Fig. 1: location of the site

Made in Dagenham: burial and pottery production in the Iron Age and Roman periods

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Introduction

An archaeological excavation on a gravel spur at the confluence of the Wantz stream and the Beam river (a tributary of the Thames) has added a community of Iron Age and Roman potters and farmers to the ancestral population of Dagenham. Oxford Archaeology was appointed by Halcrow Group Ltd to investigate the site (NGR TQ 502 836, site code BMV05, see Fig. 1) before the Beam Washlands Flood Storage area, a flood alleviation scheme and water habitat for local wildlife, was constructed by Halcrow on behalf of the Environment Agency. The fieldwork, carried out in 2005 and 2006, encompassed two

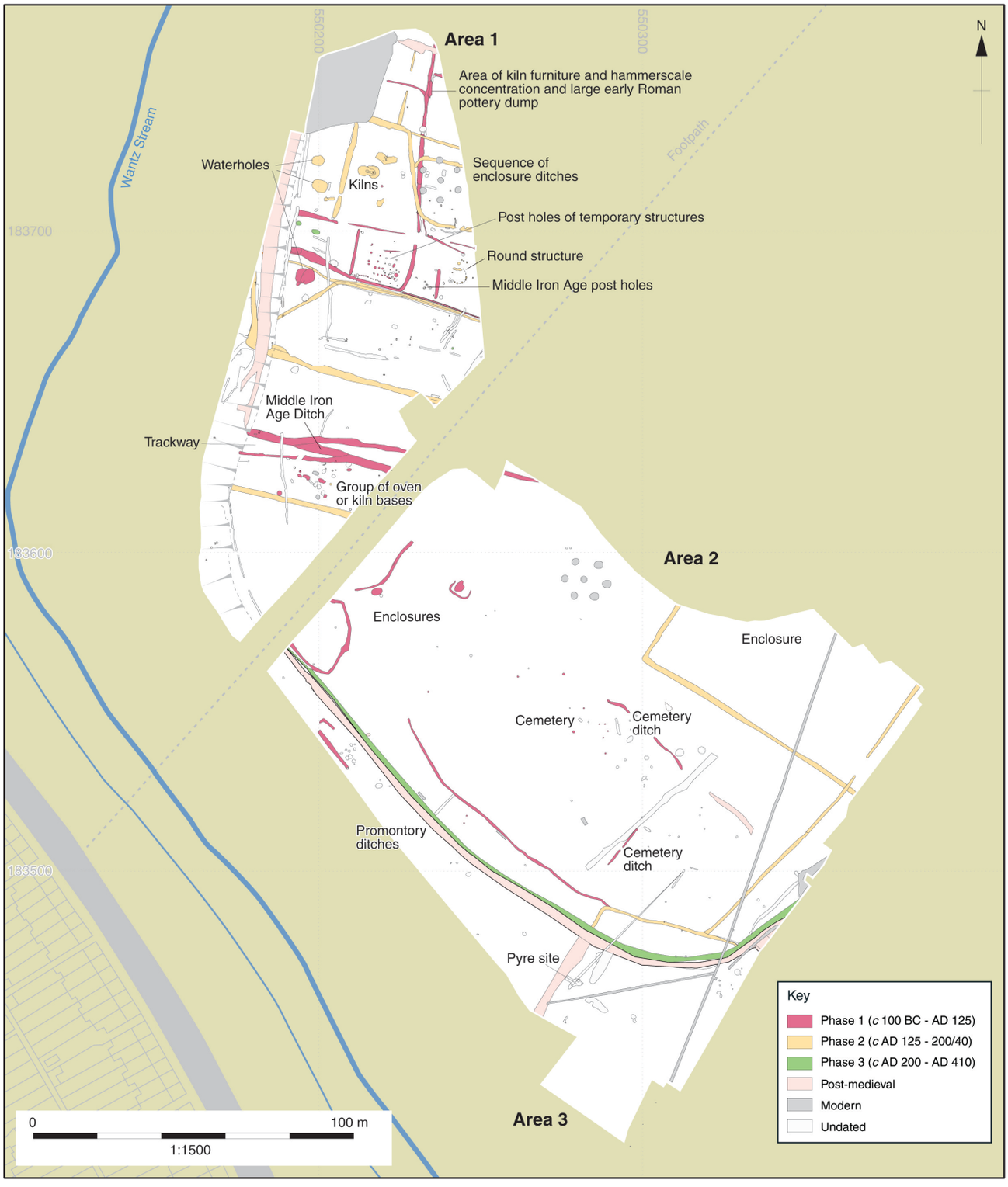

Fig. 2: plan of the excavation areas

adjoining areas (Fig. 2). Area 1 measured 1 hectare, while Area 2 to the south-east covered 1.4 ha. This report concentrates on the later Iron Age and Roman discoveries.

