

Excavations at the Palace of Kings Langley, Hertfordshire 1974–1976

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INTRODUCTION

THE PALACE at Kings Langley, Herts., lies in the grounds of New School (TL 064025) W. of Kings Langley (FIG. 45) and is approached via Langley Hill, the medieval road to the palace. It lies on an Ordnance Datum of 400 ft. on a thick deposit of plateau drift, consisting of pebbly clay and sand, overlying upper chalk.

Until 1962, when B. F. Rawlins carried out small scale excavations on Site 2, the situation of the palace was not known. Previously it was believed to be in a field to the SW. (at TL 067025) and consequently no archaeological excavation or observation was carried out during the building programme of the 1950s. The first major excavations began in 1970 during the construction of a school theatre, canteen and gymnasium. A massive cellar (identified with *la Cave* built in 1291–2) was discovered together with kitchen buildings. The cellar formed the W. side of a kitchen courtyard and the western boundary of the palace complex. Ditches associated with the pre-palace manor were also located.

In 1973 the school authorities announced plans to enlarge the existing biology wing (Site 1) and to construct a classroom adjacent to the gymnasium built in 1970 (Site 2). Excavations in advance of this work between 1974 and 1976 revealed a long structure known as *le Longrewe* and the *Great Well*. This report will describe these features, the documentary material related to them and the place of the buildings in the Palace layout. The discoveries of 1970, already published,¹ will only be described in relating the overall plan of the palace complex. Rawlins's discoveries on Site 2 will be recorded within the body of the report. The excavations of 1974–5 were arranged under the auspices of the Watford and SW. Hertfordshire Archaeological Society and financed by the

¹ *Hertfordshire Archaeol.*, III (1973), 31–72.

Department of the Environment (D.o.E.). The excavation of 1976 was carried out by the D.o.E. Central Excavation Unit.²

Finds from the excavation are housed at Verulamium Museum, St Albans, where also the photographic record is kept. Only a limited number of finds are here described and illustrated. For a fuller illustrated list consult *MS Excavations at Kings Langley 1974-76* in the Library of the Society of Antiquaries, London.

Abbreviations commonly used in the text include: L = Layer; SF = Small find.

HISTORY OF THE PALACE³

Kings Langley's history as a royal manor begins in the reign of Edward I when an account of 1278⁴ mentions "a new start"; this probably indicates the date at which improvements to the existing property began. An enrolled account records work carried out between August 1279 and November 1281.⁵ It also refers retrospectively to previous works for which no account is extant. For the period 1279-81 the account records a total expenditure of some £408. Work was in hand upon the chambers of the king and queen, and of Alphonse the king's son. The queen's cloister, her great chamber and her middle chamber, was paved. There is a reference to the making of a vineyard and the digging of a well, and a reference "both for making the fosse and for filling in the fosse" (it is likely that the original moated site of the manor house was enlarged at this time). In 1282-3 a "new gateway" and "divers other works done there by order of the Lord King and Queen" are recorded.⁶

In 1290 Queen Eleanor died and an extent was made of the manor in the following year,⁷ but this failed to itemize buildings. However, further work was still being carried out, because in 1291-2, £66. 13s. 4d. was paid to Martin of Ray, for building a wine cellar.⁸ In 1292 Henry of Bovington, a carpenter, made two louvres for the roof of the hall.⁹ There are references of 1296-7¹⁰ to a stone wall enclosing the court, to the repair of the hall, chambers, kitchen and garde-robe of the manor, and to the making of two new fireplaces in two "great chambers".

² The writer would like to record his thanks to the following supervisors who assisted on the excavation: M. Harrison, E. Higginbotham, J. Hunn, G. Smith, Mrs A. Wardle, and E. Wayman. The pottery and finds were catalogued by Miss J. Bilton, Mrs M. Cousins, Miss G. Cousins, and Mrs E. Palmer. Site photography in 1974 was undertaken by James Brown of Verulamium Museum, and in 1975 and 1976 by the writer and various supervisors recorded above.

³ The account of the history of the palace and documentation quoted in the text draws largely from H. M. Colvin (ed.), *History of the Kings Works* (H.M.S.O., 1963), II, but many references, particularly those related to *le Longrewe*, the well-house and the post-medieval condition of the palace buildings has been taken or supplied from other sources — see Acknowledgements below.

⁴ Public Record Office (hereafter P.R.O.), SC6/866/7.

⁵ Pipe Roll 9, Edward I, rot. 2d.

⁶ P.R.O., C81/1766, No. 25.

⁷ Rentals and Surveys, 279; compare H. Johnstone, *Edward of Carnarvon* (Univ. of Manchester Hist. ser. 83, 1946), 29-30.

⁸ Liberate Roll 19 Edward I, m.4; Issue Roll 70 (Easter 19 Edward I).

⁹ P.R.O., E101/466/1.

¹⁰ P.R.O., SC6/1090/4, rot. 4.

For the period 1302–27 an almost continuous series of bailiffs' accounts deals with the maintenance of the manorial buildings. There were evidently three courts, for the inner, middle and outer courts were cleaned in 1305–6,¹¹ one of these was also known as the great court¹² and contained the principal royal apartments.¹³ The latter included the hall,¹⁴ the chapel¹⁵ and (before Edward's accession) the prince's chamber.¹⁶ Other apartments in the prince's time included the queen's chamber, with her wardrobe next to it and a larder beneath it,¹⁷ the chambers of John Wake, John Braban, and the steward,¹⁸ "the long chamber towards the vines"¹⁹ and the chamber by which one goes to the cellar.²⁰ The domestic offices mentioned include the bakery and larder,²¹ the great kitchen, roasting house, saucery²² and the queen's pantry.²³ In 1305–6 the well house and winch gear was repaired²⁴ and in the same year over £20 was spent upon the prince's stable. It was lengthened and "a new chamber above the outer gate" and "a new stable between that gate and the chancellor's stable" were constructed.²⁵

Between 1359 and 1377 nearly £3,000 was spent on the manor and priory; part of this sum was spent on the bath-house, where it appears hot water was laid on,²⁶ and maintenance and improvements made to a number of rooms including repairs to the well house.²⁷ The counting house is recorded²⁸ as is a supply of timber for building a new entrance gate.²⁹ A series of accounts between 1 October 1384 to 5 January 1388³⁰ records extensive maintenance and repairs to a "long house" called *le Longrewe*. Between 6 January and 20 February 1388 and between 8 July 1388 and 11 July 1389³¹ £110 was spent on the palace against the arrival of the king and a new timbered house constructed over the great cellar.

From 1426–1428 Richard Bitterley spent £94. 5s. 5½d. on repairs to roofs and other parts of the building,³² but in 1431 the house was seriously damaged by fire.³³ However, subsequent references to the great hall, the chapel, the king's chamber and *le Longrewe* being defective precludes their total destruction.

¹¹ P.R.O., SC6/866/16, m.3.

¹² P.R.O., SC6/866/18, m.3.

¹³ For example, P.R.O., SC/866/17; m.2; 866/16, m.2.

¹⁴ P.R.O., SC6/866/16, m.3; 866/17, m.3.

¹⁵ Issuc Roll 143 (Easter 1–2 Edward I), m.3.

¹⁶ P.R.O., SC6/866/16, m.3.

¹⁷ Ibid., mm. 2, 3.

¹⁸ P.R.O., SC6/866/17, m.2.

¹⁹ P.R.O., SC6/866/15, m.2.

²⁰ P.R.O., SC6/866/16, m.3.

²¹ P.R.O., SC6/866/15, m.2.

²² P.R.O., SC6/866/17, m.2.

²³ Ibid., mm. 2–3.

²⁴ Ibid.

²⁵ P.R.O., SC6/866/16, m.4.

²⁶ P.R.O., E101/544/22, mm. 1–3, 1d.

²⁷ P.R.O., E101/544/20, m.1 (roof repairs) and E101/466/5, m.1 (windlass repairs).

²⁸ P.R.O., E101/544/20, m.1.

²⁹ Ibid., m. 1d.

³⁰ P.R.O., E101/473, mm. 16, 17 and 22.

³¹ P.R.O., E101/473/5, mm. 5, 11, 12.

³² P.R.O., E101/466/11.

³³ *Annales Monasterii Sancti Albani* (Rolls Series C. & M. 28, 5), 61.

In a survey by John Pygott, Steward-General of the county, in 1553-4³⁴ reference is made to several old buildings; "a long house in the tenure of Thomas Prior" was "badly in decay both in timber and tiling". The great long house which apparently adjoined this structure was badly neglected. In the survey of 1556,³⁵ "the divers edifices within the site of the manor are decayed, pulled down and carried away by the farmers although he be bound to repair them at his own proper charges".

By 1591 a survey³⁶ records only an empty field on the site "lying westward behind the gatchouse parcel of the said site called Verneys Lodgings". The site of the Court Wick is described as running S. up to the park pale so presumably *le Longrewe* was now demolished. An old building called the fourteen bays lay to the N. of the court, E. of the Priory Church.

THE EXCAVATIONS

SITE 1

FEATURES PRE-DATING LE LONGREWE (BUILDING C)

The ditch

One of the earliest features on the site is a ditch (FIG. 46) running approximately E. and W. and turning northwards beneath Room 7. The western part of the ditch headed towards the manor enclosure (FIG. 45) along the alignment of the school boundary. It measured 3 m. wide by 1.50 m. deep (sections A-A, B-B, FIG. 49).

Building A

The ditch was filled with stoney clay (L 80) deposited prior to construction of a wall (beneath Rooms 6 and 7) running on a NW. and SE. alignment. Its cob foundation, 60 cm. wide, supported a wall of Totternhoe stone. The foundations had subsided into the filling of the ditch. No trace of the wall was found on either side of the ditch so it is postulated that it was built as a revetment for a later causeway.

Pit 140

N. of the wall and E. of the ditch was a pit (140) (section C-C, FIG. 49) measuring 2.50 m. wide by about 1.50 m. deep. Layer 137 contained a lead jeton, a jug (FIG. 54, No. 1), a cooking pot (FIG. 54, No. 2) and a condiment dish (FIG. 54, No. 3). In the upper filling (L 136) were fragments of a decorated jug (FIG. 54, No. 5). Among the skeletal remains (from L 138) were bones of a cod and a ling.

Building B

This comprised a clay wall running on a NW. and SE. alignment situated partially beneath the S. wall of the later building (FIGS. 46, 47). It was faced on its

³⁴ Pygotts Survey 1553-4.

³⁵ Hertfordshire Record Office, Blackwell Papers, 20123.

³⁶ Hertfordshire Record Office, Blackwell Papers, 20113.



FIG. 45

PLAN OF KINGS LANGLEY PALACE

Showing location of Sites 1 and 2. (Based on the Ordnance Survey map with the sanction of the Controller of H.M. Stationery Office: Crown copyright reserved)

inside edge with flint nodules. It turned NE. beneath a later fireplace. Contemporary with, and set into the inside edge of the wall were two postholes (236 and 237). Postholes 230 and 226 were also associated with the structure, and were probably intended to reinforce the roof. Posthole 231 and a thin line of clay to the E. may represent the line of the N. wall. In the centre of the building was a hearth associated with fragments of pottery in Hertfordshire grey ware (no Surrey or Oxfordshire wares were present), sealed by a layer of cob (L 223, see section L-L, FIG. 49) collapsed from the S. wall. In the cob were the remains of charred wattles, indicating that the cob was rendering over a wattle framework, and that the building was possibly destroyed by fire.

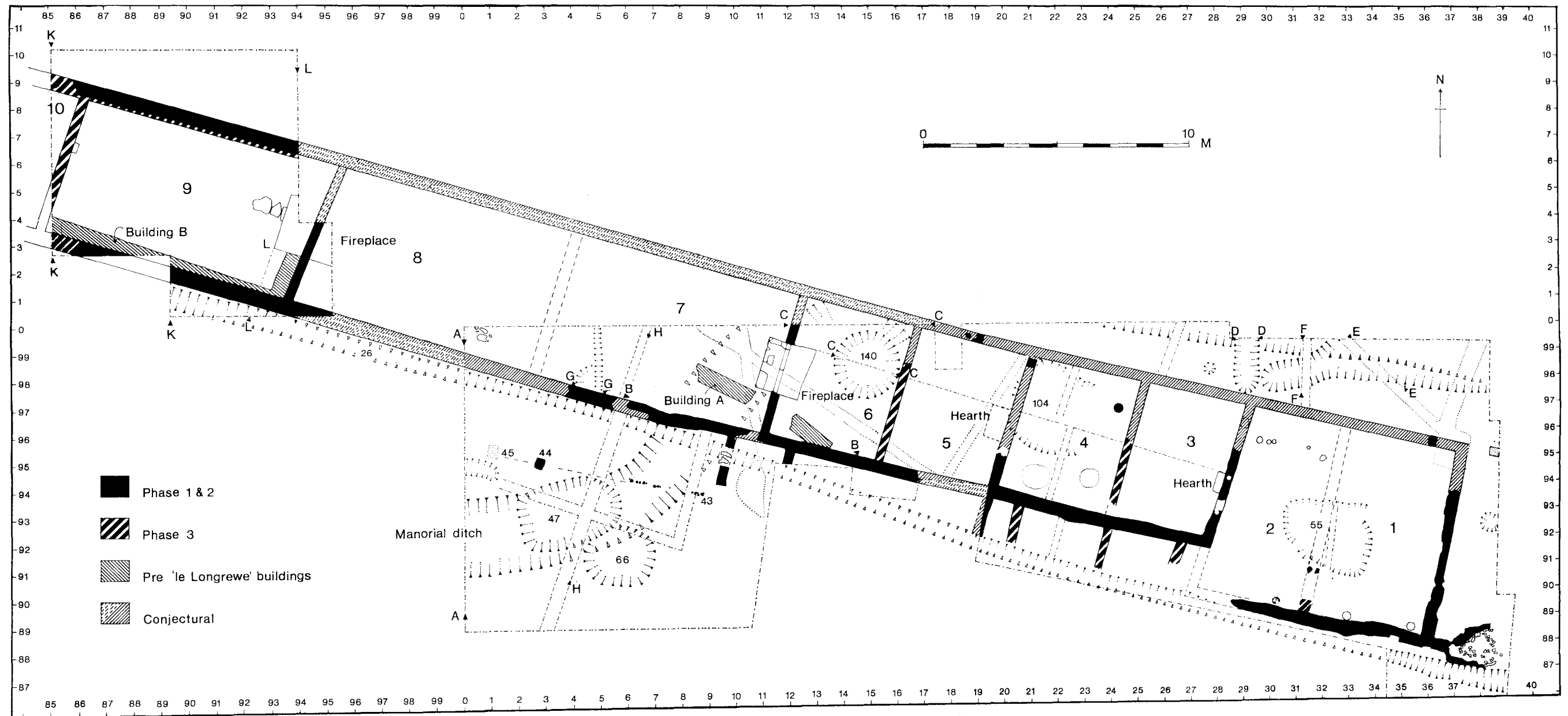


FIG. 46
KINGS LANGLEY PALACE, *LE LONGREWE*
Building C, Site 1

Cutting the destruction levels over Building B was a stone wall. It was about 1 m. wide and constructed from at least three massive blocks of erratic limestone set end-to-end, with smaller fragments of stone on its N. side. It ran on a NW. and SE. alignment, parallel to the S. wall of Building B. The stones were bedded into the natural clay subsoil, without bonding materials, and were only a single course deep. The wall ran E. beneath a classroom.³⁷ Associated with the wall were a number of postholes (201, 203, 216, 217, 218 and 221). The postholes varied between 18 and 40 cm. in depth and were all filled with dirty clay mixed with large quantities of charcoal. This same layer also spread over part of the stone wall. The purpose of the wall is uncertain. It was sealed by a deposit of charcoal (L 183, see section L-L, FIG. 49) between 10 and 15 cm. thick. This ran beneath the walls of the later Building C. The fragments of brushwood within the deposit suggested that the area might have been used for charcoal burning although an accidental fire of a woodstack may be a simpler explanation.

Cutting the charcoal layer was a number of postholes represented by 190, 192, 193, 194, 196, 197, 202, 203, 210, 212 and 228. They were randomly situated, varied between 9 and 24 cm. in depth, and were filled by layer 153 which was deposited within the area enclosed by the walls of Room 9 (Building C) as make-up for its floor. It is possible therefore that the features were associated with the construction of Building C, and were for scaffolding. Another feature pre-dating Building C but possibly associated with its construction was a bowl-shaped mass of lead (PL. XI, A), 69 cm. wide cutting the charcoal level 183 and situated beneath a fireplace. The lead was not pure, but contained many ash inclusions. It seemed to have been litharge formed by being skimmed from a crucible.

BUILDING C, LE LONGREWE (FIG. 46)

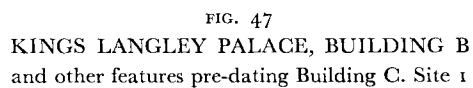
Identification

Building C is believed to be the range known as *le Longrewe*. This interpretation is based on three factors: first, the length of the building; secondly, the record of it having been in the S. part of the manor; and thirdly, the discovery on the excavation of features which appear to relate to references in medieval documents. Unfortunately the writer has found no documentary records relating to the construction of the building. A reference dated (?) 1302 to the "*long chamber towards the vines*"³⁸ and another of 1308-9 to "a gate between the *long chamber* and wall of court"³⁹ may be earlier than and not necessarily related to the building under discussion. The coin evidence precludes construction sooner than c. 1310. Later references of 1384-7 refer to the building as *le Longrewe* or "long house" and itemize expenditure on major repairs and alterations including the insertion of fireplaces — possibly those found in the excavation.

