Surrey Archaeological Collections, **102,** 1–41, 2019

Mesolithic, Iron Age and Saxon findings from excavations at Esher Park Avenue, Esher

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An archaeological excavation at Esher Park Avenue, Esher revealed a 0.40m-thick layer of sand that produced some 1522 Early Mesolithic flints, including microlithic flint points, microburins and at least four core adze fragments and a scraper (c 9.3–9.0 ka BP). The flint assemblage suggests the presence of a discrete short-stay knapping episode, perhaps centred around a hearth or hearths. Activity appears to have been directed towards the maintenance and repair of hunting and foraging kit, rather than any long-stay 'base-camp' type occupation. The Iron Age is represented by a 3.80m-diameter circular structure indicated by a series of postholes that may be a small shelter. Pottery sherds from the fills of the postholes and within the nearby hill wash date the structure to the Middle to Late Iron Age. Lastly, a sequence of Saxon pits and gullies was truncated by a series of ard marks that represent a rare example of early ploughing on the site. Truncating the ard marks was a large pit, which produced pottery and loomweight fragments dated to the late 6th or 7th century AD.

Introduction

Between 10 January and 25 February 2011 an archaeological evaluation and excavation were carried out at Esher Park Avenue, Esher under site code SY-WEP11 prior to redevelopment of the site (fig 1; TQ 14080 64600). An initial evaluation of nine trenches identified four areas of archaeological potential (fig 2). Trench 1 revealed Saxon pits and ditches, trench 7 uncovered an undated line of postholes, trench 8 produced a series of Saxon pits and postholes and trench 9 revealed Iron Age postholes.

This led to an excavation targeting the four areas of archaeological interest (fig 2). Trench 10 measured 18 x 12m and was located over trench 1, trench 11 measured 12 x 12m and was located over trench 7, trench 12 measured 18 x 12m and was located over trench 9 and trench 13 measured 14 x 10m and was located over trench 8. Following the excavation, a watching brief was carried out on the contractor's ground reduction operations across the site. The fieldwork programme ended on 17 November 2011.

The full site and research archive will be deposited with Elmbridge Museum, Esher under site code SY-WEP11. This article uses the standard MOLA recording system: context numbers cited in the text appear in square brackets [10] and accessioned finds are shown in angled brackets <20>. Land use entities consist of Structures (S) and Open Areas (OA). For expansions of pottery fabric codes see tables 15 and 16 (see *Endnote*).

GEOLOGY

The river Mole, which forms the greater part of the western boundary of the parish of Esher, is located *c* 950m to the west of the site (fig 3). Esher is located on a hilltop overlooking the valley. The site is located on elevated ground to the east of the Mole Valley, a situation that would have provided an area dry and favourable for settlement. Ground level within the site slopes downwards perceptibly by about 9m from the south-west (*c* 36m OD) to the north-east (*c* 27m OD).

Esher is situated in an area of varied geology (Richards 2015, 11, figs 1.2–1.4), located on the Bagshot Formation (previously known as the Bagshot Beds or Bagshot Sands), with an outcrop of Black Park gravel on the higher ground to the south, and the underlying Claygate

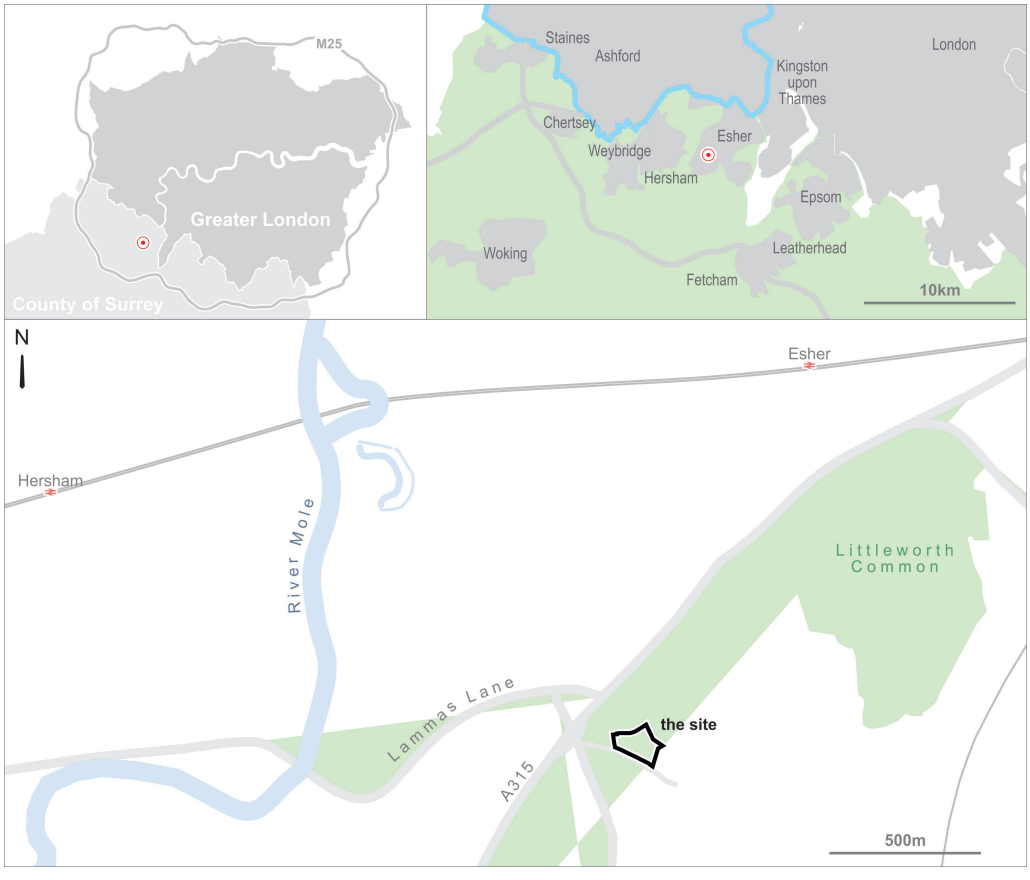

Fig 1 Esher Park Avenue. Site location (scale 1:25000).

Beds, clays with silts and sandy seams, exposed on the lower ground to the north, west and east. Beyond this are Taplow gravels to the south-west and alluvium in the valleys of the Mole and the Rythe, with London Clay to the east of the latter. Flint is available in the Black Park Terrace and in the valleys of the Mole and the Rythe. An archaeological investigation at The Warren, Sandown Park (Burchell & Frere 1947), *c* 350m north of the site, revealed sands at a depth of *c* 0.15m below ground level extending to a depth of *c* 1m, overlying the Bagshot Formation.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Prehistoric

Evidence of human activity during the Mesolithic period is largely provided by finds of flint tools and waste rather than structural remains. Although the mobile lifestyle of Mesolithic communities has left few traces in the archaeological record, transient hunter-gatherers exploited woodland resources in Surrey (Branch & Green 2004, 13). A Mesolithic chipping floor was excavated by Burchell and Frere in 1945 at The Warren, Sandown Park, *c* 350m to the north (Site 1; fig 3). The site was located on a rounded flat-topped hill, offering a well-drained location above the damp valley floor and a commanding position overlooking the Mole. The flint implements lay on the surface of the Bagshot Formation, and were apparently associated with four circular holes *c* 3 ft deep (*c* 0.90m) and 1 ft wide (*c* 0.30m), of uncertain function (Burchell & Frere 1947, 26).

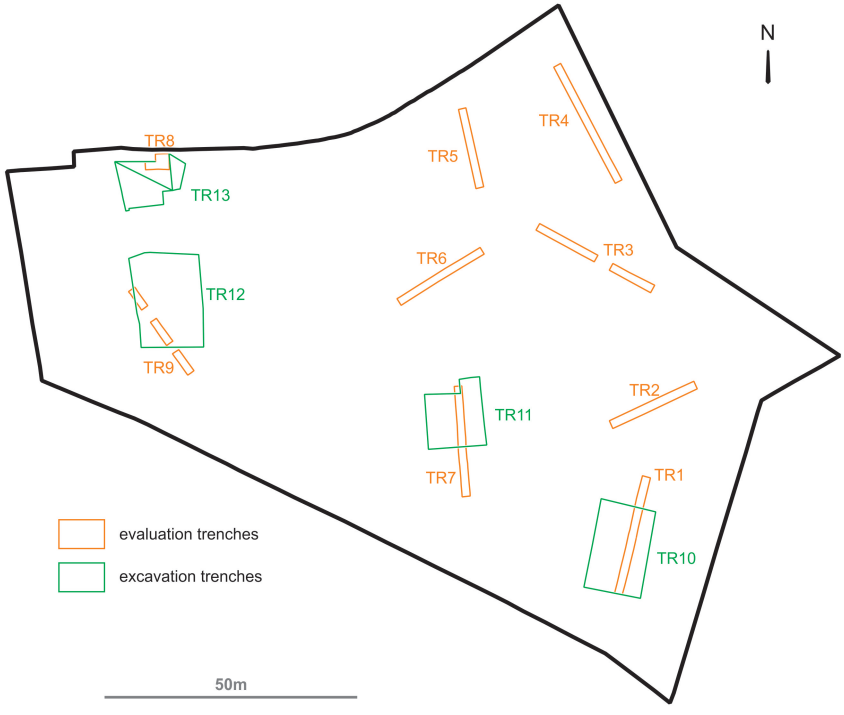

Fig 2 Esher Park Avenue. Trench location plan (scale 1:1500).

The Mesolithic industry was represented by microliths, microburins, blades, burins, scrapers, cores and flakes (Burchell & Frere 1947, 29). Two quartzite hammer-stones were also found (*ibid*, 32). Mesolithic flint blades and flakes were found at the edge of Claremont Park (*c* 1km to the south) (Hutchins 2001, 7). Excavations at Cranmere School (Site 6, fig 3, *c* 1.5km to the north) produced 809 worked flints of which just 74 residual pieces are assigned to the Mesolithic. Excepting another 'small group of residual flints' assigned to the Neolithic–Early Bronze Age the remainder of the assemblage is dated to the Later Bronze Age (Richards 2015, 14; Marples 2018; Randall & Weller 2018).

Also at Cranmere School a series of boundary or enclosure ditches of Middle–Late Bronze Age date were uncovered. A Late Bronze Age metalworker's hoard contained within an *in-situ* pot was recorded. A series of Bronze Age postholes may be evidence of a domestic roundhouse or possibly an open-fronted workshop. A large assemblage of Bronze Age flintwork was also recovered (Richards 2015, 14; Marples 2018; Randall & Weller 2018). A single sherd from the neck of a Bronze Age collared urn was found at the High School in More Lane (*c* 0.5km to the north-west; Site 5; fig 3).

The excavations at The Warren (Site 1; fig 3) revealed Iron Age occupation. At the eastern end of this site, on the summit of the hill, a marked concentration of Early Iron Age (EIA) pottery was associated with a circular clay platform, 2ft wide (*c* 0.60m) and 6in deep (*c* 0.15m), resting on a layer of flints, showing signs of firing (Burchell & Frere 1947, 32). At the western end of this site, another concentration of EIA pottery was associated with circular excavations, a horseshoe-shaped trench 18ft in diameter (*c* 5.5m) and 20in wide (*c* 0.50m) with a clay platform in the centre (the remains of a hut), and two hearths, many feet wide, composed of a very large amount of calcined (burnt) flints (*ibid*, 33). Pieces of daub and broken clay loomweights were also found. The pottery included fine and coarse wares (*ibid*, 37–43). The excavators interpreted this site as an 'outlier of expansion from Wessex' as the pottery is not of local type but is Wessex-derived.

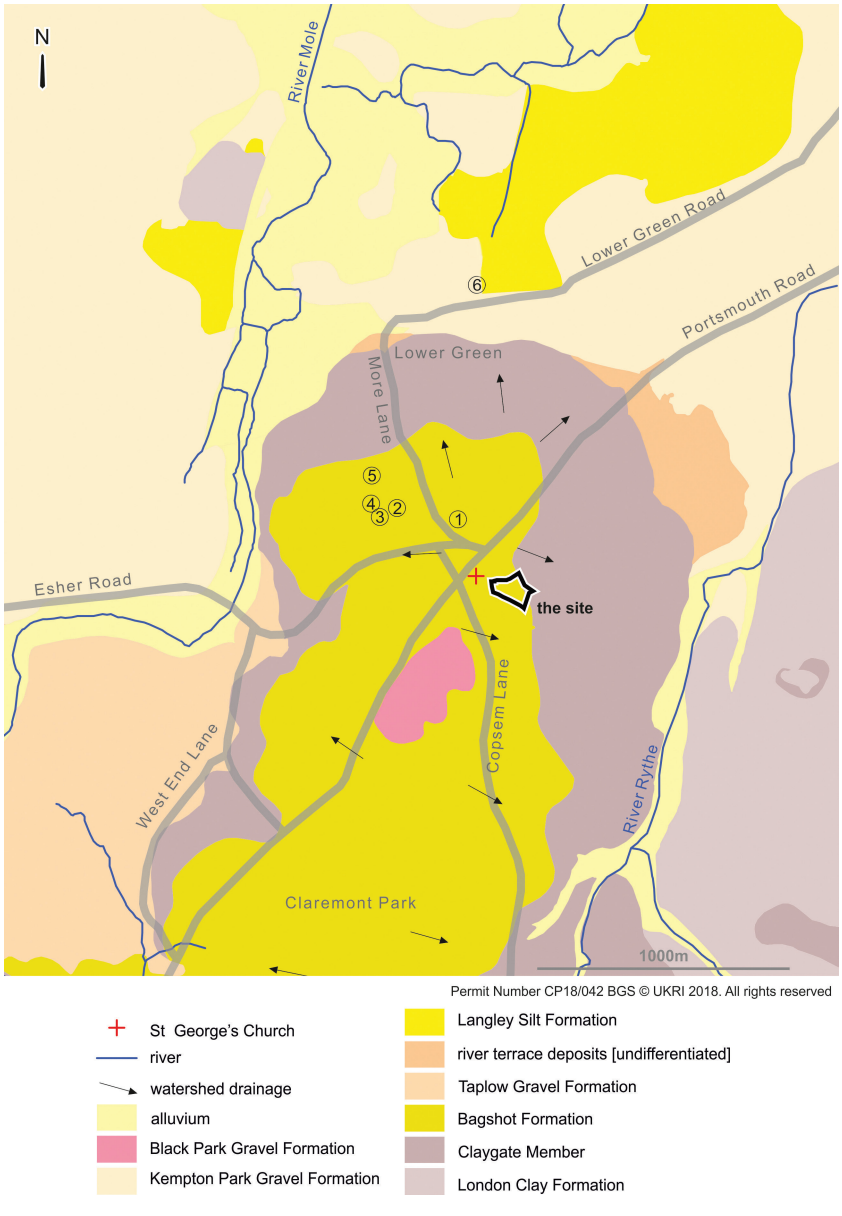

Fig 3 Esher Park Avenue. Site location in relation to the underlying geology, watershed drainage and selected sites mentioned in this report (Sites 1–5: 1 The Warren, Sandown Park; 2–4 Wayneflete Tower Avenue; 5 Esher High School, More Lane; 6 Cranmere School) (scale 1:30,000).

An Iron Age pot with a hollow base was found by chance in 1935 in the garden of 'The Roost', Wayneflete Tower Avenue, Esher Place, *c* 550m to the north-west of the site (Site 2; fig 3). The pot lay at a depth of 2ft 6in (*c* 0.75m) and is thought to have been located within a pit. These remains suggest the presence of a small Iron Age settlement.

Roman

Roman activity is attested by the find of a Romano-British 3rd/4th century AD cremation burial at Lumen, Wayneflete Tower Avenue, *c* 600m to the north-west (Site 3; fig 3). The burial comprised a globular grey mortuary jar without cover, described as a product of the Alice Holt kilns, and containing cremated bones of an adult male (Holling 1969, 119). It was found in 1968 in sand *c* 1m below the surface. Human remains identified as being ancient were located in another garden on Wayneflete Tower Avenue, *c* 780m north-west of the site (Site 4; fig 3). It is unclear whether they were part of a larger cemetery (possibly associated with the Roman cremation), as their date is uncertain and their location was recorded only approximately. Archaeological investigations in the surrounding area did not reveal any further remains, owing to modern disturbance. A single sherd of Roman pottery was found at Esher High School (Richards 2015, 15).

