

First Report on the Excavations at Middleton Stoney Castle, Oxfordshire, 1970-71

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SUMMARY. This is the first report on the excavations of the motte and bailey castle at Middleton Stoney, near Bicester, Oxfordshire (SP 534233) (Fig. 1). During the two seasons' work cuttings were made in an attempt to delimit the chronology and topography of the medieval castle and subsequent manor houses. An open area excavation in what ostensibly appeared to be an eastern bailey revealed the base of a 2nd century Romano-British farmhouse.¹ A cutting across the suspected western defences of the inner bailey uncovered a modest ditch, and stone footings of medieval walls belonging to the castle; the former had been largely back-filled by the end of the 13th century.

INTRODUCTION

THE site of the castle and deserted village at Middleton Stoney was chosen by the University of Oxford, Department for External Studies, for a five year programme of Training and Research excavation.

The earthworks of the medieval castle lie next to the heavily restored All Saint's Church in Middleton Park. Traces of the old village which was finally moved to its present site in the early 19th century, can be identified to the northwest of the church. The documentary evidence for the later history of the site is also informative. Altogether, the site presented an attractive opportunity to examine at leisure and in detail a lesser medieval castle and to investigate aspects of settlement history in the region.

There is no record of there having been any previous excavation on the site, although medieval pottery has been recovered here.²

The excavation was directed by the writer with the help of Mr. Don Benson of the Oxford City and County Museum. The work was carried out by students attending the External Department's Archaeological Summer Schools and a considerable number of part-time volunteers.

ACKNOWLEDGEMENTS

I would like to acknowledge the help given by the owners of the site, the Manor Trustees, who gave permission to excavate and have given considerable practical help during work on the site. I would also like to thank the following for their help with the excavations and preparation of this report:
Mr. F. R. S. Roper, the tenant farmer. Mr. P. Stillgoe, the farm manager. The Oxford City and County Museum, Woodstock, for the loan of equipment and

¹ A full report on the excavation of the 2nd century Romano-British farmstead will appear in *Oxonienzia*. Interim reports are published in *C.B.A. 9 Newsletter*, Nos. 1 (1971) and 2 (1972).

² *Oxonienzia*, XIII (1948), 68-70. Sherds of 13th century pottery were also recovered during grave digging in 1967, information from Mr. D. Benson.

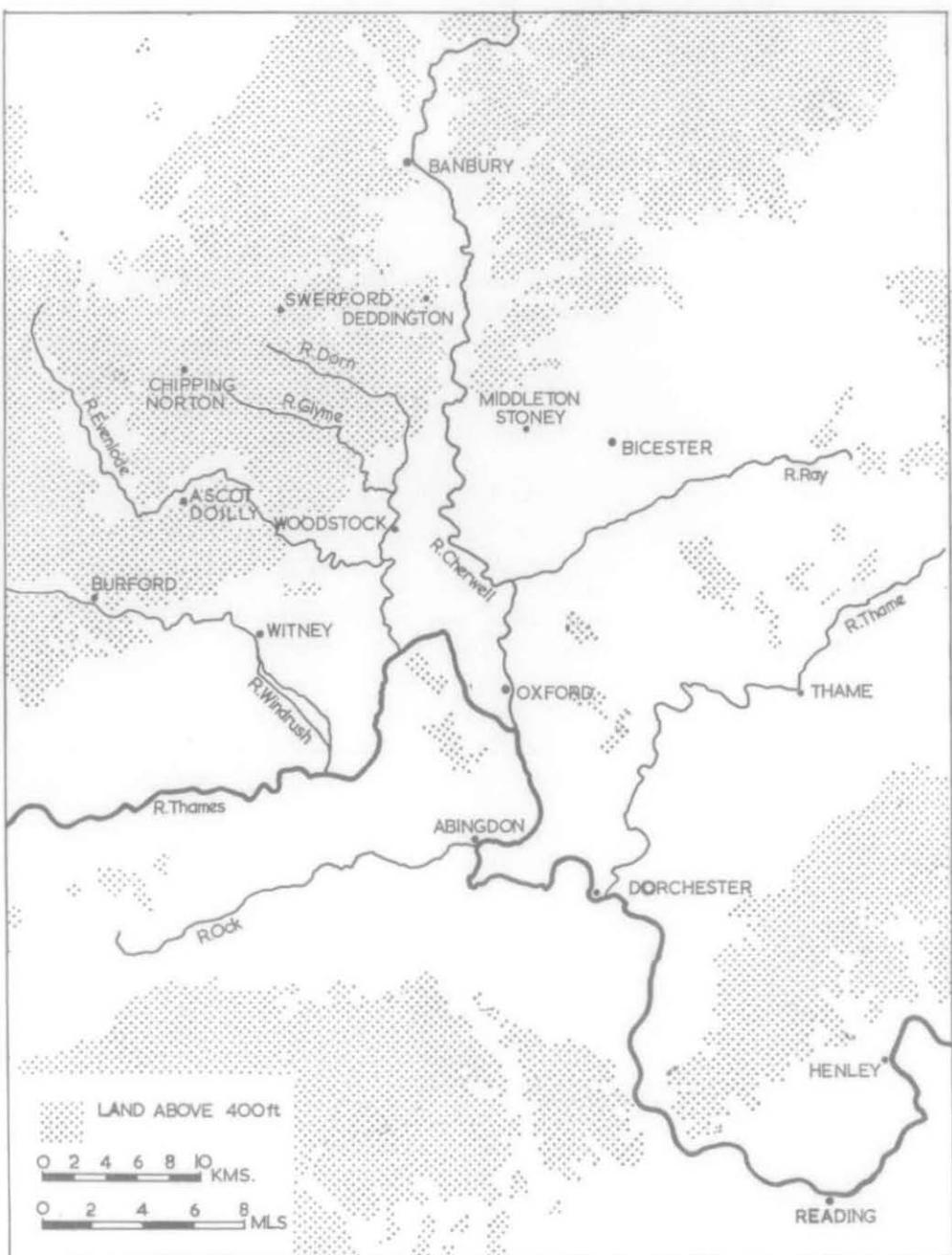


FIG. 1
Middleton Stoney in its regional setting.

other assistance. The Oxford Architectural and Historical Society. The Carnegie Trust for providing a grant towards equipment. Mr. D. A. Hinton for his help with the pottery and tiles. Professor B. Marples and Dr. J. Evans for their specialist reports. Mrs. C. Simpson, Miss L. McLean, Miss G. Porter and Mrs. P. Clarke for their help with the final drawings. Mrs. C. Simpson, Mr. M. Aston, Mr. P. Fasham, Mr. B. Durham and Mrs. S. Lavender who acted as site supervisors. The Department students and all others who have provided the labour force.

THE SITE OF MIDDLETON STONEY

Middleton Stoney is a parish of 1,853 acres, bounded on the west by Aves Ditch, a Romano-British boundary and probable road and on the east by the Gagle Brook, a tributary of the River Ray. The parish lies on a ridge of oolitic limestone to the east of the River Cherwell. This limestone is an outlier of the Cotswolds, cut off from the main escarpment by the Cherwell Valley. Much of Middleton Stoney parish lies on an outcrop of Lower Cornbrash. This is a rubbly and often highly fossiliferous limestone, so-called because it gives rise to 'brashy' or rubbly soils which were reputedly well suited to the growth of corn. The Cornbrash is never more than 5 m. thick, and in the region of Middleton Stoney is found in considerably thinner strata, interspersed with layers of clay. In the region of Middleton Stoney the Cornbrash is less fossiliferous than further south and contains little but *Meleagrinella Echinata*. In the area of the castle there is no overlying drift, indeed, a natural limestone pavement lies within 20 cm. of the ground surface in some parts, covered only by a thin profile of well drained brown Rendzina. There are several dry stone pits within the parish from which material for drystone walling and road making has been obtained in the past.³

The village manor and parish were known simply as Middleton until 1552 when Stoney was added. This element must refer to stoney subsoil, and was presumably added to distinguish the village from other Middletons in the region.⁴

Middleton Stoney lies in an archaeologically interesting but relatively unknown area (FIG. 2). The most important archaeological site locally is that of the small Romano-British town at Alchester, which lies just under 2 km. to the south-west of Bicester and some 6 km. from Middleton Stoney. Traces of earlier occupation are, however, common in the area, notably in the form of ring ditches and other crop markings around Bicester. Recent aerial reconnaissance undertaken in the area by the author suggests that evidence of prehistoric occupation extends westwards across the limestone ridge to the Cherwell Valley. There is a surviving tumulus at the Oxford Lodge entrance to Middleton Park.⁵ A considerable volume of Iron Age and Roman material has been found in and around Alchester. Additionally there is a villa at Fringford Lodge, a Roman

³ There is a more detailed discussion of local geological conditions in the section on the environment, see p. 129-30.

⁴ *Place Names of Oxford*, 1 (1953), 229. See also environmental evidence.

⁵ This lies in the neighbouring parish of Chesterton. O.C.C.M., P.R.N. 5125.

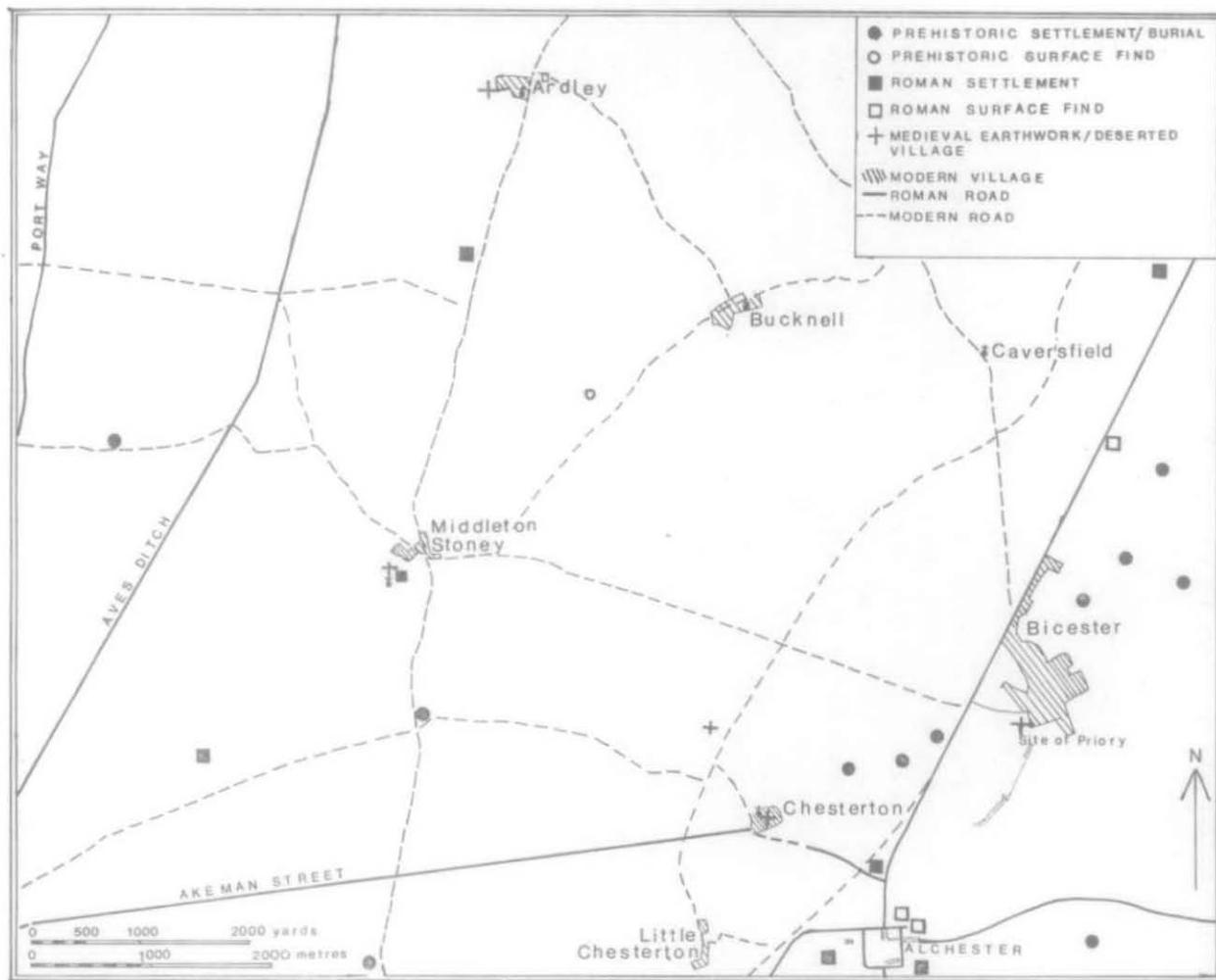


FIG. 2
Distribution of archaeological sites and finds in the region of Middleton Stoney.

cemetery site at Ashgrove Farm, Ardley, and another possible Roman settlement site near Slade Farm, Kirtlington.⁶ Aves Ditch,⁷ a probable Roman road and boundary, forms the western boundary of Middleton Stoney parish and the Roman Akeman Street runs 2 km. to the south of the church.

