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**A SECTION ACROSS THE SOUTHERN
PERIMETER OF ELSYNG PALACE, FORTY
HALL, ENFIELD, JULY 2014**

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**Cover: Cologne Stoneware Vessel Decorated with Oak Leaves and Acorns (See Appendix 3, 5.1)
(Photograph Neil Pinchbeck)**

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ABSTRACT

- Excavations showed the cause of a group of linear geophysical, LiDAR and surface topography anomalies to be a partially demolition rubble filled double moat fronting a substantial wall representing the facade and southern side of a range of Elsyng Palace. The wall had a projection to accommodate a probable garderobe chute in its thickness and there was evidence for the use of cut/moulded brick in the area.

INTRODUCTION

- On-going research into the site of Elsyng Palace by the Enfield Archaeological Society (EAS) since 2004 (Dearne 2004; 2005a; 2005b; 2006a; 2006b; 2007; 2008; 2009; 2011a; 2011b; 2012a; 2013) has advanced our understanding of some aspects of the plan and developmental sequence of the palace. However, by 2010 it was clear that the existing geophysical surveys (Bartlett 1998), on which many assumptions about the location, extent and plan of the Tudor and earlier palace had once been based, were of limited value in many areas as they were principally reflecting drift geology and post-palace dumping as well as having been inconsistently plotted against the OS grid (Dearne 2011a, 1).
- However, in late 2008 new aerial photographic evidence became available which clearly showed parch marks representing the actual position and plan of the northern range of the (Tudor outer) courtyard (in fact identifiable on the geophysical survey but omitted from its summary plans) and newly available archive plans of the location of work on the site in the 1960s (Jones and Drayton 1984) also showed that this had been misplotted against geophysical results and the OS grid. By 2010, as a draft research strategy prepared by the author in early 2008 and circulated to interested parties for comment had already emphasised, a general site priority therefore became to excavationally examine further points where resistivity/magnetometry anomalies had previously been assumed to be indicating structural elements of its plan but could no longer be relied upon.
- Excavation in one such area in 2010, where such anomalies, reinforced by parch mark evidence, apparently represented a circular structure on the presumed line of the southern curtain wall of the palace, established again that they in fact represented post-palace dumping to create paths/surfaces, but did locate a possible robber trench representing the curtain wall of the palace and what was provisionally interpreted as a lean-to structure fronting it (Dearne 2011a). Further excavation here in 2011 - 2013 (Dearne 2011b; 2012a; 2013) confirmed the presence and likely interpretation of the robber trench which was further traced, but showed that the structure thought to front it was in fact a large freestanding post palace demolition building complex. Extensive excavation of this identified it as an L-shaped threshing barn complex.
- Completion of this work allowed a return in 2014 to the medium term aim on the site of establishing the course and nature of the perimeter of the palace by excavationally checking geophysical features appearing to relate to its plan. Although the immediate continuation of the curtain wall to the west of the exposures obtained in 2010 – 13 could not be examined due to the presence of an avenue of major trees, geophysical, LiDAR and surface topography evidence suggested that it and possibly other associated features likely turned north west in the vicinity of the avenue and ran for a considerable distance on this new alignment. Thus, Bartlett (1989, Plan 7; Fig. 1 herein) shows a linear magnetic anomaly coincident with a linear resistivity anomaly flanked on the north by an approximately parallel band of magnetic disturbance which he speculated could indicate a moat; and ground observations suggested that a low linear bank might represent the former while to the north a low linear depression seen on LiDAR (Pinchbeck 2013, Fig. 20) and on the ground is present. However, given the problems with geophysical evidence on the site this clearly required excavational confirmation of the causes of these features. Thus, in July 2014 the EAS excavated a single trench across the line of these linear geophysical, LiDAR and surface topography features. Scheduled Monument Consent for the work was given by the Dept. of Culture, Media and Sport (Ref. S00083243) following the submission by the author, acting as agent for the London Borough of Enfield (the owners), of an application, supported by a project design.
- The work was undertaken on the 15th – 20th July 2014, was allocated site code FXI14 by the Museum of London and was carried out in accordance with the project design produced by the author. The work was project managed by Martin J. Dearne with the assistance of Mr. M. Dewbrey of the EAS and the site archive and retained finds generated by the work will be deposited in the LBE Museums Service/EAS archive (see Appendix 1).

OBJECTIVES AND METHODS

The objectives of the excavation were:

- to establish whether and what features of the palace were reflected by geophysical, LiDAR and surface topography indications;
- and to establish the position of the facade wall of the palace.

The methodology of the work was:

- An initially 6.00 x 1.50 m trench was systematically expanded to north and south to cross all the linear geophysical anomalies and surface features known in the area as far as possible at right angles and to ensure that the facade wall of the palace was identified. The full excavated area (Figs 1 and 2) was 14.50 x 1.50 m (with a 2.50 x 1.00 m expansion to the east at its northern end to allow features to be understood and contextualised). Excavation was by hand to a depth of 1.00 m or, where laying higher, to the top of natural, except where structural features were encountered where it ceased at their upper surface. However, resources were only available to partially excavate one large feature (context [10]);
- the excavations were single context recorded using EAS context sheets and other pro formas, colour photographs, digital photographs, plans and sections drawn at an appropriate scale and spot heights, all recording being with respect to existing fixed OS grid point markers;
- all non twentieth/twenty first century finds except cbm were collected from all contexts and all spoil sieved and or metal detected;
- the trenches were seeded with modern coins before backfilling and immediately returned.

HISTORICAL BACKGROUND

- The historical evidence for Elsyng Palace has been outlined in several published and unpublished sources (e.g. Jones and Drayton 1984, 8ff; Phillpotts 2002, 11ff; Dearne 2004, 3).
- Relevant to the current work is that the estate is believed to have Medieval origins and that under either or both Thomas and then Edmund, Lord Roos and Sir Thomas Lovell it was rebuilt in the later fifteenth century, by the early sixteenth century becoming a courtier's palace for the latter.
- It was acquired by Henry VIII in 1539 and refurbished as a royal palace with an outer and inner (Eaves) courts. Despite recorded phases of repair under Edward VI and Elizabeth I the palace was dilapidated by 1597 and in 1608 a warrant to demolish it and use the materials at Theobalds Palace was issued but not fully carried out. Repairs followed in 1609 – 10 when the rubble from one demolished side of one (?western) courtyard was levelled and a new 8 ft high wall built while a 60 ft high wall was built in a moat to close a gap at the west end of the (unlocated) palace chapel. Repairs also continued under Philip Herbert (Earl of Montgomery, later Earl of Pembroke), keeper of the palace from 1612, who subsequently purchased it from Charles I in 1641.
- Herbert is presumed to have died at Elsyng in 1650 and it may briefly have become a health spa, but the palace was still standing and partly occupied in c. 1656. Already though by 1629 the Manor of Worcesters, formerly including parts of the palace estate but not the palace and its immediate environs, had passed to Nicholas Rainton who built the standing Forty Hall at the top of the hill above the palace (Gillam 1997, 54) and by 1656 the palace estate had been acquired by a second Nicholas Rainton, who had inherited Worcesters and Forty Hall, and the palace is presumed to have been demolished shortly afterwards. The only contemporary reference to its site at the time of demolition (in 1656) describes the palace as “One very ancient Greate House called Endfield House with ye Couryards Gardens Orchards and Courtyarde with ye field adjoining called ye Walks” (Broadway Malyan 1999, 55) and little more is known from documentary sources about the palace site until the existing double avenue of Lime trees which cross the site were planted sometime before Rocque's map of Middlesex was produced in 1754.

ARCHAEOLOGICAL BACKGROUND

- The only archaeological excavation on the site prior to 2004 was in 1963 - 7 by the EAS. Elements of the work were summarised in Jones and Drayton (1984) and its main focus was an area of c. 25 x 10 m probably in the vicinity of the west side of the outer court where very substantial remains of the palace structure were encountered, often just below turf level; and the recording of a gas main trench across the northern edge of the palace complex. The royal palace had re-used elements of the earlier

courtier's palace and there was evidence for predecessor structures to this. Trenches were also cut further east and what is known of them has been summarised by the author (Dearne 2004, 3f).

- A conservation management plan for the Forty Hall estate was prepared by Broadway Malyan Cultural Heritage in 1999 and a desk top study of the site of Elsyng Palace (Phillpotts 2002) was produced by Compass Archaeology Ltd in 2002 and drew on some of the geophysical and topographical surveys of all or parts of the site which have taken place.
- A resistivity survey in 1968 near the main 1960s excavations is known only from a slide of its results (Dearne op cit), but magnetometry and resistivity surveys were carried out in 1997 and 1998 and ground penetrating radar and topographical survey in 2000 (Horsley 1997; Bartlett 1989; and see Phillpotts 2002, passim and especially Fig. 28). However, the problems subsequently identified with the magnetometry and resistivity surveys and noted above should be emphasised.
- Subsequent to the desk top survey smaller magnetometry and resistivity surveys were undertaken for the EAS in 2003, 2004 and 2005 (Dearne 2005a; Black and Black 2004).
- Excavation by the EAS in 2004 consisted of the cutting of two test pits at TQ 33881 98892 and TQ 33887 98862, both of which disclosed parts of a widespread rammed pebble surface probably of immediately post palace demolition date below which was redeposited brickearth/probable demolition dumps (Dearne 2004). Further excavation on the former site in 2005 identified the heavily robbed remains of structures along the east side of the (Tudor outer) court later assigned to the courtier's palace phase of the site, but probably reused in the Tudor scheme (Dearne 2004; 2005a; 2006b, 13); and, crossing below them, a large intact courtier's palace phase brick drain, the redeposited natural (containing discarded ?palace construction materials) above which was interpreted as forming the outer courtyard surface (Dearne 2005a). Excavation at TQ 3398 9874 also in 2005 identified a conceivably palace construction period brick firing clamp (Dearne 2005b).
- Between December 2005 and September 2007, the EAS excavated or re-excavated 34 sample pits and eight full trenches in connection with tree planting work on the site (Dearne 2006a; 2006b; 2007) and these excavations recovered pottery evidence for a site origin in the eleventh century, produced floor tile evidence suggesting the presence of high status activity by the late fourteenth century, confirmed the position of the gatehouse, sampled a small area within it, and located and sampled or fully excavated two midden areas, two pebbled and one brick courtyard (later re-interpreted as internal) surfaces, a short length of Tudor wall and a late fifteenth century drain and ?tank base. A variety of evidence from the work strongly suggested that the structures of the (Tudor outer) courtyard in fact represented reuse/repair/adaptation of the late fifteenth century courtier's palace and that the topography north of the palace had been heavily modified by the dumping of palace demolition material.
- Excavations in 2008 (Dearne 2008) demonstrated the geological origin of an area of geophysical anomalies and newly available aerial photographic coverage subsequently allowed the location of the north range of the (Tudor outer) courtyard while work in 2009 (Dearne 2009) examined imprecisely dated pebble surfaces east of the palace without disclosing an archaeological cause for a large curved geophysical anomaly. Excavation in 2010 well beyond the northern edge of the palace in the vicinity of Maidens Brook and connected to the preparation of an HLF bid for the Forty Hall estate also encountered a brick built drain relating to the palace (Pinchbeck with Dearne 2010) (for work later in 2010, and in 2011- 2013 see the Introduction above).
- In 2013 a thorough review of conventional and infrared aerial photographic and LiDAR coverage of the site was produced by the EAS (Pinchbeck 2013), some of the findings of which informed the present work.
- Very extensive archaeological excavations and monitoring on the nearby site of Forty Hall were also undertaken by the EAS (and others) in 2009 – 11 (for details see Dearne 2012b). At the time of writing further excavations and monitoring by the EAS on the Forty Hall estate, including within the scheduled area and involving new excavations on the periphery of the brick clamp excavated in 2005, were ongoing and will be reported in due course.

