

Fig. 1: site location and detailed site location, showing the location of the future Aquatics Centre (© MoLAS-PCA)

The first Olympic village: finished 3000 years ahead of schedule

John Payne

Introduction

Much attention has been given in recent years to the construction of the London 2012 Olympic Park, the progress of which is usually gauged by the visible above-ground structures. Less notice was given to the preparatory work, which included an extensive programme of archaeological investigations.

These investigations were undertaken over an extended period by a combined team from Pre-Construct Archaeology (PCA) and the Museum of London Archaeology Service (MoLAS). The works included more than 100 evaluation trenches, eight excavations, and an examination of the built heritage, including features constructed to help defend London during World War Two.

One of the targeted excavations, located within the area of the Olympic Aquatics Centre, unearthed a complex

sequence of remains which dated from the Middle Bronze Age through to the Roman period and included evidence of early settlement and land division. Sadly, this report can only present an interim statement by the excavator, prepared without access to the environmental or geoarchaeological data, which, like the production of the final report, was put out to tender by the client, the award of which went to a third-party organisation with no previous contact with the project. Ours is not to question why....

The earliest settlement was Late Bronze Age in date, and is of particular importance as it equates with a settlement type termed a 'Springfield style enclosure' in the English Heritage Monument Protection Programme (MPP) or an 'aggrandised enclosure' by David Yates.¹ Before 1989, they were believed to be relatively rare, when fewer than seven were known in

England. In recent years more have been found; for example, excavations by PCA between 2001 and 2005 discovered a further two in London. The first was the Oliver Close site in Leyton,² and the second at Dagenham Heathway.³ Their location close to each other, with the one at the Aquatics Centre being within sight of the Oliver Close site, offers an opportunity to review how they operated in the wider landscape and the way they interacted.

Topography: modern and prehistoric

The area of the Olympic Park is located within the Lea valley and covers a network of stream channels known as the Bow Back Rivers. The topography of the area today bears little resemblance to that of the former prehistoric landscape. This is due largely to the considerable thickness of made ground which was deposited here during the 19th century, when the area was



Fig. 2: plan of major Bronze Age features (© MoLAS-PCA)

rapidly developed as a location for industry (although not actually at the subject site). Prior to this, indeed from the prehistoric period on, the area was mainly marshland, and remained rural until the 19th century.

During prehistory and continuing into the Roman period the site of the new Aquatics Centre was located on a spur of the lower terrace gravel, extending westwards into the extensive area of marshland that separated the numerous braided river channels of the River Lea. The eastern limit of this gravel spur would probably have been defined by the course of the Channelsea River, which may have effectively created a gravel island, upon which the Late Bronze Age settlement was sited.

At this time this would have been a dynamic landscape with the areas of marsh constantly shifting and changing throughout the period and encompassing environments ranging from wetland through to dry areas. It is

clear that this low gravel spur was an ideal site for settlement, presumably because of its relatively secure position within the marsh, with all the additional advantages in food procurement that this would have brought, and its location upon the edge of the dryer fertile soils of the gravel spur, which would have been suitable for farming.

Middle Bronze Age: agriculture and burial

The earliest phase of activity, which was located along the eastern side of the site, comprised both north-south and east-west orientated ditches. Although later activity had truncated them in several places, it is clear that the remains represent a segmented ditch that formed the western and northern limits of a field system. At least four segments were revealed, extending over an area of about 60 m north-south by 8 m east-west, but with (presumably) most of the feature located beyond the

limits of the excavation (Fig. 2).

Because the ceramics recovered from these features comprise a mixture of Middle and Late Bronze Age material, it is hypothesised that the field system began in the Middle Bronze Age and continued in use into the later period. Of particular interest was the presence in one of the ditch terminals of over 3.1 kg of Middle Bronze Age pottery, derived from three different vessels, which may represent a deliberately placed or 'special' deposit.

A few metres to the west of the segmented ditch system two crouched inhumations were discovered. The first was found lying on its right side with its head to the east and was generally in a good condition, being essentially undisturbed with the notable exception of the legs, which were absent below the knees. They had been truncated by a Late Bronze Age ditch, which provided the only, albeit relative, dating for the burial. Later analysis indicated that the remains are those of an elderly adult male with substantial dental wear and osteoarthritis in his left knee and three thoracic vertebrae (Fig. 3).

