

Section 68 Methods: site methodology and administration; post-excavation

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Cross-references to Digital Supplement in red
Cross-references to Printed Synthesis in brown

Fieldwork strategies

The excavation strategy evolved during thirteen years of nearly continuous fieldwork. It had to respond to the changing appreciation of the scale and nature of archaeological opportunities offered by the project, developing archaeological techniques, an expanding organisational capability of the Bedfordshire archaeological service to deal with major excavations, deceleration of the advancing destructive quarry face, and the uncertain availability of resources, quantitatively and qualitatively.

In 1973 it was expected that the entire site would be destroyed within about five years. Its identity as a small alien cell of Fontevrault, founded in the later 12th century and 'dissolved' by 1415, suggested relatively uncomplicated occupation evidence. Relevant parallels seemed to be South Witham in Lincolnshire (Wilson and Hurst 1966, fig 77) and Stoke Goldington in Buckinghamshire (Wilson and Moorhouse 1970, 162), rather than the deeply stratified multi-period sites such as Elstow Abbey Bedfordshire (Baker 1971). This prompted a strategy using trial trenches to locate the main areas of buildings for later extensive stripping to secure an overall plan [1.03]. At this time, the science of geophysics was still relatively young, and later use showed that results were, in any case, unreliable due to geological conditions.

An initial survey of the earthworks showed that they represented medieval uses of the site and later quarrying activities. The lozenge-shaped field had been divided in antiquity into a number of closes by banks and ditches that facilitated a landscape approach to dissecting the site [1.01, 1.02]. The whole area was criss-crossed with ditches and tracks. Three possible locations were considered for the main complex of buildings, a central area including the rectangular depression (Closes A and B, Areas 10, 11, Trenches 1, 6, 7, 13, 23, 1.01, 1.03, 14.01), a larger area to the north (Closes C and K, Trenches 2-5, 16 in Area 5, 1.01), and a smaller area further north (Close J, Area 4, Trench 8 and its subsidiary trenches [1.01, 1.03, 2.06, 16.02]). Areas used for post excavation purposes are shown in [14.03].

The second of these areas, that including Closes C and K, was regarded as most likely to contain the buildings required for a conventional claustral plan. The first mechanically excavated trial trenches cut across this northern area and the edge of the central one, through Closes E, K, O, and B. The trenches showed relatively shallow stratigraphy coming down on to boulder clay and Gault. Two adjacent areas were excavated during seasonal work with volunteers in 1973 and 1974. In Close A, Trench 1 [1.03] uncovered many robbed multi-period wall foundations but discrete structures could not be interpreted within the limited area of examination. Excavation within Closes C and K, Trenches 2-5 [1.03], in the middle of the larger area to the north-east, identified barn-like stone structures overlying timber features that were hard to detect in difficult clay soils. By the end of 1974 it was clear that work on this scale was not dealing adequately with the technical challenges of soil conditions and the apparent

state of preservation. The extent of the task was underlined by a detailed analytical earthwork survey carried out by Peter Woodward [1.03].

Larger scale work became possible in 1975 after the formalisation of previously ad hoc arrangements into the beginnings of a County Council Archaeological Field Team during 1974. Increased grants from the Department of the Environment facilitated the seasonal employment of two experienced archaeologists to speed up exploration of the site as the expected quarry deadline approached. Humphrey Woods excavated Trench 6 (Area 11) [1.03, 14.03], on the west portion of the main platform, Close A, finding a major stone structure S19 and part of an attached annexe. Dominic Powlesland began the examination of a larger area, Trench 7 (Area 11) [1.03, 14.03], on the central part of the same platform, finding a second large masonry building S16 with annexes and burials in stone coffins; his work continued in the first part of 1976, but without being able to resolve whether or not there had been a standard claustral plan. By 1976, it was clear that well-surviving but complex evidence could be understood only by long-term excavation of large open areas [1.03]. Secondary historical documentation assembled in parallel by the present writer indicated a changing identity from manorial site to alien priory and back again, together with royal visits to the site, raising the question of how this might be reflected in the archaeological record. There was also the need to clarify ambiguous place-name evidence about whether the priory of La Grava and the documented site of the Royal Manor of Leighton were one and the same.