Saxon and early medieval

The excavations at The Warren (Site 1; fig 3), revealed three Anglo-Saxon graves oriented east/west with shield bosses and iron socketed spearheads (Burchell & Frere 1947, 33). Two circular pits were found between two of the graves (*ibid*, 35). It is suggested that the graves date to the 6th or early 7th century (Richards 2015, 15). Further north, at Cranmere School (Site 6; fig 3), a possible sunken-featured building was found measuring 2.14 x 1.40m. It included 28 sherds of pottery stylistically dated to the 6th or 7th centuries together with two small pieces of daub (Richards 2015, 15).

In AD 727 Frithwald, Subregulus of Surrey and Bishop Erkenwald are said to have granted to Chertsey Abbey 5 *mansas* of land in Esher to Chertsey Abbey, although this charter (S1181) is a known forgery (Kelly 2015, 116). A confirmation diploma of 1062 is also unlikely to be genuine (*ibid*, 155). However, by 1066 three individuals had put their Esher holdings under Chertsey Abbey and by 1086 two of these, totalling 5½ hides, were given to William de Wateville. The site was located within the Hundred of Elmbridge (an old administrative unit) (*VCH* 1911, 441). The three manors (estates) that made up the parish of Esher were Sandon, Esher Wateville and Esher (later Esher Episcopi following the acquisition of the manor by the bishopric of Winchester *c* 1233. The site probably lay in the manor of Esher Wateville.

A church is not explicitly mentioned in Domesday Book (1086), but the manor of Esher, which Tovi had held of Edward the Confessor (who reigned from 1042 to 1066), was given to the abbot and convent of Croix St. Leufroy in Normandy by William I (reigned 1066–87), on condition of finding two priests to say mass in the said manor for the souls of his predecessors (*VCH* 1911, 447–51), implying the existence of an early church in the vicinity.

It is assumed that the medieval church and any Saxon predecessor was located on the site of, or in the vicinity, of the existing St George's church (see fig 3), which lies just to the west of the site (*c* 40m west), although mostly 16th century and later fabric is visible in the standing structure. The discovery of Saxon settlement so close by (below) provides a possible explanation for the siting of the church, which otherwise appears oddly unrelated to the dispersed medieval village settlement pattern (Richards 2015).

The archaeological sequence

NATURAL AND MESOLITHIC DEPOSITS (PERIOD 1)

The natural orange sand sloped from west to east from 33.30m OD (trench 13) to 30.15m OD (trench 11) and to 27.56m OD in trench 10 (OA1). Within the eastern part of trench 11 was a glacial feature where the natural sand [111] formed a vertical edge with orange/brown sand. Along the interface was a line of brown mineral staining (see fig 4). Within the western part of the trench was a possible tree-throw hollow comprising a circular area of patchy orange/grey sand measuring 4m north–south x 2m east–west (to the limits of excavation).

The postholes found in evaluation trench 7 (above, Introduction) proved to be modern. However, while finishing the recording of the trench a single flint was observed protruding from the 'clean natural' sand within the north-east corner of the trench. The trench was extended to the north and east and the sand was manually excavated with hoe and trowel to retrieve any further flints that may have been present. On further inspection, more flints were found within an area of 5.1 x 3.6m (fig 4). The upper sand comprised a 0.20m-thick light orange sand [80] (the layer was affected by pedological processes) overlying a 0.20m-thick light grey leached sand [112]. Some 819 pieces of flint were recovered from the upper

Fig 4 Esher Park Avenue. Early Mesolithic flint scatter in trench 11, period 1 (scale 1:150).

deposit and a further 703 flints from the lower deposit. The sand layers were more or less coterminous and the flint was distributed throughout the 0.40m depth of the soil profile.

The 1522 flints in both contexts spread away evenly from a central focus *c* 1.5 x 1.5m in extent and faded in all directions. It seems likely, therefore, that the original limit of the lithic scatter in this area was fully defined. Time did not permit three-dimensional recording, and no sampling for microdebitage was carried out. Wet sieving of environmental sample {12} from context [80] retrieved thirteen small flints including flakes and fragments (included in the totals above), though the primary objective – the retrieval of charcoal – was not achieved. Owing to the inimical buried environment no traces of faunal or plant material survived.

Detailed analysis of the lithics (below, The struck and burnt flint) suggests a single phase of knapping activity, focused on the production of narrow, parallel-sided blades, as blades and blade fragments comprised over 46% of the entire assemblage. Cores and core-preparation pieces were also present, but in smaller numbers. Most of the cores (<12>–<16>; fig 11) had been worked right down to exhaustion before being discarded. Despite the relatively large numbers of flints recovered only a few retouched tools were present among the assemblage. These were dominated by a series of thirteen obliquely-backed microlithic points (<20>–<28> and <32>–<35>; fig 12), usually interpreted as composite stone armatures for wooden hunting arrows. In addition, small numbers of failed or abandoned microliths (<29>–<31>; fig 12), together with five microburins (<36>–<40>; fig 12), the latter indicative of microlith manufacture. The microliths comprised a combination of broad 'Star Carr' and narrower 'Deepcar' forms (see Reynier 2005, 18–22), indicative of Early Mesolithic activity (*c* 9.3–*c* 9.0 ka BP).

Other tool forms were limited to four small end-scrapers (<41>–<44>; fig 13), perhaps used on animal hides, and a number of fragments of slender flint axes or adzes (<46>–<49>; fig 13), the latter usually assumed to have been hafted and used in tree-felling and carpentry. Another tool type that would have been present in the assemblage is the burin, used to work wood, antler and bone, but this is only represented by three burin spalls (eg <45>; fig 13).

Analysis of the limited tool assemblage and the tight concentration of debitage suggests a short-stay, task-specific and probably hearth-centred (much of the assemblage has been affected by fire) phase of activity. This could have been concentrated on the butchering and cooking of a single animal kill and/or the manufacture, maintenance and repair of hunting and foraging equipment.

Lithics from the remainder of the site

A small number of pieces of struck flint were recovered from other areas of the site, principally from deposits of hill wash and the fills of cut features of Iron Age and Saxon date. Some of these, such as the adze fragment from hill wash deposit [32] in trench 9/12 some 50m upslope to the west (<49>; fig 13), are likely to be of Mesolithic type. Others could be of later prehistoric date.

IRON AGE (PERIOD 2)

Settlement structure (S1)

Within the southern end of trench 12 was a Middle–Late Iron Age circular structure (S1). It measured 3.80m in diameter and comprised a number of postholes measuring between 0.15m and 0.30m in diameter x 0.20–0.35m deep (figs 5 & 6). There was no evidence for an associated eaves-drip gully or any evidence for floor surfaces. However, the domestic nature of the structure was confirmed by the presence of pottery from the postholes and from an adjacent hill wash deposit to the north (see below).

Pottery was found in four postholes, totalling 81 sherds (48 ENV, 559g; fig 14). The largest amount was in [92], which contained 40 sherds (27 ENV, 302g), including <50> (FLQU),

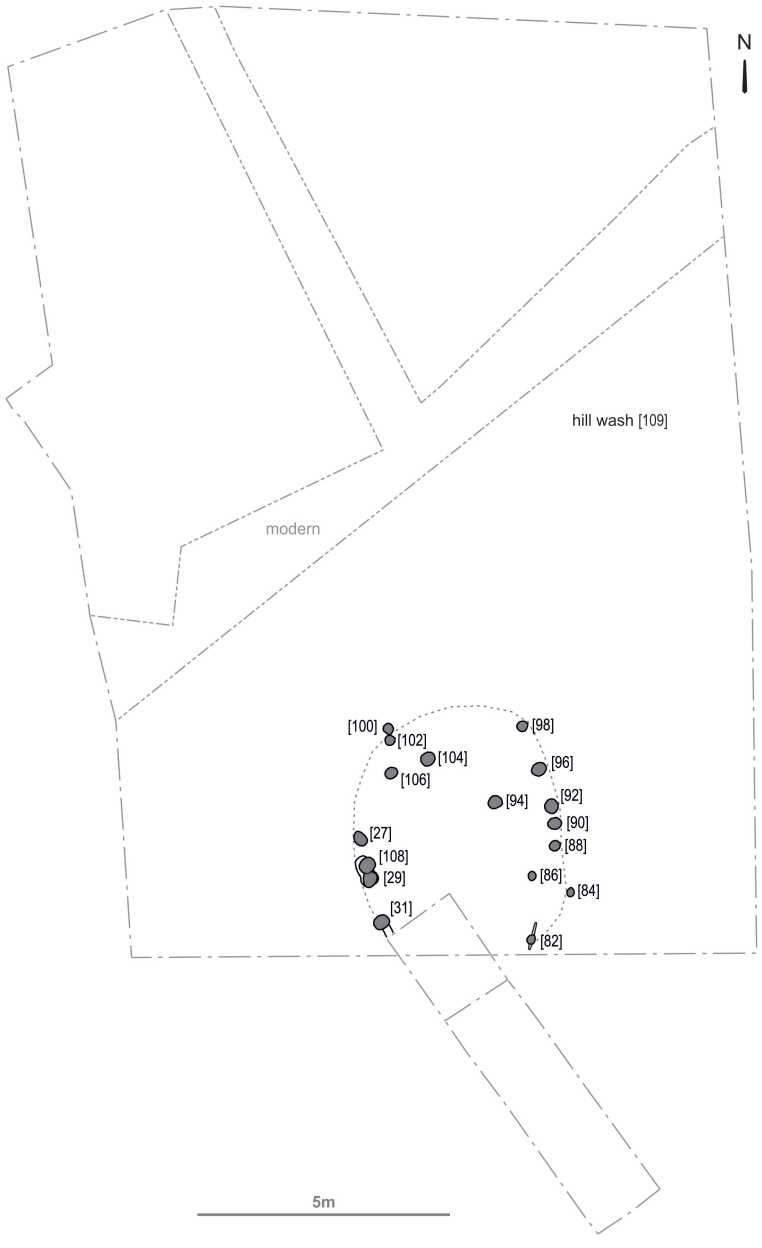

Fig 5 Esher Park Avenue. Iron Age structure in trench 12 (scale 1:150).

<51> (QUFL), <52> (QU), <53> (IOORG), <54> (GLAUC), while the adjacent posthole [90] contained 29 sherds (11 ENV, 184g), including <55> (IO). Eleven sherds (9 ENV, 70g) were found in [94], including <56> (IO) and <57> (QUORG), but only one sherd (3g) was found in [96].

Looking at the composition of the group (table 1, see *Endnote*), the various flint-tempered wares totalled 24 sherds (23 ENV, 119g). Some sherds in the iron-rich fabric group FLIO have more abundant and coarser flint and probably date to the Early Iron Age, while others have much finer flint and are of Middle–Late Iron Age date. The sandier fabric group

Fig 6 Esher Park Avenue. View, looking north, of the postholes of the Iron Age structure.

QUFL is probably of later Iron Age date. The other fabrics comprise a range of iron-rich wares, one sand-free sherd with voids from calcareous/organic inclusions (IO, IOORG) and sand-tempered wares (GLAUC, QU, QUORG); these are more common by sherd count, but the vessel count is much the same (54 sherds, 24 ENV). As discussed in the pottery report (below), the presence of glauconitic wares (at least thirteen sherds, five ENV) and absence of grog-tempered wares, together with the range of vessels forms and roughly wiped/scored surfaces, a feature typical of the Middle Iron Age (Grimes & Close-Brooks 1993, 357), point to a date in the 4th or, more probably, the 3rd to 2nd centuries BC for the occupation from which the sherds are derived, although rims <50> ([92]) and <51> ([92]) (fig 14) and some of the other flint-tempered sherds hint at (possibly sporadic) activity in the Early Iron Age (6th–4th centuries BC).

Hill wash (OA2)

Overlying, and to the north of Structure 1, was a hill wash deposit comprising a 0.40 to 0.70m-thick layer of mid-grey sand [32]/[109]. This layer produced two pieces of daub and a piece of fired clay. It also contained the largest amount of prehistoric pottery found on the site, totalling 56 sherds (52 ENV, 566g). Most of the diagnostic sherds are from [109], which contained three bases in iron-rich fabrics, <58>, <59>, <60> (all IO), and a rim and a base in a sandy fabric <61>, <62> (QU) (fig 14).

Within the base of evaluation trench 5, was a mottled grey/orange sand [21] that produced a single sherd of fine Roman grey ware pottery – the only Roman material from the site, evidence for Roman activity being rare in Esher as a whole (Richards 2015, 15). Four small sherds (4 ENV, 74g) of Anglo-Saxon pottery were also present in [32].

SAXON (PERIOD 3)

Pits (OA3)

Overlying natural sand in trench 10 was a light grey/orange sand [74] that contained six sherds of Saxon pottery (4 ENV, 68g), mostly small and abraded, comprising two from the rim and base of a jar in CHSF, two of ESANAO and two in a finer sand-tempered ware (ESANDO). This layer was cut by a series of pits (figs 7 and 8). The first [73] was circular measuring 0.65m north–south x 0.60m east–west x 0.35m deep. It had *c* 45° sloping sides

Fig 7 Esher Park Avenue. Saxon features in trench 10 (scale 1:150).

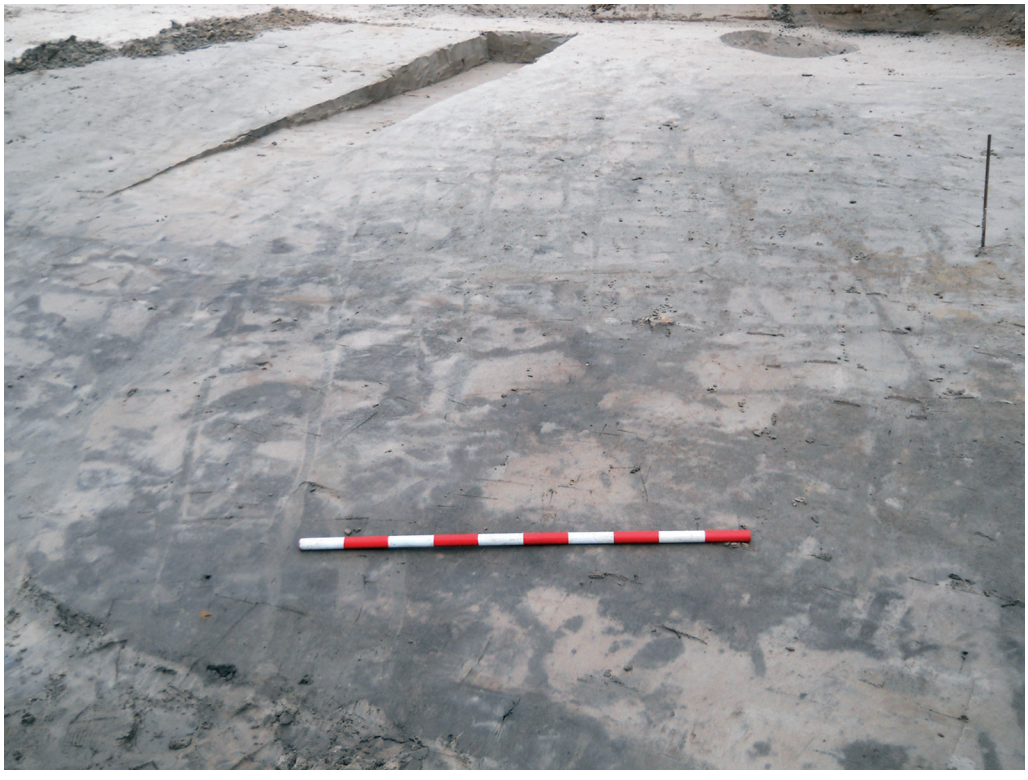

Fig 8 Esher Park Avenue. View of trench 10, looking east, showing the Saxon ard marks.

and a slightly rounded base. The pit was filled [72] with a soft mid-grey sand with occasional charcoal flecks.

