



# SECRET RIVERS

**REVEALING THE  
HISTORY OF  
LONDON'S RIVERS**

**DIGITAL CATALOGUE**

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# INTRODUCTION

London is a city of many rivers, streams and brooks. Some still flow above ground, others are 'lost', buried beneath the streets, submerged into Joseph Bazalgette's sewer system, invisible in the modern city. All have played a role in shaping London and have been shaped in turn by the people who have lived and worked here.

London is here because of its rivers. The Romans established a settlement near the crossing point where London Bridge now stands, and Londinium grew up along the banks of the Walbrook. But even before Roman occupation, human activity in the area was often focused around the waterways, which offered natural resources. Throughout London's long history its rivers have been crucial for transport, industry and sustenance. Across many different cultures they have been and continue to be revered as sacred. They have been a source of pleasure, and have inspired passion and creativity from generations of artists, authors and musicians.

Polluted and neglected, some of the rivers disappeared underground, but they are not entirely lost or forgotten. Some continue to flow as sewers and drains, and their traces can be seen throughout modern London in place-names, the shape of streets and boundaries, and in the placement of buildings and landmarks. Archaeology along the courses of London's rivers and 'mudlarking' on the Thames foreshore offer clues about the rivers' past, and artists, writers and musicians are bringing them back to our consciousness. Environmentalists and activists are working to preserve the waterways that remain open, and there are even plans to uncover some parts of those rivers that have been buried.

Using the breadth of the Museum of London's collection from archaeology to art, along with some generously loaned items and new commissions, we reveal the secrets of London's rivers.

Kate Sumnall and Thomas Ardill

## SECTION 1: SECRETS OF THE THAMES

### MIDDLE BRONZE AGE CRANIUM, 1260-990 BC FOUND ON THE FORESHORE AT MORTLAKE

Over 250 ancient human skeletal remains have been found along the Thames in London. The majority are crania (skulls without the lower jaw bone) from the prehistoric period. Many of these, approximately 43 individuals, were found in Mortlake. This is more than any other Thames location, although specific geographical information does not exist for all the Thames crania.

London's rivers provided a focus for human activity including burials. These were susceptible to flooding and the bones washed out. The water current affects bones in different ways, crania roll and often travel quite some distance. The evidence suggests the large number of crania in Mortlake may be due to the river moving them over a long period of time rather than them being deliberately placed there. Previously, opinions have been divided with some arguing that the concentration of specific bones reflected ritual relationships between prehistoric people and rivers.

This cranium is probably from a female who was 18-25 years old when she died. Close examination revealed polishing on the cranial vault (top of the skull), scraping on the bone edges, frontal tooth loss and stones wedged in the ear canal, which are all signs of river movement. The bone also has iron staining which indicates it has spent a significant amount of time in a watery environment.

Kate Sumnall

**'For they were young, and the Thames was old  
And this is the tale that the river told.'**  
Rudyard Kipling, 1911





# SECTION 1: SECRETS OF THE THAMES

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## CERAMIC RIVER EGG, 2012

This river egg was discovered by a mudlark searching the Thames foreshore for historic objects. It was one of several that have been found on the banks of the Thames since 2012. These eggs were a mystery, each one stamped with a unique number and 'London'. This egg has the number '2664'. It is hollow and appears to be empty.

Research revealed the story behind these ceramic eggs. The anonymous artist known as Anon created 5,000 stoneware eggs in 2012. The eggs were fired in a wood-fired kiln. Stoneware has a speckled appearance and adds to the realistic appearance of these eggs. The eggs were made in a variety of sizes and reportedly some had another object placed inside. Once fired, the artist laid the eggs out in the shape of the Thames on the South Downs, Sussex. The final stage of the artistic installation involved placing the eggs into the Thames on Easter weekend 6-9 April 2012.

Gradually the mudlarks and other visitors to the Thames foreshore found these eggs and reported them to the Portable Antiquities Scheme (PAS) at the Museum of London. The PAS works alongside the Port of London to support the permit system which requires anyone searching the foreshore to report their historic finds. The fascinating aspect of this discovery was plotting the distance the eggs travelled with the tide; this example was found in Erith and was gifted to the Museum by the finder in 2013.