Though securing funding seemed to be an insuperable problem, ironically it was solved by the national economic difficulties of the mid 1970s. The progress of the quarry slowed down. A series of employment training projects sponsored by the Manpower Services Commission (MSC) enabled a further nine years of almost continuous fieldwork. This life-line for the project had its own requirements, including continuity of a year-round range of work in all weather conditions for a basically untrained labour force under professional supervision, and the consequent need to develop suitable excavation and recording methods (described below). Fear that non-renewal of a scheme or changes in the employment programmes would cause the project to be abandoned was rarely absent. Nevertheless, the MSC excavations were an invaluable vocational training ground for some professional archaeologists as well as a beneficial social scheme at a time of high unemployment.

During the latter part of 1976, work continued on the main buildings (Area 11, S16). Trial trenches were also cut into the northern platform (Area 4, Trench 8) by David Devereux and selectively expanded. These found early Saxon occupation, including a sunken-floored building S1 and large areas put down to pasture, as evidenced by the lack of buildings and later documentary evidence, lying north of the medieval buildings excavated the previous year.

Between 1976 and 1981, work continued on the total excavation of the main platform, Close A, where the planning of buildings appeared to have been manorial rather than monastic, and, as the late Stuart Rigold observed on a site visit, of a type and construction whose status seemed consistent with the recorded royal visits. At least five main phases were identified. When quarrying eventually reached the north end of the field, the outer closes were examined in order of vulnerability. In Area 18 [14.03] what Gurney, a local antiquarian, had recorded as a windmill tump at the beginning of the 20th century, proved to have been a dovecote (Gurney 1920). Stephen Coleman commenced more exhaustive documentary research in conjunction with a set of parish surveys covering Leighton Buzzard and its hamlets.

Work on the outer closes C and K continued during 1982 and 1983 while extensions of the area excavation on the north and south of the main platform

were completed. The latter eventually led into a much larger area to the south, Close A, containing many of the main medieval agricultural buildings. Ground conditions had frustrated their location by geophysical survey, so their discovery during precautionary mechanical trial stripping raised a major problem. Matters were exacerbated by the increasing incompatibility of the later MSC schemes with this kind of archaeological work due to Bedfordshire then having no university and lower than average levels of unemployment. Strict requirements were increasingly imposed regarding the provision of very basic social skills training and/or greater involvement in work actually requiring much higher educational standards and professional experience than those which had been acquired by often very young long-term unemployed people. Choice of staff was limited. A special grant made by English Heritage, newly created in 1984, funded the first and only fully professional team for the last eighteen months of fieldwork, allowing its completion in August 1985, just in front of quarry overburden stripping.

Recording methods – structural evidence

From 1973 to 1975–76, the site record mainly consisted of notebooks, plans, sections, and photographs, though Powlesland initiated the first pro forma context sheets in 1975. Each trench or area excavation was given a separate number; contexts within each one were also uniquely numbered [1.03]. These were later subsumed within the division of the site into twelve areas for post-excavation analysis [14.03].

From 1976 onwards other recording methods were developed in response to the complexity of the evidence, the difficulty of soil conditions and the nature of the labour force. The main core of buildings was first seen through multiple destruction spreads and robbing, as a palimpsest of walls going out into trench edges in all directions; identification of individual buildings was difficult and large areas had to be opened at any one time in order to excavate deposits systematically [1.03]. Features cut into a mixed boulder clay subsoil tended to be initially indistinguishable, appearing only after weeks of weathering, and then often fleetingly as subtle differences in colour or texture that had to be confirmed in section or by their content differing from the surrounding subsoil and perhaps containing artefacts. These conditions effectively ruled out strict working within easily-defined phases or areas. Site excavation and recording methods had to combine general employment training for a transient labour force of variable abilities and motivation with a dependable archaeological result capable of systematic and detailed review, all in a pre-computer age. The system devised produced adequately consistent observation and recording under the discipline provided by a succession of capable senior supervisors; the present writer observed all major contexts during excavation.