The area is not particularly rich in surviving medieval earthworks although there is a ringwork castle at the neighbouring village of Ardley.

DOCUMENTARY EVIDENCE⁸

The first surviving documentary reference to the manor of Middleton Stoney dates from 1086, when the Domesday Survey records that *Middleton* was a sizeable manor.

Richard Puignant holds of the King 10 hides in *Middleton*. (There is) land for 16 ploughs. Now in demesne (there are) 3 ploughs and 5 serfs; and 25 villeins with 7 bordars have 13 ploughs. Wood(land) 8 furlongs in length and the same in breadth. In King Edward's time and afterwards it was worth £10; and (it is worth the same) now. Turi held it freely.⁹

Both the extent of arable and the exceptionally large area of woodland in the late 11th century are worth noting in the light of the archaeological evidence found during the recent excavations.

Richard Puignant was a Norman tenant-in-chief who also held Godington and other estates in Wiltshire, Berkshire, Hampshire and Bedfordshire. In the 12th century the estates in Berkshire and Oxfordshire passed to Richard de Camville. Middleton and Godington were, with Avington in Berkshire, the only manors which Richard de Camville held in chief, and the existence of a 12th century motte and bailey castle at Middleton suggests that it may have been the *caput* of his barony. The first authentic reference to the castle here is not until 1215, after the death of Gerard de Camville, but it was almost certainly in existence at the time of his father, Richard.¹⁰ In January 1215 after Gerard's death, King John ordered the Sheriff of Oxford to render to his son, Richard, the castle of Middleton. In May 1216, however, a royal order was issued for the castle's destruction. Nothing is heard subsequently of the castle—it can thus be assumed that the order was carried through, or at least that the castle was immobilized. When Leland visited the site in the 1530s, it was 'over growne with bushys', but he recorded that 'sum peces of the walls of it yet a little apeare'.¹¹ However, the manor house stood on the site of the bailey until the early 18th century when the first Middleton Park House was built on the site

⁶ *V.C.H. 1, 320.* O.C.C.M., P.R.N. 3335, 3336 and 2773, where Roman pottery has been found in a field called 'Blacklands'.

⁷ Alternatively known as Wattle Bank or Ash Bank.

⁸ This account is based largely upon that of Dr. H. M. Colvin contained in *V.C.H. Oxon*, vi, 243-50.

⁹ *V.C.H. Oxon*, i, 417.

¹⁰ Some confusion over this has arisen because Middleton is included in a list of castles and religious houses (Bod. Lib., MS. Bodley 646, f. 30b), which has been ascribed to the 12th century on the ground that Bicester Priory (founded 1182-5) is omitted. But the MS. is of the late 15th century and is worthless as evidence of the existence of a castle in the reign of Henry II.

¹¹ Leland, *Itinerary*, ed. Toulmin Smith, ii.35.

of the present Hall, indeed the old manor house survived as a farmhouse until the village was moved in the early 19th century.

In the early 19th century the earthworks of the castle appear to have been quite formidable. 'Though no part of the walls remain, the foundations are so apparent, that its form and extent may be distinctly traced. From the present aspect of the ruin, it is evident that on the north eastern side an artificial hill of considerable elevation, perpetually supplied with water, boldly thrusts itself forward into the deep fosse that surrounds the whole fortress'.¹²

THE VILLAGE

Until the early 19th century the nucleus of the village lay to the south-west of the Lower Heyford-Bicester road in the vicinity of the church and castle. Intriguing references to an 'Old Churchyard Furlong' some 1,000 metres south-west of the present churchyard suggest that there may have been an earlier church on a different site. It is possible that a Saxon settlement lay on this site and the castle and church were laid out afresh in the mid-12th century.¹³ In 1086 there had been 25 villeins at Middleton and the Hundred Rolls of 1279 name 27 villein tenants, each holding a single virgate. Additionally, there were 4 free tenants holding a total of 9 virgates, and 14 burgage holders, 10 of whom paid 1s. a year, the other four paid 6d. The existence of these 'burgesses', coupled with the grant of a weekly market in 1202, and of a market and annual fair in 1294, 'indicates an attempt on the part of the lords of Middleton to establish there something more than an agricultural community'.¹⁴ Such attempts to stimulate town life were common in Oxfordshire, and indeed throughout the country, in the 13th century. Many successful planted towns in the region demonstrate their origins through their plans. It is possible that the regular arrangement of tenements to the north-east of the castle shown on an 18th century estate map of Middleton Stoney, 1737, dates from the attempted town plantation (FIG. 3). The 'plantation' at Middleton Stoney appears to have been prematurely ended by the mid-14th century, as burgesses are never again mentioned. But their occupants may have been among the freemen formerly rendering £5.15.9½d. a year, whose holdings were reported in a survey of 1349,¹⁵ to have come into the lord's hands owing to the death of the tenants, and whose lands were 'lying untilled and uncultivated and worth nothing'. These tenants appear to have perished in the Black Death, as had 'certain villeins who also died in the same pestilence', and whose lands were similarly lying 'uncultivated and in common'. It was stated that no one would take them up, 'because almost all the men there are dead'. The perquisites of the court and view of frank-pledge, valued at 24s. in 1328, were now worth only 6s. 'on account of the aforesaid pestilence'. Subsequent inquisitions are not accompanied by surveys, so it is not possible to

¹² J. Dunkin, *History of the Hundred of Bullingdon & Ploughley* (1823), 58. There is a strong local tradition that there was a well on top of the motte; the nearest extant well lies some 40 m. to the south of the church.

¹³ The evidence from the pre-castle environment, see p. 136, would certainly support this argument.

¹⁴ Colvin, op. cit., 247.

¹⁵ P.R.O., C135/101/6.

MIDDLETON STONEY

1737

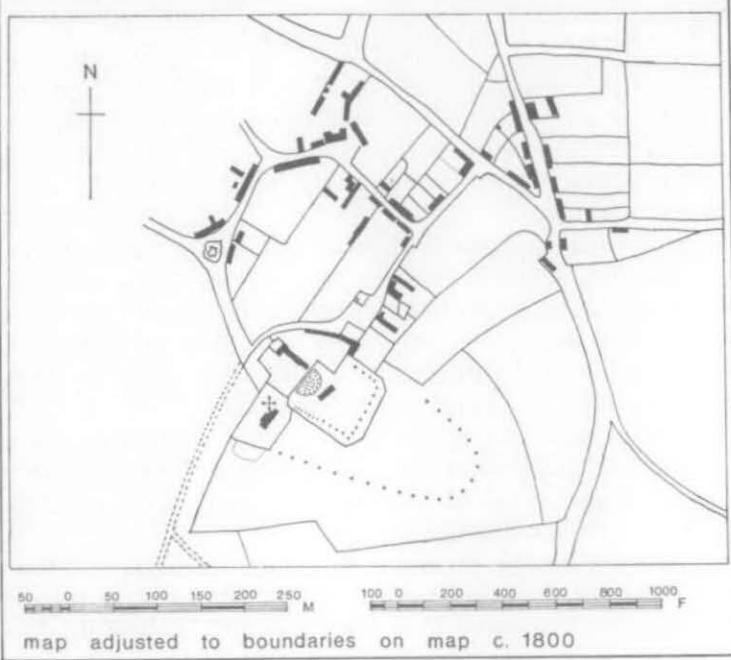


FIG. 3
Middleton Stoney in 1737.

MIDDLETON STONEY 1884

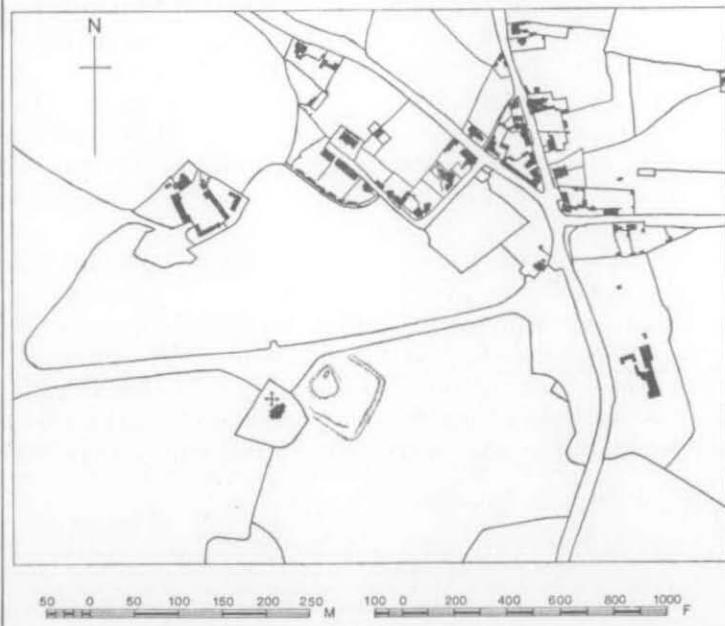


FIG. 4
Middleton Stoney in 1884.

gauge the long term consequences of the Black Death. It is not even certain that the pestilence was responsible for the extinction of the burgage tenements ; but no further reference to them has been found, and with their disappearance Middleton became once more a normal agricultural community engaged in the cultivation of its open fields.

The enclosure of these open fields began in about 1686, when part of the glebe—previously lying in over 50 distinct parcels, was 'taken out of the common field . . . and inclos'd by a general consent of the inhabitants'.¹⁶ Following this there was further enclosure culminating in a general enclosure agreement drawn up by Sir Edmund Denton and the other proprietors in 1709. A map of 1710 shows the parish as it was 'immediately after enclosure'. There were then five principal farms.¹⁷ By 1736, however, when another map was prepared, three of the farms had been bought up by the Duke of Queensbury, and Lord Jersey had begun to make possible the later extension of the park by acquiring lands adjoining it on the south and east.¹⁸

At about the same time as enclosure, Sir Edmund Denton built a new house at the southern end of the medieval deer park, still clearly identifiable as a rectangular enclosure surrounded by a low bank and shallow ditch, lying some 500 metres to the west of the church and old manor house.¹⁹ This house had been built or reconstructed by Nicholas Harman to whom the manor had passed in 1629, when it was described as a 'commodious residence'. However, a plan of 1737 portrays this house as having a cruck gable on the eastern wing—thus it almost certainly incorporated elements of an earlier medieval building (PL. XIII).

