Learning legacy

Lessons learned from the London 2012 Games construction project

The evolving landscape of the Olympic Park

At the end of the last Ice Age (approximately 12,000 years ago) the flood plain of the River Lea was formed by glacial melt waters surging through an unspoilt wilderness. However, only until early hunter-gatherers first arrived in the valley was there ever a truly natural landscape here. Ever since, people have modified their surroundings in ways designed to better meet their needs, at times with major and irreversible effects. Natural forces, too, have played their role, with the underlying geology and the soils, the extent of the river's catchment, the changing climate and the rising sea level, all influencing how and where in this landscape people have lived and worked.

Improving the wilderness

The geoarchaeological and environmental evidence recovered during the archaeological investigations has helped to build up a picture of the landscape at the end of the last Ice Age. However, as temperatures rose during the Mesolithic (8500–4000 BC), the river stabilised and broad-leaved woodland became established along its flanks. The river's fish and wildfowl, the valley's rich plants resources, and the woodland game, such as red deer and aurochs (wild cattle), would have made this an attractive landscape for groups of hunter-gatherers.

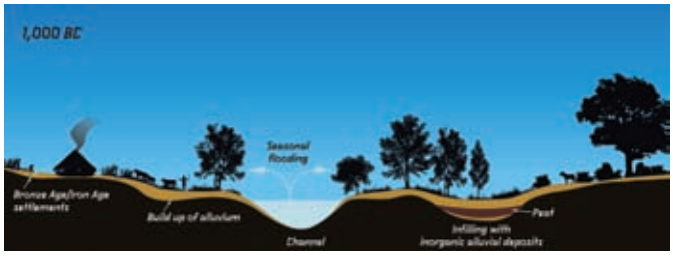
It was also a landscape that people could modify in simple ways to make it easier to hunt and gather wild foods. One method was to burn areas of woodland, creating clearings that would attract grazing animals so making them easier to hunt, and releasing nutrients into the soil and promoting the growth of edible plants, such as hazel.

The introduction of agricultural production in the Neolithic (4000–2200 BC) was a further 'improvement' to the wild landscape. This involved accelerated woodland clearance, probably using the type of finely worked Neolithic flint axe excavated from one of the Park sites, the specialised harvesting, processing and storage of selected high-yield foods in the form of cereal crops, and a new relationship with food animals involving the domestication of cattle, sheep and pigs. Such developments would have been accompanied by profound social changes, involving increasing population, more permanent settlements and the development of complex, and sometimes long-distance, social networks, which themselves, in turn, further impacted on the landscape.

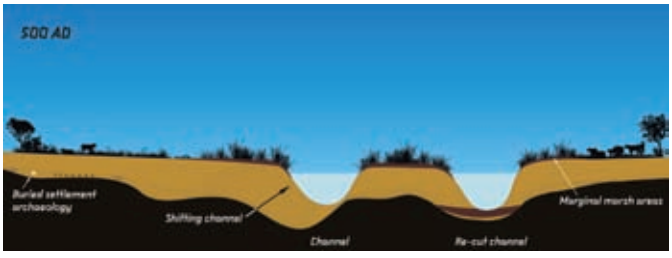
By the start of the Bronze Age (2200–700 BC), the wilderness had been largely replaced by a modified and managed landscape. Significant areas of woodland remained, but there were now extensive areas of grassland supporting, and maintained by, an agricultural economy based heavily on animal husbandry. Perhaps only the river itself, fringed in places by marshland and wet alder carr, remained a wild landscape, although even here, since the Neolithic, people had been building timber structures, such as walkways and revetments, to facilitate their exploitation of this watery environment.

Enclosing the land, taming the river

The Early Bronze Age witnessed continuing social changes, reflected in new burial practices, new materials and new technologies, and around 1600 BC further transformations of the landscape occurred. Within a relatively short period (at least in archaeological terms), large areas of productive agricultural land were being enclosed and divided up into fields by ditches, probably with banked hedges alongside them. This organisation of the landscape, direct evidence for which was found on the site of



The evolving Lea Valley landscape – 1,000 BC



The evolving Lea Valley landscape – 500 AD

the Aquatics Centre, is likely to have facilitated a new agricultural regime based on the rotation of crops and the penning and grazing of livestock.

As the climate varied and sea levels rose, the agricultural use of the valley floor would have changed. However, the creation of the Bronze Age field systems marks the start of a period, lasting for the next three millennia, where the Lea Valley landscape was dominated by agriculture. The valley floor continued to be settled with evidence for roundhouses dating from the Iron Age (700 BC–AD 43), and over time new forms of land division replaced the old. New forms of ownership, by Roman villa estates, feudal lords, medieval monasteries and country gentleman, also took their turn.

The river was also tamed, and watermills, bridges and revetments were built along the channels of the River Lea from as early as the Saxon period (from around 650 AD onwards). From then on, continual modifications were made to the river – to increase the power in the mills, to prevent flooding, to aid navigation for the transport of goods and people, and to drain remaining wetland areas for agricultural use.

Over time, the increasing intensity of ploughing in areas around the valley also helped to change its shape, as soils washed into the river settled on the valley floor during floods, and partly masked the earlier topography.

Making ground for industry and infrastructure

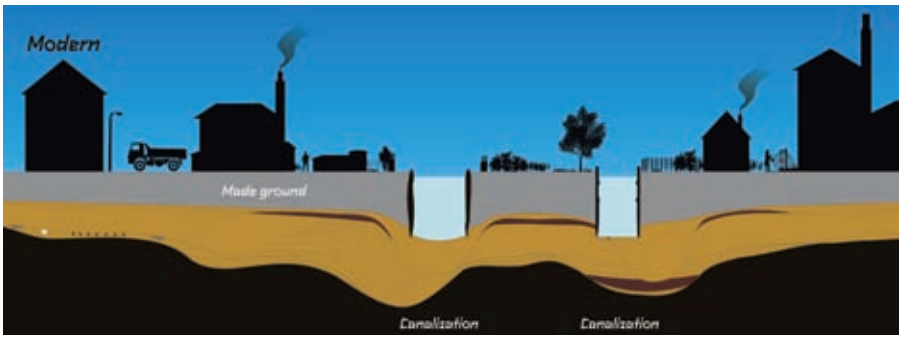
An even greater transformation of the Lea Valley landscape was effected by the industrial development that accelerated in the second half of the 19th century. Ever since the Saxon and medieval mills there had been industry in the valley, and new industries had come to the area during the post-medieval period, such as the dye works built in Bow in 1607 and on Wick Lane in 1703, and the Bow porcelain works built in 1749. However, the increasing population of London in the 19th century led to rapid urban expansion eastwards towards the River Lea, while the growth in the railways and in world trade gave land along the valley, close to London dockyards, a new value for industry.

Because the valley was located some distance from the main urban centres, many of these industries were of the anti-social, 'dirty' or dangerous kind, such as gunpowder manufacture, exiled to London's eastern fringe, and the area became the cradle of the British chemical industry in the 19th and 20th centuries. Accompanying the new industries were extensive infrastructure developments – for transport, such as new canals and navigation cuts, and the railways; and for London's water supply, with extensive reservoirs and waterworks, and the Northern Outfall Sewer.

The extent of 19th century heavy industry left little room for the development of 20th century industries, such as light engineering, and the area fell into economic decline. There was also considerable bomb damage during the Second World War.

A future landscape

Although there seems to be little to link today's landscape with its ancient past, the present creation of the Park is just the latest stage in a process of renewal and adaptation that has had a very long history.



The evolving Lea Valley landscape – the modern landscape

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