Truncating pit [73] was a second circular pit [71] measuring 1m in diameter x 0.55m deep with near-vertical sides and a slightly rounded base. It was filled with a mid–dark grey sand [70] with occasional charcoal flecks and produced one fragment (2g) of unidentifiable fish bone probably from the gill cover (opercular) area. The fill also contained 33 sherds (723g) of Anglo-Saxon pottery from three vessels. The most complete is a thick-walled (12mm) jar or cooking pot in a fine chaff-tempered ware (CHSF), originally burnished both inside and out, but now laminating; it is represented by 26 sherds and numerous small crumbs. The other finds comprise six sherds from the base and body of a smaller jar in CHSF and an unevenly finished rim from a jar with inverted neck in a sand-tempered ware with organic inclusions (ESANAO; not illustrated).

Truncating pit [71] was a further circular pit [69] measuring 1m in diameter x 0.40m deep with near-vertical sides and a slightly rounded base. It was filled with a mid-grey sand [68] with occasional charcoal flecks. It produced five sherds (119g) of Saxon pottery, four of CHSF that could be from the same pot as that in [70], and one of ESANAO. Also present is a tiny sherd in a sandy fabric with moderate flint and organic inclusions (FLOR), probably of Iron Age date.

Gully and ard marks (OA4)

Truncating the pits was a linear north–south gully [67]/[6] measuring 10m north–south x 0.60m east–west x 0.20m deep (fig 7). It had shallow sloping sides with a rounded base. It was filled with a 0.30m-thick light grey sand [5] overlain by a mid-grey sand [66]/[4] with

occasional charcoal flecks. Sixteen sherds (7 ENV, 147g) of pottery were found in the fill, comprising eleven sherds from the lower fill [5] and five from the upper fill [4]. Both groups are very alike, with sherds of chaff-tempered ware (CHSF, CHFS) and sand-tempered wares with organic inclusions (ESANAO, ESANDO) in both fills, including sherds from the same thick-walled CHSF jar. The fill [4] also produced one fragment from an Anglo-Saxon loomweight (<2>; fig 16).

To the west of the gully was a series of ard marks [65] cutting the natural sand. The ard marks were recorded covering an area 7m north–south x 5m east–west. They were generally spaced at 0.30m intervals. Each measured between 10 and 30mm wide by up to 30mm deep and had a V-shaped profile. They were filled with a light grey sand [64] with occasional charcoal flecks. The fills did not provide any artefactual or ecofactual evidence, but evidence of dating and cultivation was found within the later features (see below).

Pits (OA5)

Truncating the ard marks, at the southern part of the trench, was a large square-shaped pit [12], 1.80m square x 0.71m deep with sides at around 45° with a rounded base (fig 7). The lower fill [9] comprised a 0.20m-thick laminated mid-grey sand with occasional charcoal flecks. A sample {8} of the fill produced a large assemblage of anaerobically-preserved plant remains (table 2, see *Endnote*). These were dominated by fragments of wood and bark, but a large number of seeds were also preserved, almost all from wild plants. Occasional seeds of hawthorn (*Crataegus* sp.), silver birch (*Betula pendula*) and a complete oak (*Quercus* sp.) leaf, together with the wood and bark fragments, strongly suggest that trees and scrub may have grown close to the pit, as do the few hazel (*Corylus avellana*) nuts, sloe (*Prunus spinosa*) stones, elder (*Sambucus nigra*) and blackberry (*Rubus* cf *fruticosus* agg.) seeds, although these could equally be discarded food waste. Other remains came mainly from ubiquitous plants of disturbed ground, such as redshank (*Persicaria maculosa*), knotgrass (*Polygonum aviculare*) and fat hen (*Chenopodium album*), which grow in many types of waste and cultivated habitats. The most abundant seeds came from various species of sedge (*Carex* spp.), suggesting the presence of damp or wet ground nearby.

A second fill [8] comprised a 0.20m-thick dark brown organic sand with large amounts of wood charcoal {3}, {7} (over 1300ml; table 2). No organic remains were preserved, but a large assemblage of charred plant remains was found. These consisted mainly (by volume) of charcoal fragments, but about 200 cereal grains, plentiful chaff, and many weed seeds were also present. As the flot from this sample was large and rich in small plant remains the <1mm fraction was divided, and one-seventh of this fully sorted and quantified. Counts from the sub-sample were then multiplied to give an estimate of the total number of items in the sample. Approximately half the identifiable grains were from 6-row hulled barley (*Hordeum vulgare*), with smaller numbers of wheat (*Triticum* sp.), rye (*Secale cereale*) and a few oat grains (*Avena* sp.), the last of which may have been wild oats, growing as weeds.

Although many of the wheat grains were in poor condition, and not identifiable to species, the better-preserved examples could be divided into free-threshing wheat (*T. aestivum/turgidum*), with a generally rounded shape, and glume wheats. Of the latter, several narrower grains with a pronounced dorsal ridge resembled emmer (*T.* cf *dicoccum*), while a few were flatter with no dorsal ridge and were identified probably as spelt (*T.* cf *spelta*). The identifiable wheat chaff (mostly glume bases and rachis fragments) was also from emmer and bread wheat (*T. aestivum*), confirming the presence of these species, though no spelt chaff was evident. Rachis fragments from barley, and a few from rye, were also found, and in total the chaff fragments outnumbered cereal grains by about two to one. Charred seeds of wild plants were more abundant than grains or chaff, with the most numerous coming from stinking chamomile (*Anthemis cotula*), redshank (*Persicaria maculosa*), docks (*Rumex* spp.) and wild grasses (Poaceae). Also included in this assemblage were a number of charred flax (*Linum usitatissimum*) seeds and a few fragments of hazelnut (*Corylus avellana*) shell.

The majority of this assemblage seems to consist of crop-processing waste (cereal chaff and weed seeds), removed from a processed crop by sieving, and used as fuel together with the wood, the charcoal of which made up the bulk of the flot. The cereal grains may have been included accidentally with this processing waste, or burnt deliberately after spillages etc, together with the flax seeds and discarded hazelnut shell. The fill also contained seven burnt fragments of 'sheep-sized' bone; three calcined white fragments of skull, a calcined white rib, two calcined white long bone fragments and a charred brown unidentifiable fragment. The calcined fragments indicate a combustion temperature of at least 700 ºCelsius; the charred fragment indicates a much lower temperature, probably 400 ºCelsius or below (Lyman 1994, 386).

The fill also produced a piece of daub and a quartzite pebble with pitted (hammered) surface, possibly used as a hammerstone and a large quantity of pottery, totalling 116 sherds (64 ENV, 1.360kg), of which 64 are from a sieved sample. These include sherds from three jars in sandy fabrics ESANAO, ESANCO (<64>) and ESANDO, but mainly comprise chaff-tempered wares, notably a bowl, <65>, six cooking pots/jars in CHSF (<66>, <67>, <68>, <69>, <70>) and two jars in CHFS (<71>, <72>) (fig 15).

The upper fill [7] comprised a 0.30m-thick light grey sand with occasional charcoal flecks. The fill produced 39 pottery sherds (366g) including three jars in sandy fabrics ESANBO, ESANCO (<73>; fig 15) and ESANDO. Chaff-tempered wares are again in the majority, with sherds from up to thirteen cooking pots/jars, two with internal sooting and/or residues (<74>; fig 15). This fill also contained three fragments that could be from a loomweight(s). Although no sherd links were found, it is probable that sherds from the same vessels are present in both fills. This makes it difficult to gauge the real number of vessels represented, but in both fills chaff-tempered wares are the dominant group, with relatively small amounts of sand-tempered pottery, which points to a 6th century date for the group. The large size of several sherds suggests that the pottery represents primary rubbish from a building or settlement in the immediate vicinity.

To the east was a second large square pit [77], 2.40m east–west x 2.10m north–south and 0.80m deep (fig 7). It had a near-vertical north side with the southern side at around 45º. The lower fill [76] comprised a 0.40m-thick dark brown, slightly organic, sand with occasional charcoal flecks and wood charcoal fragments. A sample {11} from this deposit produced small numbers of both charred and uncharred plant remains (table 2). The flot was mostly charcoal and the whole assemblage probably derived from burnt fuel. Only a few grains of charred wheat (*Triticum* sp.) and barley (*Hordeum vulgare*) were seen, with a little chaff and several weed seeds. Other discarded food remains included a broad bean (cf *Vicia faba*), hazelnut (*Corylus avellana*) shell and blackberry (*Rubus* cf *fruticosus* agg.) seeds. The uncharred plant assemblage was also quite small, but included a number of seeds from hemp (*Cannabis sativa*), a plant cultivated for its stem fibres, used in the manufacture of textiles and ropes. The fill produced nine sherds (134g) of pottery from four vessels in CHSF and ESANAO pottery. The upper fill [75] comprised a 0.30m-thick light grey sand with occasional charcoal flecks.

To the north was a circular pit [11], 1.90m in diameter x 0.40m deep. The sides were near-vertical with an uneven base. The pit [10] was filled with a light grey sand that produced a small residual sherd (1g) of FLOR, probably of Middle Iron Age date.

Hill wash (OA6)

Within trench 10 was a 0.15m-thick layer of hill wash [63]/[3] comprising a light grey sand with occasional charcoal flecks. Together these four deposits produced the largest amount of Anglo-Saxon pottery from the site (149 sherds, 82 ENV, 1.091kg). Sand-tempered wares (ESANAO, ESANBO, ESANCO, ESANDO) are well represented, with 50 sherds (34 ENV, 374g), including (<75>; fig 15). However, chaff-tempered wares (fabrics CHAF, CHAFI, CHFS, CHSF) are the most common, with 99 sherds (48 ENV, 717kg), including <76> (fig 15) and two sherds with comb-point decoration (<77>, not illustrated). Other finds comprise

a piece of daub, part of a well-used hone (<4>, fig 16) probably of Saxon date but not closely datable and sixteen small Anglo-Saxon loomweight fragments (<2>, fig 16; <3>, <5>–<7>).

Cutting into the hill wash layer [63] was a small circular pit [62], 0.86 x 0.70 x 0.30m deep. It had near-vertical sides with a rounded base and filled with a light grey sand [61] that contained two sherds (2 ENV, 38g) of pottery (ESANBO, ESANDO).

The hill wash deposits also contained eight sherds (8 ENV, 81g) of residual prehistoric pottery and five intrusive sherds (3 ENV, 77g) of early medieval pottery from the base of a cooking pot in early medieval sand-tempered ware (EMS), probably dating to the 10th or 11th centuries.

Open Area 7: Structure 2, 3 and pits

Within trench 13 was a series of postholes forming a structure (S2) aligned north-east/south-west (figs 9 & 10). One of these postholes [43] contained a residual sherd of prehistoric pottery <63> (11g; QU; (fig 14). Within the group of postholes was a small linear cut [47].

To the north-east was a further pair of postholes. From the fill of one [34] two sherds of pottery were recovered from a sieved sample: one flint-tempered with finger-impressions around the shoulder and of Iron Age date, the other sand-tempered of Iron Age or Saxon date. To the east of Structure 2 were two further postholes (S3; fig 9). No finds were recovered from these postholes.

To the south of the posthole groups was a series of pits (OA7; fig 9). The first [36] measured 0.70m east–west x 0.80m north–south x 0.50m deep that had near-vertical sides and a concave base. It was filled with a mid-grey sand [35] with organic lenses overlain by a light grey sand. The fill contained two sherds (8g) of Saxon pottery (ESANAI) and two residual sherds (14g) of prehistoric pottery (fabric IO). To the east was an oval-shaped pit [39] measuring 1.10m north–south x 0.80m east–west x 0.50m deep. It was filled with a mid-grey sand [38] that contained a residual sherd of prehistoric pottery (3g; FLIO). A number of other shallow pits were located further to the south ([118], [116] and 114], none of which produced any direct dating evidence.

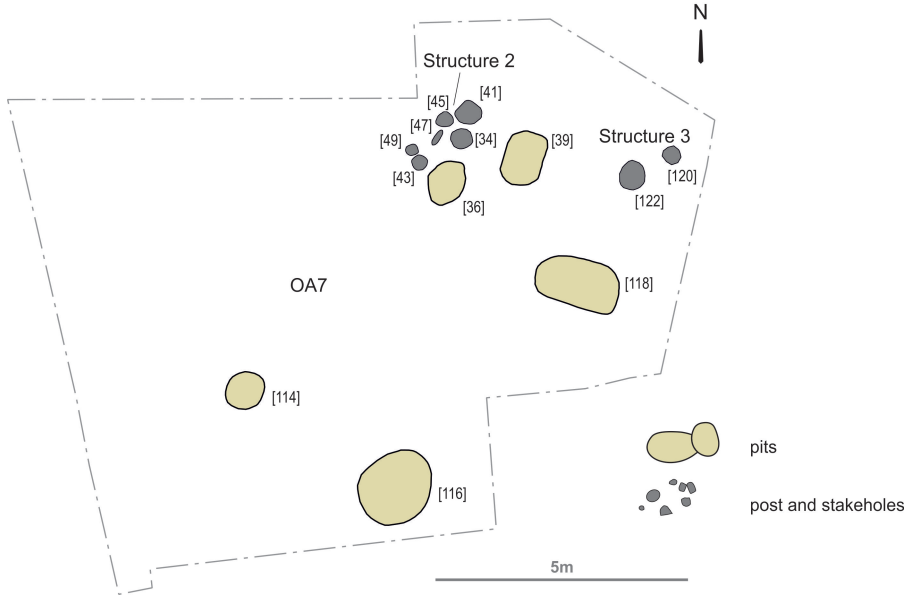

Fig 9 Esher Park Avenue. Saxon features in trench 13 (scale 1:150).

Fig 10 Esher Park Avenue. View of trench 13, looking south, showing the Saxon features.

Overlying these Saxon features was a 0.25m-thick hill wash deposit ([37], OA8) of mid-grey sand that produced one sherd containing abundant quartz sand, which has been quantified with the Iron Age pottery (QU) but which could be of Anglo-Saxon date.

THE FINDS

The struck and burnt flint, by Jon Cotton

THE ASSEMBLAGE

The lithic scatter comprises 1522 pieces of struck flint weighing nearly 11kg and was recovered from two horizons: contexts [80] and [112]. These lay within a confined area at the north-east corner of trench 11, and at a point immediately upslope of the perched water table/spring line at the boundary of the permeable Bagshot Formation with the underlying impermeable Claygate Member.

Only 22 struck flints were recovered from the other contexts on the site – principally deposits of hill wash and the fills of features ranging in date from Iron Age to Saxon. The material from these later contexts is mostly debitage – flakes and irregular nodular shatter – although it does include a single adze fragment from context [32], a hill wash deposit in trench 9/12 some 50m upslope to the west.

All the struck flint from the site is summarised in tables 3 and 4 (see *Endnote*), and data relating to the burnt unworked material is incorporated in table 5 (see *Endnote*). This report concentrates on the material recovered from the lithic scatter in contexts [80] and [112].

CONTEXTS [80] AND [112]: ONE ASSEMBLAGE OR TWO?

As noted above, the bulk of the lithic assemblage from the site was recovered from just two contexts, [80] and [112], both located within an area measuring *c* 4 x 4m in the north-east corner of trench 11. Context [80] comprised a horizon of light orange sand 0.20m thick, which merged imperceptibly into context [112], an underlying and apparently coterminous horizon of leached light grey sand a further 0.20m thick that covered the natural Bagshot Formation.

The lithics were noted to have been 'evenly spread' throughout these two horizons, although there was a somewhat denser concentration in an area *c* 1.5 x *c* 1.5m in extent at the centre (MOLA 2012, 8). This concentration appeared to fade in all directions. It seems likely that the two horizons represent a single soil profile, the upper horizon [80] of which had been affected by pedological processes, and the lower horizon [112] of which represents the reworked upper surface of the Bagshot Formation.

Time did not permit three-dimensional recording and no sampling for microdebitage was undertaken. Wet sieving of environmental sample {12} from context [80] produced thirteen struck flints (included in the overall figures above) together with a single small burnt unworked flint and a spall of burnt ironstone, although the primary objective – the retrieval of charcoal – was not achieved. The inimical burial environment meant that no faunal material was present.