A family plot

The site was occupied during the middle or late Iron Age. Three cremation graves were radiocarbon-dated to the late 2nd or 1st century BC (Fig. 3). They may have been contemporary with postholes and a ditch dated by pottery to the middle Iron Age, and were the first of 16 cremation graves in a small cemetery that continued in use until *c.* AD 70. Some, if not all, of the individuals were probably cremated at a pyre site at the bottom of the slope closer to the Wantz stream. The location may have been important, allowing water to play a role in the cremation ceremonies. The deceased may have been carried to the pyre on a litter or bier, but the evidence for this is poor, being limited to a few small nails or tacks recovered from grave fills. The pyre site comprised pits and a posthole that were overlain by scorched sand, burnt stones and

charcoal. The pits held posts that supported the pyre structure. The charcoal recovered from the graves identifies oak as the main wood used for pyre construction. Alder and willow were present to a lesser extent, and are likely to reflect the opportunistic use of locally-growing trees. Oak makes good structural and fuel wood and was commonly selected, usually along with ash, for pyres in late Iron Age and Roman Britain. Objects accompanied the deceased on the pyre. Copper-alloy staining on bone fragments from two graves suggests that the deceased were accompanied by personal items, such as brooches, bracelets or hairpins. Burnt animal bone was recovered from five graves and suggests that food offerings were placed on the pyre. The species were not identified, though animals such as pigs, lamb or chickens are possibilities.

The cremated remains were taken, perhaps in a procession, up the slope to the cemetery, which was partially marked by boundary ditches. The bone was placed in urns in three graves. More usually the bone was deposited on the floor of the grave or in containers made in an organic material. The urns from two graves did not quite match standard regional types, and at least one of them was handmade at a time – the second half of the 1st century AD – when pottery was generally wheel-thrown. The somewhat rough-and-ready aspects of the two vessels raise the possibility that they were produced specifically for funerary use or were otherwise unsuitable for the domestic setting and so were made available for burial. There were few grave goods to accompany the human remains. Brooch fragments (some of which were probably pyre goods) were present in five graves. Hobnails in one grave were clearly part of a shoe or shoes, although it is unclear whether they were burnt and worn by the deceased on the pyre, or placed unburnt in the grave. Given the amount and condition of the bone recovered, the human remains reveal little of the local population during the later Iron Age and early Roman period. It included men and women, and at least one older male aged 36 or over. Some individuals suffered from fairly minor arthritis and dental disease.

Fig. 3: a middle or late Iron Age cremation grave

It is notable that the burial rites at Dagenham, characterised by simple cremation graves with few grave goods, changed little during a period of more than a century, which may point to a small, close-knit community, possibly several generations of a single extended family. These traditions could be maintained through a process of cultural inheritance. Information transmitted from parent or respected elder to child was likely to be relatively stable and survive to be passed to the next generation with little variation. In the stability of the traditions seen at Dagenham, we potentially see the relationship between the elders of the community and its younger members, as the rites were witnessed, learnt, imitated and inherited by one generation and the next in turn.

Industry and farming

The late 1st century AD saw the establishment of a system of enclosures in the northern end of Area 1. Some of the ditches that formed the enclosures extended beyond the eastern limit of excavation, suggesting that settlement activity continued further up the slope on the higher parts of the gravel terrace. The larger enclosures were devoid of features, except for the occasional pit and posthole, suggesting that these did not see domestic occupation, but were instead reserved for other functions. One function may have related to industrial activity. Burnt soil and charcoal and the recovery of objects characteristic of pottery kilns – including clay oven plate, triangular perforated bricks, block and rectangular pedestals and a semi-circular clay ring or spacer – from a group of shallow oval or keyhole-shaped pits in the southern part of Area 1 point to pottery production. The kilns would have been shallow, sometimes little more than surface structures. The clay objects served as flooring or supports for the walls and dome of the oven, which would have been enclosed by turf. Kilns of this type are characteristic of pottery production in the late Iron Age and earliest Roman period and are known at other sites along the Thames estuary, such as Mucking. Such structures may be connected with itinerant potters,[1] who carried their removable kiln furniture around with them and returned to the same site at intervals. We do not need to evoke itinerant potters, since a kiln could be quickly assembled, dismantled, then re-assembled at appropriate times by the inhabitants of the site who were otherwise engaged in farming or other activities.[2]

