

WANDSWORTH RIVERSIDE QUARTER ENVIRONMENTAL INFORMATION FOR RESIDENTS



Introduction

Recent concerns about the state of the natural environment have led to new thinking around ways of incorporating nature into urban design. Wandsworth Riverside Quarter is a great example of this. Here, by the River Thames, you are surrounded by nature, yet are only a few miles from the hustle and bustle of central London.

Over the following pages, we hope you will make some interesting discoveries about the Riverside Quarter that will add to your pleasure of living here or visiting.

Image right: View through Wandsworth Riverside Quarter, looking towards the River Thames.

Photo credit: Biodiversity by Design



A modern building with a large glass facade and a white wall. The text 'RIVERSIDE QUARTER' is printed on the white wall. In the foreground, a person is riding a bicycle, blurred. A woman and a small child are walking on a paved path. The background shows a green lawn, trees, and a clear blue sky with a few clouds and a small airplane in the distance.

**RIVERSIDE
QUARTER**

A modern, multi-story apartment building with a blue and white facade. The building features balconies with glass railings. In the foreground, a paved walkway runs alongside the building. A person is walking on the left, and a cyclist is riding on the right. A red mailbox is visible near the building entrance. A blue signpost indicates directions to 'PIAZZA' and 'RIVERSIDE WALK'. The scene is set on a bright, sunny day with a clear blue sky.

A NATURAL APPROACH

Providing for Nature at Wandsworth Riverside Quarter

For most of the 20th Century, the four-hectare site of Wandsworth Riverside Quarter was occupied by an oil-receiving terminal owned by Shell. Extending into the River Thames from the river wall there was a large industrial jetty designed to receive tankers.

After the terminal was demolished, the site lay vacant for several years. Like most post-industrial land, the site had contamination issues, with concrete quays and timber and sheet-piled steel tidal defences which disconnected the area from the two rivers it bordered. Plans were made to develop the site and approval was granted in 2001.

Over the time that the site lay derelict, nature moved in. The old oiling jetty became home to very large numbers of fish-eating birds such as Grey Herons and Cormorants. The main site was naturally colonised by many different types of plant: native, naturalised and alien. Many insects and other invertebrates, including several uncommon species, colonised these habitats.

In redeveloping the site, the challenge was to create not only a fabulous new urban quarter for people ,but also a haven for as much of this special wildlife as possible.

Image right: Former Oil Tanker Jetty at Wandsworth Riverside Quarter.

Photo credit: Frasers Property



Sustainable Development and Urban Renaissance

Partly because of its focus on nature, Wandsworth Riverside Quarter is a good example of sustainable development. Since the Earth Summit in Rio de Janeiro in 1992, the term 'sustainable development' has become widely used, though often not fully understood. It is usually interpreted as '*development which meets the needs of the present without compromising the ability of future generations to meet their own needs*'. The word 'generations' is typically interpreted as referring to humans. But the famous American architect and environmentalist William McDonough has said that the understanding of sustainable development needs widening to include the needs of **all species**. This is because we depend on the health of ecosystems made up of many other species and their complex interactions with each other and the physical environment. This is all the more important now that we understand that 'Mother Nature' around the world is in crisis, with species loss due to human action being a particularly grave concern.

Wandsworth Riverside Quarter was also a prime example of the cutting edge thinking on urban regeneration in the late 1990s. The publication of Lord Richard Rogers' Urban Task Force report, *Towards an Urban Renaissance* (1999), signalled a significant change in the approach to dealing with derelict urban sites. It promoted their decontamination, redevelopment to achieve high densities of dwellings and integration into Nature.

Image right: Golden Rod planted at the Riverside Quarter.
Photo credit: Biodiversity by Design



Biophilic Design

The natural world is the greatest source of excitement. The greatest source of visual beauty. It is the greatest source of so much in life that makes life worth living."

David Attenborough

Wandsworth Riverside Quarter is also one of the key examples in London of what is now known as 'biophilic design'.

According to the renowned American biologist Edward Wilson, and the renowned social psychologist Stephen Kellert, we have a 'hard-wired' and genetically-determined affinity for the natural world. They referred to this as '**biophilia**' (meaning 'love of nature') a term first coined by the social psychologist, Eric Fromm. From this concept has emerged a design approach known as '**biophilic design**', which addresses how to optimise the human-nature connection in everything we design and build. The principles of biophilic design were central to the concept for Wandsworth Riverside Quarter.

There is, of course, now the additional challenge of adapting ourselves and all of our environment to inevitable climate change. Protecting and restoring nature and allowing it to flourish in and around the places we inhabit is very much at the heart of climate change adaptation and of sustainable development generally.

Image right: Biophilic Design at Wandsworth Riverside Quarter. Such designs need not always be rich in biodiversity as such, but must be strongly redolent of nature. This wending gravel band is a reference to the old drainage channels that once ran through the Wandle delta where the Riverside Quarter now stands. The constant running water is a key component of biophilic design and is a welcome drinking source for many songbirds and invertebrates.

Photo credit: Biodiversity by Design





Half-tidal weir at the Thames-Wandle confluence; this was removed in 2019.