THE STRATIGRAPHIC SEQUENCE (Figs 2 – 5)

- The earliest deposit encountered was the natural, [5], a compacted, strong brown (7.5 YR 5/8) very clayey silt (brickearth). Differentiation of it from feature fills largely composed of redeposited natural was problematic and elsewhere up to 0.06 m cbm fragments were present in some discrete areas suspected to have been subject to major tree root disturbance so that only where the deposit was sondaged could it be entirely confidently identified. However, it appeared to survive to a maximum of c. +33.000 m OD with a reasonably flat surface, though it may have been truncated further in the vicinity of the palace facade wall.

Phase 1 (? c. 1539)

- Two large, parallel, approximately east west features, [4] and [10], had been cut into the natural in the south and middle of the trench and at the north end of the latter structural features representing the facade wall of the palace had also clearly penetrated it, though no specific construction cuts were seen here as these features were not subject to significant excavation.
- [4] comprised a c. 3.00 m wide, fairly shallow (up to 0.22 m deep) channel with ill defined and 'rough' sloping north side (so that its exact orientation could not be established), basically flat but undulating base and sloping south side (Pl. 1). It was relatively hard to define as much of its basal fill ([7]) had a matrix identical to the natural and it is possible that its rather undulating sides in plan may have in part been artifacts of excavation. However, it appeared to have either been cut rather carelessly or to have been damaged (?during backfilling). There was no detectable primary silt within it which may suggest that it was either dry or more likely held standing not flowing water and, presuming that it ran for some distance, it is provisionally interpreted as an outer ornamental moat.
- Approximately 2.60 m further north, [10] was a much more substantial feature only the southern half of which could be excavated to its probable base in the eastern half of the trench and the upper part of the northern end of which could only be examined in a small area again on the east side of the trench. Again its basal fill, [9], was in large part redeposited natural which made defining the cut very problematic and some features such as an apparent step in the cut on the south could have been illusory while no precise cut line could be traced for its south edge. However, it was clearly up to 6.00 m in width and probably a maximum of 0.80 m in depth. On the south it appeared to have an approximately 1.50 m long, c. 45° slope interrupted by a step, curving in plan but untraceable in section, and an isolated bowl shaped deepening (not shown on figures), before another small step led to a more U-shaped central profile. On the north differentiation from natural was particularly problematic and findings here should be taken as provisional, but it appeared that the cut curved away to the south and east from a projecting section of the palace facade wall ([11] below) which it ran up to. So it may have had an edge in plan that ran over 1.60 m south of and presumably parallel to the main part of the palace wall (decreasing the cut's width to 4.40 m or less) but curved right up to it where the wall projected out. Certainly a mortar fillet east of the projection (below) means that it cannot have run right up to the main part of the facade wall here. There can be little doubt, whatever the precise details of its form, that the cut represented a more major inner still water ornamental moat fronting the palace facade and again the absence of any detected primary silt and geophysical evidence for its continuation over some distance (below) appear to be consistent with this.
- The palace facade itself was represented by an extremely large wall with a southerly projection to accommodate a rectangular void, very likely a garderobe chute, in its thickness (Pl. 2). This probable garderobe chute, [17], was c. 0.98 x c. 0.56 m, straight sided and excavated to a depth of 0.63 m, but clearly continued deeper. Different areas of the wall were contexted separately ([11], [12] and [14]), but there was no evidence for more than one phase of construction so the whole structure is henceforth referred to as [11].
- Overall [11] was 1.30 m wide, broadening to 1.80 m (2.14 m including a thickening along part of its south face) where the 1.60 m long southerly projection to accommodate the probable garderobe chute occurred. The wall had been demolished to different levels at different points, with much of the thickening of the projecting section especially roughly and inconsistently demolished so that it survived to (various) far lower levels than the rest of the wall except at its east end. Moreover mortar obscured some details, tree root penetration had destabilised some areas and some sections flanking the probable garderobe chute had partially collapsed inwards. Without disassembling the wall its construction details were therefore not completely clear, but it appeared mainly, judging particularly from the sides of the probable garderobe chute, to have had a header lain core at least to its foundations with, at least in the usually uppermost surviving one or two courses, an outer skin of

stretchers, the highest on the north of stretchers with a chamfered upper edge which probably indicated the first course above foundation level/floor level. An English bond construction for the wall proper may be likely and it was built of handmade, hard fired, unfrogged, reddish yellow (5 YR 7/8) to red (10 YR 5/8), 0.24 x 0.12 x (typically) 0.06 m bricks, bonded with a fine, hard very pale brown (10 YR 8/4) to white mortar.

- South of the probable garderobe chute part of the face of the wall had been thickened by 0.34 m for a length of at least 1.30 m, probably to form a projecting buttress (and at a depth greater than the limit of excavation presumably including an outlet into moat [10]). This ?buttress survived to over five courses (0.45 m). Here too, for the full width of the projection, header lain bricks also continued to the level that elsewhere stretchers began, with only the east side of the projection having a stretcher corner flanked by queen closers just above a small offset. Thus, the projecting section of the wall could have been continued up in header bond possibly for decorative contrast. Also, immediately above the highest surviving (chamfer edged) stretcher course on the north one, and at one point perhaps a fragment of a second, course(s) of probably originally complete peg tiles had been lain and were matched by one fragment above the highest surviving brick course of the part of the wall south of the probable garderobe chute. This suggests a bonding course of tiles, perhaps restricted to the section of the wall holding the chute, which could have been partly decorative in intent, though it is far from impossible that they marked the position of an actual garderobe as an adjacent floor (below) also seemed to end in line with the chute. To the east of the projection in the wall its south edge had also been given a fillet, narrowing from c. 0.24 to 0.10 m as it ran towards the projection and its top flush with the base of the highest surviving course of the wall, of small brick fragments and mortar which was not removed but probably lay over the natural, [5], suggesting the level of the contemporary ground surface.
- North of the wall lay a spread of mortar, [15], similar to that bonding the wall but whiter. It had a possibly original edge in line with the east side of the probable garderobe chute and on (and perhaps still adhering to) it were two joining fragments of an originally glazed floor tile/flooring brick (see Appendix 3) suggesting that it was a floor level. Along with the chamfer edged brick course with which the floor tile/flooring brick would have been approximately level and the presence of the chute this would appear to confirm that that wall [11] was not freestanding but the southern side of a range of buildings and its thickness almost certainly implies that the range would have been of two or three storeys.

Phase 2 (c. 1657)

- No features or deposits certainly related to the use of the moats and range of buildings were present. The only possible exception was [16], a very well defined 0.30 x 0.28 m rectangular feature at the base of the centre of moat [10]. It comprised a c. 0.01 m thick deposit of reddish brown (5 YR 4/3) clayey silt with occasional small (to 0.03 m) stones and cbm chips which did not occupy a cut and may well have been the residue of a piece of timber laying on the base of the moat at the time of its filling.
- Otherwise both moats, the intervening area, [11] and any surface between it and the inner moat had all been infilled or covered by a complex of deposits which clearly represented building demolition or other material deposited at the same time. The probable garderobe chute [17], in so far as it was practical to excavate it, had a lower fill, [18], over 0.19 m thick of fairly loose strong brown (7.5 YR 5/6) sandy material which was almost certainly pulverised mortar. It included frequent multi-angularly laying up to whole bricks comparable to those used in [11], peg tile fragments to 0.17 m and rare round wood charcoal and suggested that bricks might have been cleaned of mortar over the chute during demolition presumably prior to their re-sale. However, the mortar represented was not that used to construct [11] nor necessarily the softer yellower/cream sandy mortar (e.g. Dearn 2006b, 21f) believed to be associated with the construction of the late fifteenth century courtier's palace so it was difficult to say from which part of the palace complex any bricks being cleaned might have come. Above [18] was c. 0.43 m of demolition material more obviously matching that which the demolition of [11] would have generated. In its lower parts it, [13], comprised densely packed sometimes whole bricks and semi-complete (0.27 x 0.16 x 0.015 m) peg tiles with large areas of fine, hard, white to light grey (around 10 YR 7/2) mortar. In several instances half bricks mortared across their break were noted, numbers of the peg tiles also had mortar adhering suggesting their use in bonding courses and cut/moulded bricks were present (cf. Appendix 3). The upper levels of [13],

however, comprised less peg tile, less complete bricks and smaller (to 0.04 m) fragments of the same mortar, though at its surface a three course section of single skin brickwork bonded with a fine, sandy, very pale brown (around 10 YR 7/4) mortar had been dumped intact so the rubble might not all have come from structures of a single build. Bricks from [13] generally matched those in [11], but were more often red (2.5 YR 5/8), a slightly greater range of widths (from 0.115 – 0.12 m) and of thicknesses (from 0.05 to 0.06 m) was noted, and a number were marginally creased or drip glazed.

- The moats had both been filled with two (different) deposits in a way that suggested phases of dumping as demolition and re-landscaping progressed. The outer, [4], had initially been largely filled with [7], a 0.05 – 0.24 m thick dump of 0.02 – 0.05 m rounded pebbles and occasional cbm fragments (to 0.03 m) in a matrix indistinguishable from the natural, which filled and even mounded above it in some areas but left a strip along it unfilled suggesting it had been dumped from both south and north. It was not demolition material as such and, though it could have represented the dumping of material removed from e.g. a courtyard, might well be compared to deposits of pebbles and brickearth found widely to the east in other excavations where they were used to form new surfaces and paths associated with a threshing barn complex built immediately after the eastern part of the palace was demolished. Overlaying [7], and filling the strip of [4] left open to its base, was [3], a highly compacted dump of dense, multi-angularly laying fragments of roughly equal quantities of part bricks (up to 0.16 m) and up to 0.15 m fragments of peg tile together with a few fragments of dressed stone to 0.15 m (see also Appendix 3), rare pieces of chalk (to 0.04 m), some burnt flint and occasional rounded pebbles (to 0.08 m). The bricks were similar to those recorded in [13] if with a further range of colour variations (mainly light red from 10 YR 6/8 to 2.5 YR 6/8) but very little mortar was present except at the base of the deposit where a decayed residue was brown/dark brown (around 7.5 YR 4/4) and similar to the material forming [18]. The deposit did, however, include both glazed floor tile and cut/moulded bricks and a small amount of pottery probably all broadly of sixteenth/seventeenth century date (see Appendix 3).
- This second dump filling moat [4] formed a low linear mound along its line, preserved in the modern topography (Fig. 2), and otherwise only extended a short distance south of the moat and possibly just north of it (?overlying [6] (below)). It clearly derived from the main phase of demolition and may well suggest that space for dumping rubble was now at a premium and or that it was expected that the earlier fill of [4] would settle more than it did.
- The main and basal fill of the larger moat, [10], was [9], a fairly compacted strong brown (7.5 YR 5/6) very clayey silt (brickearth) usually indistinguishable from natural except for the presence of from rare to dense brick and tile fragments. It seemed very likely that its deposition had begun early in the demolition process as the centre of the moat had c. 0.24 m (comprising five to seven dense horizontal ‘layers’) of part peg tiles (to 0.17 m) and some large brick fragments on its base, suggesting especially roof demolition (Pl. 3). However, above this the rest of the deposit, up to 0.64 m thick in all, comprised sterile brickearth with only rare rounded pebbles to 0.03 m and oyster shells and in some areas moderately frequent cbm smears/chips and fragments to 0.03 m, but also with dispersed ‘pockets’ of multiple tile fragments (to 0.21 m) and especially fragments of and part bricks. The brick and especially tile was, however, more consistently present for at least 1.00 m south of [11] (the demolished ‘buttress’ of which it covered), and here there were also moderately frequent lumps (to 0.05 m) of mortar matching that of wall [11] and in [13] and an over 0.20 x 0.10 lump of rounded 0.035 m pebbles, chalk and limestone fragments bonded with it. [9] produced only a few chips of Frechen Bartmann Ware (FREC; imported c. AD 1550 – 1700) and a lead pistol ball (Appendix 3). Whether the dumped natural largely forming it came from e.g. excavations to remove foundations elsewhere on the palace site or not it seems that the moat was as much being infilled as used as a convenient repository for demolition material.
- However, [9]’s surface was left very uneven with very deep pits in places and immediately afterwards these were filled and it overlain by a dense layer of consistent demolition material, [8], typically c. 0.25 m thick, which completed the filling of the moat (except at the south end which [9] had already completely filled), left its area slightly raised, covered the natural where the moat was probably absent south of [11] and continued as a thin intermittent layer across the top of [11], [13] and [15]. It was composed of dense, multi-angularly laying (often including drip glazed) brick fragments with common quarter bricks, fairly frequent half bricks and sometimes three quarter bricks and up to 0.20 m peg tile fragments and occasional oyster shells, both of which were commoner

above the demolished structure. It also included rare chalk and burnt flint (to 0.05 m), though little mortar (that present brown (7.5 YR 5/4) and sandy like that forming [18] or in [3]), and produced a block of worked stone (Appendix 3, 10.1, SF2), cut/moulded bricks and pottery including Cologne Stoneware (KOLS; AD 1500 – 1580), Frechen Bartmann Ware (FREC; imported c. AD 1550 – 1700), Late Medieval/Transitional Sandy Redware (LMSR; AD 1480 – 1600) and Post Medieval Black Gazed ('Metropolitan') Ware (PMBL; Post c. AD 1580) (see further Appendix 3).

