## Survey of the Keep at Mettingham Castle MTT 003

# Survey of the Keep at Mettingham Castle 

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## HER Information

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Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Team alone. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk County Council's archaeological contracting services cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

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## Summary

A drawn and photographic record was made and a geophysical survey carried out during conservation work to repair and stabilise the ruined keep at the centre of the 14th century Mettingham Castle. The removal of vegetation and the erection of scaffolding provided an opportunity to examine closely the castle's fabric which had previously been concealed or invisible from the ground. The remains of the castle are a Scheduled Ancient Monument and the consent for the repair work was conditional upon a programme of archaeological recording being completed.

The principal area for the conservation work was the keep and the southern fragment of the curtain wall which once enclosed a base court to the north. Geophysical survey was undertaken of the court enclosed by the keep, the moated garden to the south and the area surrounding a fragment of an unidentified medieval building within the base court.

The keep consists of a flint and brick-built curtain wall with a tower at each corner; this enclosed an inner court in which a two storey timber-framed manor house once stood. The manor house was built off-centre against the south and west sides of the court and probably covered an area of $17.5 \mathrm{~m} \times 13 \mathrm{~m}$. It included the SW and central towers within its footprint with the towers acting as stair turrets to gain access from the upper floor of the hall to the tower rooms and a walkway around the top of the curtain wall. Although nothing of the timber-framed structure remained, points where it was fixed to the stonework were evident on the surfaces of the towers and curtain wall. Indications of a low ceiling height and smaller windows suggest that the ground floor of the manor house would have been reserved for the service rooms with the main hall and private apartments in the loftier chambers above.

The survey identified evidence of a previously unknown south gate which would have connected the keep to the gardens and orchards which were laid out on a separate moated enclosure to the south. Joist settings for a boarded wall-top walkway behind the parapet of the north wall of the keep were also discovered

The geophysical survey identified a hitherto unknown lean-to range against the east curtain wall and confirmed the location of the return walls of some of the extant remains.

Within the base court two large areas of disturbance were identified (Gater, 2010). The two anomalies were aligned either side of a standing fragment of a medieval building, inviting the possibility that they were part of a single entity 6.5 m wide by over 25 m long. Previous study of an inventory of 1563 suggests that it may be the site of the mysteriously named 'Cynnehall'; a translation of which could be King's hall or royal lodgings.

## 1. Introduction

Archaeological recording and a geophysical survey were carried out during conservation work to repair and stabilise the ruined keep at the centre of Mettingham Castle. The remains of the castle is a Scheduled Ancient Monument SF70 and the consent for the repair work (ref: HSD 9/2/14171) was conditional upon a programme of archaeological recording being completed.

The principal area for the conservation work was the inner court of the castle, or 'Old Keep', and the southern fragment of the curtain wall which once enclosed the base court to the north of the keep (Fig. 2). An archaeological assessment report was prepared by Bob Carr, Suffolk County Council Archaeological Service Conservation Team (SCCAS CT), at the start of the project which summarily described the layout, fabric and condition of each component of the building and made recommendations for archaeological works which form the basis for the recording specification. The removal of vegetation which clung to the walls and the erection of scaffolding provided an opportunity to examine closely the castle's fabric which had previously been concealed or was invisible from the ground.

A geophysical survey which examined areas within the keep, the base court and the moated garden to the south (Fig. 2) was undertaken after the consolidation of the structure was completed.

The project was managed by architect Tim Buxbaum and funded by the landowners Mr and Mrs Gormley, aided by English Heritage grant funding. The recording was undertaken by members of the SCCAS Field Team and the geophysical survey by GSB Prospection Ltd. The project as a whole was overseen by John Ette and Robert Parkinson on behalf of English Heritage.

## 2. Site location

Mettingham Castle occupies an elevated position 1.2 km to the south west of Bungay at TM 35998875 (Fig. 1). It stands relatively isolated at the junction of three parishes; Mettingham, Bungay and St John Ilketshall and on the south edge of what was once


Figure 1. Location of castle (red), HER sites mentioned in the text (green) and parish boundaries (black)


Figure 2. Site plan showing survey areas
medieval common land, Mettingham Green as shown on Hodskinson's map of 1783
(Fig. 3). Mettingham Church and the village are at 1.2 km distance from the castle, whilst the modern village is dispersed along the main road, between Bungay and Beccles, and follows the edge of the floodplain and marshes of the River Waveney. Historically the river was navigable at least as far as Bungay connecting Mettingham with the port at Great Yarmouth; indeed Richard Shelton, master between 1520-1539 of the college domiciled in the castle was such 'a man in those days in water works holden very expert,' that he was consulted over the cutting of Yarmouth Haven (Suckling 1846). The round tower church (MET 007, Fig. 1) at the heart of the village is Norman in date, but a church is recorded in Domesday suggesting it may have a pre-conquest foundation. A previous motte and bailey castle, The Mount (ISJ 001) and the church of St John (ISJ 004) lie within 1 km of the site in the parish of St John Ilketshall; Mettingham is linked to the main manor of llketshall and belonged to Earl Hugh at the time of Domesday.


Figure 3. Hodskinson's Map of Suffolk 1783
The complete castle as we see it today covers an area of 1.9ha and comprises two large courts enclosed by conjoined moats (Fig. 2). The north 'base' court was surrounded by a 30ft high curtain wall of which only the north wall, with its central gatehouse creating an imposing façade against the road, and a fragment of the south wall remain. The keep stands between the two courts within its own moated enclosure. The castle grounds are now divided between three properties and the various elements of the ruins stand within private garden separated (physically and visually) by property boundaries.

### 2.1 Geology and topography

The castle is located on Suffolk's clay highlands at the edge of a plateau above the 30m contour and orientated to overlook the valley of the River Waveney and village below. The surface geology is non calcareous yellow -brown clay.

### 2.2 Archaeological and historical background

The castle was built by Sir John de Norwich (descendant of Earl Hugh) who was given a licence by Edward III to crenellate an existing manor house in 1342 (together with his manor houses at Blackford and Lyng in Norfolk) as a reward for long and distinguished military service. Sir John was forced to leave his castle unfinished, in order to return to the French Wars, and the completion of the castle was entrusted to his wife, Dame Margaret, who is said to have built the keep as the family residence on the west side of the first court; not in the location of the present ruin (Martin 1990).

On the death of Sir John's grandson the Norwich family line died out and the manor passed to a cousin Catherine de Brewse, then a nun at Dartford. On her death in 1380 the property (the castle and the income derived from the manor) was to be settled on a College of Secular Cannons originally founded by Sir John at Raveningham in Norfolk but before the transfer took place the castle was attacked by rebels during the Peasants Revolt of 1381 and to safeguard the castle from further attack the castle was leased to Catherine's cousin William de Ufford, the second Earl of Suffolk. On the 5th of July 1382 license was granted to the executors under the will of Sir John de Norwich to transfer the master and priests of Raveningham College to Mettingham Castle (Martin 1990). The move however was so strongly opposed by the prioress and nuns of Bungay, that it was not effected until 1393; in which year Richard II confirmed the foundation and incorporation of a chantry within the castle grounds.

During its life as a religious college little attempt seems to have been made to soften the castle's external appearance but building work and alteration were undertaken to suit its new purpose. In the manor rolls for 1404, there is an entry of the expenses of John Wilbey, then college master, for journeying to Yarmouth to speak with Sir Miles Stapleton regarding the transportation of freestone for building works which was imported at Yarmouth, and conveyed by water to Beccles. Another entry is for Thomas Barsham, of Yarmouth, a celebrated decorator, who was also employed to paint images, and a tabula for the high altar for the chapel; a building that according to the

1506 will of Richard Brawnce, master of the college, was 'elegantly fitted' and 'in complete cathedral style’ (Suckling 1846).

At the Dissolution the college was surrendered to the Crown on 8th April, 1542. The brass lectern from the college chapel was removed to the church in Bungay and in 1544 the chapel roof which was 'a very fair roof' was carried to Great Yarmouth to cover the Guildhall which was undergoing extensive reconstruction (Suckling 1846). The hall (at Yarmouth) was 76 feet in length by 22 feet in breadth.

The castle was sold in 1563 to Sir Nicholas Bacon, Lord Keeper of the High Seal, at which time an inventory of the buildings was made. This provides a written description of the castle at the end of the medieval period and an analysis of this has been made and published by the Suffolk Institute of Archaeology (Martin 1990). The keep was already abandoned and in a ruinous state at this time and the inventory describes it as the 'olde castell inclosed with a mote by it selfe' and 'utterlye decayed', with 'dyvers of the walles fallen downe'. It describes a 'fayer chimney of freestone standinge with two great barres of Iron holdinge up part of it'. Measurements for the 'castell' are quoted as $80 \times 50 \mathrm{ft}$ and these correspond to the internal dimensions ( $87^{\prime} 66^{\prime \prime} \times 62^{\prime} 6$ " ) of the surveyed ruin. With the exception of the keep ruins all of the buildings described in the inventory were situated in the north bailey of the castle and comprised service buildings, for the preparation and storage of food, stables and lodgings for servants; typical of a base court (see appendix 3 for transcript). But set amongst these were the well appointed, high status buildings described as 'a stone-walled Mansion' and a 'fayer Cynnehalle (?Kings Hall or royal lodgings). This suggests that all of the college buildings and chapel, close to the time of the Dissolution, were located in the main north court.

The castle, as a romantic ruin, has provided artists with subject matter since the 18th century including Thomas Gainsborough who transposed the castle to a craggy coastline. All of the images (with the exception of Gainborough's painting) seem to be an accurate representation of the ruins and from the earliest depiction (Fig. 4), show the castle gatehouse and keep largely as we see them today. In 1774 Joseph Chapell Woolnough occupied Mettingham Castle as a tenant renting, in addition to his own estate in Stradbrooke, the manor and farm; these he is said to have very much improved. He also 'laid out and beautified with much taste and at great expense, the
grounds within the walls of the ancient castle and college', and turned the habitable parts of the castle within the north court into barns and a farmhouse.


Figure 4. Buck's view of the castle from the north published in 1738 and dedicated to the then owner Tobias Hunt Esq.
(This earliest image of the castle shows the NW tower of the keep in the background to the left of the gatehouses and further ruins, possibly the remains of the SW gatehouse, to the right. The keep is separated from the main north court by a moat and the large crack which splits the tower already appears to be well advanced. Note that the barns which abut the interior of the curtain walls in later illustrations are absent).

At the time of the tithe survey of 1846 the estate measured 230 acres (of which 169 were in Mettingham parish) and the property was owned and occupied by the Reverend Samuel Safford. During the first half of the 19th century, Safford pulled down the farmhouse which had incorporated part of a pre-existing medieval building and built a new house on its site (Figs. 5 and 7), retaining the remains in the angle of the new house. At this time chronicler Alfred Suckling was curate of the parish and observed what he described as, 'much of Dame Margaret's work laid open with some of the interior decorations with colour and gilding being quite fresh'.

Alfred Suckling published his 'History and Antiquities of the County of Suffolk' in 1846 and described the college as 'standing within a quadrangular moat at the south-east angle of the castle. A very picturesque tower, which formed the most attractive feature in these ruins, fell down about seven years since during the night, with so little noise as not to have been heard by the inmates of the castle'. It was called Kate's Tower, from Catherine de Brewse.


Figure 5. Tithe map of 1846 (lps. RO ref FDA175/A1/1b)
The residence built by the Rev. Safford is shown in red (383) incorporating the ruins of a highly decorated building purportedly constructed by Dame Margaret de Norwich. The moats surrounding the two baileys are shown as almost a complete circuit with 'causeways' providing access to the base court through the main gate to the north and to the estate farmhouse (394) to the east. The west moat was probably infilled by Safford to create the carriage drive for his new house (See image 14 Appendix 4). The tithe apportionment describes 384 as 'castle yard', 385 as 'garden' and 386 as 'orchard'. A large linear pond is shown in the south garden and a lean-to building is shown attached to the north face of the base court's southern curtain wall.


