



Archaeological Field Unit

**Ramsey Abbey School, Ramsey
Post-Excavation Assessment
& Updated Project Design**

Stephen Macaulay

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Cambridgeshire County Council

Report No. PXA 12

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Ramsey Abbey School, Ramsey
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**RAMSEY ABBEY POST-EXCAVATION ASSESSMENT
AND UPDATED PROJECT DESIGN**
by Stephen Macaulay (19/799)

1 INTRODUCTION

The excavation was carried out over 6 weeks between the 14th April and 1st June 1998, on the area of a proposed building for Ramsey Abbey School (TL 2931 8512). The investigation followed two assessments carried out within the grounds of the Abbey School in 1996 and 1997. The initial assessment (Macaulay 1996) investigated an area to the west of the excavation, with only a single test pit excavated in the present development area. Following the results of the first investigation, the proposed building was moved to an area of presumed lower archaeological value. Archaeology was not however the main cause for the buildings relocation. A second assessment (Last 1997) was subsequently carried out to determine the amount of archaeology which would be disturbed by the new location of the development. The remains of medieval and post-medieval archaeology was discovered, although to a lesser degree to those recorded in the initial assessment (Macaulay 1996, Last 1997).

The land is being redeveloped for a new school building by the Education Property Department of Cambridgeshire County Council. The development was divided between a school playing field and an area beneath temporary school classrooms, resting on concrete slabs, to the east of the present day school science block. The investigation area was confined to the building footprint, but included recording of service trenches linking existing utilities. The excavation was commissioned by Property Management Services, Cambridgeshire County Council and was undertaken by the Archaeological Field Unit (AFU) of Cambridgeshire County Council.

The low peninsula of Ramsey consists of Till (boulder clay) overlying Oxford Clay. There are some areas of gravel on the fen edge. The whole parish is low lying, the highest upland no more than 19m OD (Hall 1992). The investigation area lies within the precinct of the medieval Abbey of Ramsey, on 'upland' (clay/gravel). Fen peaty deposits lie to the east of the excavation area, which is close to the islands 'fen edge'. The ground level of the site slopes down significantly towards the east, with a high point of 6m OD.

A summary of the excavation results are presented in this report, in addition a post-excavation is included and an updated project design which details the further work to be undertaken. The assessment broadly follows the guidelines set out by English Heritage (1991) for MAP2.

2. ARCHAEOLOGICAL & HISTORICAL BACKGROUND

Although a Palaeolithic axe was discovered in Victoria Road, Ramsey (Hall 1992), this is seen as a chance glacial find, and no other significant Prehistoric finds have been recorded on Ramsey island (Hall 1992). The exception to this is a Bronze Age barrow group which lies 3km north of Ramsey Abbey, located along the classic spur protruding into the fens. No archaeological remains of any period were discovered at Ramsey which pre-dated the Saxon occupation.

The site is the location of the important Benedictine monastery of Ramsey Abbey and the investigation represents the first significant *archaeological* work conducted within the environs of the monastic precinct. Previous archaeological investigations have been carried out to *evaluate* the proposed development (Macaulay 1996, Last 1997) while earlier

'excavations' (observations of ground works etc.) have no surviving records. Other investigative work has centred on the *historical* documentation of the Abbey and this has been considerable.

The present knowledge of the archaeology of the Abbey is very poor. Following the Abbey's dissolution in 1539, most of the buildings were demolished. The accurate location of the monastic buildings, including the Cloisters, Abbey church and Inner/Outer Court boundaries are not known, such was the scale of the demolition. Various theories persist, based upon the interpretation of these surviving buildings. These include the present day Parish Church of St. Thomas a Becket, thought to be the original infirmary built in 1180-90, however this may also have been the guest house (*hospital*); the 16th century gate house and the 13th century chapel, known as the 'Lady Chapel' which is incorporated into the cellars of the present school building known as Abbey House, itself a 16th century house.

Ramsey Abbey was founded as a regular Benedictine monastery in AD 969 by Ailwyn (foster brother to King Edgar), and by AD 974 a wooden church was recorded and dedicated. Substantial land grants led to the church becoming one of the richest not only in the fens, but in the country and was to earn the name of "Ramsey the Golden". The abbey continued to flourish throughout the 11th century, surviving both the Danish invasion and Norman Conquest. In the 12th century the monastic buildings and the church were rebuilt using stone from Barnack (nr Peterborough). It was also in the 12th century that the monastery was seized by the Essex Baron Geoffrey de Mandeville, in the period known as the 'Anarchy' (1140-4), who fortified it, however his son abandoned the abbey shortly after Geoffrey's death in 1143. The abbey continued to flourish up to its dissolution in 1539, when the its land, titles and buildings were bought by the Cromwell family who saw to its destruction. Much of the abbey stone is known to have been used to build several Cambridge Colleges (Kings, Trinity, Gonville & Caius) as well as the gate house at Hinchingsbrooke House.

3 AIMS & OBJECTIVES

The original research framework (Macaulay and Spoerry 1998) for the excavation at Ramsey Abbey School, was based in part on the results of the Assessment Reports (Macaulay 1996, Last 1997) and the on-going research projects for Ramsey Abbey (Cozens *pers comm.*). The site specification (Macaulay and Spoerry 1998) was compiled following the design brief (for the evaluation stage) set by the County Archaeology Office (CAO) by Louise Austin (1997).

'Government policy (PPG16) reminds us that archaeological remains are irreplaceable. They are evidence - for the prehistoric periods, the only evidence - of the past development of our civilisation.'

'The primary objective of the investigation is thus to record archaeological evidence contained within the site prior to its destruction by development in order to attempt to reconstruct past use(s) of the sites.'

'Specifically, English Heritage (1991) identify the following themes which provide the framework for the investigation.'

'Process of change'

'The Late Saxon to medieval period' (c700-1300 AD) and the 'Transition from medieval to post-medieval traditions' (c1300-1700 AD).

‘Historic’

‘The impact of Christianity’

The impact, or otherwise, of Christianity is an important research area in early medieval England. The speed and nature of impact, spatial as well as chronological variations, etc. are all important issues.

‘Themes’

‘Settlement hierarchies and inter-action’, ‘Rural settlement’, ‘The definition of urban and rural poor’ and ‘Patterns of craftsmanship & industry’ (including agriculture). The particular importance of medieval abbey’s whose roles cross over and are integrated into medieval life, being neither truly urban nor rural. Although representative of both traditions and well documented.

‘Landscapes’

Medieval rural settlement patterns are the key to understanding the economic, social and political structures of rural England, and in extending our knowledge of change. We now appreciate the importance of regional differences, broadly between the areas of nucleated and non-nucleated settlement. Research over the last fifteen years has focused our attention on the formative period, between 700 and 1200 AD, which saw the nucleation of settlements in many parts of the country.

3.1 General Research Aims

Original research aims are described below as set out in the Ramsey Abbey Project Specification (Macaulay & Spoerry 1998).

The Saxon Monastery

The Late Saxon monastery is known to have existed at Ramsey from around the late tenth century and it quickly became one of the larger houses in the region. No remains relating to this early foundation are known, however, it is reasonable to expect that they lie within the general area of the post-conquest Abbey. Cropmarks on playing fields to the south of the approximate location of the medieval Abbey may represent part of the Late Saxon monastery, however, this is not proven. The first phase of evaluation for this development (Macaulay 1996) identified the presence of late Saxon remains below medieval deposits and to the west of the excavation site. The second evaluation on the site of the later excavation did not find remains of this date but the limited extent of trenching may have precluded the identification of such features.

Identification of any late-Saxon features that appear to relate to structures associated with the early monastery is a key research aim. It will probably not be possible to identify specific buildings or the layout of the institution at this time, but interpretation needs to be framed in such a way that these aims are recoverable in the longer term and with data from elsewhere.

The Post-Conquest Abbey

A general model for the location of key elements of this house is available (e.g. in Haigh 1988), however, only a few parts of the layout of the Abbey buildings are confirmed, with the remainder placed on the basis of the recognised ideal spatial arrangement for medieval religious houses of this type. This site lies to the north east of the probable location of the Abbey Church in an area that might be expected to have contained ancillary buildings. Assigning function to any structures excavated here may well enable a better picture of the physical arrangement of the house to be constructed.

3.2 Investigation of the specific remains revealed in evaluation

The evaluation revealed ditches, a surface and a wall. The first of these may relate to either drainage or to the former presence of timber structures. The surface may be from a building,

or from a yard associated with a building. The wall may align approximately with the surviving parts of the Abbey buildings. Features here will prove difficult to associate with the limited remains already known, but attempts must be made. More specifically the dating of structures and activities will allow archaeological evidence to be placed within, and compared with, the documentary history of the Abbey. Evidence for phases of building and for post-dissolution robbing and demolition should be recoverable.

3.3 Activities, Environment and Economy

If, as expected, the development area proves peripheral to the main range of medieval buildings it may still prove invaluable in elucidating detail of the activities and processes that provided the economic support for this major religious house. Changes over time will be very pertinent, especially if considered in association with documentary sources. Thus refuse disposal areas and features will be significant, and the more so if good preservation of organic remains has occurred. In addition evidence for industrial and agricultural processing will prove valuable, as will indications as to wealth, status and conspicuous consumption: recoverable from food waste, ceramics and metallic and other artefact types. Comparison of these assemblages with similarly dated ones from other medieval Fenland sites, particularly from within towns, will be a priority. The contribution of Fenland resources to diet and material culture will likewise be considered, particularly in the light of Ramsey Abbey's known fisheries on Whittlesey Mere and large holdings throughout the Fenland basin. Ramseys position on the Fenland riverine distributive system will also be a factor relating to investigation of material culture and provenance.

4 EXCAVATION METHODS

The methodology for excavation was determined by the shape and size of the building footprint, the area of which was the investigation area set out by the CAO (Austin 1997). The brief stipulates that the evaluation (excavation) must cover the footprint of the new building.

The investigation covered the building imprint, an area of approximately 2000 sq. m (35m x 55m broadly 'L'-shaped). The site was to be mechanically stripped using a 360° tracked excavator to a depth of at least 0.30 m, however subsequent investigation necessitated additional machine stripping to allow investigation of earlier archaeological deposits buried beneath both post-medieval dumping and medieval archaeology. The site was stripped in the month of April 1998 during the school Easter term break to avoid interrupting school classes, at the instruction of the client. It turned out to be the wettest April recorded this century. Ground water occurred at a depth of c0.30 m below ground level, hindering the identification of buried archaeological deposits. The site itself lies towards the edge of the island of Ramsey, close to its 'fen edge'. Throughout the investigation ground water occurred at c0.7m below ground level, necessitating pumping of all deeper archaeological features investigated.

5 SUMMARY OF RESULTS

The investigation has identified significant archaeological remains linked both to the medieval Monastery and the Late Saxon Abbey. In addition significant Post-medieval deposits were discovered, much of which could be tied to 18th and 19th century maps of the area.

Of particular significance was the discovery of Saxo-Norman (10th-12th century) buildings to the south of the site. These were temporary structures constructed using an earthfast post and beam technique. These features are truncated by medieval boundary ditches, producing material from the 12th-13th centuries. These ditches form boundaries and are the first evidence of the internal division of the abbey's *outer precinct* at Ramsey.

