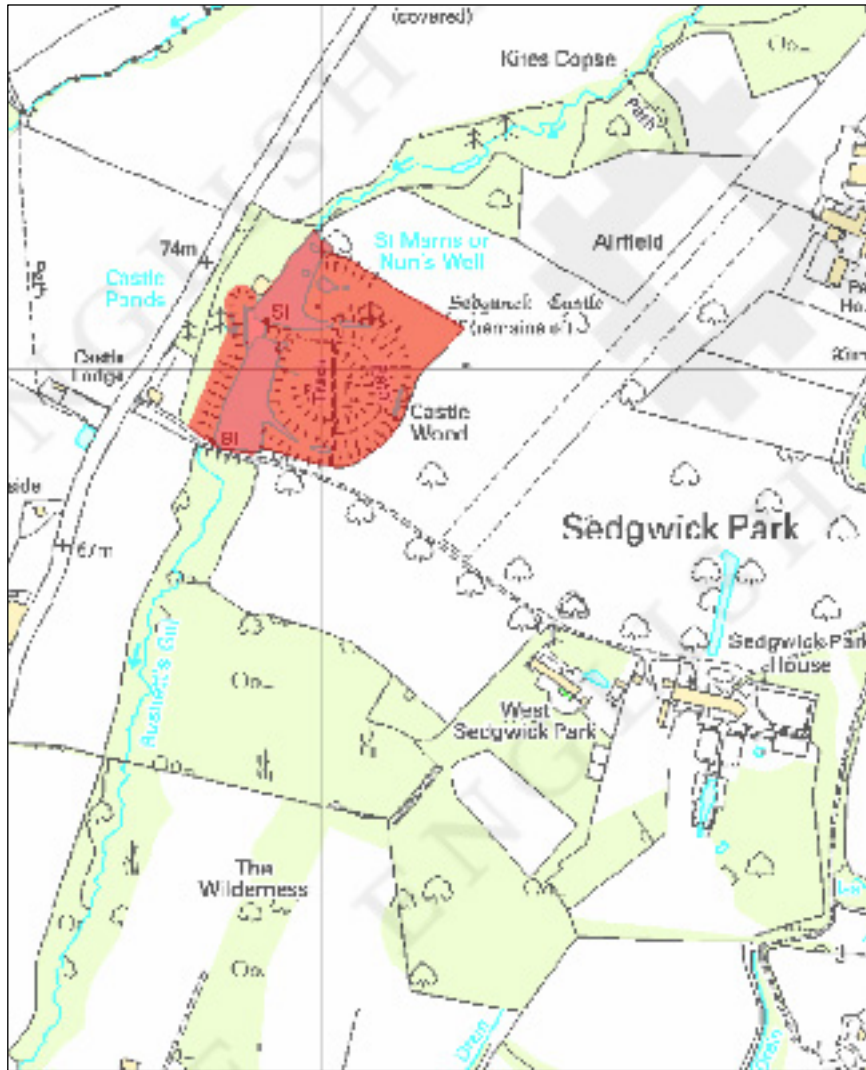
The monument includes the two concentric ditches, internal areas, ponds and outer enclosure of an unusual moated site which dates from the 12th/13th century and which continued in use into the 16th century. The flat central area has a diameter of some 50m. Within this area are a number of stretches of walling. To the south-west, part of a 13th-century curtain wall survives to a height of 4m and includes the base of an angular turret. To the east are four lengths of walling, one featuring the herringbone tiling of a fireback, which define a late medieval rectangular stone building some 22m long. Partial excavation in 1923 of this inner area revealed the foundations of an earlier stone building 15m by 13m at its centre. Around this inner area is a pair of concentric and steeply-sided ditches 9- 12m across at the top and varying in depth from some 2.5m to 4m. The ditches are separated by up to 30m of flat ground. Causeways, not all of which are original features, cross the ditches at irregular intervals. To the west of the concentric ditches are two ponds dammed at their south ends and with a 2m difference in their heights. The ponds are linked by an overflow channel. The more southerly pond has an earthen retaining bank on its western side. North of the ditches is an area of earthworks and ponds associated with the moated site, including an earthen bank over 50m long and 2.5m high and a rectangular pond some 20m by 10m in the north-east corner. The mechanisms of the Nun's Well and the sluices between the ponds and on the southern margin are excluded from the scheduling along with all above ground structures except those on the central area; all boundary fencing is excluded. However, the ground beneath these areas is included.