- Between the two moats the natural was also covered, and probable tree root voids filled, by a complex of dumps, [6], which were typically c. 0.20 m thick and very variable (with individual barrow loads of material identifiable), but essentially included much the same range of deposits as had filled the moats and consequently no real boundary could be established particularly between [6] and [9]. Some areas comprised little more than redeposited brickearth, others brickearth with frequent brick and especially small (to 0.03 m) tile fragments (including a possible cut/moulded brick; Appendix 3), others material identical to [7] and yet others that material but with the addition of 0.01 – 0.05 m tile fragments and sometimes in a darker (closer to brown/dark brown (10 YR 4/3)) matrix.
- On the completion of all the dumping there had then evidently been an attempt to re-landscape the area by depositing [2], another layer of brownish yellow (10 YR 6/6) brickearth with only occasional cbm fragments to mainly 0.05 m (but including a piece of glazed floor tile; Appendix 3), across the whole of the southern 10.70 m of the trench to cover [3], [6] and the southern end of [8]. It was of very variable thickness (from 0.03 m or less to 0.10 m) but still failed to disguise the low linear mound left by [3], or the impression of a linear hollow which had been created between [3] and [8], and had failed to completely cover [3] and [6] at all points. It produced only a few chips of Frechen Bartmann Ware (FREC; imported c. AD 1550 – 1700).
- It was overlain, or [8] and intermittently [11], [13] and [15] were where [2] was absent, by [1], a typically only 0.06 – 0.08 m, loose, brown/dark brown (7.5 YR 4/2) very clayey silt loam topsoil with patches of moderately frequent cbm fragments (to 0.07 m), which gave a modern (grassed) ground surface at c. + 33.086 – 33.347 m OD.

DISCUSSION

- Whilst it is clear that what is represented by [11] is the facade wall of a range which formed part of the southern side of Elsyng palace and which was fronted by one and more probably two ornamental moats, the outstanding questions about it are to which part of the palace it belonged and when it was constructed. Our current understanding of the palace is that, whatever earlier structures on the site it had already replaced (or even incorporated), it began as a later fifteenth century establishment to which Henry VIII added. Previous work east of the Lime tree avenue appears likely to have principally encountered elements of this later fifteenth century courtier's palace which Henry may well have refurbished as a service court and the assumption is that his new build lay mainly to the west of this. However, much still rests on differentiating the two periods' structures on the basis of the use of a yellowish/cream sandy mortar which seems to be widespread in the eastern part of the palace and that of a harder white or off white mortar which is presumed, in part from the 1960s work, to be characteristic of the Tudor extension of the palace.
- On the basis of this one would expect the palace range encountered in 2014 to belong to the Tudor expansion of the palace c. 1539. Its scale might well be consistent with a relatively prestigious section of the palace and it could have been residential, but, without excavation within the range which the wall examined fronted, further identification of it would be speculative. It does though seem to follow that both moats should be similarly dated as they would have no purpose prior to the Tudor extension of the palace (unless just possibly here it itself took its alignment from the moats or some other pre-existing feature, which, however, seems unlikely). The implication is that the setting of the facade here was also intended to be at least reasonably impressive.
- Projecting the presumed facade wall robber trenches seen in 2010 – 13 east of the avenue (and geophysical evidence for them) and the facade wall seen in 2014, it will be seen from Fig. 6 that the implication is that the interface between the later fifteenth century probably free standing (?unmoated) southern curtain wall of the palace and the mid sixteenth century southern range of the palace encountered in the present work probably lies under the western of the double avenue of Lime trees now crossing the site, so not far east of the 2014 trench. Indeed, as geophysical evidence west of

the Lime tree avenue now seems to be a more reliable, at least approximate, guide to the outline of the palace than further east, it is possible, drawing on it as well as excavational, LiDAR and aerial photographic data, to begin in outline to map something of the plan of the eastern half and southern part of the palace and to at least hypothesize about the general functions of its different elements.¹

- Importantly the plan of the south western area of the palace still relies in part on geophysical data which needs excavational confirmation and whose mapping against the OS grid is known to be flawed. But the present work suggests, even if these problems in the mapping of geophysical data against the OS grid leaves room for doubt, that what Bartlett (1998, Plan 7; see Fig. 1 herein) mapped as a coincident resistivity and magnetometry anomaly is most likely a linear band of rubble filling the inner moat ([8] in the present work), while a parallel band of magnetic disturbance ('e' on Bartlett op cit) may represent the actual facade wall ([11]) and part of the range it fronted. The rubble and stony material filling the outer moat does not seem to be represented by geophysical anomalies though, only by surface topography, so it must remain less certain whether the interpretation of it advanced is correct, unless again the mapping of the geophysical data is at fault. However, the plan of this part of the palace suggested by geophysical evidence (below) might well lend itself to the deployment of a double moat where the facade of the western part of the palace lay further north than elsewhere.
- On the above assumptions the facade wall and inner moat would appear from the geophysical evidence to continue for another 44 m to the north west of the 2014 trench; and the facade wall for c. 80 m (presumably still flanked by the inner moat, though this is less clear from the data). They would then appear likely to turn south west for 40 m and then resume their north westerly course for c. 80 if not 100 m before presumably turning again to run north east. That the outer moat ran parallel to them just for the first c. 80 m as shown on Fig. 6 is more of an assumption, but seems a reasonable hypothesisation. What might be represented therefore may be a c. 100 x 80 m rectangular court on the west (the inner court holding the Royal apartments) accessed from the much smaller, square outer (eastern) court via a narrower 80 m long complex including on its north the structures recorded in the 1960s as well as, on its south, the range encountered in 2014. Much further work would be required to confirm this and especially to establish the internal plan of the area and how the 1960s findings related to it. However, there may be some reason to believe that what was encountered in the 1960s could be the western moated edge of the courtier's palace with subsequent Tudor alterations and if so the courtier's palace might have comprised the eastern square court and structures running off broadly to its north west.
- In terms of the architectural elaboration of the area of the palace actually encountered in the present work, clearly it cannot be assumed that all of the demolition material found necessarily came from the range fronted by wall [11] and even if it did mortar variations suggest at least that different areas/levels could have been constructed separately from each other. However, it seems reasonable to assume that much of it had not travelled far and so to use it, along with the *in situ* structure, to suggest at least something about the buildings which existed in this general area of the palace (be they all Tudor or earlier in genesis). There can be little doubt that they were principally brick built, at least two (or three) storeys high in the case of the range encountered and tile roofed. Sufficient drip glazed brick was also present to hypothesize that they featured some daiper work and it is possible that some drip glazed tiles (cf. Appendix 3) were used decoratively in the roof. The evidence for cut/moulded brick (Appendix 3) suggests, as well as the bonding of angled joints in the walls, at least two projecting plinths and possibly something such as a pointed string course or decorative chimneys, though as yet anyway there is no evidence for e.g. terracotta embellishments.
- That the fenestration of at least some element of the buildings in the vicinity was in part anyway brick framed is strongly suggested by one moulded brick and small quantities of discoloured window glass did indeed come from the demolition deposits with a possible lead glazing fitting unstratified (Appendix 3, 3.1). As both glass and lead will have been priorities for collection for reuse/resale it is probably not surprising that only small quantities were recovered and glazed windows should be

¹ Note that Fig. 6 is not a detailed mapping of all available data, but rather a hypothesized interpretation of what currently seem to be the most pertinent aspects of the evidence provided by a variety of remote sensing techniques as well as excavation for the broad outline of the complex. Thus, many details such as the width of the easternmost range, length of the gatehouse and moat arrangements on the west are still speculative to some degree or other; numbers of small features and only partially recorded wall sections are not shown; and it remains likely both that elements shown represent palimpsests of different phases and that further structures could exist south of those shown and clearly must north of those shown.

assumed. A little slate was present too and could well have derived from internal fittings as much as roofing use, especially if it belonged to the original Tudor build.

- A small number of pieces of worked stone were present (Appendix 3) and probably suggest external and internal use of a variety of building stones, though as ever not all necessarily need have belonged to the Tudor build. Probably again building stone would have been targeted for reuse so the presence of only a few small fragments is unlikely to be representative of what was originally present. A slightly larger range of glazed flooring brick/tile (Appendix 3), doubtless as ever only the fragments not worth reselling, was, however, recovered and two joining fragments may even have been *in situ* so that at least some floors were probably of broadly green and or brown and or black glazed tiles. It might also be noted that, although not a large group, the pottery from the site (Appendix 3, Section 5) largely lacks fabrics and forms typical of food preparation areas and is rather dominated by stonewares used in serving liquids, including relatively prestigious decorated Cologne vessels which were often silver mounted long after their original production. This may strengthen the assumption that this was a residential area not a service one.
- The demolition of the structure and infilling of the moats is not more closely dated than post c. 1580 by the small group of pottery from it. However, whilst there are documentary references to phases of alterations including demolition prior to c. 1657, none seem likely to relate to this part of the palace or to what was evidently a complete demolition and relandscaping, so it seems fairly safe to attribute all the activity in 2014 Phase 2 to Nicholas Rainton the younger c. 1657. The nature and quantity of the demolition material encountered, even admitting that only a small area was sampled, strongly suggests that this was a controlled demolition with the salvaging and removal of much of the building materials. Thus, only a handful of complete bricks were present, there was possible evidence for the cleaning of mortar off of them and the amount of demolition material encountered was relatively small. Certainly some of it may have been dumped elsewhere and previous work has suggested that considerable dumps exist north of the palace site, but that the moats were in fact largely filled with dumps that did not have demolition material as their main components probably argues that, at least at the beginning of the process, it was not anticipated that they would be required as repositories for it.
- There is no indication that this section of the palace site was subsequently used for any activity. It would have lain some distance south west of the threshing barn complex constructed by Rainton after palace demolition and there was no evidence here for the extensive pebbled surfaces associated with that building nor for any attempt to bring the area into cultivation. The palace structure had indeed been left standing to a level where that would have been impracticable.

CONSERVATION AND RESEARCH IMPLICATIONS

- The area of the palace structure sampled here clearly survives to floor level and represents a significant archaeological resource, probably providing the potential for the detailed examination of an entire palace range and of its setting behind ornamental moats. The associated demolition material may well also be a significant resource for the understanding of at least aspects of its architecture. The area sampled is not under, or likely in the foreseeable future to come under, conservational pressure except in so far as tree root disturbance is concerned, though it is extremely shallowly buried and any ground disturbance whatsoever north of the position of wall [11] would inevitably result in damage to structural remains so should be absolutely prevented. Fortunately the southern side of the range encountered lies south of a belt of trees and tree root damage to the structure observed in the present work was from only one isolated tree. However, if it continues that far, it is likely that its conservational condition is significantly poorer to the north where dense tree cover exists and it would be desirable to minimise any spread of these trees and at least ensure that their density does not increase if not decrease it.
- In research terms the results of the work represent a major step forward in the medium term aim of establishing the footprint of the palace complex. They suggest that not only is its perimeter west of the Lime tree avenue well preserved and easily traceable, but that geophysical data, unlike further east, can provide a reasonably reliable guide to its general line if interpreted in the light of the 2014 findings and verified by sample excavation. The two immediate research priorities which follow from this are the excavational verification of the geophysical evidence for the line of the facade wall further west; and the more detailed exploration of a section of the building range behind it to establish

its size, plan, function and if possible to confirm its construction date. A third, less prioritised, aim might be to further characterise the relationship of at least the inner moat to the facade wall and evaluate further the resource represented by demolition rubble dumped within it.