Figure 6. 1st (left) and 3rd edition (right) Ordnance Survey maps
The maps show extant fragments of medieval buildings left after the demolition of the Safford's residence and a replacement house constructed in the south bailey. The pond in the south garden was infilled before 1885; the extent of the moat north of the keep had been reduced by 1927 but otherwise these are unchanged. The base court's southern curtain wall and the attached barn appear to have been truncated by 1885 to create a driveway to the new house and the barn has been removed altogether by 1904.

Suckling goes on to say 'about twelve or fourteen years ago (c.1832-4), Mr. Safford, the present possessor of the site, digging amidst the ruins for the purpose of procuring building materials, discovered a vast quantity of fractured sculptured stones, and one of the chapel windows; all of elegant and elaborate workmanship. They were found at the bottom of a crypt-still partly vaulted over, which was about eight feet deep. The size or proportions of the chapel, it is said, could not be traced' and 'It is said that six bells, belonging to the chapel, were found about fifty-years since (c.1800), in cleansing the moat.' The 18th century house was demolished in 1880, except for the old fragment, and the present house built on the inner moat (Fig. 6).


Figure 7. The residence built by Rev. Safford in the first half of the 19th century.
This shows the building viewed from the west across the still open west arm of the moat. It was constructed on the site of a previous dwelling which been created from an existing medieval building, part of which was retained within the angle of the house. The house was built over cellars of an unknown date and a geophysics survey identified a large anomaly on the site of the wing shown facing in this picture and the north (left) of the house. This building was knocked down in 1880 (picture from the sale details of 1876 (Ipswich Record office HD113/2/65)

## 3. The Survey

### 3.1 Methodology

Prior to the erection of the scaffolding and removal of the ivy a photographic record was made of the building and a rapid digital survey undertaken to record reference points against which the photographs could be registered. Hand-dug test holes were excavated at the base of the central tower within the keep and at the interior and exterior corners of the base court's putative SW corner tower. Both these areas of the castle were in a state of collapse and had the potential to provide significant visual pointers to how the castle remains should be read by an observer. The results of these investigations were therefore necessary to create informed reconstructions.

During the conservation phase all work to remove vegetation, soil, rubble and previous consolidation/cappings and unstable masonry was observed by an archaeologist working in close liaison with the main contractor to record hitherto concealed architectural details and those which could not be seen from the ground. Particular areas of attention were the wall tops, window sills and areas where large scale repointing was to occur together with areas where masonry stitches, ties and lintels were to be inserted to stabilise the structure. Where potential for significant architectural details existed, excavation and cleaning was undertaken by the monitoring archaeologists.

The building was recorded mainly by photography and each architectural feature (window/door opening etc) was photographed with a scale in addition to general views of the building. A catalogue of photographs is included in the appendices and a copy of the photo archive on the accompanying CD. The photographic record was supported by written descriptions and measured sketches drawn on plastic drawing film and located against the initial digital survey data. Levels of door thresholds, sills, floor levels and roof lines were recorded across the building related to a common datum and brick measurements and descriptions were recorded.

Site records were made under the existing HER site code (MTT 003). All site records have been archived in paper and electronic form. The archive is held in the Main Store of SCCAS in Bury St Edmunds and the digital archive on the SCC computer network.

Copies of the report have been lodged with CRO, NMR, EH, the Suffolk HER and on the Oasis on-line database.

### 3.2. Results

In this section of the report each component part of the castle is described. In Figure 8 a block plan of the castle keep, identifying each component with a number has been reproduced for ease of reference within the text and photographic archive. Scaled and annotated drawings of each of the internal elevations and the ground plan have been prepared from the digital data, the drawn record and photographic survey and are shown in Figures 9-15. The report is accompanied by a CD containing the photographic record in the form of 500 images (Appendix 3) and a selection of the photographs have been reproduced as plates at the rear of the report.

The report on the geophysical survey prepared by GSB Prospection Ltd. accompanies the results of this document as a separate report (Gater 2010).

### 3.2.1.Plan and general description of the court/keep

(Fig. 8)
The 'old keep' stands on its own moated platform. It consists of a flint and brick-built curtain wall with a tower at each corner and with a fifth 'mid-tower' on the line of the south wall situated just to the west of centre. The curtain wall encloses an inner court which measures $26.4 \mathrm{~m} \times 18.80 \mathrm{~m}$ ( $c .877^{\prime \prime \prime} \times 62^{\prime} 6^{\prime \prime}$ ), an area 496sqm. The walls of the keep are within 2 m of the water edge and the footprint of the keep covers $80 \%$ of the 'island' platform. The walls are made largely of mixed grey and brown, unworked, flint cobbles with the edges of the openings and the corner quoins completed in brick. These are plain 'handmade' bricks in both red and gault firing clays; the firing of the bricks has been inconsistent with the reds varying from orange/red to purple. The bricks are notionally all 10 " long and $41 / 44^{-4} 1 \frac{1}{2}$ " wide but the thicknesses range from $1 \frac{1}{2}$ " $-23 / 4$ ". General brick dates can be approximated by size and comparison with tables of brick sizes collected from buildings of known construction dates. The large 10" bricks match closely with bricks used in contemporary buildings elsewhere. The $23 / 4$ " dimensions of the largest of the Mettingham bricks are greater than ones typically found in medieval buildings and are more characteristic of the 17th century, however by this time brick lengths had almost become a standardised 9" long.


Figure 8. Plan of the keep with red lines showing drawn elevations

There is no correlation between the clays used and brick sizes and thick and thin forms were identified in each of the colours.

Initial impressions were that the larger bricks represented areas of repair particularly where the larger sized brick was predominant as on the NE quoin of Tower 4. But despite scrutiny no chronology could be attached to the use of any particular brick type but the variation in bricks appeared to be mixed indiscriminately throughout the building. Much later repairs and blocking of some of the openings in a soft red plain 9 "x $2 \frac{1}{2}$ " brick suggest that the consolidation of the structure, post ruination, has been ongoing since the 18th century.

The north curtain wall and the west wall rise, at points, to close to their full height at 8.7 m and 8.1 m respectively. The south mid-tower (T4) is the best preserved and retains all four of its walls over three floor levels to a height of 11.1 m . Whilst the NE and SW towers (T2 and T5) both retain a single full height wall with stubs only to identify the returns, the SE corner tower (T3) and east wall exist only as low stubs approximately 1 m high. Although the remains of the NW tower (T1) stand close to their full height there is virtually no indication of the tower's footprint and in contrast to the other towers the NW one was entirely made out of brick. The fabric of the tower is not keyed into the masonry of the adjacent north curtain wall and was part of a later phase of construction; this is the only piece of major remodelling evident in the keep which otherwise seems to have been constructed in a single phase of work. Although demonstrably later, the datable features within the NW tower originate in the 14th century and suggest that it was a close contemporary to the primary phase.

The footprints of the diagonally opposing towers, T2, NE and T5, SW were the same and measured (externally) approximately $6.5 \mathrm{~m} \times 6.5 \mathrm{~m}$ whilst on the other diagonal the projected sizes of the towers suggest that these were larger; the NW tower, T1, would have had to have been 8.6 m square and, T 3 , the $\mathrm{SW}, 7.5 \mathrm{~m}$ square to complete their respective corners. The mid-tower, T4, on the south side was the smallest at 5.2 m square.

The area within the keep was laid to lawn and the door heights indicate that this is at, or close to, the medieval floor level. This was confirmed by excavation at the base of Tower 4 which showed that the brick quoins at the edge of the door opening stopped at
current ground level. A sparse layer of crushed brick and mortar rubble was found below the topsoil at a depth of 0.20 m but there were no indications of floor surfaces. The bonded walls continued to a depth of 0.4 m below ground and were built off a footing made of dense puddled green clay packed into a cut trench with the bonded wall set into a channel cut into the top of the clay (PI. 10 Appendix 2). Below ground the flint walling spanned the opening of the west door so that, in plan, the tower footing would have formed a complete square. The clay-filled footing trench was 0.3 m wider than the tower wall, on the north side, and in the east-west direction, extended beyond the limit of the excavation suggesting that it may have run between the two towers, but the bonded flint did not. The footing trench was cut through the buried medieval topsoil, which had been left in place when the castle was built. The footing was cut into the underlying clay geology, howver the consistency of the clay packing the footing trench was not dissimilar to this and so what was gained by creating the footing is not immediately clear.

A timber-framed manor house or hall had occupied approximately half of the area enclosed within the keep. Nothing remains of this building but evidence of where it was attached to the towers and west wall was preserved within their stonework. The manor house butted against the west and south curtain walls and included within its footprint the SW and mid towers together with the space in between. The towers formed the link by which the various chambers within the manor house were connected and via their stairways the exterior walks along the tops of the curtain walls could be accessed. The hall towers were paired and, when viewed from the north (Fig. 12), mirrored each other in the positioning of their doors into the hall and the stair turrets which protruded above their rooflines. The mid-tower was located off centre, with an interval of 4 m to the west tower and c.6.5m to the east, and the particularity of its position is strong evidence of the east-west dimension of the hall.

### 3.2.2. West Wall

(Fig. 9)
The west wall of the court also formed the west wall of the former timber-framed manor house and was an integral build with the SW corner tower. The wall rises to 7.95 m in two storeys, topped off with the remains of a tall parapet, and is pierced by large domestic windows that overlook the west arm of the moat. The wall at its base is 1.2 m
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Figure 9. West wall internal elevation
thick, the same as the north curtain wall and the exterior wall of the tower but greater than the inward facing walls of Towers 4 and 5 . The wall is divided along its length into three irregularly sized bays, one wide ( $A$ ) and two narrow ( $B$ and $C$ ), indicated by vertical channels (2) built into the masonry. These are deep set at the base of the wall but disappear above first floor level, where the wall thickness diminishes; although the line of the timbers is still apparent to the base of the parapet. The channels (2) were 0.28 m wide ( $11^{\prime \prime}$ ) and $0.1-0.15 \mathrm{~m}$ deep, and would have supported the principal upright posts of the timber-framed hall. The main bay was 6.6 m ( 21 ft 8 ") wide and the two narrower ones 2.45 m ( 8 ft ). The northern end of the wall had collapsed and was truncated before its junction with the largely missing north-west tower, but the wall terminated at a brick quoin on the external face indicating that the break had occurred along the south side of an opening. The quoin extended to the ground, which suggested that this was most likely to have been a door, and a narrow rebated channel in the brickwork at the end of the wall probably supported a frame. On the interior face were the remains of a vertical channel (1), the setting for a principle post and the end of a bay PI. 15, Appendix 2).

The wall thickness on the ground floor is slightly greater than that of the storey above and the first floor level could be identified by the narrow lip (3), created by this change. The lip was 0.1-0.15m wide (the same depth as the vertical post channels at ground floor level) although the addition of rough-racking to create a water shed had reduced the appearance of this feature. The first floor runs at a constant level across all three bays and in the northern bay open sockets (4) for four floor joists were clearly visible. No joist settings were observed at first floor level in the main bay, either on the west wall or the adjacent towers, which suggested that the main structure of the floor in this area was carried by the mid-rail of the timber-frame lodged upon the lip (3). The level of the joist suggested a ceiling height of c.2.35m (7' $9^{\prime \prime}$ ) for the ground floor whereas the first floor was a loftier 4.1m (13' 3 ").

The ground floor windows have been enlarged by the later insertion of arched heads (5) built in $2 \frac{1}{2}$ " common bricks. Their gothic shape, albeit the best solution for supporting the masonry above, was an affectation and the original windows would have been square-topped to allow them to fit beneath the first floor level. The original lintel height was indicated by the extent of the 14th century brick quoins (6) which frame the openings and the brick stops on the interiors of the jambs against which shutters or
timber frames were once set (7). The lintels were probably wooden, similar to those that survived in the NE tower, and to relieve the load upon them a brick strainer arch was built into the flintwork above (8). The two windows in the main bay measured $1.65 \mathrm{~m} x$ 1.10 m while the one in the northern bay was slightly narrower at $c .1 .40 \mathrm{~m}$ - although this window could not be precisely measured as collapse meant only the left jamb and an approximation of the sill height remained. The spacing of the windows was designed to be balanced along the whole west elevation when viewed from the outside so, from the inside, they appear off-centre and out of rhythm with the position of the timber bays.