Open-area working was applied to the main concentrations of buildings on the central platform (Close A [1.01], Areas 10, 11), the southern court to the south (Areas 6, 8, 9), the barn area to the north-east (Close C, Area 5) and some of the outlying investigations (Areas 2, 3, 5, 7, 12, 13) [14.03]. Large areas were uncovered and excavated slowly but systematically, with the control of upstanding sections; recording methods ensured the evidence could be manipulated and reinterpreted subsequently. Excavation on this scale was essential for understanding complex interconnecting and overlapping building sequences, many of which had little intervening open space to demarcate them. A composite plan of earthworks, roads, buildings, and watercourses [1.01] has been designed to assist navigation throughout the project

Contexts were dug conventionally; as far as possible excavation was geared to visible and distinct archaeological horizons. Context recording had to control large amounts of data that would have been scattered widely within the records of a simple unique numbering system. For instance, a feature might be recognised but not excavated for several months, by which time the next consecutive numbers would have been used to describe other deposits. Thus the feature was ascribed a 'parent' number as a prefix and the deposits forming contents were ascribed suffixes. Features (although integrated into the same numbering system as spreads) were identified by their cut number being placed within square brackets. Deposits within a feature also carried their individual deposit numbers in circles. Floors, yard surfaces, soil horizons, and other generally horizontal deposits (spreads or layers not within identified features) were given numbers placed in circles. When this material was eventually computerised, for example, GP76/ 9/ [3] (2), or Grove Priory 1976, Trench 9, feature 3, deposit 2 within feature 3, was expressed as 9/3.2, the coding used in this report and in the database. Any single-fill features originally single-numbered were renumbered during post-excavation analysis so that fill numbers always followed after cut numbers. The inherited name of Grove Priory was used consistently for the fieldwork documentation from the outset, though it became apparent from historical research during the project that the site was more properly called 'La Grava'.

The recording system consisted of five separate but interrelated elements [68.01–68.27]

- More than 5,400 context sheets on individual pro forma sheets for collecting contextual and finds information [68.01]
- More than 1,100 detailed, multi-context, coloured drawings as sets of overlays with additions for specific details [65.02–68.14]
- Series of overlays to record positions and numbers of the multi-context drawings
- General plan overviews/all feature plans at 1:50 and 1:100 [68.15]
- A photographic record of 220 black and white, colour and slide films in addition to specialist photography
- A series of day-books or site diaries giving an evolving interpretation and additional information [68.16–68.27]

Peter Woodward's measured survey of the earthworks was used to plot trenches and area excavations as they were opened, except for Trench 7 which had an independent grid [1.03]. Trenches and areas were related to an excavation recording grid based on the survey, with a unit of five metres aligned north-south¹, providing locational numbers in the context and plan record, and on containers for finds. The series of five metre grids were marked by steel kerbing pins driven into the excavation surface [eg 69.26]. These pins remained *in situ* over several years of excavation, facilitating consistent and accurate recording. Most small finds were related to their context and single 1m² square metre within the 25m² unit in the grid, whilst finds recognised to be of particular interest were plotted more precisely to a 0.1m² square, but resources did not allow their recording in three dimensions. The smaller pre-MS (pre-1976) excavations had been planned without internal grids apart from Trench 7.

Drawings were produced as a sequence of 1:20 transparent overlays, each using the same area within the grid system. Some complex features were recorded by additional individual plans reflecting phases of excavation. Elevations and trench sections were drawn at 1:10, as were the internal sections used as controls within area excavations.

¹ Editor's note: the grid was aligned to magnetic or OS north, which is different from the site north used in the publication – see Printed Synthesis Section 1.

Making multi-context coloured site drawings was a response to staff skills stronger in accurate graphics than in verbal and literate expression [65.02-68.14]. Capable of providing subtle information of a high quality, they were an expensive method that would not have been appropriate for simpler archaeological evidence, but were superior to simplified outline drawings geared to digitising. They helped identify patterns that usefully informed the excavation strategy, and were equally valuable during the post-excavation dissection of structures and settlement.

Although there were insufficient post-excavation resources to digitise over 1000 plans, individual ones matched well within the overall scheme. They were sufficiently accurate for later detailed spatial analysis not envisaged when they were originated. The overlay system of drawing and the grid pegs used throughout excavation of the main buildings area minimised error to a level of confidence of +/- 0.10m, and allowed historic sightlines and layout grids to be reconstructed with confidence.

Salvage work at the end of the excavation also used the grid system for surveying, and could thus be directly related to pre-1976 trench plans within the same area. This allowed Anglo-Saxon features excavated during later machine stripping to be plotted accurately with those excavated in the Trench 8 series. A combination of site grid and visible trench scars meant that the two sets of evidence were successfully matched, with an overall discrepancy of less than 0.1m between the two sets of evidence.