Kate Sumnall



John Stow in his 1598 Survey of London described the Walbrook  
'this watercourse, having divers bridges, was afterwards vaulted over with brick,  
and paved level with the streets and lanes wherethrough it passed; and since that,  
also houses have been built thereon, so that the course of Walbrooke is now hidden  
underground, and thereby hardly known.'



## SECTION 2: SACRED RIVERS

### STYLII FROM THE WALBROOK, ROMAN FOUND IN THE WALBROOK VALLEY

The Walbrook has long since been covered over but it was a major feature of Roman Londinium. It was large enough for boats to sail some way up it assisted by the tide. The Romans built a dock for unloading those boats, however, within a few years of settlement the tidal reach dramatically dropped due to environmental fluctuations.

Roman Londinium was built with the Walbrook at its heart. It was part of the fabric of everyday life for Roman Londoners. It was valued for industry including metal working, milling, and water supply and it was also sacred.

Over recent decades there have been several archaeological excavations which revealed sections of the Walbrook, its tributaries and the riverbanks. Evidence for the two bridges at Bucklersbury and Cannon Street demonstrate how many Roman Londoners would have passed over and interacted with the Walbrook everyday. These excavations produced a huge number of artefacts which have helped to piece together the landscape, the people

and the activities that took place. But it doesn't provide all the answers. Some of the artefacts clearly relate to the use of waste material to create revetments and consolidate the riverbanks, others demonstrate the metal working and other industrial activity that relied upon the water from the Walbrook and then there are other objects which cannot be so easily explained. Some are definitely religious objects like the Venus figurines which may have come from nearby shrines or have been thrown into the Walbrook as offerings. Other objects, like these stylus, are practical tools. They were used to write on wax tablets. They were common, everyday objects, possibly regularly lost much like pens today. Many stylus were excavated from the Walbrook around the bridge at Bucklersbury. Some were deliberately bent, suggesting they may have been ritually destroyed and thrown as offerings into the river at the crossing point.

Kate Sumnall



## SECTION 2: SACRED RIVERS

### ROMAN MARBLE INSCRIPTION LATE 2ND CENTURY AD EXCAVATED FROM TABARD SQUARE, SOUTHWARK

The Thames of Roman London was a much wider river than today and in places it divided into several channels with islands between them. Originally north Southwark was a series of low-lying sand and gravel islands known as eyots. This watery landscape was extremely significant in prehistory and in the Roman era, providing access, not only to the valuable practical resources, but also to the sacred river. The Romans believed that rivers were a means of direct communication with the gods. Many Roman temples and shrines were built adjacent to rivers and springs. Archaeological excavations have revealed a large temple complex constructed on the shore of one of these Thames channels in north Southwark.

This marble inscription was discovered on the temple site and provides rare information about the founder of the temple, the deity and the nature of the temple. The inscription reads,

'To the Divinities of the Emperors (and) to the god Mars Camulos. Tiberinius Celerianus, a citizen of the Bellovaci, moritix, of Londoners the first...'

Tiberinius Celerianus was the benefactor of this Romano-Celtic temple. He was from the Gaulish tribe Bellovaci, located in the region of modern Beauvais in France and he was a moritix - a sea-farer or traveller connected with trade. Tiberinius Celerianus had a strong connection to seas and rivers and perhaps this gives an insight into the significance of this temple site. This Celtic connection can be seen in the god that combines Mars, a Roman god, and Camulos, a Celtic god popular with the Bellovaci. It was a Roman practice to blend deities from different cultures. The shape



and layout of the temple, two concentric squares, is also typical for a Romano-Celtic temple. The inscription also helps to date the temple due to the mention of plural Emperors. This refers to when Marcus Aurelius adopted Lucius Verus as co-emperor which provides a date after AD161, shortly after the site was converted from a roadside suburb into a religious precinct.

The religious site remained in use over the next 200 years, after which beliefs changed and this inscription was no longer needed. Religious objects were considered to have power and significance and could not be thrown away but had to be disposed of appropriately. The inscription was discovered buried with care and reverence, it was placed in a pit or ritual shaft within the walled temple enclosure and covered with a large piece of tile that may have been deliberately placed over it as protection. It remained there for 1,600 years until recent development led to the site being excavated and recorded.