Apart from pottery production, the site's other function was agricultural. One of the smaller spaces within the Area 1 enclosure complex contained a mass of postholes. These did not form coherent outlines of buildings, but could have marked out several phases of temporary structures, such as fences or stockades for livestock. There are

Fig. 4: one of the pottery kilns after excavation

further clues to a pastoral use of the site. An elaborate entrance formed by ditches may have been designed to control the movement of animals. The animals were watered from two waterholes, while small enclosures in the northern part of Area 2 provided more stockades or pens. Two wide ditches defined a trackway that took inhabitants and livestock from the settlement to the Wantz stream. There were other land divisions at the eastern end of Area 2. Like those in Area 1, two enclosures were largely devoid of internal features and may also have been put to agricultural use, although given that one of the enclosures contained a pyre site, it is possible that the ditch formed a boundary to a space with significance in terms of mortuary activity.

The animal bone assemblage was small, due mostly to the acidic soil conditions resulting in the poor bone preservation. Most identifiable bones belonged to cattle, with horses also present. Pigs and sheep were absent, but this was doubtless a product of the condition and size of the assemblage which favoured the identification of larger species. Sheep and pig bones doubtless existed in the mass of unidentifiable fragments. Crops were grown in the vicinity of the site. Charred plant remains indicate that wheat, probably spelt, was the main crop. Wild taxa, including brome grass, were also identified and were possibly cultivated as animal fodder, although it seems more likely that the grasses grew as weed flora on the margins of arable fields. These may have been located on higher ground away from the open wetland or water-meadow that characterised parts of the excavated areas.

Pottery production

By the second quarter of the 2nd century AD, the technology and organisation of pottery production at Dagenham had changed from one involving temporary structures with mobile equipment to one characterised by permanent structures and standardised output. Two kilns were built, fired and abandoned within a period of *c.* 30 years (Figs 4, 5). The first kiln in the sequence was constructed in *c.* AD 125. It comprised a firing chamber with a central pedestal, a flue and stokehole, which together took a figure-of-eight shape in plan. The kiln was subject to at least three phases of use that necessitated two phases of repair. Ashy debris that accumulated after the second repair contained pottery wasters which dated on the whole to AD 120–140.

Following abandonment and a period of structural collapse and weathering, which may have lasted a number of years, the second kiln was built into the remains of the first. The kiln was identical to the first. Pottery recovered from deposits associated with construction and the first period of use was not closely dated, but ashy debris that accumulated after a phase of repair contained a mass of pottery dated as a group to AD 120–150.

The potters depended on locally-available resources. The clay was dug from nearby deposits. With the site situated between the Wantz stream and Beam river, the supply of water

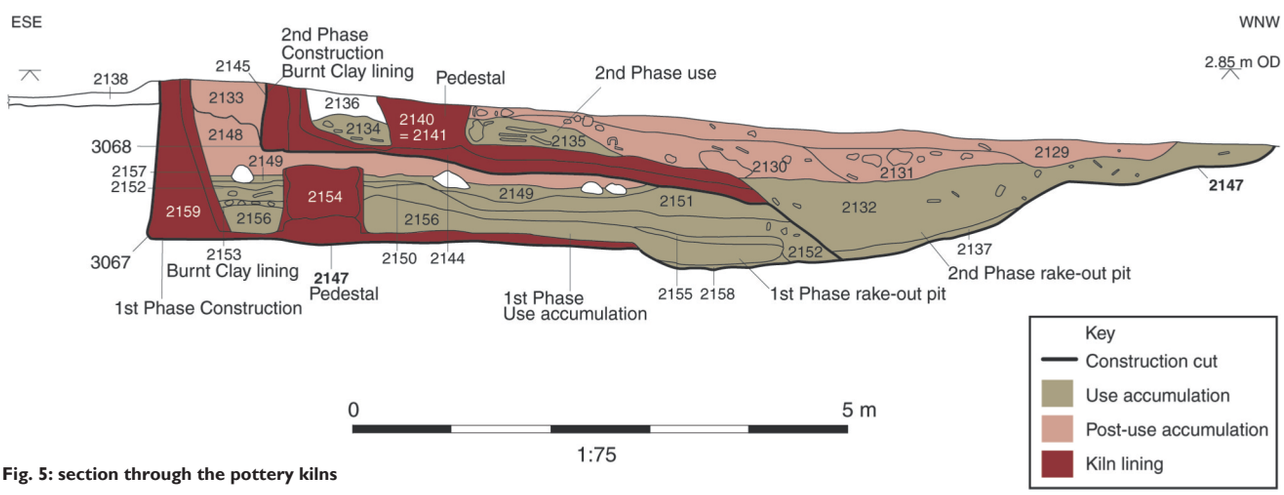

Fig. 5: section through the pottery kilns

Fig. 6: selection of pottery fired in the kilns

necessary for working the clay was plentiful, though for convenience the potters may have taken their supply from waterholes next to the production area. Fuel required for the firing process was mixed, comprising cereal waste, straw, and wood. Oak was commonly used, though heather, willow and, to a lesser extent, alder, also provided fuel.