- Whilst some of these aims might be achieved by excavation immediately north of the 2014 trench, all might well be achieved by open area excavation further west and the point where the maximum information might be recovered for the minimum archaeological intervention would probably be 80 m west of the 2014 trench where the facade wall appears to turn south west.

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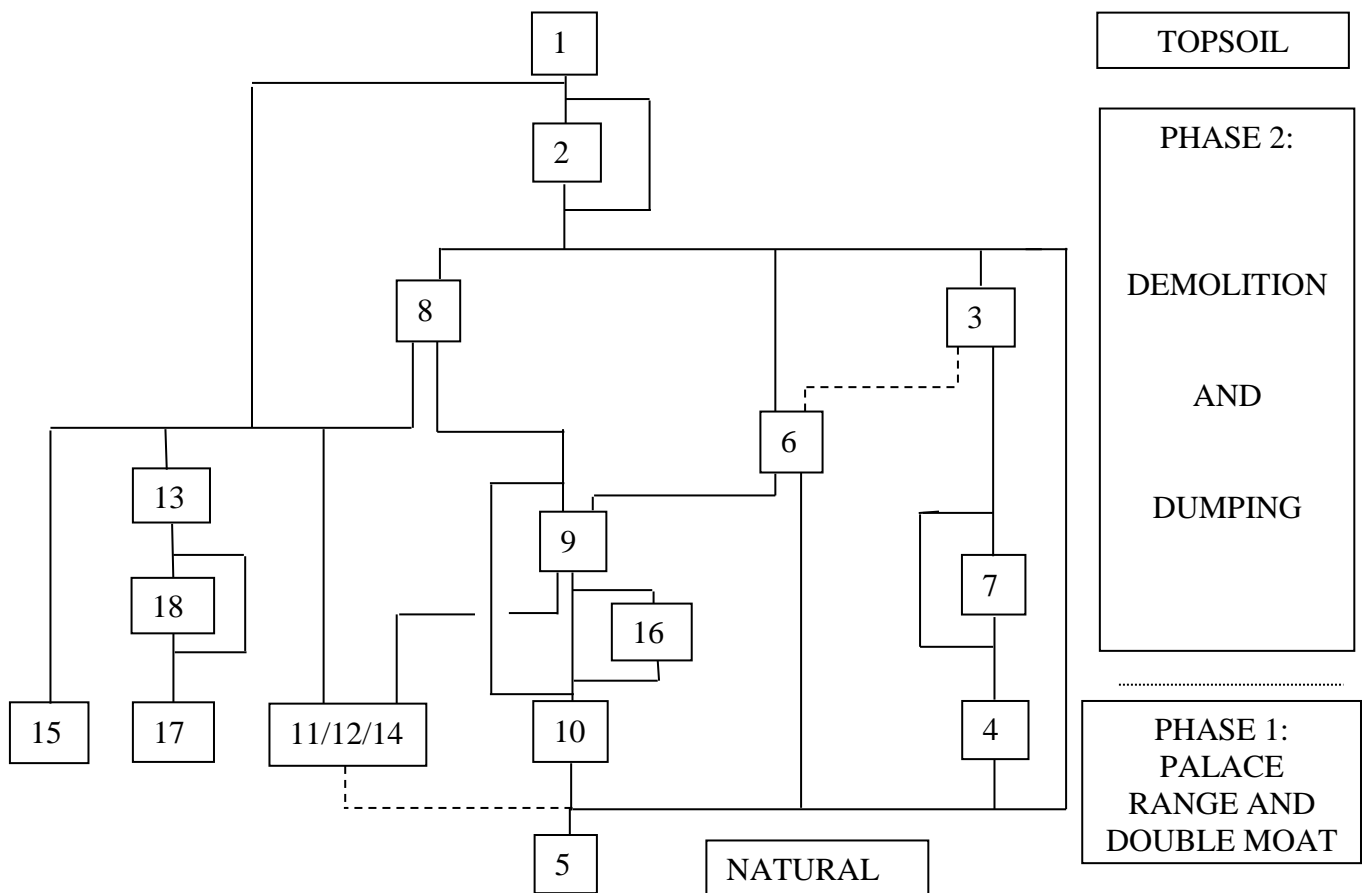
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APPENDIX 1 ARCHIVE NOTE

- The archive for FXI14 is held at the London Borough of Enfield Museums Service/EAS archive and includes:
- project design; ancient monument consent letter of grant; inked copies of all plans and sections; context register and original context sheets; section and plan registers; photographic image register; samples register; colour print archive; digital image archive; site diary; levels register; finds report; this report; and the retained finds and samples.

APPENDIX 2 CONTEXT INDEX AND SITE MATRIX

Context	Type	Description
1	Layer	Topsoil
2	Layer	Dump
3	Fill	Demolition Material
4	Cut	Outer Moat
5	Layer	Natural
6	Layer	Dump
7	Fill	To 4
8	Fill	Demolition Material
9	Fill	To 10
10	Cut	Inner Moat
11/12/14	Feature	Wall
13	Fill	Demolition Material
15	Feature	Mortar Spread/Floor
16	'Feature'	?Decayed Wood
17	Feature	?Garderobe Chute
18	Fill	Demolition Material



APPENDIX 3 FINDS SUMMARY

- The following summarises the main points of a fuller report available in the site archive. * denotes an item illustrated on Figs 7 - 8 or in the plates. Contexts appear at the end of catalogue entries thus: [35] with any small find number.

1 Coins and Tokens

1.1 Hammered Silver Elizabeth I (AD 1561 – 82) Sixpence (fragment of)

Obv. [Bust I.] [ELIZABETH D G ANG FR ET H]I REGINA

Rev. Long cross dividing legend over crowned arms [POSVI DEV] ADIVTOR[EM MEV]

[U/S]

1.2 Hammered Silver ?James I and VI (?AD 1603 – 4) Sixpence

Obv. Illegible [JACOBVS D G]ANG SCO F[RAN ET HIBER REX]

Rev. Crowned ?thistle ?? [TVEATVR UNITA DEVS]

Very heavily clipped; bent; heavily abraded. [U/S]

*1.3 Lead token (Di. 2.16; Th. 0.18 cm). Plain back, face with central spot and radiating lines.

Seventeenth/eighteenth century. [U/S]

1.4 Halfpenny, George V, 1918. [1]

2 Copper Alloy Objects

*2.1 ?Grill or screen fragment (L. 2.83; W. 1.03; Th. 0.38 cm). Very dark green patina. Weight suggesting a heavily leaded alloy. Bar, ending in projecting spiral tendril framed by narrower bar and with radiating grooves. The design, closely similar on both sides, suggests an open worked (e.g. window) grill or a free standing screen and a sixteenth/seventeenth century date is possible. [U/S]

*2.4 Thimble fragment (W. 1.93; surviving Ht. 2.26; Th. 0.041 cm). Crushed. Two basal grooves and elongated hand punched indentations. Probably domed (closed) form. Sheet, stamped construction. Not closely dateable. [13] SF 3

*2.3 (?Shoe) buckle (L. 3.39; Max. W. 2.88; Th. 0.22 cm). Double D form with central axis bar and grooved expansions at ends of it and larger ones at the ends of the buckle. Flat back. Much surface loss but perhaps white metal plated. Seventeenth/eighteenth century. [U/S]

*2.4 Mount fragment (3.48 x 2.33; Th. 0.28; shank L. 0.78 cm). From a circular mount with at least one projecting lobe. Frame of wreath of alternating paired leaves and paired dots enclosing possible garter band crossing the frame to form the lobe. Rectangular sectioned, tapering shank. Earlier post Medieval. [U/S]

*2.5 ?Horse harness decoration. Shield (1.10 x 1.07 cm) with incised marginal groove and gothic 'b'. Central tubular shank (L. 0.57; Di. 0.60 cm). ?Nineteenth century. [U/S]

2.6 Button (Di. 1.73; Th. 4.7 cm). Crushed. Crowned arms design. British Army general service other ranks "King's pattern" 12 mm button, in use 1902 – 1943 (ID Neil Pinchbeck). [8] intrusive from [1]

2.7 Button (Di. 1.8 cm). Crushed. Separately applied shank for ?loop and ring of impressed dots on face. Date uncertain. [1]

3 Lead (or Lead Alloy) Objects

*3.1 ?Window lead tie (L. 6.60; Th. 0.31 cm). Cast triangular sectioned bar, expanding and broken at one end with a pair of small decorative pellets part way along sides. Distorted. Window lead ties were used to attach the joins of two plus comes to iron window bars (cf. Egan (2005, 357) Nos 389 – 421) and are usually D-sectioned, but triangular sectioned examples occur (e.g. op cit No. 420) and the same Nonesuch find shows that some were formed into decorative spirals where they met so pre-cast decoration need not question the identification. [U/S]

*3.2 ?Ingot (strake) fragment (L. 4.12; W. 2.73; Th. 0.80 cm). Cruciform. Triangular section, at least one arm probably cut, two others cut or broken and fourth ?drawn out and spiralled to one side. Rough tool scars to back. Grid form ingots (strakes) are better known in pewter but there are probable examples in lead (which the present item is more likely to be) stamped by the Plumbers' Company (cf. Egan (2005, 346) No. 103). [U/S]

*3.3 Cloth seal (Di. 1.72; Th. 0.42 cm)

Obv. [?C]RES in rectangular frame with two overlapping arcs below and probably above.

Rev. Beaded margin and ring of strokes or lettering partly obscured by central rectangular tab. [U/S]

3.4 Pistol ball (Di. 1.14 cm). [9]

3.5 Musket ball (Di. 1.56 cm). [U/S]

3.6 – 3.8 Splashes [2] and [U/S]

4 Iron Objects

Most finds were heavily corroded and concreted nails. One (L. 4.11 cm) came from [18], two (longest 3.36 cm) from [13], at least six (longest 5.17 cm) and two amorphous items from [9], two (longest 6.68 cm) from [8] and five (longest 6.27 cm) from [3]. The few assessable appeared to have square sectioned shanks and rectangular heads.

There was also:

4.1 ?Horseshoe fragment (11.28 x 5.24 cm) Very heavily corroded and concreted. [3]

4.2 Bar (L. 13.8 cm; Di. c. 0.95 cm). Bent at one end. Very heavily corroded and concreted. Possibly a structural element such as a window bar. [3]

5 Pottery

Fifty sherds over 1 x 1 cm (and a number of chips) were recovered. No Medieval material was present and there was only one modern sherd so, although a small group, the pottery probably almost exclusively represents vessels in use c. 1657 or having been in use in the palace between c. 1539 and then. Its composition is therefore of some interest and it shows a very strong preponderance of vessels, especially in German stonewares, used for liquid serving and consumption with perhaps a few large ?liquid storage vessels. By contrast fabrics typical of Early Modern (kitchen) storage and food preparation vessels were rare.

Thus, there was only a single dark green internally glazed tripod pipkin probably in **London Area Early Post Medieval Red Earthenware** (PMRE; AD 1480 – 1600) or **London Area Post Medieval Red Earthenware** (PMR; c. 1580 - 1900) from [8] and a single small sherd of **Surrey/Hampshire Border Ware** (BORDY; c. 1550 – 1700), though two more sherds of **London Area Early Post Medieval Red Earthenware** or similar fabrics from [3] and [8] included a possible dish with internal olive yellow glaze with red brown patches.