Photo credit : Biodiversity by Design

An aerial photograph of a large reservoir or dam. The water is dark blue and reflects the sky. In the foreground, there's a concrete structure, possibly a spillway or part of the dam, with some vegetation. The background shows a paved area, possibly a parking lot, and a concrete wall. The overall scene is somewhat desolate, with sparse vegetation and a sense of industrial or infrastructure scale.

**A TALE OF TWO RIVERS:
LOSS AND RECOVERY**

Getting Your Bearings

Wandsworth Riverside Quarter is located at the confluence between the River Wandle and the River Thames.

Looking north, on the far bank of the Thames, the treeline of the exclusive and historic Hurlingham Club can be seen. To the west, the Riverside Quarter is bordered by the Prospect Quay development, built in the 1980s, and then leafy Wandsworth Park. Upstream of the park is Putney Bridge, famed as the starting point for the annual Oxford and Cambridge University boat race.

From the east-facing windows of some upper apartments the central London skyline can be seen, dominated by dramatic buildings such as the Gherkin, the Shard and the skyscrapers of Canary Wharf.

The Borough of Wandsworth itself was struck by 738 high explosive bombs during World War II, and there was considerable damage done to buildings in the vicinity of the Riverside Quarter. Nearly all the buildings along the river that can be seen downstream of the Riverside Quarter are the fruits of post-war regeneration projects.

Image right: Wandsworth Riverside Quarter occupies a prime position on the River Thames. This is an upstream view from the site past the moorings of Prospect Quay, with the dense treeline of the Hurlingham Club on the far bank. A Grey Heron may be seen on the mid foreshore in this image.

Photo credit: Dr Mike Wells



Poor Old 'Father Thames'

London waxed and waned and waxed, fed always by the silvery lifeline of the Thames.

David Piper: The Companion Guide to London

The Thames is 334 km (215 miles) long, and for 30 km (20 miles) it flows through Greater London. As the population of London grew, so the Thames suffered from the untreated human waste and industrial effluent entering its waters. In the 19th Century there were three major cholera epidemics in London, and it was not known at the time that the disease was water-borne. Instead, the disease was thought to be caused by 'miasma' (contaminated air). In the hot summer of 1858, the odour became so bad that a 'Great Stink' was declared and Parliamentary activity was interrupted, spurring the Government into action.

The chief engineer of the Metropolitan Water Board, Joseph (later *Sir* Joseph) William Bazalgette, was given the task of directing the building of a system to intercept sewage outflows to the Thames. The system he devised comprised 123 km (82 miles) of main sewers, fed by a further 1,770 km (1,100 miles) of street sewers, which opened in 1865. Two massive pumping stations transferred the sewage downstream to Beckton and Crossness where, at high tide, the untreated sewage was discharged into the Thames. While this improved river conditions in central London, the pollution problem had been transferred elsewhere. In 1878, around 650 people are believed to have lost their lives when a pleasure steamer, the 'Princess Alice', collided with another vessel close to the Beckton outfall. Many of the deaths were attributed to the passengers ingesting the toxic river waters.

Image right: Once portrayed as 'Monster Soup', the Thames is now one of the cleanest rivers in Europe passing through a city.

Image credit: William Heath, ©The Trustees of the British Museum.

Available at: https://www.britishmuseum.org/collection/object/P_1935-0522-4-121



Printed & Sold by W. G. & Co. 15, Abchurch Lane, London.

A MONSTER SOUP commonly called THAMES WATER, being a correct representation of that precious stuff doled out to us

Reviving the Thames

During the 20th Century, increases in London's population and industry, coupled with bomb damage to sewers and treatment plants during the war, resulted in further deterioration of water quality in the Thames. By the 1950s, the river was almost biologically dead with extensive stretches devoid of oxygen. Something had to be done to remedy the situation. Subsequent improvements to sewage treatment works, and the prevention of direct industrial discharges to the river, resulted in the return of many fish species to the Thames. In fact, the Thames is now one of the cleanest metropolitan rivers in Europe and a permanent or occasional habitat for an estimated 125 species of fish.

Water quality in the Thames is regularly monitored by the Environment Agency. In times of heavy rain and storms, the large volume of surface water flowing from hard urban surfaces can overload the sewage system. This still causes occasional discharges into the river from what are called 'Combined Sewer Overflows' (CSOs). The pulses of waste are associated with low oxygen levels in the water which can lead to significant local mortality of riverine life, including fish. To address this problem, two vessels - the 'Thames Bubbler' and the 'Thames Vitality' - follow the pollution pulses up and down the tideway, injecting up to 30 tonnes of oxygen per day into temporarily de-oxygenated stretches of river. The latest extensive tideway works being undertaken by Thames Water have been designed to greatly reduce the pollution caused by CSOs. Accordingly, over time, the need to operate these vessels will diminish.

Image right: View of the Thames upstream opposite Wandsworth Park.
Photo credit: Biodiversity by Design



Decline and Resurgence of the Wandle

“Under the low red roofs of Croydon, and by the cress-set rivulets in which the sand danced and minnows darted above the Springs of Wandle.”