The second burial was located a few metres to the south of the first and was also positioned on its right side. This grave was considerably shallower than the other and as a consequence the skeleton had suffered horizontal truncation. This had resulted in the removal of the skull, which would have originally pointed towards the south-east. Although the bone condition was generally poor, later assessment showed that the remains were also those of an adult male, although his age could not be determined.

Late Bronze Age: settlement evolution

Evidence for the Late Bronze Age was defined by four partial ring drip gullies, which would have had diameters of around 10.5 m, and defined the outline of former round houses (Fig. 2). All contained ceramics of Late Bronze Age date, as did 90 of the numerous small pits and postholes identified within the excavation area. A miniature conical bowl, possibly representing part of a Late Bronze Age foundation deposit, was discovered within the internal area of one of the ring gullies, within layers of reworked clays and gravels that may

be the remains of floor preparation deposits. Because of the large numbers of individual features excavated, the identification of possible post alignments proved difficult. The juxtaposition of the ring gullies suggest they represent two sub-phases of settlement, perhaps with each episode comprising two roundhouses with their ancillary features, many of which are likely to be related to animal husbandry and domestic industry.

Evidence for two phases of activity has also been recorded on virtually all of the previously excavated Springfield-style enclosures, in the form of postholes, hearths and domestic debris, sealed beneath enclosure banks. At the Aquatics Centre site, verification of the existence of an initial unenclosed settlement is supported not only by the juxtaposition of the ring gullies but also by the pattern of Late Bronze Age features dispersed over the wider area, although a marked concentration does still occur within the enclosed area of the settlement.

An enclosure ditch surrounding the ring gullies was recognised on their northern, eastern and southern sides, and a roughly rectangular enclosure has been hypothesised. It is suggested that the minimum dimensions of this enclosure would have been about 32 m north-south by 38 m east-west.

Evidence for an internal bank associated with the enclosure was largely absent, although its presence was confirmed in one of the ten sections excavated across the ditch. The location of an entrance is problematic because of the frequent areas of later truncation. It is also possible that more than one entrance was originally present, as highlighted in other excavated Springfield-style enclosures, where anything from one to six have been recorded.

One of the pits, in the south-west corner of the enclosure, contained a near-complete antler, which may have been a placed deposit.

Middle Iron Age: settlement continuity

The remains of three further ring gullies representing round houses of Middle Iron Age date were also recorded. They were noticeably larger than the Late Bronze Age structures, with diameters

of around 12.5 m. Two of them were located within the footprint of the Late Bronze Age enclosure, while the third was located to the east, suggesting that by this period the enclosure no longer provided a line of demarcation (Fig. 4).

Although all three of the ring gullies contained Middle Iron Age ceramics, internal features were largely absent. However, within the central house an inner arc comprising a series of double postholes was revealed.

Within the easternmost house a sub-rectangular pit containing a partially complete articulated skeleton of a young goat (kid) was discovered, alongside a series of four irregularly-shaped cuts. These irregular pits contained ashy grey fills, and three of them were partly truncated by the ring gully. They are believed to represent the position of burnt-out tree roots, which were removed to facilitate the house construction. It should be noted that this house was constructed beyond the limits of the Late Bronze Age enclosure, with the root holes perhaps indicating differences in vegetation cover between the inside and the outside of the earlier enclosure. This ring gully had also clearly been re-cut, perhaps indicating that it remained in use for longer than the other two structures and required modification during its life.

Probably associated with this phase of occupation was a large sub-rectangular pit located to the south of

the Middle Iron Age settlement, which may represent a large waterhole. This contained fragments of wood and the remains of three skulls from dwarf or so-called 'Celtic' cattle.

When compared with the Late Bronze Age phase of activity, the objects and features securely dated to the Middle Iron Age were noticeably scarce, and evidence for a classic four-post structure was only present in one instance. This lack of associated features and cultural material may indicate that the main period of occupation was relatively short-lived.

Middle Iron Age: continuity with change

A second phase of Middle Iron Age activity comprised an east-west orientated ditch and an associated rectangular enclosure with two wide opposing entrances, one on the north and the other on the southern side.