A blind arched recess (9) filled the width of the northern bay. The perpendicular style four-centred arch-head was well-formed in brick with a simple chamfer and rose to just below the first floor joists. The bricks forming the arch did not extend to the ground on the south side but sprang instead from the post channel built into the walls. The post channel (1) for the north side of the bay was set back slightly from the arch but collapse of the face here removed any potential evidence of a brick respond.

## First Floor

The first floor was lit by large windows in the main and adjacent bays (W4 and W5); the two windows shared the same vertical dimensions (1.4m) and were probably the same width $(1.83 \mathrm{~m})$ but only the south jamb remained of the northern window. The height of standing wall fragment above the arch was at sill height of the first floor windows but there was no indication of a window in the end bay. As with the ground floor openings the first floor windows were square-headed and deep mortices to accommodate stout ( $0.2 \mathrm{~m} \times 0.5 \mathrm{~m}$ ) timber lintels were set 0.54 m into the walls on each side of the windows. The interior of the reveals were edged with brick with a rebated stop (10) for a timber frame. The rebate continued horizontally at sill level but the facing bricks or stones of the sill itself had been removed. The exteriors of the windows were constructed of a fine-grained dressed limestone (Caen -type) and were re-used blocks taken from an earlier building. The stones included examples decorated with zig-zag shallow geometric moulding characteristic of Norman masonry and date to no later that the 12th century. One fragment was carved on three of its sides and was from some form of frieze or block modillion from very ornate building (PI. 14, Appendix. 2). The decorated faces had been turned into the wall and the reverse of the stones re-carved with simple flat faces and chamfers to fit their current settings. Compromises had been made to make the stones fit and some had been laid the wrong way round with their grain
running vertically. The stone was only recorded on the exterior of the first floor windows as the external faces of the ground floor windows were made of brick, although almost all of the material visible today is the result of later 18th century repairs.

The internal face, at the top of the wall had fallen away (11) so the precise height of the first floor room was unknown, but the junction between the base of the parapet wall and the top of the west wall proper (12) indicates the eaves height at c.6.85m.

## Parapet

Above eaves level the parapet wall survived to a maximum height of 1.3 m but the top of the wall has been lost and no indication of its original extent remained. The surviving fragment however equals the measurement to the base of the merlins on the north wall, where a full height section of the curtain wall does survive, and suggests that the parapet wall was the same height all of the way around the building. The parapet wall was 0.38 m thick compared to 1.10 m of the main wall below to give an internal ledge 0.72 m deep. The parapet wall was pierced at its base by a square hole (14), which was built into the wall fabric and the top of the hole was bridged over with a brick lintel. This was similar to the holes for a row of the timber supports for a boarded walkway that was seen on the north curtain wall but in this instance only a single hole was observed.

A horizontal strip of lead (15) was built into the wall 0.18 m above the base of the parapet and level with the top of the square hole described above (PI. 16 Appendix. 2). The lead strip, a fragment 0.4 m long, was set into the wall by 0.1 m . The flints above the flashing were re-pointed in a fine white mortar that was different from that used to bond the flints in general and might indicate that the lead was a later addition; a water-shed was created after the building had lost it roof, used a similar mortar. The south side of the water-shed retained the impression of the vertical edge of a structure, long gone, against which it was built.

### 3.2.3.South-west corner tower (Tower 5)

(Figs. 8, 10 and 12)
When built, the exterior walls of the SW tower were continuous with the west and south curtain walls and together with the south central tower (T4) formed part of the structure of the timber-framed hall. The tower was built over three floors (including the ground floor),


Figure 10. South-west tower (left) and Central tower (right) from the South.
and narrow doorways at its NW corner connected the tower's rooms to the main hall on each floor whilst the top floor was part of the circuit of the wall top walk-way. Only the north half of the tower was extant and the remains consisted of the north wall with a narrow stub of the east return. The north wall was no longer attached to the west one as the door heads, which once connected these elements, had all collapsed. No remains of the south half of the tower existed above ground and tellingly the ground level sloped down to the moat edge at this point. At its base the tower measures 4.10 m across (inside wall -inside wall) and the north wall stands 11.1 m high.

Although little of the tower exists, the interior of the north wall provides an informative cross-section and shows that the first and second floors and entry onto the roof were linked by a spiral stair (19 and 20) built across the angle of the NE corner. The stairs were not a continuous spiral but two separate flights, with the rooms between effectively acting as landings. Half of the width of the stair was cut into the thickness of the north and east wall and each flight appeared as two domed alcoves (17 and 18) each containing treads winding around a central shaft. The missing half of the stair would have wound into the room supported on a brick vault (21) spanning the diagonal across the corner, the remains of which could be seen below the bottom flight of steps. The top of the stairs exited out onto the tower roof where the head of the stair well was enclosed within a small turret (22), which projected above the general roofline. Evidence of the east and west returns still remained and the internal (E-W) measurement of the turret was 1 m ; the winding of the stair indicates that the turret door would have faced west. A curious square-section vertical hollow (23) (PI. 13 Appendix 2) was built into the thickness of the turret east wall which turned through a right-angle and exited horizontally through the external face. The opening was constructed of brick, in the manner and the size of a putlock hole suggesting that this was a setting for a timber structure raised above or out from the turret, but whether it was part of the construction works (a crane/winch mount perhaps) or part of the finished building is unknown.

The stairs themselves were based around stone treads robbed or recovered from a previous building, which also provided the moulded stones that created the centre-pillar and the stub of each winder (PI. 11 Appendix 2). The stones re-created the pitch of the former stairs but had been broken, greatly reducing the width of the treads, either because they came from a wider stairwell or could only be recovered by breaking them. The remainder of each of the winders was a composite of brick which formed the riser
and part of the tread with the nosing (the leading edge of the tread) being formed from timber; these had been lost but were evidenced by sockets set into the wall.

Approximately half of each flight remained with six steps in the lower flight and five in the upper. The riser height and the tread depth, measured at the outer edge of the winder, were both c.0.25m. An engraving published in 1819 from a drawing by I. Higham shows the entrances to the stairs and the stairwell almost intact and the vault by which the upper flight overhangs the room below as a hood over the entrance to the lower stair.


Figure 11. An engraving of the SW tower published in 1819 from a drawing by I. Higham. Note the entrances to the stairwell intact and the corbelled vault above the first floor to support the top half of the stairwell, also what appears to be a revetment to the moat island at the water's edge and drain outlet at the base of the mid tower (lps. RO ref HD1678/97/2)

Ledges (25 and 26) created by the diminishing wall thickness at each floor level provided a setting for the floor joists on the north wall and at the base of the stairs. Below the first floor these were supported by brick corbelling (27), which projected in a curving arc and bisected the NE and NW corners. On the east side the corbelling simply underpinned the stairs but on the west side there appeared to be the stub of a narrow rib-vault (28). The vaulting was low (springing from a point lower than the door arch) and was set away from the door to avoid restricting the passage through it - although the entrance and the window on the west wall were still compromised. The rib-vault projected toward the diagonally opposite (now missing) SE corner of the tower. The


Figure 12. Central tower (left) and southwest corner tower (right) from the north.
estimated radius of the rib-vault is similar to the strainer arch built in the wall of the NE tower but it is debatable as to whether a full span vault could be achieved in the limited space below the known first floor level. The ledge to support the first floor timbers (25) across the face of the north wall was interrupted by a dropped section, 1 m wide, creating a shallow recess (29) immediately to the east of the first floor door. This break in the ledge implies that the floor was not suspended on the walls across its full width and an opening occurred here. This may explain the need for the vaulting, of which there is no indication in any of the other towers, to support the floor. It may also demonstrate a communication between the ground and first floors which was evident nowhere else in the standing remains.

The ground and first floor rooms were lit by centrally placed windows in the west wall; the shear point of the tower's collapsed southern half is through the line of the windows and only the north vertical jambs remain. The opening of the lower window (W17) was formed in brick and included the springing point of an arch whilst the upper one (W18) is in dressed stone maintaining a consistency with the windows on the west side of the hall, although the confines of the tower mean that the windows would have been narrower. On the east side of the tower all evidence of windows or doors has been lost.

The north face of the tower (Fig. 12) was an internal wall that faced into the hall abutting against its timber frame and appeared relatively plain. The door openings (D2 and D3) connecting the tower to the first and ground floors of the hall were small ( $1.1 \mathrm{~m} \times 2 \mathrm{~m}$ ), and edged in plain chamfered brick. The doorways were simple portals, which did not have closing doors and the rebated stops against which the door would have shut, and the hinge settings recorded on the external entrances were not in evidence.

A prominent groove (34), 0.15 m wide and one flint deep was recorded on the north face of the tower. It sloped $5^{\circ}$ from horizontal, dropping towards the west wall and occurred at between 6.50 m and 6.30 m from the ground. The groove was partly packed with tile along its top edge so despite having the appearance of being a rough scar it had been built into the wall. It is believed to be an attached roof-line where a lead flashing or weathering was fixed into the masonry. It continued across the face of the adjacent central tower and its projected line intersected with the west wall slightly below the base of the parapet and below the level of the west wall lead flashing. Immediately below the
groove the east quoin bricks were slightly recessed (35) and aligned with a square 0.2 m $x 0.3 m$ depression built into the corner (36), which was matched by a narrow ledge on the opposing corner of the adjacent tower (52). It is noticeable that on both towers the builders lost the vertical at this point and the top of the towers leant away from each other.

A second square depression was recorded at first floor level and below it the line of the NE corner was interrupted by a shallow vertical rebate (37) built into the east face of the tower (PI. 12 Appendix 2). This was 1.2 m long and ran between 1.8 m and 3 m from the ground. Each of these surface anomalies are likely to denote the position of framing timbers. The brick quoins, which were a feature of the external corners, did not occur below the rebated section but instead the corner at the base of the tower was composed of a mixed of large flints (38). In addition to this the north face at the base of the wall projected half a flint proud of the rest of the wall forming a horizontal lip (39) at a height of 1.4 m .

### 3.2.4. Central tower (Tower 4) and south curtain wall

(Figs. 10, 12 and 13)
The central tower is the best-preserved component of the keep with all four walls standing to close to their full height. The tower stood at the SE corner of the hall and was originally joined to the SW tower by a curtain wall, which formed the south end of the manor house. Only a short stub of the curtain wall remained (40), projecting from the central tower's SE corner. The shear point where the south curtain wall had collapsed has been consolidated in the past and repaired by creating a squared-off terminal. This showed the stepped profile of the curtain wall in cross-section where the first floor and hall roof and wall walks were lodged (Fig.13, 44). The curtain wall survives to it full height, demonstrable by the extent of the brick quoin on the tower corner. It is 7.30 m high and at its base 1.2 m thick, dimensions it shares with the curtain wall on the north side of the keep. Metric comparisons with the bettered preserved north wall indicated that the south wall was also crenellated and was attached to the mid tower at a raised merlin. However the extended section of parapet which shielded the doorways to the tower's upper rooms on the north wall did not occur here. The vertical line of truncation of the south curtain wall occurred through a window (Fig. 12, 41) on the first floor and the internal face of the east jamb is preserved in the end elevation of the wall. The window was at the same level as the first floor window in the tower and


Figure 13. South mid-tower. East (right) and West (left) elevations
shared the same vertical dimension, 0.8 m . The base of the wall was substantially rebuilt and retained no architectural details of the ground floor.