³⁷ SW. of Site 1 is a modern rockery built with blocks of coarse grit. Among its rocks is a glacial erratic similar to those in the wall. It is possible that it was discovered during the digging of the foundations of the old Biology Block in the 1950s.

³⁸ P.R.O., SC6/866/15, m.2.

³⁹ Hertfordshire Record Office, B.P. 20090 Account of Robert Parker 2 & 3 Edward II 1308/9.



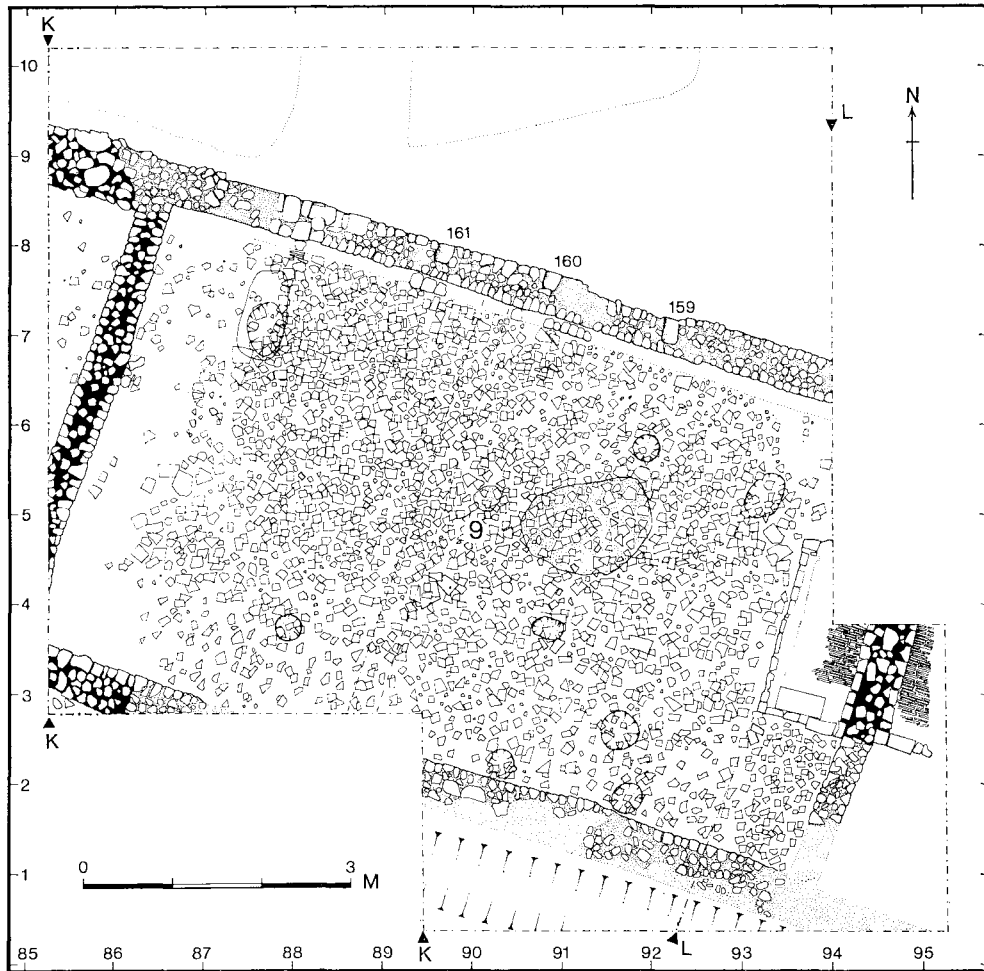


FIG. 48
KINGS LANGLEY PALACE, BUILDING C
Detail plan of Room 9. Site 1

Description

Le Longrewe was a lodging range about 100 m. long on the S. side of the Court Wick. The main range (Rooms 3–9) measured 5 m. wide internally, but at the eastern end of the building Rooms 1 and 2 projected southwards making the range 7 m. wide internally (PL. x, B). The W. side of the range probably extended to an inner gatehouse but the eastern extent is uncertain. Its walls were built in flint (laid herringbone fashion), set in yellow mortar, built directly on to the land surface without foundation trenches. Only where the walls crossed earlier features, were they provided with deeper foundations, although in some places the wall had a single offset. Postholes (Nos. 161, 160, and 159, FIG. 48) cutting the N. wall

of Room 9 indicated the structure to have been half-timbered. The building was poorly preserved having been robbed in post-medieval times, cut by gardening activities in the Edwardian era, and seriously damaged by the construction of school buildings, drains and soakaways.

The building is of three phases: Phase 1: main construction; Phase 2: insertion of stone fireplaces; and Phase 3: alterations to the internal layout.

Phase 1

There were probably eight rooms in this phase (excluding rooms which may or may not extend east of Room 1/2). Rooms 1/2 (PL. x), 3/4 and 5/6 were all 8 m. long. Unfortunately no trace of the western wall of Room 7 survived, but the room is likely to be of the same proportions, as is Room 8. Room 9, however, was larger (9 m. long) which might possibly indicate that the lodgings towards the W., i.e. the principal apartments, were built larger to accommodate visitors of higher rank. There would be space for two more rooms the same size as 9 between Room 9 and the site of the inner gatehouse (FIG. 45).

Along the S. side of Rooms 3–7 were six projecting walls, three of which were contemporary with the Phase 1 building. They seemed too narrow and long for buttresses, but the juxtaposition of the walls S. of Rooms 6 and 7 suggest a garde-robe serving chambers above Rooms 6/5 and 7. The walls S. of Rooms 3–5 were of a later phase.

The floors of the Phase 1 building were of rammed clay mixed with occasional roofing tiles (L 153, see section L–L, FIG. 49). There was no evidence that the first floors were either tiled or mortared. Fireplaces contemporary with the Phase 1 building have not been located although traces of burning have been found in Rooms 6, 7 and 9. It is likely that the burning indicates the position of braziers rather than open hearths. No thresholds into the rooms of either period have been found, although it is assumed that they were on the N. side, opening on to the Court Wick. The building was probably of two storeys although the position of stairs has not been located. Upstairs rooms may have been connected by an external gallery also situated on the courtyard side.

Two coins were discovered in levels (L 163, see section L–L, FIG. 49) pre-dating the construction of the building. They were a penny of Alexander III of Scotland (Appendix 2, No. 6) and a penny of Edward II dated *c.* 1300–1310 (No. 1). A sterling jeton (No. 20) dated 1290–1340 was also found. The building therefore could not have been erected in the 13th century, although it could have been built during the first decade of the 14th. If this is so, the reference of 1308–9 may relate to *le Longrewe*. Pottery Nos. 1–19 (FIGS. 54 and 55) pre-date the building.

Phase 2

No alterations in the layout of the rooms was made in this period (which is undated) but new fireplaces were inserted in Rooms 6 and 7. Perhaps the references of 1369–70 to the chambers of Thomas of Woodstock and the Earl of Cambridge, which were both provided with fireplaces, were from this building and of this phase.

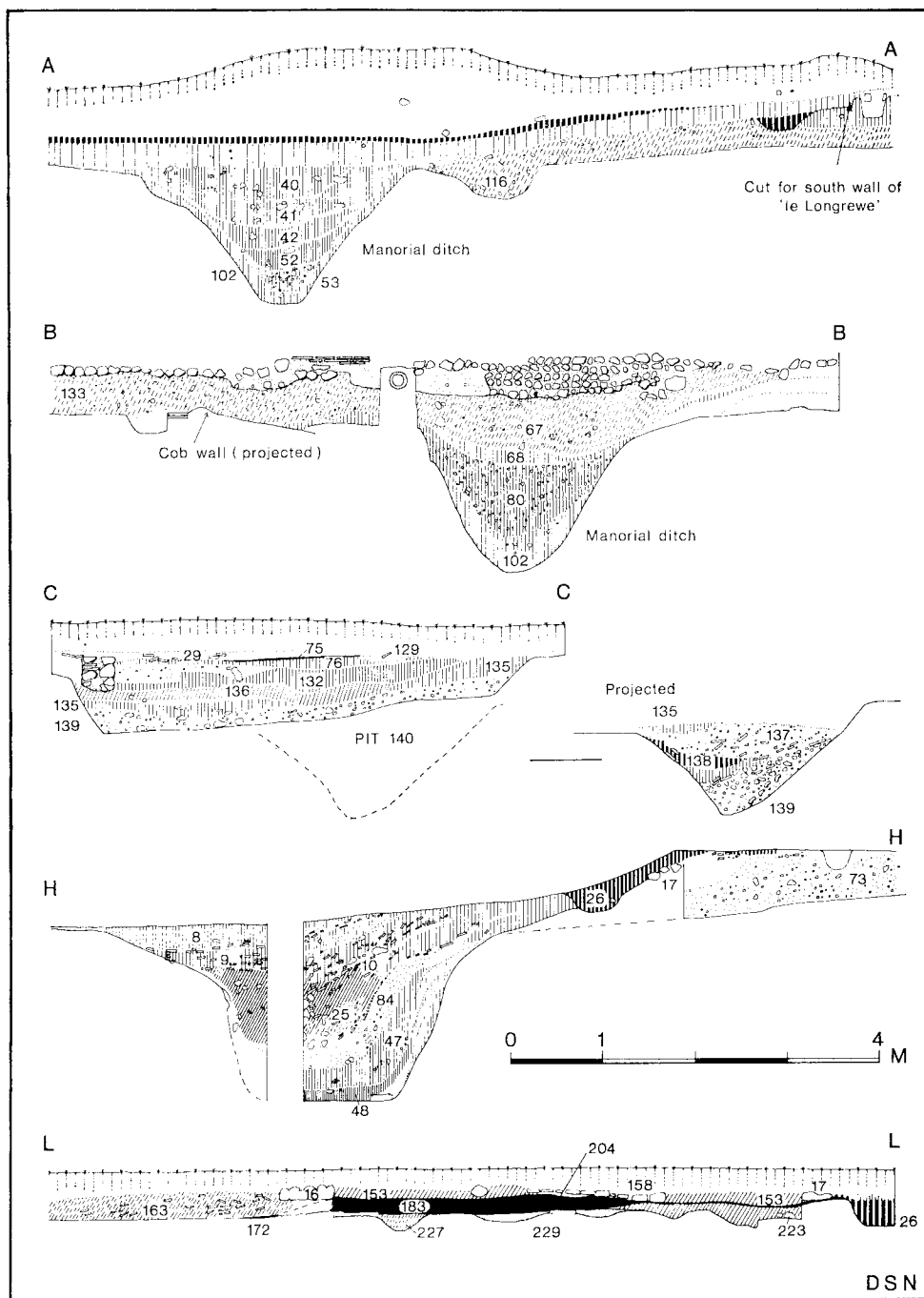


FIG. 49
KINGS LANGLEY PALACE SITE : SECTIONS

The division wall between Rooms 6 and 7 was partly demolished to insert a fireplace (PL. XII, A). Its surround was constructed in Totternhoe stone and its hearth of tiles-on-end. It measured 1.90 m. wide by 1.70 m. deep and was constructed as a single unit — i.e. the cheeks of the fireplace serving Room 6 extended through to Room 7, as did the tile-on-end hearth. A wall, built with plain tiles, was constructed across the tile hearth to divide the area into two equal units. The original wall, which measured 30 cm. wide was rebuilt, but made narrower — about 20 cm. wide. The early footings ran beneath the fireplace. The kerb had a half-round moulding, 10 cm. wide.

Phase 3

The internal layout of Rooms 1/2, 3/4, 5/6 were changed and parts of the building repaired. The floor levels were raised between 5–10 cm. by a spread of clay (perhaps wall daub) mixed with very large quantities of roofing tile. It formed the base for a mortar pavement, perhaps once tiled. The new internal walls were constructed on the clay and tile spread, as were three buttresses (or garderobe walls) on the south side of Rooms 3–4. The yellow mortar in the Phase 3 walls was a little paler than that previously used.

The area of the former Room 1/2 (PL. X, B) was divided into two rooms both measuring 4×7 m. The N. face of the S. wall was reinforced by at least three posts, set on to pads of roofing tiles laid in shallow scoops. The partition wall and floors were cut by a large pit (55) 1 m. deep, filled with clay and heavy flint rubble which contained two 16th-century bowls (FIG. 58. Nos. 70–71). On the N. side of Room 2 was a line of shallow postholes belonging perhaps, to a screen.

Room 3/4 was also divided into two. No paved surfaces survived but the lower remains of a tiled hearth, considerably burnt, were found against the E. wall of Room 3. The E. and S. walls of Room 3 were strengthened by posts possibly between 1384–7 when carpenters were paid to “underpin various chambers” in *le Longrewe*.⁴⁰

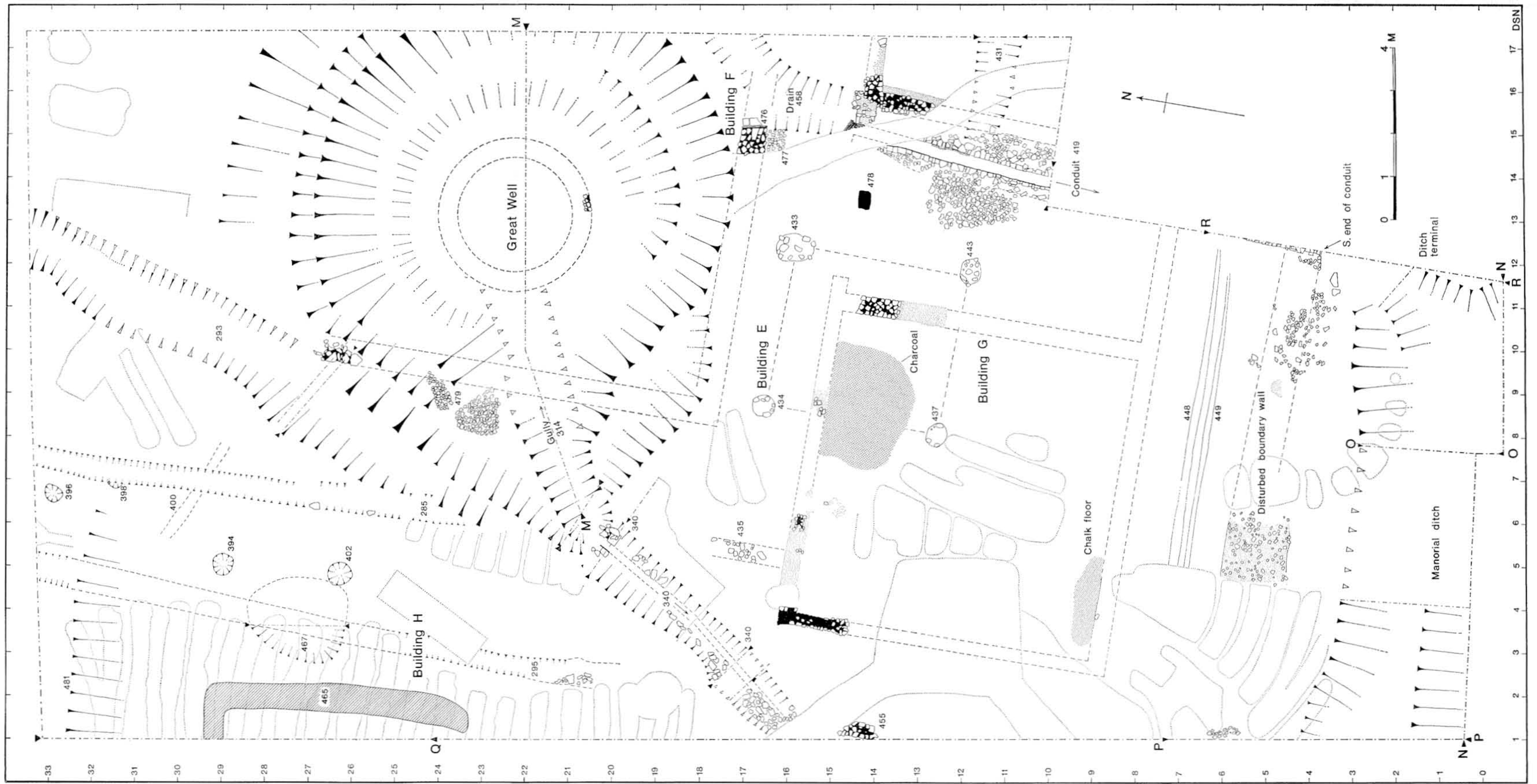
Room 5/6 was also divided. No details of Room 5 survive except for a rectangular area of burnt clay, tile and chalk against the E. wall. It marked the position of a fireplace. The clay and tile sub-floor of Room 6 was spread up against the old fireplace surround and over the offset of the Phase 1 wall between Rooms 6 and 7. A new hearth (PL. XII, B), also of tiles-on-end, was constructed over the earlier fireplace.