In the northeast corner of the investigation area, was a medieval timber framed building(s) (12th-14th century) which was discovered to have disturbed earlier Saxo-Norman deposits, also a building. These buildings are likely to have been warehouses or barns, again within the *outer precinct*. This medieval building has drains which run to the east into what appears to have been a fairly early fish pond. This feature is at least 11m wide and over 20m long and continues beyond the investigation area northwards. Both medieval and post-medieval drains are functional. The pond itself was completely infilled/covered by Post-medieval rubble dumping, presumably to infill the hollow created by its presence. The discovery of a fish pond is of real significance, as an understanding of the wetland elements in the economy of Ramsey is a pertinent research aim which is heavily alluded to in documented texts but little understood in practice.

Of great significance was the discovery of a very large (1.87m deep x 4.6m wide) V shaped ditch running east-west, through the centre of the site. The sharp profile, great size and nature of its infilling suggests a defensive purpose. Pottery recovered has been dated to the 12th century or later (Shelly ware, Ely ware), although earlier types (St Neots, Stamford and Thetford wares) were present. The ditch itself had a short life span, being waterlogged (moat?), quickly infilled and finally deliberately backfilled with its own bank. There is no evidence to suggest that the ditch was a drain or catchwater. The ditch is a much larger re-cut of an earlier ditch along the same alignment. A possible explanation may be that it was constructed during the fortification of the abbey in the 12th century during the Anarchy, and that it was excavated along an existing boundary. Later, but still medieval features (13th-14th century) are cut into the top of the infilled ditch. These features are beamslots and postholes, again representing buildings, probably similar in function to the Saxo-Norman examples already described.

The site has a considerable deposition of Post-medieval material, including the remains of two wall foundations, both of which also follow the courses of earlier medieval ditches. The site is covered by both rubble dumping (which obscured much of the site) and accumulated garden soils. Several phases of Post-medieval drains, both open and stone-lined, run across the site, unsurprising in a seasonally waterlogged area. Of importance were the large quantities of dressed stone re-used in these Post-medieval features which must have originated from the medieval abbey. Fragments of pillars, windows, spiral stairwells, and even a sarcophagus base were recovered.

The investigation at Ramsey Abbey has encountered significant archaeological remains dating to the Late Saxon or Saxon-Norman and medieval periods. The Saxon remains represent the first investigation of archaeology of that period at Ramsey Abbey, following their discovery in the evaluation in 1996. They seem to be linked to out-buildings and although iron working cannot be proved further research into this find will prove significant. The discovery of medieval boundary ditches and other features provides context for the layout of the abbey for the first time. Many of these features, including the fish pond, are concerned with water management, unsurprising due to its fen edge location and a common feature of many monastic sites. The presence of medieval buildings, probably linked to barns and out buildings, suggests that the areas was indeed within the monastic '*Outer Court*' and will provide data on this aspect of the abbey.

A general synopsis of the site's occupation can be divided into 6 main phases, based on the stratigraphic matrix and the Ceramic phases (Fletcher & Spoerry this volume). The pottery spot dating and analysis has not altered the sites chronological sequence, and has allowed a refining of the sites development. The site has been subject successive periods of occupation and much archaeology is cut through previous culturally deposited layers and deposits, as well as other cut features. No remains of pre-Saxon date were recovered from the site and although 20th century disturbance has occurred on the site, no significant land use (i.e. structural foundations) has affected the preservation of deposits since the medieval period, other than the laying of drains and the walls recorded on the 1707 map.

Phase 1 (900-1150 AD)

This corresponds to Ceramic Phase 1 and describes the earliest occupation on site, relating to the Saxo-Norman period. The remains of this phase are, mostly, located in the southwest corner of the site, although there are some postholes which are located in the northeast corner of the site which are disturbed by later features. The Late Saxon/early medieval features are the remains of wooden structures (beamslots, postholes) from at least two buildings. Finds recovered include pottery of Thetford, St Neots and Stamford wares and refuse from iron smelting debris. Although these features cannot be definitely interpreted as evidence of smithing or iron working, there is likely to have been such works nearby. Also belonging to Phase 1 is a small east-west ditch which probably marks an important boundary, within the Abbey. It is this ditch which is re-cut in Phase 3, during the construction of fortifications and remains a boundary through to the Post-medieval period.

Phase 2 (Mid-12th Century+)

Ceramic Phase 2 (1150-1350 AD) is contained within *stratigraphic* Phase 2, however Ceramic Phase 2 also relates to Phases 3 and 4 (see below). Phase 2 in the initial Post-Conquest period, records a boundary ditch which runs nnw-sse and turns in an 'L'-shape to the west, forming an enclosure to the south and west. Two smaller ditches to the north are set out on an east-west alignment. Importantly a drainage ditch runs east-west, over which the later post-medieval wall (1707 map) is aligned. Again, this evidently marks a boundary which persists beyond the Abbey's dissolution.

Phase 3 (Mid-12th Century+)

This represents the main period of occupation on the site. A possible trackway is formed as well as a boundary/enclosure ditch in the southeastern area of the site. An 'L'-shaped feature, aligned approximately east-west and north-south, cuts both building remains from Phase 1 and the enclosure ditch in Phase 2. The feature appears to replace the enclosing/boundary function of this ditch from Phase 2. Across the centre of the site is a large east-west ditch running along the same alignment as an earlier (drainage?) ditch. This ditch is over 4.6m wide and 1.87m deep with a steep V shaped profile. It is probable that it is a ditch dug during the fortification of the Abbey during the occupation by troops of Geoffrey De Mandeville, when the Essex Baron seized the Abbey in 1143. Again, like other ditched features on the site, the position of the ditch, which marked a boundary of some description, was maintained until the 18th century, with a Post-medieval wall running directly above. At least one timber building was excavated in the north west corner of the site and is assigned to Phase 3. This building has foundation remains characterised by vertical slots for split timber frame construction and post supports. It is evident that there are several *phases* of construction and re-building of this structure. Which measures in excess of 10m x 4m. In addition smaller ditches possibly cut for drainage, run to the south and east, away from the Abbey in general (towards the fen edge) and out of this building in particular. Some isolated refuse pits are assigned to this general Phase 3.

Phase 4 (13th-16th century)

This Phase could be incorporated with the previous, and indeed Phase 3 remains are likely to persist through to the dissolution in 1539 (c.f.). Phase 4 exists to describe later medieval

features which, although possessing some contemporary functions, do stratigraphically post-date some features of Phase 4. The most important feature of this phase is a large pond or channel (11m wide, over 20m long) which was encountered in the northeast corner of the site, buried beneath Post-medieval rubble debris. This feature has drains running downslope to the east and is in turn the recipient of drains from buildings to the west (c.f.). Post-medieval stone drains are also cut into the upper fill of this feature. The pond contained high medieval pottery (Ceramic Phase 2) and animal bone, notably horse.

Phases 5 and 6 (Post-Dissolution 1539-Post-medieval)

Following the Abbey's dissolution in 1539, no occupation *per. se.* was recorded. Post-medieval drains are present both ditches and stone lined. Importantly, several stonework features were recorded which re-used dressed and decorated stone from the Abbey. In addition the discovery of two wall foundations could be traced to walls recorded on a 1707 map. As noted above both these walls continue a long tradition of boundaries within the Abbey, which retain their importance throughout the site's occupation. The demolition of the walls (Phase 6) has resulted in much of the investigation area being covered by the resultant debris. This in turn covered stone-lined drains, of Post-medieval date (machine brick based, but capped with Abbey stone). These drains run to the north and east beyond the limit of the site. Remains of this period also include dumping layers and garden soil (Phase 6). This is of interest as much Abbey dissolution material is present.

7 ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

Key to abbreviations in Task Lists

Cons = Conservator, EC = External Consultant, ILL = Illustrator, PM = Project Manager, PO = Project Officer, AS = Assistant

7.1 STRATIGRAPHIC AND STRUCTURAL DATA by Stephen Macaulay

7.1.1 Quantity of materials and records

The number of records relating to the excavated features are as follows:

379 context records, of which 236 describe deposits and 143 describe cuts;

A digital context record of the site;

70 hand drawn plans at scale 1:20;

A digital base plan of the site, hard copies of which may be reproduced at any required scale;

82 hand drawn sections at scale 1:10;

1 hand drawn sections at 1:20;

700 photographs (not including post-excavation artefact slides);

24 sample records;

66 small finds.

Unexcavated features were recorded both on the digital base plans and the hand drawn base plans.

7.1.2 Provenance and dating

All deposits but the topsoil and natural geology can be attributed to the Late Saxo-Norman period through to the Post-medieval 19th century. These dates are based on pottery spot dating, stratigraphic and spatial associations. Within this date range, a minimum of six distinct stratigraphic phases exist (see section 6 above).

7.1.3 Range and variety

Feature types are mostly cut features containing at least one deposit, however layers and cultural deposits are present on the site. Upstanding features do exist on the site, although these are Post-medieval features, either wall foundations or stone lined drains.

Cut features recorded on the site included ditches, generally U shaped drainage ditches, which also served as boundaries within the Abbey precincts. A larger V shaped fortification ditch was excavated, which ran through the centre of the site. Beam slot ditches of buildings were recorded, of which two distinct types were excavated. The type of foundation slot for the earlier Saxo-Norman buildings was notably different to the later medieval features. Small narrow ditch drains were also investigated, as were later Post-medieval field drains. Other structural or constructional feature types included postholes and stakeholes, both usually associated with nearby timber framed buildings. Only a few pits were present, although a rubbish function for some was likely, at least as a secondary use. Water management features included not only drainage channels, but a larger 'pond', which may have been for fish. The layers recorded were both trample deposits, potentially associated with occupation floors (within and around buildings) and dumping layers, containing cultural material disturbed from earlier deposits.

7.1.4 Condition

The archaeological deposits were horizontally truncated across much of the site. There was some evidence of buried surfaces and 'midden' type deposits on the site, including 'make up' deposits from earlier periods of occupation. However the truncation and alluviation caused by regular episodes of flooding both removed and added to the deposits. The sequence of site occupation has resulted in some severe feature truncation, with direct re-use of features through time and extensive post-medieval action which has resulted in both dumping and infilling of large areas of the site.

Many features, particularly the earlier deposits, had suffered acute truncation, with only limited traces surviving. In particular features from Phase I (Saxo-Norman period), survived only as shallow cuts or as truncated features, visible in section beneath later medieval deposits.

Although the site was excavated in initially extremely wet and waterlogged conditions, the deposits were not *waterlogged*, as such the preservation of palaeoenvironmental deposits was generally poor. The nature of the local topography and water table creates significant annual fluctuations in the water level, resulting in leaching and flooding episodes. The effect this process had on the deposits and features was to blur some interfaces, however the effect was not serious enough to prevent feature/deposit recognition.

7.1.5 Primary sources/documentation

The records for the excavated deposits are complete and have been checked for internal consistency. All context records have been computerised to aid in cross-referencing and record consistency, using the 'Dataease' software package for PC's. Written records have been completed on archival quality paper using light-fast waterproof ink and have been fully indexed. Drawn records in pencil have been checked, referenced and levels checked. All digital and computerised records have been archived and copies are held at separate locations and in a fire proof safe. The site matrix has been produced on-site and checked/cross-referenced during the assessment stage. The matrix has also been checked with preliminary spot dating results.

All primary records are retained at the AFU offices, Fulbourn.

7.1.6 Means of collecting data (method of assessment)

The primary paper records have been checked in conjunction with the site matrices and the assessments of artefactual and ecofactual materials to generate the information for this assessment. General finds information for individual contexts has been collated using the computerised records database. Some preliminary grouping of contexts, deposits and features have been undertaken, as well as a site phasing sequence developed.