## Eastern elevation. (Fig. 13)

There was no evidence of a full-height masonry wall being attached to the east side of the tower, but truncated flintwork at the tower's base suggested that the central and east towers were connected at ground level by a dwarf wall (44). This was 1.85 m wide, - greater that the width of the full height curtain wall, but no more than 0.5 m high. This apparent gap in the circuit of the wall prompted the hypothesis of a second large-scale entrance on the south side of the keep and was supported by the peculiar layout of the architectural features of the tower's east face. The tower was divided vertically approximately into one third, two thirds, with the southern side (42) of the tower set back 0.25 m from the general plane of the north. The recessed section was built into the wall with its vertical north edge defined with a brick quoin in a fashion similar to the tower corners. The recess did not span the full height of the tower but ran from the truncated remains of the dwarf wall (44) at the base of the tower to just below the second floor door at the top. The sunken area was 1.8 m wide by 4.8 m high and the head of the recess was a curving arc. Apart from the scar of the dwarf wall there was no evidence of there ever having been a wall projecting from the SE corner of the tower and within the recessed section (42), the tower's corner was presented as a finished, rendered face for its entire height. The arrangement of the windows respected the recessed area and it is suggested that this allowed some form of large door to be operated within this space although there is no indication of how this was mounted. A narrow channel (45) , buried within the wall ran from a shallow triangular niche (46) and exited into the 'door' recess. The function of the channel was unknown but it is suggested that it was a chain tunnel and the triangular niche, the housing for a timber that spanned the opening and a location for the chain's mount. The face of the channel had been rebuilt and the south side of the niche had been repaired but both were original features contemporary with the building of the tower. The height of the recess is $121 / 2 \mathrm{ft}$, and modern building regulations for equestrian centres state that the minimum head clearance for doorways of a horse and rider is 12 ft .

The entrance to the top floor overhung the recess and was on the same plane as the north side tower. The doorway opening (D9) was set back 0.52 m into the wall and was approached by three brick-built steps (57); the threshold was raised by the thickness of
one brick from the internal floor level. To the left of the door was the head of an elongated shallow depression (80) but the lower extent of this feature was unknown and lost to collapse. A small mortise was set into the north side of the door reveal above the second step for a possible timber tread.

The north half of this face is pierced by a window on each of the three floors (W7,W8 and W9); the windows although vaguely in the middle of this part of the elevation did not align and instead respect internal features within the tower. The upper story windows have arched heads and all are relatively wide openings ( $0.4 \mathrm{~m} x .0 .9 \mathrm{~m}$ with external splays) which reflect their position looking into the courtyard compared to the slit windows that look out to the south (Fig. 10). The former arch of the ground floor window (W9) had been removed and replaced with a wooden lintel (50) which in turn was badly rotted.

## North and west face

The north face of the tower abutted the timber-hall and the line of the attached roof (Fig.
$12,57)$ and continued from the west tower but here it was a wider and more pronounced square-sectioned groove 0.12 m deep and 0.2 m wide (PI. 23 Appendix 2 ). The groove continued on the west face of the tower (Fig. 13,52) demonstrating that the roof extended to enclose the space between the west and central towers. On the west face it slopes down to a ledge on the inside of the south curtain wall at an angle of 3-4 ${ }^{\circ}$. Immediately below the roofline on the west face was a stepped ledge against which the end rafter would have lodged. The roof-line on the north face of the tower did not span the complete width of the tower but stopped 1.3 m short of the east edge and below it the shortfall was taken up by a deeply raked out horizontal joint (almost a whole brick depth) at the base of a panel of brickwork. An angled mortar line suggestive of a roof pitch was also recorded running between the tower edge and the putative roofline.

## Upper room

There was no evidence of there being direct access between the first and second floor rooms and the only entry to the top floor was from the battlements through doors in the east and west walls (D8 and D9). The doorways were recessed into the tower wall and (together with the upper room floor level) were above the level of the wall walks and approached by a flight of three steps (57). Both doors were hinged on their south side and opened outwards (the west door to the left and the east to the right) so that the door shielded the occupants as they stepped out of the tower. Remains of the iron pegs, the
pivots on which the eye of the hinges turned were found set into limestone blocks in the jambs. A brick-built internal spiral stair which rose, clockwise, in the north-west corner room gave access onto the roof. As with the stairs in the west tower, the stairwell was part cut into the depth of the wall and part cantilevered out into the room itself supported on a brick-built, arched vault which spanned the diagonal of the corner (PI. 9 Appendix 2). The remains of nine steps survived; these were steep and narrow with a riser height of 0.26 m and tread width of 0.2 m at the outer edge of the winder. Above the roof level the top of the stairwell was enclosed within a small turret (56), similar to that on the west tower, which would have opened out onto the roof at an east facing door. The bottom of the stair was lit by a slit window (W10) which pierced the west wall where, due to the cut of the stairwell, it was at its thinnest and only the width of the bricks that made up the embrasure ( 0.12 m thick). The bottom two steps were dog-legged both to improve the access to the stair and create the window's splayed reveal and sill.

In addition to the stair window in the west wall the room was fenestrated on the north south and east sides (Fig.13, W7 and Fig12, W6). The inside of the embrasures were plain suggesting that they contained neither a window nor shutters. The wall faces within the reveals are rendered with a lime mortar made up with a coarse stony sand.

The south facing window opening was split into two narrow slits (Fig. 10 W11) which each measured $0.8 \mathrm{~m} \times 0.1 \mathrm{~m}$ on the exterior elevation. The division between the two openings was maintained for half the depth of the wall before opening out into a single, wide reveal. Over the slits, where the span is narrow, of the wall above the window is supported on timber lintels made up of a pair of stout planks but above the wider reveal a strainer arch is used. Repairs to the setting of the planks suggests that the planks have been replaced but they replicate the original to the build. The thickness of the south wall, the external wall of the keep, is 1.2 m and greater than that of the other walls of the tower (1m).

A narrow ledge was built into the internal masonry on all four walls which would have supported the joists of the upper room floor. The ledge was 0.15 m below the door threshold level which indicated the combined depth of the joist and floor boards. A deep, squared sectioned socket, the settings for crossing tie-beams, was built into the middle of each of the walls 0.21 m below the level of the floor joist. The tops of the E-W sockets were slightly higher set and half the vertical thickness of the opposing N -S holes which
suggests that the N-S timbers were the principle beams into which the E-W ones were jointed or lapped. The primary function of the tie beams was to prevent the tower walls from spreading and the distance between the joist ledge and the tie beam sockets indicates that the floor joists of the room above did not rest upon them. Tie beams did not occur at first floor level which suggested that they were not necessary to carry the weight of the floor and the span was not great enough (at only 3.35 m ) to necessitate a bridging beam. Later iron ties, which bound the timbers to the wall, projected from the socket holes and at the time of recording still had rotted timber fragments attached.

## First floor room

The first floor room had a door (D5) in the north face, to the main hall, and a second (D7) in the east wall connecting it with the chambers between the central and west towers. The doors were off-centre in their respective elevations and aligned with openings on the ground floor below. On the north wall the section of masonry between the ground and first floor doors was missing creating a single, elongated opening. The brick jambs on the east side of the door (Fig. 12, 47) projected slightly forward of the north wall face, by $6-8 \mathrm{cms}$, a feature that was not seen on any other of the doors. The west side was also proud of the wall face (32) but was less pronounced; it had been patched and roughly re-pointed over its entire length, which masked any detail. The internal sides of the opening were plain and straight with no indication that it ever contained a closing door. In contrast the brick jambs and arch of the east door (D7) formed a stop on the external face against which an inward opening door would close and on the inside of the south jamb at mid height was a neat, tile-lined cut out into which a door catch or bolt could be secured.

The internal ledge which would have supported the first floor joists stepped up in the SE corner suggesting that the floor was not continuous across the room. The raised ledge was 0.45 m above the general level of the joist support. The raised section was about 0.5 m wide and appeared on both the south and east elevations. The edges of this feature aligned with the vertical scars of two truncated walls, a single brick's width thick, in the room below. This was indicative of an enclosed structure, possibly an internal shaft, within the corner linking the ground and first floor rooms. Both lower floor windows on the south and east wall were off-centre in respect of this feature and a small drainhole pierced the south wall at ground level alongside the putative shaft; and a garderobe would be the most probable explanation for this feature (PI. 8 Appendix. 2).

## Ground floor

The layout of the ground floor was similar to the floor above with an open doorway (D4) into the hall on the north side and one that would have contained an inward opening door on the west. The head of the arch and most of the north jamb of the west door (D6) were rebuilt and the south jamb was rebated and had a wooden catch-plate set at midheight. The doors and the level of the drain-hole at the base of the south wall indicate that the floor level was unchanged from the medieval one and suggest that the floors were solid, but no excavation was undertaken within the footprint of the tower.

### 3.2.5. North curtain wall and north east tower (Tower 2)

## (Figure 14)

## The north curtain wall

The north curtain wall bounded the north side of the moat platform and joined together the north-east and north-west towers (T1 and T2). The moat which was shown on the 1883 OS map and part filled in on the 1904 and 1927 editions, no longer exists and the wall now overlooks a neighbour's lawn. The top of the wall was once traversed by a wall-walk (30) (PI. 17, Appendix 2) set behind a crenellated parapet (41). Both the wallwalk and the battlements are now difficult to appreciate but part of one merlin (31) remained to indicate the wall's full height and profile. At the time of the survey, the wall remains survived generally to a height of 6.50 m , the wall-walk was at 5.20 m and the parapet 7.50 m to the top of the crenellations.

The wall-walk was 0.83 m wide as measured at the two extreme ends of the wall where the full width measurement survived. The path is a neat right-angled ledge created by the change in thickness between the parapet ( 0.4 m wide) and curtain wall ( 1.23 m wide). The interior face of the parapet wall (41) remained intact at its base, along most of the wall length which demonstrates that this stepped profile was real and not the result of truncation. At the level of the wall-walk (30) the top of the curtain wall was roughly capped off with a 'rough racking' of coarse mortar and flint, a material which was applied in the medieval period and was an original feature of the wall. This surface showed no sign of wear and had not been walked on as, in its original form, it had been covered with a timber board-walk supported on six regularly spaced timber joists. Narrow channels, the setting for the joists, were built into the top of the wall running across its width and the joists were located into sockets which pierced the full thickness
of the parapet wall (59). The sockets were $0.4 \mathrm{~m} \times 0.4 \mathrm{~m}$ and the channels 0.2 m deep indicating that the joists were secured by being sunk to half their depth into the wall. The fixing within the parapet wall would have allowed the joist to cantilever out beyond the edge of the wall but the interior face of the curtain wall immediately below the walkway had eroded away and there was no indication of a wall plate, or wall posts that might confirm this. The spacing of the joist settings varied between $1.70 \mathrm{~m}-1.9 \mathrm{~m}$ but was generally $c .1 .80 \mathrm{~m}$. The exception to this was at the west end where the interval between the rebuilt west tower and the first joist was only 1.43 m . This shortened distance implied that the rebuilt west tower had either been moved, or was an enlargement on the original by 0.4 m .

Rising from the wall-walk to the east tower were the remains of a flight of three brick built steps which lead to a door (D11) to the second floor room. The riser height within the flight steps was 0.33 m but there was an impossibly large 0.65 m ascent from the wall top to the bottom step and the addition of the raised boardwalk to the top of the wall would have reduced this gap. The difference between the top of the boardwalk joist is 0.48 m and this implies that the deck of the walk would have been 0.15 m thick if all the steps had been regularly spaced. In addition to the walkway mortises, a small socket ( $0.15 \mathrm{~m} \times 0.12 \mathrm{~m}$ ) was set into the wall at the base of the steps (61).

The crenellations at the top of the parapet were edged with brick similar to the quoins and edging of the openings. Although almost entirely missing, enough brickwork survived at the top of the wall to establish that the merlins were square with a height, width and interval of 0.65 m and that the height of the parapet was 1.3 m between the merlins and 1.95 m behind them. Alongside the east tower a short section of the parapet (62) was raised by a further 1.2 m and provided protection to anyone standing on the steps to the tower's upper floor (PI. 19 Appendix 2).