- John Ruskin, describing the source of the Wandle

The source of the Wandle is in the chalk of the North Downs. The river is only 19 km (around 12 miles) long but falls notably in height from source to the Thames, making it historically a useful provider of water power. Since Roman times, it has fuelled mills for corn and cloth production and, later, gunpowder, snuff and tobacco. In the 19th Century, it was described as *‘the hardest worked river for its size in the world’* and, at this time, ran clean and was renowned for the quality of its Brown Trout. Frederick Halford (1844 – 1914), generally accepted as the father of modern-day fly fishing, fished for trout in the Wandle.

Sadly, the toxic effluent from later industries such as tanneries turned the Wandle into a noxious multi-coloured open sewer. A certain Courtney Williams (the author of a book called *Angling Diversions*) writing in 1945 quoted a newspaper report from 1905 as follows: *‘Wandsworth knows the Wandle as a sickly stream, sage green and sluggish, soiled by a dozen factories, often smelling vilely’*. A polluted river is not only no longer an asset to a place; it is a blight on everything from living standards to property values.

Accordingly, works to improve the water quality began. The Environment Agency and the Wandle Trust (part of the South East Rivers Trust) have jointly achieved amazing improvements throughout the catchment. Long-term conservation efforts including restocking have seen the return of the river’s famous Brown Trout, and other species such as Chub, Roach and Perch are all flourishing once again.

Image right: Historic Map of the Wandle
Delta in London in 1898.
Source: <https://commons.wikimedia.org/>



Broom House

Lonsdale House

16 BROOMHOUSE DOCK

WANDSWORTH BRIDGE
Wandsworth Wharf
Johnson's Wharf
West Bank Wharf
Corrison Wharf
St. John Wharf
West Wharf

Wandsworth Pier

Sawing & Planing Mills

Union Brewery

WANDSWORTH RIVER

PUMPING STATION

Spencer's Ice Mill

15

Wool Works

Railway Works

WATER SIDE

BOARD SCR.

MISSION HALL

WANDSWORTH STATION

BRITISH SCHOOL

WINDSOR BRANCH

Malt Houses

Ropery

WINDSOR BRANCH

Oster Beds

Wool Works

WANDSWORTH CANAL

Lyons Wh

ST. FAITH

HEN Road

WINDSWORTH ROAD

14

GASOMETER

WANDSWORTH

MORRIS STREET

NORTH STREET

WINDSWORTH

WINDSWORTH

WINDSWORTH

WINDSWORTH

WINDSWORTH

WINDSWORTH

'Weir'd Happenings

As a further improvement to the Wandle environment, in 2017 a largely redundant half-tidal weir next to the terraces was removed by Wandsworth Borough Council (funded by Thames Water), along with a large volume of silt that had built up behind it. This exposed the gravels on the river bed once more.

The removal of this obstruction benefitted the Eel, a critically endangered species which breeds *thousands* of miles away in the Sargasso Sea (in the Atlantic Ocean, east of North America).

Young Eels return from the sea to mature in the upper catchments of streams like the Wandle, and weirs and similar structures can block their way.

Image right: Eels are found in the upper catchments of streams like the Wandle.
Source: theecologist.org 2019



Putting Back the Edges

In keeping with the planned resurgence of the River Wandle, the redevelopment of Wandsworth Riverside Quarter also included the restoration of its riparian (river edge) habitats. So much of the Thames and so many of its tributaries have lost their natural vegetated sloping margins; these margins are vital to the survival and development of young fish and also home to many other species of wildlife. By choosing when to move to river edge habitats, and when to enter the main water column, juvenile fish can stay close to their preferred locations in the river with least energy expenditure in fighting the forces of the tide. This increases their survival chances.

Now the policy is to try and put such important edge habitats back into London's rivers. A derelict vertical wall at the northeast corner of the Riverside Quarter was removed and replaced by a series of terraces created within the local tidal range. These terraces slope, both along their length towards the Thames and along their width, towards the Wandle. This arrangement recreates, in a narrow space, a sort of folded version of a more extensive natural sloping river margin, where riverine plants can grow. When the terraces are submerged by the tide, young fish can readily access and use the densely vegetated terrace habitats to forage and seek refuge from the forces of the twice-daily tide as it sweeps up and down the Thames.

Image right: Creation of intertidal terraces at Wandsworth Riverside Quarter.
Photo credit: Frasers Property





The European Smelt *Osmerus eperlanus*:
a fish species that is considered endangered in Europe
and which breeds near the Riverside Quarter.
Photo credit : Steve Colclough

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RIVER WILDLIFE

A Riot of River Plants

s

On the created river terraces, you can see a great variety of native (and some non-native but naturalised) plants that, to one degree or another, 'like their feet wet'. There are Goat, Grey, Almond and Purple Willows nearest the footpath. Lower down you may see beautiful flowering Wild Angelica, Purple Loosestrife, Yellow Flag Iris, Pendulous Sedge, Water Figwort and Gypsywort.

You may see the statuesque naturalised alien Greek Dock which persists as tall dead stems in winter.

Himalayan Balsam, otherwise known as Policeman's Helmet because of the shape of its pink flowers, regularly colonises and lives for a year or two. Whilst attractive to the eye and to bees, this is an invasive alien species that can dominate at the expense of all others. It is controlled by regular management.

These vegetated margins also provide shelter for young fish (fish fry). In addition, various types of waterfowl forage or rest on the terraces at different states of the tide.