7.1.7 Selection of data for further analysis

All records dating to the remains of Saxo-Norman and medieval in date will be subject to further analysis. And where appropriate the Post-medieval records which relate to the medieval archaeology. This will include features containing dissolution material, Abbey stonework, and demonstrating continuity from the medieval period, especially boundary features.

7.1.8 Statement of potential

The contextual records are the main component of data and are sufficient to form the foundation of the site narrative. The site's major significance is based upon the recording of the stratified sequence of Saxo-Norman, medieval, Abbey Dissolution and Post-medieval re-use and demolition, all within the small investigation area. The understanding of the site's development will be enhanced both with regards to the site itself and the relationship/implications for the Abbey as a whole. The investigation represents the first archaeological investigation of consequence within Ramsey Abbey itself.

The interpretation and understanding of the ditches and their roles as boundary features will be significant. Many features which originate in the Late Saxon or Early medieval period, continue with re-used and re-cut and are maintained as ditches or re-built as walls, through to the Post-medieval period. Some features are still present in the 18th century and are marked on the 1707 map. This data is the first understanding of the divisions within the *Outer Court* of the Abbey precinct.

The investigation and interpretation of the large 'fortification' ditch will add to both the *intra* site development, but more significantly to the *Historical* records during the Anarchy period and the occupation of the Abbey by Geoffrey De Mandeville.

Structures and buildings on the site provide the first investigation of such features within the Abbey precinct. Spanning the Late Saxon and medieval periods, they will contribute to understanding the non-Monastic elements of life within the Abbey. The interpretation of the function of these features will shed light on possibly industrial activities present on the site.

The importance of water management at Abbeys (Aston 1988 & 1993), and particularly at Ramsey (Haigh 1988) is noted. The investigation of the channels, pond type feature and drains (medieval and Post-medieval) will contribute to this aspect the settlements functions.

Preliminary pottery dating has indicated that a tight dating sequence does not exist from artefactual material alone, indeed the sites *phasing* is more accurately determined by the stratigraphical records. It is into the matrix that the artefactual material will be fitted. The spot dating of pottery does not contradict the interpretation of the sites phasing.

7.1.9 Analysis methods and quantity statement

The site data will be subjected to rigorous analysis. All contexts dating to all periods will be grouped and phased based on information from pottery, feature types, spatial distribution and matrices. This information will be distributed to relevant specialists to allow accurate analysis of the material categories on the basis of the contextual data. The full site report will be based on a combination of the contextual data and the reports compiled by individual specialists, it is therefore envisaged that the final report will not be written until all specialist analysis is completed. Reference to, and comparison with other sites of similar period and type will be made wherever possible. Importantly the integration with *Historical* documents and where appropriate primary sources will be considered. The site will also be considered in on-going research studies by Cambridge University (Department of Anglo-Saxon, Norse & Celtic studies - Prof. M. Lapidge) into Ramsey Abbey. Useful comparisons will be made with other Cambridgeshire and fen monasteries such as those at Peterborough, Ely and Sawtry.

7.1.10 Potential of methods to meet aims and objectives

By subjecting the contextual data to rigorous analysis and incorporating all the specialist data into the site record it should be possible to produce a database and report which can be used for Ramsey Abbey presenting the first opportunity to interpret activities at Ramsey with other Abbeys and Monastic Houses. Given the known *historical* importance of Ramsey during the medieval period, the dearth of any excavated material makes this archive particularly important. Data has been recovered which will help to elucidate the development of both the Saxon Monastery and the Post-Conquest Abbey, although more data was recovered for the later periods. Understanding the activities on the site, with implications for economy and environmental considerations, was identified as a key objective for the project. The stratigraphic records not only contribute to the site sequence of development but demonstrate chronological and functional alterations, with changes in palaeoenvironmental data recorded. The site will be phased and dated based on the extensive site matrix which exists for the site. Work will be carried out on the spatial distribution and comparisons of feature types. Of particular importance will be determining both changes and continuity in the sites functions, and their relationships to the broader Abbey precinct. The final phases and disuse of the site have a basis in historical documentation and demonstrate both information on the Dissolution as well as development into a 16th century country house.

7.2 POTTERY by Paul Spoerry and Carole Fletcher

7.2.1 Provenance and quantity

The material from Ramsey Abbey School consists of 1,014 sherds weighing 10,977g. It derives from a range of features from Late Saxo-Norman date, through to the Dissolution period (post 1539) and Post-medieval horizons, excavated during the evaluation and excavation (Stages 1 & 2). The assemblage is not large, and mostly dates to the 12th to 14th centuries.

7.2.2 Dating

The Ramsey assemblage spans the Late Saxon/Saxo-Norman period to the early modern. The pottery has been divided into 4 main Ceramic Phases:-

Ceramic Phases	Pottery types typifying phase
CF1 (990-1150)	Thetford & Thetford types, Early medieval ware, St Neots, Stamford.

CF 2 (1150-1350)	Medieval Ely ware, Shelly ware (Northants), Developed Stamford, Lyveden-Stanion wares, Grimston.
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CF 3 (1550-1700)	Frechen stoneware, Post-medieval redwares.
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CF 4 (1780-1900)	Bone China.
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Ceramic Phase	No. of contexts
CF 1 (900-1150)	11
CF 1-2	1
CF 2 (1150-1350)	39
CF 2-3	19
CF 3 (1550-1700)	6
CF 3-4	2
CF 4 (1780-1900)	4

7.2.3 Fabrics and forms

The principal fabrics are each period are as follows CF 1: Thetford, St Neots and Stamford wares; CF 2: medieval Ely ware (MEL), Northampton Shelly ware, Developed Stamford, Lyveden-Stanion and Grimston wares; CF 3: Frechen stoneware, Redwares; CF 4: Bone China. The largest group on the site is the "High medieval" CF 2 (1150-1350) group, consisting mainly of MEL fabrics and Shelly wares. The classic type at Ramsey being the bowl forms, with wavy line decoration or stabbed rims. Some of the smoother, less shelly fabrics are used for cooking pots. In general this is a domestic assemblage, dominated by cook pots, jugs and bowls. Much of the assemblage consists of small body sherds and a high percentage of residual material.

7.2.4 Primary sources and documentation

The primary comparative sources are poor, there is a complete absence of information regarding the ceramic sequence at Ramsey and the Cambridgeshire fenland monasteries in general, only Denny Abbey provides useable data from recent excavations. Very recently a County type series has begun to be established in both Cambridge (Hall 1998) and Peterborough (Spoerry 1998), against which this material can be compared. The relationship between the ceramic assemblage at Ramsey and other ports and towns in the fenland system may be the most significant line of enquiry at a regional level.

7.2.5 Data collection

Each context has the sherds separated into fabric types. The number of sherds recovered, along with spot dating and form type has been recorded, also weight has been measured.

7.2.6 Discussion and potential

The collection is of importance locally and of regional interest for a number of reasons. Quantified data from Ramsey Abbey does not exist, and will thus be crucial in initiating a local type series. There are only 11 contexts on the site which can be firmly dated to the Saxon or Saxon-Norman period. These 11 contexts dated 900-1150, contained a total of 32 sherds. The largest group of pottery represented on the site is the "High medieval" 1150-1350 group which consists mainly of medieval Ely ware (Mel) fabrics and Shw with a small amount of Lyst & Grim. The form of many of the Mel sherds suggests an early date (1150-1350). The Mel material is also assigned to this earlier date period where there are "significant" amounts of Shw or Lyst, as these fabric types have a more fixed date range

(1150-1350). There are a number of contexts (19 in total) assigned to the phase 2-3 group. This is mainly due to the presence of only Mel sherds in the context, or were Mel sherds are less abraded than other pottery within the context. The next major ceramic phase is 1550-1700 (phase 3). There is a significant fall in the number of contexts that fit into this dating group, six in total producing 46 sherds of which 27 sherds can be considered residual. Finally, Ceramic Phase 4 contains only 4 contexts with 84 sherds of pottery, 47.6% of which is residual. It would appear that between 1350 and 1550 there is a fall in the deposition of ceramic material on the site. By ceramic phase 3 material is recovered from only 6 contexts and from these the residuality is over 50%.

The pottery record suggests lower levels of depositional activity on the site post-1350 and very little post-Dissolution activity. It is possible that when a more detailed examination of the pottery from Ramsey Abbey is undertaken the dating of some contexts may change. This will be of most significance in Phase 1 where those sherds identified as a Thetford type or Emw may be reassigned to a Mel type fabric. It will also effect phase 2-3 material which may be assigned an earlier date or may be widened to include more material that is at present located in Phase 2.

7.2.7 Recommendations

Fabric identification

There is a problem in the Fenland in attributing fabrics to kilns in the medieval period. At Ramsey the majority of material is Ely ware type, but much of it is rather different to that known from the Potters Lane kiln site at Ely. Whether it is therefore from another location, or represents wider variation within Ely products, is not known. This needs resolving and it may well be that the best way forward with this assemblage would be to carry out thin section analysis on a small selected sample, including comparison with sections from known Ely products. This is in part, or wholly, beyond the core requirements of this post-excavation programme, but is fundamental to regional ceramic studies of the medieval period.

Regardless of a thin section programme some effort should be spent on macroscopic fabric comparison. In addition vessel form/fabric concordance should be studied by visiting and photographing more complete examples in the small local museum in Ramsey, which derive from elsewhere on the monastic site.

A small local type series should be created.

Sequence and significance

This assemblage is too small to warrant detailed analysis, however, so consideration of changes in the assemblage over time should perhaps be attempted at a Phase/period level only, as there are few large individual feature groups. If groups of features can be linked to separate 'structures' or properties then the assemblages from these entities should be compared and contrasted.

Phases 1-3 should be fully quantified and recorded.

Illustration

The assemblage includes very few profiles and details of decoration warranting illustration at this stage. Archive drawings should, however, be made of Ely ware variants and any other local types occurring in some abundance to provide information for regional study. These should be inked-up as this constitutes only a small amount of time on top of that required to produce drafts.

Report and Publication

A short report, with tables and statistical representations should be produced. This will focus on phases and key groups, and contrasts between them, plus it will consider the contribution of key producers and their geographic and other linkages with Ramsey Abbey.

7.2.8 Task list

Full Report

Recording	4.5 days (AS)
Sequence/background	2 days (PM)
Analysis	1 day (PM)
Illustration of selected sherds	1.5 days (ILL)
Report writing and edits	1.5 days (PM)

7.3 THE FAUNAL REMAINS by Ian L. Baxter

7.3.1 Quantity

A total of 699 fragments of animal bone was recovered from hand excavated deposits. A small amount of bone was recovered from the heavy residues of sieved environmental bulk samples. Due to the relatively small size of the assemblage a full report was commissioned on the faunal remains, rather than an assessment.

The total weight of the assemblage is 14,459g, not including material recovered from recovered from bulk samples. A total of 510 fragments or 73% of the total could be identified to some extent.

7.3.2 Provenance

All faunal remains were selected for analysis, deriving from a total of 73 contexts. Although the faunal remains were recovered from the full range of feature types identified during the excavation, there was a clear pattern of deposition. Faunal remains recovered from ditch contexts (N=35 or 48%) dominate the assemblage, and in particular structural remains (beam slots N = 18). Faunal distribution: Ditches (Boundary/drainage N = 18, Beam slots N = 17); Postholes (N = 5); Channel/Pond (N = 4); Pits (N = 6); P/Med stone Drain (N = 1); Unstrat (N=7).