The creation of the modern park, which occupies nearly half the parish, and the final abandonment of the old village was the work of the 5th Earl of Jersey in the early 19th century. But the park had been extended to the very edge of the village by the end of the 18th century ; in 1814 there was an agreement by which the rector's glebe of 72 acres was added to the park. The eastward extension of the park was completed in 1824–5, when the former manor house and the adjoining cottages were demolished leaving the church and castle in isolation half way between the Hall and the park gates. New cottages were built on the edge of the extended park on the diverted road. These cottages were reputedly constructed under Lady Jersey's personal direction, each with a rustic porch and a small flower garden, conveying to one contemporary observer 'an idea of comfort and respectability seldom enjoyed by the lower classes'.²⁰

Lady Jersey's concern to rebuild the village does not appear to have been purely altruistic. It was recorded in 1825 and again in 1826 that the new road from the village to the parish church was 'generally blocked up by the express order of Lady Jersey to the annoyance of the Parishioners in general—and the

¹⁶ Bod. Lib., Oxf. Archd. Oxon. b41, f. 36.

¹⁷ O.R.O. J. IV/2.

¹⁸ This map now hangs in the 'Jersey Arms', Middleton Stoney.

¹⁹ The deer park was the only enclosed part of the parish until the end of the 17th century. Its formation had been authorized by King John at the same time (May 1201) as the grant of the market to Gerard de Camville—two years later he gave Gerard 10 bucks and 40 does from Woodstock Park to stock it. In 1328 it was described as being surrounded by a stone wall half a league in circuit.

²⁰ Dunkin, op. cit., 57.

road is so narrow and bad it is with great difficulty a horse can be taken to church and it is impossible for a carriage to turn in the doorway to the said road'.²¹ By the following year, however, all seems to have been resolved and the villagers were allowed access to the church. The settlement and park had roughly assumed their present shape by 1830, and the plan taken from the 1st Edition of the O.S. clearly shows the dramatic change that had taken place (FIG. 4).

THE EARTHWORKS

Extensive and comparatively well preserved earthworks survive in Middleton Park (FIG. 5). Rather ironically, in view of the excavated material, the earthworks are locally known as Caesar's Camp. The motte, which forms the centrepiece of the complex, stands only 20 m. away. This mound which is overgrown with trees and bushes has been heavily eroded and has been partly dug away for stone on the north in the past. A hole which has been burrowed into the mound half-way up reveals that it was in part at least constructed of laid layers of limestone. The top of the motte has been so disturbed that few traces of a tower or other motte structure could have survived. The bottom of the motte has slipped and largely obscured the surrounding ditch; a shallow counterscarp on the outside of the motte ditch is, however, clearly visible.

The castle bailey lies to the west of the motte and is apparently almost square in shape. A ditch is clearly distinguishable only on the south and west sides, but a depression in the drive to Middleton Hall marks its return to the motte. The castle earthworks in the field to the north of the drive are confused because of the subsequent village earthworks. In the adjoining field, which now forms parts of Villiers Park, the earthworks have been completely levelled. The base of a medieval cross now stands on the southern edge of the bailey.²²

To the east of the motte lies another clearly defined enclosure, previously thought of as representing the castle bailey. Three sides of this enclosure survive in the form of a ditch and inner rampart, a shallow outer rampart is visible in places. The enclosure is interrupted on the western side, presumably by the motte ditch. It is not clear, however, if the ditches are beginning to return to complete the enclosure at this point. The rampart is made up of two parts, the lower section which is an earthen bank and an upper clearly defined regular structure, which represents an overgrown wall. Indeed, on 18th century estate maps this enclosure has a field boundary running along its length. The south-eastern corner of this enclosure has been dug away and the ditch and ramparts disturbed. An entrance into the enclosure at this point is almost certainly post rampart. Both the entrance and the disturbance within the enclosure appear to have been caused by post-medieval stone robbing. After a

²¹ Bod. Lib., Oxon c. 83, fol. 23b.

²² This was almost certainly moved here after the old village had been abandoned, originally it stood at a point halfway between the Old Rectory and the road to Heyford.

References in glebe terriers to 'Headless Cross furlong', adjoining the Chesterton Way suggests the former existence of a second cross.

period of dry hot weather parch marks within the enclosure demonstrate that it contains a number of regular stone based structures.²³

To the east of this earthwork there extends a third much larger enclosure, which reaches almost the Oxford-Northampton road. This enclosure has a shallow ditch and low interior bank, which almost disappears at its eastern end. A geophysical survey has shown that there is probably a wall beneath this bank.²⁴

The enclosure boundary is in the form of a horseshoe, although there are three fairly abrupt changes in the alignment, with an entrance on the extreme eastern point of the enclosure. To the north the boundary aligns itself on the castle defences, but lies some way to the south of the church and castle, and appears originally to have encompassed both. It is now truncated in the region of the modern graveyard. This enclosure has been dug into for stone in a number of places. There are no earthworks within the enclosure apart from very shallow ridge and furrow distinguishable only from the air. It is possible that this enclosure originally formed an outer bailey, or even a village or borough precinct boundary.

Few traces of the old village of Middleton Stoney survive, except in the form of parch marks to the north of the inner bailey of the castle, there are, however, a few sunken tracks and irregular bumps which also belong to the old settlement. Ridge and furrow belonging to the open field system and ancient trackways leading from the village can be seen in the park. A survey of all these features is being undertaken and will be published subsequently.

THE EXCAVATIONS

In this account I intend to deal only with area 2 (FIG. 6); the report on the excavation of the eastern enclosure and its Romano-British occupation will appear in the next publication on Middleton Stoney.

Area 2 (18 m. × 2·50 m.) was placed between the modern churchyard wall and the castle motte. It was sited in order to cut across a shallow surface ditch which appeared to mark the line of the western bailey ditch. The reason for this cutting was simply to demarcate the castle defences, to try to ascertain their character and to determine a possible chronology for the site.

The cutting was dug by hand and finds were recorded by levels except for special finds which were measured and plotted onto the section.

STRATIFICATION

- A. Mixed yellow stoney loam with darker patches—plough/garden soil.
- B. Small gritty limestone rubble with an admixture of humic loam.
- C. Faced wall (Wall 2).
- D. Packed clay and limestone rubble.
- E. Mixed loam and limestone fragments.
- F. Large angular limestone rubble with air spaces between stones.

²³ The excavation of Romano-British buildings within this enclosure and apparently aligned upon it throws into question its date and function, the answers to which must await further investigation.

²⁴ Kindly undertaken by Dr. M. Aitken and members of the Oxford Archaeological Research Laboratory.

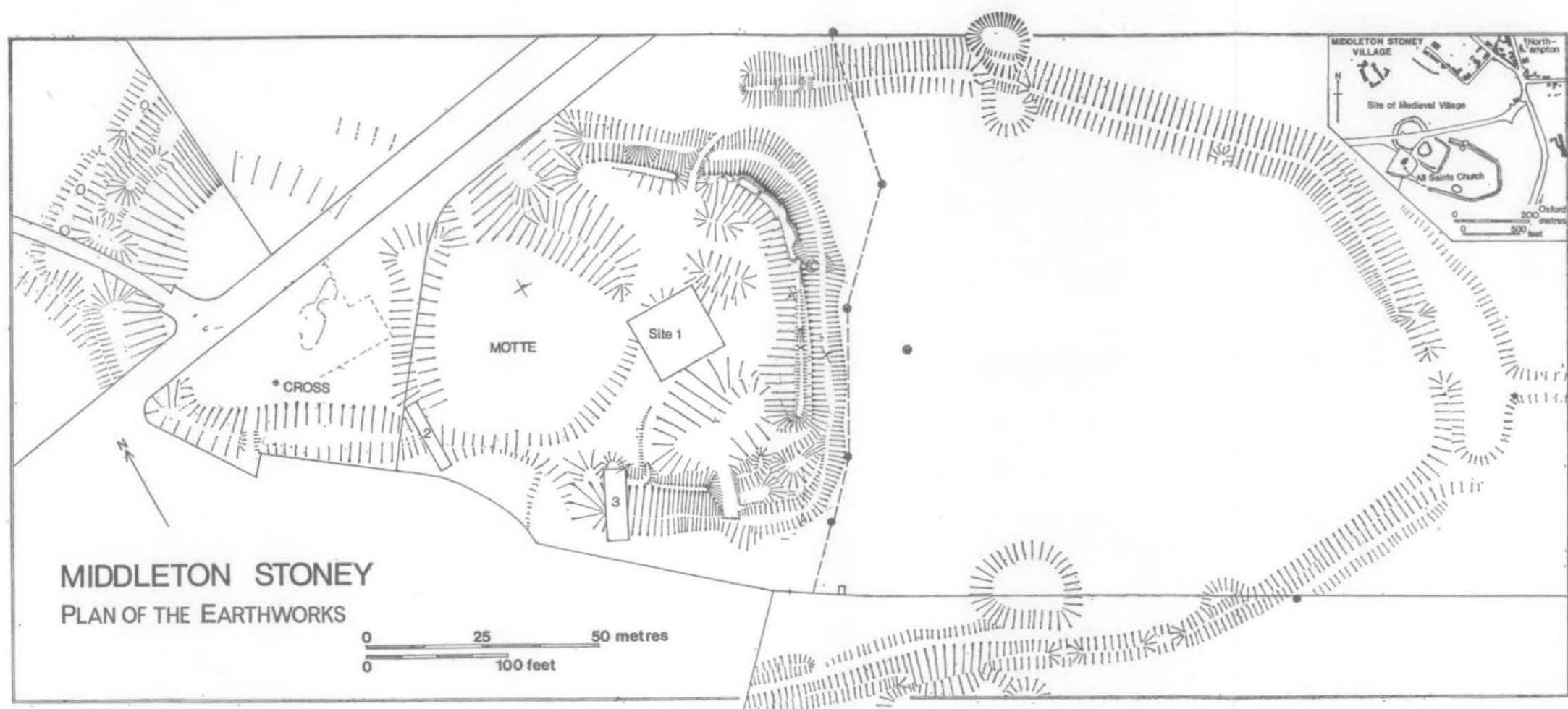


FIG. 5
Plan of Middleton Stoney earthworks.