MAP EXTRACT The site of the monument is shown on the attached map extract.

## Selected Sources

1. **Book Reference** - *Author:* Winbolt, S - *Title:* Sedgwick Castle - *Date:* 1925 - *Type:* EXCAVATION REPORT

National Grid Reference: TQ 18002 27014



Boundary of the Scheduled Ancient Monument at Sedgwick Castle © English Heritage 2014

**Appendix 3:**  
**Record Photographs**





**Appendix 3.1:** Earth dam, looking northwest.



**Appendix 3.2:** Outer ditch (south side), looking east.



**Appendix 3.3:** Causeway crossing outer ditch at entrance to castle.



**Appendix 3.4:** View looking into inner section of castle, looking north.



**Appendix 3.5:** Inner ditch (north side), looking east.



**Appendix 3.6:** Causeway crossing inner ditch, north side of castle, looking southeast.





**Appendix 3.7:** Section of standing masonry in southeast part of Inner Ward (1m scale).



**Appendix 3.8:** Overgrown projecting D-shaped tower on west side of inner ward (1m scale).



**Appendix 3.9:** Surviving stone doorway with carved jamb in east part of inner ward (1m scale).



**Appendix 3.10:** Detail of remains of tiled fire-back built into the masonry walling of the inner ward.



**Appendix 3.11:** Modern house (1980s) on west bank of north pond.



**Appendix 3.12:** Small summer house (dated 1929), on east bank of north pond.





**Appendix 3.13:** Inserted stone footbridge and steps on west bank of inner ditch (west side of castle).



**Appendix 3.14:** Surviving stone stepping stones crossing northeast inlet of north pond.



**Appendix 3.15:** Modern base (c.1982) for statue.



**Appendix 3.16:** Modern footbridge across north end of north pond.



**Appendix 3.17:** Linear mound along west bank of south pond, looking south.



**Appendix 3.18:** Remains of pumping plant located on the southeast bank of the south pond.



## **Appendix 4:**

### **Catalogue of Pottery in Lewes Museum**

## Pottery Recovered from Excavations at Sedgwick Castle, West Sussex

Stored in Barbican Museum, Lewes  
Examined by Oliver Jessop 05.02.14

1x box (small)  
Label: Sedgwick Castle Horsham, 41  
Med. Pottery excavated by S.E. Winbolt 1923/4

### Introduction

As part of the archive research into the former excavations at Sedgwick Castle in West Sussex, a small assemblage of pottery was found to survive in the Barbican Museum in Lewes, from the excavations undertaken by S.E. Winbolt in 1923/24. This catalogue has been prepared to act as supporting information for a reassessment of the excavations undertaken by Winbolt.

### Contents of Archive Box

Inside the archive box are five clear plastic bags of pottery sorted by fabric and a written note, stating that the fabric groups were initially divided up into five groups by ADFS 5/79 (Andrew Streeton). During the preparation of this catalogue the fabric has been further divided into a total of seven groups.

A reused museum card was included within box, with a hand written note: Medieval pottery from Sedgwick Castle, Horsham excavated by Mr S.E. Winbolt 1923/24. Presented by Mrs Henderson.

### Catalogue

The following catalogue is a basic description of the surviving sherds of pottery from the 1920s excavations at Sedgwick Castle.

#### Bag 1 (2x sherds)

Paper label – thin section No.574; marked on sherds - 14<sup>th</sup> or 15<sup>th</sup> century

Fabric 1 - pale cream coloured fabric, with gritty inclusions. Grey unreduced clay core.

- 1.1 Large body sherd 11.5cm x 8cm in size, with a curved profile. 6mm wide. 84gm in weight. Diagonal scored impressions on outer face and splashes of green glaze.
- 1.2 Small section of a strapwork handle with raised edges and wavy pinched decoration. 4.2cm wide and 4.5cm in length, 0.9cm thick. 46gm in weight.

#### Bag 2 (4x sherds)

Paper label – thin section No.577; marked on sherds - 15<sup>th</sup> century

Fabric 2 - pale orange/pink coloured fabric, with fine sand/grit inclusions. Grey core on some fragments.