The enclosure ditch truncated the westernmost of the houses and the waterhole of the earlier phase, and the fact that this enclosure is also dated to the Middle Iron Age strengthens the hypothesis that the earlier phase of Middle Iron Age settlement may have been short-lived. Additionally, the area where the central roundhouse had been located was now sealed by a large spread of dark soil also containing cultural material of Middle Iron Age date. Although the function of the



Fig. 3: crouched inhumation burial, partly truncated by Late Bronze Age enclosure ditch (© MoLAS-PCA)

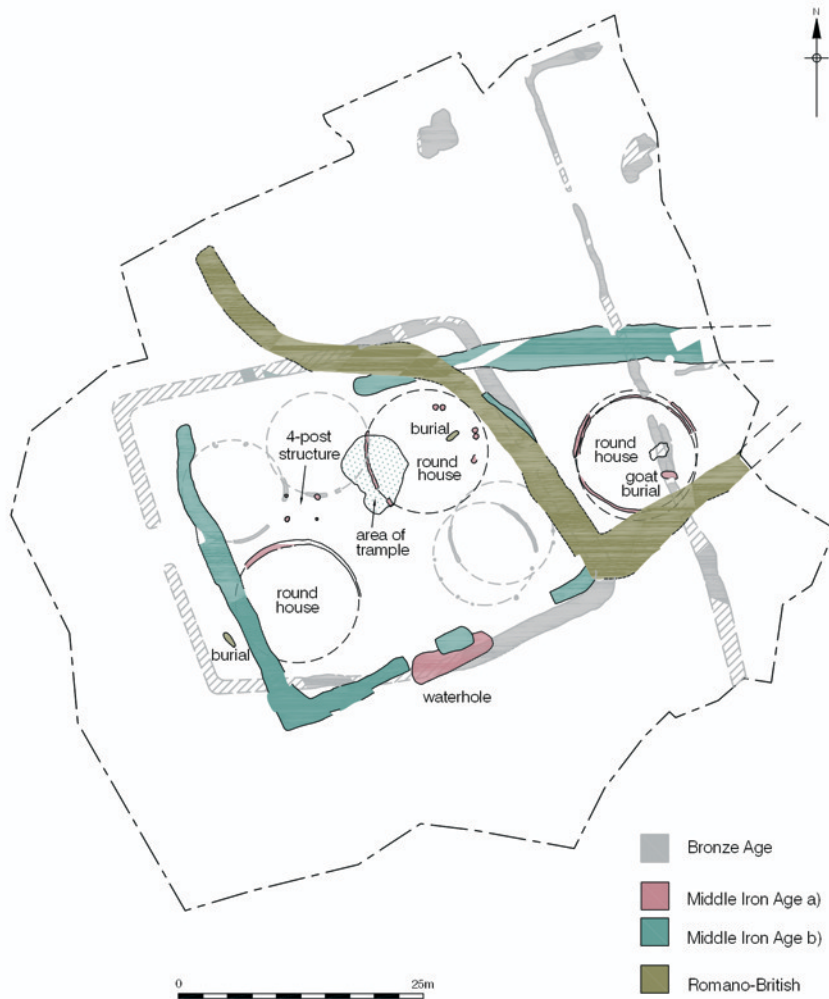


Fig. 4: plan of major Iron Age and Romano-British features (© MoLAS-PCA)

enclosure is uncertain, the large area of dark soil inside it was possibly caused by animal trample, perhaps indicating the enclosure was used to control, manage or house livestock.

Direct evidence for the presence of a bank associated with this ditch was inconclusive. However, partly overlying the ditch was a series of mixed soils and disturbed alluvial sediments which are thought to represent levelled bank material, possibly reworked by animal traffic or repeated flooding episodes.

The re-cutting of the easternmost of the house ring gullies may be evidence for continuity of occupation. However, even if correct, it is unlikely that this continued for very long, as a sequence of preserved alluvial deposits suggests the area was now subjected to periodic flooding.