The west wall of Room 7 was not located. The Phase 2 fireplace remained in use and was given a new kerb but without a new tile-on-end hearth as in Room 6. The clay and tile floor make-up contained three jetons (Nos. 22, 23 and 28) dated to c. 1350.

The fireplace of Room 8 was contemporary with the fireplace in Room 9 and will be described under Room 9 following. The size of the room is not known but assumed to be about the same as Room 9.

The size of Room 9 remained unchanged (9 by 5 m.) (FIG. 48). Its west wall and the western end of the S. wall were rebuilt. The foundation of the N. wall was

⁴⁰ P.R.O., E101/473/2, mm.16.



retained but made 15 cm. thicker. Whether postholes 159, 160 and 161 in the N. wall are contemporary with the Phase 3 reconstruction, is uncertain. The E. wall was breached and a new fireplace built in Rooms 9 and 8. The fireplaces comprised a hearth of tiles-on-end with a Totternhoe stone surround set on a foundation of chalk blocks (PL. XI, B). The wall between the two fireplaces was made wider than the original partition and constructed with an outer facing of old roofing tiles with a chalk rubble core set in pale yellow mortar. This work was considerably more substantial than the division wall across the fireplace in Rooms 6 and 7, and would have been of sufficient strength to support a chimney stack serving both fireplaces. A chimney stack could also have been situated over the fireplaces in Rooms 6 and 7 and also, possibly, Rooms 2 and 3.

Cutting the courtyard surface to the N. of Room 9 was a pit (167, see FIG. 47) and a number of postholes forming no logical plan. On the courtyard surface was a bronze seal matrix (SF 2, see FIG. 53), and coins of Edward I (No. 8) and a Duke of Brittany (No. 18). Jetons were represented by Nos. 24, 26 and 27 and five plain discs, probably dispersed from a hoard, intended for use as late 14th-century jetons.

The N. wall of Room 10 was rebuilt at the same time as the party wall with Room 9.

The rebuilding in Phase 3 may have been the work carried out on *le Longrewe* during the period 1 October 1384 to 5 January 1388. The jetons (Nos. 20, 22, 23 and 28) preclude a date earlier than c. 1350. The accounts⁴¹ record "working on a new roof on said long house on south side of manor" and "wages of 20 labourers working on the carrying away of rubbish out of the said long house and to clean the same for the coming of the King". Over 36,000 plain tiles, 44,500 roof nails and "various cords for ladders for use of tilers and carpenters for the underpinning of various chambers called *le Longrewe* were ordered. The underpinning referred to in the accounts could relate to the features found in Rooms 1, 2 and 3. 1,200 ft. of planks and 12,100 laths were ordered. The latter were clearly required for the roof, but the planks could have been intended for the repair of the upper floors. The building must have been allowed to fall into serious disrepair to have required such large-scale improvements. The same accounts record "expenses on two chambers newly made in the long house with repairs of various other chambers there". This statement would seem to imply that two new rooms were built. If so, perhaps the reference relates to Room 10 (and possibly another room between it and the inner gatehouse), because only this room could be described as "newly made". The references are often ambiguous, but the accounts related to *le Longrewe* imply, possibly, that one of its chambers was "assigned to the Duke of Ireland".

Post-medieval occupation

The building survived the fire of 1431 and remained standing until 1554. In a reference of 1553-4,⁴² the great long house (presumably *le Longrewe*) was so

⁴¹ Ibid.

⁴² Pygotts Survey.

neglected that it "cannot be repaired without taking down". References of 1591⁴³ fail to record the building so presumably it was now totally ruined.

Post-medieval survival of the range is suggested archaeologically by a number of post-medieval sherds (FIG. 58, Nos. 70–71) in a pit (55) cutting the division wall in Rooms 1/2. A gully was also cut along the S. side of the building, through the projecting garderobe walls and buttresses. It flowed E.

FEATURES S. OF LE LONGREWE

Pit 47

This was a cess pit (see Section H–H, FIG. 49) and contained a thick deposit (L 48) of grey-green faeces sealed by a layer of clay (L 47). The remainder of the pit was filled subsequently with layers of mortar rubble (L 84), clay (L 25) and roofing tiles (L 9). Pottery (Nos. 35–43) from these levels is illustrated in FIG. 56. A 2 kg. sample from L 48a contained 144 seeds identified by Miss P. J. Paradine of the Ancient Monuments Laboratory and listed in TABLE I. With the possible exception of the fig seeds, the samples could have intruded from the natural habitat.

TABLE I
SEEDS FROM CESS PIT 47

<i>Sambucus nigra</i> L.	Elderberry	2 seeds
<i>Rubus</i> sp. (most likely to be <i>R. fruticosus</i> agg.)	Blackberry	15 seeds and fragments
<i>Fragaria vesca</i> L.	Wild strawberry	14 achenes and fragments
<i>Ficus carica</i> L.	Fig	106 seeds and numerous fragments
<i>Juncus</i> sp.	Rush	4 seeds
<i>Carex</i> sp.	Sedge	3 achenes — too eroded for assessment

Features 43–5

On the N. side of Pits 47 and 66 were three features. 43 consisted of a line of unmortared flints running parallel to the S. wall of Room 7 and on the same alignment as two possible post pads (Nos. 44 and 45) of flint and mortar, both measuring about 30 cm. square. Perhaps they belonged to a pentice.

SITE 2

FEATURES PRE-DATING THE PALACE (FIG. 50)

Building D

In the NW. corner of the site was a wall trench (465) running N. and S. and turning W. beneath the W. baulk. The trench was 60 cm. wide by 11 cm. deep and contained a filling of crushed chalk. No postholes were present. To the E. of the trench was an oval-shaped pit (467), 35 cm. deep. Associated surfaces contained three fragments of Hertfordshire greyware (FIG. 58, Nos. 64–66).

⁴³ Hertfordshire Record Office, Blackwell Papers, 20113.

Building E

This building, represented by post pads 433, 434, 437 and 443, was a four-post structure with post pads built of flint set in puddled chalk; its purpose remains doubtful.

Gully 282

This ran NE. and SW. and was sealed partly by the W. fragment (309) of well house. Beneath the wall, the gully widened and became deeper as though it was draining into a shallow pit. In its filling were three cooking pots (FIG. 57, Nos. 61–63) and two 14th-century jugs (Nos. 59 and 60). It also contained a gilded bronze strip (SF 4, see FIG. 53).

Gully 458

The gully was 10 cm. deep, and pre-dated the well house; it flowed S. into the manor ditch. When Buildings F and G were constructed the gully was made to flow into a conduit, except in the alley between the buildings, where the gully remained open.

PALACE BUILDINGS

The well and well house (Building F)

Site 2 was dominated by a huge weathering cone (PL. XIII, A), 1.50 m. wide, of a well. A depth clause in the builder's contract prevented excavation beyond 5 m. but fortunately this was sufficient to expose a small area of flint masonry which originally formed part of the well lining. The thickness of the lining was not established nor whether it was confined to the upper levels. Because the sides of the well had eroded so badly few adjacent surface features survived — only fragments of walls to the NW. (309) and S. (476). They probably belonged to the well house. The walls were constructed in flint and yellow mortar and that to the S. had the remains of a tile-built conduit. On the W. side of the well house, just outside the assumed W. wall, was an area of flint and yellow mortar (479) *in situ* clinging to the edge of the weathering cone, and 1.50 m. below the surface of the medieval courtyard. It was cut by a post-medieval gully (314). The purpose of the feature is not known; perhaps the W. wall of the well house needed considerable reinforcement here or perhaps it was related to a winch gear pit.

There can be little doubt that the well was the *Great Well* dug in the period 1279–81. A reference of that date records:⁴⁴ “. . . and in the wages of divers diggers in the great well for the same period £18. 1s. 7d. . . .”. The depth of the well was not recorded, but during the excavation an 18th-century well on nearby Langley Hill Farm (400 m. distant) was opened. Its depth was probed by weighted line and measured 57 m. deep; the Great Well probably had a similar depth.

With such few traces of structure it would not normally be possible to speculate about the well house, but snippets of information from documentary

⁴⁴ Pipe Roll 9, Edward I.

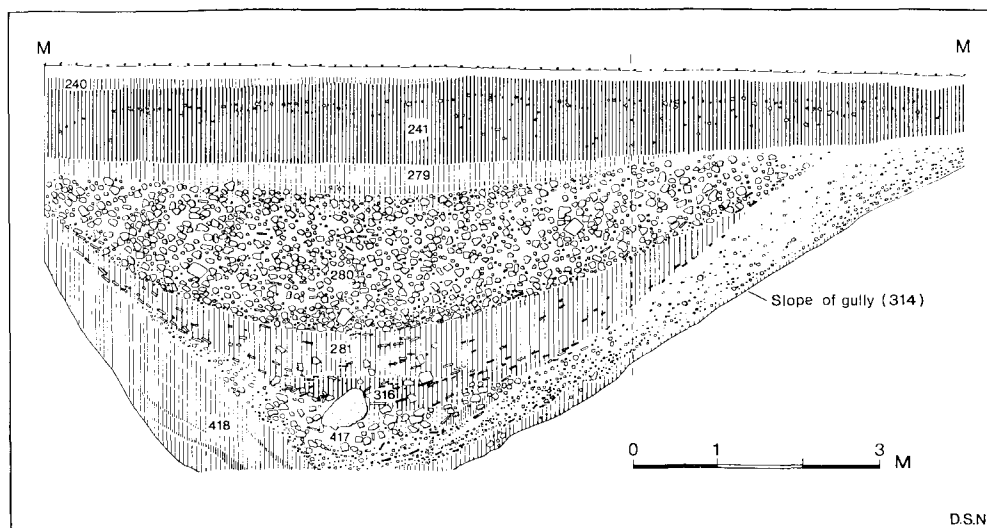


FIG. 51
KINGS LANGLEY PALACE, SECTION ACROSS WELL
Site 2

records give details of repairs to the building and its mechanism. Within twenty-five years of construction the well house and windlass was repaired. An account of 1305-6⁴⁵ relates:

"In the wages of four carpenters of whom each one takes by the day 4d for the cutting down of timber in order to shingle and repair, for the propping up of the house above the well for 5 days 6s. 8d. In the wages of Nicholas Piron by the day 2d for aiding the said carpenters in the aforesaid works for the same period 10d. In the wages of a smith for one (? sale) of iron for a chief axis of the windlass of the same well to be bound and for one circle of iron for the bucket of the same well together with the iron bought from the same smith 2s 6d."

In 1366-7 the roof of the well house must have been in a poor condition. An account⁴⁶ records the purchase of tiles for:

"... the repair of the roof to the Queen's hall and another chamber and houses within the manor as about the repair of the roof, of the house over the well (*fontem*) 6,400 plain tiles."

The shingles must have been stripped and replaced. Further work was being carried out in March of either 1369 and 1370 because the windlass needed further repairs. An account⁴⁷ records under the title of ironwork:

"(He renders account for money expended) in 100 lb. iron bought from Adam Rawlins the 5 day of March for the repair of windlass of the well with the chain within the manor — 7s 6d."

⁴⁵ P.R.O., SC6/866/17, m.2.

⁴⁶ P.R.O., E101/544/20, m.1.d.

⁴⁷ P.R.O., E101/466/5, m.1.

and under the title materials:

"(He renders account for money expended) in 6(?) bushels sea coal bought from Adam Rawlins for the repair of the windlass of the well within the manor with the chain, for each bushel 6d . . . 3/-."

There are no clues in the documentation, apart from the reference to the windlass and its chain, to the precise method of raising water. If the well was over 50 m. deep, which is probable, the weight of a chain of this length, and the weight of a bucket and its contents, would be considerable. It is unlikely that a conventional windlass, bearing this weight, could be rotated without extreme effort and therefore it is possible the well house accommodated a treadmill such as existed at Clarendon.⁴⁸

Building G

This ran in an E. and W. direction and was situated on the S. side of the well house, probably parallel to it. It was very disturbed, so much so that most of its plan is conjectural. It was divided into at least three rooms (Rooms 1-3). An area of chalk floor in Room 1 had a straight S. side which prompted the idea that this line may mark the position of the S. wall. If so, the range is likely to have been about 7.50 m. wide externally, which is a little narrower than Rooms 1 and 2 in *le Longrewe* (Building C). Its walls measured approximately 40 cm. wide and were constructed in flint and yellow mortar built directly on to the natural gravel surface level, without foundation trenches. Only where the wall crossed gully 458 was the foundation of any depth. It is assumed that the building was mainly timber framed. There was no dating evidence for the structure.

Whether Room 2 was enclosed on all sides is unlikely; there was no evidence that the N. wall of the range crossed its N. side. The only wall was on the E. side and comprised a tile door jamb or buttress built over, and forming an integral part of an underlying tile-built conduit (PL. XIII, B). Mid-way between the side walls was a Totternhoe stone block (478) that had either been used as a post pad or a door-stop. The conduit at the N. end was arched by means of corbelling tiles, but whether this method of construction was adopted along the rest of the conduit was not confirmed. It discharged into a gully draining into the manor ditch. At a later date the conduit was repaired and eventually deliberately blocked and infilled, possibly to support a fireplace or hearth.

Building H

Only a single fragment (455) of this building was found in 1976; it was part of a structure first located in 1970. Its N. and S. dimension is not known but its width is 7.50 m. Clearance of the Great Cellar in 1970 did not permit full excavation of the building and no internal features were recorded. It had a chalk floor set about 15 cm. below the outside ground level. It is also possible that a conduit (340), first discovered by Rawlins in 1962, came into its NE. corner.

⁴⁸ P.R.O., E460, 16.

Miscellaneous structures

Projecting N. of Building G was a fragment of wall (435) on the same alignment as a robber trench (285) further N. Its purpose may have been to support a pentice, linking buildings on the N. side of the kitchen court. The space between the wall and the well house was similar to the width of the alley between the well house and Building G. Another robbed wall (295) further W. ran on the same alignment as the E. wall of Building H. Like walls 435 and 285 it is later than the mid 14th century. Perhaps it also supported a pentice, possibly replacing 285 further E.

Between Building G and the manor ditch an irregular line of rubble running E. and W. seemed to have been the lower footings of a wall. It ran on the same alignment as a boundary wall recorded in 1970 (FIG. 45). On its N. side were two parallel slots (448 and 449, see FIG. 50), each 20 to 25 cm. wide by 5 cm. deep, possibly the sides of a timber-lined gully.

The Manor Ditch

On the S. side of the trench was a ditch (Sections N–N and O–O, see FIG. 52) running E. and W. on the same alignment as the school boundary. It was first located in 1962 by Rawlins. Since the ditch lay beneath a boundary its complete profile was not established but its depth is unlikely to be more than about 2 m. and its width about 6 m. At the eastern side of the trench the ditch became shallower, suggesting that it may have formed a terminal. If so, a causeway can be postulated here. Its lower fill (367) contained a penny of Edward II (No. 2) dated c. 1302–1310, lost c. 1310–20, and pottery (FIG. 57, Nos. 44–50). Also in this level were skeletal remains of a sturgeon. Above a deposit of clay (366) was a thick band of dark soil (364) containing numerous plain tiles, a late penny of Edward III (No. 7) and a jeton (No. 34).

In 1970 two ditches (FIG. 45) running N. and S. were located, one E. of the cellar, underlying the palace boundary walls, and another beneath the site of the inner gatehouse and the Priory Church (dedicated in 1312). They had been deliberately infilled with clay, possibly in 1279–81 when accounts⁴⁹ record expenditure “both for making the fosse and for filling in the fosse”.

The coin of Edward II precludes the former ditch having been filled during this work, but it is quite possible that it originally linked the two N.–S. ditches, and formed the S. moat of the manor (the causeway could therefore have provided access into the manor enclosure). The ditch was not infilled here because it became part of the S. boundary of the palace.

POST-MEDIEVAL AND LATER OCCUPATION

The well

Cutting the W. side of the well was a deep gully 1.40 m. wide. Its bottom sloped down at an angle of 35° (shown on section M–M, FIG. 51) and drained into a level slightly below that excavated. The purpose of the feature is uncertain,

⁴⁹ Pipe Roll 9 Edward I, rot. 2d.