For the purpose of this analysis the bone has been grouped into phases based on the pottery ceramic phases and stratigraphic relationships of site features. Phase 1 dates from 900-1150 AD, Phase 1-2 from 1000-1200 AD, Phase 2 from 1150-1350 AD, Phase 2-3 from 1150-1500 AD, Phase 3 from 1500-1700, Phase 3-4 from 1770-1900 AD, and Phase 4 from 1780-1900 AD. Most of the bone from the site came from features in Phase 2, the High medieval period, just over 40% of the total. A further 23% came from Phase 2-3, making the medieval total over 63%. Table 1 (Appendix in Archive Report) gives the total number of fragments per species per phase, tooth eruption and wear data for the main domesticates in the medieval phases are in Table 5 (Appendix in Archive Report), and bone epiphyseal fusion data for the same taxa for the same period in Table 6 (Appendix in Archive Report).

7.3.3 Range and variety

Of the 699 fragments within the report, 510 fragments were recognisable or 73% of the total.

Species Representation		Phase
Human	<i>Homo sapiens</i> L.	3-4
Horse	<i>Equus caballus</i> L.	1-2, 2, 2-3, 3, 3-4, 4
Red Deer	<i>Cervus elaphus</i> L.	2, 2-3
Fallow Deer	<i>Dama dama</i> L.	2-3, 3, 4

Cattle	<i>Bos f. domestic</i>	1, 2, 2-3, 3, 3-4, 4
Pig	<i>Sus f. domestic</i>	1-2, 2, 2-3, 3, 3-4, 4
Sheep/Goat	<i>Ovis/Capra f. domestic</i>	1, 1-2, 2, 2-3, 3, 3-4, 4
Dog	<i>Canis familiaris</i> L.	2, 2-3, 3-4
Cat	<i>Felis catus</i>	2-3, 3, 3-4
Hare	<i>Lepus europaeus</i> Pallas	1-2
Goose	<i>Anser f. domestic</i>	2
Goose	<i>Anser/Branta</i> sp.	2-3
Fowl	<i>Gallus f. domestic</i>	1, 1-2, 2, 2-3
Cf. Tufted Duck	<i>Aythya foligula</i> L.	3
Crow	<i>Corvus corone/fugilegus</i> L.	3
Jackdaw	<i>Corvus monedula</i> L.	3-4
Fish	<i>Gadus</i> sp.	2-3

Notes on the species

Human

A human frontal fragment and a fragment of fibula were found in context (1008) of Phase 3-4. These are probably redeposited from disturbed burials.

Horse

The remains of horse are relatively common, accounting for nearly 6½% of identified fragments. In Phase 2 horse fragments represent 3% of identified bone but none are sufficiently complete to calculate withers heights. Available measurements suggest the animals were small. Deposits in Phase 2-3 contained a similar proportion of horse bones. Some of these were larger than the animals from earlier phases. Of particular interest are two femora from different animals found in context (1301). The more complete specimen is from a horse approximately 130.6 cm or 13 hands high at the withers. The other less complete femur came from a somewhat larger animal over 14 hands high. As this was associated with a stirrup and armour it may represent a destrier or war-horse (Hyland 1994). The horse remains from Post-medieval phases (3, 3-4 and 4) came from large animals of 14 or 15 hands. In Phase 4, 18% of identifiable bone came from horses. In France during the High medieval period Abbeys played a significant role in horse-trading (Hyland 1994:83-5), but the author has not seen comparable data from England. After the Dissolution Henry VIII enacted legislation to improve the quality of English horses and increase their size and fitness for war (Chivers 1976:7-8). The approximate ages at death of horses from the site are given in Table 2 based on tooth wear.

An innominate fragment from Phase 2 (1323) has chop marks around the acetabulum and a second innominate from Phase 3 (1004) has longitudinal cut marks on the inner and outer surface of the ilium body and transverse cut marks on the outer wing. The larger femur from Phase 2-3 (1301) has a longitudinal chop mark on the lateral epicondyle.

A third metatarsal from Phase 4 (1095) has the second metatarsal fused to it with pitting of the proximal articular surface. This is unlikely to be a case of spavin as the joint surface is affected. It may be a mild case of infective arthritis probably caused by *Brucella abortus* which also causes infectious abortion in cattle and severe undulant fever infection in man (Baker and Brothwell 1980). A much more severe case of infective arthritis from Market Harborough has been published by the author (Baxter 1996).

Deer

Two red deer antler tines were found in context (1102) of Phase 2-3. The only other possible red deer remains are a lower II from (1192) in Phase 2. A fallow deer antler tine accompanied those of red deer in context (1102). None of these antler fragments has any chop, cut or saw markings indicative of craft working and it is not possible to say if they were from shed antlers or the result of hunting. The remains of fallow deer are twice as common as red deer at the site and occur in Phases 2-3, 3, and 4. In Phase 2-3 they account for 2½% of

the identified bone. A proximal radius fragment from context (1168) has two transverse cut marks on the proximal anterior surface below the articulation. These were probably caused during dismemberment.

Cattle

Cattle account for 10.7% of identified bone from Phase 2, or 35% if combined with large mammal. In Phase 2-3 cattle remains comprise 9% of identified bone, or 41% if combined with large mammal.

No suitable cattle bones were complete enough to calculate withers heights. The limited information available from teeth and epiphyseal fusion data (Tables 5 and 6) suggests that most medieval cattle were adults or old adults at time of death. This is probably related to their usefulness as traction animals. Half of the cattle bones from Phase 1 have butchery marks. Although few bones from Phases 2 and 2-3 have butchery marks, the level of fragmentation and that of bone fragments only identifiable as large mammal is indicative of butchery. By Phase 3-4 cattle long bones are being sawn through. Three bones from the carpus of a single individual were found in context (1040) of Phase 2. A phalanx I from the same context has high ring bone indicative of a beast used for traction (Baker and Brothwell 1980:120-2).

Pig

The remains of pig are particularly common in Phase 2, accounting for nearly 10% of identified bone.

Many religious houses kept pigs on a moderately large scale during the Middle Ages. Although withers heights have been calculated for the pigs from the site in Table 4, these should be treated with caution as the estimations based on Teichert's (1990) factors for the calcaneum and metapodials are unreliable (Weinstock 1993:77). An astragalus from Phase 1-2 (1090) gives a withers height of 74.6 cm, which may be an underestimate (Weinstock op. cit.). Out of four canines or canine alveoli available from Phase 2 all but one are from male animals (Table 3). This suggests the culling of surplus boars not required for breeding purposes. The canines from Phases 3 and 3-4 are also from male animals. Most pigs were probably slaughtered before the age of two years (Tables 5 and 6). The only butchery recorded on pig bones is a scapula fragment from Phase 3 with the neck (collum scapulae) chopped through.

Sheep/Goat

No bones of goat were identified in the assemblage and where bones are sufficiently complete they are consonant with sheep. Unfortunately no bones suitable for estimating withers height were complete enough to be useful. However, most of the sheep were of a small size typical during the medieval period. An exception is provided by a scapula fragment from Phase 2 (1069) which came from a particularly large animal, perhaps a ram. The horn cores of a ram were found in context (1353) of Phase 1-2. Where sex can be established from the pelvis, over 66% of sheep in Phases 2 and 2-3 are female (Table 3). Most sheep seem to have been slaughtered between one and three years but a number of older animals were also kept as breeding stock. Sheep comprise 18% of all identified fragments in Phase 2, or 44% if combined with medium mammal, and 14% in Phase 2-3, or 30% if combined with medium mammal.

Dog

Canine teeth belonging to small dogs were found in Phase 2 (1080) and Phase 3-4 (1180). The remains of a much larger animal were found in context (1100) of Phase 2-3 comprising a distal humerus, most of a femur and a proximal tibia. Although none of the bones is complete enough to give an accurate withers height, this was a large hound similar in size and build to a modern Irish Wolfhound. There is a transverse cut mark on the lateral midshaft of the humerus; a longitudinal cut mark on the proximal anterior shaft of the femur, which also has an old proximal break indicative of an impact fracture; and two longitudinal cut marks on the lateral shaft of the tibia, the medial proximal part of which has been crushed inwards while

the bone was still fresh. At least 6½% of all identified medieval bone has been gnawed by dogs.

Cat

Cat remains occurred in Phase 2-3 (1303), Phase 3 (1311), and Phase 3-4 (1008). The bones from (1303) are associated hind leg elements from a sub-adult. The partial skeleton of a small adult cat was found in a sample from context (1311). There are possible cut marks on the mandibulae which would suggest skinning, but they are not as fine as other examples I have seen and may be of recent origin.

Hare

A proximal tibia fragment of hare was found in context (1138) of Phase 1-2. It bears a canine puncture caused by a dog.

Birds

The remains of domestic fowl occurred in all the Late Saxon and medieval phases. The juvenile remains from Phases 2 and 2-3 recorded as indeterminate in Table 1 probably also derived from domestic fowl. Bird bones account for 7% of all identified medieval bone. Two fragments of bird eggshell were found in a sample from context (1311) of Phase 3 but the species cannot be identified. The goose remains from Phase 2 are all of greylag (*Anser anser*) size and probably represent domestic geese. Those from context (1218) in Phase 2-3 are slightly smaller than a reference white-fronted goose (*Anser albifrons*) in the Leicester City Museums collections and may have originated from wild geese. The distal humerus fragment from this context has tooth punctures on the anterior surface, probably caused by a dog. A single duck bone from context (1311) of Phase 3 probably came from a tufted duck (*Aythya fuligula*). A single bone of either carrion crow (*corvus corone*) or rook (*Corvus frugilegus*) was recovered from context (1035) of Phase 3, and two bones of Jackdaw (*Corvus monedula*) from context (1180) of Phase 3-4.

Fish

Two large fish vertebrae were found in context (1102) of Phase 2-3. These belong to a large Gadid, probably cod (*Gadus morhua*). Fish, both salt and fresh-water, will have played a more significant role in diet at the Abbey than is reflected in bone recovery.

7.3.4 Condition

The preservation of bone from the site was good. The majority of the bones had good clean surfaces and where they existed, chop, gnawing and butchery marks were recorded.

7.3.5 Method of Assessment/Report

A full detailed report has been compiled on what is a small assemblage of faunal remains from Ramsey Abbey School. All recognisable fragments have been analysed recording species, skeletal elements, butchery, pathology and taphonomy. Bone was identified by comparison with published descriptions (in particular Schmid 1972, Boessneck 1969, Sisson and Grossman 1953, Getty 1975, Cohen and Serjeantson 1986, Prummel 1987-9, Clutton-Brock et al 1990), and reference material in the author's collection and the collections of Leicester City Museums. Bone measurements are given in Appendix 1 and are based on Jones et al (no date), von den Driesch 1976, Eisenmann 1986 and Harcourt 1974. Withers height estimations in Table 4 are based on multiplication factors given by Kiesewalter (in von den Driesch and Boessneck 1974) and Teichert (in Weinstock 1993). The horse ages in Table 2 are based on incisor wear drawings in Barone (1980) and tooth wear curves in Levine (1982). In Table 3 the sex of the domestic animal remains is based on Sisson and Grossman (1953), Grigson (1982), Boessneck (1969), and Clutton-Brock et al (1990). Long bone fragments without diagnostic features are classified as Large and Medium Mammal. For most purposes these can be combined with cattle and sheep/goat respectively.