Kate Sumnall

## SECTION 2: SACRED RIVERS

### CERAMIC VERULAMIUM-REGION WHITEWARE MORTARIUM AD 50 - 160 EXCAVATED FROM THE FLEET VALLEY

An almost complete Roman mortarium, this ceramic vessel would have been used to grind food and herbs in a similar way to the modern mortar and pestle. Grits were added to the internal surface to aid grinding. The grits used on this example are flint and a coarse quartz; they are clearly still visible. The mortarium was made in Verulamium (modern day St Albans) and there is a maker's stamp located on the flange, it reads MORINAM. This gives us the potter's name of Morina and the 'M' at the end is an abbreviation of 'manus' meaning hand; so the stamp can be read as 'made by the hand of Morina;'

The potteries at Verulamium produced large quantities of vessels that were distributed and used widely around southern Britain and to a lesser extent northern Britain and southern Scotland. The easiest method to transport the finished products would have been by boat. During the Roman era, the River Fleet was valued as a transport route. The lower Fleet was tidal and wide enough to allow ships to sail up to the eyots and then unload goods.

A number of complete and almost complete Roman ceramic vessels, including this mortarium, were excavated in the lower Fleet valley during the late 1980s. Was this one part of a lost or damaged cargo? Alternatively, was it an offering into the river as we see in other watery places like the Walbrook? Or, was this mortarium simply discarded? The Romans used rubbish to raise ground levels and build revetments, both methods of river management. The mortarium shows signs of having been burnt, does this lend more weight to the disposal theory?

It is rare to be able to identify ordinary individuals by name in the distant past. With this object and the marble inscription in the Sacred Rivers section, we not only know the names of two people who lived almost 2,000 years ago but we also know their professions, Morina the potter in Verulamium and Tiberinius Celerianus a Celtic sea-farer. Traces of their existence have survived in these riverine environments for millennia providing tantalising clues about the people who lived, worked or had connections with London.

Kate Sumnall





## SECTION 3: BIOGRAPHY OF A RIVER

### MEN BATHING IN THE FLEET DITCH, 1750-1780 CHARLES GRIGNION AFTER FRANCIS HAYMAN, ENGRAVED BOOK ILLUSTRATION

Before it began to be buried in the late 18th century, the River Fleet would have been considered London's second river. Flowing through the western part of the City and joining the Thames at Blackfriars, it would have been seen, heard, smelled and crossed over by thousands of Londoners on a daily basis. It is therefore a curious fact that works of art depicting the Fleet are somewhat hard to find. When we consider the state of the water in the 18th century, however, this absence is understandable: Londoners had little reason to be proud of what was effectively an open sewer usually referred to as the Fleet Ditch.

Efforts had been taken to clean the river throughout the previous century. It was scoured out in 1598, 1606 and 1652, but industries along its banks continued to throw their waste into the water and householders to direct their sewage into it, so it once again clogged up with filth. A more ambitious renovation was undertaken after the Great Fire of London (1666) when Christopher Wren (1632-1723) directed and Robert Hooke (1635-1703) supervised the deepening and widening of the river from the Thames to Holborn Bridge (where Holborn Viaduct now stands) to create a short canal crossed by elegant stone bridges and lined on both sides with wharves.<sup>1</sup>

**'the Fleet is a secret ditch, the kingdom  
of typhoid, a conduit of bad air'**

Aiden Andrew Dun, 1995



This inspired a grand oil painting of the *Entrance to the River Fleet* by the painter Samuel Scott, a contemporary copy of which is shown in Secret Rivers (on loan from the Guildhall Art Gallery). Scott was a disciple of the leading Venetian landscape painter Canaletto, who specialised in city views including of London and the Thames. Inspired by this master, Scott pictured the mouth of the Fleet from a vantage point on the south bank of the Thames. With a foreground of neat little boats floating on glassy green water, the tall buildings and church spires, and especially the high arched bridge, this looks more like the Grand Canal in Venice than the Thames and Fleet.

Scott's decision to view the river from afar is a clever trick as the viewer can imagine the Fleet continuing as a long, straight canal running through the heart of an elegant European city. In reality it ran for less than half a mile (650 metres) before terminating at Holborn Bridge. Here a grating was installed to prevent the canal from silting up with rubbish from the ditch. It was only partially successful as detritus built up behind the grate and water cascaded over the top, bringing plenty of muck with it. By the early 18th century the canal was no cleaner than it had been a hundred years earlier when the author Ben Johnson (1572-1637) likened a boat trip on the Fleet to a journey along the River Styx to Hell (*On the Famous Voyage*, c. 1612).