Although retrieved from separate horizons it was a working assumption that the lithics from contexts [80] and [112] comprised a single, time-bound, scatter dispersed vertically downwards through the soil profile by a combination of frost action and bioturbation. Close attention was paid during analysis to determine whether the lithics from the two horizons represented single or successive episodes of knapping activity. This relied on a comparison of the raw material utilised and the condition of the artefacts; the percentages of the different classes of debitage and modified pieces (tools and tool-making debitage) present, and on a detailed metrical analysis of the complete blades/bladelets from each horizon. In all instances the results were supportive of the single-episode hypothesis, and table 6 (see *Endnote*) underlines the similarities in terms of assemblage composition that exist between them, although the contents of the two horizons are separately identified in the tables that accompany this report.

However, while they seem to have been dispersed vertically, there is little to suggest that any elements of the scatter had been moved far horizontally, ie that they had been spread much beyond the immediate scatter by human or natural agencies (such as 'drop-and-toss', trampling or post-depositional transportation downslope in colluvial or hill wash deposits). Indeed, their tight concentration and the presence of numbers of spalls/chips suggest that the scatter comprises a single undisturbed and more or less *in-situ* phase of knapping activity that had been relatively quickly stabilised, for example by falling among leaf litter or vegetation, prior to its subsequent vertical dispersal down the soil profile. Moreover, several refits were casually identified among the lithics from context [80] and it is entirely possible that a concerted refitting programme would identify others from across both contexts.

The various processes affecting the dispersal of lithic artefacts within sandy soils were explored at Hengistbury Head (Barton 1992, 90–5, 69–78) where considerable vertical, but also horizontal movement of Upper Palaeolithic and Mesolithic assemblages, was noted. A rather similar set of circumstances was recorded at the B&Q site in Bermondsey (Sidell *et al* 2002, 73, fig 48), North Park Farm (Jones 2013a), and at Three Ways Wharf – although vertical movement at the latter site was less marked owing to the nature of the fine-grained alluvial clays in which the artefacts lay (Lewis with Rackham 2011, 150–1).

RAW MATERIAL AND SURFACE CONDITION

The raw material comprises a variably opaque/semi-translucent mottled grey/brown, occasionally orange/brown, flint with cherty inclusions and a thin, bleached and pitted cortex. A small component retains a thicker, less weathered, white/buff cortex. As noted above, there was no obvious distinction apparent between the flint source(s) utilised in [80] and [112].

The raw material would have been locally available from the mixed deposits of Black Park (High Level terrace) gravels located immediately to the south-west of the site, and on the summit of a flat-topped hill overlooking Sandown Park and known locally as The Warren, some 350m to the north (Burchell & Frere 1947, 25–6). The Black Park gravels were laid down following the diversion of the river Thames during the Anglian glaciation, and are composed of coarse and medium-sized angular and rounded flint cobbles, together with erratics of Greensand chert and occasional ironstone incorporated from the Mole–Wey valley (Gibbard 1985, 23). Further sources of cobble flint would also have been available from the Thames terrace gravels to the north, from the floor of the Mole Valley to the west, and from the bed of the Rythe stream downslope to the east.

Much of the material is in a fresh, unrecorticated condition with feather terminations. However, a striking feature of the lithics from both contexts is the consistently high number of pieces affected by fire, a point returned to below.

TECHNOLOGY AND DEBITAGE

Taken together, the assemblage from [80] and [112] exhibits a well-organised, skilful and maximising approach to core reduction, the latter focused on the production of slender parallel-sided blades/bladelets using a combination of hard- and soft-hammer techniques. Blades/bladelets and fragments combined constitute over 45% of the entire assemblage, while the blade to flake ratio is in excess of 2:1.

All aspects of the reduction sequence are present: unworked and tested nodules, cortical flakes, crested pieces, core-dressing pieces (tablets and platform-renewal flakes), spent cores, complete and broken secondary and tertiary blade and flake blanks, core tools and retouched pieces, together with the waste generated during their production and maintenance. Moreover, the numbers of spalls/chips <10mm recovered by hand is a further indication of probable *in-situ* flint working (as is the presence of two small refitting groups from context [80]). While it is likely that sieving would have increased the recovery of microdebitage (thirteen pieces of debitage were present in environmental sample {12}), enough diagnostic material is present in both contexts to allow a clear characterisation of the available assemblage.

BLADES

A number of complete unmodified parallel-sided blades up to 80mm in length are present, with one or two in excess of 100mm, together with a larger number of systematically snapped proximal, mesial and distal fragments, many of which had been burnt (see below). Blades and blade fragments make up over 48% of the lithics from context [80], and over 43% of the lithics from context [112] – a combined total of over 46% of the entire assemblage. Furthermore, 42.8% of the complete blades from context [80] and 34.2% of the complete blades from context [112] (a combined overall figure of nearly 38% of all blades) feature a small but pronounced 'lip' at the edge of the striking platform, suggesting that they had been detached using a soft hammer either of stone, or more likely an organic percussor (eg antler) (as Ohnuma & Bergman 1982).

There was a slight variation in butt morphology between the two contexts: complete blades from both [80] and [112] were dominated by linear butts (at 41% and 38%, respectively), but punctiform butts were only marginally less common in [80] (37.5%), compared with [112]

where punctiform and plain butts were more or less equally represented (at 19.7%). Whether this has statistical validity given the small size of the overall sample is debatable.

FLAKES

Complete and fragmentary flakes make up 20.6% of the assemblage from context [80], and 24.6% of the assemblage from context [112] – a combined total of more than 22% of the entire assemblage. Complete blanks are in the minority in both contexts, and are dominated by tertiary removals. There are two distinct size modes: a minority comprise large pieces up to 100mm in length by up to 70mm in breadth, most of which appear to have resulted from the initial hard hammer testing and quartering of flint nodules, and a far larger group of much smaller pieces, mostly less than 30mm in length, comprising small trimming flakes and accidental products of the knapping process. Some of these smaller pieces display regular parallel scars on their dorsal surfaces indicating the importance of blade production. A handful of the flakes in both size modes might be categorised as thinning flakes, though whether these represent waste from the axe-making process (as Ashton 1988) is unclear. (A number of fragments of finished axe/adzes were certainly present among the assemblage, and are discussed below.)

CORE-PREPARATION AND MAINTENANCE PIECES: CRESTED PIECES; TABLETS AND REJUVENATION FLAKES

A total of 43 core-preparation and maintenance pieces were recovered from both contexts, and comprise three crested pieces <9>, nineteen tablets <17>–<19> and 21 rejuvenating pieces including fifteen plunging pieces <10>–<11> (fig 11) and six platform-renewal flakes (not illustrated). The crested pieces are all small (<67mm in length) with blade-like proportions and are unilaterally crested (see Marples 2014, 19); one of the two from context [80] has been burnt. The complete core tablets include a number of pieces that are rather larger than the surviving cores, in particular two refitting examples from [80] <17>–<18> (fig 11) that clearly demonstrate the resulting progressive diminution in core size as blades were detached (see Refitting group 2, below). A third, non-conjoining tablet <19> (fig 11) of the same distinctively-marbled flint appears to have been detached from the same core.

The rejuvenation flakes include a handful of platform renewal flakes together with a number of plunging pieces eg <10>–<11>, several of the latter over 80mm and one over 100mm in length, again indicative of the large size of the original cores from which they had been detached.

CORES

Twenty-two complete cores were present: thirteen from context [80] and nine from [112]. Eleven had been affected by fire: six from [80] and five from [112]. Whether this represents deliberate heat-treatment remains unclear; it is possible that spent cores were simply tipped into an adjacent hearth. There are thirteen single-platform blade/bladelet cores of pyramidal form and small size, nine from context [80] eg <12>–<13> (fig 11) and four from context [112].

The remaining nine examples (four from context [80] and five from [112]) are two platform types eg <14>–<16> (fig 11; table 7, see *Endnote*): seven had their secondary platform worked from the opposite end to the main platform eg <16> (as Reynier 2005, 119); one from context [112] had its second platform at 90° to the first; another from context [80] is a true opposed-platform core (burnt) <15>. Five cores had been flaked all round; a majority of the rest retained expanses of cortex on the rear (non-flaked) face. Reynier notes that bi-platformed cores are more common among 'Star Carr' type assemblages, while single platform pyramidal cores are prevalent in 'Deepcar' type assemblages (2005, 118, table 8.1).

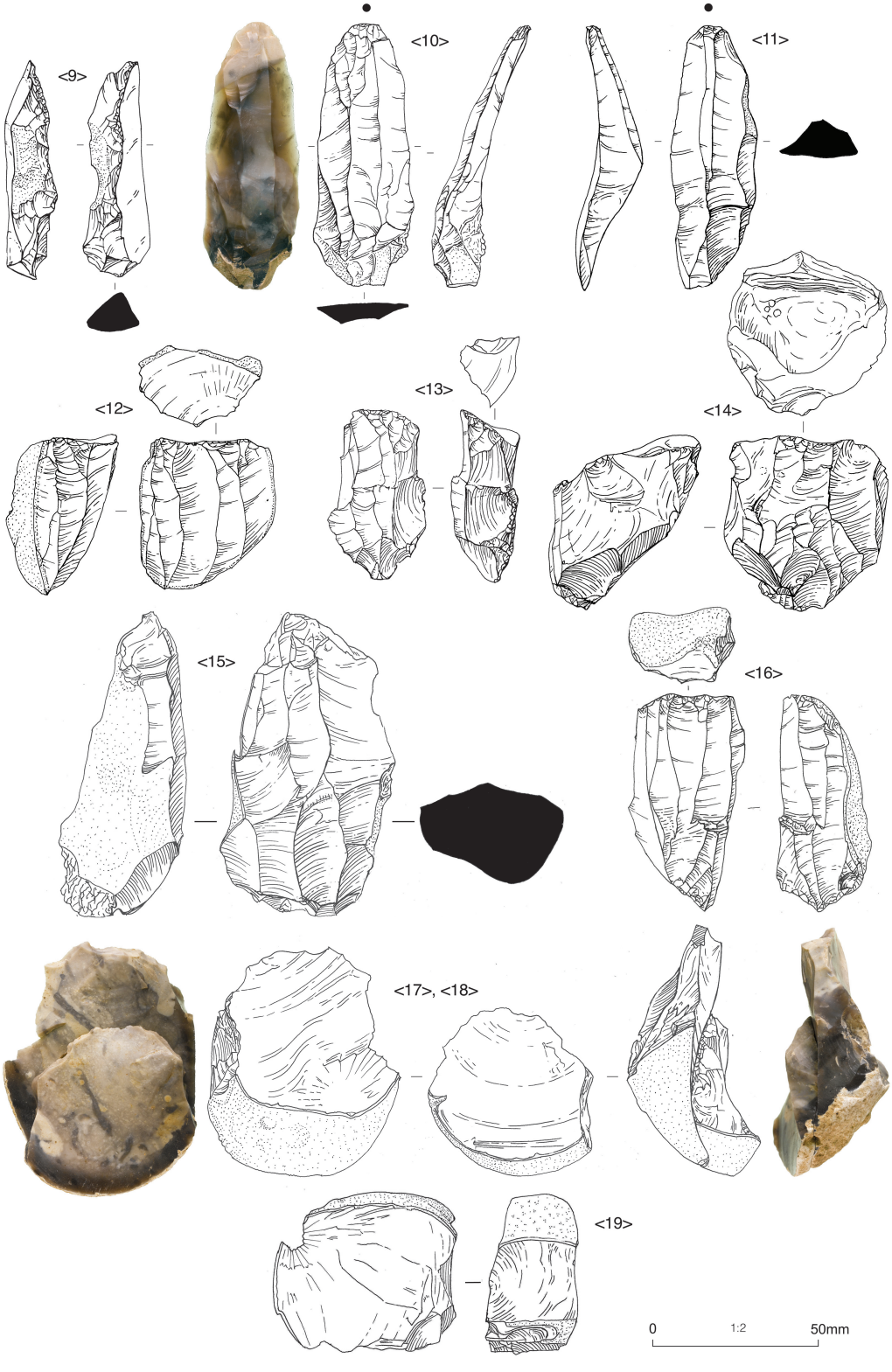

Fig 11 Esher Park Avenue. Cores and core preparation <9>–19> (scale 1:2).

There is a clear mismatch between the sizes of the cores and those of the core tablets and plunging pieces, which makes it clear that the cores must have been worked right down prior to discard. This is neatly demonstrated by the two conjoining core tablets of diminishing size from context [80] (see below).

PARTIALLY WORKED AND UNWORKED NODULES: IRREGULAR NODULAR SHATTER

A number of mostly complete but unmodified ovoid flint pebbles weighing between 393 and 46g were recovered: six from context [80] and five from [112] (table 8, see *Endnote*). Although seemingly deliberately collected it is unclear whether these were intended for use as hammerstones or as raw material for knapping. Neither explanation is particularly compelling: the absence of any obvious sign of modification (one heat-affected example excepted) rather militates against the former while their small size and poor quality militates against the latter.

A number of unworked and partially worked nodules were present in scatters A and C at Three Ways Wharf (Lewis with Rackham 2011, 52, 64–5) and in scatter C were distributed around the periphery of various knapping concentrations. As such they were taken to represent 'rejected debris at the periphery of hearths and knapping scatters'. They were quite distinct from a smaller series of flint and quartzite hammer- and anvil stones (*ibid*, 65–6) as these bore clear signs of use in the form of localised abrasion and crushing at the circumference.

The quantities of irregular nodular shatter – some of large size (up to 100mm in length by up to 70mm in breadth) – highlight the deficiencies in the quality of the flint sources being exploited. Much of this material contains cherty inclusions and occasional crystalised voids, while the cortical surfaces are often thermally altered. A number of the largest pieces appear to have been generated during the initial testing and quartering of large nodules.

One fragment from [112] has localised battering/crushing at one end suggesting that it was shattered through use as a hammerstone or maul. Three fragments of angular shatter were refitted from context [80] (see Refitting group 1, below) and it is possible that other, non-conjoining, fragments from the same shattered nodule are present in both context [80] and [112].

THE RETOUCHED TOOL ASSEMBLAGE

In total, 22 deliberately retouched tools were present, comprising 1.4% of the total assemblage: eleven in context [80] and eleven in context [112] (a further stray piece was recovered from context [32]). In addition, a few pieces of tool-making waste were also recorded.

MICROLITHS AND MICROBURINS

Thirteen obliquely-backed microlithic points were recovered, nine from context [80] <20>–<28> and four from context [112] <32>–<35>, together with two notched pieces (? microliths in process of manufacture) from [80] <29>–<30> and an unfinished piece from [112] <31> (fig 12; table 9, see *Endnote*).

Only two of the thirteen finished points are complete, <21> and <27>, and three (all from context [80]) have been burnt – two heavily so. Where it has been possible to determine form, most appear to belong to Clark's Class A type (1934, 56)/Jacobi's Type 1ac (1978, 16, fig 6), although one of the two complete examples <21> is an obliquely bi-truncated form of Clark Class C/Jacobi Type 3a. A majority were worked on broad blades conforming with microliths of so-called 'Star Carr' type (Reynier 2005, 18) although three, <20>, <22> and <33>, are worked on narrower bladelets up to 12mm in width that conform with microliths of so-called 'Deepcar' type (*ibid*, 22). Most have been retouched at the proximal end of their right lateral edges, although two were retouched at the left lateral edge, one of which (straight-backed piece <31>) retains its bulb of percussion.