- 2.1 Fragment of the base of a cooking pot?, 11.5cm x 8cm in size, with a curved base diam. 23cm. 34gm in weight. 0.1-0.6cm thick. Exterior is blacked from use, and internally traces of a thick orange glaze.
- 2.2 Body sherd from curved profile with combed decoration and traces of green glaze. 5.5cm x 5cm in size, 4mm thick. 46gm in weight.
- 2.3 Rim fragment from shallow bowl. 4cm x 5cm in size, with 5cm section of rim surviving, 2.5cm wide. Inner diam. Rim 21.5cm. 40gm in weight in length, Internal orange glaze.
- 2.4 Rim fragment 4cm x 7cm in size, with 7cm section of rim surviving, 1.5cm wide. Outer diam. rim 29cm. 38gm in weight in length.

**Bag 3 (4x sherds)**

Paper label – thin section No.576; marked on sherds – 1250-1490

Fabric 3 - pale orange coloured fabric, with fine sand/grit inclusions. Partially reduced grey core. High fired. External green glaze.

- 3.1 Large body sherd with slightly curved profile, 7cm x 8cm in size, 7mm wide. 36gm in weight. 0.1-0.6cm thick. Faint dimples in and thin concoidal grooves. Pale orange yellow external glaze.
- 3.2 Body sherd from jug? With curved profile and thin wavy combed decoration and traces of vertical and horizontal incisions. External green glaze. 5.5cm x 4cm in size, 5mm thick. 18gm in weight.
- 3.3 Section of jug handle attached to wall of vessel. Traces of green glaze on upper surface and row of pricked holes along top surface for decoration. Rounded section to handle. 3cm x 7cm in size. 54gm in weight.

Fabric 4 - orange coloured fabric, with occasional fine grit inclusions. Powdery texture and abraded. (labeled 14<sup>th</sup> century).

- 4.1 Small fragment of neck or angled shoulder of a flagon, or jug. External concoidal incised grooves and possibly grey powdery glaze, or colouration (dirty?). 4cm x 6.5cm in size, 5mm wide. 18gm in weight.

**Bag 4 (6x sherds)**

Paper label – thin section No.573; marked on sherds – 13<sup>th</sup>-14<sup>th</sup> Century

Fabric 5 – Coarse and friable orange/brown fabric. Powdery texture. Frequent small to medium fragments of shell temper and occ.grit. Dark grey core. (labeled 13<sup>th</sup> 14<sup>th</sup> century).

- 5.1 Small section of rim 3cm x 4cm, 5-8mm wide. 16gm in weight.
- 5.2 Body sherd, with curved profile. 3cm x 4cm in size, 7mm thick. 16gm in weight.
- 5.3 Large fragment of base. Outer diam. 17cm. 6cm x 7.5cm in size. 46gm in weight.
- 5.4 Small fragment of base. 5cm x 8.5cm in size. 38gm in weight.
- 5.5 Small fragment of base. 6cm x 7.5cm in size. 30gm in weight.

Fabric 6 – Coarse dark orange/brown fabric. Frequent small to medium fragments of black grit. (labeled 12<sup>th</sup> century).

- 6.1 Rim fragment from large cooking pot. 5cm x 9cm in size, 6mm wide. 60gm in weight.

