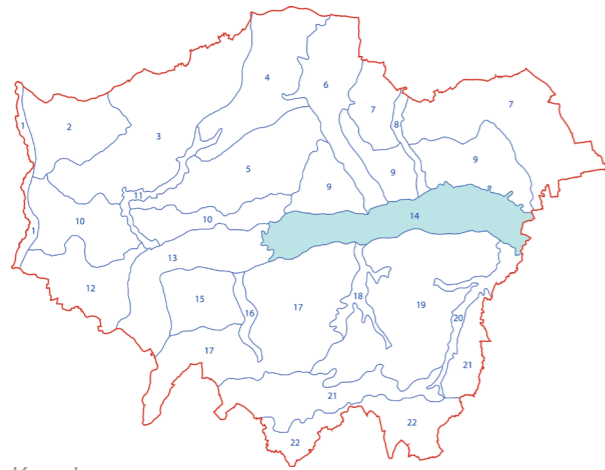
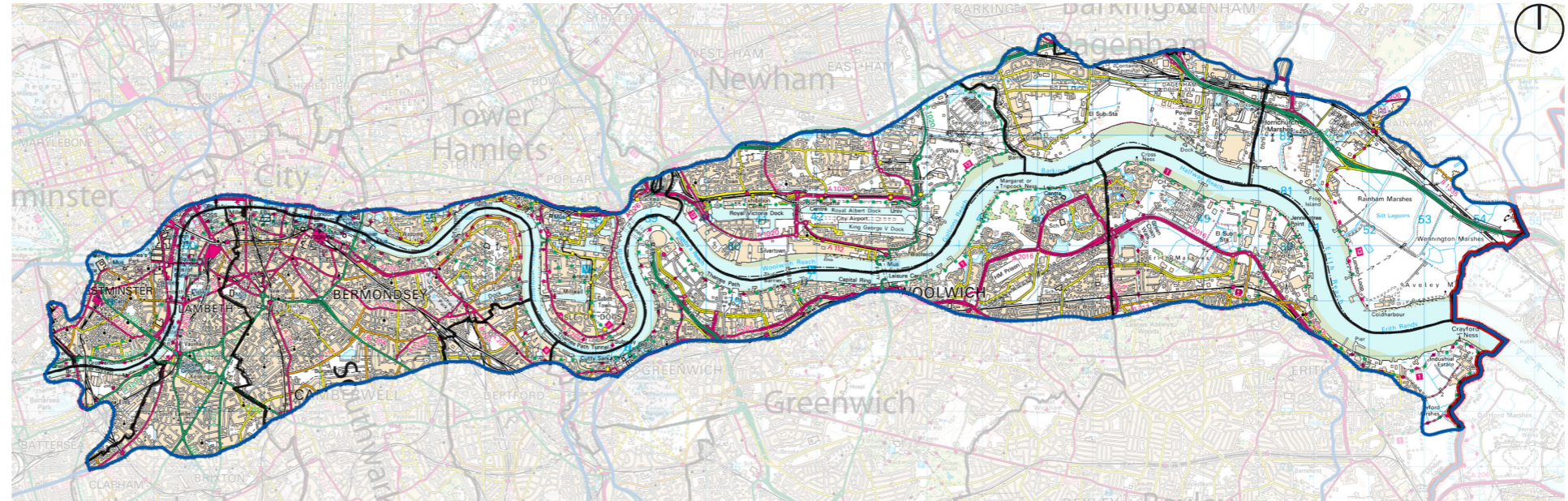


# 14. Lower Thames Floodplain



Key plan



14. Lower Thames Floodplain

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## Description

The Lower Thames Floodplain Natural Landscape Area covers the tidal Thames and its associated floodplain from Battersea in the west to Rainham Marshes and Crayford Marshes in the east. As the river flows east from Battersea it takes on more of the character of an estuary as it reaches Rainham and Crayford Marshes. The Area's boundaries coincide with the wide band of alluvium, which has been laid down by the river over thousands of years, and which has created a broad, level corridor of around 3.5km width through the heart of the city. A broad terrace of river gravels (of the Black Park Gravel Formation) has been deposited over the alluvium within the Vauxhall, Lambeth and Southwark areas. Within the broad alluvial floodplain, the river channel meanders from the margins of the North Thames Gravel Terraces (NLA 9) at the City and around the Isle of Dogs to the southern river bank at Greenwich. East of the confluence with the Lea, the river channel maintains a more central course in the middle of the floodplain.