Recording techniques had to deal with both clearly defined observations and more ephemeral ones that did not respond readily to standardised methods, such as the results of allowing exposed archaeological surfaces time to weather and mature visually. Green-brown soils had a large clay and pebble component, derived from green-brown boulder clay overlying Gault clay that made distinguishing archaeological features from natural variation extremely difficult. Structures used these local materials; features were often backfilled with nearly identical components. Guidelines were issued for describing soil make-up and content in order to impose consistency and accuracy, together with a thesaurus of key words. Munsell colour charts were used at first, but later discarded due to difficulties over allocating relatively coarsely differentiated soil/colour numbers to the more subtle distinctions recognisable in difficult sub-soils, in variable light and weather conditions.

A series of linked matrices for areas of the site and individual buildings were compiled mostly during post-excavation. Together with the coloured overlays they helped to reconstruct the site. A series of interconnecting statements about the site were drafted during the lengthy course of its excavation, Daybooks and site diaries containing extensive notes, observations and sketch drawings recorded on-site interpretation as it developed and changed, adapting a traditional antiquarian approach [68.16-68.27]. Their purposes were:

- To complement the 'objective' record.
- To provide a record of changing hypotheses and excavation strategies as the project proceeded, presenting the various arguments about areas where the evidence seemed ambiguous or conflicting.
- To recall the assumptions behind the excavation strategies when returning to exposed contexts after weeks or months.
- To assist the recording of data too subtle or indeterminate to be fully comprehended within standard pro forma records, allowing the degree of certainty to be registered.
- To act as insurance against the further deterioration in resources which always seemed possible.
- To assist excavation and post-excavation analysis by people who had not seen the site or previous excavation work.

- To act as a social document, recalling the management of staff, type, and numbers, as well as other circumstances colouring the decisions of the day such as weather and site morale, all of which had an effect on the project. For some time such day books were relegated as being too 'subjective' in comparison with so called 'objective' records; in 2006 their value appears to be recognised once again as a tool which is able to record thought processes, uncertainties and hypotheses that more regimented pro forma records cannot accommodate.

Recording methods – artefacts

Finds collection policies, based on the recognition level that could be consistently achieved with the available labour force, were based on the time-honoured maxim of 'if in doubt, keep it'. Since MSC funding did not run to the employment of a site finds assistant, initial on-site discard of non-archaeological material and spot dating was carried out by the present writer and site supervisors. Subsequent discard after post-excavation analysis was by agreement with Luton Museum as recipient of the archive.

Ceramics [51-58]

130 standard boxes of pottery were recovered and 83 standard boxes of samples of roof tile. All sherds of pottery, clay pipe, and ceramic objects were kept, both stratified and unstratified; roofing material was selected from the large quantities recovered based on variety and completeness. Densities of materials were recorded on the field drawings, photographs, notes, and context sheets because there were no facilities or resources to make detailed recording of tile types.

Worked Stone [39]

More than 500 fragments of worked stone and architectural fragments were kept; unique architectural fragment numbers, separate from registered finds numbers, were given only to those pieces with distinguishing characteristics other than material and tooling. Tooling types were noted. All objects of stone were kept.

Mortar and Plaster

All fragments of decorated or plain medieval wall plaster and backing were retained, together with samples from plaster floors and wall finishes. From 1978, all mortar-bonded walls were systematically sampled in the hope that this might further define or confirm the dating sequence. The reports on this material and on residues on pottery, have not been received from the specialist to whom it was submitted, and only site records and a descriptive list are in the archive.

Animal Bone [61-62]

All animal bone (206 boxes), including material from unstratified groups of bone, was kept for species identification prior to discard by the specialist.

Molluscs were retained from stratified contexts only; the limited quantities of fish bone came only from stratified contexts.

Human bone [60]

Inhumations were given separate numbers, drawn, planned and photographed and recorded on pro forma sheets.

Environmental sampling [64]

Until 1978 samples were kept only from such potentially fruitful contexts as ditch or pit fills. Then a more comprehensive sampling strategy was recommended through the Ancient Monuments Laboratory and Mark Robinson of University Museum, Oxford, with material kept from floor levels and smaller features. There were no sieving or flotation facilities available, though numerous samples were retained for environmental examination and other finds retrieval out of the field. Once out of the field, samples were analysed and reported on by Robinson [62]. Large quantities were kept until tested and discarded.