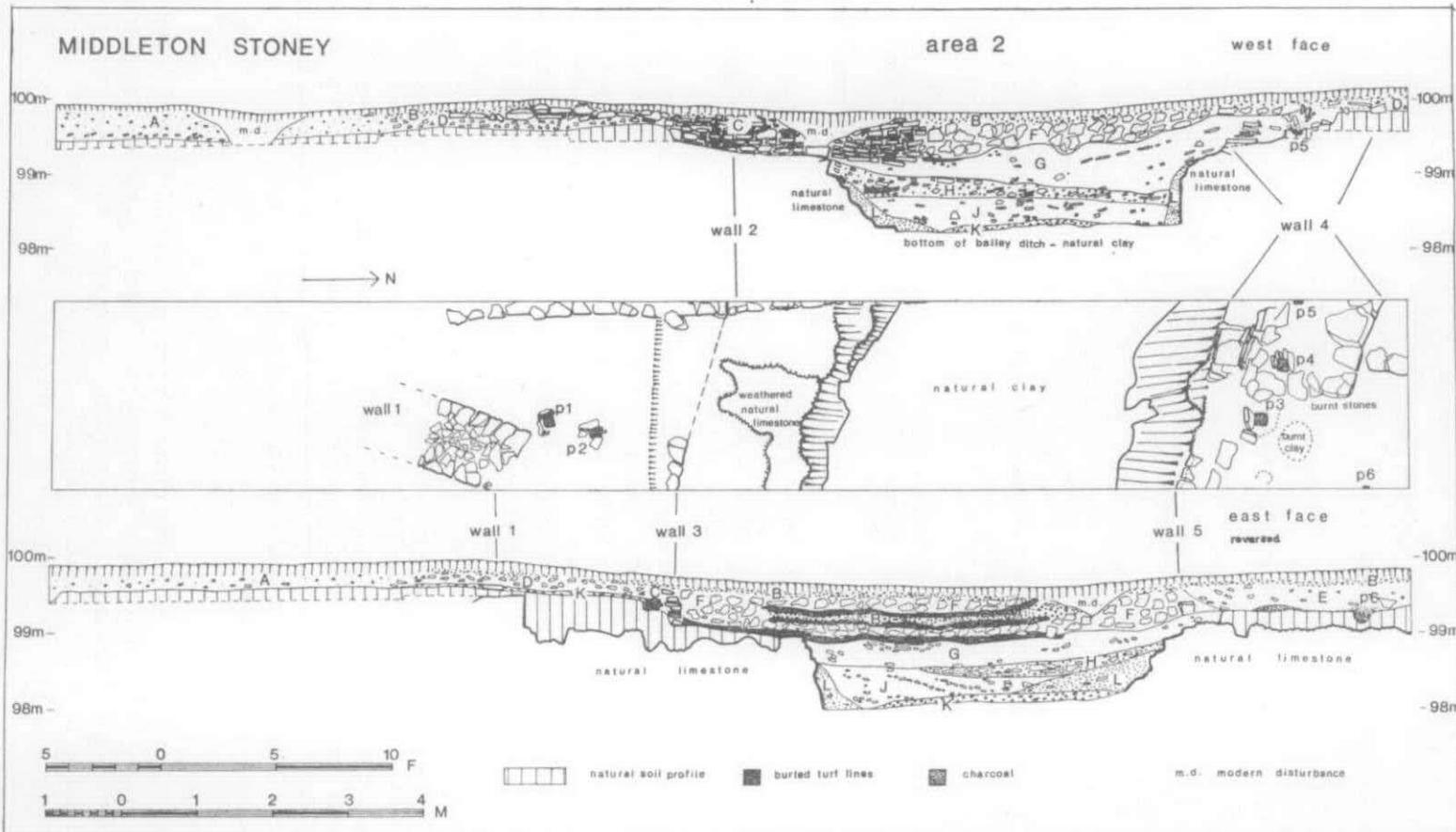


FIG. 6
Area 2. Plan and section.

- G. Clean brown loam with fragmented limestone rubble.
- H. Mixed limestone rubble.
- J. Dark silt containing particles of stone with larger fragments of rubble.
- K. Angular limestone fragments.
- L. Clean brown clay containing a few microscopic particles. Primary silting.

FEATURES

- Wall 1. Wall foundation ($1.50\text{ m.} \times 1\text{ m.}$) lying on natural soil. 1 course only, robbed on south, 2 faced edges.
2. Running into west face of section. 1 face visible (7 m. long).
 3. Revetment wall on S. edge of ditch.
 4. Footings of robbed wall on inside lip of ditch.
 5. Fragment of wall footings on same alignment, but secondary to wall 4, lying on ditch fill.
 6. Fragment of wall footing, secondary to wall 4.

All the surviving walls were built of non-fossiliferous local limestone.

POSTHOLES

1. $16 \times 18\text{ cm.}$ — 40 cm. deep	Stone packing on 2 sides. Grey humic stone-free fill.
2. $28 \times 24\text{ cm.}$ — 38 cm. deep	Stone packing on 2 sides. Grey humic stone-free fill.
3. $18 \times 20\text{ cm.}$ — 28 cm. deep	Stone packing on one side, brown loamy stone-free fill.
4. $10 \times 9\text{ cm.}$ — 12 cm. deep	Stone packing on 3 sides, brown loamy stone-free fill.
5. $8 \times 10\text{ cm.}$ — 5 cm. deep	Black humic stone-free fill.
6. $20 \times 16\text{ cm.}$ — 22 cm. deep	Black stone-free charcoal fill.

The cutting revealed a shallow but steep sided ditch dug into the natural limestone; the ditch filling had a varied but comparatively simple stratification. On the inside edge of the bailey timber and stone structures relating to the castle buildings were located. The limited nature of the examination of these structures makes any interpretation suspect, and a full understanding of the interior buildings of the bailey and those on the exterior of the ditch must await more complete excavation.

There were no well defined pre-castle features in the cutting, although a scattered spread of well weathered rubble at the southern end of the cutting (bottom of C) may have belonged to a disturbed Romano-British horizon. This scatter lay on the natural soil profile, but was distinct from the scatter of chippings and rubble found above, which were interpreted as belonging to the castle building phase. There was no dating evidence from this dispersed level, but the presence of Romano-British stone structures only 20 m. away (Area 1) makes this hypothesis quite possible.

THE SECTIONS

The bailey ditch had been dug through a thin strata of limestone to a layer of natural clay. The ditch had steep but ragged sides, due to the highly fissured nature of the natural limestone. The northern upper edge of limestone appears to have been more heavily weathered than that of the southern edge, which may have been protected by the lower courses of Wall 2.

On the bottom of the ditch there was a scattered layer of flaked and chipped limestone belonging to the building phase of the castle (K). This layer appears to have been contemporary with the primary silting (L). Above this lay a considerable level of mixed rubble and silt (J). These layers probably constitute occupation debris and accidental backfilling during the initial period of castle occupation. The volume of cooking pot sherds, and animal bones found within the layer would support this. Individual lines of tipping can be identified, suggesting that during the early phases backfilling came from the church side ; however, later the decay or destruction of the bailey curtain wall led to the deposition of material from within the castle bailey. The two sections demonstrate, however, that there was differential tipping even within a very short distance—the west face gave a more confused picture than the east. In general terms the whole of the stratification appears to be dipping towards the motte-end of the ditch.

Level H, which consists of mixed limestone rubble, much of it faced, together with white mortar and fragments of stone, may well belong to the destruction phase of Wall 4.

Above this level G consisted largely of brown loam and chippings, and appears to represent a deliberate phase of ditch levelling with soil and associated debris, much of it originally friable in character. The tip lines within this layer indicate that most of it was deposited from the castle side of the ditch.

Above this on the eastern face of the section there were alternate layers of old turf lines and rubble, indicating periods of stability followed by periodic bouts of stone robbing and disturbance relating to buildings and walls on the outside of the bailey ditch. The extension of Wall 2 belongs to the earliest part of this phase. Significantly the footings of Wall 5 lay above this level indicating that by the time the buildings on the interior of the bailey were reconstructed the ditch had been largely backfilled.

Above this there lay a level of larger rubble (F), some of it derived from Wall 2 and some probably from the then surviving castle buildings. Just below the modern topsoil there was a thin band of worm-sorted limestone grit and humus (B).

At the northern end of the eastern section there was evidence of a late or post-medieval intrusion with associated traces of burning which had removed most of Walls 2 and 5 in this area (E).

At the southern end of the section almost all the stratification had been disturbed (A) indicating that this area had been ploughed or more probably dug as a garden or orchard in the post-medieval period.

There were two modern disturbances, one cutting through Wall 2 ran tangentially across the site and probably represented a recent pathway. The topsoil consisted of a dark-brown stone-free loam.

THE PLAN

The plan revealed a number of building structures both on the inside and outside of the bailey ditch. Within the bailey the footings of a wide wall (4) were uncovered lying on the natural subsoil. The southern face of this wall

lay on a step into the limestone on the lip of the ditch forming together with a series of up-ended stone on the inside a revetment for the core of the wall.

The interior of the wall consisted of horizontally laid flat weathered stones, suggesting that the wall may have originally had a hollow core, or that the wall core may have been removed during a secondary phase. This is possible in the light of the fact that in the centre of this Wall 3 postholes (3, 4 and 5) were found; the edges of these postholes had been packed with vertically laid flat stones when the timbers were *in situ*.

Wall 6 is aligned at right angles to Wall 4, but only two stones of the eastern face were revealed.

Wall 5, as already indicated, was a secondary construction, following the same alignment as Wall 4 but based on ditch fill, and was a far less substantial structure than Wall 4. The north-eastern corner of the cutting had been dug away, leaving traces of burning, both in the filling of posthole 6, and in the area as a whole (E).

The chronology of the structures on the exterior of the ditch is not clear. The lower courses of wall 2 appear to have originally occupied a curious step, cut into the natural limestone. Due to its size the faced stone occupying the lip of the ditch is of particular interest, possibly marking the edge of the original medieval wall. The line of a revetment marked by Wall 3 on the eastern face was defined running parallel to the ditch. This wall probably belongs to the earliest structures in the cutting. Only one course of Wall 1 remained and it had been robbed away to the south. However, its alignment and siting onto the natural soil indicated that it too was probably an original wall. Its alignment running towards the south-eastern corner of the bailey may have some significance.

Two major postholes (1 and 2) align themselves on Wall 1, and are possibly contemporary—both postholes had stone packing. Wall 2 clearly belongs to a secondary phase ; although part of it sits on natural limestone, it overlies the ditch fill in the north and an occupation layer (D) in the south. It may well be contemporary with Wall 5, and date from the medieval rebuilding of the manor house.

DATING EVIDENCE

Medieval pottery (discussed below) was found throughout the body of the cutting, but the imprecise dating of this pottery means that it is only possible to postulate a general chronology for the site. Dating of medieval pottery is a complex problem dependent on the repeated occurrence of datable objects, such as coins, or in otherwise datable contexts, such as those clearly associated with documentary evidence. A corpus of work now exists for Oxford,²⁵ but just how closely applicable this is to rural sites in north Oxfordshire remains to be seen.

The sherds recovered from levels G, H, J, K and L were largely from unglazed cooking pot, although there was a little glazed material.

There is no clear break to indicate the destruction of the castle in the early

²⁵ *Oxoniensia* passim.

13th century but the pottery does conform closely in range to that found at the castles of Ascot Doilly, Deddington and Swerford.²⁶ This suggests that although occupation went on into the later Middle Ages, the site had been abandoned as a military fortification by the end of the 13th century.

DISCUSSION

On the basis of the documentary evidence the motte ditch excavation and the specialist reports, particularly that on the environment (see below), the following chronology for Middleton Stoney Castle can be postulated.

Little can be said of the Romano-British occupation on this part of the site at the moment. As already mentioned a scattered rubble spread at the southern end of area 2 may date from this period, but no other structural evidence was found. A few worn residual sherds of Romano-British coarse pottery were recovered from the ditch fill and one sherd of colour-coated ware was found in the natural subsoil at the northern end of the section, probably deposited there by worm action. The absence of Roman pottery from the southern end of the cutting can be explained as the occupation levels had been dug away, but the comparative paucity of residual Roman pottery from the ditch fill is surprising in view of the nearby Roman settlement. A final observation on the Roman evidence, both the coin of Constantine II (minted 341-6), and the dating of the pottery found in the ditch suggests Roman activity near here into the 4th century. This conflicts with the available dating evidence from the farmstead, which at the time of writing suggests that the settlement had been abandoned by the early 3rd century A.D.

No pre-castle features were encountered in the section and apart from the Roman material there was no pottery earlier than the 12th century. This, together with the environmental evidence indicates that the castle was possibly built on uncultivated soil in an area of newly cleared woodland. This woodland must have re-colonized the site in the post-Roman period.

It suggests too that the post-Conquest church, castle and village of Middleton Stoney were laid out together on a site apart from the old Saxon settlement, perhaps chosen for its strategic superiority over the old village. As for the site of the old village this may have lain some distance away, possibly in the area of 'Old Churchyard Furlong'.