In general, the gravel terraces to the north of the floodplain rise less abruptly than those to the south, where a ridge formed by more resistant bedrock (where the gravelly sands and clays of the Lambeth Group are capped by the pebbly beds of the Harwich Formation) provides some fine views over the Thames, including the famous view from Greenwich Park.

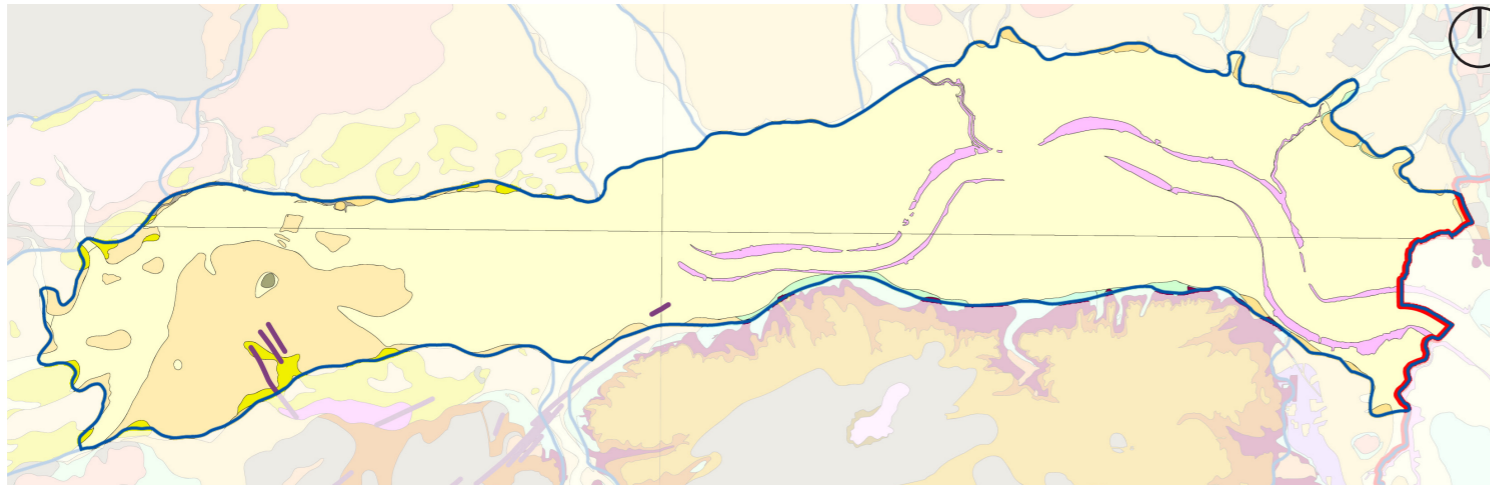
Low-lying and prone to flooding, this area of the floodplain would have comprised intertidal saltmarsh, unsuitable for human settlement, though an important resource for grazing. The desire to make use of this resource led, from the 19th century onwards, to the construction of a simple flood defence system of river walls backed by networks of drainage ditches. Remnants of this system survive today at Rainham Marshes.

The other influence on the development of the Lower Thames Floodplain Natural Landscape Area was the function of the Thames as the principal artery for trade. As ships became larger, it was no longer possible simply to beach trading ships, as the Anglo-Saxons did along the Strand. Deeper quays and, increasingly, large docks were required to handle London's river traffic. The nature of the Thames floodplain, particularly its width, made it ideal for the construction of massive dock complexes, such as those in the meander of the Isle of Dogs or, further down, the Royal Docks. The creation of the London Docks and their subsequent transformation into Docklands have had a significant impact on this landscape.

Associated with docks came industry which both filled in the spaces between the docks and, increasingly, took over the former marshes around Barking, Dagenham and Rainham. The general lack of human settlement, the flat ground (and the prevailing westerly wind) made these areas ideal for the development of large scale industry, such as the Ford Plant at Dagenham.