Like the inhabitants selecting wood for cremation, potters were opportunistic with regard to their fuel supply, taking what they could from nearby woodland and the waste left by agriculture.

We do not know how pottery production was organised or precisely how long the first kiln was used before being replaced by the second, but if production was seasonal, with repair being carried out on an annual basis,[3] then the use of the kilns spanned a period of at least five years, with the life of both kilns being accommodated a few years either side of AD 125.

A similar range of pottery was fired in both kilns (Fig. 6). The repertoire included ledge-rimmed jars, high-

shouldered necked jars, oval-bodied necked jars, storage jars, bead-rimmed dishes, plain-rimmed dishes, grooved-rimmed dishes, wide-mouthed jars or bowls, poppy-headed beakers, and a variety of lids. Curiously, the lids were rarely made to fit ledge-rimmed (or so-called lid-seated) jars. Generally, the lids were too large and extended beyond the rims of the jars. The production of ill-fitting lids suggests that ceramic lids were regarded as a general cover to be used with any vessel that required it, but it is possible that potters could not overcome technical difficulties of making lids to exactly match associated jars. Most vessels were in a medium sandy grey ware, but a fine grey ware, a coarse storage-jar fabric, and an oxidised sandy fabric were also recorded.

The repertoire of the Dagenham potters would have been familiar even to the later Roman potters working along the Thames estuary edge of East London and South Essex. Some of the forms that were made in the later 2nd to 4th centuries, for example at Orsett and Mucking, were types that had been fired in the Dagenham kilns.[4] Comparison of the kiln assemblages in the region gives validity to the identity of a Thameside ceramic tradition.[5] Key forms common to most kilns include plain-rimmed, groove-rimmed, and bead-rimmed dishes, the oval-bodied necked jar, and the ledge-rimmed jar.

The emergence of a Thameside ceramic zone with a uniform cultural identity raises questions about the organisation of the pottery industry and the spread of skills and knowledge. Rodwell saw the hand of itinerant potters in the standardisation of pottery.[6] This view has not been dismissed, but it has fallen out of favour to some extent as an alternative model of permanent, though part-time, 'farmer-potters', whose seasonal production was tied to the agricultural year, has gained ground.[7] Of course, the two models are not necessarily exclusive, but what constitutes evidence for itinerant potters is far from clear. While itinerant potters can be offered as an explanation of how pottery styles were introduced to an area, they do not explain how ceramic traditions were maintained well beyond the lives of the original potters or why pottery even of the same basic types was variable.

Solutions to both questions may lie in models of cultural evolution.[8] Information about the shape of the vessel, the height of the pot or style of decoration were passed between people, for example master potter and apprentice or groups of potters in neighbouring workshops, or spread when potters came into contact with the objects, which were then copied. As favoured forms increased in frequency in the region, existing and new potters became more likely to produce them and pass on their knowledge of them to other contemporary potters or the next generation. Eventually the same forms appeared in different settlements and were included in the repertoires of different potters across the region.

Variations in shape, size or decoration were the inevitable result of the existence of multiple potters. For example, the ledge-rimmed jar was something of a regional speciality, having evolved from 1st-century shelly ware jars produced at a number of south Essex sites. Its predominance in the region made it inevitable that the form would be part of any potter's repertoire. Many minor variations among examples of Dagenham's ledge-rimmed jars, such as a groove and stabbed decoration below the shoulder, have been noted, but most of these are unique to Dagenham and were never sufficiently embedded within local manufacturing traditions to be adopted elsewhere by different potters.

The end of the site

The settlement was largely abandoned by the end of the 2nd century. No features were dated specifically to the 3rd century, although it is possible that some boundaries were subject to several episodes of re-cutting and maintained during this time. The late Roman period (late 3rd–4th century) also saw limited activity. The pottery indicates that a settlement existed near the site during this time, but features were restricted to three pits, which were oval in shape and contained large amounts of fired clay, potentially identifying the features as oven or kiln bases like those assigned to the early Roman period, and further redefining of boundaries, principally along the promontory edge.

Acknowledgements

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