7.3.6 Selection of data for further analysis

A full report has already been compiled and no further research will be undertaken.

7.3.7 Statement of potential

A full report was undertaken since conducting an assessment would not be worthwhile. The available animal bones are insufficient in number to draw any conclusions about husbandry as practised on farmland attached to the Abbey. However, during the medieval period pig meat formed an important element of the diet second only to beef. No doubt large piggeries were maintained by the Abbey. Many cattle were probably used as traction animals before utilisation as food. Sheep were next in importance followed by domestic fowl, domestic and possibly wild geese, and venison. No rabbit bones were found during this excavation and only one Saxo-Norman hare bone. Large hunting dogs were kept and butchered upon death, perhaps to feed other dogs. Such animals would have been useful in the pursuit of deer. Horses of a size suitable as palfreys and destriers were found in the medieval deposits together with evidence of horse butchery. Whether horse meat was intended for the consumption of humans or dogs is unknown. Fish were imported from the coast, certainly on a larger scale than their representation in the faunal assemblage.

The faunal assemblage will be combined with spatial patterning analysis and will be considered in conjunction with the types and morphology of features across the site. The faunal remains will also be considered with development of the site chronologically, with the data from the exploited species being considered when attempting to understand the sites economic and functional uses. A broad implication will be inferred as to the nature of animal husbandry for the Abbey as a whole, although as stated above this cannot be considered a reliable means of understanding such processes.

7.4 CERAMIC BUILDING MATERIAL by Paul Spoerry and Carole Fletcher

7.4.1 Provenance, dating and quantity

Ceramic building materials, excluding daub and plaster, were recovered from a total of forty-seven contexts, of these thirty eight contained tile only with brick also present in the other nine. Thirty-one contexts also contained pottery that has provided the initial dating.

Ceramic Phase	Number of contexts containing pottery	Number of contexts containing tile	Total Weight of tile (g)	Number of contexts containing tile & brick	Total Weight of tile & brick (g)
CF 1 900 - 1150	11	1	19	0	0
CF 1/2	1	0	0	0	0
CF 2 1150 - 1350	39	15	7792	1	9/97
CF 2/3	19	5	581	1	1338/54
CF 3 1550 - 1700	6	4	2986	1	*9153/437
CF 3/4	2	1	322	0	0
CF 4 1780 - 1900	4	1	113	2	1449/2195

* includes decorated tile

Ceramic tile production in this country is resumed in the mid-twelfth century, the absence of ceramic building material from the majority of ceramic phase 1 contexts helps to confirm

their date. Two small tile fragments were recovered from one context (1374) but these may be intrusive.

The ceramic building material recovered from the excavation consists of roofing material, brick and floor tiles.

7.4.2 Fabrics

Various roof tile fabrics are present. The majority have medieval Ely ware-like characteristics although some contain more mica and appear to be of an Essex type. Others are yellow and similar to some of the later locally produced brick and to the rose/cream of the early brick and floor tile. The bricks are present in the rose/cream local fabric and a harder fired yellow/cream fabric that is also local. Some are of a hard-fired, more brick-red, coloration. Further examination of the fabric types is required.

7.4.3 Range and variety

Roofing material

Roof tiles make up the largest group of ceramic building material recovered from the site. These are mainly plain tiles, relatively few fragments of which show any evidence of method of suspension. The only diagnostic features present are peg holes, these are mainly round, though a few square holes were also noted. It is difficult to say if the peg tiles have single, or multiple, peg holes as only fragments with single holes survive. The material forms large unabraded pieces, but none provide complete measurements for any dimension except thickness however from the surviving pieces it would appear that the tiles were rectangular. Some of the tile pieces also have mortar on one or two surfaces.

One fragment of ridge tile or finial was recovered from context (1151), the pottery from this context is dated to ceramic phase 2 (1150-1350); no other brick or tile was recovered from this context. Though not complete, the surviving portion is 0.15m in length and 0.09m wide and part of the decorated end survives. The fabric appears to be an Essex-micaceous type, but at present this not a definite identification.

Brick

Only ten contexts contain brick fragments and only one context produced a fragment that provides dimensions. This brick is from an unstratified context (1000) but does indicate what other bricks of the same fabric may have looked like. The surviving brick is approx. 115mm wide, 45mm thick, and in excess of 90mm long. This appears to be an early, locally-produced, brick with a soft fabric, of pale pink coloration with white/cream swirls. Other brick fragments of this fabric are found in other contexts, but also present are much yellower harder fired bricks again probably local production but of a later date.

Floor tiles

Fragments of decorated medieval floor tile were recovered from three contexts (1035), (1356) and (1007), a total of 629g (8 pieces). Context (1035) is assigned to ceramic phase three, the other tile fragments come from contexts containing no pottery. No complete tiles were recovered and there are no obvious cross fits between the pieces but all appear to be of a similar design. It seems likely that these tile fragments originated from the Abbey, a complete example is said to exist at Ramsey Abbey school. The thickness of the tile fragments varies between 27mm and 20mm, and the fabric is similar to that of the pale pink brick. It is probably a local product. Hughes describes tiles made at Ramsey "where they were burnt to a very lovely tinge of rose and cream"(Hughes, 1937, p17). This description can be applied to the fabric of the decorated tiles and to the brick described earlier. The tile bases are lightly sanded and their edges are not bevelled and there is no evidence of knife trimming. Several fragments recovered from context (1356) show mortar on the base, one fragment also shows mortar on the surface, suggesting reuse.

Fragments of other floor tiles are present in several contexts but these are probably of a later date. These fragments are of a harder fired fabric with bevelled edges, some of which still have surviving glaze, but none show evidence of decoration.

7.4.4 Primary sources and documentation

The lack of published works on medieval floor tiles in this region is a recognised problem. The work of Elizabeth Eames for the British Museum represents the only significant work in this area (Eames 1980). The Ramsey tiles are singled out by Eames due to their distinctive style. The decoration is *applied* using a mould rather than a stamp, and although the decoration suggests 13th century, she thinks the tiles are early 16th century (Eames 1980, 102). Collections of the tiles exist at The Norris Museum at St Ives (Cambridgeshire) but no reports have been produced.

7.4.5 Discussion and potential

Ceramic building material appears on site in ceramic phase 2, 1150-1350. The problem arises if peg tiles, which are present in almost all contexts containing tile, are not in use before the thirteenth century. This would suggest a slightly later start date than 1150 for those contexts containing peg tile. Brick forms only a small part of the ceramic building material present on the site and occurs in fabrics also represented in the tile assemblage. Further study of the decorated floor tile is required and in addition the tile and brick fabrics should, perhaps, be studied in relation to those recovered from other Cambridgeshire sites. The bulk of the assemblage is plain roof tile that appears similar in fabric and production techniques. More information may be gained from looking at this material, in relation to its distribution across the site.

7.4.6 Recommendations

In addition to the proposed study outlined above, the tile assemblage at Ramsey will be discussed with regards to the existing collections and the material recovered from the excavation of a medieval brick kiln in the 1960s (Eames unpublished report), to the southeast of the present day Ailwyn School. Of particular interest is the decorated tile, although the small size of the sample will preclude more than a limited analysis.

7.5 STONEWORK AND MASONRY by Stephen Macaulay (contributions from Tony Baggs)

7.5.1 Provenance, dating and quantity

A large quantity of stonework was excavated, recorded and collected from the excavation at Ramsey Abbey. A selected sample was taken from the site and incorporated into the artefactual assemblage. A total weight is not attainable at this stage, given that the total will be measured in Tons rather than Kg's. The decorated, dressed and faced stonework was of importance since it has originated from the medieval Abbey buildings. This stonework is linked to Post-medieval structures and demolition horizons, where the stone has been re-used from medieval monastic buildings.

7.5.2 Range and variety

The stone source is the Barnack (ragstone) quarry, near Peterborough, where the Abbey received quarrying rights from the Norman period. Masonry from the site derived from wall

foundations, stone lined drains and rubble demolition layers. There is no native stone from the Ramsey area. Masonry fragments include segments of spiral door posts, a possible stone sarcophagus base, lintels, pillars, arches and other dressed stone, including flagstones and windows.

7.5.3 Primary sources and documentation

A number of historical documents record the dismantling of the Abbey and the 'open quarry' which the site became (Willis and Clarke 1900). These records state that stonework went to the Cambridge Colleges of Gonville, Caius, Kings, Trinity, as well as other sites in Cambridge itself. Part of the later gateway was transported whole to the Cromwell's estate at Hinchingsbrooke, which still survives today. In addition to houses around Ramsey itself, both the churches at Over and Somersham possess Ramsey Abbey stone.

7.5.4 Discussion and potential

The stonework recovered from the site is of interest due to the nature of both its construction and deposition. The presence of such large quantities of masonry at a site such as Ramsey is not surprising, however an interesting reflection of the post-Dissolution and Post-medieval development of the Abbey. The stonework does not reflect the function of the site during the Saxon and medieval occupation, where there was no stone built structures recorded, and it is probable that the stone has been derived from both the demolition of the Monastic buildings themselves from the *Inner Court* from 1539 onwards, as well as secular buildings from throughout the rest of the precinct.

7.5.5 Recommendations

While only limited information can be gained from the study of the masonry, the incorporation of this material with regards to the stratigraphic data and the implications of the development of the Abbey, following the Dissolution, are important. The fragments of masonry recovered will be identified and where possible, determined what part of the monastic precinct it derived from. The material has already been sourced and other than mentioned above, no further work will be undertaken.

7.6 OTHER FINDS

A number of miscellaneous finds were recovered from the site, these are listed below.

Daub	59g
Shell	804g
Glass	148g
Clay pipe	109g
Metallic	
- Fe	2,683g
- Cu	87g
- Pb/Ag	641g
- Slag	11,494g

7.6.1 Daub

Burnt daub was found in cleaning and unstratified deposits, totalling 59g. This material is of little use, other than to record its presence. Buildings and structures excavated on the site

were all timber constructions. The only recommended work would be a visual inspection for structural or plant remains.

7.6.2 Clay Pipe

A small number of Clay Pipe (N=30) was recorded, totalling 109g. There were 25 stem fragments, 2 bowl fragments and 3 bowls. The material derives from only 7 contexts, these being cleaning or demolition/dumping layers associated with the Post-medieval activity on the site. The material dates to the early-mid 17th century, which is consistent with the stratigraphic dating of the deposits. The assemblage is small and not significant, and will not be subjected to further analysis.

7.6.3 Shell

Oyster and mussel shells were recovered from 19 contexts, totalling 804g. Species identification and provenance are required. Feature types include; Layers/dumping (N=8 or 42%), Ditches (N=5 or 26%), Beam slots (N=6 or 32%). Significantly the material was recovered from either fills of occupation activities or in features where domestic rubbish would have been dumped. The identification and potentially sourcing of the assemblage will shed further light on the organisation of the domestic economy of Ramsey Abbey and possibly identify trade routes.

7.6.4 Glass

A total of 148g of glass was recovered from the site from 8 contexts. The assemblage derives from Post-medieval layers and cleaning deposits. The material was Post-medieval in origin, the single largest fragment being 99g of a 17th/18th dimple bottle. There is no further need to analyse this assemblage.