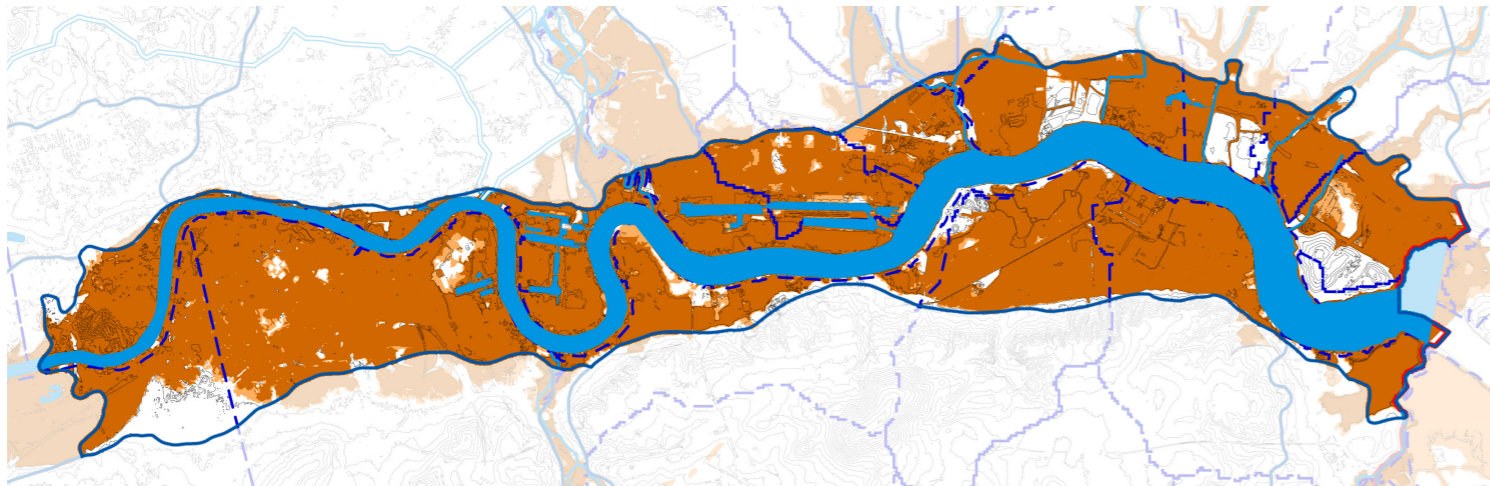
The exception to this industrial picture is the area of the gravel terrace of Southwark, Lambeth and Vauxhall. This provided the opportunity for the first crossing of the Thames (see NLA 9) and, given the well drained soils, became a focus for early Roman settlement at Southwark. By the 18th century settlement had spread along the embanked Thames towards Bermondsey.

Aside from the floodplain, the foreshore and areas of land away from the river are dotted with green features that continue to offer vital natural assets and views.



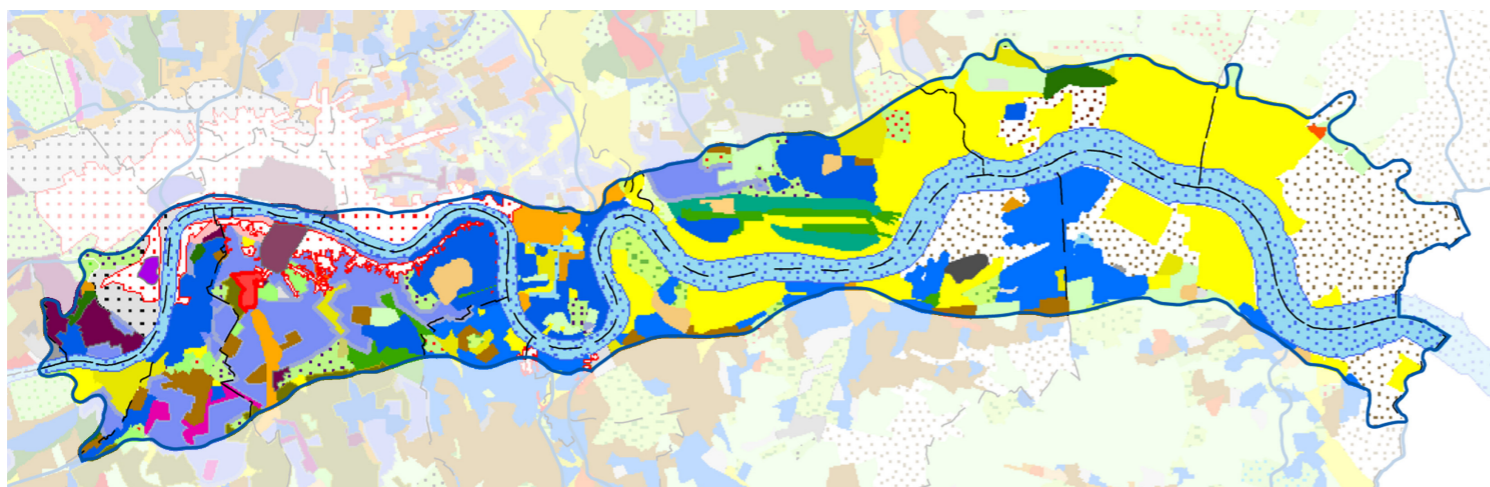
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Geology