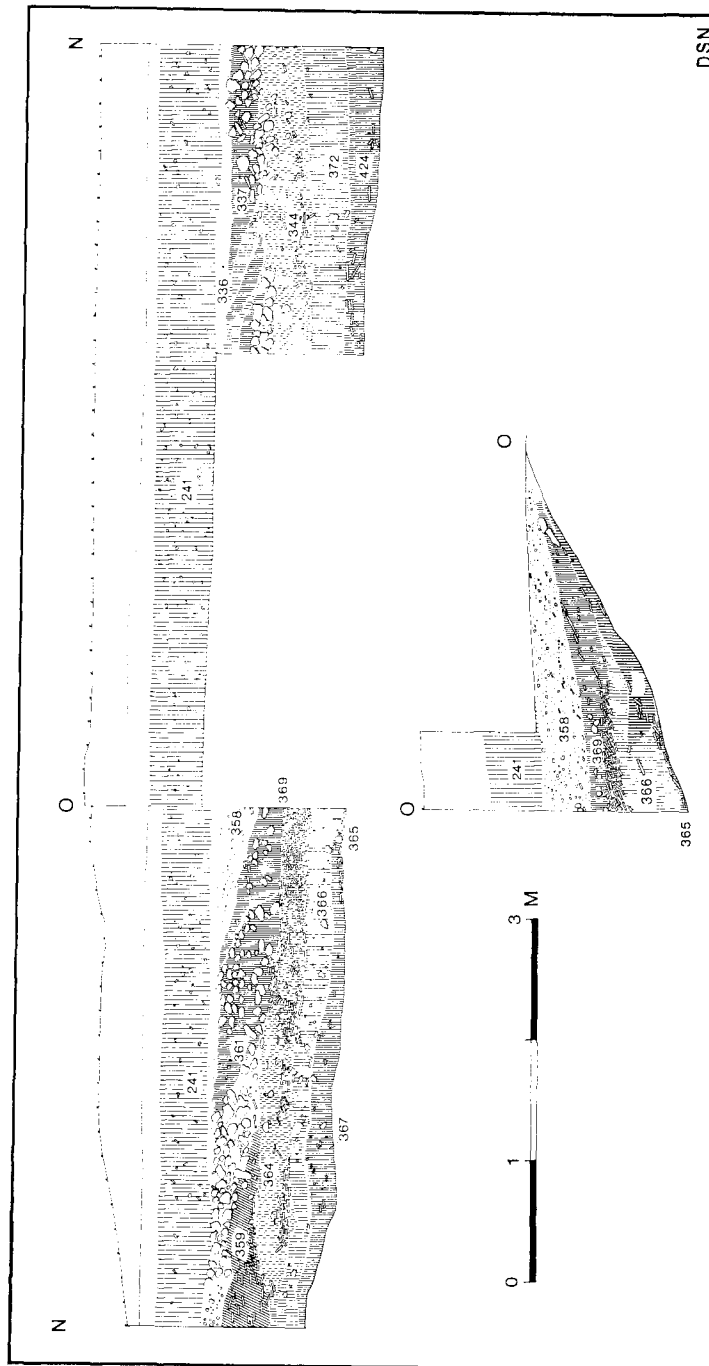


FIG. 52
KINGS LANGLEY, SECTIONS OF MANOR DITCH
Site 2

but it is possible that in the post-medieval period the well, already filled to within about 5 m. of the surrounding surface, became a water catchment pit. The pit was certainly waterlogged in the post-medieval period because in it was a layer of sticky grey-brown clay sediment (L 316).

At the interface between L 316 and L 281 above was a hoard of two farthings of James I and four farthings of Charles I. Also in L 316 was a decorated Purbeck marble shaft from a column of identical form to a Purbeck marble shaft displayed on the lawn of the school and others in private gardens nearby. They probably came from the piers in the adjacent Priory Church (FIG. 45).

CONCLUSIONS

The site of the early manor is likely to lie W. of the palace area and be delineated on the S. side by a ditch on Site 2, and on the E. and W. sides by two N.-S. ditches found in 1970. How the ditch on Site 1 relates to these features must remain doubtful, but it is possible it was dug when "a new start" was made in 1278. If this is correct, Building A must date towards the end of the 13th century. The situation of Building B, N. of this ditch, would also suggest that they were related. Buildings D and E, Site 2, may be either associated with the manor or the late 13th-century palace.

Some reasoned assessment of the overall layout of the early 15th-century plan can be attempted. During the 14th century it is unlikely that many buildings were demolished to make way for new structures. The complex is more likely to have grown on a piece-meal basis with only a regard for the basic layout, i.e. kitchen buildings on one side of the hall and living apartments on the other. This was certainly the case with the palace at Clarendon,⁵⁰ Wiltshire, which consisted of a series of separate buildings, set on different alignments, either linking one another or joined by pentries and walks. It had its kitchens on the SW. and living chambers on the E. Kennington may also be quoted.⁵¹ Here the kitchen buildings were S. of the hall and the chambers N.

Kings Langley palace had three courts, the inner, the middle and outer. The outer courtyard was known as the Court Wick and separated the palace from the Priory Land and Priory Church to the N. It was approached via a gatehouse facing the approach road now known as Langley Hill. The gatehouse is likely to have formed part of a range running N. and S. The N. end of this range probably linked with a building known as the "House of the fourteen bays"⁵² on the N. side of the Court Wick, and the S. end possibly linking with *le Longrewe* (Building C). The NW. side of the outer court was dominated by the Priory church; on the W. side was a buttressed wall and a path.

In the SW. corner of the Court Wick, on the same alignment as *le Longrewe*, was the site of another gate, probably leading into the middle court, known possibly as Great Court. The precise location of the middle court and buildings

⁵⁰ *Antiq. Jnl.*, xvi (1936), pl. xx.

⁵¹ G. Dawson, *The Black Prince's Palace at Kennington, Surrey* (*British Archaeol. Report*, xxvi, 1976).

⁵² Hertfordshire Record Office, Blackwell Papers, 20113.

related to it is not known, but it is likely to have contained the chapel and the principal apartments including the great hall. If the latter were situated on its original (manor) site, it is possible to suggest that it was located in the SE. corner of the manor enclosure. The presence of kitchen buildings on the W. side of the palace, might indicate that the hall ran on an E. and W. alignment with access to the kitchens through its W. wall and access to chambers through its E. wall.

As with Clarendon, the buildings were dispersed and this is apparent from the position of the great cellar or *le Cave* situated on what was probably the W. side of the kitchen court and the W. boundary of the palace. The building discovered on Site 2 was probably also related to the service buildings as the location of the well house implies.

APPENDIX 1

BRONZEWORX

1. Gilded copper alloy rowel spur of finest quality with scrolling foliage in relief along sides and neck (FIG. 53). Crest decorated with double s motif entwined around horizontal stem. Form of spur with its pronounced curling crest, curved sides and especially single ring terminals are typically first quarter of 15th century. Similar spurs are shown on several English monumental brasses including that of Sir Nicholas Dagworth, Blickling, Norfolk, dated 1401. Probably English.⁵³ Found in 1970 against the outside north wall of the inner gatehouse (FIG. 45). AM 722751. Length 15.5 cm.
2. Bronze seal matrix with praying figure within legend reading + *IHZVIENVS* (FIG. 53, No. 2). Beginning I of IHSVS or whole of IHS and end of NAZARENVS.⁵⁴ Legend semi-literate. 14th-century. Site 1 (91.0 11.0) L 149. AM 765125. Diam. 2.4 cm.
3. Bronze seal matrix with oval die (FIG. 53, No. 3). Rampant feline with inscription reading * *DAVID KELMEN*. Bead handle. 16th-century. Unstratified. Site 1 (14.0 99.0) Room 6. AM 765188. Diam. 2.2 cm.
4. Gilded bronze strip possibly once ornamenting leather strap (FIG. 53, No. 4). Decoration consists of two raised shield motifs separated by sunken zone containing traces of foliage design. Topmost shield has in centre smaller shield decorated with four bars on border of ten molets. Other shield also contains smaller shield in centre surrounded by series of alternating zigzag and parallel line. Round base of shield not typically English but more common in Spain or Portugal. Gully 282, Site 2 (8.25 27.0), associated with late 13th or early 14th-century pottery. AM 765123. Length 5.8 cm.

APPENDIX 2

COINS AND JETONS

By S. E. RIGOLD

COINS

1. Penny. London X e 1302-1310. Slight wear. Partly clipped. Site 1 (93.0 8.0), L 163, section L-L (FIG. 49). AM 765157.
2. Penny. London X d 1302-1310. Probably c. 1307. Moderate wear. Lost 1310-20. Site 2 (11.0 0.5), L 367, section N-N (FIG. 52). AM 765221.
3. Penny. London III b, 1280-1301. Moderate wear. Lost 1280s or 1290s. Site 2 (6.90 18.45). L 241, section N-N (FIG. 52). AM 765212.
4. Penny. Canterbury X c, 1302-1310. Fairly heavy wear. Unstratified, Site 1, AM 765131.
5. Penny. London. Probably XIII, c. 1320. Heavy wear. Clipped. This example escaped the coinage reduction of the 1340s. Lost post 1351. Site 2 (11.70 0.30), L 359, Section N-N (FIG. 52). AM 765227.

⁵³ The writer is grateful to Mrs B. Ellis of the Tower of London for information on the spur.

⁵⁴ The writer is grateful to S. E. Rigold for the reading of this seal.

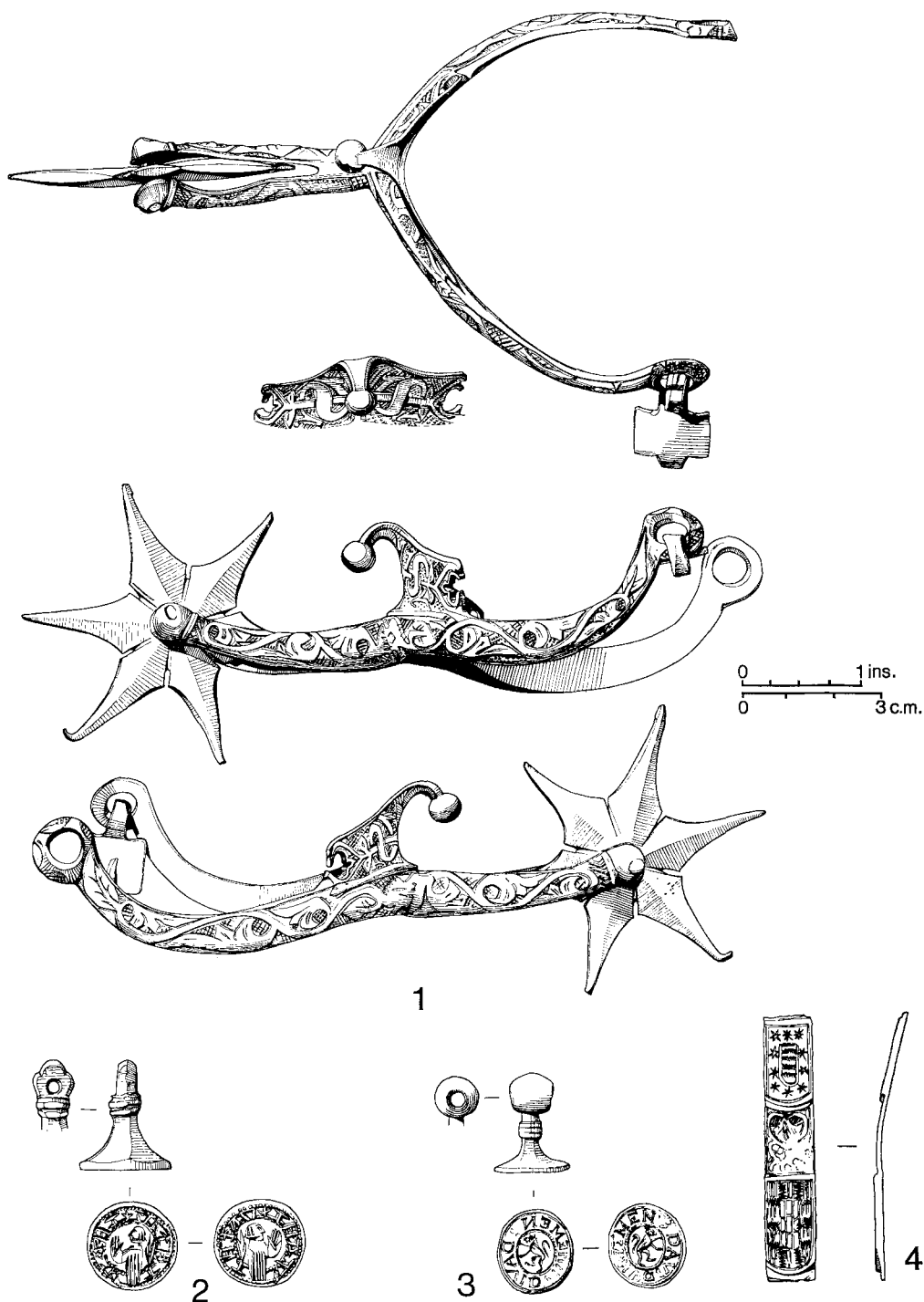


FIG. 53

OBJECTS OF BRONZE FROM KINGS LANGLEY PALACE

1. Rowel spur, first quarter 15th cent.; 2. Seal matrix, 14th-cent.; 3. Seal matrix, 16th-cent.;
4. Ornamental strip, late 13th or early 14th-cent. Sc. 2:3

6. Penny. Probably Berwick (four six-pointed stars). Alexander III of Scotland. 2nd coinage, 1280s. Moderate wear, lost before 1300. Site 1 (87.70 10.55), L 163, section L-L (FIG. 49). AM 765158.
7. Penny. London. Edward III, treaty or post treaty. *c.* 1360-70. Heavy wear. Site 2 (12.0 3.0), L 440, between L 359 and 361, section N-N (FIG. 52). AM 765219.
8. Halfpenny. London. ? IX. *c.* 1300, lost *c.* 1340s. Heavy wear. Site 1 (85.0 11.0), L 149. AM 765147.
9. James I Lennox farthing as Nos. 10-11. Slight wear. Site 1 (38.0 87.0), L 3. AM 675138.
- 10-11. James I Lennox farthings, 1614-1625. Slight wear. AM Nos. 765206-7.
- 12-15. Charles I, Richmond farthings, 1625-34. Slight wear. AM Nos. 765204-5, 765208-9. Nos. 10-15 are a hoard found in the filling of the well, Site 2, at the interface between L 316 and L 281, Section M-M (FIG. 51). The hoard was probably buried in the late 1620s.
16. Forged Richmond or Maltravers farthing *c.* 1630s. Pierced. Site 1, unstratified. AM 765189.
17. Charles I rose farthing 1636-42. Heavy wear. Site 1 (93.0 3.0), unstratified. AM 765143.
18. Blanc of a 15th-century Duke of Brittany, probably John V (1399-1442), possibly Francis (1442-50), mint of Rennes. Arms in tressure. Only . . . (*BRIT*) *TONV · DVX · R* legible. Worn and battered. Site 1 (90.0 13.0), L 149. AM 765148.

TOKENS

19. Token with the Royal oak containing three crowns and dated 1669. Site 1 (15.0 94.0), unstratified. AM 765130.

JETONS

English 'sterling' jetons

20. *Obv.* and *Rev.* short cross molins with pellets in quarters and border of pellets. Diam. 2.1 cm. Thin fabric (0.5 mm.). Pierced. Site 1 (89.0 9.0), L 172, section L-L (FIG. 49). AM 765159.
21. *Rev.* short cross molins with pellets in quarters, border of pellets. *Obv.* short cross molins with terminals joined making an octafoil (Berry's 'well formed rose', Berry⁵⁵ Ed II, 7d Rev. 5). First half of 14th century. Diam. 2.3 cm. Thin fabric (0.5 mm.). Pierced from obverse. Site 2 (4.0 22.0), L 300. AM 765217.
22. *Obv.* Seeded rose, border uncertain, but includes legend (Berry, Edward II 7 B). *Rev.* Single long cross with crosslets (compare Berry (1974), Pl. 3, No. 3). Diam. 2.0 cm. Thin fabric (0.5 mm.). Pierced from obverse. *c.* 1325 from clay and tile make up (L 32) associated with Period 3 conversions. Site 1 (11.0 97.0). AM 765139.
23. *Obv.* probably a sterling head, border of saltire and pierced six foils. *Rev.* short cross molins with pellets in quarters and border of pellets. Diam. 2.1 cm. Medium fabric (0.5 mm.). Pierced from obverse. *c.* 1325. From Site 1 (11.0 97.0), as 22 above. AM 765140.
24. *Obv.* two crowns with trifoliate fleurs impale. Border of saltires and pierced cinquefoils. *Rev.* short cross molins, border of pellets. (Berry, Edward II 13A, Rev 5, but crown suggests possibly earlier). Diam. 2.0 cm. Thickish fabric (1 mm.). Pierced from obverse. Site 1 (95.0 13.0), L 149. AM 765146.

Later English jetons

25. *Obv.* Lion rampant in tressure flory, saltires alternating with paired oak leaves in border (as Berry (1974), Pl. 7, No. 4; Barnard (1916),⁵⁶ Pl. 11, No. 50). *Rev.* 4 lys *en croix* in quadrilobes; in border, paired oak leaves (on cusps of quadrilobe), 3 trefoils between pellets between each pair (as Barnard (1916) Pl. 11, No. 51; Berry (1974), Pl. 7, No. 4, but with trefoils in place of M's). Diam. 2.9 cm. Thick fabric (nearly 2 mm.) pierced from reverse. Two nicks on reverse edge. Site 1 (90.0 9.0), L 145 (unstratified). AM 765145.
26. *Obv.* As No. 25. *Rev.* Cross flory, spread eagle at centre in inner ring, one pellet in each quarter: in middle ring spread eagles on cross-arms, paired leaves and lys in quarters: in border, cross between lions rampant separated by anulets in each quarter (as Barnard (1916), Pl. 11, No. 50). Diam. 2.9 cm. Thick fabric (2 mm.) pierced from reverse. Site 1 (94.0 14.0), L 149. AM 765153.
27. As No. 26 but thinner fabric (1 mm.). Diam. 3.0 cm. Find spot as No. 26. AM 765152.