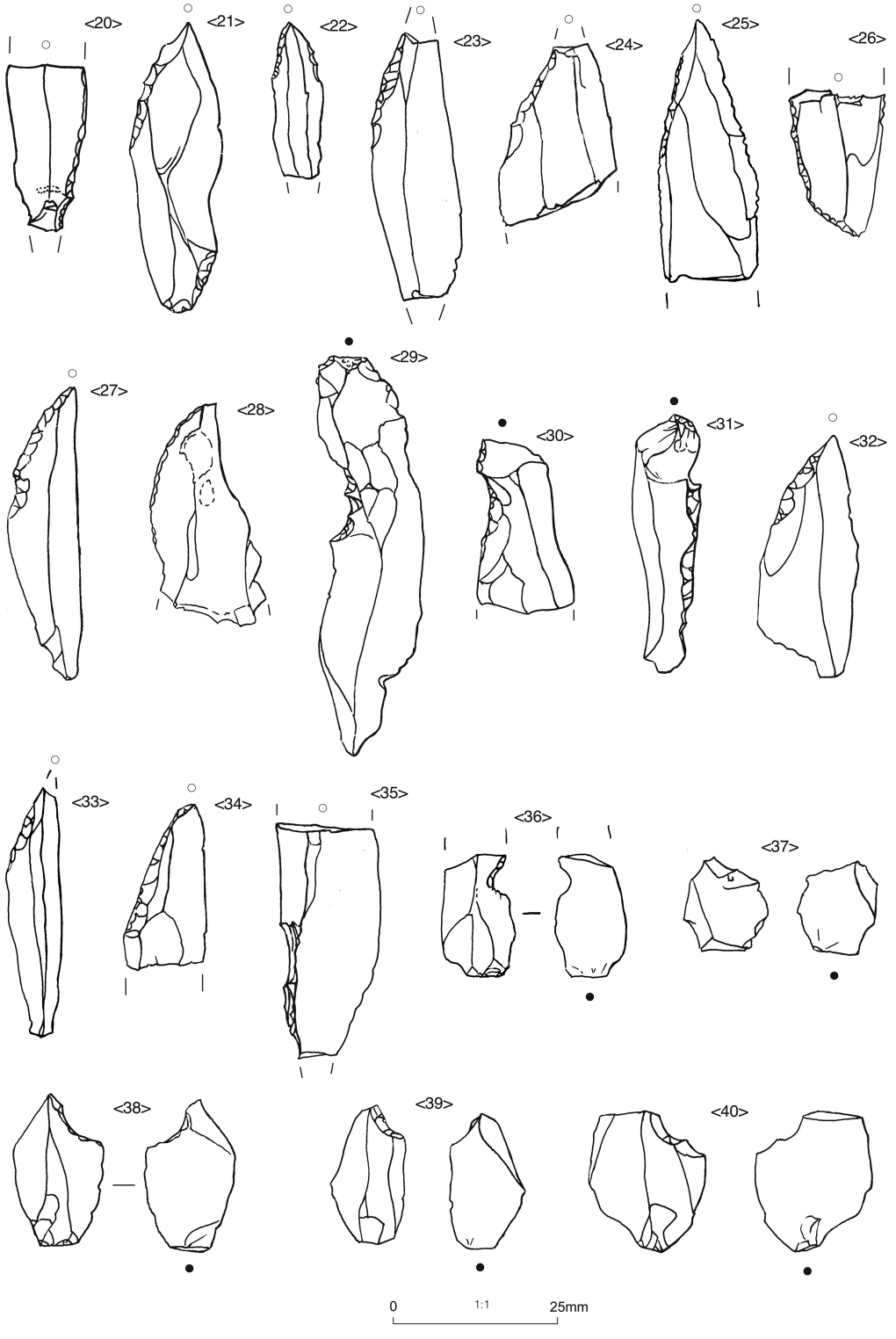

Fig 12 Esher Park Avenue. Microliths and microburins <20>–<40> (scale 1:1).

One further broken/unfinished piece bears traces of attempted retouch at its right distal edge. All the microliths were produced by the microburin technique and were worked from the ventral face.

Five microburins were recovered: one from context [80] <36>, and four from context [112] <37>–<40> (fig 12; table 10, see *Endnote*). All five had been notched at the proximal end of their right lateral edge, which corresponds with the majority of the microliths – most of which also display blunting retouch at the proximal end of their right lateral edges.

There are essentially two microlith populations represented by the microliths and microburins in contexts [80] and [112]. These comprise 'spent' microliths discarded among the other debitage, and absent examples (represented by the discarded microburins) used to repair or re-tool hunting equipment subsequently carried away from the site for deployment elsewhere. In terms of their breadth and thickness there is clear overlap between the microliths and microburins present in the assemblage, suggesting that the two are probably products of a single technology.

SCRAPERS

Four convex scrapers are present in the assemblage <41>–<44> (fig 13; table 11, see *Endnote*), all from context [112], of which only two are complete. They comprise short end forms with abrupt and semi-abrupt distal retouch. The two complete examples <41> and <42> are fashioned on flat tertiary flakes, one of which has a linear 'lipped' striking platform; the two fragmentary examples, one of which is fire-spalled, are on the distal ends of secondary flakes, one flat and one of robust 'nosed' form. Both of the broken examples appear to have snapped in use.

?BURIN SPALLS

No convincing burins are present among the assemblage, although there are three possible burin spalls, all from context [80], the longest of which <45> (fig 12), though broken at either end, is 43mm in length.

AXES/ADZES

At least five axe/adze fragments are present (fig 13; table 12, see *Endnote*): two in contexts [80] <46> and <47> and three in [112] <48>, with a further single fragment from hill wash deposit context [32] in trench 9/12 some 50m upslope to the west <49>. One of the two fragments from context [80] is burnt <46>; another from context [112] is fire-spalled at the blade <48>.

All appear to comprise fragments of slender form <50mm in width. Two of the pieces (from [80] <47> and [32] <49>) have been re-sharpened, although no actual re-sharpening flakes were present in the assemblage, and no obvious thinning flakes connected with axe production could be positively identified. However, it is possible that some small flakes generated during axe making and finishing lie unrecognised among the ordinary flake blanks (see above). One of the two re-sharpened pieces (that from context [112] <48>) was reused as a core from which several bladelets were detached; a similar occurrence was noted at Three Ways Wharf (Lewis with Rackham 2011, 80) and North Park Farm (Marples 2013, 114), where narrow adzes in the 'light' to 'medium' size ranges also predominated.

MISCELLANEOUS RETOUCHED PIECE

A single miscellaneous retouched piece was present in context [80]. This comprised the distal end of a broad cortical blade/narrow flake of opaque grey/brown flint with semi-abrupt dorsal retouch along one lateral distal edge. It is somewhat out of place among the rest of the assemblage, and may be of later Neolithic/Bronze Age date.

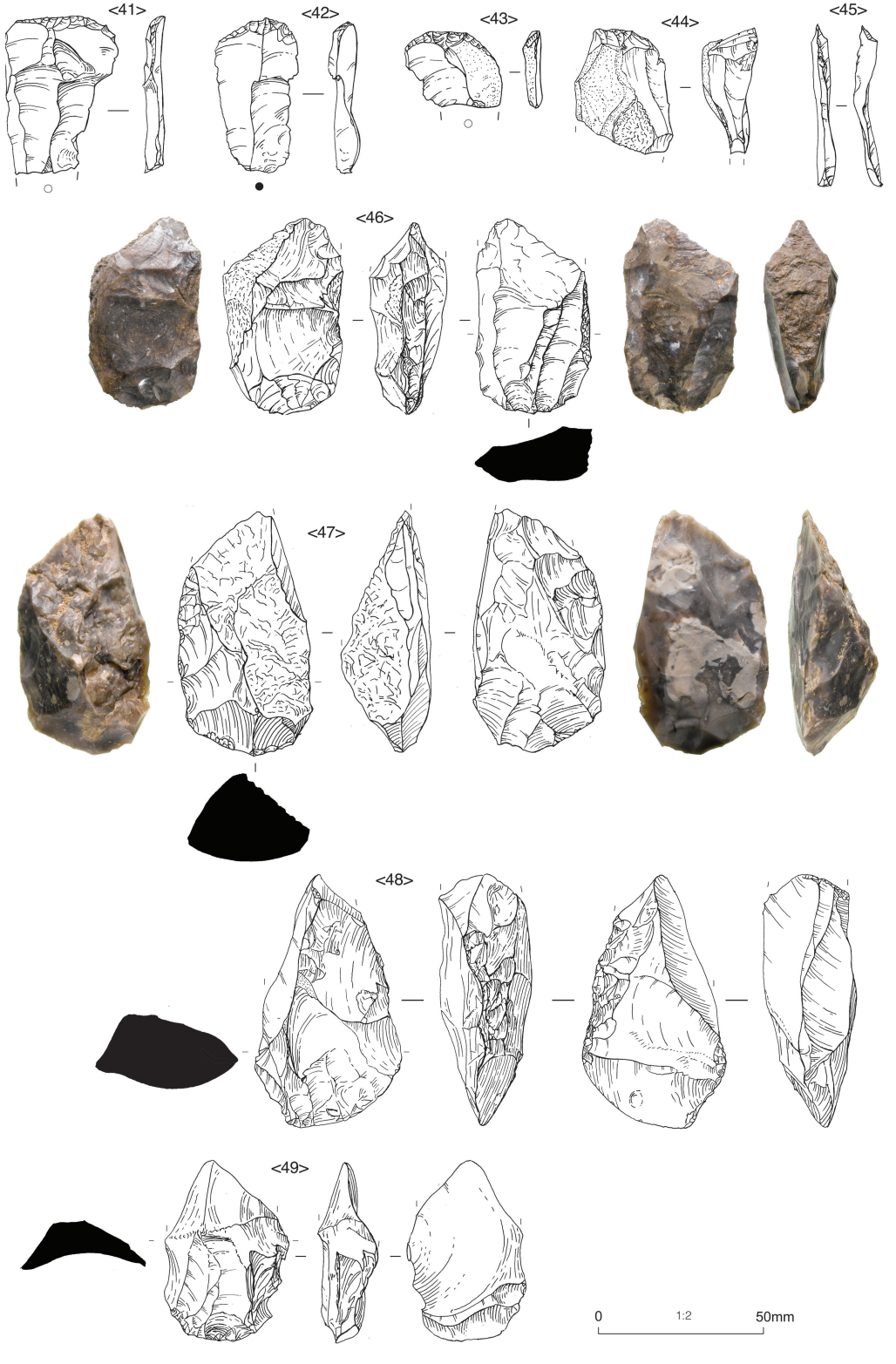

Fig 13 Esher Park Avenue. Scrapers <41>–<44>, burin spall <45> and adze fragments <46>–<49> (scale 1:2).

BURNT MATERIAL

A striking feature of the lithic assemblages from both context [80] and [112] is the consistently high number of pieces that have been affected by fire: 313 out of 819 (38.2%) in context [80], and 280 out of 703 (39.8%) in context [112], a combined total that represents nearly 39% of the overall assemblage (table 13, see *Endnote*). (Compare these figures with those obtained from Three Ways Wharf (Lewis with Rackham 2011, 154 and fig 173.)) The signs of burning range from highly calcined pieces fired to a brittle state and white colour, to others that have been more marginally affected by surface crazing and spalling. At North Park Farm large numbers of burnt struck flints were recovered, although not always in close association with hearths – the latter sometimes marked by tabular fragments of ferruginous sandstone used as hearthstones (Jones 2013a, 107–9 and 114). At Dorking nearly 24% of all worked flints were burnt, although the figure was as high as 80% for the contents of pit 412 (Marples 2016, 24 and 46–7).

In both Esher contexts it is the flake fragments and blade segments that appear to have been preferentially affected: >53% and >63% respectively in context [80] and nearly 47% and >56% respectively in context [112]. By contrast very few of the complete blades/bladelets in either context were heat affected. Moreover, six out of thirteen cores from context [80] and five out of nine cores from context [112] have been burnt. Three of the thirteen microliths (all from context [80]) have been burnt too, although this may have resulted from the cooking of meat in which the microliths were embedded (see Sidell *et al* 2002, 15; Jones 2013a, 114) – assuming that the latter functioned as armatures.

The reason for this high percentage of burnt pieces remains unclear: it could be connected to the pretreatment of poor flint to improve its knapping qualities, or simply that waste flint was swept up and tipped into a hearth as a practical means of disposal. The high number of burnt fragments and low number of burnt complete blades/bladelets might suggest the latter explanation is to be preferred. It seems unlikely that the heat generated in any burning of vegetation to encourage browse, for instance for deer, would have provided sufficiently high and/or sustained temperatures to affect the lithics in this way, and in any case this could reasonably be expected to have affected all components of the lithic assemblage.

REFITTING

The lack of three-dimensional recording on site and time constraints off-site meant that no concerted refitting programme was attempted. However, two small refitting groups were serendipitously identified among the material recovered from context [80]. Unfortunately, no refits between contexts [80] and [112] were identified, although non-conjoining fragments of the same nodule may be present in both.

Refitting group 1 comprised three conjoining fragments of irregular nodular shatter that appear to have been smashed apart with considerable force using a hard hammer. Close examination of the individual pieces ruled out damage inflicted by hoes or trowels during excavation, and it is likely that the damage was sustained as part of the initial testing or quartering of the nodule before further reduction. Other non-conjoining pieces of the same distinctively shattered nodule appear to be present in contexts [80] and [112].

Refitting group 2 comprised two core tablets <17>–<18> refitted at their ventral and dorsal surfaces (fig 12). The uppermost tablet measures 68 x 55mm and weighs 78g, while the lower companion piece measures 54 x 46mm and weighs 32g. These provide a clear demonstration of the progressive reduction in size of cores during the knapping process. A third tablet <19> of the same distinctively-marbled flint and buff cortex, although not conjoining, probably belongs to the same nodule; this measures 55 x 55mm and weighs 77g (fig 12).

CONCLUSION: DATING AND AFFINITIES

Manual excavation has recovered a modest but tightly focused lithic scatter on an east-facing slope of the Bagshot Formation overlooking a spring line at the junction with the Claygate Member. Although lying within two apparently discrete but coterminous sand horizons, close metrical analysis suggests that the scatter is likely to belong to a single, probably short-stay, phase of activity.

In the absence of any independent radiocarbon dates, the forms of the microlithic points within the scatter are of most help in establishing the date of the activity, although this must be tempered by the fact that only two of the points – both in excess of 40mm in length – are complete. Nevertheless, as table 7 (see *Endnote*) makes clear, virtually all the classifiable pieces are of Clark's Class A (1934, 56)/Jacobi Type 1ac (1978, 16, fig 6), comprising obliquely-backed forms. Microlith populations dominated by such forms are usually ascribed to the Early Mesolithic.

Work by Reynier (1998; 2005) among others has further suggested that Early Mesolithic assemblages can be subdivided into early 'Star Carr', later 'Deepcar' and latest 'Horsham' stages. Based on available radiocarbon dates these can be dated as follows: initial 'Star Carr' assemblages, *c* 9.6–*c* 9.5 ka BP; persistence of 'Star Carr' and appearance of 'Deepcar' assemblages, *c* 9.3–*c* 9.0 ka BP; and persistence of 'Star Carr' and 'Deepcar' assemblages, and the appearance of 'Horsham' assemblages, *c* 9.0–*c* 8.7 ka BP (Reynier 2005, 68; see also Conneller *et al* 2016). As at Three Ways Wharf (Lewis with Rackham 2011, 184), the present assemblage shares characteristics of 'Star Carr' and 'Deepcar' assemblages (ie broad obliquely-backed points with some narrower convex-backed points) – a conclusion supported by analysis of the core technology. Radiocarbon dates centring on 9200 BP have been adduced for the Three Ways Wharf assemblage (Lewis with Rackham 2011, 17) and for others at the site of the former Sanderson factory a few hundred metres to the north-east (Halsey 2006 and pers comm) and these dates are also likely to be broadly applicable to the Esher material. Elsewhere within the county a single date of 9300±30 BP from a pit containing an Early Mesolithic assemblage incorporating 'Deepcar' microliths has been published from Dorking (8625–8465 cal BC; Munnery 2016, 65). The earliest dates from North Park Farm appear to relate to a slightly later 'Deepcar'/'Horsham' Mesolithic (Marshall *et al* 2013, 100–5), but some of these are thought to be statistically inconsistent. Finally, a late 'Horsham' industry from Kettlebury 103 in the west of the county is associated with a group of four dates spanning *c* 8200–7900 BP (Reynier 2002, 226; Conneller *et al* 2016).