Below the wall-walk the curtain wall was pierced by an alignment of five ground floor narrow windows (W18-22) including the one in the east tower and a low door (D10), all of which are now blocked. The windows were at the same height ( 1.3 m to the sill) and equally spaced presenting from the outside an even row of slits 3.5 m apart. The pattern was interrupted at the west end of the wall where the last two windows were set 4.15 m apart to accommodate a small door (D10) set between them. Externally the windows


Figure 14. Interior elevation. North curtain wall with Northwest and Northeast corner towers.
were narrow rectangles $0.6 \mathrm{~m} \times 0.1 \mathrm{~m}$ which splayed to an internal arch-headed reveal $1.2 \mathrm{~m} \times 1.45 \mathrm{~m}$. The arches were a flattened two-centre form rising to a point, and were rustically imprecise and the sills sloped markedly. Both the internal and external openings were framed with a mix of red and gault-coloured 'hand-made' bricks with a double row of bricks forming the slightly irregular arch-heads. Across all of the ground floor windows the bricks measured 10 " $\times 41 / 2^{\prime \prime}$ but the thickness varied from $13 / 4$ " $-23 / 4$ ". The internal width of the east window was compromised by being set hard against the east tower and the arch sprang from the line of the tower west wall. The inside of the reveals were rendered with a coarse lime mortar, an original medieval finish which had been preserved partly as a result of the windows being blocked up in the distant past; a blocking which has now largely fallen away. There was no indication of a lean-to building constructed against the north wall and the windows and door looked out from an open courtyard. The door was 1.7 m high to the centre of the arch and 1.3 m wide, and the eastern side of the arch is made up of a single coarse of bricks and was deformed. There is no indication of a door hanging on the edge of the opening on the interval face and as it would be impossible to open an arched door within the alcove, it suggests that the door was externally mounted and opened out, or that it contained no door at all.

## North east corner tower (Tower 2)

The NE corner tower was built into the right-angle of the north and east curtain walls. The north wall of the tower stands close to its full height, buttressed by truncated stubs of the east and west returns. A wide, full height crack (63) which passes through the centreline of the north windows means the remains of the east half of the tower was almost completely detached from the west which has been prevented from collapsing into the moat by a great iron chain which looped around the end of the tower with its ends anchored to the exterior and interior faces of the north curtain wall. The chain is purported to be from a naval battleship. From within the keep the viewer is rewarded with an almost complete internal cross-section of the tower and enough of the south wall remains to establish its footprint.

In plan the footprint of the tower measured c.6.5m square; this was a similar size to the diagonally opposite south west tower but larger than the central tower on the south side of the keep. Unlike the central and SW towers the walls are all the same thickness and the curtain wall's robust 1.2 m thickness is continued around the tower wall circuit. The
tower remains were up to 10.9 m high but it is thought that about 0.75 m has been lost from the top of the parapet. The east and west walls have sheared down the mid-line of the windows so that the position of these features is preserved in section. There is no indication of stairs between the floors although it is likely that these would have been located on the SW corner within the interior of the keep, as with Towers 4 and 5, but this SW corner no longer exists.

## Ground Floor.

The base of the tower was filled with rubble (64), which was not disturbed during the project. This was presumably debris from the collapse of the tower and had banked up against the north wall to just above the sill of the ground floor window (W22) obscuring the floor and bottom of half of the ground floor room.

Both of the visible internal corners at the base of the tower are built in brick and raised on arched 'squinches' (65). The squinches were narrow two-centred arches that span the angle across the corner tying the two adjacent walls together. The points of the arches rose to the mid-height of the room, above which the corners are formed by a column of irregular brickwork. The bricks were generally laid as stretchers with headers defining the edge of the column. The brick coursing was irregular (like a rubble wall) and the corners did not appear to have been laid out as a first stage of work to establish the angles and verticals (as would be expected with a brick building) but were raised together with the walls. Brick-built strainer arches (66), which sprang from the corners and spanned the full width of the room occurred in both the east-west and north-south walls. The arches were a surface feature only and could not be seen within the north wall core where it was exposed within a deep crack. The haunches of the strainer arch rose to intersect with the ceiling line but did not actually come together. The arches were made of a single course of stretchers and were flat in the wall rather than a part of a projecting ceiling vault. A narrow lip (67), where the joists were lodged, and the intact flat wall faces to first floor level indicate that the first floor was timber rather than stone. Putlock holes pierced the wall above the strainer arches.

The position of the windows was recorded in each of the three available walls and all had the same sill level. The windows (W22 and 24) which looked out over the moat tapered to a narrow slit 0.1 m wide on the external face and, unlike the upper floor windows the reveals were aligned at right-angles to the wall face. The west window
(W23) was larger and the reveal was parallel-sided so that the width of the opening on the internal and external face was equal. The north window conformed to the string of windows that pierce the north curtain wall; all of the widow reveals were rendered with medieval lime.

## First floor

The ceiling height of the first floor room was 3.5 m (11' 6 ") greater than that of the ground floor one (c.3m). At ceiling height across the north-east corner was a shallow arched corbel or vault (69) made up of two courses of bricks laid on edge. Each brick course had a slightly different radius and the spring points of the lower were wider apart. Above the vault the face of the wall was scarred (70) where a block of masonry had come away. In the other towers the vaults were used to underpin architectural features notably stairs - the other alternative would be a fireplace, but there was no indication of any structure in the room above.

The vault spanned the interval between the putlocks in the north and east walls but was not built off them. The putlock on the north wall was a double (79), and the hole on the left passed through the wall at right angles to the face whereas the one on the right was angled towards the tower corner. Temporary timbers set into these holes would have cantilevered out over the moat and supported the exterior scaffold boards around the corner of the tower. This is quite a common building device but interestingly this phenomenon was not observed elsewhere in the castle.

The first floor windows aligned with the ones in the ground floor and were recorded in all three walls (W25, 26 and 27). The window reveals on the north and east sides of the tower on both the first and second floors were steeply angled so as to train the view over the NE approach to the keep. On the interior face these windows opened out to a single reveal measuring 1.47 m wide by 1.4 m high, but at mid-depth were divided and tapered to two narrow slits ( 0.8 m by 0.1 m . and 0.67 m apart). The angling of the reveals meant that the windows were off-centre on their respective exterior elevations. The heads of the windows on the inside were arched with the brick and tile vousoirs running square to the tapering line of the west side of the reveal rather than the tower wall face. From the point where the openings divided the arch ceased and the opening was bridged by timber lintels. Sockets to locate the timbers were recorded above the windows on the north wall which were designed to take three $0.1 \mathrm{~m} \times 0.6 \mathrm{~m}$ planks laid
side by side and set 0.15 m or more into the wall. The sockets were floored with thin plain roof tiles $(0.01 \mathrm{~m} \times 0.13 \mathrm{~m})$ which were glazed green or red; this was thought to be an applied glaze rather that vitrification of the tile surface by overfiring. The remains of an extant lintel were recorded in place over the first floor east window and consisted of three square section posts $\left(0.1 \mathrm{~m}^{2}\right)$ laid side by side. The timbers seemed stouter than the empty sockets in the north window but there was no indication that the timbers were not original or inserted later (PI. 20 Appendix 2). The remains of a lime render were observed on the inside of the reveals which continued across the sills of the windows. The pale coarse grit mix was similar to the mortar that bonded the main fabric of the wall and it was thought to be original. The first floor north window has lost the masonry that divided the opening and only the north reveal of the second floor east window remained, but the first floor east and second floor north windows preserved enough of their details to determine the window design.

The west window, which looked into the keep, was much larger at 1.4 m tall than those that pierce the external walls. The jamb at the exterior of the window projects slightly to form a rebate against which a window or shutter could be fixed. Remains of a coarse lime render were recorded on the interior wall surface just below the level of the window in the north-west corner.

## Second floor

The second (top most) floor of the tower was part of the wall-walk circuit; it was shorter than the rooms below it with a ceiling height of approximately 3 m ( $9^{\prime} 10^{\prime \prime}$ ). The windows were arranged as the floor below with the exception of a door (D11) in the west wall over that window, which provided access out onto the north curtain wall. The door was recessed within an arch-headed alcove set in the external wall face and the remains of the iron pegs, on which the door hinges once hung, were set it limestone blocks on the north jamb. The hinges were set 1.71m apart and the door swung out to open flat against the inside of the curtain wall's parapet and shut against a rebated stop built into doorway surround.

## Parapet

The roofline of the tower was indentified by a horizontal scar (72) and above this the wall thickness narrowed to become the parapet (73). The parapet wall was 0.38 m thick, half that of the main wall below and was truncated at only 0.55 m above the roofline. A small opening which pierced the parapet was recorded close to the NE corner. It was a
ragged hole without structure but the bottom of the hole had a sloping base suggesting a possible drainage chute.

### 3.2.6. North West tower (Tower 1)

The only surviving part of the NW tower was a fragment of the east wall. The tower was constructed after the rest of the keep and the surviving remains were not keyed into the fabric of the north curtain wall but simply butted up against it (PI. 21, Appendix 2). Uniquely the interior of the tower was built almost entirely of brick although flint was interspersed into the exterior face. The use of brick was more than skin-deep and its presence continued in the depth of window reveals, across the end of the wall and lining the putlock holes which suggests that the core may also have been brick. The bricks were made of a pink-purple firing clay and were very similar to those that formed the quoins and openings in the rest of the keep. The brick sizes tended toward the large end, but still within the range of sizes recorded elsewhere. This similarity suggests that although the west tower was demonstrably the latest element it was still close in date to the rest and is likely to have used materials derived from the same source, although there was no definite indication that bricks had been re-used or salvaged from the previous incarnation of the tower. However this remains a possibility. The increasing use of flint from the mid point of the second floor room, particularly on the exterior face, suggests that the supply of bricks may have been running short and the top of the tower and the parapet were constructed entirely from flint.

The NW tower would have completed the circuit of the curtain wall enclosing the keep but any attempts to understand this corner were frustrated. The west wall was truncated before its projected junction with the tower and the presence of a large cedar tree stump at the end of the west wall prevented the geophysics team from gathering data. The interval between the ends of the north and west curtain walls was 8.5 m suggesting that the tower had a greater footprint that the standing ones. The tower almost certainly contained a gateway, which controlled entry into the keep, and a causeway across the moat is shown at this point on the early maps (Fig. 5).

The north end of the east wall turned through a c. $45^{\circ}$ angle indicating that the tower was polygonal in plan with each face c .2 m wide. The main gate to the north bailey exhibited similar angled exterior corners to the stair turrets that flank the gateway and it is likely that the keep's entrance followed a similar design.

The tower rose over three floors to 9.5 m ; it was estimated that about 0.5 m had been lost from the top of the parapet wall (78) but the standing remnant was close to its full height. The curved smooth face of the well of a spiral stair (74) was preserved in the angle between the north curtain wall and the tower; the end of the north wall having been re-profiled to accommodate this feature. The stair itself had gone and had been replaced by a large brick-built support (76) constructed in the mid- 20th century which underpins the tower's remains. The jamb and arched head of a door at the entrance to the bottom of the stair existed just to the north of the support and above it was the jamb of the entrance to the first floor room at the head of the stairs (77). The stair would have wound clockwise around a centre post located approximately in the middle of the support. The support obscured any details of the stairs and whether the well contained a stone or wooden staircase is unknown. The evidence suggests that the stairs were a single flight, which wound around $c .180^{\circ}$ similar to those in the SW tower rather than a continuous spiral, but there was no indication of how access was gained to the top floor. At the west end of the north curtain wall brick quoins suggest a second possible opening but this would only have given access to the back of the stair and therefore it is unlikely to have been a door.

Sockets for a row of joists indicated the level of the second floor and 0.31 m below this the larger socket for a bridging beam that would have tied the opposing walls together. The sockets for the joist were square sectioned $0.14 \mathrm{~m} \times 0.14 \mathrm{~m}$ whilst the bridging beam was $0.27 \mathrm{~m} \times 0.32 \mathrm{~m}$ and set 0.82 m into the wall.

Stone plate tracery probably salvaged from an earlier building had been inserted into the first and ground floor windows and the simple trefoil heads indicated that these date from no earlier than the start of the 14th century. The windows are small and similar to those seen in the stair turrets of churches. The stones were well matched and seem to have been kept together and brought to the site complete. The inside edge was rebated but there is no indication of attachments for glazing. The windows were smaller than the reveals and the area between the top of the tracery and the top of the reveals had been infilled with brick.