⁵⁵ G. Berry, *Medieval English Jettons* (Spink and Son Limited, London, 1974).

⁵⁶ F. P. Barnard, *The Casting-counter and the Counter board* (Oxford, 1916).

These large sized English jetons are relatively late and scarce. Some types are fairly widely distributed and less rare (e.g. the Agnus Dei type) and often bear the name of the Royal Wardrobe. These examples, although without the name of the department, may have been largely confined to the royal household and are thus in place at Kings Langley Palace. The form of the fleurs (plain trefoils) on the tressure, and that of the M's on the variant reverse (Berry (1974), Pl. 7, No. 4) are most closely matched on groats of the late 1340s and 1360s, which (with possible differential delay of a year or two, applicable also to 'sterling' jetons) would suggest c. 1360-65 for these closely associated examples. This would not agree with a suggested association of the eagles with Anne of Bohemia.

French official jetons

28. *Obv.* Arms of France, ancient, impaling Navarre in tressure, with pellets in spandrels. Tressure of six arcs. Legend corroded. *Rev.* Quadrilateral of arcs flory with lys in centre. Legend + . . . *OLDI*IE*DVN*. Early type with circumscription on both sides. Date c. 1350. Diam. 2.5 cm., thin fabric (0.5 mm.). Site 1, find spot as Nos. 22 and 23 above. AM 765141.
29. *Obv.* Crown with rosettes left, right and below. Outer legend *NIN: COVRON I...* *Rev.* Quadrilateral of arcs flory. Rosettes in angles. Outer legend *LOV ROIN... PAIS... BIE*. Probably late instance of mid 14th-century type. Diam. 2.6 cm. Thin fabric (0.5 mm.). Site 2 (8.0 1.0), L 369, section N-N (FIG. 52). AM 765220.
30. *Obv.* 'Agnus dei' type. Legend *MOUTON: SUI DEBER*. *Rev.* Elaborate three strand cross flory in quadrilobes. + *AVE* between crosslets in spandrels. Date, c. 1380s. Diam. 2.5 cm. Thin fabric (0.5 mm.). Site 1 (5.0 93.0), L 8, section H-H (FIG. 49). AM 765136.
31. *Obv.* Crowned shield of France modern with crosslets in chief. Legend — *AVE MARIA: GRACIA: PLEI*. Double crosslet stops. *Rev.* Elaborate three strand cross flory in quadrilobes + *AVE* between crosslets in spandrels. Common late 14th-century type c. 1390s. Diam. 2.5 cm. Medium thick (almost 1 mm.) fabric. Site 1 (95.0 7.0), unstratified. AM 765144.

Late official French jetons

32. *Obv.* Crowned shield of four lys. Garbled legends *TOCTETO*, etc. No stops. *Rev.* Quadrilateral of arcs flory in quadrilobes. Lombardic *N* in spandrels. Rose in centre of quadrilobes. Early 15th century. Diam. 2.7 cm. Thin fabric. Site 1 (7.0 93.0), find spot as No. 30. AM 765134.
33. *Obv.* Shield of France modern. Pellets left, right and above. Legend *AVE MARIA + GRACIA PLE +*. Two star stops at base. *Rev.* Plain three strand cross flory in quadrilobe, + *MA* between crosslets in spandrels. Early to mid 15th-century. Diam. 2.6 cm. Fabric almost 1 mm. thick. Site 2 (9.0 0.0), L 358, section N-N (FIG. 52). AM 765226.
34. *Obv.* Shield of France modern. Legend illegible. *Rev.* Plain three strand cross flory in quadrilobe. Diam. 2.6 cm. Almost 1 mm. thick. Site 2, L 364, Section N-N (FIG. 52). AM 765215.

French late official or 'derivative' jetons

35. *Obv.* Shield of France modern. Star above and star initial mark. *AVE* inscription unclear. *Rev.* Plain three strand cross flory in quadrilobe. Diam. 2.6 cm. Exceptionally thick fabric (2.0 mm.). Second half of 15th century. Site 2 (11.0 2.0), L 440 (between L 359 and 361), section N-N (FIG. 52). AM 765214.
36. *Obv.* Shield of France modern. Legend *AVE MARIA: GRACIA + PLENA*. Double anulet stops. *Rev.* Sort of extended cross flory with quadrilateral centre containing star in quadrilobes. Vs in spandrels and anulets on cusps. Diam. 2.8 cm. Thin fabric (0.5 mm.). Find spot as No. 35. AM 765216.
37. *Obv.* Shield of France modern, anulet between pellets above. Saltire initial mark. Legend *AVE MARIA: GRACIA.X*. Double anulet stops. *Rev.* Plain three-strand cross flory in quadrilobe with *AM* in cusps. Anulet between pellets in spandrels. Diam. 2.8 cm. Fabric 1 mm. thick. Site 2 (2.0 1.0), L 241, section N-N (FIG. 52). AM 765211.
38. *Obv.* Shield of France modern, *AVA: MARIA GRACIA* legend. Saltire initial mark leafed rose stops. *Rev.* Plain three-strand cross flory without quadrilobe. *M*. in quarters.

- Garbled inscription with star stops. Diam. 2.5 cm. Fabric almost 1 mm. thick. Site 2 (5.0 22.0), L 241, section M-M (FIG. 51). AM 765210.
39. *Obv.* Shield of France modern. *AVE MARIA GRACIA* legend. Anulet stop. *Rev.* Plain three-strand cross flory in quadrilobe. *M* and *A* in cusps. Anulet between pellets in spandrels. Damaged. Diam. 2.8 cm. Fabric 1 mm. thick. Site 2 (11.0 0.0), L 344, section N-N (FIG. 52). AM 765218.
40. *Obv.* Shield of France modern. Saltire initial mark, *AVE MARIA: GRACIA* legend. Double anulet stop. *Rev.* as No. 39. Diam. 2.9 cm. Fabric 0.5 mm. thick. Site 1 (32.0 89.0). AM 765132.
41. *Obv.* Shield of France modern with anulet between stops over. Saltire initial mark. *AVE MARIA + GRACIA* legend. Cross stops. *Rev.* As No. 39. Diam. 2.9 cm. Fabric almost 2 mm. thick. Site 2 (12.0 2.0). Findspot as No. 35. AM. 765224.
42. *Obv.* Shield of lys quartering Burgundy ancient. Saltire initial mark. Double anulet stop. Unclear legend *AVE GRACIA*. *Rev.* As No. 39. Diam. 2.8 cm. Almost 1 mm. thick. Site 2 (12.0 2.0), L 440. Findspot as No. 35. AM 765213.
43. *Obv.* Shield of France modern. Anulet over, three anulets to left and right. Lys stop and initial. Legend *AVE MARIA GRACIA* followed by *O*. *Rev.* Plain three-strand cross flory in quadrilobe. *A* and *M* in cusps. Anulet between pellets in spandrels. Diam. 2.7 cm. Fabric almost 1 mm. thick. Site 2 (9.0 1.0), L 369, section N-N (FIG. 52). AM 765222.
44. *Obv.* Shield of France modern. Two pellets to right and left. *MARIA GRACIA* legend unclear but ending *PL*. Leafed rose stop at base. *Rev.* Plain three-strand cross flory without quadrilobes. Lys below *Ms* and crosslets in quarters. Diam. 2.7 cm. Fabric 1 mm. thick. Site 2, L 440. Findspot as No. 35. AM 765223.
45. *Obv.* Shield of France modern. *AVE* legend unclear. *Rev.* Plain three-strand cross flory in quadrilobes. *As* in cusps. Six foils between anulets in spandrels. Diam. 2.7 cm. Fabric 1 mm. thick. Site 2 (12.0 0.0), L 359, section N-N (FIG. 52). AM 765225.

Uncertain, possibly Flemish jetons

46. *Obv.* Four chevrons in field rather than on a shield. *Rev.* Long cross, lys set radially in each quarter. Diam. 2.0 cm. Unusual fabric, very thin. Site 1 (6.0 93.0), L 8, section H-H (FIG. 49). AM 765135.
47. *Obv.* Two shields. Left, a lion rampant; right, France modern. Naturalistic leaf between trefoils above and (between pellets) below. *Rev.* Cross potence, pellets in quaters. Zigzag (? intended as pointed star) border with pellets between and in points of star. The shields (for France and Flanders) would hardly allow a date before the 1370s, but the style is odd and archaic for this date. Diameter 2.0 cm., fabric almost 1 mm. thick. Not pierced. Site 1 (93.0 8.0), L 154. AM 765149.

Nuremburg jetons

48. 'Normal' type (*Reichsapfel* orb) in trilobe/three crowns and three lys and garbled Lombardic legends. Large orb and careful details: may be one of earliest of its kind (c. 1510?). Diam. 2.2 cm. Very thin fabric, broken. Site 1 (5.0 91.0), L 8, section H-H (FIG. 49). AM 765133.
49. As No. 48 but not broken. Pierced in three places. Site 1 (85.0 19.0), unstratified. AM 765142.

Miscellaneous

- 50-54. Plain, rather thick (1.5 mm.) discs, 2.7 cm. in diameter. Pierced at centre. Their size would indicate they were probably intended for use as late 14th-century jetons. Possibly c. 1360. Associated with jetons (Nos. 24, 26-7) dated mid to late 14th-century. Site 1 (91-92.0 13-16.0), L 149. AM 765150-1, 765154-6.

APPENDIX 3

POTTERY

NOTE: for economy of space only a limited description of the pottery fabrics is given. For a fuller description see *MS Excavations at Kings Langley, 1974-76* in the Library of the Society of Antiquaries of London.

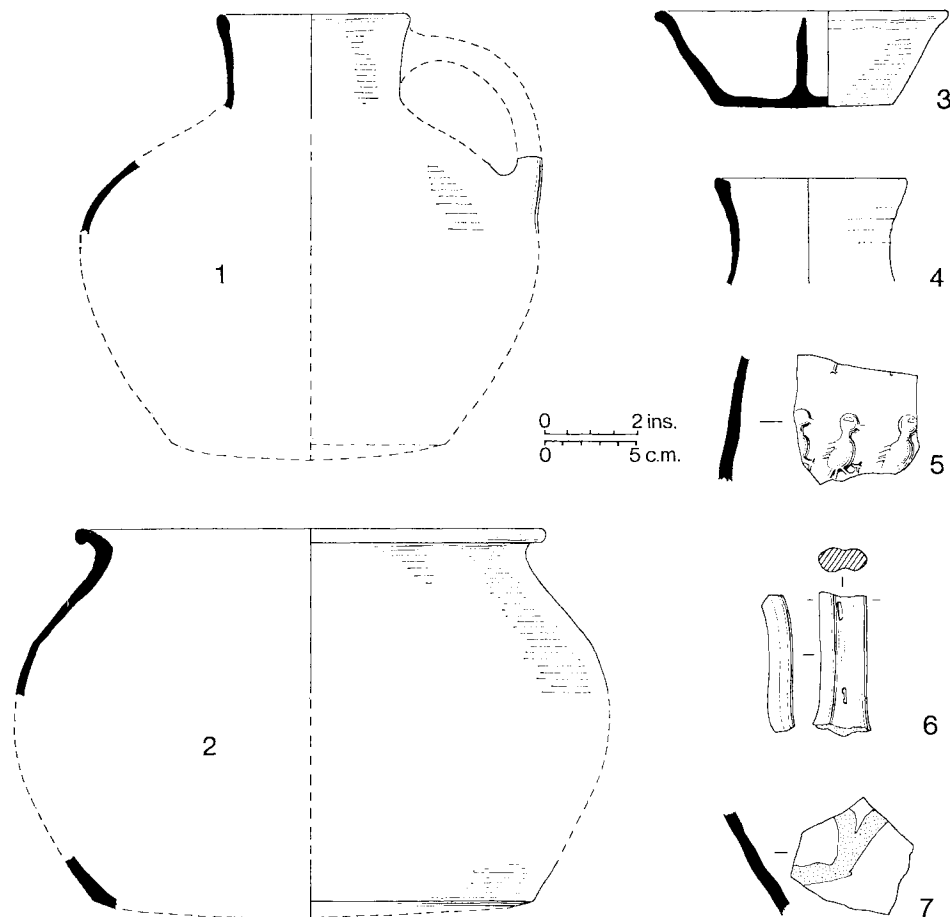


FIG. 54
POTTERY FROM KINGS LANGLEY PALACE
Nos. 1-7 Sc. 1:4 (below)

Pottery from Pit 140 pre-dating Building C (Section C-C, see FIG. 49)

FIG. 54

1. Jug in Oxfordshire type ware. Mottled dark green external glaze. Stabbed decoration on handle. L 137 and 138.
2. Cooking pot in Hertfordshire grey ware. L 137.
3. Condiment dish, vessel in two equal compartments. Oxfordshire type ware. Internal thick green glaze. L 137 and 141.
4. Jug in Oxfordshire type fabric. Thick green external glaze, mottled green glaze on interior surface.
5. Sherds from jug in Oxfordshire type ware. Stamped running duck motif in at least two zones. L 136. Fragments of this vessel were also found in floor make up levels associated with the Phase 1 building (L 153, section L-L, see FIG. 49).
6. Handle in Oxfordshire type ware. Blotches of green glaze. Stabbed decoration. 13th-century. L 137.
7. Body sherd in pinkish-buff fabric. Buff surfaces. White slip decoration on outer surface. L 135.

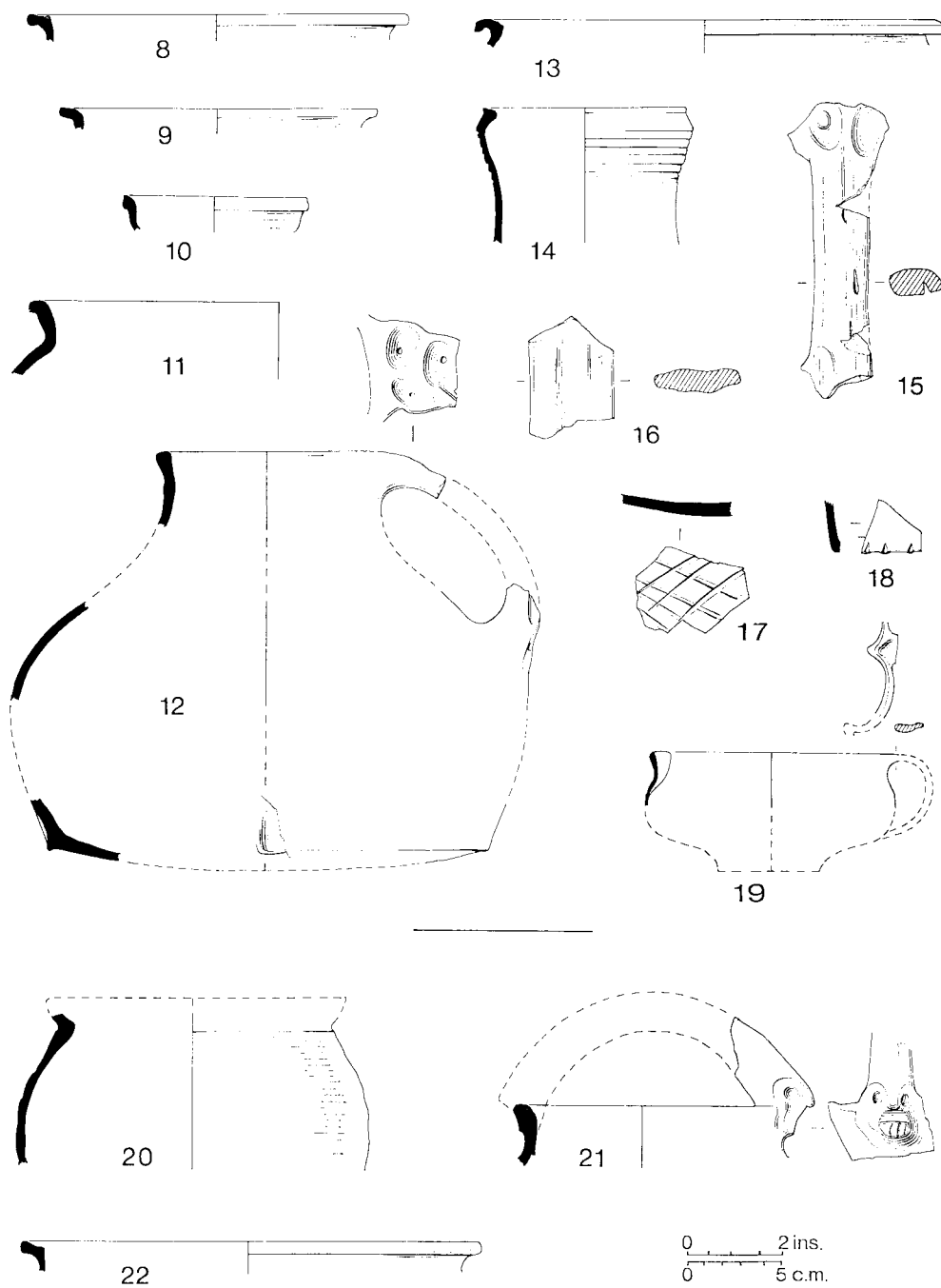


FIG. 55
 POTTERY FROM KING'S LANGLEY PALACE
 Nos. 8-22. Sc. 1:4 (p. 150)

Pottery pre-dating Building C (Section L–L, see FIG. 49)

FIG. 55

8. Cooking pot in Hertfordshire grey ware. Burnt. L 223.
9. Cooking pot in Hertfordshire grey ware. L 77.
10. Jug in Hertfordshire grey ware. L 181.
11. Cooking pot in Hertfordshire grey ware. Traces of applied strip decoration. Late 12th or early 13th-century. L 183.
12. Jug in Hertfordshire grey ware. Finger impressed decoration on handle. 13th-century. L 183. Fragments of a similar vessel were also found on the courtyard surface, Site 2.
13. Cooking pot in Hertfordshire grey ware. Rilled rim. L 37 and 35.
14. Jug in Oxfordshire type ware. Mottled external green glaze. L 163. A similar form was found in the filling of the cellar. Compare *Herts. Archaeol.*, iv, 60, No. 27.
15. Handle in Oxfordshire type fabric. Mottled pale green glaze. Body sherds from same vessel show the jug to have been decorated by thin diagonally scored lines. L 153.
16. Strap handle in West Kent ware. Mottled green glaze over white slip. Late 13th-century. L 213.
17. Base fragment in Surrey white ware. Scored lines on underside. Other base fragments, possibly from same vessel, had closer and finer scored lines. L 70 and 121.
18. Base fragment in Surrey white ware. Mottled external green glaze. Notch decoration on base angle. Only example of this decoration found on site. L 181.
19. Lobed cup. Fine pinkish-white fabric and surfaces. External mottled green glaze. L 90.