7.6.5 Metallic Finds with contributions from Chris Montague.

Cu Alloy

A total of 87g of Cu Alloy material was recovered from the site. Recovered from only 6 contexts (cleaning layers), this material was collected using a metal detector. Important individual objects were; Lace Tags Chapes (13th-16th century), Strap End with fleur-de-lis design (late 14th-early 15th century) and a Bronze Casting Sprue.

There is not any need to carry out further investigation into this material.

Fe

A total of 2683g of Fe or Iron finds were recovered from the site. This material derives from 32 contexts. The assemblage contained a large number of nails. The larger nails would be for constructional or building purposes, with smaller ones for general use. There was an assortment of large wall hooks (suspension types), probably derived from an open area kitchen - used to hang cooking pots and utensils (1321, 1171). Other iron finds include cleats, a door hinge - latch, window and furniture fittings. All were probably associated with the medieval buildings on the site. Significant artefacts include; Iron Shears (12th-15th century), Iron Spur (Mid-Late 15th century), Horse Shoe (c1400-1600) and Iron Carpenters Tools (reamer with sectional blade and whittle tang handle, a chisel and a nail punch). No further work will be carried out on this material other than to include in the report.

Pb

A total of 641g of lead (Pb) material was recovered. 616g or 96% derived from metal detected finds from spoil tips or were collected from cleaning layers or Post-medieval

dumping demolition layers. The remaining 25g were recovered from ditch fills (N=3). Artefacts include: Spindle Whorl, stylus and a Token (17th-18th century). Only illustration will be needed for this material category.

7.7 Slag by Stephen macaulay (with contributions by William Wall)

A total weight of 11,494g of slag was recovered from the site. This material derived from 29 discrete contexts and cleaning layers. Of this 9,630g (83.8% of the sample) derived from 7 contexts located in the southwestern corner of the site, presumed to be deliberate dumping deposits within a depression or possible pond. This material contained two PCB's (plano Convex Hearth Bases), linked together. This suggests forging over a number of campaigns. Although forging took place the complete absence of residues within the soil samples indicates that no smelting took place on the site.

7.8 ENVIRONMENTAL (PLANT MACROFOSSIL ANALYSIS) by A.J. Clapham

7.8.1 Quantity, Provenance and dating

A total of twenty-three samples from Ramsey Abbey were analysed for charred plant remains. Of the twenty-three samples, eight samples contained no remains (sample numbers, 1, 6, 11, 12, 14, 15, 16 and 17), the rest did contain charred plant remains but only two (samples 2 and 23) could be considered to be rich in plant remains. Twelve of the twenty-three samples were from ditches (sample numbers 2, 3, 12, 14, 15, 19, 20, 21, 22, 23 & 24), six were from pits (sample numbers, 4, 5, 6, 10, 11, and 17), other samples were from buried soils (sample 1), beam slots (sample 8), layers (sample 9), and post-holes (sample 16), there was no context or feature information for sample 18.

In general, the samples were dominated by modern plant debris and roots, although the preservation of the charred material was good enough in order to allow species identifications in most cases.

7.8.2 Method of assessment

The samples were processed using the standard Archaeological Field Unit, Cambridgeshire County Council flotation procedures and were sorted using a low-powered stereomicroscope (x 6.3-40 magnification). The critical plant taxa were identified using the modern plant reference collection housed in the Pitt-Rivers Laboratory, Department of Archaeology, University of Cambridge.

All nomenclature follows that of Stace, 1997.

7.8.3 Range and variety (RESULTS)

As mentioned above, twenty-three samples were analysed for charred plant remains, of which only two could be considered to be rich. These two samples, 2 and 23 were from ditch fills (contexts 1065 and 1331 respectively). It is these two samples that provide the main source of evidence for the economic activity of the site.

The Crops

In total, remains of six crop species were recovered from the samples. The commonest cereal recovered was that of bread wheat (*Triticum aestivum*), of which both grains and crop processing debris, in the form of rachis fragments were identified. Other cereal remains identified from the site included the possibility of a free-threshing tetraploid wheat such as

macaroni wheat (*Triticum durum*) which was tentatively identified from poorly preserved rachis fragments present in sample 23. This is not an unusual find for a site of this date, another cereal which is found from sites of this period is rye (*Secale cereale*) which was identified by the presence of both grains and rachis fragments, although this cereal was not very common. Hulled barley (*Hordeum vulgare*) was also recovered from the samples, although not many grains were identified.

Other crops present on the site were single finds of flax/linseed (*Linum usitatissimum*) and peas (*Pisum sativum*), (samples 2 and 23, respectively).

In general, it can be assumed that the crops were grown locally, especially those represented by chaff remains, i.e. bread wheat. As this wheat is a free-threshing cereal, (i.e. the grains fall easily from the ear, without the need to parch or pound), it may be suggested that the finds of these rachis fragments in ditch cut 1350, may represent the remains of threshing or winnowing waste. The presence of culm nodes (parts of the grass stem), also lends support to this interpretation. The presence of the possible durum wheat rachis fragments may suggest a similar origin for these remains.

The weed seeds

The weed seeds recorded from the samples are in the majority of cases representative of the arable field, such as buttercup (*Ranunculus* subgenus *Ranunculus*), knotgrass (*Polygonum* sp.), goosefoot, (*Chenopodium* sp.), parsley-piert (*Aphanes arvensis*), vetches (*Vicia/Lathyrus* sp.), medick and clover (*Medicago* sp. and *Trifolium* sp.), small nettle (*Urtica urens*), cleavers (*Galium aparine*), stinking mayweed (*Anthemis cotula*) and nipplewort (*Lapsana communis*). The presence of low-growing weeds such as parsley-piert and scrambling weeds such as cleavers suggests that the crop was either harvested close to the soil or reaped by uprooting, but due to the paucity of weed seeds in any of the samples it is not possible to be totally sure. The presence of stinking mayweed suggests that heavy soils were being cultivated, although the presence of parsley-piert also suggests that lighter more sandy soils were also exploited.

Other habitats represented in the samples include, a scrubby component as represented by the presence of a hawthorn (*Crataegus* sp.) thorn and a seed of apple (*Malus sylvestris*), this component could have been present at the edge of the field or have been incorporated into the sample from other sources (such as fuel). Grassland is represented by the presence of self-heal (*Prunella vulgaris*) but again this could have been growing at the edge of the field.

The other major component of the samples was of seeds of plants which are found in damp/waterlogged environments, include: lesser spearwort (*Ranunculus flammula*), soft rush (*Juncus effusus*), woodrush (*Luzula* sp.), spike-rush (*Eleocharis* sp.), bulrush (*Schoenoplectus lacustris*), fen or saw sedge (*Cladium mariscus*) and the sedges (*Carex* sp.) including the star sedge (*Carex echinata*).

In many situations these species are considered to be obligate water or high water-table plants, but in this case the species are considered to represent weeds of the arable crops. As the area surrounding the site is on the fen edge, it can be assumed that at the time of deposition of the plant remains, the area possessed a very high water-table, it is entirely feasible that these wetland species were encroaching into the arable fields from the possible ditches surrounding the fields, as most of these species spread via underground rhizomes it is possible that they could cover a large area of the fields, and the presence of the seeds of these species in the samples suggests that they were harvested along with the cereal crop.

Other remains

The only other notable remains recovered from the samples was that of two fragments of what appears to be charred bread, these fragments, one of which measured 2 x 1 x 1 cm, consisted of a uniform vesicular mass, these remains were found in ditch sample 22 (ditch cut 1312, context 1367), this probably represents the remains of a burnt loaf of bread which was discarded into the ditch.

7.8.4 Conclusions

In general the major crop grown at the site was bread wheat, with smaller amounts of other cereals such as durum wheat, barley and rye being less well represented. The presence of oats (*Avena* sp.) may represent another crop, or in fact may be a weed of the arable fields. Other crops which were poorly represented include flax/linseed and peas.

The weed species identified from this site correspond to those usually associated with crops, the presence of two species (stinking mayweed and parsley-piert) suggest that both heavy and light soils were being cultivated. The high number of wetland indicators is taken to indicate that many of the fields had high water-tables which enabled these species to encroach into the fields. Although other uses, such as roofing and flooring material can not be entirely ruled out. Although saw-sedge, with its saw like edges to its leaves is unlikely to have been used as flooring but as a roofing material.

7.8.5 Statement of potential and further analysis

The analysis of the charred plant remains will significantly contribute to the economic reconstruction of the site. The research objectives at both a regional and localised site level sought to investigate the local environmental, agricultural and economic variable affecting the site and its wider role or functions (and whether these have changed through time). This would thus also include an analysis of both spatial and temporal variation. The results of the environmental analysis/report will address each of these objectives.

Although the general quality and survival of plant macrofossils is poor, the burnt deposits have produced important data. In addition the nature of the remains will provide useful information on the site function and hierarchy towards other nearby settlements.

The material recovered from these samples should provide useful data to support the interpretation of specific features and the site as a whole, from other sources of evidence. In addition, the assemblage should be usefully compared with those from other appropriate sites within the region (Murphy in Glazebrook 1997).

The charred plant remains have provided good data for palaeoenvironmental reconstruction on the site and the above report represents a full analysis of the sampled material. Therefore no further analysis will be undertaken.

8 SUMMARY OF POTENTIAL

8.1 SITE CONTEXT AND SIGNIFICANCE

Archaeological investigations within the precincts of a medieval abbey will undoubtedly uncover important remains. The excavation at Ramsey Abbey has the added significance of being the first investigation at the site and thus the findings will be the only archaeological record of the physical aspects of the Abbey to date, beyond the recording of the upstanding building remains. The fact that even the location of the Abbey Church is unknown highlights the paucity of understanding of what was once one of the richest monasteries in the country. Archaeological remains have been uncovered dating from the Late Saxon foundation of the monastery through to the Abbey's Dissolution and Post-medieval occupation, providing for the first time a sequence of occupation which can be cross-referenced to the existing *historical* records and primary sources.

English Heritage's updated survey of archaeological endeavour and their agenda for future work (English Heritage 1997) draws attention to the importance of archaeological remains which record the transition from the Late Saxon to medieval period (c700-1300 AD) and the transition to Post-medieval traditions (c1300-1700 AD). While there exists much research into medieval Abbeys, the understanding of the economic life is in need of more work, while, as stated above, the case of Ramsey is one of great historical knowledge while at the same time no archaeological understanding. English Heritage go further in highlighting the importance of integrating archaeological results with a 'Historic Understanding' and in this context the 'Impact of Christianity' is addressed as a national research priority.

The results of the excavation will be incorporated into what is now an extensive programme of research, which has focused on the historical documentation of the ecclesiastical records. On-going research by the department of Anglo-Saxon, Norse & Celtic studies at Cambridge University (Prof. M Lapidge) and translations of primary sources by the Latin department of Huntingdon Regional College (Dr Sue Edgington) will both be added to.