The tight concentration of lithic material spread through the sand horizons located in the north-east corner of trench 11 suggests that it comprises a discrete knapping episode that had been moved vertically down the soil profile over time, but which had been subject to correspondingly little horizontal movement. To judge from the numbers of burnt struck flints the scatter was probably hearth-centred. The site overlooks a spring-line where the permeable Bagshot Formation overlies the impermeable Claygate Member, and was presumably chosen for its ready access to sources of fresh water and to the animal game attracted to them. Spring water was contained to form many ornamental ponds hereabouts in the 18th century AD (eg Richards 2015, 11), and the spring-fed pond of Cranmere ('Crane Pool') that still exists within Sandown Park is mentioned in the Eynsham Cartulary of AD 1005 (Salter 1907; Electronic Sawyer S911). Furthermore, four other localised areas of lithics 'which occupied about a square yard each' were identified at the western end of the flat-topped hill overlooking Sandown Park some 350m to the north (Burchell & Frere 1947, 32). Wymer (1977, 273) provides a conflated (and probably highly selective) list of 136 surviving pieces of struck flint from here, including 24 cores, 92 blades/flakes, twelve scrapers, gravers, seven microliths and a microburin. A number of these pieces, including five microliths of Clark's Class A type (three of broad 'Star Carr' type and two of the narrower 'Deepcar' type), were illustrated in Burchell and Frere (1947, figs 6–9), together with two small quartzite hammer-stones (*ibid*, fig 10).

Tool types within the Esher assemblage are restricted and the balance is weighted towards microliths, axes/adzes and a handful of scrapers but no others – burins are represented by resharpening spalls only. As such, the limited tool assemblage and the tight concentration of debitage supports a short-stay, task-specific and – as noted above – probably hearth-centred phase of activity. This could have been concentrated on the butchering and cooking of a single animal kill and/or to the manufacture, maintenance and repair of hunting and foraging equipment. While no faunal remains survived in the mobile sandy palaeosol further light could be shed on subsistence strategies through microwear analyses. Where these have been undertaken elsewhere they have usually confirmed that microliths functioned as piercing armatures, and that scrapers were used to process fresh and/or dry hide, as at Bermondsey (Donahue 2002, 81–8) and North Park Farm (see Donahue & Evans 2013, 80–4). However, at Three Ways Wharf a somewhat more varied set of functions for various tool types was suggested, encompassing the deployment of microliths on wood, fish, meat and hide as well as projectiles (see Grace 2011, 171–80).

A concordance of the illustrated lithics is given in table 14 (see *Endnote*).

The prehistoric, Roman, Saxon and medieval pottery, by Lyn Blackmore

POTTERY FABRICS AND FORM

The pottery was examined macroscopically and using a binocular microscope (x20) and recorded on the MOLA Oracle database using standard codes for fabric, form and decoration. Each fabric has a basic fabric code, in general a two-, three- or four-letter abbreviation of the dominant fabric inclusions, in some cases with additional characters indicating additional inclusions (table 1; table 15, see *Endnote*). The numerical data comprises sherd count, estimated number of vessels (ENV), estimated vessel equivalent (EVE) and percentage of rim present.

Given the varied local geology (above), it would have been possible to produce a variety of fabric types locally, and as the site looks out towards the Rythe rather than the Mole, it might be suggested that, if there were local kilns, they were located to the south-east of the site, perhaps close to the confluence of the Rythe and a tributary, where four geological deposits occur in close proximity. However, without thin-section and chemical analysis, it is not possible to make more than broad observations.

PREHISTORIC

The prehistoric assemblage totals 153 sherds (116 ENV, 1.258kg, 0.69 EVE; table 13, see *Endnote*), mainly of Middle Iron Age date (4th–2nd centuries BC), but including a few potentially earlier forms. Nine rims and twelve bases were found, but there are no complete profiles. Most sherds are of small to medium size (average sherd weight *c* 11g) and the majority are abraded, making it difficult to estimate how many vessels were originally burnished or wiped, but decoration is rare. Geographically the closest contemporary sites are at Brooklands I (period B; Hanworth & Tomalin 1977; Close-Brooks 1977) and Brooklands II and III, Weybridge, and Wey Manor Farm, near Weybridge (Hayman *et al* 2015, 119–20); to date there are few other published Middle Iron Age assemblages from the area, and the most relevant sites lie closer to the Thames, some in Middlesex (see Jones 2017). Most rims and bases are shown in figure 14.

The fabrics

A particular problem for sites of this period is the range of fabric codes used in different reports, with widely varying levels of fabric description (eg Close-Brooks 1977; Grimes & Close-Brooks 1993, 350–2; Lyne 2002; Seager Thomas 2006, 109), which hinders inter-site

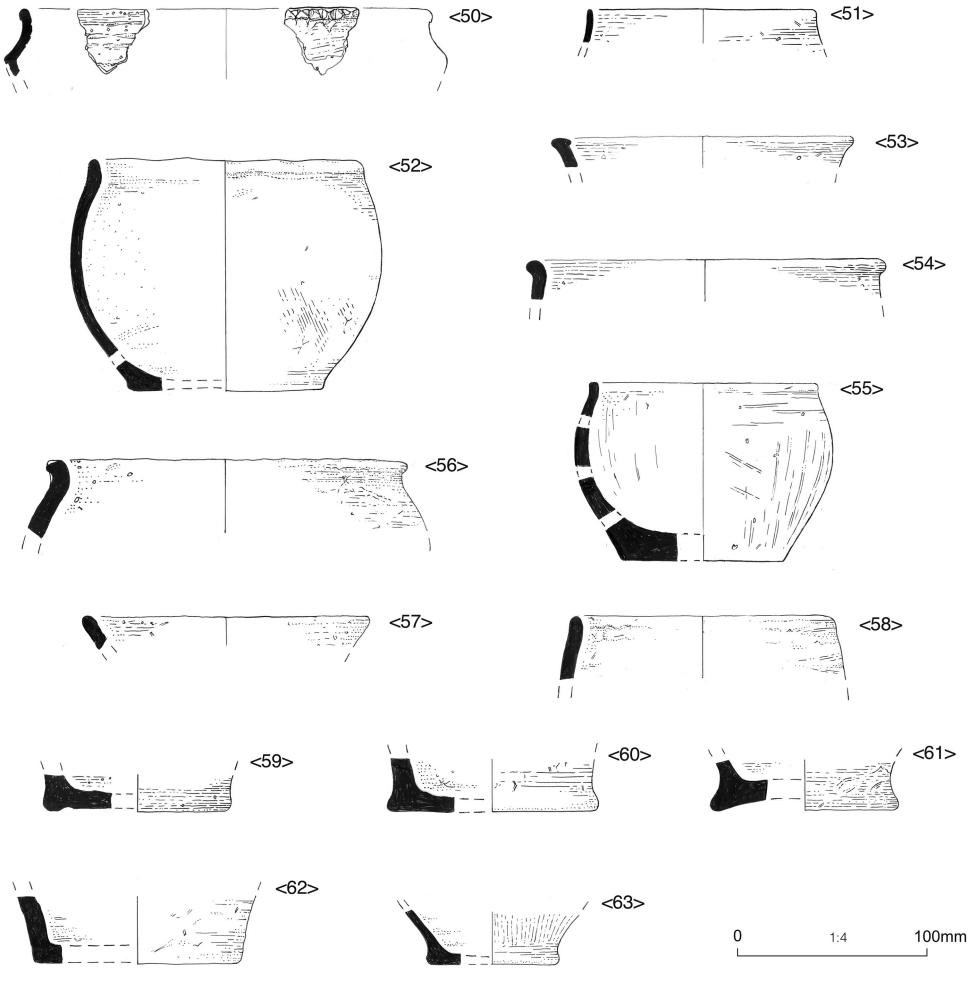

Fig 14 Esher Park Avenue. Prehistoric pottery <50>–<63> (scale 1:4).

comparison. This, together with the small size of the Esher assemblage, makes it difficult to classify and date the fabrics precisely or to place them within their regional context. The codes used for the present assemblage (table 15, see *Endnote*) are similar to those used by the Surrey County Archaeological Unit (Jones 2012a, 117–38), but differ from those recommended by the Prehistoric Ceramics Research Group (PCRG 1997) in that they do not distinguish between frequency/size of added inclusions.

As there clearly are differences within these broad fabric groups an attempt was made to classify the pottery by texture as well as inclusions but, as noted above, the local geology would make possible a wide variety of combinations. Without scientific analysis, all that can be said here is that at least three different clay types seem to have been used. Some 59 sherds are from pots that were probably made of Claygate Member clay or another of similar texture (listed as group 1 in the pottery archive); this contains extremely fine quartz sand, but as some sherds are virtually sand-free, the larger quartz grains in others, are probably added temper, possibly derived from the Bagshot Formation. A few sherds have a matrix closer to Reading Beds clay but lacking iron-stained inclusions and containing abundant sand that is probably a natural component (group 3). The other 94 sherds appear to have a matrix of London Clay or alluvial clay containing abundant fine sand (group 2).

As shown in table 15, iron-rich and sand-tempered wares are in the majority, with slightly fewer flint-tempered wares. Surface treatment is rare and, with only two exceptions, limited to wiping and burnishing. The main characteristic of the assemblage, and of most others in west London, noted on prehistoric and later sites both to the north and south of the Thames, is the presence of abundant iron oxides, which sometimes appear as large rounded nodules up to 5mm across. These occur in both flint-tempered and sand-tempered wares and in both clay groups 1 and 2, as do occasional organic inclusions. As with the iron-rich Lower Bracklesham Beds outcrop to the south at St George's Hill, Weybridge (Jones 2012b, 14), these wares could be relatively locally made, although production on the north bank of the Thames is also possible, notably at Laleham (Lyne 2002, 158).

Flint-tempered wares (codes FLIO, FLOR, FLQU, QUFL)

The flint-tempered wares vary in coarseness from very fine and thin-walled to quite coarse with flint inclusions up to 5mm across; examples of both are present in [32] and [109]. Of the iron-rich fabrics (FLIO), 35 sherds were classed as clay group 1; these contain abundant iron oxides, moderate ill-sorted fine to coarse flint (0.3–5mm across) and rare rounded quartz sand; one sherd from [32] contains grog or white clay pellets. The fourteen sherds in clay group 2 have more abundant very fine quartz sand with scattered larger grains between 0.5 and 1mm across. One sherd from [92] has a flint grit >7mm across, while another has finer flint inclusions and smooth internal and external surfaces that may originally have been burnished. Four other sherds from [32] have traces of burnish while nine ([32], [39], [92]) have wiped surfaces.

One of the five sherds with flint and organic inclusions (FLOR) belongs to clay group 2, the others to group 1; that from [63] has a sand-free matrix with abundant fine and very fine flint, and occasional larger flint grits up to 5mm across, with fragments of burnt-out wood/plant stem up to 5mm in length.

The division between FLQU and QUFL is somewhat subjective and reflects both the size and frequency of inclusions. In FLQU (eight sherds) the flint is generally coarser and more abundant, although the sand can be quite sparse, while the reverse applies to most sherds in QUFL. An exception is <51> ([92]), which contains moderate fine/medium flint (<1mm) in a group 2 clay. Four sherds are of clay group 1, of which one sherd from [32] has abundant added sand; the flint is mostly sparse, fine (<1mm) and unevenly sorted, but occasional large grits are present (<9mm across); the others belong to group 2. One of the eight sherds in fabric group QUFL has a virtually sand-free matrix with added sand, but the others appear to belong to clay group 2. In most cases the flint is fine (<1mm) and the surfaces are wiped, but some sherds have more abundant and coarser flint grits (in one sherd from [92] they are <5mm across). Two sherds from [63] and [109] also contain very fine plant matter.

Sand-tempered and iron-rich wares (codes GLAUC, IO, QU)

The iron-rich sandy wares (IO) are the same as the iron-rich flint-tempered wares but without the flint. Eight of the 28 sherds are of clay group 1, while twenty belong to group 2; forms include rims <55>, <56> and bases <58>, <59>, <60>. The 28 sherds of sand-tempered ware (QU) are mainly of clay group 2 but include four sherds of group 1 with abundant sand. Some vessels are wiped, but only one is burnished; forms include rims <62>, <63> and base <64>. Glauconitic wares are not common but amount to fifteen sherds from seven vessels, all originally burnished, including saucepan pot rim <54> ([92]). Glauconitic wares are generally dated to after *c* 300 BC and would appear to have gone out of use during the earlier 1st century AD (Blackmore 2014, 54).

Wares with organic inclusions (codes IOORG, QUORG)

Six sherds have an iron-rich fabric with organic inclusions (IOORG); these include rim <53> ([92]), and a sherd from a vessel with rough vertical striations ([90]). Six other sherds, including an everted rim, <57> and a thick base sherd from [90], have a sandier fabric with no iron (QUORG).

LATE BRONZE AGE/EARLY IRON AGE FORMS

Rim <50> ([92]) in FLQU, is decorated with a band of fingernail impressions around the outer edge and could date to the Early Iron Age (6th–4th centuries BC). The carinated bipartite profile has an unstratified parallel at Brooklands I, Weybridge (Hanworth & Tomalin 1977, fig 14.11), where similar decoration is seen on longer-necked jars with more everted rims (*ibid*, figs 14.1, 16.24, 19.151). Two rims with external finger-impressed decoration were also found at Sandown Park, although there is no mention of flint in the fabric description and the dating is unclear (Frere 1947, 43, figs 19.49, 19.50). In addition, there is a problematic sherd from [32] that could be from the shoulder angle of a carinated or bipartite jar, or a crudely formed base.

The one rim in QUFL, from [92], <51> is in a fine burnished type 2 fabric and may be from a Late Bronze Age cup or bowl (cf Grimes & Close-Brooks 1993, fig 36, although a similar rim is seen on a fineware carinated/bipartite jar (Bishop form 9) found at Sandown Park (Frere 1947, 43, fig 16.6)). A base from [90] is from a vessel in a group 2 clay with sparse to moderate fine flint inclusions, but has been stood to dry on a layer of coarser flint, a feature normally considered typical of the Late Bronze Age, and found locally at Brooklands I, Weybridge (Hanworth & Tomalin 1977, 24, fig 14.23) and Cranmere School (Cotton & Jones 2018, 35, fig 26, no 13).

One sherd from [34] is from the concave neck and shoulder of a jar with finger impressions around the carination (Bishop form 3) which, from the form of the neck, would appear to have been set very high on the body of the pot ([34]; cf Bishop 1971, 3, figs 2–3; Barclay 1995, fig 6.4). Similar decoration also occurs at Sandown Park (Frere 1947, 43, fig 19, nos 43–6) and on Early Iron Age sherds from Brooklands I (Hanworth & Tomalin 1977, fig 14). An externally burnished everted rim (<53> [92], IOORG) could also be of Early Iron Age date, resembling others from Sandown Park (Frere 1947, fig 19.51), Heathrow (Canham 1978, 26, eg figs 14.31, 19.113) and Uxbridge (Barclay 1995, fig 6.4).

MIDDLE IRON AGE FORMS

The pottery has been grouped according to the typologies presented by Bishop (1971) and Seager Thomas (2006). Globular bowls, bipartite jars and saucepan pots are typical of Middle Iron Age assemblages in the Thames Valley and south–central England, whereas rounded/shouldered jars with vestigial necks, convex-sided jars and footring bases have a wider distribution (*ibid*, 56). Owing to abrasion it is not possible to tell how many vessels were originally burnished, but at least eleven were recorded, of which five are glauconitic wares.

Shouldered jars

Shouldered jars (Bishop forms 2, 3) have a plain rim, sometimes with finger or fingernail impressions, short upright or slightly everted neck and rounded shoulder (Bishop 1971, 3, 11). The form is long-lived, originating in the Late Bronze Age and in some areas continuing into the Middle Iron Age (Seager Thomas 2006, 57). Rim <56> ([94]; QU) is from a large, thick-walled jar of Bishop type 2, although as the sherd is abraded (and possibly heat-altered) and the rim is damaged, it is impossible to be sure of the exact angle or profile, or determine whether it was originally finger-impressed. A possible parallel is a much larger jar from

Ashford Prison, dated to the Middle Iron Age (Seager Thomas 2006, fig 55.3). Similar forms are also known from Wisley, dated to the Early Iron Age (Lowther 1945–7, 32, fig 1, no. 5, fig 4, no. 54), and from Caesar's Camp, Heathrow (Grimes & Close-Brooks 1993, 356).