Pottery associated with Phase 1 and 2, Building C

20. Jar in red ware, possibly local. 14th-century. L 29.
21. 'Bucket handled' vessel. Fine, dull red fabric and inner surface. Handle and outer surface covered in greenish brown glaze. Face decoration at junction of rim and handle. L 75.
22. Cooking pot in Hertfordshire grey ware. Late 13th or early 14th-century. L 104.

Pottery associated with Phase 3 occupation of Building C

FIG. 56

23. Jug in Surrey white ware. Blobs of glaze on neck only. 14th-century.
24. Jar in Surrey white ware. Traces of green glaze on outer body. First half of 14th-century. L 61.
25. Jar with bifid rim, possibly in Surrey ware (burnt). Olive green external glaze. 14th or 15th-century.
26. Jug rim in Surrey ware. 14th-century.
27. Handle fragment in Surrey ware. Stabbed decoration on handle. L 167 E.
28. Jug in Surrey ware. L 120.
29. Jug. Possibly Oxfordshire type ware. L 166.
30. Handle fragment in Oxfordshire type ware. Stabbed decoration. L 74.
31. Jug handle in Hertfordshire grey ware. Stabbed and thumb impressed decoration. 14th or 15th-century. L 166.
32. Jar in red fabric and surfaces. Local product? L 167 C.
33. Bifid rim in Oxfordshire type ware. Traces of green external glaze. 15th-century. L 5.
34. Bowl in Surrey ware. 14th-century. L 149.

Pottery from Pit 47, S. of Building C (Section H–H, see FIG. 49)

35. Jug in grey fabric. Possibly a local product. L 47.
36. Jug in Surrey ware. Three sets of double finger impressions on base angle. L 25.
37. Jar in Oxfordshire type ware. 14th-century. L 25.
38. Handle in Oxfordshire type ware. Stabbed decoration. L 25.
39. Jug in Surrey ware. 14th-century. L 8.
40. Jug, possibly from the Oxfordshire region. L 8.
41. Bowl in dull red fabric and surfaces. Possibly a local product. 14th-century. L 8.
42. 'Money-box'. Mottled green glaze. Possibly Oxfordshire ware. L 8.
43. Bowl, possibly a local product. 14th-century.

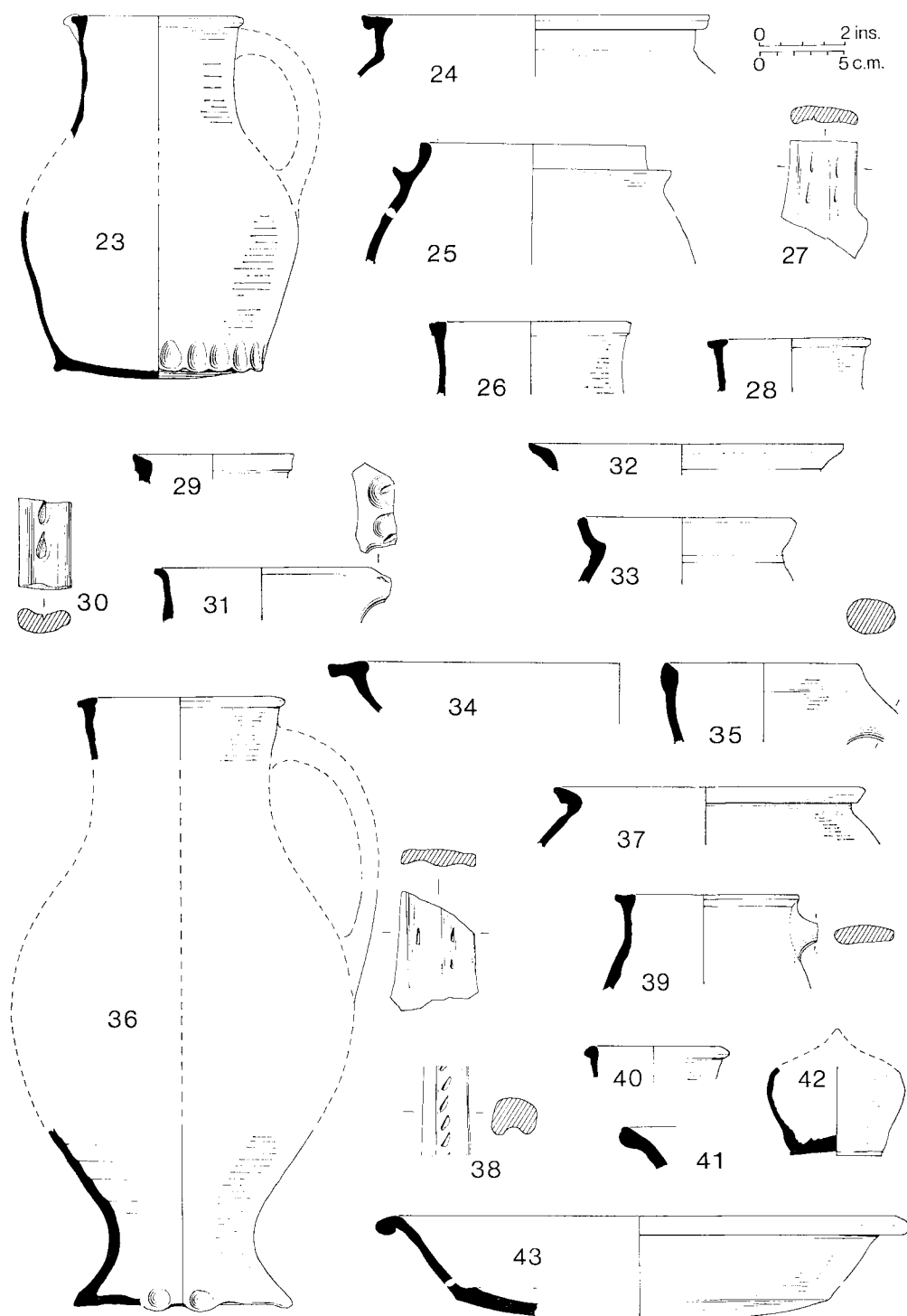


FIG. 56

POTTERY FROM KING'S LANGLEY PALACE

Nos. 23-43. Sc. 1:4 (p. 150)

Pottery from the manor ditch (Sections N-N, O-O, see FIG. 52)

FIG. 57

- 44. Cooking pot in Hertfordshire grey ware. Applied strip decoration. L 367.
- 45-6. Cooking pots in Hertfordshire grey ware. L 367.
- 47. Handle in Hertfordshire grey ware. Stabbed decoration. L 367.
- 48. Jug in Hertfordshire grey ware. L 367.
- 49. Dripping pan. Grey fabric, possibly a local product. Patchy green glaze. 14th-century. L 367 and 283.
- 50-51. As above but with knife trimming. L 367 and 369 respectively.
- 52. Jar. Dull red fabric and surfaces. Dark grey core. Probably a local product. 14th-century. L 364.
- 53. Large jug, fabric as above. L 364.
- 54. Jug in Surrey ware. L 364.
- 55. Cooking pot. Probably Hertfordshire grey ware. L 344.
- 56-7. Cooking pots in Hertfordshire grey ware. L 344.
- 58. Jug in hard grey fabric with buff margins. Probably a local product. L 344.

Pottery from gully 282

- 59. Jug in Oxfordshire fabric. Light green glaze on body and handle. 14th-century.
- 60. Jug in West Kent ware. Thin mottled green glaze. 14th-century.
- 61-2. Cooking pots in Hertfordshire grey ware.
- 63. Jug rim and handle (possibly from one vessel) in Hertfordshire grey ware.

Pottery associated with Building D, Site 2

FIG. 58

- 64-6. Cooking pots in Hertfordshire grey ware. L 472.

Post medieval pottery and residual wares from Sites 1 and 2

- 67. Handle. Hard, slightly coarse red fabric with grey core. Reddish-grey surfaces. Body area and upper handle covered with dark green glaze. L 32.
- 68. Base in hard red fabric with dark grey core. Hard red/grey outer surfaces. Thick greenish-brown internal glaze. The vessel is of similar fabric to Neal (1970), No. 32, and appears to be copying German stoneware types although it does not have frilled foot. 16th-century. L 11.
- 69. Rim and base, possibly from one vessel. Fine orange fabric with occasional yellow ceramic inclusions. Orange interior, and reddish external surfaces with thin green glaze. Glaze also on lid seatings. 16th-century. L 13 and 29.
- 70. Bowl in fine off-white-pinkish fabric and external surface. Dark brownish purple internal glaze and with touches of pale green glaze on flange. The bowl is probably a Surrey ware copy of a Beauvais form. From Pit 55, Site. 1.
- 71. Shallow bowl in Surrey fabric. Thick green internal glaze. 16th-century. From Pit 55, Site 1.
- 72. Rim from posset pot. Hard red earthenware with thick all-over black iron glaze. Late 17th-century. L 36.
- 73. Base from tankard in hard red earthenware with thick all-over black iron glaze. Late 17th-century. L 37.
- 74. Shallow dish in hard, red fabric with internal yellow slip and semi sgraffito decoration covered with thin green glaze. Possibly English, 17th-century. Unstratified.
- 75. Base of dish. Soft, smooth creamy fabric and surfaces. No evidence for glaze. Delft ware, possibly Lambeth. Second half of 17th-century. L 241 (Section M-M, see FIG. 51).
- 76. Bowl in hard red fabric and with slightly darker red outer surface. Internal white slip decoration covered with thin pale green glaze making white slip appear greenish yellow. Possibly Potterspury fabric. 17th-century. L 241 (Section M-M, see FIG. 51).
- 77. Handle in fine greyish buff fabric with smooth buff surfaces. Potterspury fabric. 17th-century. L 316 (Section M-M, see FIG. 51).
- 78. Jug in hard, dull red fabric and inner surfaces. Traces of white slip decoration covered with thin clear glaze on exterior surface. Medieval. Possibly East Anglian red ware. L 316 (Section M-M, see FIG. 51).
- 79. Fragments from a Type I flask made at Martincamp, France. Hard, fine, cream coloured fabric and surfaces. Pale grey core. 15th or early 16th-century.

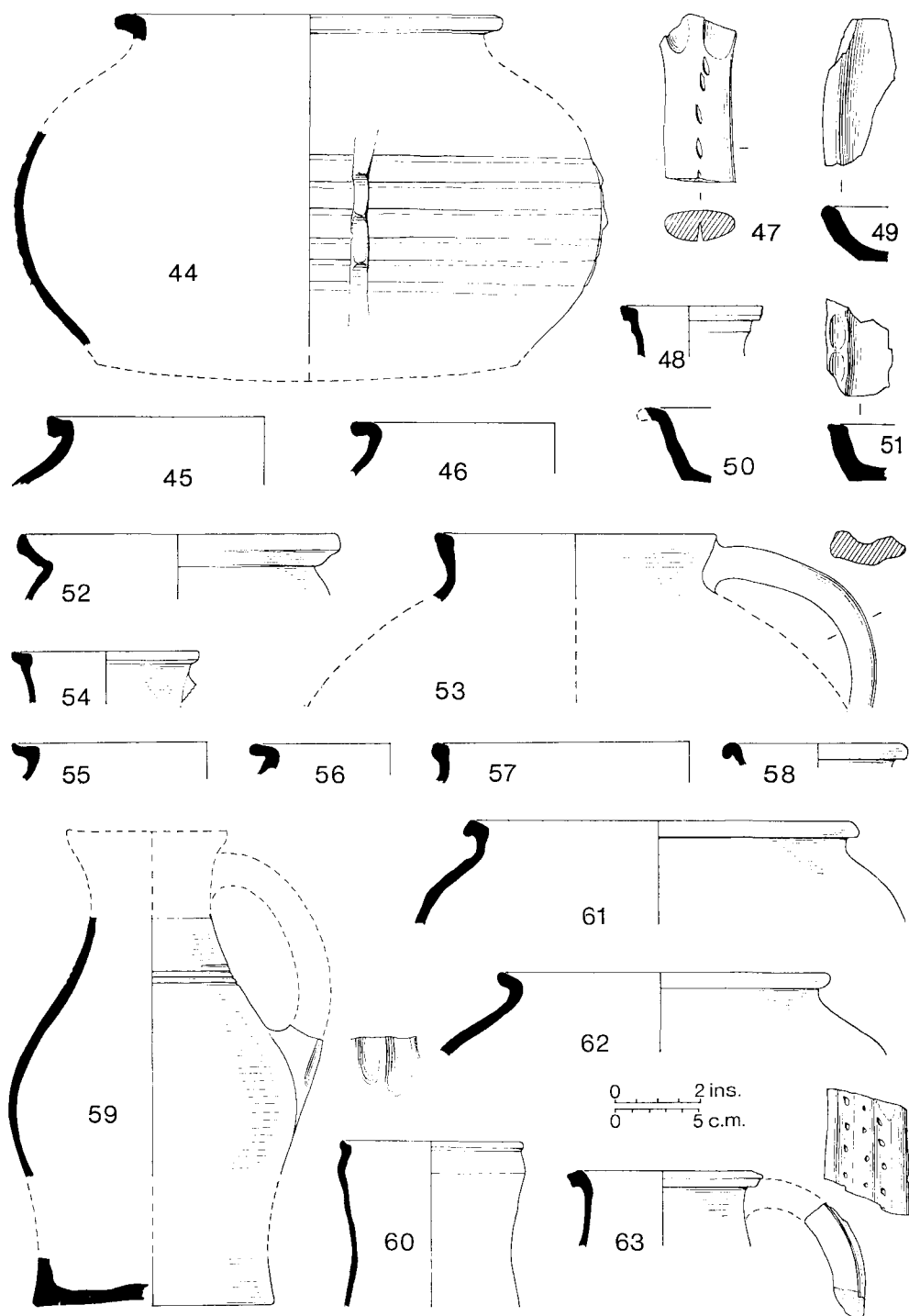


FIG. 57

POTTERY FROM KING'S LANGLEY PALACE

Nos. 44-63. Sc. 1:4 (p. 152)