The window on the ground floor was built across the angle in the wall face. It tapered to a narrow external slit consistent with the other ground floor openings; its aspect was out across the front of the castle looking along the face of the north curtain wall.

The parapet (78) was constructed of flint and rises above the level of the roof. The wall thickness of the parapet is less than the main wall creating the ledge on which the roof structure would have rested. A narrow horizontal channel was built into the wall where lead flashing was fixed into the parapet, sandwiched between two rows of bricks. The lead was fixed 0.4 m above the suggested eave height to prevent the ingress of water and to form a gutter inside the parapet; this discharged through a hole at the base of the parapet midway along the elevation. The hole was neatly created with brick sill jambs and lintels and measured 0.30 m square.

### 3.2.7. East curtain wall and SE Tower (Tower 3)

These existed only as 1 m high stubs of flint and mortar masonry and no detailed description is made here. Wall stubs indicated that Tower 3 was $c .7 .5 \mathrm{~m}$ square although its footprint did not survive.

### 3.2.8. North Bailey, South Curtain Wall

See Pls. 24-26, Appendix 2.
A 32 m long fragment of the south side of the curtain wall which enclosed the main court survives to the NW of the keep and is separated from it by the moat which divided the north and south courts. The extant section of wall ran from the west corner of the base court and includes the remains of the west corner tower and a vestige of the west return wall. The layout of the wall was similar to the north wall of the keep with a run of six narrow slit windows, which open out to large internal reveals at ground floor level overlooking the moat. The openings are the same size and interval as those within the keep and have the same brick edging outlining the reveals. The wall at the east end was truncated at a height of 3 m but alongside the tower the remains stood to 4.5 m high where the wall was the same thickness for the entire surviving height. This level is still below that of the wall-walk (which was at 5.20 m ) and parapet recorded within the keep. The existing top had been capped off with flint and metric comparisons with the keep walls suggests that about 3 m of the wall's total height had been lost.

The corner tower was integral with the south and west curtain wall and was identified by the vestigial stub where the tower's east wall connected to form the tower's SE corner. At this point the tower remains stood to their tallest at $c .5 .8 \mathrm{~m}$.

The west corner of the tower was particularly dilapidated and the exterior angle of the corner and face of the west wall and did not show above ground. Their existence however was demonstrated by excavation, where three to four courses remained below ground. This defined precisely the western limit of the base court, the true line of the west curtain wall and provided the line from which the builders could accurately consolidate this part of the monument. The wall face was built off a clay footing similar to that seen beneath Tower 4 but the brick quoin that characterised the exterior corners of the other towers was not present although this could be due to loss as it survived only to two flints high.

The interior of the west corner includes a brick-built squinch constructed across the angle of the corner stitching the south and west walls together. This occurred at c. 1 m from the ground and provided a stylistic link to the fabric of the towers in the inner court. Excavation from a small sondage against the corner removed 0.6 m of rubble to the base of the bonded fabric but no evidence of a floor surface remained within the tower.

A long farm outbuilding was once attached to the north face of the wall and is shown on the tithe map of 1846 (Fig. 5); this seems to have been truncated or replaced by a shorter building by the time of the first edition Ordnance Survey (Fig. 6) and which in turn was knocked down when the site was re-surveyed for the 1904 edition. Evidence from where these building were attached could be seen on the north face of the curtain wall, including the substantial stub of the west gable of the long building and a horizontal scar of the former roof line. The south end of the wall had been truncated when the access across the moat to the current house was created in 1880's and the medieval ground floor window had also been blocked or modified as part of the conversion to a farm building. This remodelling of the wall was most apparent on the south face where much of the medieval fabric had been replaced with late brick which obscured the exterior openings of the original medieval windows.

Survival of medieval facework on the south side was vestigial and restricted to a short length of the triple brick plinth near the wall base at the western end; a $2 m$ length about 1 metre from its extreme east end.

## 7. Discussion

Mettingham Castle dates from the 14th century, the final period of castle building in the medieval period, and was constructed with royal permission granted to Sir John de Norwich as a reward for military service. The castle at Wingfield, which is the only comparable castle in Suffolk, was constructed at about the same time by Edward de Pole under similar royal patronage. Neither man belonged to the old aristocracy nor had extensive landed estates and the castles were visual statements of their social advancement, rather than defensive strongholds. The architect of Mettingham provided Sir John with a building that outwardly displays all of the features of a fortress down to the small details such as the angled arrow slits and the way the tower doors are protected. But compromises to the military effectiveness of the castle at Mettingham are readily apparent in the design, particularly the positioning of the keep isolated outside of the main curtain wall, the open east side of the base court and the large west windows. The castle was put to the test, and succumbed, when during the Peasant's Revolt, rebels gained access to the castle and ransacked it in 1381.

The 1563 inventory describes the main court as having a wall on three sides and by implication the east side of the base court was open and the area immediately to the north of the keep enclosed by a moat only. This appears to be borne out by the survey evidence which shows no attachment for the base court's curtain wall on the NE corner of the keep. The wall's absence is also supported by the evidence of the angled first floor window in the north wall of the NE tower which, whist designed to afford a good view across the NE approaches to the castle, would have been too low to see over a curtain wall which, had it existed, would have been immediately outside it.

The keep was the focus of the medieval castle providing the residence for the founder's family and the administrative centre of the manor. At Mettingham the presence of a large aisled hall, the mansion house as described in the inventory of 1563 , within the area of the north court is confusing and its relationship with the old keep (in the primacy of buildings within the castle) is unknown. The mansion house was in existence prior to the dissolution and bore the arms of the master of the college, but its aisled construction could imply an early, c.14th century date. The record of the purchase of building stone within the compotus rolls in the 15th century indicates that building work went on during
the college's tenure but the inventory description does not imply that this building was ecclesiastical. The 'old (mansion) house' served as a farmhouse which the historian Alfred Suckling saw being demolished to construct the new mansion shown on the tithe map (Fig. 5). This exposed workmanship that Suckling attributed to the de Norwich family; believing it to be the main residence of the family, which Dame Margaret is said to have had built within this western side of the site. Despite it being referred to as the site of the college by antiquarians it is unlikely that the college occupied the moated keep particularly during its latter years as it was in utter ruins within twenty years of the college being dissolved; all reference to its fabric pertain to the north court.

### 7.1. The possible layout of the keep

Figures 15-17 show reconstruction drawings of alternative interpretations of how the castle may have looked. The keep was probably entered through a gatehouse located in the NE corner across the break in the moat shown on the earliest map of the site. Sucking reports that the gate tower (T1) did not fall down until c. 1840 and describes it as the most beautiful of the towers; the remaining fragment is clearly different from the others and its brick walls and stone tracery windows must have appeared striking. The remaining fragment of the tower retains an angled exterior corner of a turret that projects forward of the line of the walls and both these features are reminiscent of the narrow turrets that frame the main gate to the base court and this must provide the best parallel for the missing tower. Artists and illustrators had visited the site before the gatehouse of the keep had collapsed. The subject of most of their work is a gatehouse and all of the engravings look similar to the extant gate to the main base court. Some of the early illustrations however show a gatehouse less complete than the one that stands today (Image 11 Appendix 4) and invite the thought that some of the engravings depict the now lost keep gatehouse. The reconstruction plan of the north-west tower (Fig. 8, T1) has been created by transposing the OS plan of the main gatehouse (Fig. 2, gatehouse at north of plan) into the gap left by the absent tower; into which it fits surprisingly well. It is also interesting to note the angled west end of the geophysical anomaly alongside the gatehouse (Fig. 5 Appendix 2) paralleled the inside shape of the putative gate.


Figure 15. Hypothesised reconstructions of the castle keep showing (top) the extent of the Hall beneath a triple-pitch roof and reconstructed gatehouse styled on the existing main gate. The drawing below shows the putative south entrance and the features recorded on the $S$ mid tower the interval between the towers would have been bridged by a timber structure at second floor level.


Figure 16. Hypothesised reconstructions of the hall frame. Preferred triple-ridged roof alternative whereby the manor house is formed by with three conjoined ranges of equal length.


Figure 17. Hypothesised reconstructions of the timber-framed building, alternative option.
Alternative reconstructions of the hall frame. Showing an E-W aligned range against the south towers with a cross wing attached to the west end. This is by suggested by the widely spaces upright posts in bay A ,, but not supported by the ground plan suggested by the geophysics survey.

A break in the wall on the south side of the wall strongly suggests the position of a second entrance on the south side of the castle between Towers 3 and 4. The evidence on the east side of Tower 4 indicates that the entrance was the full height of the curtain wall and the presence of an east facing door and possible timber settings imply a timber gallery bridging across its top or (?)brattice around the door which over-sailed the entrance and was hung from the wall. The loss of most of Tower 3 , and the consequent absence of the east side of the entrance means that the width is unknown but indications are that it provided a substantial entry into the castle. Evidence of small single postern gates or service doors were recorded in the north and west curtain walls but this putative south gate is of a greater magnitude and not comparable to these. Unfortunately there is no upstanding evidence which suggests that the moat was bridged at the site of the southern entrance. Scarring at the base of the central tower was seen as evidence of a possible dwarf wall at the base of the entrance which may have provided an abutment for a timber bridge, such as at the gatehouse at South Elmham Hall, but evidence of the dwarf wall or bridge abutment on the opposite bank was not found in the geophysical survey (Gater 2010). The current width of the moat at this point was more than 10 m wide; too great for a single span structure.

The manor house or hall itself occupied almost all of the west side of the inner court and included SW and central towers and the area between them within its footprint. The width of the hall was probably the determining factor in the asymmetrical position of the central tower; the hall is unlikely to have extended beyond the central tower as it would have been restricted by the line of putative south gate. Whilst there is clear evidence that the building was attached to the south and west curtain walls there is no indication that it was fixed to the north wall of the keep and it is believed that the end of the building was just short of this wall. The resistivity survey identified a linear anomaly running parallel to the north wall and this is probably the north end of the manor house which suggests it covered an area that measured c.17.5m by 13.m.

The timber-framing of the hall would have been a self-supporting structure and the survey provided few details about the hall beyond what can be deduced from the evidence left where the frame came into contact with the stone walls. The frame would have been constructed in a series of bays with the principal timbers of the cross-frame (which ties the building across its width) located in the channels set into the west wall. The bays run north-south, the west curtain wall forming the 'long side' of the building.

This is suggested by the spacing of the posts at the north end of the west wall which are too narrow to be the width of a cross-truss, were the frame to be orientated the other way around. Three bays were evident but the frame was likely to have been composed of four, with the towers at the south end (T5 and T4) and also possibly the gatehouse (T1), where the quoin of a possible door jamb in the west curtain wall may indicate that the building extended this far making it effectively a five or six bay structure.

To attain the full width of the building the frame would have been made up of three sets of equal width frame-trusses aligned with each of the towers, 4 and 5 and one with the space in between; in effect a row of three conjoined buildings. Shallow square depressions at first floor and eaves height in the wall face of T5 at the NE corner were believed to be where the tower rested against the ends of the mid-rail and wall plate timbers (and also demonstrates that the towers were built after the frame was in place). This pattern of framing would imply that the roof ridges ran N-S and the building was covered with a triple-ridged roof. The roof was hipped as on both the west and south sides where the roof attaches to the masonry walls the roof line was approximately horizontal and shows no sign of a gable. The roof over the chambers between the towers was a pent roof which sloped towards the south curtain wall.

A possible alternative construction design of the timber-framed building is that it consisted of an E-W range aligned against the towers with $\mathrm{N}-\mathrm{S}$ cross wings at its east and west ends. Although the pattern of framing suggests that this is possible, this option is not supported by the footprint suggested by the geophysics results. Figure 16 shows this alternative reconstruction.