Five sherds of **Late Medieval/Transitional Sandy Redware** (LMSR; AD 1480 – 1600) from [3] and [8] included body sherds of a large globular vessel and of a very large vessel with matt yellow glaze while the only sherd of (inspecifically identified) **Surrey Whiteware** (from [3]) may have been from a jug neck. Several large sherds of **Post Medieval Black Gazed ('Metropolitan') Ware** (PMBL; Post c. 1580) represented at least one mug, but the corpus was dominated by 36 sherds and further chips of stonewares including a semi-complete **Frechen Bartmann Ware** (FREC; imported c. AD 1550 – 1700) jug base from [8] and the following:

Cologne Stoneware (KOLS; AD 1500 – 1580)

5.1 (*see report cover) Body (4 and 2 chips with joins) and rim (chip), round bodied drinking vessel (krug). Grey f., pitted grey glaze int. and mid to dark brown freckled glaze ext. Slight rim groove and cordon at ?neck. Body decorated with running scroll inhabited with oak leaves and paired acorns on stems; prominent stamp edges around leaves and acorn pairs. Complete examples with similar decoration include two in the V&A (112-1908, dated c. 1550; and especially C.9-2002, dated c.1540), but a very close match is provided by one in the British Museum (AF.3141) which was later given Dutch silver mounts dated 1597 and another close parallel with silver mounts was included by George Flegel in his 'Still Life with Stag Beetle' (Wallraf-Richartz-Museum and Fondation Corboud, Cologne) dated 1635. Thus, although the vessel was probably made c. 1520 – 1550, the fashion for collecting and silver mounting such vessels means that there may have been survivors in use into the mid if not later seventeenth century. [8] SF 1

5.2 (*see Pl. 4) Body. Grey f., matt cream int. s. and light brown ext. glaze. Band of decoration with alternating triple diagonal lines and panels of dots. Probably from a similar vessel to the last. [8]

Frechen Bartmann Ware (FREC; imported c. AD 1550 – 1700)

*5.3 Rim/handle, handled bottle. Brown int. and grey mottled brown ext. glaze. [1]/[2]

*5.4 Rim, strap handled jug. Grey f., unglazed buff int. s., brown freckled ext. glaze. Groove above flange. [8]

6 Glass

Most glass comprised small fragments or just chips of window glass. Commonest were fragments of now matt black glass with gold iridescence, often beginning to devitrify. Four sherds/chips came from [8], one from [13] and five (largest 2.70 x 3.57 cm) from [18]. [9] produced only five chips of probably greenish ?window glass and a surface spall and [8] a very bubbly ?blue green iridescent sherd. There was only one item of vessel glass:

*6.1 Base (3, join). ?Greenish glass now black with iridescent silvery surfaces. From a fairly small vessel with a kicked base. Specific identification is not possible, but a plain cylindrical or squat beaker is a strong possibility (or less likely a cylindrical jar). A seventeenth century date may be most likely but cannot be certain. [9]

7 Clay Tobacco Pipes

Three stem fragments came from [2] and there was a bowl chip from [8]. There were two [U/S] part bowls, an Atkinson and Oswald (1969) type 18 (c. 1660 – 80) and an op cit type 25 which compared best to Oswald (1975) type 12 (c. 1730 – 80).

8 Struck Lithics

There were six, mainly broken, flakes or struck lumps from [3] or [U/S], a possible trapezoidal microlith from [9], a crude ?chopper (made on a large, thick flake of poor quality grey/black flint retaining cortex on the dorsal surface, trimmed to a square and crudely dorsally flaked on one edge) also came from [9] and there was:

*8.1 Scraper. Made on a fairly thick flake of black flint, crudely trimmed and with heavy, fairly crude dorsal retouch to one straight medial edge. [3]

9 Industrial Residues

9.1 Slag/clinker. Light, vesicular, grey brown. 5.00 x 4.00 x 3.00 cm. [8]

10 Worked Stone by Ian K. Jones

*10.1 Irregular lump of fine grained white Limestone with no worked surfaces (Max. L. 22.00; Max. W. 11.00; Max. Th. 6.00 cm). Presumably a remnant from a much larger block. At least three graffiti-like parallel/crossing grooves which seem to have been made by a convex headed masonry chisel. They look a little too precise to be demolition marks and could be the result of someone practising their skills. [8] SF2

10. 2 – 10.4 Three worked but very heavily abraded fragments of Greensand which may all be from the same block (largest: Max. L. 12.20; Max. W. 9.60; Max. Th. 6.20 cm). The two smaller pieces have only a single irregular edged worked surface. The larger in section has three worked surfaces surviving; the assumed vertical back and horizontal base, and the sloping upper surface. The upper surface slopes down from the assumed back of the block to a broken edge and is heavily abraded suggesting it was sited on the exterior of the building and suffered from water erosion. It could have formed part of a stone plinth course, a dripstone from over a door or window or part of a window sill. [3]

10.5 – 10.6 Two worked but very heavily abraded fragments of Greensand from the same block (largest: Max. L. (along face) 6.30; Ht. (of face) 3.20; Depth 6.20 cm). If from a similar type of block to the previous, the worked surfaces may be part of the back; although very heavily abraded it is possible that a curved surface on the larger fragment is part of the original upper surface making it part of another plinth, drip or sill block. [8]

10.7 A heavily abraded piece of fine white, probably Oolitic, Limestone (Max. L. 11.80; Max. W. 9.70; Depth 4.50 cm) One surface appears to be worked, but it is too abraded to say more than that it probably came from a much larger block. [1]

11 CBM and Other Building Materials

Peg tile:

Most peg tile was of standard form and appearance, however a small number of fragments had reduced not oxidised surfaces and generally with one face more or less vitrified/drip glazed (examples from [3], [8] and [9]). One peg tile fragment from [3] had a 1.65 mm deep, 4.02 mm wide groove deliberately made 1.06 cm from and parallel to a (probably side) edge, but whether it had any functional role may be doubted.

Ridge tile:

Four fragments (2 joining) from [8] were from ridge tiles (longest 12.55; widest 6.83 cm) but no edges were preserved.

Flooring tile/brick:

Ten fragments were recovered. Three represented examples with no trace at least remaining of glaze. Of them one edge fragment (7.45 x 7.69 cm) from [8] in a fairly sandy fabric with rare rounded smoky quartz to 1.60 mm was only 2.30 cm thick. The two others, an edge fragment from [9] and a corner from [8] (largest 11.82 x 6.66 cm), were in a rather finer, sandy fabric, 3.42 – 3.47 cm thick with smooth, in

one case little worn, upper surfaces and indications of knife trimmed edges including in one case a chamfer to the lower part of the side.

Four or five different types of tiles/bricks retaining glaze were present. [2] produced a possible corner fragment (2.85 x 3.43; surviving Th. 2.63 cm) in a sandy, fairly soft orange fabric with fairly well sorted, moderately frequent angular grey quartz to 4.00 mm and an upper surface with black glaze. Three glazed fragments from [3] included a corner (9.61 x 5.82 cm) and another edge fragment from 3.66 cm thick examples in a bright orange, medium fine, sandy fabric with a dark green glaze, on the corner fragment becoming patchier mottled green/brown. The third was an edge fragment (8.65 x 7.69 cm) in a fairly granular sandy fabric from a 3.18 cm thick example with a good clear to brown glaze with black spots over reduced surfaces, though the glaze was restricted to the upper part of the side and only part of the upper surface. [8] also produced an edge fragment (7.57 x 4.22 cm) of a maximum 3.59 cm thick (but clearly tapering) example in a fabric resembling the finer of those used for tiles/bricks not retaining glaze, but in this instance with a reduced core and traces of now greyish glaze over a reddish brown fired (or conceivably very thinly slipped) surface.

The final two fragments joined to give a 9.52 x 5.56 cm corner from a 3.14 cm thick tile/brick found, possibly *in situ*, on mortar surface [15]. In a granular, sandy fabric with poorly sorted flint and rounded quartz to 4.00 mm, probably calcareous inclusions to 3.80 mm and sometimes stones to at least 9.20 mm, its back retained some clear to brown glaze (with spots on the side face) and the upper surface was probably sufficiently worn to have removed any glaze.

Cut and Moulded Brick (MJD with Ian K. Jones):

In addition to the *in situ* Queen Closers noted in the description of [11], ten certainly cut or moulded bricks and two further possible examples were recovered from [3], [6] and [13] and appeared to represent at least six different categories of material as follows.

King Closers

*a) Complete (L. 17; W. 11.80; Th. 5.80 – 6.10 cm). One end cut (slight diagonal tool marks) at a slight angle. Corner of opposite end cut (slightly clearer diagonal tool marks and traces of hard white mortar). Possible diagonal tool (?keying) marks to one face. [13]

*b) Incomplete (L. 7.60; W. 11.50; Th. 6.15 cm) One complete end with cut corner (no certain tool marks). [3]

c) Incomplete (L. 12.81; W. 9.69; Th. 5.93 cm). Part of cut corner (clear vertical tool marks) and adjacent side. [13]

d) Incomplete (L. 9.67; W. 7.00; Th. 5.75 cm). Part of cut corner (clear diagonal tool marks) and adjacent side. [3]

Plinth Bricks

*e) Incomplete (L. 12.30; W. 7.97; Th. 2.65 - 4.72 cm). Corner, including well preserved leading edge and uncut end. One (75°) sloping face (diagonal tool marks). [3]

*f) Incomplete (L. 13.84; W. 11.82; Th. 6.24 cm). One sloping (40°) cut face (curved tool marks). [3]

King Closer Plinth Bricks

*g) Incomplete (L. 17.50; W. 12.22; Th. 2.64 – 5.67 cm). One face sloping to a vertical edge and one corner cut at 50° (retaining faint diagonal tool marks). Unsloped face with broad ‘stepped’ and narrow angled (?keying) tool marks. [3]

h) As last (L. 11.00; W. 11.30; Th. 3.80 – 5.60 cm), but vertical edge to slope lost. [3]

?Pointed Brick

*i) Incomplete (L. 6.17; W. 12.25; Th. 6.10 cm). Two adjacent (45°) cut faces (deep diagonal tool marks), adjacent to original ?edge. (Cf. Richardson (2010) Fig. 8 Plan and Section 3a).[3]

Window Surround Brick

*j) Incomplete (L. 12.25; W. 6.15; Th. 5.76 cm). Moulded. Three quarter round moulding fronting asymmetrical glazing groove backed by flat topped block. [3]

Uncertain

*k) Incomplete (L. 13.45; W. 10.48; Th. 7.31 cm). Faces curved (one poorly preserved; one original and moulded with marginal crease) and sides sloping (one original and moulded, one rough). It is possible that this is just a badly misfired distorted brick, but it is much thicker than any other uncut/moulded brick recorded and it might have been moulded for a projecting curved moulding. [6]

l) Incomplete (L. 9.92; W. 6.35; Th. 5.86 cm). Corner with parts of three flat surfaces and what appears to be a curved one (as a *Bull-Nose Brick*) but too little preserved to be sure this is not just a fortuitous

concoidal fracture which may be more likely as only about half of the width of a normal brick is represented. [3]

Discussion

These examples clearly indicate both the use of pre-moulded and cut bricks in some structure(s) on the site. Whilst the King Closers only indicate wall(s) turning at angle(s) (as indeed wall [11] did, though they need not necessarily come from this point), the Plinth Bricks and King Closer Plinth Bricks show that material was present from at least two projecting plinths (as two different angles of cutting, one leaving a vertical edge at its end, and two different thicknesses of bricks, are apparent). At least one of these plinths also evidently turned a corner. Whilst most of the bricks are cut, one, g), does not retain tool marks on the sloping face and could therefore alternatively have been moulded. Rough tool marks on the, presumably, lower surface of some suggest keying for mortar or the trimming of bricks to keep a course even while a) probably shows the cutting down of a longer brick (intentionally or not at a slight angle) to fit. The ?Pointed Brick is not complete enough to be sure, but may indicate a pointed string course or similar or use in a chimney. The Window Surround Brick might come from the side or base of a glazed window and has clearly been pre-moulded; whilst brick built houses of any status often had stone framed windows by the later fifteenth century so that this brick could have come from a pre Tudor structure on the site it would be premature to assume this.