This notorious blight in the heart of London became a victim of satire once again when it was described by Alexander Pope in book 2 of his mock-heroic narrative poem, *The Dunciad* (1728-1743), for which this engraving is an illustration. Pope's humour stems partly from the contrast between the architects' dream of the Fleet as a grand canal, and the sad reality that it was little more than a dirty ditch, 'The king of dykes!' (line 273). The print illustrates an episode in the poem which narrates a heroic diving competition by Bridewell prison 'where Fleet Ditch, with disemboing streams, Rolls the large tribute of dead dogs to Thames' (lines 271-272). A bound set of journals will be awarded to the hack writer 'Who flings most filth, and wide pollutes around The stream' (lines 279-280), while 'A pig of Lead [will be awarded] to him who dives the best; [and] A Peck of Coals apiece shall glad the rest' (lines 281-282). Lead and coal were precisely the kinds of heavy and bulky goods that were unloaded at the wharfs along the Fleet canal; indeed one of the men in the picture is standing on a coal barge and another sits on a stack of cuboid objects that may be lead ingots ('pigs'). Many of the participants in the competition drown, 'number'd with the puppies in the mud' (line 308), but one reappears triumphant having discovered a branch of the river Styx beneath the filth which flows into the Thames and intoxicates the citizens with 'wafting vapours from the land of dreams' (line 340). Again, this is ironic as the 'wafting vapours' of dead carcasses and household and industrial waste from the Fleet Ditch were more likely to induce vomiting than peaceful sleep.

Pope was not exaggerating when he suggested that the Fleet could be deadly. Two 18th-century clippings, pasted beneath and on the back of this print, give accounts of accidents in the ditch. The first, inscribed '1769', reports that 'On Saturday evening last two boys fell thro' the open rails into Fleet-ditch; a soldier jumped in and saved one of them; but the other, a most beautiful child, was drowned.' The second gives an account of a man being robbed and thrown in the ditch (27 November 1750).

The canal was not only dirty and dangerous, it was also unprofitable, and it was for these reasons that it began to be covered over. In 1733 the section between Holborn Bridge and Fleet Bridge at Ludgate Circus was arched over to form Fleet Market (now part of Farringdon Street). The rest down to the Thames was covered in 1766, making this part of the river into an official sewer. Other parts of the Fleet were progressively covered over until the whole river was incorporated into the London-wide combined sewer network where it still flows today.

Thomas Ardill



<sup>1</sup> Nicholas Barton and Stephen Myers, *The Lost Rivers of London: Their effects upon London and Londoners, and those of London and Londoners upon them*, revised and extended edition, Historical Publications, Whitstable, Kent, 2016, pp.138-141.

## SECTION 3: BIOGRAPHY OF A RIVER

### MEDIEVAL OAK TRIPLE TOILET SEAT, MID-12TH CENTURY

Before the Roman settlement, the lower Fleet was a wide, open river with two eyots. Over the centuries the water levels in the Fleet rose and fell due to environmental conditions. During the second half of the 11th century, the land around the southern eyot was reclaimed and the channel was infilled, after the land was granted by Henry II to the Knights of the Temple of Jerusalem (a Catholic military religious order). Henry II granted the Knights Templar 'a place on the Flete next Castle Baynard and all the course of the water of the Flete to make a mill there; and a messuage on the Flete by the bridge of the Flete'. A 'messuage' is a residence with outbuildings and land. This bridge over the Fleet connected with an east-west road known as Fleet Street. The location of the bridge and road had Roman origins. A large archaeological excavation along part of the Fleet in the late 1980s revealed a row of buildings that fronted onto Fleet Street. These medieval structures were a mix of commercial (including shops, a brewhouse and tavern) and associated residential and storage spaces.

Historic records from the 13th century show that one of the buildings was known as 'Helle' and was owned by John de Flete, a capper (a cap maker). The name 'Helle' has different possible meanings but may allude to the cellars belonging to the house. The three-seater wooden toilet belonged to this building. It was situated to the rear of the building on land planted with trees, suggesting an orchard belonging to the house.