Image right: Native and naturalised plants thrive on the created river terraces.

Photo credit: David Holland, Salix



River Animals Without Backbones

Animals that do not have backbones (otherwise known as invertebrates) are the most common animals around you, but many of them are hidden from view.

On a warm summer's day, you may see 'devil's darning needles' (dragonflies and damselflies) in number on the riverside terraces and sometimes in the wider landscape. These may include the jewel-like Banded Demoiselle – a species of river edges.

The sand and mudflats of the Thames are themselves rich in invertebrates – which are very important food for fish and birds. The Thames is still tidal at Wandsworth and the water very slightly brackish, and so faunal communities are dominated by species that tolerate small amounts of salt. As the river water ebbs away, pools form in depressions in the river bed. Pools down the shore near the low tide mark are dominated by the estuarine prawn (which can reach over 7 cm in length). Pools nearer to the banks are dominated by much smaller (around 2 cm long) estuarine shrimps.

Most of the invertebrates comprise very small worms and pea-shell molluscs. Jenkin's Spire Snail and Wandering Snail and Nerite Snail occur in the river margins.

The invasive alien Chinese Mitten Crab occurs here, as it does through much of the Thames Catchment. This species can cause problems by burrowing into banks and river edges, undermining them. Chinese Mitten Crabs are a popular culinary delicacy.

Image right: The Banded Demoiselle damselfly occurs on the Wandle. Here is a handsome male of the species.
Photo credit: Dan Powell



Common Fish and Special Fish

The improvement in water quality in the Thames over the last few decades has contributed hugely to the recovery of fish populations. The London Wildlife Trust estimates that there are 125 species of fish in the Thames and, for many, the river provides important nursery areas for their young where semi-natural river margins persist. The local fish community is dominated by Dace, which spawns in the riverine shingles, along with Roach, Perch, Barbel and Bleak in varying numbers.

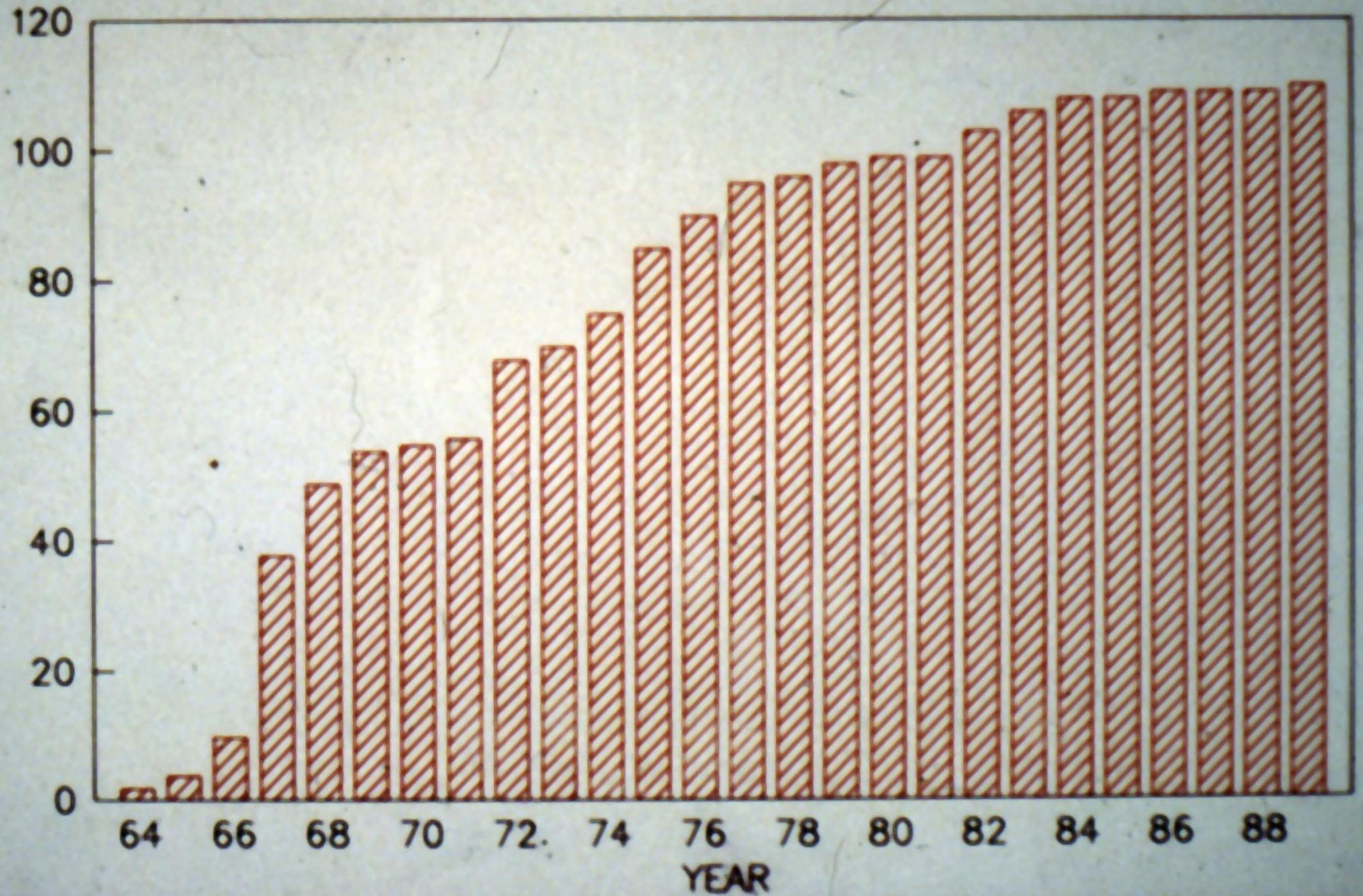
Places at or near the confluence between rivers – such as the Thames/Wandle confluence at the Riverside Quarter – are often relatively rich in different species and can be favoured places for fish breeding. The river channel gravels between the Riverside Quarter and Wandsworth Bridge are a key spawning ground for a special fish species called the European Smelt (see pages 26-27). This slender, silvery-green fish (typically up to 20 cm long, although some are considerably larger) is a close relative of Salmon and Trout. It is said, strangely, to smell of cucumbers when handled! It breeds in the area between February and May.