Slate:

A little grey slate also came from [2], [8], and [13]. The largest piece was a single find from [2] and 6.47 x 6.26 cm. Its thickness (up to 0.79 cm) may suggest that it was used internally rather than in roofing. Three fragments from [8] were up to 3.70 x 3.10 x 0.38 cm. Two from [13] were up to 5.80 x 4.90 x 0.37 cm.

12 The Animal Bones and Paw Print by Neil Pinchbeck

Twenty bones and dental or bone fragments were recovered from four contexts, [3], [7], [9] and particularly [8]. Fifteen items were bovine (domestic cattle: *Bos taurus*), four were ovicaprid (domestic sheep or goats: *Ovis aeries/Capra hircus*) and a single rabbit (*Oryctolagus cuniculus*) bone came from [8]. Generally, the state of preservation was poor and the group is too small for further comment.

However, there was also one fragment of peg tile from [2] which had a paw print. Although the print is incomplete, the toe pads are preceded by the imprint of non-retractile claws, indicating that this is a canine print. The print measures 45 mm across and is of a size compatible with either a small dog (*Canis familiaris*) or fox (*Vulpes vulpes*). However, the spread of the toes is much more consistent with those of a dog.

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OASIS ID: enfielda1-187289

Project details

Project name	Elsyng Palace
Short description of the project	A section across the southern facade of the Tudor expansion of the palace located the southern wall including a buttressed expansion accommodating a garderobe chute and a double moat. Study of demolition rubble including cut and moulded brick and glazed floor tile allowed deductions to be made about the nature of the range which the facade wall fronted.
Project dates	Start: 15-07-2014 End: 20-07-2014
Previous/future work	Yes / Yes
Any associated project reference codes	FX14 - Sitecode
Type of project	Research project
Site status	Scheduled Monument (SM)
Current Land use	Other 14 - Recreational usage
Monument type	PALACE Post Medieval
Significant Finds	BUILDING MATERIALS Post Medieval
Investigation type	"Open-area excavation"
Prompt	Research

Project location

Country	England
Site location	GREATER LONDON ENFIELD ENFIELD Elsyng Palace
Postcode	EN2 9HA
Study area	24.35 Square metres
Site coordinates	TQ 3379 9685 51.6540142558 -0.0657471319195 51 39 14 N 000 03 56 W Point
Height OD / Depth	Min: 33.00m Max: 33.00m

Project creators

Name of Organisation	Enfield archaeological Society
Project brief originator	Enfield Archaeological Society
Project design originator	Enfield Archaeological Society
Project director/manager	Dr. Martin J. Deame
Project supervisor	Dr. Martin J. Deame
Type of sponsor/funding body	London Borough of Enfield

Project archives

Physical Archive recipient	EAS / Enfield Museums Service Archive
Physical Archive ID	FX14
Physical Contents	"Animal Bones", "Ceramics", "Glass", "Metal", "Worked stone/lithics"
Digital Archive recipient	EAS / Enfield Museums Service Archive
Digital Archive ID	FX14
Digital Contents	"Animal Bones", "Ceramics", "Glass", "Metal", "Stratigraphic", "Worked stone/lithics"
Digital Media available	"Images raster / digital photography", "Text"
Paper Archive recipient	EAS / Enfield Museums service Archive
Paper Archive ID	FX14
Paper Contents	"Animal Bones", "Ceramics", "Glass", "Metal", "Stratigraphic", "Worked stone/lithics"
Paper Media available	"Context sheet", "Correspondence", "Diary", "Matrices", "Photograph", "Plan", "Report", "Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	A Section Across the Southern Perimeter of Elsyng Palace, Forty Hall, Enfield, July 2014
Author(s)/Editor(s)	Deame, M. J.
Date	2014
Issuer or publisher	Enfield Archaeological Society
Place of issue or publication	Enfield
Description	Loose Bound A4/Digital

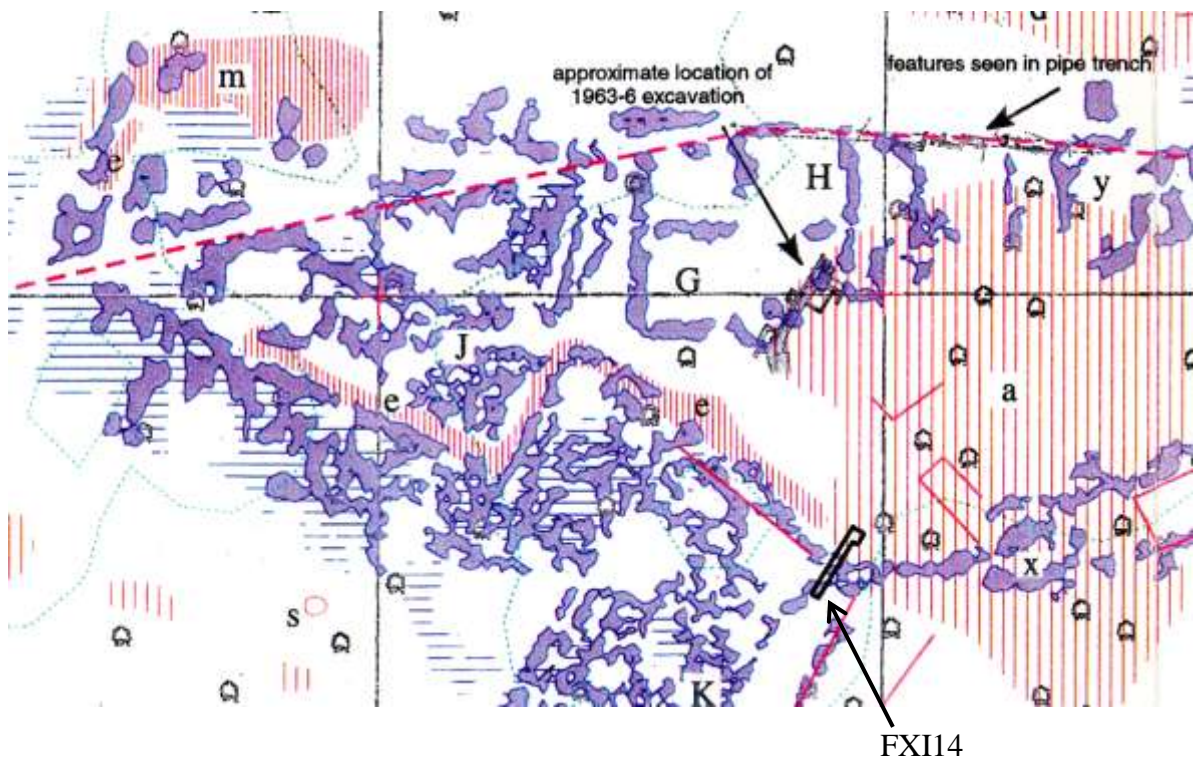


Fig. 1: Bartlett (1989) Plan 7 in Relation to FXI14 Trench (1:1500)
 (N.B. the 1963 – 6 Excavations are Misplaced by Bartlett; see Fig. 6 for the Correct Location)

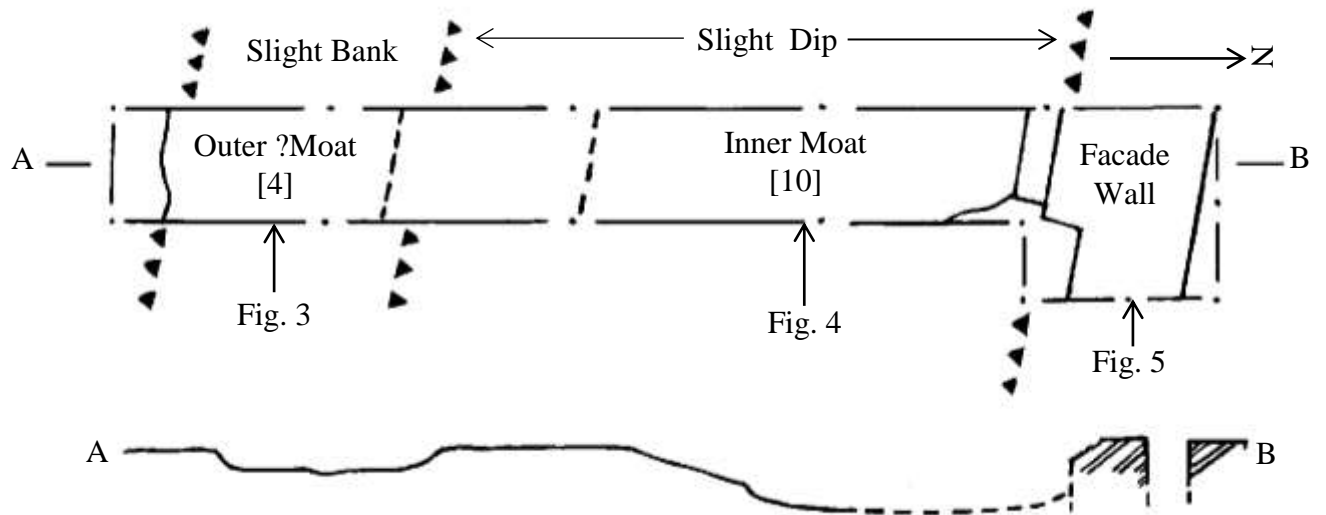


Fig. 2: FXI14 Main Features, Surface Topography and Overall Section (1:100)

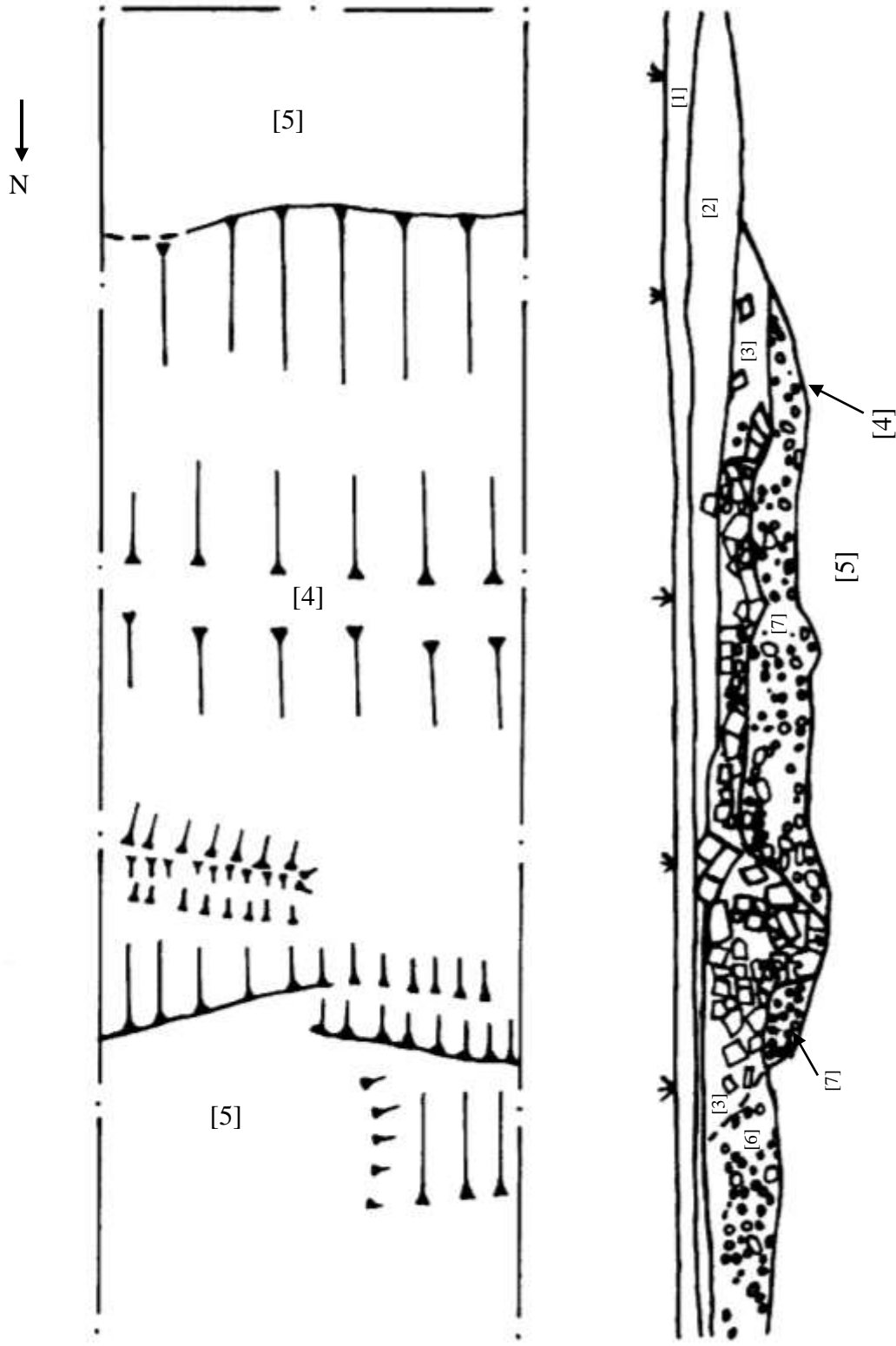


Fig. 3: Outer ?Moat [4] (1:20)