The hall was divided vertically into two floors, the position of the doors suggest that the basic layout of the two levels was identical but the low ceiling height of the ground floor suggests that this may have been for service rooms for the main hall and private chambers on the floor above. By the 14th centurythe Medieval Hall was fully evolved and was laid out to a specific tripartite plan with private parlours and service rooms at the opposing (high and low) ends of a large central hall. The partition walls between the three elements of such buildings would occur on the lines of the trusses with the halls usually made up of more than one bay. The remains at Mettingham probably represent two thirds of this typical building plan with the main hall running the full surviving length of the west wall. The towers are probably at the low end of the hall and part of the
service rooms, as the abundant doors suggest that part of their function was to provide a link between various elements of the hall and the keep beyond. The upper rooms of the towers were part of the wall-walk circuit and certainly the stairs in the SW tower room between the first floor and the upper room would preclude this from being a private space - and the position of a garderobe in the mid-tower would lend a level of pragmatism. In this interpretation the 'high end' parlours would be at the north end of hall but the simple three part layout of the Medieval Hall is complicated at Mettingham by the potential for the building to be also subdivided across its width. The existence of adjacent doors in the north and west walls of the central tower would suggest it was divided up and that these served separated spaces. Understanding of the layout is limited by not having evidence of a fireplace. A chimney is mentioned in the inventory of 1563. This was described as free-standing which would place it away from the walls and it was admired for its stone work which suggests that it was an object of status. There was no indication of a chimney visible above ground and the geophysical results were inconclusive. A rectangular shaped response is shown in the resistivity survey on the east edge of the hall footprint and this aligned with and is the same width as the central narrow bay (Fig. 9, B) on the opposing wall. An internal chimney would occupy a separate bay so it is tempting to conclude that the missing chimney is located here but the evidence is inconclusive; unfortunately the inventory account does not report whether there was a fireplace at first floor level.

The geophysical survey identified a lean-to range against the east curtain wall opposing the hall across a seemingly small open court yard (Gater, 2010). The upstanding remains here are very reduced and there is no evidence to indicate whether this was single or full height range; the geophysical response suggests that it aligned with the interior walls of the two corner towers and therefore had an internal span of over 3.5 m .

Within the base court two large areas of disturbance (Appendix 1, Fig. 5, L and M) were identified by geophysics either side of the standing fragment of a medieval building. The anomaly ' M ' to the south followed closely the footprint of the house built by the Rev. Safford which was described as having extensive cellars in the sale particulars of 1876 Appendix 4). The date of the cellars are unknown and may have pre-existed from the previous building which was knocked down by Safford to build his mansion (indeed they may have been why he chose to build in the same spot), and part of which building was retained in the new above ground structure. The anomaly to the north of the ruin was
outside the footprint of the 19th century house but aligns precisely with the one to the south inviting the possibility that these were part of a single entity, 6.5 m wide by over 25 m long. The north-south alignment would exclude it being the college chapel, and Edward Martin in his discussion of the castle suggests that it may be the site of the mysteriously named 'Cynnehall'; a translation of which could be King's hall or royal lodgings. Whatever its interpretation the geophysics results suggests that there is a high potential for extensive remains.

## 8. Conclusions

There is probably only one other comparable medieval defended site in the county which is the castle at Wingfield and locally and regionally this monument is of extremely high significance. Working alongside the conservation project team has provided the opportunity to examine hitherto inaccessible parts of the ruin and secure a record of the castle which provides a basis to assess its potential and define the requirements for further study. The evidence collected has provided some scope for interpretation but it is clear that these hypotheses need to be tested which would only be possible through below ground investigations. The absence of an overburden sealing and protecting the medieval ground level within the keep, and the long standing efforts to clear and maintain the site as a garden has inevitably eroded some of the evidence. However the results of the geophysical survey has highlighted that the potential to enhance our understanding of the site still survives within the ground.

## 9. Archive deposition

The archive is to be stored in the SCCAS archive stores at Bury St Edmunds, Suffolk.
The digital archive on the SCCAS server: R:IEnvironmental
Protection\Conservation\Archaeology\Archive\Mettingham\MET 003.

Copies of the report will be lodged with the Suffolk County Council Historic Environment Record and a digital copy uploaded onto Archaeology Data Service database (http://ads.ahds.ac.uk/catalogue/library/greylit)

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## 11. Bibliography

Carr R., 2009, Archaeological Assessment, Mettingham Castle, Upstanding College remains and parts of South Curtain

Gater J,.2010, . Geophysical survey report, 2010/50. Mettingham Castle Suffolk. MTT003

Martin, E., 1990, Mettingham Castle:An interpretation of a Survey of 1562 in Proceedings of Suffolk Institute of Archaeology and History, Vol. XXXVII

Suckling, A., 1846, The History and Antiquities of the County of Suffolk, 1. London
V.C.H 1907, Victoria History of the Counties of England, Suffolk. London

## Internet reference

From: 'Colleges: Mettingham', A History of the County of Suffolk: Volume 2 (1975), pp. 144-145. URL: http://www.british-history.ac.uk/report.aspx?compid=37944 Date accessed: 11 August 2011.

## Appendix 1. Full list of photographic record (see accompanying USB stick)

1. Main gate to the base court from the N.JPG
2. North wall of the base court from the N.JPG
3. North wall of the base court NE corner fom the N.JPG
4. Main gate entrance from the N.JPG
5. Main gate holes fro drawbridge above entrance.JPG
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## Appendix 2. Selected plates



Plate 1. Main gate to the base court from the south


Plate 2. NW tower (Tower 1) gate to the keep east wall from the west


Plate 3. West curtain wall from the east (inside the castle) scales $2 m$


Plate 4. North side of the mid and SW corner towers (Towers 4 and 5) with the remains of the south curtain wall between them. The arched head of the ground floor door has collapsed giving the appearance of one elongated opening. Stair turrets project from the top of the inside corner on both towers. $1 \times 4 \mathrm{~m}$ scale


Plate 5. NE corner tower (Tower 2) interior viewed from the south showing east side of the tower detached from the west and anchored by a large chain, with rubble banked up at the base.


Plate 6. SW corner tower (T5). Interior of the north wall viewed from the south, showing spiral stair well and projecting stair turret above .


Plate 8. Interior of mid tower (T4) showing stepped ledge at first floor level. The scale is within the remains of enclosed shaft in the SE corner. $1 \times 1.5 \mathrm{~m}$ scale


Plate 7. Exterior of the mid tower (T4) and remains of south curtain wall viewed from the south.


Plate 9. Mid tower (T4) Spiral stair to the roof underpinned by an arched vault across the NW corner of the tower. $1 \times 1 \mathrm{~m}$ scale


Plate 10. Foundation below NW corner of Mid-tower(T4) showing green clay packed trench cutting buried medieval topsoil. The brick quoin to the right is the edge of the west door opening; the lowest brick indicates ground level. Note bonded flint footing extends across the opening.


Plate 11. Spiral stairs in the SW corner tower (T5). The stone centre post with the stub of winders are reused from a previous building.


Plate 12. Rebated section in the NE corner of the NW corner tower (T5) possible setting for vertical wall post. 1 x 1 m scale


Plate 13. Remains of the stair turret above the roof-line of the SW corner tower (T5) with socketed timber setting built into the thickness of the wall (to the right of the 30 mm scale). The shape suggests that it supported a vertical post but there is also a putlog for a horizontal timber to exit through the east (right) face. $1 \times 1 \mathrm{~m}$ scale, $1 \times 0.3 \mathrm{~m}$ scale


Plate 14. Re-used moulded stone recovered from the west wall windows. The stone was decorated on four faces with a raised Romanesque-style fret ornament. 2 x 0.3 m scale


Plate 15. Brick quoin at the north end of the west curtain wall, the jamb of a now missing door (D1), with raised brick stop to the left of the scale. $1 \times 1 \mathrm{~m}$ scale


Plate 16. Lead flashing at the base of the parapet of the west curtain wall (15). $1 \times 0.3 \mathrm{~m}$ scale


Plate 17. The wall-walk across the top of the north curtain wall. Slots to retain the joist of a boarded deck were regularly spaced along its length and can be seen between the scales. $2 \times 1 \mathrm{~m}$ scale


Plate 18. North curtain wall-walk seen from the gate tower (T1). The parapet wall has been truncated and the crenulations lost from its top.


Plate 19. The raised section of parapet (62) at the east end of the north curtain wall shielding the entrance (D11) to the second floor of the NW corner tower. The top of the only surviving merlin of the crenulations that once which topped the parapet can just be seen between the scaffold floor boards to the left of the picture. $2 \times 1 \mathrm{~m}$ scale


Plate 20. Angled double slit window in the east wall of the NE tower (first floor), the window reveal angled to view the NE approaches to the keep.


Plate 21. Butted joint between the first phase flint work of the north curtain wall and the later brick-built NW corner gate tower. $1 \times 1 \mathrm{~m}$ scale


Plate 22. Stepped east face of the mid tower (T4), showing the south half of the wall face recessed back from the plane of the north. The recessed section enables a door to be opened flush to the wall.


Plate 23. Horizontal scar across the north face of the mid-tower (T4) where the roof of the timber-framed hall was attached to the tower at its eaves. The section of the wall between the first floor door and second floor window, to the left of the scale has been removed prior to repairs. $2 \times 1 \mathrm{~m}$ scale


Plate 24. South curtain wall brick infill on the south face and truncated east end. $1 \times 2 \mathrm{~m}$ scale


Plate 25. Vestigial remains of the corner tower at the west end of the south curtain wall


Plate 26. Brick squinch internal corner of the south curtain wall's west tower

# Appendix 3. Transcript of inventory of 1562 as published in PSIAH, 1903 

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## III. METTINGHAM COLLEGE and CASTLE, 1562.

Com. Suff. The viewe \& Survey of the manors of Mettingham, Ilkensall, \& Shippmedowe in the sayde Countye of Suff. there made by John Hill svante to the righte honorable S : Nycholas Bacon, Kuight, lorde keap of the great Seale the $x x^{\text {th }}$ daye of December in the fyfte yeare of the reigne of our sovaigne ladye Elizabeth by $\mathrm{y}^{\mathrm{e}}$ grace of god of Eugland, ffrannce, and Ireland, Quene defender of yo faythe $\& c$. Anno 1562 as followyth.

That is to saye
The descripc̃on of the mannor.
The saide mannor of Mettingham is scituate in the Northest borders of the Countye of Suff. one mile from Bongaye three miles from Beceles miset 'Townes eighte miles from Leystofte and 12 myles from yarmouthe haven Townes in a Countric plenty full of wood pasture errable lande \& meadowe the nature of the soyle very good and holsome to inhabit upon \& the said mamors extende into the Townes \& pishes of mettingham St. ohns of Ilkensatt St. Margaretts St. Andrewes $S_{t}$. Agnes $S^{t}$. Laurence Bongaye Becles \& Elloughe and the woods growing within the sayde mannors are solde at highe prises because $y^{\text {e }}$ same maye be conveyed to London by walter for there cometh within one myle \& halfe of the Castell yo Ryver ruñynge from Becles wh wyll beare a kele or barge of $x x^{\text {ti }}$ tunne. The woods are pte coppes \& pte tymber. Wel. are for $y^{e}$ moste parte standinge within one myle \& a halfe of $y^{e}$ water verie mete to be conveyed to London or to any other parte of the Realme by Water as well for fyre wood as for tymber and are ptelye replenyshed withe ashe which is very muche desired of coopers to make barrells for $\mathrm{y}^{\mathrm{c}}$ costes of Suff. \& Norff. in herringe tyme.
The gatehouse and other decaied lodgings.
The Scyte of the Castell standyth at the Southest corner of the comen called Mettingham grene inclosed rounde aboute withe a mote and a fayer stone wall conteyninge in height $x_{x x^{\text {ti }}}$ foote and in thickness three foote but decayed in some places. And at thintre into the same standithe a gate house well and stronglye bylded the walles of stone, and above over the gate a fayer Chamber with a chymney nowe decayed by reason of the taking of the leade whiche covered the same where before the leade was taken awaye over the same chamber
was a fayer tower where was a goodlye pspecte to view Townes and villages there aboutes and also moste pte of the demeanes of the same mannor were within the view of the same. And the Gatehouse containeth in length xxiiti foote and in bredthe xvij foote but will decaye out of hande if it be not shortleye covered. And adioyninge on the est syde of the said gate house are dyvs lodgings as well above as benethe for the Porter and lodgings for svants whereof remayneth onlye the walles of stone, the tymber and coveringe whereof are utterly decayed.