Much work, both archaeological and topographical, remains to be carried out on the siting and shaping of medieval villages, but there is enough evidence at Middleton Stoney, at least, to suggest a clear break in siting between the Saxon and post-Conquest villages. The almost complete absence of even late Saxon evidence from other excavated deserted village sites in the region suggests that such settlement movement may be common.

The documentary sources suggest that the castle was probably built about 1140. It was a characteristic motte and bailey which appears to have been

²⁶ E. M. Jope and R. I. Threlfall, 'The Twelfth-Century Castle at Ascot Doilly, Oxfordshire', *Ant. J.*, xxxix (1959), 219-73. H. M. Colvin, *A History of Deddington, Oxfordshire* (1963). E. M. Jope, 'Castle Hill, Swerford', *Report of the Oxfordshire Archaeological Society*, lxxxiv (1938), 85-93.

built with substantial stone walls and probably a stone tower. No traces were found during this part of the excavation of earlier timber structures, although due to the small sample nature of the work, they cannot be entirely ruled out. Stone from the bailey ditch was used for the building of the castle, possibly for the walls, but more probably due to the fractured nature of the strata, for the core of the motte. Work on the ditch stopped immediately a less resistant clay strata was reached, creating a steep sided, flat bottomed shallow ditch, indicating perhaps that the castle builders were more interested in winning stone from the ditch than creating a really formidable defence.

The ditch was accompanied by a wide wall on the bailey side and a revetted wall 1·50 m. outside the outer ditch edge—leaving a narrow berm between the ditch and the outer wall.

After a comparatively short period, marked by the primary silting (L), the ditch began to be backfilled with material coming largely from outside the bailey. There then followed a fairly dramatic phase of destruction (G), which possibly corresponded with the order by King John to destroy the castle in 1216. Whatever the precise date it is clear that the original walls were destroyed and the ditch largely backfilled by the middle of the 13th century. This is consistent with the evidence from the nearby stone castles at Deddington and Ascot Doilly, both of which appear to have been redundant as military structures by the second half of the 13th century.^{26a}

Not long after, the ditch appears to have been levelled off completely with soil and material largely from the interior of the bailey. This was followed by the construction of more flimsy stone walls inside the bailey (Wall 5), which was built over part of the ditch fill, as was Wall 2, which cut across the line of the old ditch. The associated pottery was 13th century and it is probable that this marks a rebuilding of a manor house in the bailey to replace the largely destroyed castle.

Subsequently the remaining hollow marking the line of the bailey ditch was filled with stone from periodic robbing activities on the remaining castle walls outside the bailey. Such robbing was interspersed by long periods of calm when turf levels were allowed to develop over the rubble. Some of the debris in the upper part of the ditch can be attributed to repairs and alterations to the church, whence the medieval floor tiles almost certainly came.

At some stage, perhaps in the 14th century, the south-eastern corner of the bailey was disturbed, and the footings of Walls 4 and 5 removed (E). This disturbance appears to have been associated with burning, but until further work is carried out in the bailey little more can be said about it. It is significant that the manor house continued to occupy the same site within the bailey until the early 18th century. It is a part of the site that would well repay excavation in the future.

^{26a} Deddington Castle was described as old by 1277 and a century later in 1372 the Canons of Bicester were able to buy a quantity of dressed stonework from the walls for 5 marks. Colvin, *op. cit.* The stone tower at Ascot Doilly appears to have been dismantled at an even earlier date, 1153–1175. Jope and Threlfall, *op. cit.*

The disturbance at the southern end of the cutting is clearly associated with agricultural activity. On the plan of 1736 the area is marked as orchard, and it has obviously been worked over as a garden for a considerable period.

FINDS ²⁷ POTTERY

Altogether 602 sherds of pottery were recovered from the section. Many of the sherds were very small and many belonged to the same vessels. Only 64 were rim sherds.

There were three residual sherds of Romano-British pottery, two fragments of shell-gritted ware (J)²⁸ similar to that found on the nearby 2nd century farmstead site, and one fragment of presumably 4th century colour coated ware (found in natural soil on the inside of the bailey). One much weathered grass-tempered sherd (H) was not identifiable.

Most of the pottery was medieval. In this category there were 312 sherds of coarse sandy ware (weight 5 lb. 2 oz.), 190 sherds of shell-gritted ware (weight 2 lb. 2 oz.), and 41 sherds of glazed ware (weight 2 oz.).

Most of the medieval rim sherds came from levels F-K, but a few residual sherds were found alongside post-medieval sherds in the upper levels. Most of the rims conform to the general Oxfordshire pattern of medieval castle pottery and much of the pottery appeared to be 13th century, but some could belong to the second half of the 12th century. The finds included a few sherds from tripod pitchers which according to Oxford parallels can be dated to the period 1120-1220. The latest forms are flanged rims, which are normally late 13th or 14th century.

ILLUSTRATED SHERDS (FIG. 7)

Only a few of the rim types are distinctive enough to warrant illustration.

1. Pan rim (J). Unglazed sandy ware, light brown surfaces, light grey core, incised wavy line on top of rim. Similar, wide, shallow bowls were discussed by E. M. Jope, *Oxoniensia*, VIII-IX (1943-4), 102-6. The rim and the wavy, incised line are likely to be 13th century.

2. Cooking-pot rim (S.F. 210). Upper fill of posthole 2. Coarse, unglazed, with black surfaces and red/grey core. Body hand worked after ? throwing. Light grooving on shoulder. The squat bulbous shape is unusual in the Oxford area.

3. Cooking-pot rim (H). Unglazed sandy ware with red-brown surfaces and grey core. Grooved shoulder. Cf. pots from Seacourt, *Oxoniensia*, XXVI-XXVII (1961-2), FIG. 26, 1 for colour and shape, fig. 26, 2 for shape; both late 13th century. Three other rims of similar type.

4. Bowl (J). Coarse, unglazed, with black surfaces and grey core with red 'skin'. Cf. the 12th-13th century bowls from Seacourt, ibid., fig. 24.

5. Jug or pitcher rim (J). Coarse, unglazed fabric, pink-brown surfaces, grey core. The fabric is similar but not identical to that of the Radcliffe Square jug (*Oxoniensia*, V (1940), 46-7). It probably represents a version of 12th century developed St. Neots ware.

GLAZED WARES (not illustrated)

Twenty body sherds of a green-glazed jug. Thumb pressed base, patchy apple green glaze with red applied brush strokes. Wheel made internal grooves, grey body fabric, with pink interior surface. Early to mid 13th century, cf. *Oxoniensia*, IV (1939), fig. 23, G.

²⁷ All the finds, original plans and site notebooks are deposited at the O.C.C.M.

²⁸ Letters designated thus (J) refer to layer descriptions in Fig. 6.

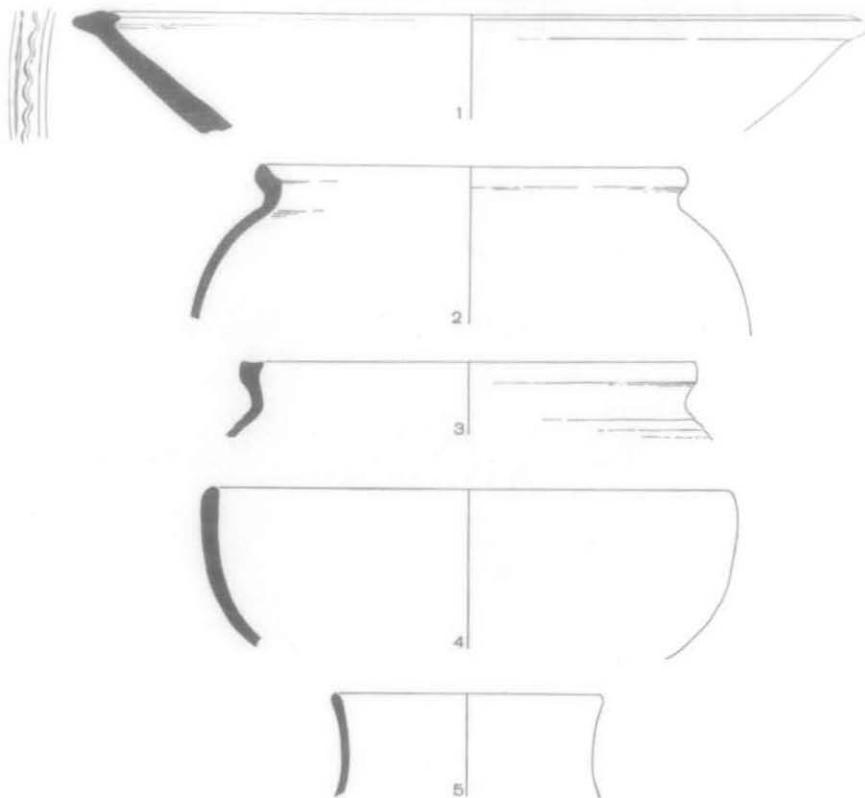


FIG. 7
Middleton Stoney, medieval pottery (1).

Eleven body sherds of glazed pitcher. Hard orange-buff sandy ware, even pale brown glaze. Decorated with shallow girth grooves over which have been applied finger-pressed vertical clay strips, early 13th century; cf. *Antiq. J.*, xxxix (1959), D.18.

One sherd with even dark brown glaze, possibly belonging to a plate.

One flat sherd with even green glaze, concentric finger grooves, possible plate.

Some thirty-nine sherds of post-medieval pottery were recovered from layers A and B and later disturbances.

Other. Half a clay spindle-whorl (not illustrated).

TILES (FIG. 8)

One hundred and sixty-four fragments of tile were found, forty-two were glazed (2 lb.) and 122 (8 lb. 14 oz.) were unglazed. A large proportion came from the upper levels, and appear to have been associated with the rebuilding of the church in 1858,²⁹ and the extension of the churchyard carried out at the same time. A considerable number of fragments of red roofing tile probably came from the buildings in the village when it was demolished. There were also a few pieces of medieval glazed ridge tile.

²⁹ The church was rebuilt from the ground, but the old materials were reused and the original design was carefully reproduced.

Much of the tile was well worn and had obviously been lying around for a considerable period. The more interesting medieval floor tiles are illustrated below and reported upon by D. A. Hinton.

1. (F). Line impressed fragment of a crowned head. Reduced core and upper surface, slit keys, coarse fabric.

2. (F). Similar, head larger.

3. (F). Line impressed with a flower in the centre. L. 13·6 cm. Reduced core and upper surface, coarse fabric, keyed with a nicked point. There were other fragments with this design.

Line impressed tiles of this type are new discoveries in the Oxford region, but there are similar designs found at Pipewell Abbey, near Kettering, Northamptonshire, some 40 miles from Middleton Stoney.³⁰ The clay used for the Pipewell tiles now in the British Museum is purer, most of the tiles are oxidized, and the keying is different. Middleton Stoney design (1) has a stamp identical to Pipewell R.1319, design (3) to R.1344 : (2) is not in the British Museum series. A similar design to (3) is recorded from Meesden, Herts.³¹

4. Inlaid fragments, standard Oxford region tile fabric, with stabbed keys. The design appears to show a three turreted, windowed castle, with trefoils in the corners

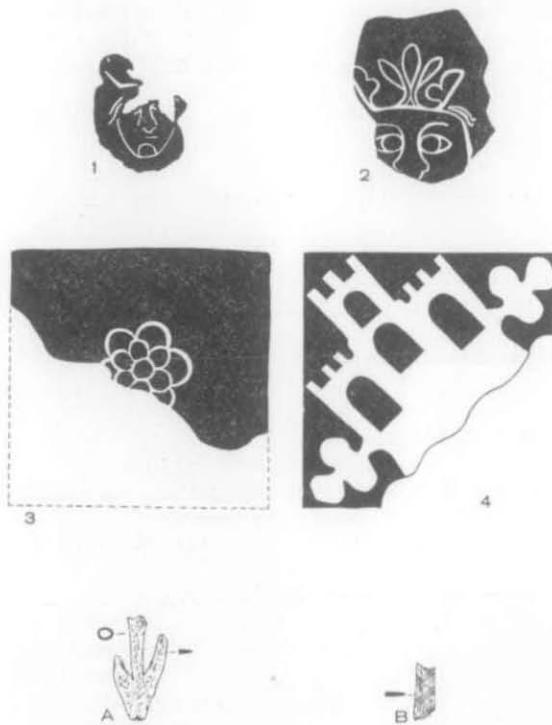


FIG. 8
Middleton Stoney, medieval floor tiles, carved bone and arrowhead (1).