Glass [40, 41-50]

All glass fragments, both medieval and post medieval, were kept as bulk finds. Any object of glass such as a Saxon bead, was given a unique number as a registered find. Painted and plain window glass was collected as a separate category, as bulk finds partly for storage reasons.

Small finds (registered artefacts) [41-50]

Objects considered to merit special attention, needing to be easily retrievable or having special storage needs, were given unique numbers. The total of 3100 items excludes iron nails, window and vessel glass, worked masonry, plaster and flint work, having moved some of these finds into bulk categories, particularly from Trenches 6 and 7.

Flint

The material is not discussed in this report. All worked flint and debitage was collected. Frost-worked flints and those resulting from activities such as ploughing were discarded after examination by Andrew Pinder in 1985. It is possible that some mesolithic flint fragments were not collected, though experienced personnel were deployed onto sensitive areas once they had been recognised.

Post-excavation strategy

It was a basic premise of the methodology used in working out sequences for 109 structures that the framework for archaeological dating and interpretation should not be determined by documentary sources. It was initially based upon the structural, artefactual, and ecofactual evidence, and was later enhanced by

spatial analysis that refined understanding of development, reconstruction, function, and status for the plans of individual buildings and groups of buildings [33-36]. Attempts to impose broad interpretations upon the archaeological evidence were delayed until as late as possible, and this policy was facilitated by the recording methods described above. Though the quality of the historical documentation was apparent from early in the project, its contribution to the overall story was kept as separate as possible from the archaeological evidence until the latter had been analysed and interpreted in its own right.

Post-excavation methods: structural and stratigraphic analysis

For analysing the core of medieval activity, the excavated site was divided into twelve areas [14.03], each containing sets of trenches or larger open area excavations, and each with a discrete set of buildings. The area divisions used in post-excavation analysis were dictated by banks, ditches, and closes, and are used mainly in descriptions of settlement planning. Sequences of stratified deposits created by construction, occupation, and destruction were worked out for each area and then, where possible, correlated across areas.

The system devised was hierarchical and structure-led in order to facilitate handling large quantities of data, initially manually, though both structural evidence and finds were later put on to a relational database. Pro forma sheets were devised for single structures or a group of structures, and their immediate environment. These acted as a check-list to ensure that all available evidence was assembled in a standard format, and that the same basic questions were asked of each structure, so as to form the core of a consistent structural archive. An integrated overview was assembled covering the evidence for 109 basic structures, any fixtures and fittings, subsidiary structures within them, their functions, the way they were used, the objects used in them, and contemporary features. Functional relationships within the settlement were examined at different periods, including spaces between buildings and their position within the landscape. The pro forma records were augmented with free text, related directly to phase plans, and accompanied by Evidence Correlation Charts providing all other data. This whole process created a hierarchy of information from contexts, groups of contexts describing features and deposits, to assemblages of features making up buildings or substructures, and finally related buildings and features making up the localities of the site.

Generally, however, the evidence from the site did not exhibit well-defined events within clear time frames, but rather a complex continuum in which overlapping sequences of events could not always easily be matched precisely from area to area. The nature of this evidence created problems and opportunities for analysis and interpretation.

In some places there were intricately stratified sequences covering several hundreds of years within a depth of usually less than a metre, apart from some deeper features. There were some clear archaeological horizons and major site events, including landscaping, burning, demolition, periods of inactivity, and deliberate ground clearance that swept away buildings wholesale. Some of the most useful recorded archaeological events were apparent 'break points' or flurries of activity where building or demolition activities seemed to occur in rapid succession. Some individual buildings were well stratified, had good finds assemblages and independent archaeomagnetic dating; several good building sequences in different parts of the site provided a framework of vertical and horizontal axes through stratigraphy and across adjacent contexts.

In other places, stratigraphy had been truncated, or more intact sequences lacked diagnostic artefacts so that only parts could be dated. Buildings with few or no datable directly associated finds appeared beneath topsoil and stood upon subsoil; these could only be generally dated by the finds within their destruction deposits or in contemporary external surfaces. Others lacked even these indicators. In some cases, diagnostic construction techniques or materials could be correlated with other buildings having more secure phasing. With other structures the temporal window within which they could have functioned was defined by other, better dated, activities that could be linked stratigraphically.