Since European Smelt are relatively sensitive to poor water quality, their occurrence here reflects the healthy local status of the river. In fact, the Thames is now believed to host one of the largest European Smelt breeding populations in the UK and is the subject of a long-term study by the Zoological Society of London.

Image right: Improved water quality in the Thames in the latter half of the 20th Century led to the recovery of the populations of many fish species in the river.
Source: The Environment Agency

CUMULATIVE FISH SPECIES RECORDED IN TIDAL THAMES (FULHAM - TILBURY)

CUMULATIVE SPECIES NOS.



A River Bird Bonanza

The number of fish-eating birds you can see around Wandsworth Riverside Quarter is an indication of the generally healthy state of the river – a comforting sign for any Londoner or visitor. This source of food attracts a variety of riverine birds including the exotic-looking Great Crested Grebe. Grey Herons are common here on the mud and shingle flats and like to perch for safety on undisturbed structures in the river or large bankside trees. Cormorants are also abundant and can often be seen drying their feathers with wings outstretched. To enable them to dive their feathers lack the oils of many other birds, so they become wet in the water and have to be dried off on land to be kept in good condition.

Other birds feed on the abundant invertebrate life, algae and bankside vegetation. These include Mute Swans, duck species such as Gadwall, Teal, Mallards and Tufted Duck, and many different types of gull. When the intertidal flats are exposed or only covered by a few centimetres of water, wading birds – such as Common Sandpipers and Oystercatchers – can sometimes be seen probing the silt for invertebrates.

Bobbing around the shore and banks you can also often see Grey Wagtails, river-loving songbirds that feed on aquatic insects and nest in holes in stonework along the river edge. They are beautiful slate grey birds with yellow bellies.

Image right: The Great Crested Grebe is just one of the fish-eating birds you can see from the Riverside Quarter.
Photo credit: Binson Calfort/Shutterstock.com



'Bird Barges'

The removal of the derelict oil jetty and bankside trees left a substantial number of Cormorants and Grey Herons, an unusually large population so close to the heart of London, without a place to rest and preen when not feeding. Rather than hope they would find 'alternative accommodation', it was decided to provide them with what might be best described as floating bird hotels — or '*bird barges*'.

The barges were sourced in Holland where they had been abandoned at the end of the Second World War, having been used to create bridges over the River Meuse. They were refurbished and specially fitted out in the Medway in Kent with different structures designed to attract a variety of bird species, and then sailed up to Wandsworth where they were installed outside the main shipping channel.

The barges with many posts are favoured by the Grey Herons and Cormorants. The gravel barge provides potential nesting sites for Little Ringed Plovers and terns. There are also holes and niches that can attract Kingfishers or Wagtails. You may also see other species on the barges and it is always worth reporting your observations (see page 52).



Image left: The Cormorants and gulls seem to be very appreciative!
Photo credit: Biodiversity by Design

Image right: Four specially-designed 'bird barges' have been installed opposite Wandsworth Park as a safe haven for river birds displaced by the development of the Riverside Quarter.
Photo credit: Biodiversity by Design



Mammals of the River and Its Edges

At dusk or dawn you may well see bats flying up and down the River Wandle. These bats are attracted to rich marginal habitats along watercourses, and benefit from dark corridors that smaller rivers like the Wandle provide. The most common species in the area is the Soprano Pipistrelle, which is most often associated with water and feeds on small insects like midges that emerge from water environments.