Globular bowls/slack-shouldered jars

This bowl form (Bishop form 11) is most typical of the Midlands and upper Thames Valley (Harding 1972, 196). Of the two examples, <55> ([90]; IO), represented by eleven sherds, has horizontal and vertical scoring on the body and the remains of a splayed flat base 17mm thick. The rim form and decoration are noticeably simpler than those of the bead-rimmed bowls found at Wisley (eg Lowther 1945–7, fig 3.30, 3.34, 3.37, 3.38) and at Ashford Prison (Seager Thomas 2006, 57, figs 53.6, 56.1). Rim <52> ([92], QU), with associated splayed base (10mm thick), has a very slight bead and internal bevel, a feature of some globular forms found at Brooklands I (Hanworth & Tomalin 1977, fig 15.36, 15.37), Laleham (Lyne 2002, fig 10.5) and at Ashford Prison (Seager Thomas 2006, fig 53.3, 54.1, 54.2), and related to the 'pointed rim' form also noted at that site (*ibid*, 68). The unburnished rim <58> ([109], QU) is quite plain with a rounded top and could be a local copy of a saucepan form (cf *ibid*, fig 52.5), from a convex-sided jar, or from a slack-shouldered jar (Bishop form 5) with a broader base than the globular bowls, although less developed than that from Ashford Prison (cf *ibid*, 58, fig 54.5).

Saucepan pottery

The burnished rim <54> ([92]; GLAUC) is from a saucepan pot (Bishop form 12), a form first known in the 4th century BC, but more common in later contexts; bead rims as seen on <54> are considered a 3rd century BC or later development (Seager Thomas 2006, 56–7). Undecorated saucepan pots with plain or grooved rims are present at Wisley (Lowther 1945–7, figs 2.15, 2.17), at St Ann's Heath School, Virginia Water (Jones 2013b, 80) and at Ashford Prison (Seager Thomas 2006, 57, figs 51.1, 52.6), and given the overall plainness of the Esher assemblage, it seems likely that <54> was also undecorated.

Other rims, bases and body sherds

The angle of rim <57> ([4], QUORG) is problematic but it could be from a Middle Iron Age S-profiled jar (part of Bishop's form 11), a form found in Essex at Little Waltham (Drury 1978, types 11 and 14) and at Stanford Wharf (Biddulph & Stansbie 2012, 5) but less common in this part of the Thames Valley, although possibly present at Heathrow T5 (Every & Mepham 2010, fig 13.103, 13.106, 13.111).

At least eleven bases are present, some already noted above. Of the others, one in FLIO has a thickness of 13–17mm. Three are present in the IO fabric group, all from [109], some with traces of burnish; one is flat (<59>), one is recessed (<60>) while <61> has a concave underside. It is likely that these derive from globular bowls (above; cf Harding 1972, pls 60, 61; Bishop 1971, 3, fig 1). One is present in fabric QU, <62> ([109]), while a base 17+mm thick from [90] is in fabric QUORG. Two bases in glauconitic fabrics were found in [42] (<63>) and [109], the latter possibly of pedestal form and 12–22mm thick.

No body sherds are obviously decorated, but a few have scoring or striations, perhaps from wiping with grass. In addition to the globular bowl <55> ([90], IO), such marks were also noted on sherds from [92], [94] and [32].

SAXON POTTERY

In total there are 378 stratified sherds (193 ENV, 4.128kg, 1.25 EVE; table 16, see *Endnote*) of Anglo-Saxon pottery. Although some sherds are abraded or laminated, most are of a good size, and in relatively fresh condition; the average sherd weight is *c* 11g. Several rims but no bases were noted. The range of fabrics is limited to two main groups and one/two minor groups, and the absence of sandstone-tempered wares of the type that characterises most early Saxon settlements in the London area (for descriptions see Blackmore 2008, 176–81; Blackmore & Vince 2008, 153–6) suggests that the assemblage probably dates to the late 6th or 7th centuries AD. Most rims are shown in figure 15, together with the decorated sherd and accessioned finds.

The fabrics and forms

Sand-tempered wares

The first main fabric group comprises 88 sherds (60 ENV, 825g, 0.33 EVE) from vessels in sand-tempered wares, which range from very fine (recorded as fabric ESAND) to medium (ESANA, ESANB) and coarser (ESANC; Blackmore 2008, 176). Almost all have some

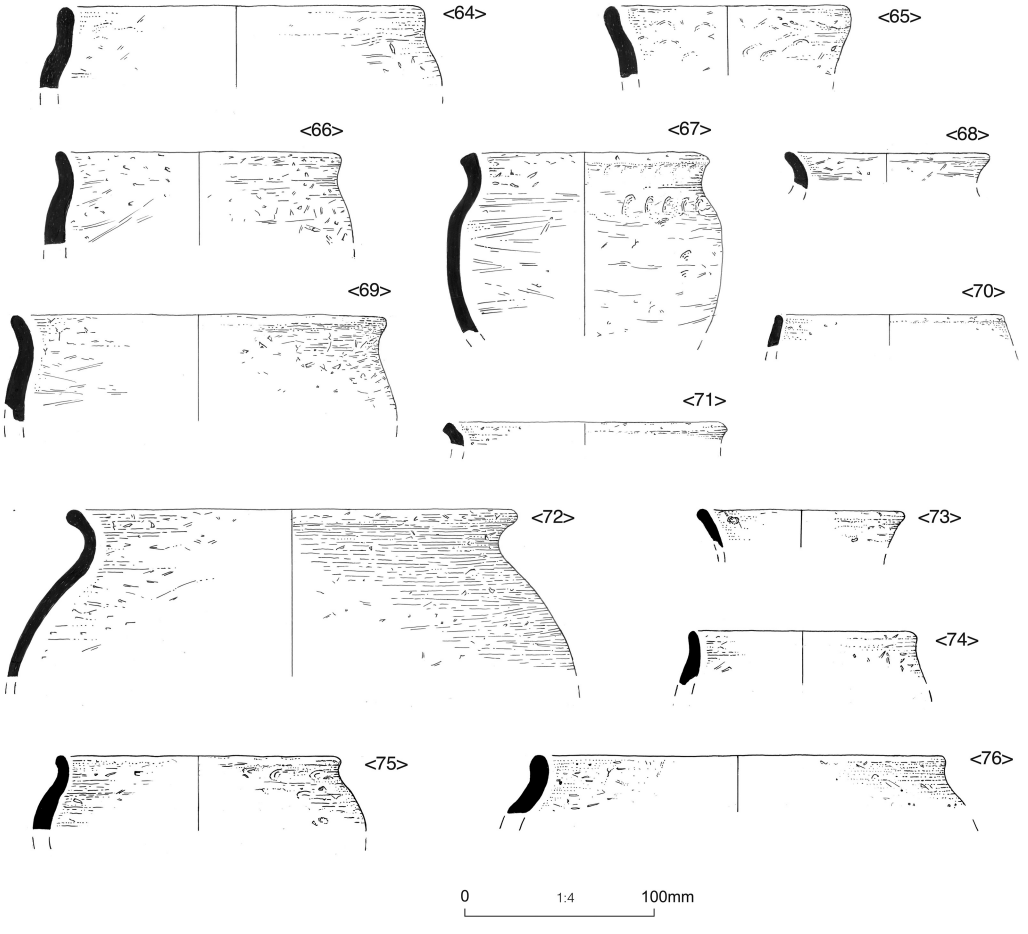

Fig 15 Esher Park Avenue. Saxon pottery <64>–<76> (scale 1:4).

organic content, denoted by the suffix 'O'. Other sherds are characterised by the presence of iron oxides and have the suffix 'I' ([35]). These wares were probably in common use in the later 5th and 6th centuries, but died out as chaff-tempered wares became more popular.

Most sherds were recorded as being from jars, but nine sherds with internal or external sooting are from three cooking pots, while two internally burnished sherds ([4]) and a rim in ESANAO, <75> ([3]) are probably from bowls. Five other rims are present, including part of an ESANCO jar with short upright rim and slack, rounded shoulder, <74> ([8]). Both slack- and convex-shouldered forms with upright rims are common in the London region in the Early Saxon period (Blackmore 2008, 183–4), and continue in chaff-tempered ware in the Middle Saxon period (Blackmore 2003, 233; 2012, 236, fig 141, <P11>). Everted rims such as <73> (fig 15; [7], ESANCO) are also long lived, but more common in the Middle Saxon period (*ibid*, 184). The angle of the unillustrated rim from Open Area 3 ([70], ESANAO) is uncertain but it would appear to be from a jar with concave neck and an inverted rim form.

Greensand-tempered and sandstone-tempered fabrics are found elsewhere in the region, mainly in the Early Saxon period but also in later contexts in Lundenwic (Blackmore 2008, 176–8; 2012, 241–4); their absence here is intriguing and must reflect the date of the assemblage and/or personal preferences.

Chaff-tempered wares

The second group comprises chaff-tempered wares (Blackmore 2008, 179–81; Blackmore & Vince 2008, 155–6), which total 290 sherds (133 ENV, 3.303kg, 0.92 EVEs). The main fabric, coded as CHSF, has a fine silty matrix like that of ESAND, with abundant fine sand (251 sherds), while the other (coded as CHFS) contains more abundant coarser sand. There are no obvious calcareous inclusions, a feature of chaff-tempered wares from Staines (Blackmore & Vince 2008, 181; Vince 2003).

This type of pottery was probably introduced in the 5th century, became more common in the 6th century and is the dominant type in the trading settlement of Lundenwic up to *c* AD 730/50. It probably continued in use later than this in the hinterland, although the claim that it was still being used in the 11th century at Old Windsor is dubious (Blackmore & Vince 2008, 179).

At least twelve rims are present (fig 15), of which eight are from [8]; two are from [7] while single rims were found in [63] and [74]. Rims <64> ([7]) and <66> ([8]), and probably the unillustrated rim from [63], are from slack-shouldered jars/cooking pots with a slightly closed, short upright or slightly everted neck and plain rim, as described above (Blackmore 2008, 183–4), but <76> ([63]) has a more rounded shoulder, while <77> ([8]) has a more developed beaded rim. Rims <68>, <69>, <71> and <72> ([8]) and probably the unillustrated rim from [74], are more everted; <69> is from a slack-shouldered jar but <71> has a more globular body.

One small vessel appears to be convex-sided with a plain inturned rim (<70>, [8]). Of particular interest are two sherds from a jar with comb-point decoration, <77> ([58], CHSF), which seems to be a late 6th–7th century trait, concentrated in the Thames Valley and adjacent counties (Myres 1977, 64–5; 353–4); vessels with this form of decoration have now been found on four sites in the trading settlement of Lundenwic (Blackmore 1988, 85; 1989, 75–7; Jarrett 2004a, 49; 2004b, 78, 82), while other finds include an urn from Croydon (Myres 1977, fig 362, no 332).

MEDIEVAL POTTERY

Three sherds from the sagging base of a cooking pot in early medieval sand-tempered ware (EMS; *c* AD 970–1100) were found in [59] (trench 4), while single sherds of EMS and early Surrey ware (ESUR; *c* 1050–1150) were found in trenches 7 and 11 ([58]) and 12 ([32]). The

latter equates with the IQ fabric group in the Surrey series respectively (Jones 1998, 219–20, 232–3; 2010, 147, 151, 269–70).

The Anglo-Saxon accessioned finds, by Lyn Blackmore

INTRODUCTION

Other than pottery, very few finds were recovered. All have been recorded on accession cards and on the MOLA Oracle database, using standard codes for material and object type and noting dimensions.

STONE

Part of a well-used hone (length 64mm, W 23mm, Th 13mm) of fine-grained grey sandstone with sub-trapezoidal section (<4>; fig 16) was found in hill wash deposit [63] in Open Area 6. It is probably of Saxon date but cannot be closely dated.

CERAMIC

Twenty fragments from up to five Anglo-Saxon loomweights were found; one is from fill [4] of pit [6] (<1>), while the others are from the hill wash deposits in Open Area 6: one in [3] (<7>) and the others in [63] (<2>, <3>, <5>, <6>). All are made of London clay/fine brickearth with fine organic inclusions, mostly burnt out.

Classification of loomweights is hindered by the fact that, being handmade, their apparent diameter and profile can vary considerably from one side to the other, and here it is made more difficult because the fragments are small and abraded, with no obviously joining pieces. However, the largest fragment, <2> (fig 16) appears to be from an annular weight (diameter of central hole wider than the thickness of the ring), as it has a diameter of *c* 130–140mm, with a ring thickness of *c* 40mm (height *c* 45mm) and a central hole of *c* 60–70mm. Fifteen other pieces from [63] (<3>) are probably from the same weight, but fragment <5> could be from a different weight. Annular weights are conventionally considered as Early Saxon (AD 450–650), although they do occur in later contexts (Cowie & Blackmore 2008, 149, 195–7; discussion below).

A concordance of the illustrated pottery and accessioned finds is given in table 17 (see *Endnote*).

Discussion

The archaeological excavation at Esher Park Avenue has demonstrated that the area on which the site lies was much favoured as a settlement during the Mesolithic, Iron Age and Saxon periods. This has increased knowledge of settlement patterns in the locality.

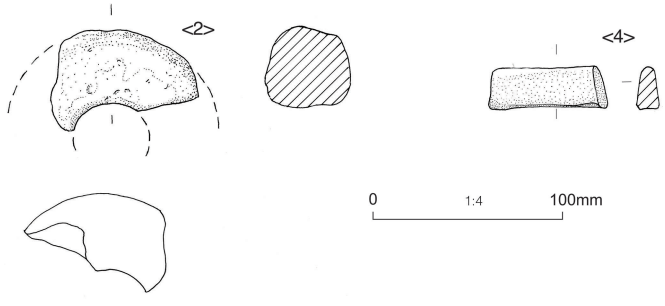

Fig 16 Esher Park Avenue. Saxon ceramic loomweight <2> and sandstone hone <4> (scale 1:4).

MESOLITHIC

The tightly focused flint scatter dispersed down the soil profile in trench 11 is likely to represent all that remains of a short-stay, probably hearth-centred, episode of activity that took place in the Early Mesolithic, and probably sometime during the period *c* 9.3–*c* 9.0 ka BP. Now marked only by the remains of a knapping scatter, the site was carefully chosen to exploit the potential of an elevated position on the watershed between the river Mole to the west and the Rythe stream to the east. In addition, it overlooks the spring line at the junction of the Bagshot Formation with the Claygate Member that lay a few tens of metres downslope to the east. From here natural resources such as flint, forest flora, fresh water and animal game (eg deer, aurochs and wild pig) could be exploited and processed and tool kits repaired, perhaps as part of a seasonal round of activity enacted by a band of mobile hunter-gatherers. Similar interventions in the local landscape – perhaps by the same or similar groups of people – have been recorded on the western end of The Warren, some 350m or so to the north of Esher Park Avenue (Burchell & Frere 1947). Here four flint scatters, each occupying 'about a square yard', could be dated to the Early Mesolithic, again on the basis of the presence of obliquely-backed microliths.

While Esher Park Avenue might not conform to a 'persistent place' in the local Mesolithic landscape – as defined by Barton *et al* (1995) and further elaborated for the county by Jones (2013a, 115–16) – in that it is not the scene of repeat visits over an extended period, the locality would have offered a number of long-standing advantages to hunter-gatherer groups. First, its topographic position on the watershed between the Mole to the west and the Rythe stream to the east provided elevation with a potentially good viewshed over wide tracts of landscape, as well as access to the Thames and the Surrey hinterland along either valley floor. Secondly, a range of raw materials would have been easily accessible: flint from the Black Park and other gravels and flora including seasonal fruits, nuts and berries; the presence of the freshwater springs a few tens of metres downslope would have attracted mega-fauna such as deer, aurochs and wild pig.