Romano-British: a return to agriculture and burial

Partly re-cutting the line of the Middle Iron Age ditches, the remains of a sinuous ditch were revealed. Although

dating evidence for this ditch was scarce, a fragment of poorly preserved Samian pottery dated to AD 120–250 and an unabraded rim sherd that could date from the Late Iron Age until AD 70/120 indicate a Romano-British date for this phase. The ditch is believed to form the south-west corner of an enclosure or boundary which clearly incorporated elements of the Middle Iron Age ditch system, suggesting some continuity in land division.

Two inhumation burials are also believed to be associated with this phase of activity, although neither contained associated grave goods. One of the burials was placed alongside the Middle Iron Age ditch system, which although clearly in-filled by the time the body was buried, may still have been a visible feature in the landscape, possibly surviving as a hedge line or shallow earthwork. The burial was of a middle-aged to old adult male, lying prone, with his head to the north, and showing unusual dental wear patterns. The molar has a shine to it and has

been worn in a way which is unlikely to have occurred as a result of chewing alone. It is perhaps indicative of an habitual activity, either recreational or occupational, where the teeth were used either to chew and soften material or grip an object. The second burial was placed to the west of the Romano-British ditch, and this is also thought to be a deliberate placing of the body alongside this boundary. This burial was also too fragmentary to yield much information, but was laid supine, with the head to the east and the legs bent in order to fit the body into a relatively small grave cut.

Discussion

The segmented ditch system revealed at the Aquatics Centre site is likely to date to the Middle Bronze Age, a time when archaeologically recognisable field systems first appear in Britain.

Recent research on the development of Middle Bronze Age field systems on the river terraces to the west of London has suggested that here intense pressure on the available arable land resulted in the expansion of the field system into the floodplain and also onto the gravel islands within the floodplain itself.⁵

If this model of development may be extrapolated to the Lea valley, it is significant that here also the excavated field system is sited upon a gravel island within the lower floodplain. This could indicate that the area of higher gravel lying to the east of the site was already intensively farmed and by assumption also densely settled by this period.

It seems probable that the crouched inhumations are broadly contemporary with early development of the Middle Bronze Age field system, perhaps placed just outside of the agricultural area where they would lie undisturbed. The subsequent truncation of one of them by the Late Bronze age enclosure suggests that by this period the location of the burials had been forgotten, possibly indicating that no substantial grave marker was associated with them.

Ceramic evidence suggests that the field systems of the Middle Bronze Age continued in use into the Late Bronze age; the siting of the Late Bronze Age settlement adjacent to the western edge of the field system supports this idea.

Studies of sites within the Thames



Fig. 5: general view of site, showing Middle Iron Age ring gully and re-cut (© MoLAS-PCA)

Valley⁶ have concluded that much of the Late Bronze Age agricultural activity is principally associated with animal husbandry, which, it is suggested, became increasingly important during this period. The evidence currently available from the Aquatics Centre site supports this, as the faunal assemblage from Late Bronze Age deposits comprised over 180 identifiable fragments of bone which divide roughly equally between sheep/goat and cattle, with limited numbers of pig and a single deer being represented. It is unfortunate that detailed environmental analysis which could produce vital information concerning flora assemblages for the Aquatics Centre site is still waiting to be processed.

Of particular interest is the Late Bronze Age activity centred on a Springfield style/Aggrandised enclosure, as they are believed to form focal points within the surrounding agricultural landscapes.

The enclosure discovered at the Aquatics centre site satisfies many of the type criteria for a Springfield enclosure, although because of the numerous areas of truncation no definitive evidence for the location of the entrances was found. However, if reference is made the majority of the

known Springfield-style enclosures evidence for two entrances is the most common. These are generally located on the east and west sides of the enclosure or close to that, *i.e.* northwest-southeast or southwest-northeast. The exception to this was the site of Springfield Lyons itself, where six entrances were recorded, although even here the east-west ones are regarded as being the two main access points.⁷

The distribution of Springfield-style enclosures is restricted to eastern England, and although examples are known from as far north as Yorkshire, the majority occur in Sussex, Kent and Essex. These enclosures are one of a restricted range of monument types known from this period, and evidence from known sites suggests they may have fulfilled multiple functions.

Although the sites are believed to have had a domestic component, the additional functions could be wide-ranging. These could include centres of administration or centres associated with bronze or other commodity distribution and exchange. Centres for industrial processing could include bronze, ceramics or textiles; for example, loom weights are frequently seen. Other possible functions could include defence or stock management;

similarly, animal bone is common.