The results from Ramsey Abbey School will contribute to the on-going Regional/Local research on the Saxon and medieval periods. Research and Archaeology: A Framework for the Eastern Counties - 1. Resource Assessment (Wade and Ayers in Glazebrook 1997) discussed the *rural* and *urban* agendas, however the role and development of monastic settlement is only briefly covered. In part it falls between both definitions, being a separate settlement class that shows elements of both rural and urban character. Within Cambridgeshire the role of the great fenland Abbeys at Ely, Thorney and Ramsey, as well as Peterborough, form an important central theme to the region as a whole. Although some smaller scale excavations have taken place on these sites, there has been little work within the *outer courts* beyond the ecclesiastical buildings. This is an area lacking research previously raised (Coppack 1990, Aston 1993), where the emphasis is not on historical records but centres on the ecclesiastical buildings rather than the domestic and industrial functions. Glyn Coppack (1990) states that although there is a general understanding of the role of the Outer Court in providing the economic base of the monastery, it was largely ignored until the 1970s and although excavations at sites such as Waltham Abbey, Thornholme Priory and Fountains Abbey, have partly rectified this, it is an area still in need of further work. The investigations at Ramsey Abbey school will add to this knowledge, where the discovery of warehouses and boundary features are of significance.

The results from the excavations will contribute to the wider research in the fenland. Ramsey Abbey had fisheries at Whittlesey Mere, as well as other holdings in the fens. The economic and environmental data from the project will be viewed in light of both these broader concerns as well as the general understanding of Late Saxon and medieval occupation in the Fens.

In summary, the excavation of an area of the Outer Court of Ramsey Abbey, along with the post-excavation analysis and specialist reports, has the potential to provide the first knowledge of the development of the Abbey. When this information is combined with the existing body of historical research and the on-going work on documents, then the sites will take on not only a local but regional and possibly national significance.

8.1.1 STRATIGRAPHIC AND STRUCTURAL DATA

The contextual data is the main component data and is sufficient to form the foundation of the site narrative. The sites major significance is based upon the recording of the stratified sequence of medieval occupation, with important Post-Medieval remains and continuity with earlier features. The deposits represent the first investigation within Ramsey Abbey.

The determination of date, phasing and function of ditches, boundary features and building remains will be important. The development of the site over time and the shifting pattern of domestic occupation, abandonment, deliberate dumping and industrial/agricultural activities is represented within the stratigraphical records of ditches, structures, middens and

demolition layers. In addition the overall understanding of the sites development and place within the broader Abbey complex (inner/outer court) will be enhanced and considered in this light.

Preliminary pottery spot dating has indicated that there does not exist a tight dating sequence from artefactual material alone, indeed the sites *phasing* is based only in part on the pottery dating sequence, with more accurate determination from the stratigraphical relationships identified at this stage.

8.1.2 POTTERY

The collection is of importance locally and of regional interest for a number of reasons. Quantified data from Ramsey Abbey does not exist, and will thus be crucial in initiating local type series. There are only 11 contexts on the site which can be firmly dated to the Saxon or Saxon-Norman period. These 11 contexts dated 900-1150, contained a total of 32 sherds. The largest group of pottery represented on the site is the "High medieval" 1150-1350 group which consists mainly of medieval Ely ware (Mel) fabrics and Shw with a small amount of Lyst & Grim. The form of many of the Mel sherds suggests an early date (1150-1350). The Mel material is also assigned to this earlier date period where there are "significant" amounts of Shw or Lyst, as these fabric types have a more fixed date range (1150-1350). There are a number of contexts (19 in total) assigned to the phase 2-3 group. This is mainly due to the presence of only Mel sherds in the context, or where Mel sherds are less abraded than other pottery within the context. The next major ceramic phase is 1550-1700 (phase 3). There is a significant fall in the number of contexts that fit into this dating group, six in total producing 46 sherds of which 27 sherds can be considered residual. Finally, Ceramic Phase 4 contains only 4 contexts with 84 sherds of pottery, 47.6% of which is residual. It would appear that between 1350 and 1550 there is a fall in the deposition of ceramic material on the site. By ceramic phase 3 material is recovered from only 6 contexts and from these the residuality is over 50%.

The pottery record suggests lower levels of depositional activity on the site post-1350 and very little post-Dissolution activity. It is possible that when a more detailed examination of the pottery from Ramsey Abbey is undertaken the dating of some contexts may change. This will be of most significance in Phase 1 where those sherds identified as a Thetford type or Emw may be reassigned to a Mel type fabric. It will also effect phase 2-3 material which may be assigned an earlier date or may be widened to include more material that is at present located in Phase 2.

8.1.3 THE FAUNAL REMAINS

A full report was undertaken since conducting an assessment would not be worthwhile. The available animal bones are insufficient in number to draw any conclusions about husbandry as practised on farmland attached to the Abbey. However, during the medieval period pig meat formed an important element of the diet second only to beef. No doubt large piggeries were maintained by the Abbey. Many cattle were probably used as traction animals before utilisation as food. Sheep were next in importance followed by domestic fowl, domestic and possibly wild geese, and venison. No rabbit bones were found during this excavation and only one Saxo-Norman hare bone. Large hunting dogs were kept and butchered upon death, perhaps to feed other dogs. Such animals would have been useful in the pursuit of deer. Horses of a size suitable as palfreys and destriers were found in the medieval deposits together with evidence of horse butchery. Whether horse meat was intended for the consumption of humans or dogs is unknown. Fish were imported from the coast, certainly on a larger scale than their representation in the faunal assemblage.

The faunal assemblage will be combined with spatial patterning analysis and will be considered in conjunction with the types and morphology of features across the site. The

faunal remains will also be considered with development of the site chronologically, with the data from the exploited species being considered when attempting to understand the sites economic and functional uses. A broad implication will be inferred as to the nature of animal husbandry for the Abbey as a whole, although as stated above this cannot be considered a reliable means of understanding such processes.

8.1.4 CERAMIC BUILDING MATERIAL

Ceramic building material appears on site in ceramic phase 2, 1150-1350. The problem arises if peg tiles, which are present in almost all contexts containing tile, are not in use before the thirteenth century. This would suggest a slightly later start date than 1150 for those contexts containing peg tile. Brick forms only a small part of the ceramic building material present on the site and occurs in fabrics also represented in the tile assemblage. Further study of the decorated floor tile is required and in addition the tile and brick fabrics should, perhaps, be studied in relation to those recovered from other Cambridgeshire sites. The bulk of the assemblage is plain roof tile that appears similar in fabric and production techniques. More information may be gained from looking at this material, in relation to its distribution across the site.

8.1.5 STONEMASONRY AND MASONRY

The stonework recovered from the site is of interest due to the nature of both its construction and deposition. The presence of such large quantities of masonry at a site such as Ramsey is not surprising, however an interesting reflection of the post-Dissolution and Post-medieval development of the Abbey. The stonework does not reflect the function of the site during the Saxon and medieval occupation, where there was no stone built structures recorded, and it is probable that the stone has entirely derived from the demolition of the Monastic buildings themselves from the *Inner Court* from 1539 onwards.

8.1.6 OTHER FINDS

8.1.6.1 Daub

This assemblage is very small and of little use. Limited data for structural and plant remains will be undertaken.

8.1.6.2 Shell

The identification and potentially sourcing of the assemblage will shed further light on the organisation of the domestic economy of Ramsey Abbey and possibly identify trade routes.

8.1.6.3 Glass

The glass assemblage relates entirely to Post-Medieval deposits and does not contribute to the archaeological report.

8.1.6.4 Clay pipe

The assemblage is small and not significant and will not be subjected to further analysis.

8.1.6.5 Metallic

Cu Alloy, Lead and Iron were all recovered from deposits. All the material contributes to the understanding of the site and importantly provides information concerning the wider activity of Ramsey Abbey.

8.1.7 ENVIRONMENTAL (PLANT MACROFOSSIL ANALYSIS)

The analysis of the charred plant remains will significantly contribute to the economic reconstruction of the site. The research objectives at both a regional and localised site level sought to investigate the local environmental, agricultural and economic variable affecting the site and its wider role or functions (and whether these have changed through time). This would thus also include an analysis of both spatial and temporal variation. The results of the environmental analysis/report will address each of these objectives.

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The charred plant remains have provided good data for palaeoenvironmental reconstruction on the site and the above report represents a full analysis of the sampled material. Therefore no further analysis will be undertaken.

9 RESEARCH AIMS

9.1 Excavation Aims

As previously stated (in detail in Section 3) the aims of the project were to recover a sample record of Romano-British activity on the site. The specific site based objectives were as follows:

- Dating of structures and activities to place the archaeological evidence within its Abbey context, including documentary records.
- Elucidate in detail the activities and processes that provided the economic support for Ramsey Abbey.
- Understand the development of the site over the span of occupation and record, if possible, changes in function. Integration with known documentary records will be undertaken.
- Discover the evidence for industrial and agricultural processing. Compare the assemblages with similarly dated sites in the fens and towns.
- Understand the contribution of fenland resources to diet and material culture and consider this data with regards to Ramsey Abbey's known fisheries and holdings throughout the fenland basin.

9.2 Revised Aims

The broad aims of the excavation are unchanged, however a number of questions have been raised based on the nature of the data generated by the excavation.

The primary aim of this project is to publish a coherent description and interpretation of the findings of the archaeological project undertaken at Ramsey Abbey School, Ramsey and to disseminate the findings of the various aspects of this analysis through inclusion in a range of

suitable publications. A number of objectives have been highlighted below which will help to ensure that these aims are realised. Some objectives will apply across periods, spatial patterning and to all artefact assemblages whereas other more specific questions will apply only to certain elements of the site record.

- Objective 1* To produce an accessible archive of the results requiring:
 - 1.1* To produce a detailed description of all excavated/recorded features.
 - 1.2* To establish, where possible, secure grouping and phasing of all excavated/recorded features.
 - 1.3* To clearly identify and describe the elements characterising individual groups and phases.
- Objective 2* To attempt the interpretation of the functional nature of the site by groups, location and period.
- Objective 3* To place the interpretation of the site within its local context with reference to previous work on sites within the immediate vicinity and incorporate/understand the site within the extensive documentary material which exists for the Abbey.
- Objective 4* To place the interpretation of this site within its regional context with reference to contemporary and comparable sites in the region.
- Objective 5* To highlight the potential for re-assessment of any aspects of previous work in the local area where the findings of the recent excavations may indicate a need for a re-appraisal of accepted theories.

9.3 General Research Topics

The post-excavation results from Ramsey Abbey will contribute to the following research topics.

- (1) Refine dates and the site's sequence showing the Abbey's development from the Late Saxon period through to the Dissolution and Post-medieval periods.
- (2) Contribute towards an understanding of the pottery of the medieval period in the region.
- (3) Add to the understanding of the Abbey's economic and non-ecclesiastical development, from the Late Saxon origins through the high medieval period to Dissolution. Understand the processes of *intra-site* development and changing economic and occupation functions of the site, as well as its place within the wider monastic precinct.
- (4) Understand the archaeological remains in relation to recorded *historical* events and documents which exist for Ramsey Abbey. Attempt to integrate the archaeological and historical record. This will include the existing cartographic evidence and the role and longevity of boundaries which constitute key features recorded during the excavation.
- (5) Contribute to a broader understanding of the role of the Monastic Outer Court in terms of the economic and settlement evidence, structure/building typologies and industrial activities at both a local and national level.

- (6) Contribute to an understanding of the development of Late Saxon Monasteries into the post-conquest period.
- (7) Add to the information from the Fenland Research Project and elsewhere concerning the exploitation of the fens and the role of the fenland monasteries.

It is important to note that each of the areas of analysis will be of little value if studied without regard to its context both at site, local and regional level. Assessment has indicated that there may be potential for looking at the spatial/stratigraphical distribution of a number of data types. The function and activity zones on the site change both through time and with regard to spatial positioning. Certain periods are richer in faunal remains and the industrial activity shifts throughout the site. Further analysis will show the full development of the site and the implications for the sites economic and functional development, potentially demonstrating both zonal and temporal activities.