Esher Park Avenue is likely to represent one thread in a complex skein of inhabitation and exploitation on the part of local Early Mesolithic hunter-gatherer communities variously employing 'intercept' and 'encounter' subsistence strategies (as Reynier 2005, figs 8.1 and 8.2) in the local, probably *Pinus/Betula*-dominated, woodland (see Branch & Green 2004, 12). However, given its tight focus and modest scale the site perhaps best conforms to Lewis with Rackham's Model 4: 'small-scale, seasonally determined activity' (2011, 213–14). That similar interventions were being made elsewhere in the local landscape is demonstrated by the finds from The Warren and Cranmere School to the north (Burchell & Frere 1947; Marples 2018) and possibly the edge of Claremont Park to the south-west (Hutchins 2001, 7); quantities of lithics have also been collected on the left bank of the Mole at Southwood Manor Farm, Hersham (eg Wymer 1977, 287).

In recent years Surrey has produced a number of extensive, if usually mixed, Early Mesolithic flint assemblages (eg Powell & Leivers 2012; Jones 2013a; but see also Sidell *et al* 2002, 11–17, figs 8–15, 69–77; Marples 2017, 103–4, 136, fig 3.3.1; Poulton *et al* 2017, 235–9), including several within the greater Mole catchment at Ockham Common, Fetcham and Dorking (eg Munnery 2014; 2016, 66, fig 43). The particular importance of the Esher Park Avenue assemblage lies in the fact that it represents the remains of a relatively undisturbed short-stay occupancy by a hunter-gatherer group which, on present evidence, probably occurred sometime during the currency of a mixed 'Star Carr'/'Deepcar' microlith assemblage *c* 9.3–*c* 9.0 ka BP.

IRON AGE

The Middle–Late Iron Age circular structure (Structure 1) within trench 12 is difficult to interpret. The associated pottery found close by certainly gives the structure a domestic

character, but its small size (3.80m in diameter) and the lack of an eaves-drip gully and floor surfaces rules out a standard layout for a roundhouse (generally between 5 and 15m in diameter) and is more typical of the Bronze Age house plans, such as at Itford Hill and Amberley Mount in Sussex, where the huts are on average between 4 and 5.50m in diameter (Musson 1970, 268).

The structure may therefore be a small 'hut' for occasional shelter. Its location on the watershed provided a commanding position overlooking the Mole to the west, the Rythe stream to the east and the Thames Valley to the north. The early Iron Age settlement at The Warren, some 350m to the north, indicates a continuity of settlement patterns within the locality.

The lack of evidence for Bronze Age activity at Esher Park Avenue and The Warren suggests the preferred environment for settlement at that time was lower down the slope on the Kempton Park gravel and Langley silt, closer to water sources. Here, excavations at Cranmere School uncovered a settlement dating to the Middle–Late Bronze Age (Randall & Weller 2018). By contrast, only a single sherd from the neck of a Bronze Age collared urn was found at the High School in More Lane just to the west of The Warren.

The Iron Age pottery

In terms of dating and interpretation, understanding of Iron Age activity in north Surrey has improved since the overviews by Bishop (1971), Canham (1976) and Hanworth (1987). To the north, west and south-west of Esher there are new pottery assemblages from Thorpe Lea Nurseries (Jones 2012a, 131–7), from Wey Manor Farm, near Weybridge (Hayman *et al* 2015), Brooklands II and III (awaiting publication; Jones 2012a, 156), and St Ann's Heath School, Virginia Water (Jones 2013b, 89–93). To the east, occupation sites have been identified at Tolworth and Old Malden (Poulton 2004, fig 4.1; Jones 2012b, 12–17, 156–7, fig 1.10). There are also new sites to the north of the Thames, notably in the Heathrow area (Greenwood 1997, 156–8; Wait & Cotton 2000, 109–10; Seager Thomas 2006; Seager Smith 2015). The source of the pottery found at Esher Park Avenue is unknown, but at least three different clay types are apparent, which may reflect the location of the site at the interface of different geological deposits (above, Introduction), It is also possible that some of the pottery was made at Laleham, just to the north of the Thames, where evidence for production has been found (Lyne 2002, 158; Taylor-Wilson 2002, 141). The glauconitic wares could be from the Medway valley, Kent, or from Essex, although as glauconite also occurs in some Anglo-Saxon wares from Lundenwic, thought to be from Surrey, they could be more locally made. Saucepan pots are most typical of Hampshire and Berkshire and, although uncommon in Surrey and Middlesex, they were also copied in local fabrics.

The proportion of flint-tempered wares (*c* 46% by sherd count, *c* 59% by ENV, *c* 37% by weight) and lack of developed rim forms at Esher Park Avenue suggests that the main period of activity dates to early in the Middle Iron Age, but the presence of glauconitic ware and at least one saucepan pot might make this closer to *c* 300 than *c* 400 BC. There are no obvious Bronze Age finds, and only two sherds have finger-tipped decoration. There is little overlap between the Esher Park Avenue assemblage and that from Sandown Park, Esher which, although thought at the time to reflect movement down the Thames from South Oxfordshire/Berkshire in the 3rd century BC, is rather earlier in character (Frere 1947, 43–6). There are also differences between the Esher assemblage and those from the relatively nearby sites of Wisley (Lowther 1945–7), Brooklands I (Close-Brooks 1977) and St Ann's Heath School (Jones 2013b, 81–93) in that these all have a greater mix of Early and Middle Iron Age forms, with the latter including a number of decorated vessels. The Esher Park Avenue assemblage, by contrast, seems to be more homogenous and quite plain. However, similar forms are present in Middle Iron Age deposits at Wey Manor Farm (Hayman *et al* 2015, 30, 73, 119–20, figs 2.12, 2.13), at Thorpe Lea (Jones 2012a, figs 5.32, 5.33) and at St Ann's Heath School (Jones 2013b, 89–93, figs 2.37, 2.38). To the north of the Thames, the

use of sandy and iron-rich fabrics and the same range of forms, notably globular bowls and saucepan pots, can also be seen at Ashford Prison (Seager Thomas 2006, 67–8), Imperial College Sports Ground (Seager Smith 2015, 160), Caesar's Camp, Heathrow (Grimes & Close-Brooks 1993, 356–7, figs 25, 27, 28, 29, 33), at Perry Oaks, Heathrow (Brown *et al* 2006, 172–5; Every & Mepham 2006) and Heathrow T5 (Lewis *et al* 2010, 219, figs 4.7, 4.15, 4.17, 4.25, 4.27, 4.28; Every & Mepham 2010). Glauconitic wares, including burnished saucepan pots of ?Hampshire/Berkshire type were found at St Ann's Heath School together with a few decorated bowls (Jones 2013b, 75–6, 80–2, figs 2.37, 2.38). No such saucepan pots, and no decorated bowls were noted among the 3286 sherds (21.796kg) of Middle Iron Age pottery found at Perry Oaks or the 1159 sherds (11.903kg) from the later excavations at Heathrow T5, both assemblages dated to *c* 400–100 BC (Every & Mepham 2006, 4, 17–19, table 3; 2010, 37–41). Locally made saucepan pots are, however, present on both sites (Every & Mepham 2006, 17, 24, ills 40, 42, 47, 50; 2010 47, figs 13.102, 13.104, 13,109, 9, 13.112; Leivers *et al* 2010, 5, table 2; Lewis *et al* 2010, 219). This supports the view that the London area forms the eastern fringe of distribution of saucepan pottery and globular bowls. The area also forms the western fringe of Medway Greensand fabrics (Wait & Cotton 2000, 112; Every & Mepham 2010, 41), giving a wider variety of fabrics and forms than in other areas. While the distribution of different fabrics and forms is patchy, and may reflect a number of different factors, the sites noted here all belong to a north Surrey/Thames Valley ceramic tradition, which includes wares from further afield, used both in small dispersed settlements such as Esher Park Avenue, and in larger areas of occupation, such as the Heathrow region (Wait & Cotton 2000, 109).

The location of the north Surrey settlements around the Wey almost certainly reflects the development of ironworking in the area during the Middle Iron Age, if not earlier (Jones 2012b, 14, 16–17). Whether this applies to Esher Park Avenue is unclear, but the pottery could be broadly contemporary with that from within the roundhouse and from the western ironworking area at Brooklands I (*ibid*, figs 18, 19), and the earlier wares in the period 1 (300 BC to AD 1) assemblage from Laleham (Taylor-Wilson 2002, 140–2; Lyne 2002, 153–6), from Wey Manor Farm, near Weybridge (Hayman *et al* 2015, 30, 73, 119–20, figs 2.12, 2.13) and in the Heathrow area (Wait & Cotton 2000, 106; Brown *et al* 2006, 171–201, fig 4.17; 2010, 213–72), although slightly later than Stockley Park, Dawley, which dates from the 5th century to the last quarter of the 4th century BC (Rayner in prep). However, unlike Brooklands II, Laleham and Thorpe Lea (Jones 2012a; Hayman *et al* 2015, 120) and the Heathrow sites, there is no ceramic evidence at Esher Park Avenue for continuity into the Late Iron Age or Roman periods, and occupation on the site may have been short-lived.

SAXON

The Saxon ard marks, pits and gully within trench 10 are rare evidence of 6th or 7th century settlement and cultivation within Esher. The postholes recorded further up the hill, within trench 13, may represent associated structures, but little can be said for their size and shape. The ard marks had cut the well-drained sand and indicate that cereals were cultivated on the site. The fills did not produce any samples of crops, but the evidence of cereals and other crops came from a sample from the fill of the large pit [12]. While barley was the most abundant cereal in terms of grains, it is evident from the number of chaff fragments that wheat was also an important cereal in the settlement. The use of the Saxon ard is well documented but the ard marks preserved here represent a rare survival as such traces are unusually obliterated by later ploughing (McKerracher 2016).

The presence of emmer wheat (*Triticum dicoccum*) is interesting as it was previously thought that free-threshing wheats (*T. aestivum/turgidum*) had, by the early Anglo-Saxon period, largely replaced the glume wheats (mostly spelt with some emmer) preferred by the Romans. Over the last twenty years, remains of glume wheats have been recovered from a number of Saxon sites in the South East, including two from the upper and middle Thames Valley, where

emmer was a significant component of the charred assemblages (Pelling & Robinson 2000, 117), and Prospect Park, Harmondsworth, where both emmer and spelt (*T. spelta*) were found (Hinton 1996, 43–7). Occasional chaff fragments and provisionally identified grains from these species have been found at a number of other sites around London, especially in the Harmondsworth area (Giorgi 2008, 159). Emmer and spelt require a lower input in terms of cultivation, fertiliser and weeding than does bread wheat, but yields of the latter are potentially higher, and it has been suggested that the changeover happened when high yield became the most important factor. It is possible that cultivating both varieties, either mixed or as separate crops, may have provided insurance against total crop failure in a poor year. It is also said that emmer makes particularly tasty bread, so may have been preferred for this purpose.

Apart from the cereals, the most interesting botanical finds were seeds of flax (*Linum usitatissimum*) and hemp (*Cannabis sativa*), both of which were cultivated for their strong stem fibres, used in the manufacture of textiles and rope. The seeds of both plants have a high oil content and make nutritious foods, so may have been used to enrich cereal-based pottage (Hagen 1992, 59) as well as being pressed to produce linseed and hempseed oil. While the seeds are a strong indication of consumption, no evidence was found for cultivation or processing of these crops on the site, in the form of seed capsules or other vegetative remains.

Saxon pottery and finds

Scientific analysis of chaff-tempered pottery from sites near Staines and elsewhere in the London area has shown that fabrics found in Staines and Barking differ from those closer to the city, suggesting production at different centres supplying markets within a radius of *c* 10–15 miles (Blackmore & Vince 2008, 155–6; 2008b, 181), and the same probably applies to the sand-tempered wares. The lack of Greensand-tempered fabrics that are more typical of Surrey and are found elsewhere in the region (Blackmore 2008, 176), including Lundenwic (Blackmore 2012, 243–4), is intriguing. Dating is problematic, but it would seem that the first Early Saxon sites (ie dating to the late 5th/early 6th century) have a wide range of fabric types. However, those dating to the mid-6th century and later generally have a much narrower range of local ware types that continued in use over a long period, and where more diagnostic types, such as decorated forms or imports, are absent they cannot be closely dated (Cowie & Blackmore 2008, 157). At Esher Park Avenue true sand-tempered wares are rare and there are no sandstone-tempered wares of the type that characterises most early Saxon settlements in the London area (Blackmore 2008, 177–8; Blackmore & Vince 2008, 154–5). The rim forms, and specifically the short upright rim on a slack rounded shoulder, are typical of the 6th and 7th centuries (Blackmore 2008, 193–1), but the most diagnostic find is the sherd with comb-stamped decoration from [58], which probably dates to the 7th century (see above).

The homogeneous nature of the pottery assemblage, which comprises a limited range of fabric types and is the same in all contexts, thus points to a date in the late 6th or 7th centuries for the assemblage, *c* AD 575–675 (or possibly later) and this is supported by the other finds. The pottery is comparable with that from broadly contemporary sites at Brooklands I, Weybridge; (Hanworth & Tomalin 1977, 46–7), Wey Manor Farm (Jones 2015, 73–5, figs 4.7, 4.8; Hayman *et al* 2015, 125), the RMC Land and Imperial College Sports Ground site, near Heathrow T5 (Lewis *et al* 2010, 332, fig 5.12; Mepham 2010; 2015, 169–70) and other sites along the Thames, including Staines (Jones & Moorhouse 1981; Jones 2010, 148–9, fig 2.57), Kingston (Hawkins 1998, 276; Hawkins *et al* 2002; Cowie & Blackmore 2008, 59–61, 108–114) and Clapham and Battersea (*ibid*, 22–7, 101–5). The loomweights are too fragmented to be sure of their form, but others of the same date are known from elsewhere in north Surrey, notably at Brooklands I, Weybridge (Nevinson 1977, 48), Wey Manor Farm, near Weybridge (Jones 2015, 78–9, fig 4.9) and South Lane, Kingston (Hawkins *et al* 2002; Cowie & Blackmore 2008, 61, 108–14).

To conclude: the finds suggest that the occupation of the site dates to *c* AD 575–675 (or possibly later), and that it was sufficiently permanent to allow the construction of at least one loom for weaving, but either short-lived (spanning a generation or so) and/or conservative in its tastes. The community may have depended on local resources for its pottery supply and was not engaged in wider trade networks, although the comb-stamped sherds form part of a wider Thames Valley tradition (see above). This is the first Anglo-Saxon pottery to be found in Esher, and it gives new clues to the origins of the village, and possibly also St George's church, which is only 40m away. The only other Anglo-Saxon site in Esher comprises three burials found to the north at The Warren (Burchell & Frere 1947, 33–6; Hines 2004, fig 7.4), two of which each contain a sword and a spear; the other had a shield boss (group 3; Dickinson & Härke 1992, 14–17). These also date to the mid-6th or 7th century and so are possibly contemporary with the occupation at Esher Park Avenue.

Endnote

The tables listed below are available on the Archaeology Data Service website:
https://doi.org/10.5284/1000221
Select *Surrey Archaeological Collections* volume 102 and the files are listed as supplementary material under the title of the article.

Table 1 The composition of the period 2 pottery assemblage
Table 2 Plant remains from Esher Park Avenue
Table 3 Summary of total lithic assemblage, all contexts
Table 4 Detailed breakdown of the total lithic assemblage – all contexts
Table 5 Lithics and burnt unworked flint from all contexts – by context, trench, type and suggested date
Table 6 Lithic assemblage composition from contexts [80] and [112]
Table 7 Cores from contexts [80] and [112]
Table 8 Unmodified flint pebbles from contexts [80] and [112]
Table 9 Microliths and related pieces from contexts [80] and [112] – after Clark 1934 and Jacobi 1978
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ACKNOWLEDGEMENTS

MOLA wishes to thank Colin Nicholson of Octagon Developments Ltd for commissioning and funding the archaeological works and Gary Jackson of Surrey County Council for archaeological advice and guidance. Thanks are also due to the site staff Isca Howell, Gabby Rapson and Mark Wiggins. The project was managed for MOLA by Stuart Hoad (fieldwork), David Bowsher and Nicky Powell (post-excavation). Illustrations are by Juan Jose Fuldain (plans) and Gabby Rapson (finds), with studio photographs by Andy Chopping. The report was edited by Bruno Barber. MOLA is grateful to the journal's editors and referees for their suggestions and to Jo Richards for assistance with the historical sources.

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