In general these enclosures are located on hilltops or spurs and it has been postulated that many are so sited for the commanding views they had over adjacent field systems.

The artefactual material recovered from the Aquatics Centre site conforms to the idea that these monuments play a largely domestic role. Pottery, animal bones, perforated clay slabs plus a single loom weight were all discovered. However, the location of the Aquatics Centre site upon a gravel spur complies only very broadly with the accepted definition for monument location. Despite being located on higher land within the immediate area, it is unlikely to have commanded extensive views across the associated field system. So in this point the Aquatics Centre site differs from the standard type, being located near the valley floor.

We therefore have to consider another advantage for the site location, and in so doing its position beside the marsh becomes particularly relevant.

The marsh area would certainly have contained a wide variety of resources, although many of them are likely to have been available on a seasonal basis. Seasonal availability of resources, and the probability that the

area would have been vulnerable to flooding, especially during the winter months, may indicate that the site was only seasonally occupied.

The possibility of seasonal occupation for the Aquatics Centre site conforms to a framework of seasonal cycles of movement which is believed to have structured Late Bronze Age society. The most well-known example of seasonal or periodic use are the midden sites, thought to be associated with feasting activities. The location of the site would be well placed for the summertime use of both the low-lying pasture and the adjacent marshland.

It is also a real possibility that the location has some association with an as yet unidentified crossing or access point to the adjacent marshland and one could hypothesise a situation where the Aquatics Centre site acted as a focus for the people who harvested wild flora and fauna from the adjacent areas of marshland. It must be stressed, however, that the obvious commodities of fish and wildfowl do not appear in the currently processed faunal assemblage, and generally are not represented from other assemblages dated to this period. Eggs and decorative feathers are two other possible alternatives; it is known from ethnographic studies that the latter can be objects of prestige, while the former are typically available from mid-spring to midsummer (beginning of March to the end of July). The tract of arable land lying directly to the east of the settlement would clearly have provided good summer grazing for the cattle and sheep, which we know from the faunal assemblage formed part of the Late Bronze Age economy here.

In attempting to test the theory of seasonal occupation it is to the environmental evidence that we will have to turn in the hope of finding answers. This body of data, which is at present unprocessed, should permit a better understanding of not only the

activities being carried out within the enclosure, but also produce evidence of seasonal bias which could support the theory of seasonal occupation. In a wider context, the environmental evidence will enable a reconstruction of the environs to be achieved. It is unfortunate that, as so often happens in a world of competitive tendering, this data may never be processed, or because of delays or political disputes, be processed by people who were uninvolved in the original excavation.

Aside from the unprocessed environmental data it is clear that the Aquatics Centre site is something unusual in the Late Bronze Age landscape. The nearest known example of a Springfield-style enclosure was the Oliver Close site excavated by PCA, which is located approximately 2.5 km to the north. This conformed better to the type site, being situated on the 10 m contour, and is possibly placed to overlook an associated field system, although no evidence of such was revealed in the excavation. The closeness of its location to the Aquatics Centre site indicates that these enclosures maybe did not control large tracts of land and they may in fact have formed part of a series of seasonally occupied sites associated with specific activity areas. It is therefore possible that the Bronze Age occupants of the Aquatics Centre site and the site at Oliver Close were either the same people or the same family groups.

The apparent continuity of settlement during the Middle Iron Age is of considerable interest, and the remains of the Middle Iron Age ditch system which superseded the settlement is also of importance, as it is clear evidence of changing but continued land use during the Middle Iron Age.

To sum up, the multi-period landscape revealed during the excavation at the Aquatics Centre attests to the continued exploitation of the area from the prehistoric through

into the early historic period.

It is clear that with the increasing number of Late Bronze Age sites excavated, our understanding of patterns of land use and settlement density is adding to our knowledge of this period of prehistoric Britain. It is hoped that the post-excavation environmental analysis will be able to augment this understanding greatly. This may be especially relevant with regard to seasonal activities undertaken within specific areas and the exploitation of wild flora and fauna.

Interestingly, it was during the time of the occupation of the Bronze Age settlement at the Aquatics Centre site that the Olympic Games had started to be celebrated in Greece.

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