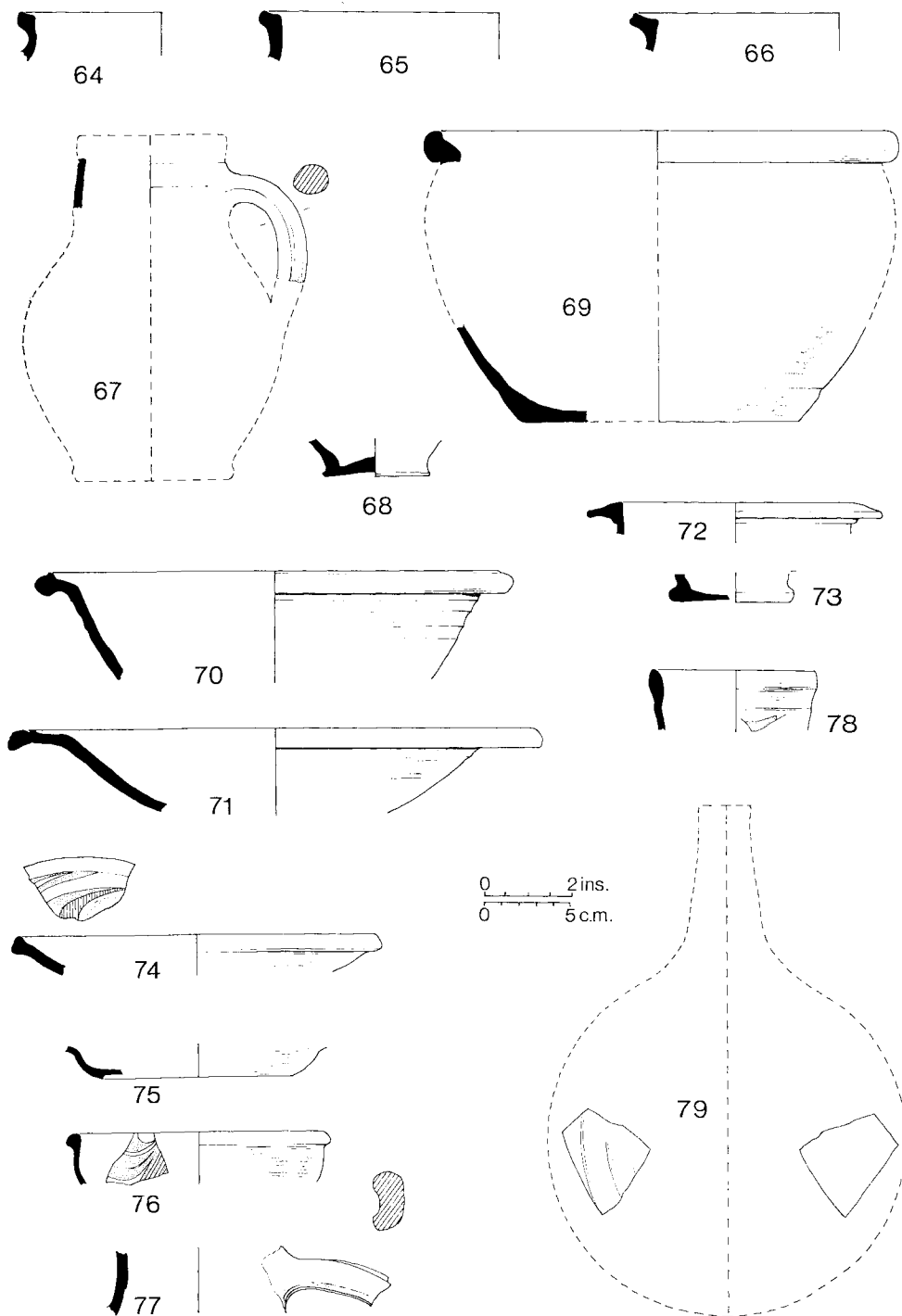


FIG. 58
 POTTERY FROM KINGS LANGLEY PALACE
 Nos. 64-79. Sc. 1:4 (p. 152)

TABLE II
AREA OF MANUFACTURE OF PUBLISHED POTTERY

Ware	Pottery numbers
Hertfordshire reduced	2, 8-13, 22, 31, 44-48, 50, 51, 55-58, 61-66
Local red	20, 32, 35, 41, 43, 49, 52-53
Oxfordshire	1, 3-7, 14, 15, 29, 30, 33, 37, 39, 40, 42, 59
Surrey	17, 18, 23-28, 34, 36, 38, 54, 70, 71
West Kent	16, 60
Potterspurty	76, 77
East Anglian red	78
Lambeth	75
Imported	19 ² , 79

DISCUSSION OF POTTERY

By J. G. HURST

The new groups confirm and extend the sequence published in the first report.⁵⁷ The pottery of the late 13th and early 14th centuries from the filling of Gully 282 (Nos. 59-63) and Building D, Site 2 (Nos. 64-6) includes typical squared rim Hertfordshire reduced ware,⁵⁸ cooking pots and jugs together with imports from the Oxford region.⁵⁹ The jug sherd of West Kent slipped ware⁶⁰ adds a new type. These are common in London but travel NW. being found at Northolt;⁶¹ this extends its distribution. The presence of this ware, together with another sherd from under Building C (No. 16) may not necessarily show trade, and could have been brought specially from London on some occasion. The Surrey and Oxfordshire types, on the other hand, are in sufficient quantity to suggest real trade.

Surrey white wares come into general use about 1300⁶² so the lack of these from the two groups above might suggest a pre-1300 date; but the small quantity of sherds makes it hard to be sure. The next two groups from Pit 140 pre-dating Building C (Nos. 1-7), and from general levels also pre-dating Building C (Nos. 8-19) include two examples of Surrey white ware together with the usual Oxfordshire and Hertfordshire types. A date in the first quarter of the 14th century might therefore be suggested which is confirmed by a sealing date of no later than *c.* 1320. The small number of Surrey wares might suggest that at least it was not traded in large quantities to this part of Hertfordshire in the first quarter of the 14th century. The lobed cup (No. 19) provides another useful early dated example to add to the others increasingly being recorded from the end of the 13th and the beginning of the 14th century.⁶³

The pottery from the manor ditch (Nos. 44-58) comprising mainly Hertfordshire reduced and other local wares, with only a single Surrey white ware jug, suggests a date mainly late 13th-century not extending very far into the 14th century. On the other hand the lack of Oxfordshire imports either could mean that the deposit is mainly kitchen material without finer wares. A date before 1350 is certain and most of the

⁵⁷ S. Moorhouse, 'The pottery' in D. S. Neal, 'Excavation at the palace and priory at Kings Langley, 1970', *Herts. Archaeol.*, III (1970), 59-65.

⁵⁸ J. G. Hurst, 'The pottery' in M. Biddle *et al.*, 'The excavation of the Manor of the More, Rickmansworth', *Archaeol. Jnl.*, cxvi (1959), 161-2, period I; and J. G. Hurst, 'The kitchen area of Northolt manor, Middlesex', *Medieval Archaeol.*, v (1961), 267-70, Group K.

⁵⁹ There is no general survey but much material is in the Ashmolean Museum, Oxford, and published in *Oxoniensia*, *passim*.

⁶⁰ R. Rackham, *Medieval English Pottery* (2nd ed. revised J. G. Hurst, London, 1972), pls. 25, 32.

⁶¹ J. G. Hurst (1961), *op. cit.* in note 58, 270-3, Group 3.

⁶² *Ibid.*, 273-4.

⁶³ J. G. Hurst, 'Sixteenth and seventeenth-century imported pottery from the Saintonge', in V. I. Evison *et al.*, *Medieval Pottery from Excavations* (London, 1974), 250-2.

vessels are likely to date to 1300 or earlier rather than being a group of the first half of the 14th century, though some of the rims are quite heavily flanged.

The two groups from phases 1 and 2 (Nos. 20–22) and 3 (Nos. 23–34) of Building C, together with the cesspit 47 (Nos. 35–43), give useful additional material to that recovered earlier, towards a corpus of pottery datable to the mid and late 14th century and into the early 15th century.⁶⁴ The pre-1380 group is too small and contains residual material but the other two post-1380 groups contain typical bifid rims of this period together with Surrey and Oxfordshire imports.

The post-medieval sherds, being unstratified, are too mixed to add greatly to our knowledge of the sequence in the area but add useful new additions to the local range. No. 68 is a copy of 16th-century flat based stoneware jugs,⁶⁵ a later type than the frilled copy found in 1970.⁶⁶

MARTINCAMP FLASKS

No. 79 is a Type I flask.⁶⁷ The distribution of these has been greatly extended in the last ten years and they may now be regarded as much a type fossil of the late 15th and early 16th century, as the more frequent Raeren stoneware drinking mugs or S. Netherlands maiolica flower vases, which occur in about the same quantities. There was some doubt as to where these flasks were made as they were hard to parallel abroad; the only examples being in the museums at Dieppe and Rouen in northern France. Beauvais therefore seemed to be the obvious kiln source especially as the Type II Stoneware examples must have been made in the stoneware making area between the Rhineland and Normandy. Beauvais wasters, however, do not include any examples of the flasks without handles, but there are numerous costrels with handles. In addition, the Beauvais examples do not have vertical tall necks with simple rims but short sharply everted ones.⁶⁸ Amongst the many million sherds from the Scherbenhügel in the Aulgasse at Sieburg there was only a single example of a possible flask neck similar to these flasks. As off-white earthenware was also being produced at Sieburg this might have been a source for both Type I and II flasks. The quantity of flask imports in England, and the lack of any quantity of other Sieburg 16th-century wares, when the main source of stoneware was Raeren, makes this unlikely.

With the red Type III globular flasks of the 17th century M. Biddle has suggested that they may be Italian on the evidence of a find from Nonsuch⁶⁹ encased in wicker-work suggesting a parallel with Chianti bottles. The possibility has been considered that they might be linked with the red Spanish Merida wares, though they lack the characteristic mica inclusions of this ware. In any case, it seems more likely that the three types of flask were made in the same area, which precludes any area outside the stoneware producing region.

Uncertainty was resolved in 1974 when a drainage scheme at Martincamp produced conclusive evidence that the N. French slipwares on a white fabric with yellow and green decor were made there.⁷⁰ These are found in England at London, Plymouth and other sites on the S. coast. In addition, a number of sherds of flasks of typical types were found.⁷¹ Martincamp was an important pottery centre in the 18th and 19th centuries,⁷² but until these recent finds it was not appreciated that it was also important earlier.

⁶⁴ S. Moorhouse, *op. cit.* in note 57, 62.

⁶⁵ That is Cologne or Frechen drinking mugs and Bellarmine.

⁶⁶ That is Raeren drinking mugs. S. Moorhouse, *op. cit.* in note 57, 63 and 64, no. 32.

⁶⁷ J. G. Hurst, 'Imported flasks', in C. V. Bellamy, 'Kirkstall Abbey excavations, 1960–4', *Pub. Thoresby Soc.*, LI (1966), 54–9.

⁶⁸ L. Jewitt, *The Ceramic Art of Great Britain* (London, 1878), I, 87, figs. 304–5.

⁶⁹ M. Biddle, 'Nonsuch Palace, 1959–60', *Surrey Archaeol. Coll.*, LVIII (1961), 16, and fig. 5, no. 4.

⁷⁰ An exhibition of these finds was held at the Dieppe museum in 1974.

⁷¹ Information J. Chapelot.

⁷² C. Rogère, *Les Poteries de Martincamp* (Rouen, n.d.).

Martincamp is situated halfway between Dieppe and Beauvais just to the W. of Neufchâtel-en-Bray, another important pottery making centre⁷³ especially for the remarkable 16th-century relief floor tiles which were imported into England at the same time as the Type I and II flasks.⁷⁴

APPENDIX 4

DECORATED AND PLAIN MEDIEVAL FLOOR-TILES

By LAURENCE KEEN

This small collection of floor tiles is important, despite the lack of close dating, since it adds to the material already excavated from the site and expands the range of designs already published in the three main groups identified. None of the tiles was found *in situ*.

Group 1, Nos. 1-5 (FIG. 59)

Hard dull-orange to red fabric with sparse yellow grog tempering (size, 1-2 mm.). Grey core. Large tiles measure (at the surface) 12 cm. square, small tiles 7.6 cm. square; they are all 2.2 cm. thick, have chamfered sides, and a thick clear glaze.

The five designs belonging to this group can be identified by the well-fired fabric and the appearance of the design. The design is two-colour: a white slip against the plain background. In the majority of the tiles there is a distinct ridge defining the edge of the various parts of the design and the thin slip, which covers the bottom of the impressed design, tends to be at a lower level than the background. It is clear that this result is unlikely to have been achieved by inlaying a stamped impression with white slip. Tiles produced by this method tend to have a substantial depth of inlay and the surface of the design is level with the background. Drury and Pratt have examined the techniques used to produce tiles at Danbury, Essex, and have suggested, on the basis of tile-wasters and practical experiments, that two previously unidentified techniques were used by medieval tilers, in addition to those already recorded: *stamp-over-slip*; *slip-over-impression*.⁷⁵ The *stamp-over-slip* method could have been that used to produce the tiles in this group, although there are whole tiles and parts of others where the surface of the design is level with the background. However, this could have been achieved by the scraping. It is of interest to record that tile No. 1 has a line of slip which appears to have been applied freehand to replace part of the design removed by careless scraping.

The group belongs to a series of tiles represented by examples at Berkhamsted Castle, Burston Manor and St Albans Abbey in Hertfordshire, and Pitstone in Buckinghamshire. Hohler, in his survey of Buckinghamshire tiles has identified these as belonging to a *Hertfordshire group*.⁷⁶

No. 1 is also found at Berkhamsted Castle⁷⁷ and at St Albans Abbey;⁷⁸ it is similar to design P164, which has a whirligig in the outer angle, published by Hohler.⁷⁹ He records P164 from several sites in Buckinghamshire and others in Berkshire and Oxfordshire. Drury has found the same design at Danbury⁸⁰ and established the connexion between this group and the products of the Essex factories. No 2 is similar to Hohler's P41 which is recorded at several sites in Buckinghamshire and at Berkhamsted Castle,

⁷³ M. Bas, 'Le Musée Mathon, Neufchâtel-en-Bray', *Présence Normande*, xv, x (1964), 17-21.

⁷⁴ A. Lane, *Victoria and Albert Museum: A guide to the Collection of Tiles* (London, 1960), pl. 25D.

⁷⁵ P. Drury and G. Pratt, 'A late 13th and early 14th-century tile factory at Danbury, Essex', *Medieval Archaeol.*, xix (1975), 92-164.

⁷⁶ C. Hohler, 'Medieval pavingtiles in Buckinghamshire', *Records of Bucks.*, xiv (1942), 26, 104.

⁷⁷ St Albans City Museum.

⁷⁸ British Museum, 134, 5, 6.

⁷⁹ Op. cit. in note 76, 121.

⁸⁰ Op. cit. in note 75, C6 and 152.

Hertfordshire.⁸¹ No. 3 appears to be similar to Hohler's Pg1, found in Buckinghamshire, Berkshire and at St Albans Abbey.⁸² Nos. 4, with a design clearly meant for a larger tile, and 5, without the ornament between the leaves, are also found at St Albans Abbey.⁸³ This last tile is the same size as the plain tile No. 21 (not illustrated). The plain tiles belonging to this group were glazed either a dark brown or a light green over a white slip-coated surface; some of the tiles (not illustrated) had been broken from diagonally scored whole tiles.

Group 2, Nos. 6-12 (FIG. 59)

Hard, friable, dull orange-red fabric containing flint tempering (1-3 mm.). Unevenly fired; some surfaces and fabric near to surfaces have a 'reduced' appearance. Thin clear glaze. There are two sizes; the larger measures 10.6 cm. square, and the smaller 10.2 cm. square. They are 2.5 cm. thick and have chamfered sides. The tiles are smaller and thicker than those in Group 1 and are characterized by the badly prepared clay.

Like Group 1, the exact method by which the tiles were made is difficult to establish. In a discussion of the possible method used in producing tiles of the *Westminster Tiler* group, to which these tiles probably belong, although some of the designs are found in the *West Essex* group, it was thought that the slip was applied after the design had been stamped into the plain quarry.⁸⁴ However, it is now suggested that these tiles were produced by the *slip-over-impression* method,⁸⁵ although in the case of No. 9 the three examples found appear to have been produced by either the *slip-over-impression* method or the *stamp-over-slip* method. The latter technique is that used for tiles of the *West Essex* group. Since Nos. 9, 10 have been identified in this Essex group there is a link between the *Westminster Tiler* and the *West Essex* group. The designs Nos. 8 and 10 have been recorded at Kings Langley before.⁸⁶ Designs Nos. 8, 9 are found at Pleshey Castle, Essex, and No. 10 is found at Pleshey with the 15-cm. design complete.⁸⁷ At Pleshey, however, tiles Nos. 9, 10 belong to Drury's *West Essex* group.

A number of plain tiles belonging to this group were found (not illustrated). They are either glazed a light to dark green, or a yellow over a white slip. Several tiles are half-tiles broken from whole tiles scored diagonally. Tiles of the *Westminster Tiler* are found at a number of sites in Bedfordshire, Buckinghamshire, Essex, London, Middlesex and elsewhere⁸⁸ but, other than Bengoe,⁸⁹ Kings Langley is the only site in Hertfordshire.

Group 3, Nos. 13-17 (FIG. 59)

Hard, dull orange-red fabric with fine flint tempering. Grey Core. Dimensions: 11.3 cm. square, 2 cm. thick. Chamfered edges, clear glaze. Five designs could be identified in this group. They belong to the Penn (Buckinghamshire) series which has been studied in detail by Hohler.⁹⁰ Hohler has described the process of producing the design as *printed*, following the work of Haberley,⁹¹ but Drury's work has demonstrated

⁸¹ Ibid., 107.

⁸² Ibid., 113.

⁸³ St Albans City Museum and British Museum 16.

⁸⁴ Laurence Keen, 'Medieval floor tiles of the "Westminster" tiler at Bengoe, Hertfordshire', *Hertfordshire Archaeol.*, III (1973), 90-3; idem, 'Medieval decorated and plain floor tiles' in D. S. Neal, 'Excavations at the palace and priory at Kings Langley, 1970', *ibid.*, 65-7.

⁸⁵ Op cit. in note 75, 140.

⁸⁶ Neal, op. cit. in note 84, fig. xix, No. 3; J. P. Haythornthwaite, *The Parish of Kings Langley* (London, 1924), fig. 6.