## The Courte.

And within the gate house is a fayer large base courte conteyning in length two hundred fytie eighte foote, and in bredth, one hundred fiftie two foote inclosed on thest North and West withe the Stone wall and on $y^{e}$ South withe $y^{e}$ buyldings and lodgings of the mansyon house.

## The Porche and the Chamber above it.

And on the South syde of the Courte ys a fayer Porche ledinge into the hall conteyninge in length xiij foote and in bredth viij foote withe a Chamber over the same wherein is a chymney and a wyndowe openinge into the Courte well glased the walles of stone and covered with leade.

## The hall.

And within the porch is a fayer large hall withe an open roof covered withe tyle conteyninge in length xlvj foote and in breadth xxx foote wherein is a chymney on the north syde, the Walles of stone with one yle on evsy syde covered withe leade conteyninge in length xlvi foote and in breadth vi foote with vii spouts of leade to the same yles and gutters of leade descending from the toppe of the hall into the same spouts the flower of the same hall well paved with bricke.

## The p'lour.

And at; the ende of the hall is a verie fayer plour conteyninge in length $\mathrm{xxv}^{t i}$ foote and in breadth xviij foote withe a large chymney on the est syde and a fayer baye wyndowe of stone glased openinge at the South ende into a lyttle Court which adioyneth to the mote inclose on the southe syde withe a stune walle betwene the Courte \& the mote. And the plour ys verie fayer seled with waynescott carved with knoppes fayer gilte hanginge downe and withe two fayer benches of waynescott and the flower borded with oke. And the armes of the last master of Colledge rounde about the same parlour fayer gilte.

The p'lour chamber.
And over the same parlour is a fayer chamber called the plour chamber conteyning in length $x x v$ foote and in breadth xviii foote with a fayer chimney \& but little decayed the wyndowe whereof is well glased do openeth towards the South into the forsaid Courte.

The vestry \& ye vestrye chamber.
And adioyning to the plour on thest syde ys a Chamber somtyme called the vestrie Chamber withe two Chambers above yt adioynge to the vestrie whiche are uncovered \& sore decayed \& the vestrie adioyninge to the same ys utterly decayed.
The pantrie.
And at the nether ende of the hall on the sonth syde ys the pantry seled coñt in length xviij foote \& in breadth xij foote the walles of stone coved with tyle.
The buttrie.
And at the nether ende of the hall on the northe syde nere the hall dore is the buttrye seled and paved with stone conteyninge in length $x x^{\text {ti }}$ foote and in breadth xviii foote the walles of stone.

## The larder.

And adioyninge to the buttrie at the Weste ende is the larder conteyninge in length xij foote \& in breadth viij foote the walles of stone. The wine celler.

And next unto that on the Weste Ende is the Wyne celler whiche hath byn used for Wyue but in my opynyon not mete for that purpose, because it is verie little it conteyneth in length $x$ foote $\&$ in breadthe viij foote.
The lodginges over the buttrie Pantrie Wyne celler de larder.
And at the hall door is a payer of stayers leading up into an olde decayed Gallery where on the southe syde of the same over the pantrey buttrey larder \& wyne celler is a storye Whearein are vij chambers ptlely decayed. Whereof fower have chimney's and two houses of office, and somtyme weare called the Gestes Chambers and $\begin{gathered}\text { sved to laye }\end{gathered}$ Strangers in And on the southe syde of the same ys a payer of stayers descendinge downe into the little Courte that adioyneth to the mote covered with leade on the toppe conteyninge in length iiij foote di \& in breathe iij foote.
The entrie.
And at the nother ende of the hall is a fayer entrie conteyninge in length liiij foote and in breadthe x foote.
The Kytchyn, boyling house and theire necessarie chambers.
And at the nether ende of the entrie is a Chamber withe a Chimney, whiche belyke s'ved for the Clarke of the Kytchyn, and adioyning to that is the Kitchyn whearein ys one raunge, and the Kytchyn conteyneth in length axx foote, and in breadth xxvi foote and above that ys a little chamber over the boylinge house at the West end, whiche belyke was for lodginges for the cookes. And next the Kytchyn is the boylinge house at the West ende conteyninge in length xxiiij foote and in breadth xij foote wythe a chymney in yt partelye decayed. All whiche sayde houses weare covered withe leade, butt nowe are uncovered wherebye they are greately decayed.

## The bakehouse yard.

And at the West end of the Kytchin is the bakchouse yarde conteyninge in lengthe one hundred and eighte foote and in breadth xxxij foote and on the South was the slaughter house and other offices lately pulled down.

The bakehouse, brewhouse, and maltinge house.
And at the Weste end of that is the bakehonse, brewhouse, and maltinge house, but are decayed becanse theye were covered withe leade, and are now uncovered which is thonly canse of theire decaye and there are neyther leads nor brewinge vessels.
The storehouse.
And on the northe side of the sayd bakehouse-yard ys a house called the store house conteyning in lengthe xxxvj and in breadthe xviij foote, the flower plamehed with oke and in it a chamber to laye apples in the roofe covered withe tyle.

Cynnyhalle withe a buthie and one chamber.
One fayer house adioynge to the store house at the North ende cnoteyninge in length xxij foote aud in breadth xviij foote called Cymnye halle with a chymney and the wyndowes well glased withe a lyttle buttrey and one other chamber adjoyinge at ihe West ende.

The lodyings over Cynny halle and the malte chamb'.
And or the same halle and buttric $y$ 's a storye whearein are two chambers whereof one hathe a chymmey and a house of office. And adjoining to them at $y^{e}$ West ende is a chamber to laye malte in withe a payer of stayers decending into $y^{c}$ malte house.

## The Stable.

The Stable incloseth parte of the northe syde of the Court $\&$ adjoyneth to the gate-house verie large conteyninge in length laxvj foote \& in breadth xxvj foote and it fawted $x$ for above it was a fayer rome to laye in baye but is decayed because the coveringe of leade is taken awaye, \& the raigne cominge in hathe rotted the plankes d there remayneth nothinge, but the walls of stone \& the rafter that beare up the leade are taken awaye \& solde.
The olde castell. (See note, p. 319.)
The olde castell inclosed withe a mote by it selfe, from the mansyon house coni in length fower score foote, and in breadthe fyftie foot, but that $y$ s utterlye decayed and dyvers of the walles fallen downe, but there remaineth yet a fayer chymney of freestone standinge withe two great barres of Iron holdinge up parte of it.
The Inner ortyarde.
Thimer Ortyarde on the South syde of the Colledge inclosed withe the mote conteyneth in it five roods sett withe dyvers trees of fruite
and devided into sondrye partes with quickesett hedges \& quicke hedges of boxe where hathe byn manye fayer Arbors \& many small gardens \& wolde be agayne if it were well kepte \& hathe fower little pondes in it called fridaye pondes. Wherein is small store of fyshe or none but they sved to ßsve fishe taken on $y^{e}$ welse dayes tyll fridaye.

## The greate Orteyarde.

The great Orteyarde at the West end of the Colledge thre parte inclosed withe thutter mote and the Sothende withe a pece of grounde called the Bowlinge Alley with a fayre ponde in the northe ende wythe some fyshe in yt but small store which are breames \& perche. And it ys verie full and thicke sett withe fruite trees of all kinds for pears apples wardens plumes \& such other \& it conteyneth one acre \& thre roods.

## The mote.

Within the mote are roche. breame, trenche, and perche, but small store because it is not well keapte, nor looked to, for the fish are sore distroyed with an otter and with some pickerell, which are in the same and bathe not been stored of a great time but hatbe been taken very much with bow netts but if it weare scowered \& well stored and kept it would be verie good for all kindes of fishe.

## Demesne lands.

The scite of the Castle or College of Mettingham, with the houses, offices, ponds, urchards, gardens, and a small park, called the Kitchen park, contains 28 acres 3 roods. Value of an acre, 5s. p. Ann.

Rental and Cust. of Mon. of St. Edm. Brit. Mus. Add ms. 14850.

Note.-Permission to crenellate or fortify his manor house at Mettingham was granted to John de Norwich, 17 Edward 11 .

Appendix 4. Historical images and references


Image 1. Gate house from without


Image 3. Possibly the south curtain wall


Image 2. Gate house from without


Image 4. Gatehouse from within

Photographs of the castle taken in 1954 (held in Ipswich Record Office ref 13/77/12)


Image 6. Interior of the north curtain wall (1954)


Image 7. Exterior of the main gate 1876 from the sale particular of 1876 (Ipswich Record office HD113/2/65


Image 8. Exterior of the main gate 1817 Engraved by Mathews from a drawing by J P Neal
for The Beauties of England and Wales
(Lowestoft Record office Record office 13/77/2


Image 9. An engraving by W Deeble from a drawing by T Higham for the Excursions through Suffolk published 1817 (Lowestoft Record office 13/77/4)


Image 10. Undated engraving (Ipswich record office HD1678/97/3)


Image 11. Engraved by Mathews from a drawing by J P Neal for The Beauties of England a Wales (Lowestoft Record office Record office 13/77/3

Early images of the gatehouse at Mettingham Castle. The architectural details are similar to the exterior of the main gate but Images 10 and 11 seem to show the right turret as missing (which on the main gate is still extant) and a barn in full view to the west. The tithe map drawn in 1846 (Fig.5) show the barns inside the curtain walls and located to the east of the tower. However there was a barn with this relationship to the keep gatehouse which did not collapse until about 1840 - c. 30 years after these images were created and would have been seen by the artist. Could this be an image of the lost keep gatehouse?


## THE METTINGHAM CASTLE ESTATE,

Comprises a comfortable and commodious FAMILY RESIDENCE, standing in the midst of the ruins of the old Castle and College, with attractive Pleasure Grounds, planted with choice Trees and Shrubs, surrounded by water and luxuriant and well-timbered pastures, and commanding pleasant views, containing on the Ground Floor Entrance Hall, Morning Room, Library opening into Conservatory, Dining Room looking west, 22 feet by 17 feet, Breakfast Room adjoining, 16 ft .8 by 16 ft .2 . Housemaid's Pantry, Butler's ditto, Spacious Kitchen, Back Kitchen, Dairy and Coal House, W.C., and good Cellarage. On the First Floor, approached by good Staircase and Landing, and by two secondary staircases, are Drawing Room over Dining Room, 22 by 17, 8 Bed Rooms and 2 Dressing Rooms and on the Second Floor 2 Attics and Box Room. There are excellent Brick-and-Tiled Stabling, containing 2 Loose Boxes and 3 Stalls, Harness Room and Coach House for 4 Carriages, Cow House and Calves Pen, with Granary over, Tool House, Knife House, Piggeries, Hay and Straw Store, \&ic. Also a Vinery in full bearing and a large and well stocked Orchard and Kitchen Garden, and an unfailing supply of purest Water. At the end of the Lawn are TWO Substantial Brick-built-and-Tiled TENEMENTS for Coachman and Gardener. The Residence is approached by two Carriage drives, one of which is through the Castle Gateway. The Church is about a mile distant.

At a convenient distance from the Residence is the FARM HOUSE, substantially built of brick and tiled, containing Hall, 2 Parlours, Kitchen, Back Kitchen, Store Room, Capital Dairy, Cellar and 5 Bed Rooms ; also

THE AGRICULTURAL BUILDINGS, comprising a Capital Double Barn, with Stone Floor, and Drill Shed, Timber and Pantiled Cow House, with Calves Pen and Root House communicating, 2 Cattle Sheds, Stabling for 8 Horses, Horse Shed, Riding Stable, Implement Shed and Granary, and a newly-erected range of Piggeries. There are also TWO newly-erected COTTAGES on
and occupied with the Farm.


Image 14. Map from the sale particulars of 1876 (Ipswich record office Ref HD113/2/65). Note the line of the carriage drive through the east moat

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- Environmental processing
- Finds analysis and photography
- Graphics design and illustration


## Contact:

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