10 METHODOLOGY

In order to contribute to realising the sites significance outlined above (8.1), meet the original project aims (9.1) and revised research aims (9.2), as well as contribute to the broader research topics (9.3), the following methodology has been devised with reference to those objectives highlighted within section 9.2 of this report.

10.1 The Stratigraphic and Structural Data

10.1.1 Section of data for further analysis (*Objectives: 1, 2, 3, 4, 5*)

All relevant records will be subjected to further analysis upon receipt of specialist analytical reports and specific artefactual materials. Comparisons with other fen monastic sites, Abbey's and similar features will be sought to aid in feature and site interpretation. Equal consideration should be given to those features/deposits without clear functional interpretations or local parallels to contrast the spatial groupings and settlement zones across the site. The dynamics of the *Inner/Outer* Court zones will be considered.

10.1.2 Grouping and Phasing (*Objectives: 1, 2, 3, 4, 5*)

A degree of preliminary phasing and zonation has already been achieved. The following techniques will be utilised:

- a) Artefact identification and categorisation by individual specialists, specifically the ceramic artefacts which occur in securely stratified contexts.
- b) Gross quantification of specific artefact types; particularly to characterise the length of site occupation and, where possible, understand the changes and developments during each individual phase.
- c) Plant and Mollusc data will be incorporated into the record to determine the palaeoenvironmental conditions of each phase of occupation and what, if any, conclusions can be drawn which relate to the function and occupation of the site.
- d) Where no artefactual/ecofactual data is available grouping and phasing may be attempted using inter and intra site comparisons with features and deposits of similar morphology and/or interpretation.

10.2 Artefacts

For all categories listed below material recovered from the evaluation must be integrated with the bulk of the excavation assemblages. Detailed methodologies and recommendations for analysis for individual material assemblages are contained within the relevant section of the Assessment of Archaeological Potential (Section 7). Most assemblages recovered from contexts consist of a range of different materials and typological elements. Discussions with the relevant specialists both prior to and following analysis will seek to examine these artefactual assemblages as coherent groups to contribute to interpretation.

10.2.1 Pottery (*Objectives: 1, 2, 3, 4, 5*)

Fabric identification

There is a problem in the Fenland in attributing fabrics to kilns in the medieval period. At Ramsey the majority of material is Ely ware type, but much of it is rather different to that known from the Potters Lane kiln site at Ely. Whether it is therefore from another location, or represents wider variation within Ely products, is not known. This needs resolving and it may well be that the best way forward with this assemblage would be to carry out thin section analysis on a small selected sample, including comparison with sections from known Ely products. This is in part, or wholly, beyond the core requirements of this post-excavation programme, but is fundamental to regional ceramic studies of the medieval period.

Regardless of a thin section programme some effort should be spent on macroscopic fabric comparison. In addition vessel form/fabric concordance should be studied by visiting and photographing more complete examples in the small local museum in Ramsey, which derive from elsewhere on the monastic site.

A small local type series should be created.

Sequence and significance

This assemblage is too small to warrant detailed analysis, however, so consideration of changes in the assemblage over time should be attempted; perhaps at a Phase/period level only, as there are few large individual feature groups. If groups of features can be linked to separate 'structures' or properties then the assemblages from these entities should be compared and contrasted.

Phases 1-3 should be fully quantified and recorded.

Illustration

The assemblage includes very few profiles and details of decoration warranting illustration at this stage. Archive drawings should, however, be made of Ely ware variants and any other local types occurring in some abundance to provide information for regional study. These should be inked-up as this constitutes only a small amount of time on top of that required to produce drafts.

Report and Publication

A short report, with tables and statistical representations should be produced. This will focus on phases and key groups, and contrasts between them, plus it will consider the contribution of key producers and their geographic and other linkages with Ramsey Abbey.

10.2.2 The Faunal Remains (*Objectives: 1.1, 1.3, 2, 3, 4, 5*)

A full report was undertaken since conducting an assessment would not be worthwhile. The available animal bones are insufficient in number to draw any conclusions about husbandry as practised on farmland attached to the Abbey. However, during the medieval period pig

meat formed an important element of the diet second only to beef. No doubt large piggeries were maintained by the Abbey. Many cattle were probably used as traction animals before utilisation as food. Sheep were next in importance followed by domestic fowl, domestic and possibly wild geese, and venison. No rabbit bones were found during this excavation and only one Saxo-Norman hare bone. Large hunting dogs were kept and butchered upon death, perhaps to feed other dogs. Such animals would have been useful in the pursuit of deer. Horses of a size suitable as palfreys and destriers were found in the medieval deposits together with evidence of horse butchery. Whether horse meat was intended for the consumption of humans or dogs is unknown. Fish were imported from the coast, certainly on a larger scale than their representation in the faunal assemblage.

The faunal assemblage will be combined with spatial patterning analysis and will be considered in conjunction with the types and morphology of features across the site. The faunal remains will also be considered with development of the site chronologically, with the data from the exploited species being considered when attempting to understand the sites economic and functional uses. A broad implication will be inferred as to the nature of animal husbandry for the Abbey as a whole, although as stated above this cannot be considered a reliable means of understanding such processes.

10.2.3 Ceramic Building Material (*Objectives: 1, 2, 3, 4, 5*)

Further study of the decorated floor tile is required and in addition the tile and brick fabrics should, perhaps, be studied in relation to those recovered from other Cambridgeshire sites. The bulk of the assemblage is plain roof tile that appears similar in fabric and production techniques. More information may be gained from looking at this material, in relation to its distribution across the site. In addition to the proposed study outlined above, the tile assemblage at Ramsey will be discussed with regards to the existing collections and the material recovered from the excavation of a medieval brick kiln in the 1960's (Eames unpublished report), to the southeast of the present day Ailwyn School. Of particular interest is the decorated tile, although the small size of the sample will preclude more than a limited analysis.

10.2.4 Stonework and Masonry (*Objectives: 1.1, 1.3, 2, 3, 4, 5*)

While only limited information can be gained from the study of the masonry, the incorporation of this material with regards to the stratigraphic data and the implications of the development of the Abbey, following the Dissolution, are important. The fragments of masonry recovered will be identified and where possible, determined what part of the monastic precinct it derived from. The material has already been sourced and other than mentioned above, no further work will be undertaken.

10.2.5 Other Finds

10.2.5.1 Daub (*Objective: 1.1*)

Only recording the presence of this material will be undertaken.

10.2.5.2 Clay Pipe (*Objective: 1.1*)

This material is only of use to date later features on the site.

10.2.5.3 Shell (*Objectives: 1.1, 1.3, 3, 4*)

The material needs to be sourced and general implications for local diet inferred. Additional information concerning the domestic economy and possible trade links with the Abbey will be sought.

10.2.5.4 Glass (*Objective: 1.1*)

Only recording this material category will be undertaken.

10.2.5.5 Metallic Finds (*Objective: 1, 2, 3*)

Metal artefacts (Cu Alloy, Fe and Pb) all need to be integrated with the stratigraphic record and contribute to the functional interpretation of both feature groups and phasing descriptions. The presence of some material, particularly lead, relates to the broader activities and buildings within the settlement and their demolition following the Abbey's Dissolution.

10.2.6 Slag (*Objectives: 1.1, 1.3, 2, 3*)

Although the small nature of this assemblage limits its value for contributing to the sites interpretation, the presence of this material in particular areas and phases will be of significance and needs to be integrated into the overall site records.

10.2.7 Plant Macrofossils (*Objectives: 1.3, 2, 3, 4*)

Although the general quality and survival of plant macrofossils is poor, the burnt deposits have produced important data. In addition the nature of the remains will provide useful information on the site function and hierarchy towards other nearby settlements.

The material recovered from these samples should provide useful data to support the interpretation of specific features and the site as a whole, from other sources of evidence. In addition, the assemblage should be usefully compared with those from other appropriate sites within the region (Murphy in Glazebrook 1997).

The charred plant remains have provided good data for palaeoenvironmental reconstruction on the site and the above report represents a full analysis of the sampled material. Therefore no further analysis will be undertaken.

11 TASK LIST

The project team will consist of the project director (project officer & author), project manager, illustrator(s) and assorted consultant specialists.

The project team consists of:

Project Director - Stephen P. Macaulay, Project Officer
(& author) Cambridgeshire County Council Archaeological Field Unit (SPM)
Project Manager - Tim Malim, Field Unit Manager (CCC AFU) (TM)
Illustration and desk-top publishing - Jon Cane, Caroline Malim (CCC AFU) (ILL)

Specialist Consultants

Ceramic Analysis - Paul Spoerry (CCC AFU)	(PSS)
Coins, Fe & Cu Alloy - C. Montague (CCC AFU)	(CM)
Faunal Remains - Ian L. Baxter (consultant)	(ILB)

Personal work programme for principal members of the team

Project Director: Preparation of text for publication.
Liaison with specialists and incorporation of reports in main text.
Consultation with illustrators and desk-top publisher
Consultation with editor on final publication.

Project Manager: Editing and proof reading report.

Illustrator(s): Production of publication quality maps, plans, sections and artefact illustrations. Desk-top publishing.

Key to abbreviations in Task Lists

FC=Finds Co-ordinator, ILL=Illustrator, PM=Project Manager, PO=Project Officer,
SC=Specialist Consultant, EC=External Consultant

11.1 The Written Record

Task	Days	Staff
Write individual feature/deposit descriptions	5	(PO)
Collate and review results of previous work from the local area	3	(PO)
Write historical background	3	(PO)
Discuss results of assessment with post-excavation team	0.5	(PO)
Review results of specialist analyses	2	(PO)
Compile list of illustrations and liaise with illustrator	1	(PO/ILL)
Collate results of specialist reports	1.5	(PO)
Incorporate the results of specialist reports	1.5	(PO)
Produce plans/maps/sections	10	(ILL)
Write Excavation report	10	(PO)
Assemble report	4	(PO/ILL)
Write summary of results/conclusions	2	(PO)
Edit report	2	(PM)
Incorporate edits	2	(PO)
Proof Reading	2	(PM/EC)
SMR summary	0.5	(PO)
Archiving	1	(PO)
TOTAL	51 days	

10.2 SPECIALIST ANALYSIS

Task	Days	Staff
Pottery Report		
- Recording	4.5	(FC)
- Sequence/Background	2	(PSS)
- Analysis	1	(PSS)
- Report writing & edits	1.5	(PSS)
Pottery Illustration	1.5	(ILL)
Faunal Remains	n/a	

Ceramic Building Material	(inc. in Pottery Report)
Stone/Masonry	0.5 (SC)
Daub	n/a
Shell	0.5 (SC)
Glass	n/a
Metallic Finds (CU Alloy/Fe/Pb)	1 (CM)
Slag/Fe	n/a
Plant Macrofossils	n/a

12 PUBLICATION SYNOPSIS

In addition to the archive report, it is intended to publish the report in the Proceeding of the Cambridge Antiquarian Society, a refereed local journal of national standing. Summaries will be submitted to medieval Archaeology (Notes).

It is suggested that the final report will follow an established pattern, as follow:

- Background to excavation, archaeological and historical context
- The site summary - phases of activity
- The pottery and ceramic material
- The environmental remains
- The faunal remains
- The other finds
- Discussion and Conclusions (including regional and local settlement contexts)

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