⁸⁷ I am grateful to Drury for his comments on this Appendix and for making available details of his work on Pleshey tiles.

⁸⁸ A preliminary list is published in Keen, *Hertfordshire Archaeol.*, III (1973), 92-3.

⁸⁹ Ibid., 90-3.

⁹⁰ Loc. cit. in note 76.

⁹¹ L. Haberley, *English Medieval Paving tiles* (Oxford, 1937), 55.

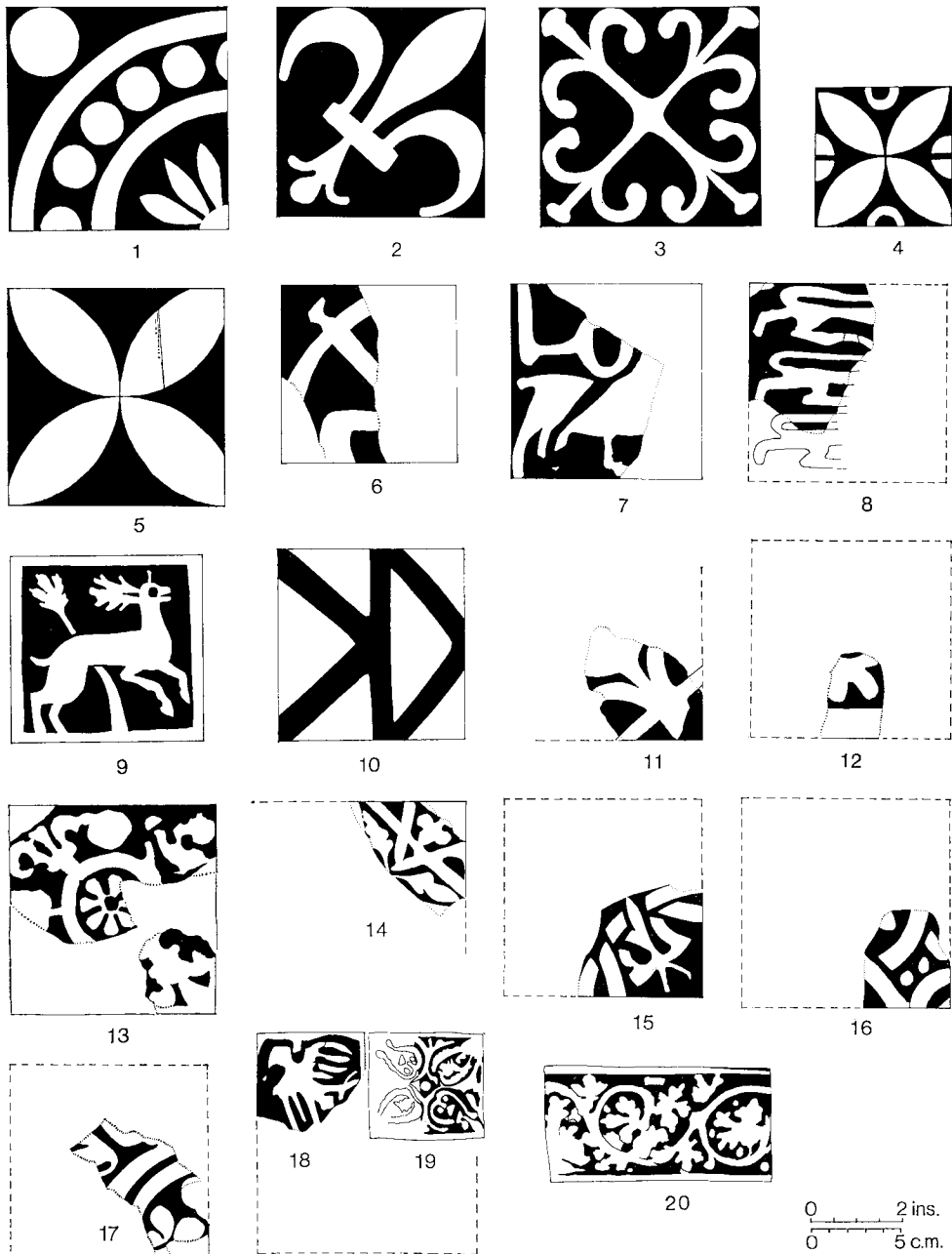


FIG. 59

DECORATED FLOOR TILES FROM KINGS LANGLEY PALACE

Nos. 1-20. Sc. 1:4 (p. 157)

that *printing* is practically impossible and that, in fact, Haberley never managed to print tile patterns.⁹² It seems likely that the mass-produced and widely distributed products of Penn, together with those from Tyler Hill, Canterbury, and the *Westminster Tiler* were made by the *slip-over-impression* method.⁹³ Three of the designs are found at a number of other places which Hohler has listed. Design No. 13 is probably Hohler's P68, No. 14 is P153 and No. 16 P62.

Group 4, Nos. 18–20 (FIG. 59)

Two designs are identified from this group. One (Nos. 18 and 19) is designed so that the tile could be broken up into smaller tiles, the other (No. 20) in order that it could be divided into two pieces to provide a continuous decorated border. It appears that these designs are inlaid.

DATING

With such a small quantity of tiles from the excavations and the continuing work on Hertfordshire tiles by the writer, any suggestions about dating must be preliminary. The recent work by Drury includes a tentative discussion of the relationship between tiles of Group 1, Danbury and Group 3 (Penn).⁹⁴ The tiles from Danbury, produced from c. 1275–85 to c. 1325–35, have some connexions through their designs with the series produced at Penn, Buckinghamshire; an industry certainly established by 1332 and in large-scale production between 1344 and 1357.⁹⁵ It seems likely that tiles of Hohler's *Hertfordshire* group (Group 1) influenced some of the Danbury designs as well as some at Penn⁹⁶ and that several tiles from Danbury influenced designs used at Penn. On this evidence it may be suggested that the Group 1 tiles were probably made at the end of the 13th century or in the early 14th century. They are certainly found at Kings Langley in a pre c. 1320 context.

The Group 2 tiles, which probably belong to the *Westminster Tiler* group, are no easier to date despite the larger quantity of evidence. Whitcomb⁹⁷ and Huggins,⁹⁸ on the basis of heraldry and design, favour an early 14th-century date, but the tiles might equally well be late 13th-century. The Penn tiles of Group 3 are certainly 14th-century, probably belonging to the second quarter. The tiles of Group 4 may date from the second half of the 13th century.

APPENDIX 5

ANIMAL BONES AND SHELLFISH

By ALISON LOCKER

ANIMAL BONES

The quantity of animal bones from the 1974–76 excavations was small totalling twelve long-bone boxes. This discounted any possibility of statistical work. Preservation was good, and measurements were taken whenever possible. The measurements used

⁹² Op. cit. in note 75, 140.

⁹³ Ibid., 161.

⁹⁴ Ibid., 153.

⁹⁵ Loc. cit. in note 76.

⁹⁶ Op. cit. in note 75, 153.

⁹⁷ N. R. Whitcomb, *The Medieval Floor-tiles of Leicestershire* (Leicester, 1956), 16. *Westminster Tiler* tiles found *in situ* are described by P. J. Huggins, *Medieval Archaeol.*, xx (1976), 120.

⁹⁸ R. Huggins in P. J. Huggins, 'Waltham Abbey, monastic site and prehistoric evidence, 1953–1967', *Trans. Essex Archaeol. Soc.*, II, iii (1970), 259.

are those devised by R. T. Jones of the Ancient Monuments Laboratory. The bones were divided into three groups:

- 1) The manor ditch and pre-dating *le Longrewe* (Building C).
- 2) Contemporary with the palace buildings.
- 3) Post-medieval (some of this material may be residual).

A chart was drawn up for each group, indicating the species, and the part of the skeleton represented. The relative importance of each species is based on the total number of identifiable bone fragments, but does not include ribs as these may have been broken many times.

1) *The manor ditch and pre le Longrewe*

The following species were present: *Bos* sp. (cattle), *Equus* sp. (horse), *Sus* sp. (pig), *Ovis* sp. (sheep), *Dama dama* (fallow deer), *Gallus* sp. (domestic fowl).

Cattle appear to be predominant in this group, although the total amount of identifiable bone was only seventy-three. At least two individuals of fallow deer were identified. The four pig mandibles from the manor ditch all appear to have been butchered in the same manner, i.e. cut posteriorly to the 2nd premolar, but the mandibular symphysis was still unbroken. The canines and 3rd premolar were not fully erupted. All the cattle metapodials appear to have been cut in the same way, across the midshaft. Domestic fowl is the only bird species identified from this phase, and includes one male.

2) *Contemporary with the palace buildings*

The following species were identified: *Bos* sp. (cattle), *Equus* sp. (horse), *Cervus elaphus* (red deer), *Dama dama* (roe deer), *Ovis* sp. (sheep), *Sus* sp. (pig), *Oryctolagus cuniculus* (rabbit). Bird species include: *Gallus* sp. (domestic fowl), *Anser* sp. (goose), *Corvus monedula* (jackdaw), *Cygnus* sp. (swan), *Anas* sp. (duck).

Cattle are predominant, pig and sheep appear in roughly equal proportions; few mandibles were present. Cattle included some immature individuals represented by two unfused epiphyses of humeri, the distal end of a femur, and some unfused vertebral epiphyses. Three distal ends of humeri, all showed signs of butchery, a number of butchered long bone fragments were also present. Pig included individuals of varying size, two accessory metapodials were particularly large. Fragments of mandibles and teeth indicate some immature individuals. Also a new born piglet was identified from some long bones. One accessory metapodial (from an adult) had been broken during life, and healed poorly. Horse included two individuals, one was the size of a small pony. An immature individual of fallow deer was represented by the unfused distal end of a tibia. Red deer was identified from a calcaneum. Although rabbit was identified no butchery marks were noted. The most common bird was domestic fowl. Goose, swan and jackdaw were identified from a single bone each.

3) *Post-medieval*

The post-medieval material was the most prolific and came mainly from the filling of the well. It is likely to have been deposited in the 17th century. However residual material from the palace occupation is likely to have been present.

The following species were identified: *Bos* sp. (cattle), *Equus* sp. (horse), *Ovis* sp. (sheep), *Sus* sp. (pig), *Felis* sp. (cat), *Canis* sp. (dog), *Cervus elaphus* (red deer), *Dama dama* (fallow deer), *Oryctolagus cuniculus* (rabbit), *Lepus* sp. (hare). Bird species are: *Gallus* sp. (domestic fowl), *Grus grus* (crane), *Perdix* sp. (partridge), *Anser* sp. (goose).

Most of the bones were from cattle and pig (123 and 110 fragments respectively), in approximately the same proportions. Sheep (43 fragments) seems to be of less importance. Several cattle humeri were all cut in the same manner, across the shaft as were the metapodials. A number of unfused epiphyses were found indicating some immature individuals. Horse was represented by two teeth. Pig included a number of immature individuals, in particular the remains of one juvenile represented by: one pair of femora, unfused both distally and proximally, one pair of humeri, unfused proximally, one pair of tibiae, unfused proximally and distally, one pair of radii distally unfused and one pair of astragali. An immature scapula showed a pathological defect and was x-rayed. All the fragments of mandibles and maxillae were immature, the teeth had not fully erupted. Both red and fallow deer were present, however red deer was more numerous. At least two dogs were identified. Birds were mostly domestic fowl. Crane was identified from a single immature metatarsus.

SUMMARY

Although the quantity of bone was small the species represented showed that the butchery techniques tended to be fairly consistent throughout the three periods.

Cattle seem to be the most important species, followed by sheep and pig. Many immature specimens of pig were identified, more so than for other species.

Both red deer and fallow deer were found consistently but in small numbers; no particular butchery techniques were noted.

Domestic fowl was the most numerous bird species, other domestic birds present were duck and goose. More unusual species were crane, partridge, swan and jackdaw.

SHELLFISH

SITE 1

1) *Pre le Longrewe*

Ostrea edulis (oyster): 50
Helix aspersa (garden snail): 3
Cardium edule (cockle): 15 and 5 fragments

2) *Associated with the occupation of le Longrewe*

Ostrea edulis: 5
Littorina littorea (winkle): 7

Considerable numbers of mussel shells (*Mytilus edulis*) were found to the side of the assumed garderobe pit on the south side of Rooms 6 and 7.

SITE 2

1) *Early occupation*

Ostrea edulis: 5

2) *Palace occupation*

Ostrea edulis: 3

3) *Post-medieval* (some of these shells may be residual from earlier deposits)

Ostrea edulis: 11
Buccinum undatum (whelk): 4
Cardium edule: 7
Helix aspersa: 1

The number of bivalves has been divided in two in order to assess the correct number of individuals.

APPENDIX 6

FISH BONES

By ALWYNE WHEELER

1) *The manor ditch and pre le Longrewe*

Sample	Species		Bones
Pit 140, L 138	<i>Gadus morhua</i>	Cod	Right dentary Parasphenoid Preoperculum
Section C-C (FIG. 49)	<i>Molva molva</i>	Ling	1 Caudal centrum 1 Abdominal centrum 1 Caudal centrum Fragments
	indet.		
L 367, Section N-N (FIG. 52)	<i>Acipenser sturio</i>	Sturgeon	Lateral body scute

2) *Contemporary with the palace buildings*

Sample	Species		Bones
Conduit, Room 2			
Building G	<i>Gadus morhua</i>	Cod	2 Posterior caudal centra (fine rays presumed to be of this species)
	Gadoid		1 Caudal centrum Anterior centrum Fragments
	indet.		

3) *Post-medieval or modern*

Sample	Species		Bones
L 241, Section M-M	<i>Gadus morhua</i>		Anterior caudal centrum
(FIG. 51)	Gadoid		Anterior centrum

APPENDIX 7

DESCRIPTION OF LAYERS ON PUBLISHED SECTION DRAWINGS

Layer No.	Description
8	Ginger-brown clay containing flints, tile and charcoal.
9	Ginger-brown clay containing tile.
10	Ginger-brown clay containing large flints, tile and flecks of mortar.
25	Loamy clay containing tiles, charcoal, mortar and flecks of bright orange clay.
26	Black stony soil.
29	Dark soil containing tile, charcoal, mortar and shells.
40	Orange-yellow clay and small pebbles.
41	Dirty orange-yellow clay and flints.
42	Grey-brown stony layer with rust-brown flecks.
47	Orange clay containing flints and tile.
48	Faeces.
52	Dirty ginger clay containing occasional large flints and many small pebbles.
53	Orange clay and flint.
67	Khaki brown soil containing some medium-sized flints and tile.
68	Red-orange clay containing a few stones.
73	Soft brown, water-washed, soil.
75	Dark silty clay containing traces of charcoal and flecks of chalk.
76	Orange clay.
80	Brown stony soil containing flecks of chalk.

<i>Layer No.</i>	<i>Description</i>
84	Mortar containing tiles, charcoal and oyster shells.
102	Primary silt. Smooth brown-ginger clay containing chalk flecks.
116	Dirty ginger sandy soil containing pebbles and tile.
129	Burnt daub and tile.
132	Ginger clay containing flecks of chalk, possibly cob.
133	Mid-brown clayey soil containing some very small stones, tile and chalk flecks.
135	Sticky orange-yellow clay containing chalk nodules.
136	Brown-ginger clay.
137	Sandy soil containing much tile.
138	Fine black soil and sooty layer containing shells and bones.
139	Gravelly soil.
153	Orange clay containing tile, chalk and charcoal.
163	Orange clay mixed with yellow mortar, tiles and charcoal.
172	Silty khaki soil containing tile, charcoal, and pebbles.
183	Charcoal.
204	Loose, pale yellow to grey mortar.
223	Flint facing to wall of Building B.
227	Brown loam mixed with chalk, charcoal, flecks and clay.
240	Grey silty soil containing flints, tiles, patches of yellow and white mortar, yellow clay, charcoal, shells and pebbles.
241	Very dark soil containing a few large flints, tile, and many pebbles.
279	Loose light brown soil with mortar.
280	Very loose flint rubble containing tile, chalk and clunch.
281	Sticky dark brown loamy clay and rubble.
316	Sticky, compacted, grey to brown clay containing tile, small chalk nodules and charcoal.
336	Grey-brown sandy soil containing a lot of mortar flecks, flint and tile.
337	Dark brown sandy soil and orange clay containing flint, tile and clunch.
341	Dark grey to brown sandy soil containing a few large flints, pebbles, tile and charcoal.
344	Dark brown sandy clay loam containing flint, tile and pebbles.
358	Compacted yellow-brown clay loam containing tile fragments and mortar.
359	Soft black loam containing a few flints, tile and charcoal.
361	Soft black loam containing flint and mortar.
364	Hard, light brown, sandy loam containing tile and pebbles.
365	Heavy, dark brown clay loam containing tile.
366	Orange clay containing tile and pebbles.
367	Heavy, dark brown clay containing tile fragments and charcoal.
369	Soft black loam containing tile and some charcoal.
372	Orange to yellow clay containing flint, tile and pebbles.
417	Very heavy rubble consisting of flint, tile, pebbles and clunch.
418	Multi-textured and coloured clay.
424	Grey-brown sandy clay-loam with charcoal, flint, tile, mortar and pebbles.

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