**Bag 5 (12x sherds)**

Paper label – thin section No.575; marked on sherds – 1250-1490

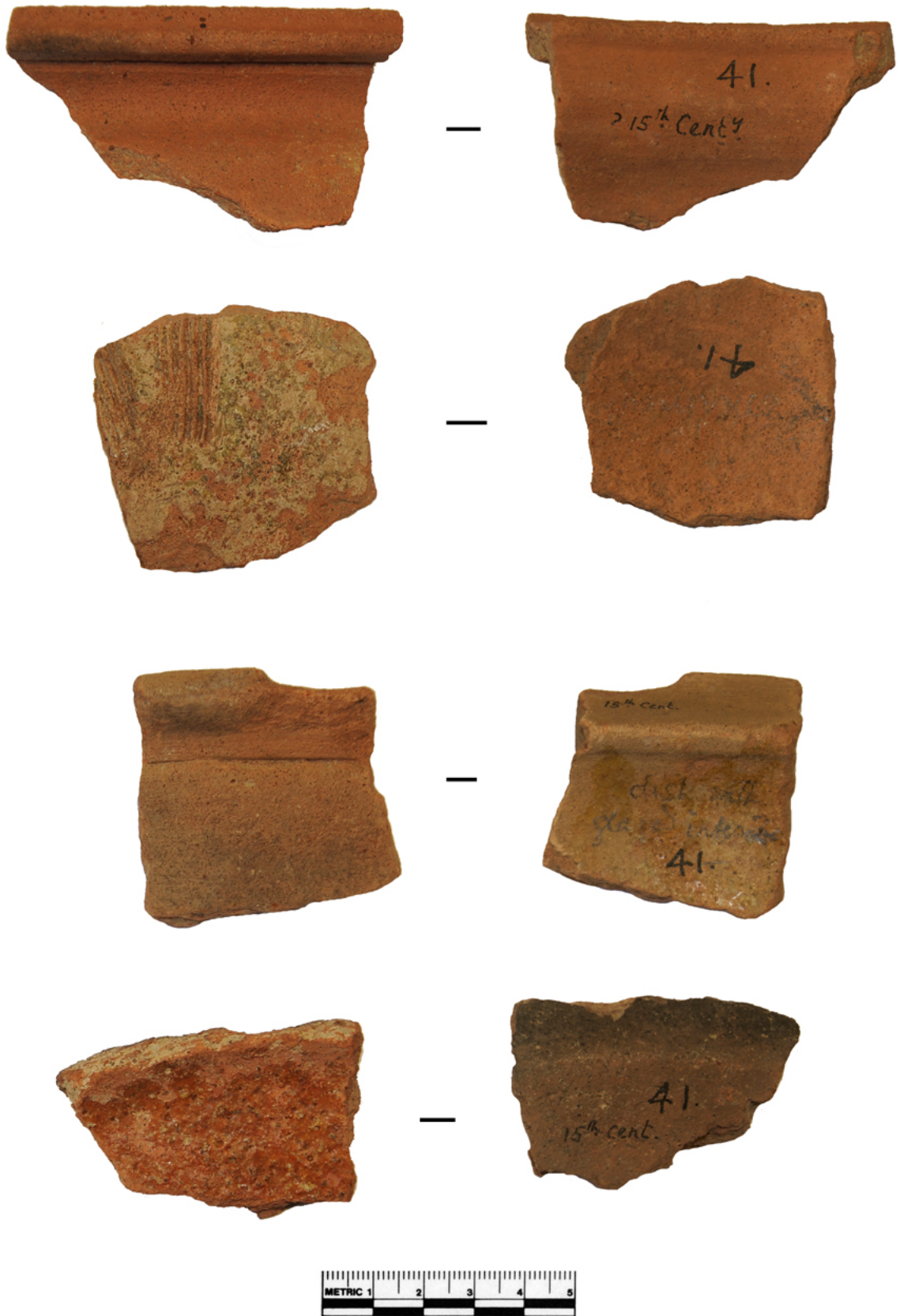
Fabric 7 – High fired pale grey fabric, with fine black sand. Dark green glaze with incised decoration. Pale grey core.

- 7.1 Small body sherd 4.5cm x 3.5cm, 4mm wide. 8gm in weight. External green glaze with incised wavy line.
- 7.2 Small body sherd (2x joined) 4cm x 5cm, 4mm wide. 8gm in weight. External green glaze with incised wavy line.