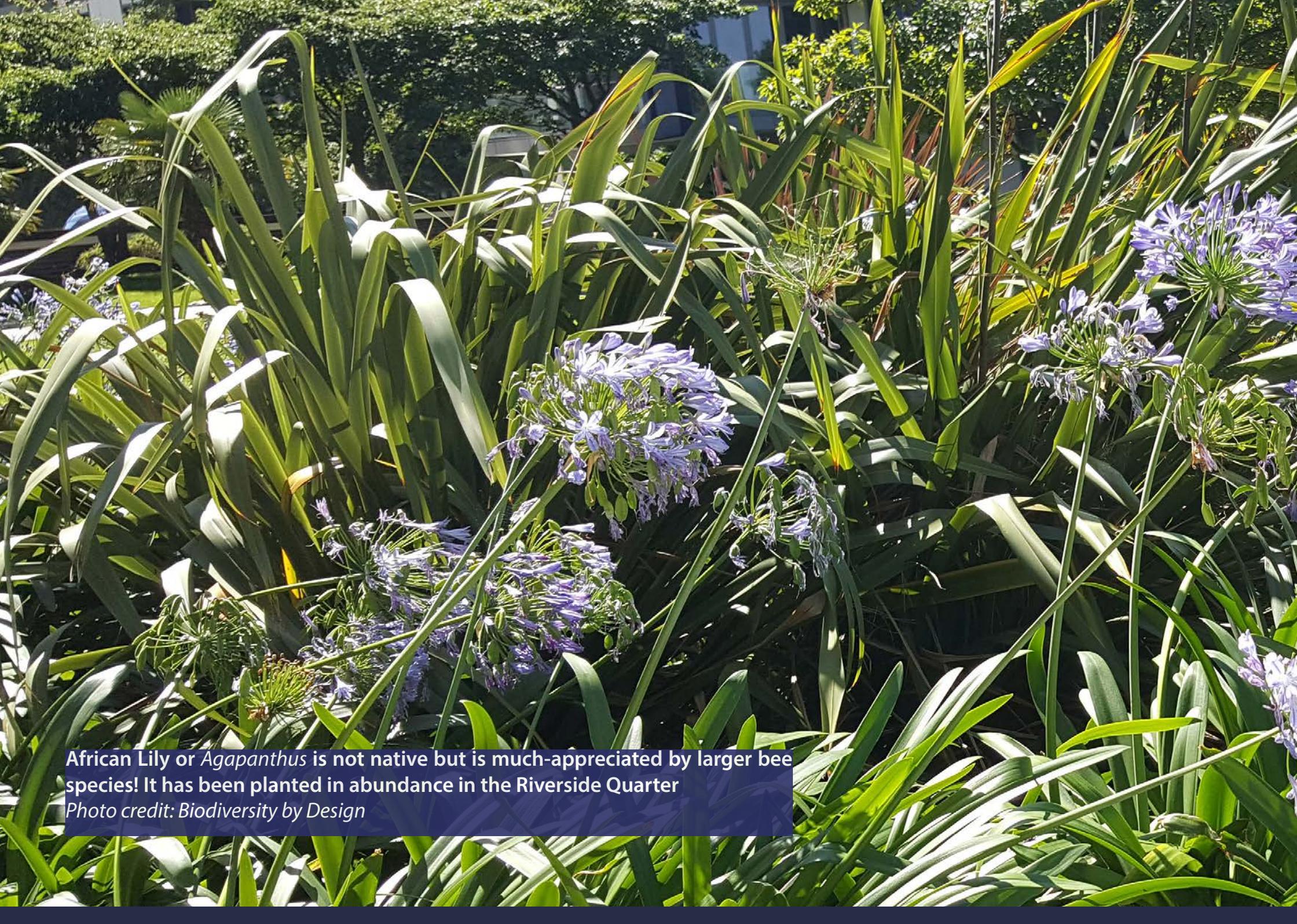
A much larger bat hawking at or above tree canopy height down the edges of the tidal Thames might be a Noctule bat or even a Lesser Noctule (Leisler's) Bat.

It may come as a surprise to some that several marine mammals that use the Thames estuary can actually occur this far upstream. Around the Riverside Quarter, both Harbour Seals (also called Common Seals) and Grey Seals do occur and feed, though you would be lucky to see one. You also might see Harbour Porpoises (actually a small species of whale) in this area but they occur more typically further downstream.

In the unlikely event that you see a larger whale species it is likely to have lost its way and be in difficulty and should be reported to the Harbour Authority and the Zoological Society of London (see page 52).

Image right: Harbour seals (like this one) can sometimes be seen from the Riverside Quarter.
Photo credit: Enrique Aguirre/Shutterstock.com





African Lily or *Agapanthus* is not native but is much-appreciated by larger bee species! It has been planted in abundance in the Riverside Quarter
Photo credit: Biodiversity by Design



CATERING FOR NATURE EVERYWHERE

Nature, Nature Everywhere

As already explained, the redevelopment process that created Wandsworth Riverside Quarter included careful consideration of how to nurture and celebrate the adjacent riverine environment. Even on the land there are attempts to echo the site's watery past. The landscape weaves its way between offset buildings redolent of the sinuous drainage channels in the former Osier (willow) beds that used to occupy the Thames-Wandle confluence (see page 3).

But it is not just the rivers that have been considered. Everywhere you look, including when you gaze down onto some of the roof spaces from apartments above, you can see how the natural environment is woven into the fabric of Wandsworth Riverside Quarter.

The formal gardens between the buildings are rich in plants providing nectar, pollen and other resources to pollinators and other wildlife. There are many different species of bee in London, and plant species and assemblages throughout the development have been selected to maximise the chance of some of the less-common species of bee occurring. With a keen eye (and luck) you might spot one of the rarer bee species here. The diversity of insects helps to stop any one species dominating and becoming a 'pest'.