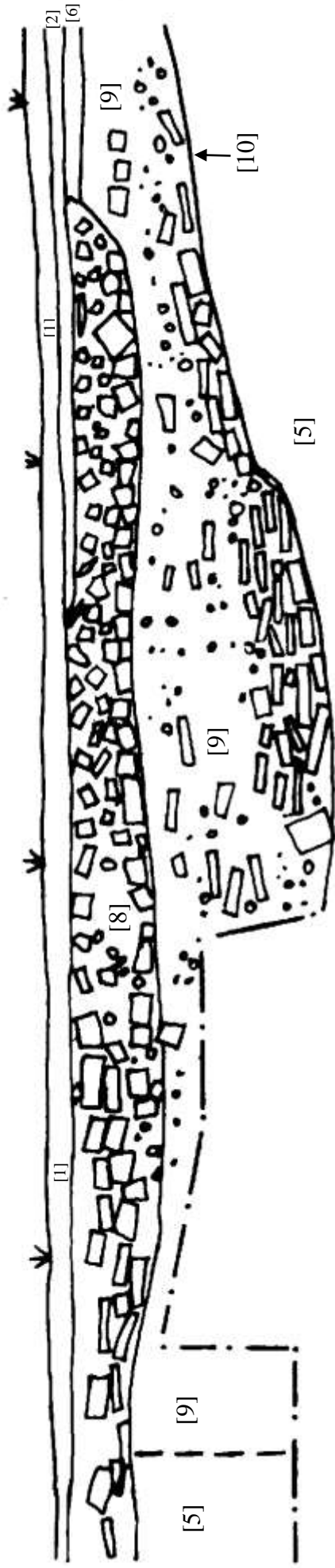


Fig. 4: Inner Moat [10] (1:20)

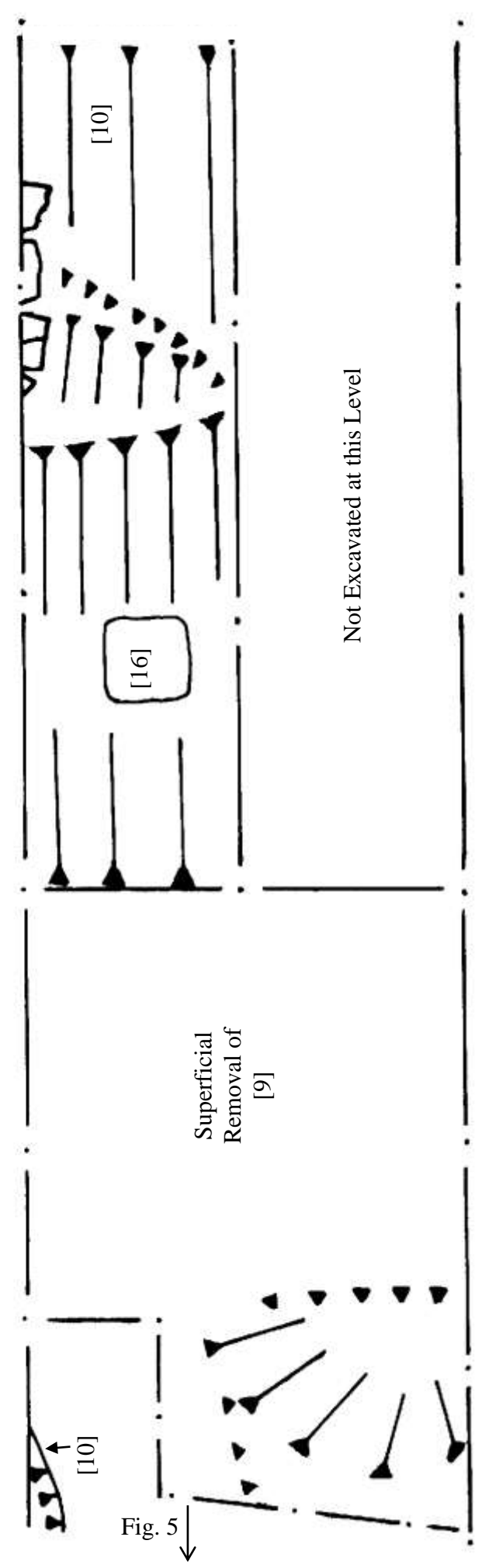
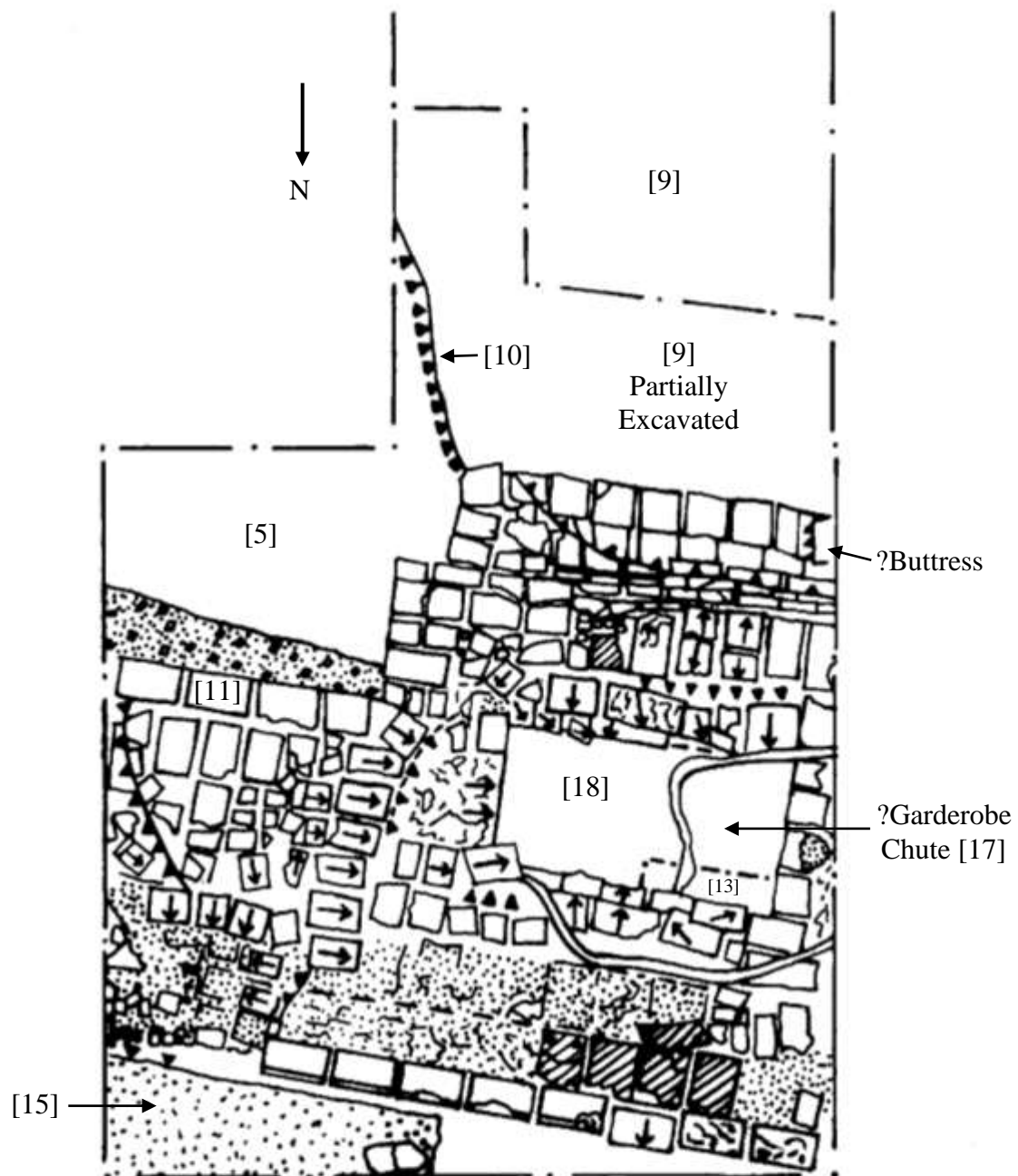


Fig. 5



 Mortar
 Tile

Fig. 5: Facade Wall, ?Buttress and North End of Inner Moat (1:20)

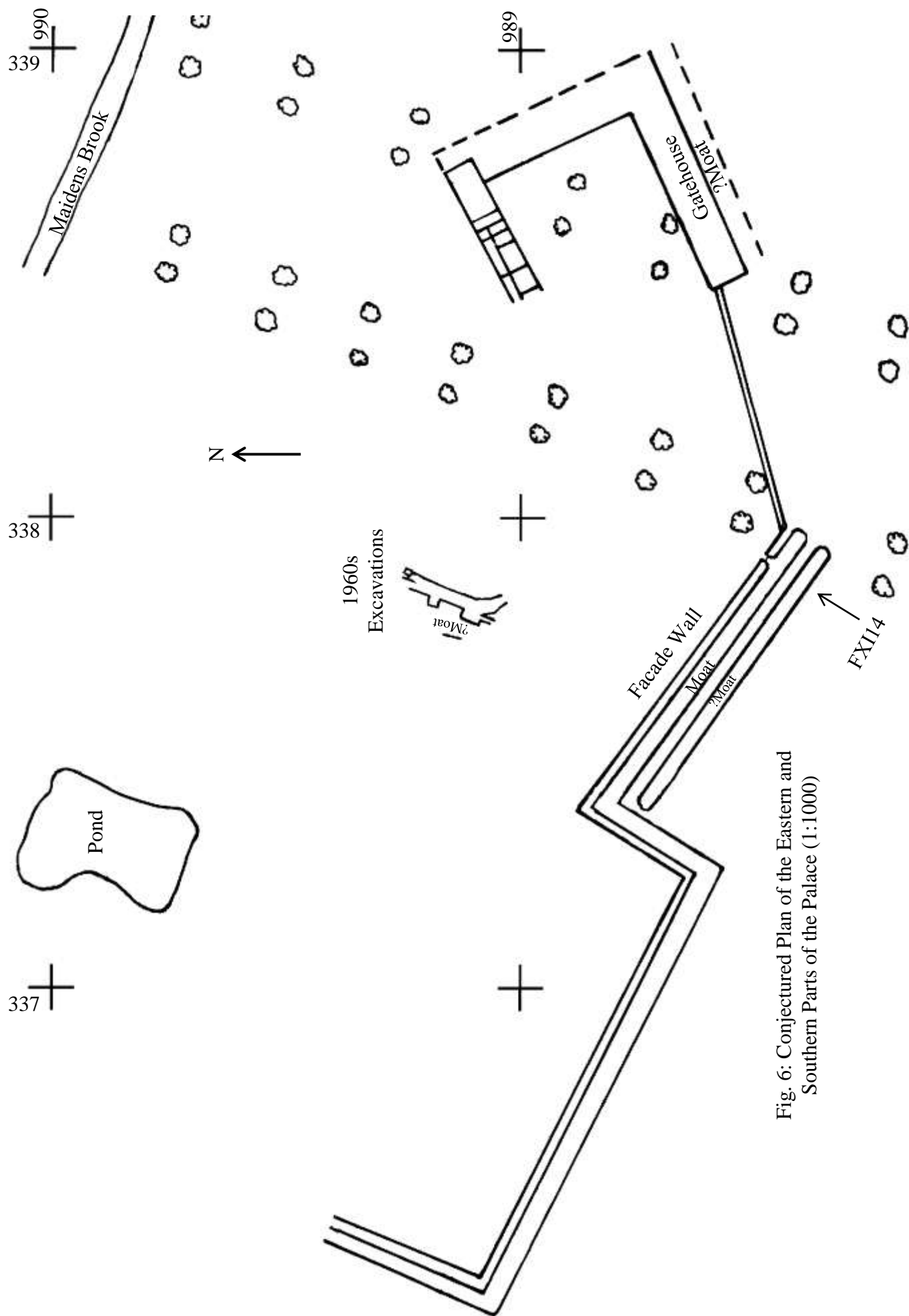


Fig. 6: Conjectured Plan of the Eastern and Southern Parts of the Palace (1:1000)