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Rivers and Topography



ACKNOWLEDGEMENT: ENGLISH HERITAGE DATA

Historic Development

## Natural signature and natural landscape features

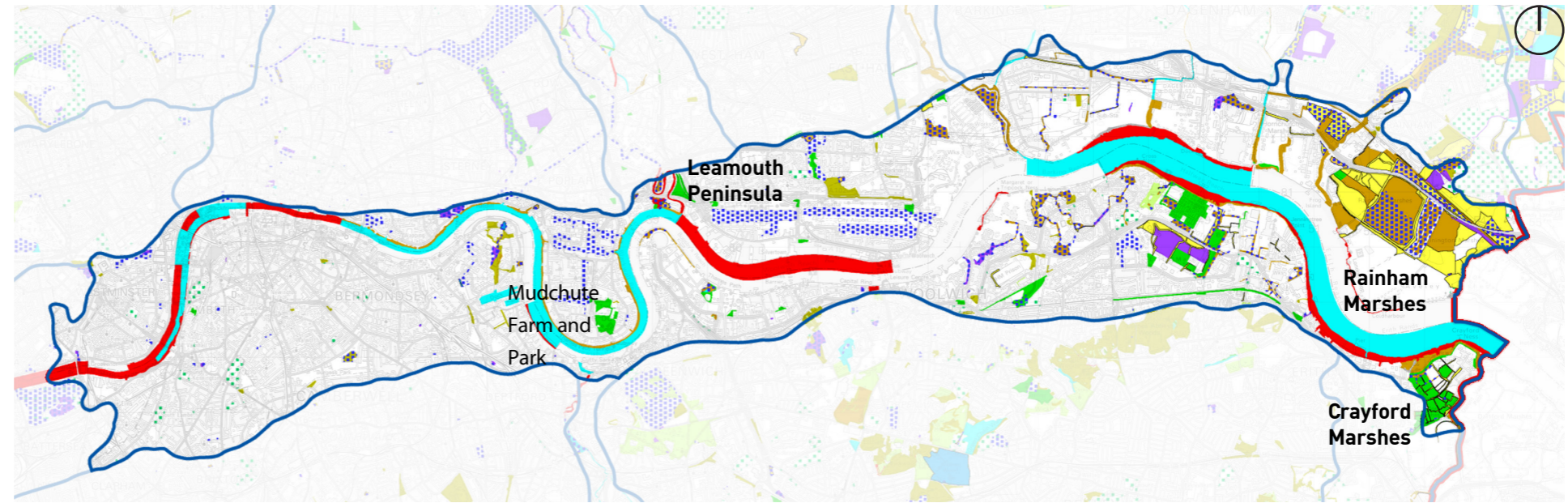
### Natural signature:

**Lower Thames Floodplain – A vast, flat riverside zone of grazed saltmarshes grading to reedswamp, mudflats and the wide tidal Thames - the most striking and immediately visible natural element in London.**

Although now hemmed in by embankments and walls along its entire length, the River Thames remains strongly tidal and is a key element in the identity of London. Extensive remnant grazing marshes survive at Rainham, Erith and Crayford and there are smaller areas of reedswamp along the lower reaches of the various creeks and rivers which flow into the Thames. The vast open wetland landscapes of these low-lying marshes retain a powerful sense of wild remoteness. They provide an impression of the unique natural heritage – and Natural Signature – of the lower Thames floodplain.

Examples of natural landscape features within the Lower Thames Floodplain Natural Landscape Area are:

- **Leamouth Peninsula** – This includes the East India Dock Basin, Bow Creek Ecology Park and the tidal reaches of the river (up to around Tower Hamlets). Whilst some of these sites are more carefully managed and may have been planted to a certain extent, they do reflect the natural characteristics of the Natural Landscape Area. The East India Dock Basin contains a wide range of habitats, including saltmarshes and reedbeds fringed by willow woodland. The site also has two small areas of woodland and wild flower meadow areas. The river edges of Bow Creek themselves support extensive reed beds and mudflats supporting communities of birds. Bow Creek Ecology Park has been developed around a series of created wetlands, but has become a popular wildlife haven and centre for environmental interpretation and education.



Natural Habitats &amp; Landscape Key Features

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- **Crayford Marshes** – One of the few remaining extensive grazing marshes in London, Crayford Marshes is located at the confluence of the river Darent (the Cray being a tributary of this – see NLA 20). The area is fringed with saltmarshes and a network of ditches that provide a rich habitat for reedswamp with many locally and nationally restricted species. The next zone is a flooded pasture which seasonally becomes inundated. Rare plants are found on the sea walls.
- **Rainham Marshes** – This is the largest remaining expanse of marshland remaining in London. It contains many characteristic species of the Thames Estuary that are otherwise nationally rare, making this an important site. The ditches and seasonally flooded areas support many brackish grasses and associated invertebrates, which in turn provide a valuable food source for birds, and the site is managed by the RSPB as a nature reserve.