³⁰ Some Pipewell tiles are shown in E. S. Eames, 'Medieval Tiles' (1968), pl. I, 3, 5.

³¹ L. Keen, 'A Fourteenth Century Tile Pavement at Meesden, Herts.', *Hertfordshire Archaeology*, II (1970), Fig. 11, nos. 7, 12.

as reconstructed in the composite drawing.³² This castle design has not been found in the Oxford region before, although there are similar patterns elsewhere, for instance in Wiltshire³³ and London.³⁴

5. Inlaid fragment (not illustrated), possibly similar to a piece from Bicester Priory.³⁵

METAL, GLASS, BONE, FLINT (FIG. 8)

Apart from some heavily corroded nails few metal objects were recovered.

A. Iron arrowhead, socketed and barbed, the ends of the barbs broken. Type used for hunting. Possibly 13th century.³⁶

Nine pieces of window glass, six decorated but no pattern distinguishable, probably from church.

Two fragments of bottle glass.

B. One piece of carved bone (J), probably from comb (illustrated).

Two pieces of worked flint.

ANIMAL BONES

Report by PROFESSOR B. J. MARPLES

The bones considered here came from the medieval levels. Many of the bones were noticeably fragmentary and seem to have lain around and been chewed by dogs.

The collection comprised 268 bones, fragments of bone or loose teeth. Hardly any of the bones were complete and many of the fragments were quite small, in which case no attempt was made to identify them.

Ox.	20
Horse.	3 teeth
Sheep.	35
Goat.	1 fragment possibly this species
Pig.	19
Fowl.	5
Duck.	1
Other birds.	3
Fragments.	181

Fifteen showed signs of having been chewed by dogs and two of having been chopped by the butcher.

DETAILS OF THE SEPARATE COLLECTIONS

Level F.	Bird	1 fibula, seems not to be fowl.
Level G.	Ox	Skull fragment, a jugal. 1 rib fragment.
	Sheep	1 calcaneum, immature, 1 pelvis fragment. 1 scapula fragment. 3 vertebral fragments. 4 parts of ribs. 1 dorsal vertebra.
	Pig	2 half metapodials.
	Goat	1 distal end of humerus, chopped. ? goat.
	Bird	1 femur, small fowl. 1 very immature humerus, ? fowl.
	Fragments	14, one chopped. 1 rib broken and healed.
Level H.	Ox	1 metacarpal. 1 calcaneum, immature. 1 molar.

³² I owe this reconstruction to Mrs. E. S. Eames, who realized that the different fragments were part of the same design.

³³ F. Stevens, 'Inlaid Paving Tiles of Wiltshire', *Wiltshire Archaeology Magazine*, cxxiv (1936), pl. IV, 7.

³⁴ London Museum Medieval Catalogue (1940), Fig. 82, no. 76.

³⁵ *Oxoniana*, xxxiii (1968), Fig. 13, E.

³⁶ London Museum Medieval Catalogue (1940), Fig. 16 and 70, said to be 14th or 15th century. But see also *Antiq. J.*, xxxix (1959), 266, for a similar arrowhead found in a 13th century context.

<i>Sheep</i>	1 part of jaw, last molar just erupting. 1 vertebra.
<i>Pig</i>	1 pelvis fragment.
<i>Bird</i>	1 skull fragment with 2 molars not fully worn.
<i>Fragments</i>	1 canine fragment.
<i>Ox</i>	1 part tibia. ? small fowl.
Level J.	25
	1 calcaneum. 1½ phalanges. 1 incisor.
	2 fragments of pelvis.
<i>Sheep</i>	2 teeth. 1 humerus distal ⅓, 1 radius proximal ½.
<i>Pig</i>	1 metatarsal distal ½. 1 calcaneum. 1 tibia fragment.
<i>Fragments</i>	1 jaw fragment immature. 3 incisors.
	38, three chewed.

COINS

One coin of Constantius II, minted A.D. 341-6. (H). R. Two victories VICTORIAE DD AVGGQ N.N. Probably minted at Treveri.³⁷

THE ENVIRONMENT OF THE INNER BAILEY DITCH

By J. G. EVANS

1. INTRODUCTION

The excavation in 1970 and 1971 of the inner bailey ditch of the castle at Middleton Stoney enabled information to be obtained about the environment of the site in the 12th and 13th centuries. This has been made possible through a combination of soil studies and snail analysis. The technique of using land molluscs—snails and slugs—in the interpretation of past environments has been successfully applied to sites on the Chalk (Evans, 1968), but has rarely been used on limestone. The opportunity to test such a site was therefore welcomed.

2. THE ENVIRONMENT PRIOR TO THE CONSTRUCTION OF THE INNER BAILEY

At the time the ditch was dug, the natural soil was a non-calcareous brown earth, preserved on either side of the ditch (FIG. 6), beneath a spread of limestone rubble (D) and (K). The profile is of the type known as *sol lessivé* in which clay particles have been washed down through the profile and accumulated at a lower level (Avery, 1964, 54). Two horizons are clearly visible, an upper, pale-brown loamy horizon from which clay has been washed, and a lower, dark-brown more clayey horizon in which it has accumulated. The surface of the natural limestone was fragmented into small blocks, rounded by solution. These characters—the non-calcareous nature of the soil, its division into two distinct horizons, and the chemically weathered subsoil surface—strongly suggest that in the vicinity of this section the land had not been cultivated for at least some centuries prior to the digging of the ditch, but lay under pasture or possibly woodland. The ridge and furrow which now exists to the east of the motte did not formerly extend across to the future site of the inner bailey.

³⁷ I am grateful to Dr. C. M. Kraay for this information.

3. THE STRATIGRAPHY OF THE DITCH

The ditch was probably quarried out in the 2nd half of the 12th century, and apparently remained open for about fifty years. King John ordered the destruction of the castle in 1216. Archaeologically, the ditch appears to have filled up quite rapidly and there is nothing in the body of the section later than about 1275. Throughout the lower half of the ditch—i.e. the bottom 1·5 m.—the pottery is consistently late 12th to early 13th century. However, the environmental evidence suggests that the infilling of the upper levels may have gone on considerably longer—at least into the 17th century.

In order to clarify some of the environmental changes which took place during the infilling, a column of soil samples from the fill was analysed for land molluscs. At the point sampled (FIG. 9) the ditch fill showed the following stratigraphy (FIG. 10):

Depth below surface (cm.)

0– 8	Modern turf. Dark-brown, stone-free loam.
8– 16	Small, gritty limestone rubble with an admixture of humic loam (B).
16– 34	Limestone rubble (F).
34– 42	Upper buried turf. Brown stone-free loam.
42– 50	Small, gritty limestone rubble with an admixture of humic loam (B).
50– 65	Limestone rubble (F).
65– 73	Lower buried turf. Brown stone-free loam.
73–150	Pale-brown loam with layers of limestone rubble (G–H).
150–160	Limestone rubble (J).

Thus essentially the fill comprises two main sections. In the lower half of the ditch, below about 75 cm., there is a uniformly brown stony loam with layers of limestone rubble. In the upper half, the fill comprises a series of alternating buried turf horizons and layers of limestone rubble, the former reflecting periods of stability, the latter of destruction of walls and the accumulation of building debris.

4. THE MOLLUSCAN FAUNAS

(a) *Identification.* A series of sixteen samples was cut from the east section of the ditch cutting (FIG. 9) and analysed for molluscs using the method described by Evans (1971, 69). In addition, a spot sample (Md S II) was taken from the west section of the cutting from around the base of wall 2 (F) and (G).

All shell apices greater than 0·5 mm. were extracted from the samples, counted and identified. Where a species was represented only by non-apical fragments, these were noted in the table as a plus sign. This applies mainly to the larger species such as *Helix aspersa*, *Cepaea* and *Hygromia hispida*.

Throughout the deposits there were large numbers of sub-spherical or ovoid calcareous granules, milk-white in colour and with a radial crystalline structure. These are thought to be derived from slugs of the genus *Arion* and a number were submitted to Dr. M. P. Kerney who confirmed this identification as far as is possible with such featureless objects (Kerney, 1971). Granules were extracted from seventeen modern *Arion ater* agg. adults by destroying them in caustic soda, each in a separate container. From each slug only one granule greater than 1 mm. and one or two between 0·5 and 1 mm. were obtained. On this basis, the granules from the ditch were divided into two size grades and plotted separately (FIG. 10, arionid granules).

The other group of slugs present comprises two genera, *Limax* and *Agriolimax*, which contain a flat, subrectangular or oval internal shell. Unlike the arionid granules,

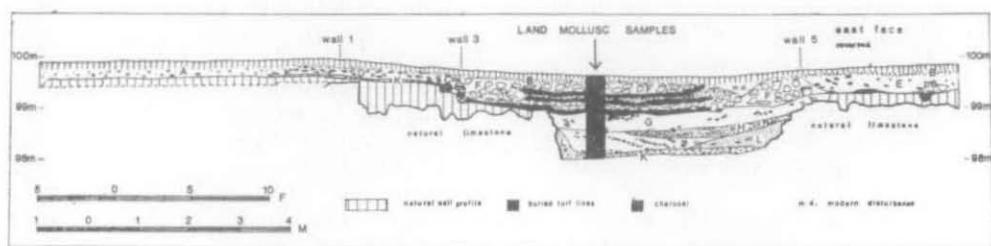


FIG. 9
Middleton Stoney. Area 2. Bailey ditch land mollusc sample.