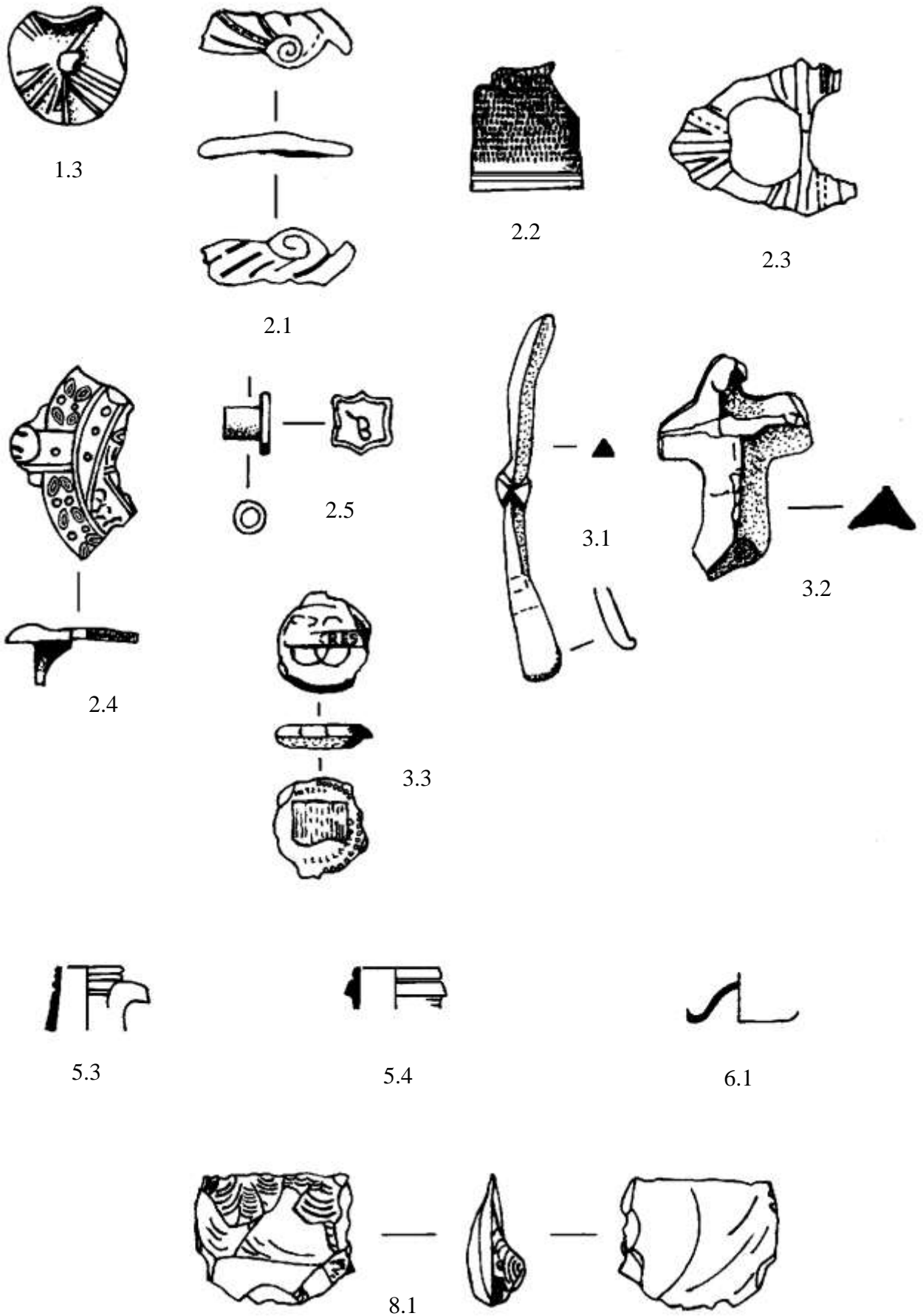


Fig. 7: Objects of Copper Alloy and Lead, Pottery, Glass and Struck Lithic (1:1 except 5.3, 5.4 and 6.1 at 1:4)

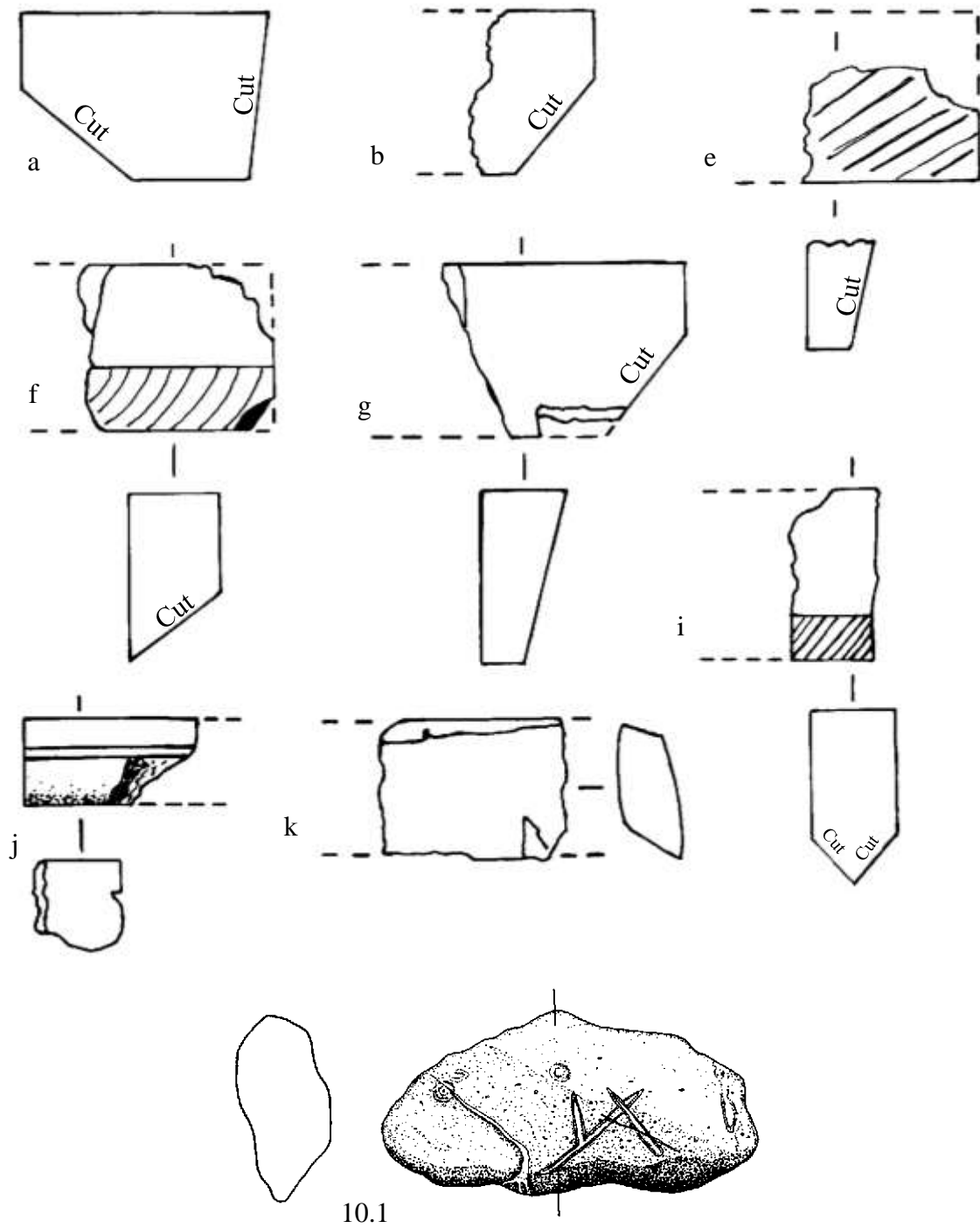


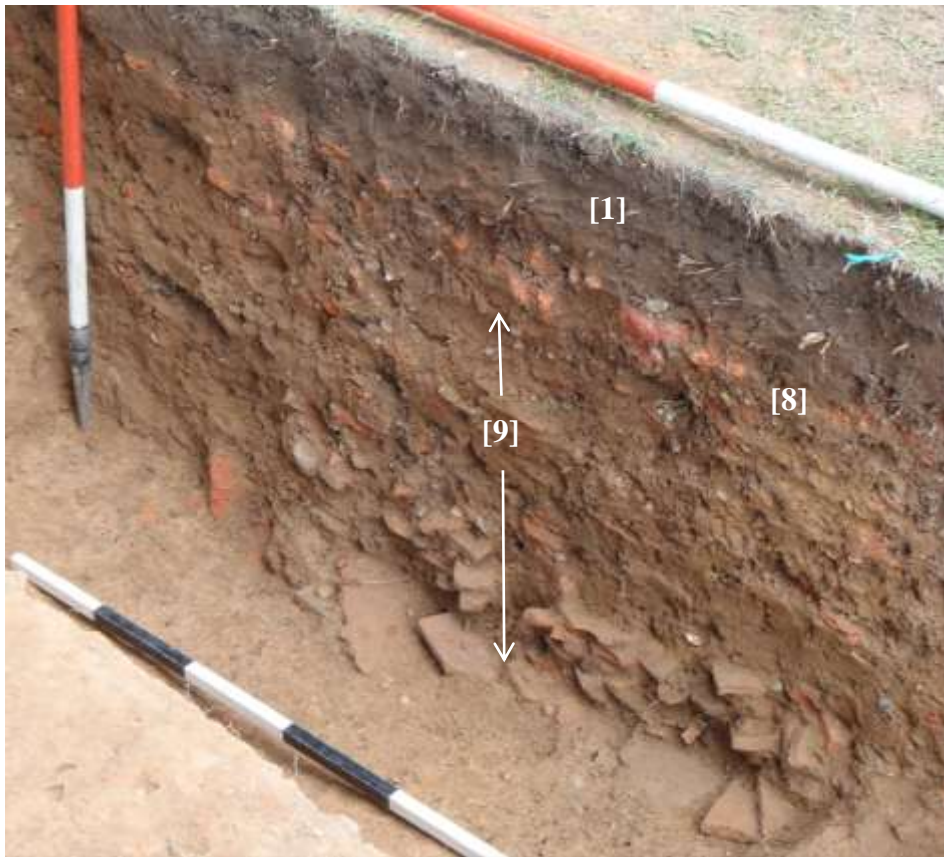
Fig. 8: Cut and Moulded Brick and Worked Stone (1:4)



Pl 1: Outer ?Moat [4] Looking North (Photo Neil Pinchbeck)



Pl. 2: Inner Moat, Facade Wall, Garderobe Chute and ?Floor Looking East (Photo Neil Pinchbeck)



Pl. 3: East Section of Inner Moat Showing Fills [9] and [8] (Photo Neil Pinchbeck)



Pl. 4: See Appendix 3, 5.2
(Photo Neil Pinchbeck)