Image right: The formal gardens of the Riverside Quarter are full of plants loved by native wildlife. Here an American Coneflower *Echinacea* is being foraged by a honey bee.
Photo credit: Biodiversity by Design



Play in Nature

To the south of the Wandle river terraces is a '*pocket park*' that has been designed for both play and enjoyment of a very natural setting. We now know that play in Nature is generally better for us than play in other settings (see page 10).

Most of the plant species in this pocket-park are native to the UK and very attractive to wildlife. The grass is rich in native flowering plants and the edge of the park near the Thames Path supports various dramatic species that prefer damp soils including, for example, the striking Yellow Loosestrife. You might even be lucky enough to see a beautiful solitary Loosestrife Bee, which lays eggs in holes in the ground and then furnishes them with Yellow Loosestrife pollen as a rich food for the grubs when they emerge. In the open, near the terraces, there is a south-facing 'hotel' for solitary bees. Hidden from view, there are deadwood logs set vertically in the ground which provide the perfect habitat for the majestic Stag Beetle.

There are various nesting boxes for birds and roosting boxes for bats on the trees. A water trough is installed – and if you fill it with water you will have so many more opportunities to see songbirds and other wildlife up close and personal. If you find snail shells on boulders between the trees, this might be a sign that a Song Thrush (one of the UK's favoured songsters) has been there, feeding on snails by breaking the shells on its 'anvil'.

This 'pocket park' now forms part of the **Wandle Valley Regional Park** – a network of over 40 green spaces and 12 nature reserves covering over 900 hectares linked by the River Wandle and **Wandle Trail** with provision for walking and cycling. There are many different wildlife habitats to explore in the Regional Park, including the river itself, wetlands, species-rich grasslands and areas of native woodland.



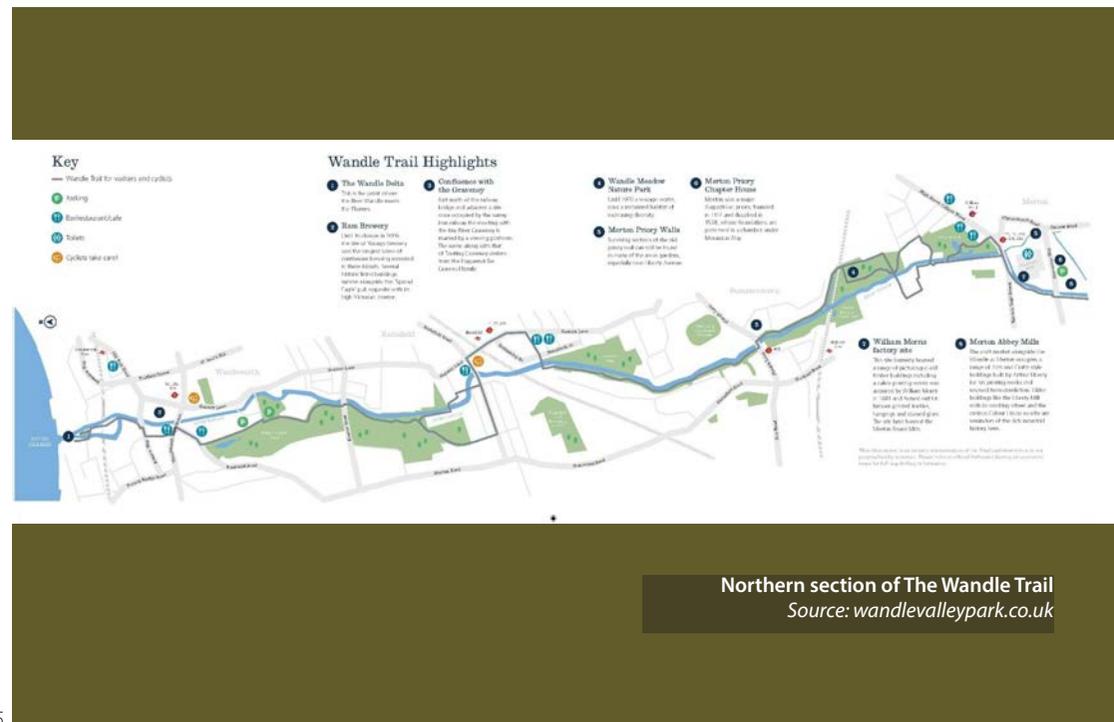
The solitary Loosestrife Bee - a London rarity
Source: Flickr



Yellow Loosestrife — a native wetland plant found near the Thames Path
Source: Naturescape.co.uk



A Stag Beetle
Source: questfornectar.com



Northern section of The Wandle Trail
Source: wandlevalleypark.co.uk

Green 'Living' Roofs - the Whys and Wherefores

Most roofs on buildings such as here in the Riverside Quarter have what is known as an 'inverted warm' structure. This comprises a waterproof layer topped with insulation held in place by some sort of weight (ballast), such as paving slabs. This arrangement keeps the water out and the heat in, and prevents condensation inside the building.