The toilet seat was found over a wicker-lined cesspit. The construction of the cesspit would allow liquids to drain and be filtered by the ground while the solids would be collected and it would periodically need to be dug out. The cesspit and gardens were located over the infilled channel of the Fleet. There is no surviving evidence about the nature of the structure that would have enclosed the toilet but it is likely to have been constructed from wattle and daub. The loo seat itself was made from a single plank of oak and the three holes were cut using an axe.

This toilet would have been a private facility associated with the building on Fleet Street now known as Ludgate Hill. There was a common privy of the Fleet, for public use, located nearby. The lane to access this latrine separated this row of buildings from the two buildings adjacent to the River Fleet. The excavation report did not reveal any further evidence of this privy, however a contemporary account described it as 'full perlus and defectif'.

The row of buildings that fronted onto Fleet Street, now Ludgate Hill, were first built in the second half of the 12th century and survived until the area was heavily damaged by bombs during the Second World War. They were some of the longest-surviving London buildings, remarkable given that this minor row of buildings were associated neither with royalty, governance nor religion.

Kate Sumnall





## CLEANING TOILETS THE CONSERVATORS' WAY

This fantastic medieval triple toilet seat was discovered as part of the Fleet valley excavations that took place between 1988 and 1992. Due to the presence of the river Fleet, the burial environment of this object was very wet, allowing the preservation of the wood for hundreds of years. The large quantity of water in the soil reduced the supply of oxygen, limiting the activity of microorganisms that normally degrade wood.

The waterlogged toilet seat was conserved shortly after its discovery by conservators at the Museum of London. Irreparable damage can occur to wet archaeological wooden objects if they are allowed to air dry. If not properly conserved, this type of object deforms, cracks and shrinks. To avoid these problems, conservators impregnate the wood with special waxes called polyethylene glycol (PEG for short). These waxes take up some of the space previously occupied by the water, supporting the structure of the wood.

After the toilet was impregnated with PEG, it was dried in the Museum of London freeze dryer. Through the freeze-drying process, we can carefully control the drying of the wood and further minimize shrinkage and cracks.

After the initial drying, the toilet seat went into storage for 26 years, until it was selected for display in *Secret Rivers* by our curators. The surface of the object was covered in soil and white wax left over from the PEG impregnation. To remove the detritus, I carefully cleaned the surface of the wood by swabbing it with gentle solvents.

The toilet seat was very fragmentary when it was originally excavated. In total, there were 16 fragments of varying sizes. To make the object easier to understand and to simplify the display

process, I adhered several fragments to form 7 large pieces. In many cases, the joins between the wood had been worn or damaged by the long burial. Because of this, I had to fill the joins with long-fibre paper that was tinted to colour match the wood. If you look carefully, you can see the areas that have been filled, as they are at a lower level than the rest of the wood.