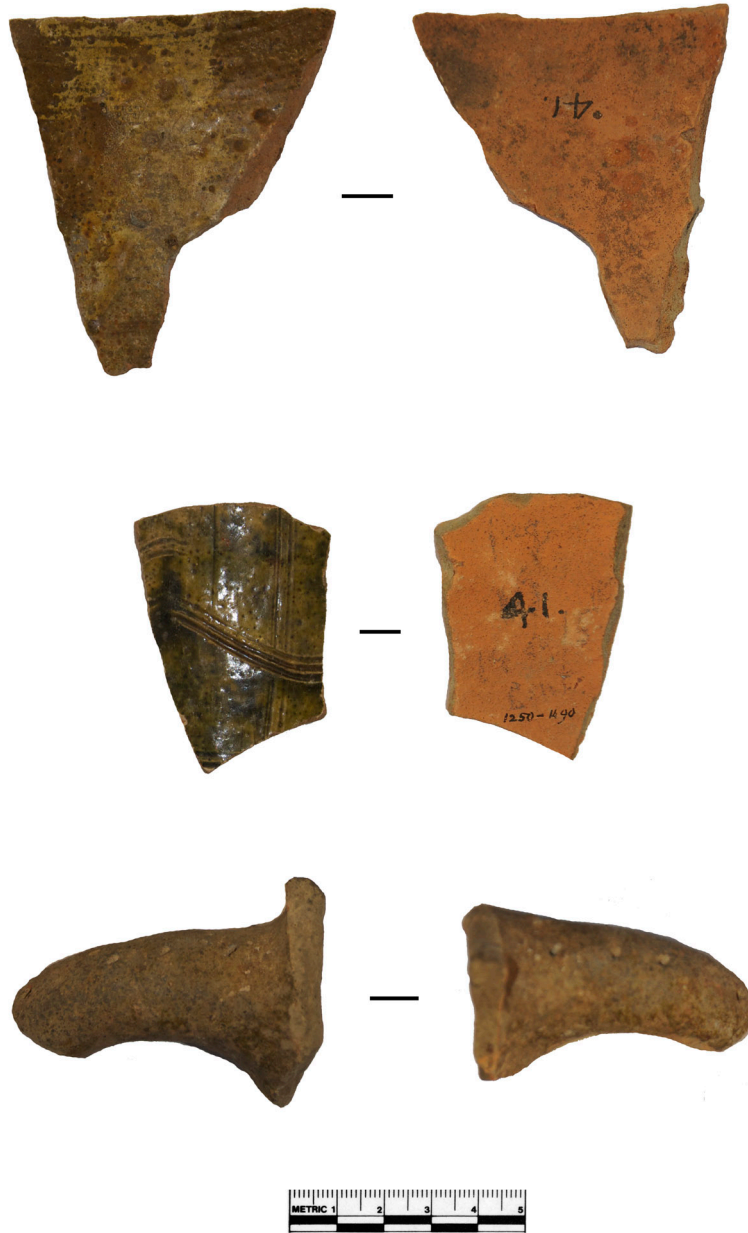
- 7.3 Small body sherd 2.5cm x 3cm, 4mm wide. 4gm in weight. External green glaze with zig-zag incised line.
- 7.4 Small body sherd 2cm x 3cm, 4mm wide. 4gm in weight. External green glaze with incised wavy line.
- 7.5 Small body sherd 1.5cm x 4cm, 7mm wide. 8gm in weight. External green glaze with incised horizontal line and row of dots.
- 7.6 Small body sherd 3cm x 3cm, 4mm wide. 6gm in weight. External green glaze with incised wavy line.
- 7.7 Body sherd 4cm x 6cm, 7mm wide. 18gm in weight. External green glaze with incised wavy line and spiral.
- 7.8 Body sherd 4cm x 5.5cm, 4mm wide. 12gm in weight. External green glaze with incised wavy line lines forming scales. Abraded edges.
- 7.9 Curved sherd from a neck of a flagon 4cm x 5.5cm, 5mm wide. 18gm in weight. External green glaze with concoidal incised ribs. Abraded edges. Neck diam.c.13cm.
- 7.10 Base fragment with pinched flat vertical ribs. Slight raised internal foot ring. 5cm x 3cm. Base diam. 11.5cm. External green glaze. 16gm in weight.
- 7.11 Section of jug handle attached to wall of vessel. Green glaze on upper surface and row of pricked holes along top surface for decoration. Oval section to handle. 5cm x 5.5cm in size. 50gm in weight.
- 7.12 Central section of jug handle. Green glaze on upper surface and horizontal slashed decoration along top surface for decoration. Oval section to handle. 3cm x 2cm in size. 16gm in weight.