But the roofs nearest the River Wandle in the Riverside Quarter are modified into green roofs. Why? To turn an 'inverted warm' roof design into a 'green' roof, the ballast is replaced by several types of matting, drainage layers and a growth medium sown with wild plants. The benefits are many. The roof then becomes 'responsive' and multi-functional. The soil and plants absorb and filter rainfall and slow down the rate of its discharge into drains and rivers, cool the roof and the surrounding areas on hot days, trap air-borne pollutants and deaden urban noise.

There are more green roofs on nearby developments, and there is interchange of plants and animals using these roofs and those in the Riverside Quarter. This interchange increases the survival chances of species in the area as a whole. London now has around a million square metres of green roofs which act together to enrich the capital with biodiversity whilst bringing all the other benefits mentioned above.

Image right: Biodiverse grassland as a living roof in the Riverside Quarter in late summer. The sward naturally dries out and dies back through the summer but regenerates the following year.
Photo credit: Biodiversity by Design



Enjoying the Highlife

The green roofs at Wandsworth Riverside Quarter have also been designed to be especially attractive to native wildlife, including wild flowers, insects, birds and bats. Soil depth differs across the roof, with deeper mounds into which some insects can burrow and make their homes. Other areas are designed to create wetter conditions favoured by some species.

The green roofs of the Riverside Quarter have been very well-designed with significant parapets and logs arranged in arcs with the top of the arc towards the prevailing wind. These features reduce windspeed and thereby slow down the rate at which soil dries out, and also improves flying conditions for small invertebrates.

If you see a greyish bird with a whiteish belly and russet tail – please make a note of it and report it to Greenspace Information for Greater London (see page 52). It might just be a Black Redstart, one of the UK's rarest breeding birds and one that loves open semi-vegetated habitats such as these. They have adapted to living in urban centres in the UK, including in Greater London. Special 'Cave Nest Boxes' to attract Black Redstarts to breed have been installed on the green roofs. Other species may also be attracted to nest in these Cave Nest Boxes, including the attractive Pied Wagtail sometimes known as the 'Chiswick Flyover' due to the sound of its call – 'Chis'ik'!



Image left: Pied Wagtail
Photo credit: Erni/Shutterstock.com

Image right: A male Black Redstart.
Photo credit: Bildagentur Zoonar GmbH/
Shutterstock.com





A River Wandle clean-up party.
Source: Wandle Trust



ONE STEP BEYOND

Getting Involved and Learning More

If you would like to get closer to, or more involved with, nature in and around Wandsworth Riverside Quarter, there are a number of ways in which you can do it. A great amount of information on the environment of London's rivers is available from the **Environment Agency** (www.gov.uk/government/organisations/environment-agency), the **Port of London Authority** (www.pla.co.uk) and the **Thames Estuary Partnership** (www.thamesestuarypartnership.org/).

If you spot any unusual birds or wildlife on the Bird Barges or using other refuges around the site, please do report your sightings to **Greenspace Information for Greater London** (www.gigl.org.uk). This sort of information can be very useful in the design of future developments to support the biodiversity of the Thames tideway.

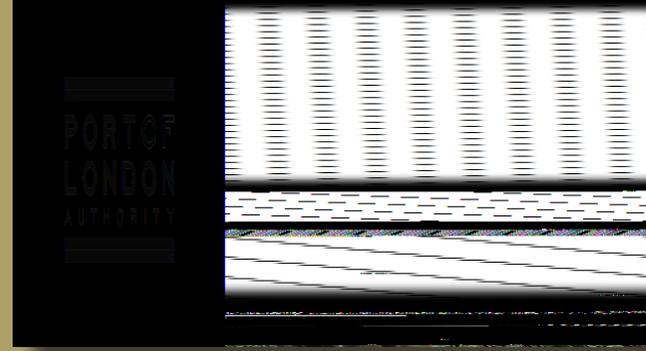
You can report marine mammals on the **Zoological Society of London** website, or using the Twitter hashtag #inthethames, where there is a map of all recent sightings (though several may be of the same individual animal). You can also contact the **Port of London Vessel Traffic Services Officer** on 0208 855 0315 (available 24 hours a day) to help make shipping aware of marine mammals in the area.

To find out more about the Wandle, take a look at the **Wandle Vistas** document on the **Wandle Valley Park** website (www.wandlevalleypark.co.uk/projects/wandle-vistas).

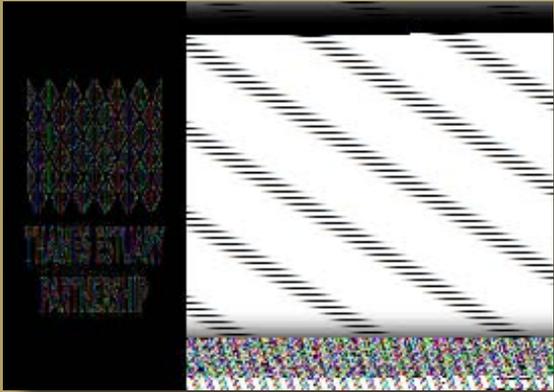
Further information about the vital restoration work on the Wandle can be obtained from the **Wandle Trust** (part of the South East Rivers Trust) at www.wandletrust.org. There are also opportunities to get involved in its many activities and initiatives.



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Wandle Valley

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WANDSWORTH



Walking the Wandle Trail.
Source: Wandle Valley Park