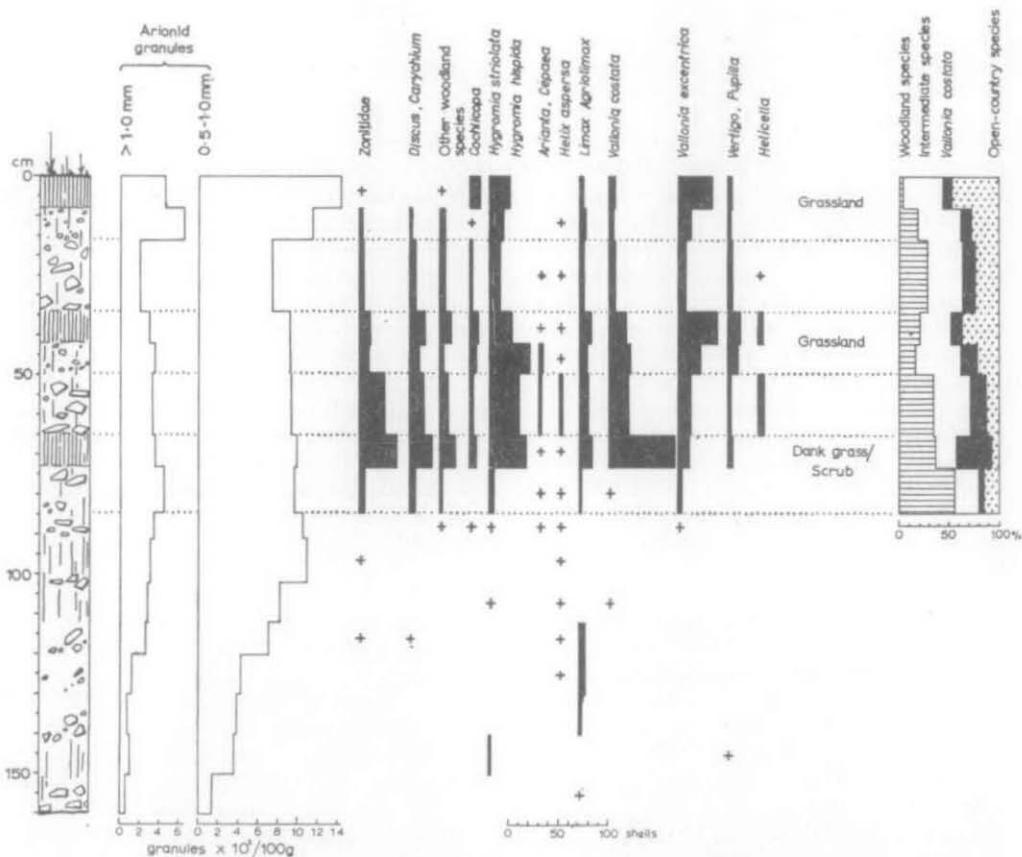


FIG. 10
Middleton Stoney. Bailey Ditch. Molluscan Histogram.

this is a true homologue of the external shell of snails, only one occurring in each slug. Unfortunately they are not specifically determinable, but most of those present at Middleton Stoney probably belong to *Agriolimax reticulatus*, though a few large examples may be referable to *Limax*. There were no shells of the related genus *Milax*.

(b) *Ecology.* The molluscs have been graphed in terms of absolute abundance—the arionid granules per 100 g. dry weight of sample (actual count), the shells and limacid plates per total weight of sample. The latter varied (Table 1) but this has not been corrected for and is thought to have had little effect on the pattern of faunal change.

Ecologically, several groups can be recognized. On the left of the histogram (FIG. 10) are three groups—the Zonitidae, *Carychium/Discus* and the 'other woodland species'—which favour damp and shaded habitats. In the central section are five groups—*Cochlicopa*, *Hygromia*, *Arianta/Cepaea*, *Helix aspersa* and *Limax/Agriolimax*—which are less fastidious in their requirements for moisture and shade, occurring in a wide range of habitats. And on the right are four groups—*Vallonia costata*, *V. excentrica*, *Vertigo/Pupilla* and *Helicella*—which demand light and dry habitats. The snails in each of these three categories have been amalgamated and graphed as a percentage of the total fauna (excluding arionid granules and *Cecilioides acicula*) on the far right of the histogram as Woodland, Intermediate and Open-country species. *Vallonia costata* has been split off from the latter category as being an open-country species of wider habitat preferences than the others.

Cecilioides acicula has been excluded from the histogram as this is a burrowing species, many of the shells of which are probably modern.

(c) *The pattern of change.* Below 85 cm. shells are virtually absent (FIG. 10). This is curious in view of the highly calcareous nature of the deposits and the abundance of arionid granules. There are two possible explanations for this state of affairs. One is that the environment was not suitable for snails at this level and that they were never present. The other is that snails were once present and have since been destroyed. Arguments can be put forward for and against both hypotheses, and it is not possible to decide between them. In favour of the first it can be pointed out that the soil immediately adjacent to the ditch at the time of its quarrying was a non-calcareous brown-earth which would not have favoured a rich snail fauna. Once the ditch was dug, of course, it would have provided a very suitable habitat, but may have become infilled before snails had had time to colonize it. In favour of the second hypothesis it can be said that the arionid granules and limacid plates—the two most abundant elements in the lower part of the ditch—are composed of a form of calcium carbonate known as calcite which is more stable than aragonite of which snail shells are composed. A case could perhaps be made therefore for the differential destruction of aragonite in the ditch.

The increase in arionid granules up to 85 cm. in the lower part of the fill may be interpreted either in terms of the gradual invasion of the site by slugs as the ditch fill accumulated, or as a fall off in the rate of accumulation of sediment, the size of the slug population remaining constant. Possibly there is a combination of both effects.

Above 85 cm. snails become consistently present and arionid granules gradually fall off in abundance until the modern soil is reached when they show a marked increase.

In the lower buried turf (65–73 cm.) woodland species together with *Hygromia hispida* and *Vallonia costata* predominate; open-country species are sparse. The abundance of woodland species (36%) makes it clear that we are dealing with a relatively damp and shaded habitat at this level (65 cm.) (from the snail's point of view, tall grass of species such as *Bromus* and *Arrhenatherum* constitutes shade) not a grazed sward, while the abundance of *Vallonia costata* (34%) argues against woodland, and probably scrub also. *V. costata* is nominally a species of open ground but may occur in woodland in low abundance. Today it is frequent in fairly damp, low lying situations where tall grasses are the dominant vegetation form; but it is rare in closed scrub communities,

Table 1. Middleton Stoney, inner bailey ditch. Land molluscs.

	150-	140-	130-	120-	112-	102-	91-	84·5-	73-	65-	49·5	42-	34-	16-	8-	o-	Md S	
Depth below surface (cms.)	160	150	140	130	120	112	102	91	84·5	73	65	49·5	42	34	16	8	II	
Sample weights (kg.)	1·0	1·0	1·0	1·0	1·0	1·0	1·0	1·0	0·75	1·4	1·0	1·0	1·0	1·34	1·1	1·28	1·45	1·0
<i>Carychium tridentatum</i> (Risso)	—	—	—	—	—	—	—	—	2	11	7	2	2	3	1	—	7	
<i>Cochlicopa lubrica</i> (Müller)	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	5	—	
<i>Cochlicopa</i> spp.	—	—	—	—	—	—	—	+	—	5	3	7	6	2	+	5	—	
<i>Pyramidula rupestris</i> (Draparnaud)	—	—	—	—	—	—	—	—	—	2	—	—	1	—	—	—	1	
<i>Vertigo pygmaea</i> (Draparnaud)	—	—	—	—	—	—	—	—	—	2	2	5	11	2	2	3	—	
<i>Pupilla muscorum</i> (Linné)	—	I	—	—	—	—	—	—	—	2	1	5	1	2	—	—	1	
<i>Lauria cylindracea</i> (da Costa)	—	—	—	—	—	—	—	—	—	5	2	2	2	1	1	—	—	
<i>Acanthinula aculeata</i> (Müller)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	
<i>Vallonia costata</i> (Müller)	—	—	—	—	—	—	—	—	—	1	75	20	21	17	6	5	6	
<i>Vallonia excentrica</i> Sterki	—	—	—	—	—	—	—	—	—	1	4	13	12	21	39	7	12	
<i>Ena obscura</i> (Müller)	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1	—	1	
<i>Marpessa laminata</i> (Müller)	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	3	
<i>Clausiella bidentata</i> (Ström)	—	—	—	—	—	—	—	—	—	1	+	4	1	1	6	2	1	
<i>Balea perversa</i> (Linné)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	?	1	—	
<i>Cecilioides acicula</i> (Müller)	—	—	—	—	—	—	—	2	10	29	28	7	11	8	1	1	17	
<i>Helicigona lapicida</i> (Linné)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Arianta arbustorum</i> (Linné)	—	—	—	—	—	—	—	—	—	—	?+	1	+	—	—	—	—	
<i>Helix (Cepaea) nemoralis</i> Linné	—	—	—	—	—	—	—	—	—	—	—	?+	—	—	—	—	—	
<i>Helix (Cepaea)</i> spp.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	
<i>Helix aspersa</i> Müller	—	—	—	—	+	+	+	+	+	+	+	+	3	+	1	+	12	
<i>Hygromia striolata</i> (C. Pfeiffer)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40	
<i>Hygromia hispida</i> (Linné)	—	2	—	—	—	—	—	—	—	—	3	36	24	35	18	7	10	27
<i>Helicella virgata</i> (da Costa)	—	—	—	—	—	—	—	—	—	—	—	—	—	4	cf. 1	—	—	
<i>Helicella itala</i> (Linné)	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—	—	—	
<i>Punctum pygmaeum</i> (Draparnaud)	—	—	—	—	—	—	—	—	—	1	1	3	—	—	—	—	1	
<i>Discus rotundatus</i> (Müller)	—	—	—	—	+	—	—	—	—	3	10	7	7	13	3	1	—	
Arionid granules (per 100 g.)																		
> 1·0 mm.	59	91	84	119	269	281	304	340	439	350	328	350	286	202	646	470	Not	
0·5-1·0 mm.	126	360	378	421	703	824	1093	1040	958	980	930	920	924	734	1140	1410	counted	
<i>Euconulus fulvus</i> (Müller)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Vitrea contracta</i> (Westerlund)	—	—	—	—	—	—	—	—	—	10	7	4	6	—	—	—	7	
<i>Oxychilus cellarius</i> (Müller)	—	—	—	—	—	—	—	—	3	15	12	3	1	3	1	1	23	
<i>Retinella radiatula</i> (Alder)	—	—	—	—	—	—	—	—	—	cf. 1	—	1	—	—	—	—	—	
<i>Retinella pura</i> (Alder)	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	
<i>Retinella nitidula</i> (Draparnaud)	—	—	—	—	1	—	1	—	2	9	6	—	3	1	2	—	1	
<i>Vitrina pellucida</i> (Müller)	—	—	—	—	—	—	—	—	—	+	1	—	—	—	—	—	1	
<i>Limax, Agriolimax</i> spp.	1	—	2	6	6	—	—	—	2	13	9	8	12	4	6	3	6	

where the surface is generally bare. On balance therefore an environment of tall grasses with perhaps some shrubs would seem most likely at this stage.

A phase of deliberate infilling of coarse limestone debris then took place (50–65 cm.). The fauna shows little change as is to be expected since most of the shells in the matrix are probably derived from the soil adjacent to the ditch.

There then followed a further phase of stability when a second turf line formed (34–42 cm.). The fine gritty debris at the base of this horizon (42–50 cm.) is probably dumped material, broken down by weathering. It also contains an element of pea grit, brought down by earthworms. Pedologically its affinities are with the overlying turf, and part, if not all of its snail content probably derives from this level.

The environment at this stage (34 cm.) is quite different from that of the lower turf (65 cm.). Woodland species comprise only 20% of the fauna while open-country species have risen to 50%. Of the latter, *Vertigo pygmaea* and *Vallonia excentrica*, species favouring short grass sward habitats, became abundant for the first time; *Vallonia costata* on the other hand falls to 10%, though the exact significance of this is not clear—it may reflect a decrease in the moisture content of the soil. An environment of dry, short-turfed grassland, grazed by sheep or cattle is most probable at this stage.