## Underlining the natural signature of the Lower Thames Floodplain

### Key influences

- Flat, expansive landscape, with low horizons.
- Remote and wild.
- Open grazed saltmarshes patterned by networks of medieval (meandering) and modern (rectilinear) reed-fringed drainage ditches.
- Extensive intertidal mudflats, divided by evolving winding creeks.
- Reedswamp.
- Industrial and military heritage – pill boxes, wharves, jetties, industrial archaeology.
- Embanked pathways.
- Virtually no trees.

### Design clues

Ideas for place making and shaping future design decisions - how the Natural Signatures for each natural landscape area might be expressed within the wider public realm, through new development and landscape management projects.

- Drainage ditches to direct and control patterns of circulation.
- Embankments, stepped terraces and viewing mounds as a contrast to larger scale, open marshes.
- Open landscapes – occasional lines and groups of trees will be prominent.
- No hedgerows, fences or upstanding boundaries.
- Wet scrapes, ponds, swales and ditches surrounded by open wet grasslands.
- Incorporate industrial archaeology within the public realm – as seats, signs and structures for adventure play or artworks.
- Simple boardwalks and jetties provide access to areas of reedswamp and the inter-tidal zone.

## Lower Thames Floodplain – Key environmental assets

Environmental asset	Relevant borough	Notes
Lambeth Palace Gardens	Lambeth	Native hedges in the grounds of Archbishop of Canterbury's London residence.
Kennington Park	Lambeth	Native hedges and small native wooded area.
St Katharine Docks	Tower Hamlets	Still water, busy marina east of Tower Bridge.
Shadwell Basin	Tower Hamlets	Open water with steep sides. Intertidal mud.
Greenland Dock; Russia Dock Woodland	Southwark	Dock basin of still water with native woodland to the north.
West India Millwall Docks	Tower Hamlets	Large area of still water. Surrounded by urban development.
Mudchute Farm and Park; Millwall Park	Tower Hamlets	Two large green areas adjacent to each other – a city farm and nature reserve, and a public park. Both have herb-rich grassland.
Royal Docks	Newham	Series of large docks (Royal Victoria, Royal Albert and King George V).
Beckton District Park and Newham City Farm	Newham	Landscaped park, but with areas of native wood and herb-rich grassland. Some ponds. City farm valuable as educational resource.
<b>East India Dock Basin</b>	Tower Hamlets	Small area of still water, reedswamp, typha and herb-rich grassland.
Ripple Nature Reserve	Barking and Dagenham	Former industrial land, now 8 hectares covered in natural features such as grassland, reedswamp and woodland; has been naturally re-colonised by Silver Birch.
Barking Creek	Barking and Dagenham	Water stream following into Thames, with reedswamp.
The Gores Brook	Barking and Dagenham	Area of reedswamp which flows into wet ditch area of Ship and Shovel Sewer.
Dagenham Breach; Lower Beam River	Barking and Dagenham	Reedswamp, intertidal mud, ditches and herb-rich grassland.
<b>Rainham Marshes</b>	Havering	Very large expanse of grassland, typha, wet ditches, still water and wet marginal vegetation. Valuable for being the only RSPB (Royal Society for the Protection of Birds) reserve in GLA.
<b>Crayford Marshes</b>	Bexley	Grazing marsh, habitat to a large number of rare animals and plants. Herb-rich grassland and reedswamp, with wet ditches.
Erith Marshes and Sewerage Works	Bexley	Wet marginal vegetation, herb-rich grassland, reedswamp and wet ditches. South Mere (lake) is in close proximity to the west and Riverside Golf Course (with acid grassland) borders western side of golf course.
Crossways Nature Reserve	Greenwich	Reedswamp and small ponds.
Gallions Reach Park; Birchmere; Thamesmere; Twin Tumps; Tump 53 Nature Park; Thamesmead Wetlands	Greenwich	Chain of various wetland areas – largely consisting of still water and reedswamp. Also small areas of typha and native wood. Some of the wetlands are landscaped. Thamesmere is part of the old Woolwich Arsenal.
Greenwich Ecology Park	Greenwich	Herb-rich grassland, ponds and reedswamp. Recently created amenity for environmental education.
Burgess Park	Southwark	Large park begun in the postwar period and developed over the course of the twentieth century, largely on reclaimed land; lake contains large fish population; north bank is a sanctuary area.