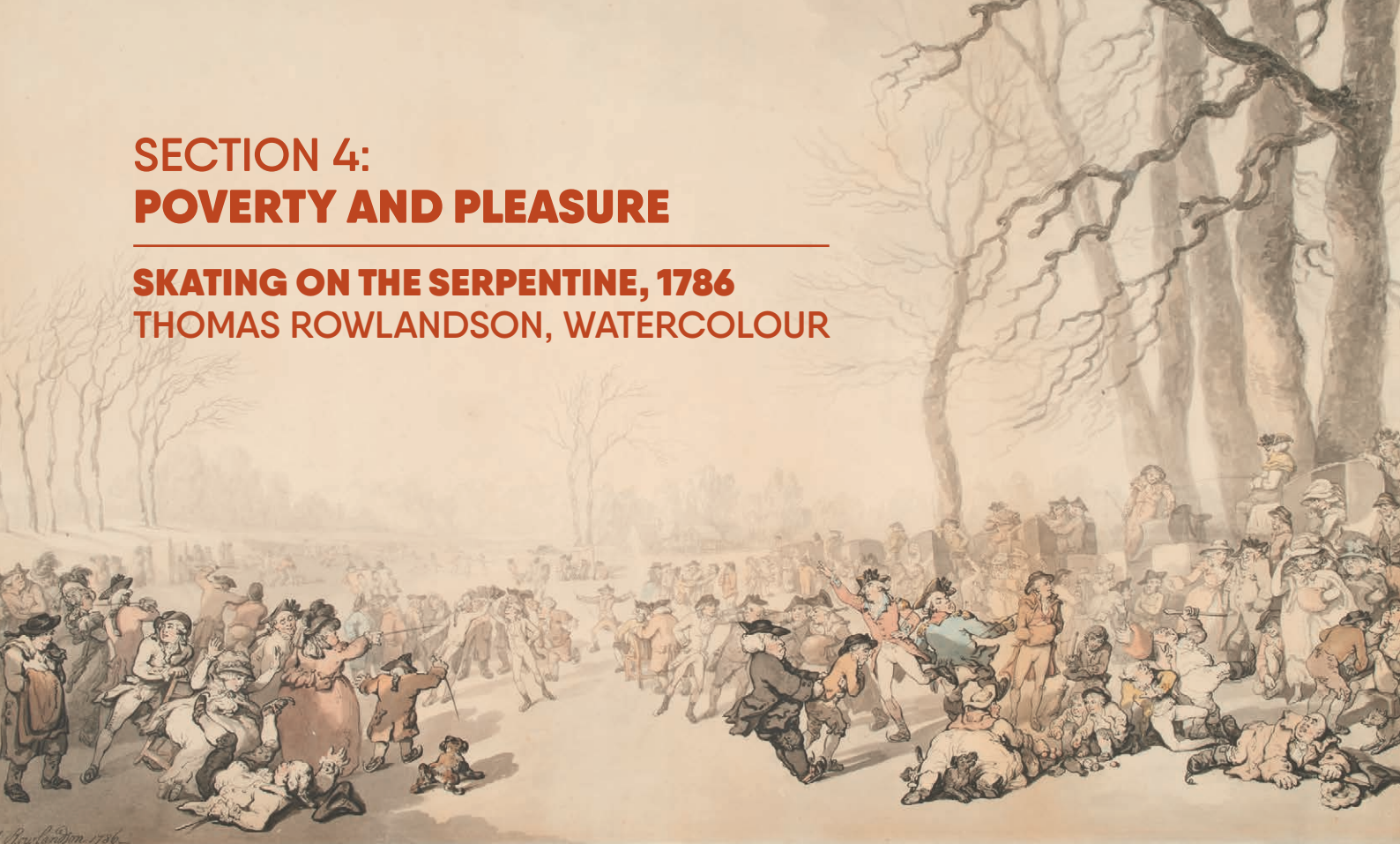
It took me 40 hours of careful work to get the triple toilet seat looking its best for the *Secret Rivers* exhibition. I hope you enjoy viewing it as much as I enjoyed conserving it.

Luisa Duarte  
(Conservator, Archaeology)



## SECTION 4: POVERTY AND PLEASURE

### SKATING ON THE SERPENTINE, 1786 THOMAS ROWLANDSON, WATERCOLOUR



The Serpentine in Hyde Park is an artificial lake, originally created along the course of the Westbourne by damming the stream and linking together a number of natural ponds in Hyde Park.<sup>2</sup> The work was overseen by the Royal Gardener Charles Bridgeman in the 1730s at the command of Queen Caroline. Until the 1860s the Serpentine was effectively part of the Westbourne as it received its water from the stream at Bayswater and another tributary, the Tyburn Brook (not to be confused with the River Tyburn), and drained back into it at Knightsbridge (the Knights' Bridge).<sup>3</sup> Because of this, and its narrow, curved river-like shape, it was often referred to in writing, maps and pictures as the Serpentine River. Indeed this was the original title of Thomas Rowlandson's watercolour painting now known as *Skating on the Serpentine*.