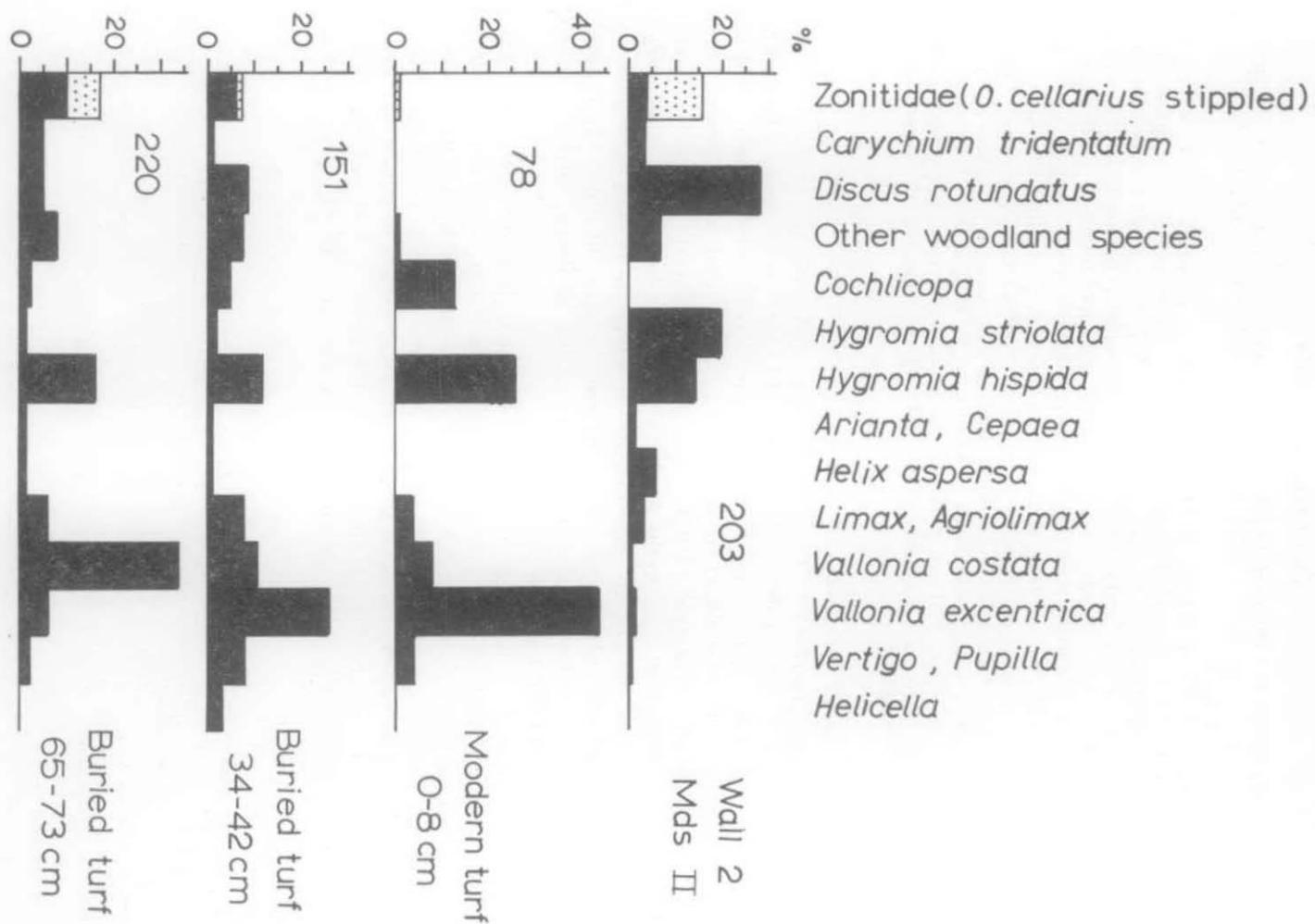
There was then a final episode of deliberate infilling (16–34 cm.), on top of which the modern turf (0–8 cm.) formed. Here, too, there is a layer of small gritty limestone debris immediately below (8–16 cm.), which may have resulted from weathering of the underlying rubble. On the other hand this horizon may be a plough or garden soil for in contrast to the lower gritty zone (42–50 cm.), the affinities of its fauna with that of the overlying turf are not close—for instance the two size grades of arionid granules behave in opposing fashions, the larger ones decreasing, the smaller increasing. This is also interesting in that it suggests that the two groups may reflect different species of *Arion*.

However, against this horizon being a plough soil is the unlikelihood of such a confined area ever having been cultivated, for it comprises a thin strip of land between the castle motte and the N.E. wall of the churchyard, and is virtually isolated from the main area of the field in which it lies by the bank of the outer bailey. The snail evidence is not incontrovertible on this point.

The fauna in the modern turf reflects the very open conditions which today exist on the site. *Vallonia excentrica* at 45% comprises almost half the fauna, and only two other species, *Hygromia hispida* and *Cochlicopa lubrica* are at all abundant.

Thus in the upper part of the ditch fill we are essentially dealing with three horizons of surface stability when the site was covered by grassland of one form or another. The land-snail faunas at each of these stages are compared in FIG. 11 and indicate successively open and dry environments. It may be argued that these changes are due to the raising of the ground level by the dumps of limestone rubble in the ditch increasing the drainage properties of the soil and making for increasingly xerophytic plant communities. But the short vertical distance between the three turf-lines, and the generally free-draining nature of the site as a whole makes it more likely that we are dealing with changes in land use. It has already been suggested in the case of the two buried turfs that the faunal differences reflect different types of grassland. The difference between the modern fauna and that in the upper turf is less easily interpreted, but the abundance of *Vallonia excentrica* in each argues for similar environments. Perhaps the present-day fauna is simply the result of many years grazing on the site, causing the gradual extinction of the more fastidious faunal elements.

(d) *Wall 2.* The fauna from the base of wall 2 (sample Md S II) is quite different from any of those discussed above (FIG. 11), although not more than 2·5 m. distant. It was taken from a level which appears to correspond to the lower turf-line (65–73 cm.) and the differences between the two faunas are striking (FIG. 11), demonstrating the effect of local habitat differences on the snail fauna. Open-country species, including *Vallonia costata*, are virtually absent (total 3%). *Oxychilus cellarius*, *Discus rotundatus*



Middleton Stoney. Molluscan faunas from selected levels.

FIG. 11

and *Hygromia striolata* are the predominant elements and none, particularly *H. striolata* (here at 20%), are at all well represented in the other section. Shade-loving species as a whole comprise 55%.

The most likely interpretation of this fauna is that it reflects the local environment of the tumbled material around the base of the wall. Limestone rubble, unlike chalk, weathers slowly, and dumps of coarse angular debris retain almost indefinitely a ramifying network of chinks and crevices in which humidity is high and the temperature relatively uniform. Such conditions are ideal for land molluscs and result in a rich fauna of 'woodland' affinities, even though the over all environment may be quite open.

I have seen similar faunas from three archaeological sites on limestone in Somerset and in all, *Discus rotundatus* and *Oxychilus cellarius* were predominant elements. This was most noticeable in one of the ditches at South Cadbury Castle where the fauna of rubble horizons contained a strong 'woodland' element, while that of finer layers was more open. On the Chalk, in contrast, rubble horizons are generally coincident with an increase in the open-country aspect of a fauna. This is an important difference between limestone and chalk sites.

5. SUMMARY AND CONCLUSIONS

Prior to the construction of the inner bailey, and probably of the castle as a whole, the soil was a non-calcareous brown-earth of *sol lessivé* type. The mollusc fauna was probably sparse and may have consisted largely of slugs. But the building of the castle, entailing considerable excavations and quarrying operations into the Cornbrash, changed all this. The soil was converted into a calcareous rendsina, a change well seen on the flanks of the ditch where the original brown-earth is overlain by the present-day soil; and a rich fauna of land snails probably invaded the site, not only in response to the soil changes but to the creation of a third dimension in the environment—stone walls, sheltered ditches and the large motte of the Norman castle.

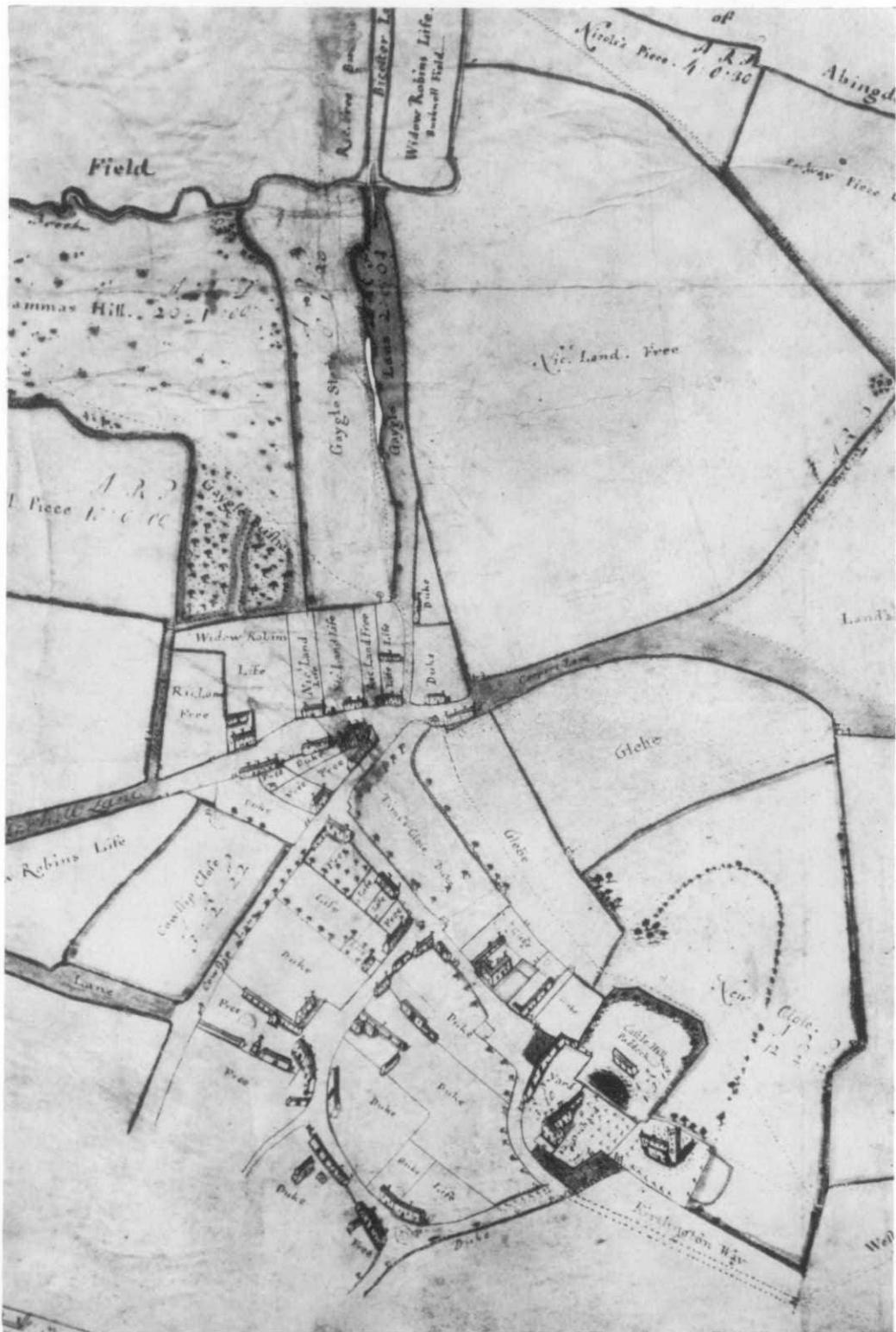
The destruction of the castle, ordered by King John in 1216, took place intermittently since that time as indicated by the alternate layers of stone rubble and grassland turf horizons in the upper levels of the ditch. Leland describes Middleton Castle in the early 16th century as 'over grown with bushys', and 'some peces of the walls of it yet a little apere'. If we are to equate this period with any of those in the ditch it must be with the lower buried turf (65–73 cm.) and the Wall 2 for above this the environment was undoubtedly quite open and very dry.

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PLATE XIII



Plan of Wilson's Farm, Middleton Stoney, 1737, by Thomas Williams. O.R.O. J IV/3.
Photo : Oxfordshire Record Office