Some contexts either represented activity over lengthy periods of time, or could not be ascribed with any degree of certainty to a single dated phase, so were given linked phasing. Even this dating evidence was helpful in cases where it was stratigraphically associated with structures having otherwise poor or conflicting indicators in the form of intrusive or residual finds. Lack of resources prevented the reliable assignment of all contexts to phases, but while further detailed analysis might reduce the total of contexts unassigned to specific structures or period, it would probably not contribute greatly to the overall picture.

The spatial analysis described in [6] and [33] also had a part to play; plotting and comparing precise positions and angles of some buildings allowed them to be placed within a specific construction campaign. Remaining ambiguities in placing buildings within the temporal framework are indicated, as are those buildings placed in the sequence on the basis of relative dating or circumstantial evidence.

Selection for publication

Generally context numbers have not been used within text since this can be found in the archive and listings as necessary. They have been used in finds catalogues and key context (selective summary) lists that are part of the structure descriptions. Care has been taken to give specialists the information they need for material under study and to guide archaeologists with regard to decisions made about date and function. Finds have been integrated as fully as possible into the structural report and structures cross-referenced with finds. The full and unamended specialist technical reports and interpretation are in the Digital Supplement and fully illustrated as closely to descriptions as possible.

To facilitate understanding and further research detailed summarised lists of all finds except animal bones have been compiled for stratified structural sequences [13.01-13.13]. Eleven groups comprising 51 closely associated buildings have been selected to illustrate these Dating and Material Culture Sequences. The choice was made primarily from those structures that were part of a stratigraphic sequence, but also to show the range of types of buildings and activities through their material residue. These summaries are complemented by selected finds tables, listed with each structure description to show the principal dating and diagnostic elements.

Some structures provided little or no dating evidence, and use has been made of associated stratigraphic relationships. Contemporary external surfaces sometimes contained the only artefactual evidence for some structures. In these cases it was considered particularly important to include finds found in external association with buildings through time where they existed. Relationships are distinguished by suffixes used in compiling the database: A (associated) or D

(disuse or destruction). Some surfaces were patently long-lived or difficult to separate, but could indicate date as well as activity in the vicinity of the building over a period. In many cases structures in the sequences provide the continuity as an effective and informative means of filling the evidential gaps left by the selective key context lists in the structure descriptions and the deliberate exclusion of context numbers in texts. Sequences can include pre-building and post-building assemblages in order that residuality and intrusivity can be gauged. Each finds sequence is given in period and phase order by amalgamating the products of like contexts in each. The term u/s, or unstratified, means that an item was redeposited, but may not have travelled far from where it was originally lost or abandoned.

Post-excavation methods

These notes summarise the approaches taken by the various specialists whose main reports are to be found in the digital publication.

Evelyn Baker is responsible for integrating all specialist reports into the printed report. She has designed all the tables, charts, and diagrams. She has undertaken analysis and reporting on all structural evidence, with initial help from **Michael Dawson**, **David Devereux**, **Andrew Harris**, **Robert Mustoe**, **Andrew Pinder**, and **Karen White** on major structures and dating. The 109 buildings formed the core of the whole analysis, incorporating all other types of evidence as appropriate [17-28], and are accorded the prefix S. Buildings were examined as entities through time and as landscape groups [16]. Phasing descriptions include pre-building and destruction levels (D suffix), and whether the context was part of a Structure (S prefix) or associated with it (A suffix); **S16A** means the context was associated with **S16**, usually outside, but not a physical part of it; **S16D** signals that the context was deposited after the life of the building in a destruction level. All structural evidence, infrastructure, yards, buildings, subsidiary structures, walls, roofs, floors, and cut features were tabulated and cross-referenced. All finds except animal bones were summarised according to Structure and phase in Material Culture and Dating Sequences [13] to complement the specialist reports; these were divided into primary structural evidence and material that indicated activity; the presentation of specialist reports follows this scheme. Spatial analysis resulted in a greatly enhanced understanding of the immediate landscape, layout, and individual Structures [33-36]. It has implications for not only having achieved a greater degree of accuracy within this site report but the methodology could be used to review other excavations such as Writtle [6.14]. Additional analysis of ceramic and non-ceramic finds and their implications included the issues of residuality and intrusion. A chart of all Structures in Structure number order can be found in [1.08=13.16]; a catalogue of Structures by building date is presented as [13.15]. [1.04] is a composite plan of the main buildings and [1.06] is a key to symbols used in all structural illustrations.