Appendix 4.1: Pottery fabric 1



Appendix 4.2: Pottery fabric 2



Appendix 4.3: Pottery fabric 3



Appendix 4.4: Pottery fabric 4

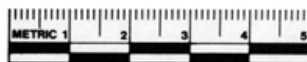




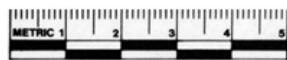
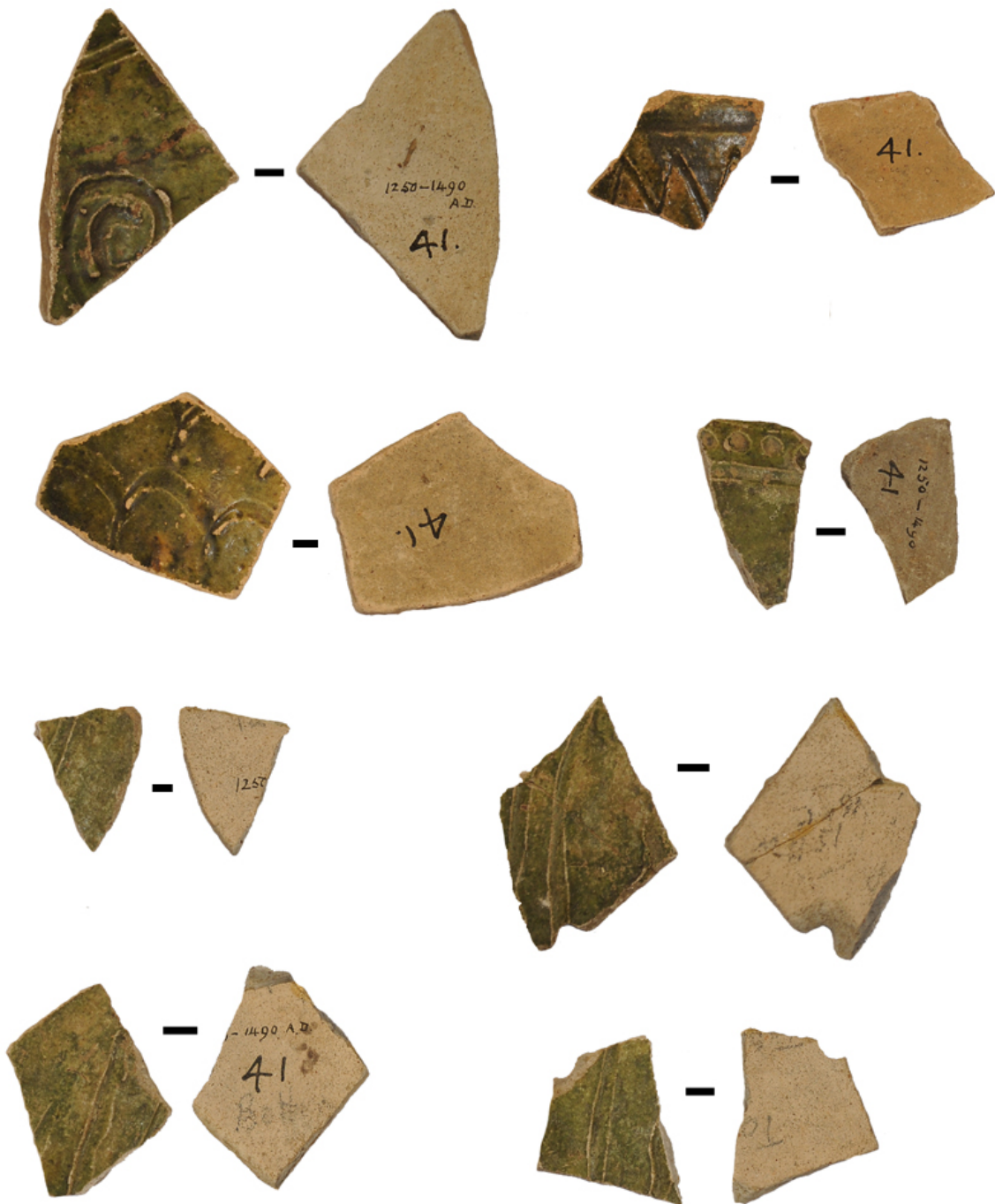
Appendix 4.5: Pottery fabric 5



Appendix 4.6: Pottery fabric 6



Appendix 4.7: Pottery fabric 7



Appendix 4.8: Pottery fabric 7