Anna Slowikowski reported that the ceramics were analysed within discrete groups of buildings or Areas. Only stratified contexts were fully recorded, although good examples of unstratified pottery supplemented the type series. Initial work was undertaken by **Georgina Brine**. Pottery from contexts was quantified by sherd count and minimum vessel count with illustrations showing proportion of pot surviving as pie diagrams. Eves and weight calculations were not undertaken. Cross-context analysis was used to give additional information about the site phasing and soil movement (shifting refuse material) across the site. Basic questions concerned typology and chronology, sources and supply, differences in the types/forms found across the site, and what they might tell about who used what types in which part of the site. Phasing is used except for Periods 3 and 4. A table of ceramic fabrics, common names, and dates according to the Bedfordshire Ceramic Type Series initiated by **Evelyn Baker** and **Jane Hassall** may be found in [51.02]; the catalogue of illustrated pottery by illustration and catalogue number, fabric, form, trench, context, phase, Structure, and comments in [51.01]. The report on residues noted on vessels was not received from the specialist. Other ceramic items including clay building material are discussed in [38] and [45].

Holly Duncan reported that quantities of non-ceramic bulk finds and 3,100 small finds (registered finds) were identified during the initial post-excavation stage using a 'simple names' list compiled in consultation with Bedford and Luton Museums. She was assisted by **Teresa Jackman** and **Patricia Walsh** and the specialists named in the Acknowledgements. These identifications were then allocated to a classification system; this approach reflected more closely the object's relevance to the function and status of the site and facilitated an integrated presentation of the material and structural evidence. Crummy's definitions (1983), based upon function rather than materials of manufacture, were used in the classification system. Some modification of and addition to Crummy's categories were made in order that the classification system could be used on all single period and multi-period sites. Allocation of the 'simple names' to categories was not always straightforward as some objects had more than one specific use or could have been reused for a purpose other than originally made. Some material from Woods' and Powlesland's excavations, such as glass fragments and plaster, were relegated from small finds' status and placed into bulk finds categories. Phasing is used except for Periods 3 and 4 [40-50].

Andrew Harris reported that 538 architectural fragments were retrieved, generally in a good to fair general condition. Initial work was undertaken by **David Wilkinson**. About 250 were catalogued, ranging in date from the 12th to 14th centuries, the most intense phases of the site's occupation. This material was examined, analysed, catalogued, and given individual Architectural Fragment numbers (AF) that formed the basis for a computerised database. The remaining uncatalogued material comprised small fragments and generally had only a single plane and perhaps some tooling which was recorded. Distribution plots were useful in providing supporting evidence for the dating of structures and any additional phases. The density of stone material within particular areas of the site was used to locate those buildings more likely to have been of masonry construction. Type of stone, form, function, and tooling were taken into account [39].

Wayne Bonner, Matilda Britten, and Annie Grant reported that the processes used in the analysis of animal bone included identification and cataloguing, quantification, fragment count (NISP), minimum number of individuals (MNI), epiphysis only, metrical analysis, and ageing. Excavation undertaken through manual methods without the resources for sieving or column sampling resulted in the under-representation of the smaller bone elements of larger-sized mammals and the smaller sized animal groups such as mice or shrews. The actual importance of the smaller-sized species cannot fully be estimated. For statistical reasons the report has used only Periods, and not the finer phasing within them [61-62].

Tony Clarke reported on independent dating which was confined to archaeomagnetic sampling undertaken at a time when the technique was still experimental; only a proportion of hearths, those excavated towards the end of fieldwork, were studied. **Nimo Yassi's** Natural Remanent Magnetisation sampling of ditch sediments was unsuccessful, probably because of the ground conditions [31].

Ann Stirland with **Teresa Jackman** (Spencer) reported on the human remains, comprising examination of about 28 individuals, mostly fairly complete. Post-

burial breakages, especially of skulls and long-bones, prevented calculation of various indices. The assemblage was examined to provide information on age, sex, stature, dental condition, morphological traits, and pathological conditions, Cranial Index, Platymeria and Platycnemia [60].

Mark Robinson reported that 43 viable samples of plant and invertebrate remains were assessed from a total of 210 samples for the presence of surviving biological evidence. Ten samples were selected and floated over 0.5mm mesh, wet sieved to 0.5mm and washed over 0.2mm mesh in order to extract the particular material they contained. The appropriate residues or flots were sorted and the remains identified and listed [64].

Stephen Coleman consolidated and greatly expanded Evelyn Baker's initial documentary research examining several thousand primary and secondary sources for Leighton, La Grava, and Grovebury. Many of these were transcribed on to 500+ pro forma sheets in date order as part of the site archive, and some have been incorporated as [67]. This work included searches on aerial photographs, map evidence, and any other matters relating to the area of the whole manor [65]. Elisabeth Zadora-Rio located, translated, and transcribed documents in Angevin archives [67]. Evelyn Baker undertook additional research and analysis on national and regional contexts, owners and tenants, agrarian practices, the possibility of an earlier Anglo-Saxon estate, and the manor's position within the Danelaw [66]. Patricia Bell (formerly Bedfordshire County Archivist) and Michael Baily transcribed selected key documents and discussed their implications [67]. Judith Everard of the British Academy's Plantagenet Acta Project commented on Joan of Sicily's will [67]. The specialist report published in [65] is taken from an extensive Parish Survey (Coleman, unpublished, 1981; in the Bedfordshire and Luton County Record Office, Bedford).

Cecily Marshall has illustrated all finds, structural figures, plans, and reconstructions. She has also assisted Evelyn Baker with some aspects of structural analysis. Subsequent editing of illustrations was carried out for CBA by Marie-Claire Fergusson.

Key to terminology used in publication

Structural evidence is presented in the Digital Supplement as a series of cross-referenced tabulated reports on Structures [19-28], subsidiary structures (hearths, ovens, furnaces, brazier marks, and kilns) [29, 30], cut features (ditches, pits, drains, gullies, wells and ponds) [32] and infrastructural arrangements of roads and tracks within the site as a whole, together with a description of the techniques of spatial analysis [33-36]. There are reports on architectural stone [40, 41], environmental evidence [59-62] and on archaeomagnetic dating [31]. A list of major events and sources for the documentary history is based upon an extensive and annotated archive of extracts and transcripts, mostly published in full in the Digital Supplement [67]. Details of excavation methodology, recording, and administration are in [68], with additional photographs in [69]. The Digital Supplement contains most of the illustrations supporting the specialist/technical texts and historical documentation, with links to the relevant passage for ease of reference when referring to texts in the printed Synthesis.

There are 437 headings used within 15 categories including closes, sectors, yards, and cut features in the texts.

Closes A-Q [1.01, 1.02]

Areas of land separated by banks and or ditches for agricultural or building purposes

Sectors 1-3 (shown in phase plans)

Three principal areas of building activity, the areas of Sectors 1 and 2 change with boundary alterations.

Sector 1: high status, administrative, and service buildings in the north court

Sector 2: service, domestic, and agricultural buildings in the south court

Sector 3: buildings to the north-east of the two main courts

Outliers: buildings not within the three main Sectors, eg S51, S72

Yards (Y) 1-15

These open spaces are described by area and phase using Cut Features where relevant for location: Yards and enclosures, areas between buildings

Cut Features (CF) 1-96

By phase and associate Structure.

Negative features other than structural (ie robber trenches) for buildings: enclosure ditches, gullies, drains, pits, cisterns, ponds, and quarries.

Banks (B) 1-10 by number

Routes (Rt) A-AB by landscape group. See phase plans.

Trackways, roads, and paths

Structures (S) 1-109 in structure number order.

Groups of features making up buildings, gatehouses and entrances, plus miscellaneous constructions such as S106 hitching rail, S77 boundary wall and ditch, S44 dam.

Subsidiary Structures (SS) 1-64 by associated Structure.

Structural features usually within buildings: hearths, ovens, kilns, furnaces, tanks and chimney bases.

Construction Techniques (CT, RT, BA, BM, RM, BT)

Construction Techniques: (CT) 1-38

Repair Techniques: (RT) 1-11

Bonding Agents: (BA) 1-6

Building Materials: (BM walling) 1-8

Roofing Materials: (RM) 1-7

Building Terms: (BT) 1-10

Areas: landscape groups 1-13 as areas of post excavation analysis [14.03].

Areas are noted for archival research but locations are best found by using Closes

Areas 1, 6, 8, 9, 10, 11: main buildings area

Area 2: south-eastern earthworks and tracks

Area 3: north-eastern area and boundaries

Area 4: northern landscape and Saxon buildings

Area 5: barns and Saxon buildings

Area 7: pigeoncote and boundaries

Area 12: watching brief around areas 3-5, 7

Area 13: principally watching brief over the rest