The royal park had been open to the public since 1637, but the Serpentine River provided a new picturesque focus and site for public recreation. As well as promenading by the water, bathing (in the summer months) and skating (when the water froze sufficiently) were popular past-times for Londoners from a variety of social backgrounds. January and February of 1784 were particularly cold and the frozen Serpentine brought Londoners to Hyde Park, either to skate or to enjoy the spectacle. The *Whitehall Evening Post* reported:

'There never was a more brilliant exhibition than Hyde-park yesterday afforded. Ministers, Lords, Commoners, all on their skaits; crossing, jostling, and overthrowing one another with as much dexterity and as little respect as they do in St. Stephen's; ... Of the dignified skaiters the Earl of Carlisle bore off the honours; Of the Commoners, Mr. West the artist, and Dr. Hewit, were the best. They danced a minuet on their skaits, to the admiration of the company.'<sup>4</sup>

Admiration, however, soon turned to hilarity when people were seen to bump into each other, slip over or even fall though the ice. The *London Chronicle* took particular delight in reporting the following incident:

'Yesterday afternoon as a party, who had amused themselves with skaiting, were refreshing their stomachs with cold ham and wine, at the side of the Serpentine-river, the ice suddenly gave way, and the bench, table, and company, had an upset; but by the situation the gentlemen were not above knee-deep in water; and the confusion for the moment made the scene of distress more laughable than alarming.'<sup>5</sup>

Such scenes provided a ready-made subject for Britain's leading satirical watercolourist and printmaker Thomas Rowlandson, who painted this



**'There never was a more brilliant exhibition than Hyde-park yesterday afforded. Ministers, Lords, Commoners, all on their skaits; crossing, jostling, and overthrowing one another with as much dexterity and as little respect as they do in St. Stephen's'**  
Whitehall Evening Post

comic picture for the Royal Academy's summer exhibition in 1794 where it was accompanied by another large watercolour of the fashionable crowd at Vauxhall Gardens.<sup>6</sup> Rowlandson's scene is full of the kind of amusing incidents reported by the newspapers: young men showing off, friends greeting each other, skaters bumping into each other and falling over, lascivious men eyeing young ladies, boys stealing dropped fruit, dogs barking and amused onlookers enjoying the fun from the warmth of their carriages. Screens have been erected on the ice to provide shelter from the wind and from which to sell wine and cakes (perhaps provided by the nearby Cheesecake House, a refreshment lodge seen at the far side of the frozen lake). The watercolour was never engraved, but the painting proved popular enough for Rowlandson to make a copy, which is the version shown here from the Museum of London collection.

Most newspaper reports of the Serpentine during the late 18th century are not of fun on the ice but of accidents, including frequent drownings. In 1794 a Receiving House was built on the north bank of the lake by the Royal Humane Society (originally the Society for the Recovery of Persons Apparently Drowned), equipped with boats and life-saving equipment and staffed by boatmen and ice-men.<sup>7</sup>

Frequent accidents, however, did not stop people from skating; indeed up to 10,000 skaters per day visited the Serpentine during the 19th century.<sup>8</sup>

Skating declined in popularity after indoor rinks were introduced in the 1920s, but Hyde Park still boasts of the UK's largest ice rink which is now set up every winter as part of the Winter Wonderland attraction. Visitors to the park can still enjoy boating on the Serpentine and swimming in the Lido area of the lake which is now fed by clean water from boreholes dug in the 1990s to a depth of 130 metres at the north end of the lake.

Thomas Ardill

<sup>2</sup> These ponds were also fed by springs. One of these emerged as St Agnes' Well, also known as the Drinking Well or Dipping Well. See the print by Francis Wheatley: Museum of London A13404.

<sup>3</sup> By the 1860s the Westbourne was too polluted to supply clean water to the Serpentine, so a well was dug to extract water from an aquifer (since the 1990s it has received water from a borehole). Around this time the Westbourne was covered over south of the Serpentine and the water from the lake was diverted into Joseph Bazalgette's Middle Level Interceptor Sewer, except in times of storm when it is diverted into the Ranelagh storm Sewer. (Barton and Myers, 2016, pp.78-82.)

<sup>4</sup> The *Whitehall Evening Post*, Issue 5712, January 31, 1784 - February 3, 1784

<sup>5</sup> *London Chronicle*, Issue 4253, January 31, 1784 - February 3, 1784

<sup>6</sup> Victoria and Albert Museum, no. P.13-1967

<sup>7</sup> An oil painting in the Museum of London collection features a lifeguard on the ice with 'ROYAL HUMANE SOCIETY' written on the back of his overcoat: J Barber (dates unknown) after John James Chalon (1778-1854), *Skating on the Serpentine*, oil on canvas, 1839, no. A8076

<sup>8</sup> <https://www.museumoflondon.org.uk/news-room/press-releases/new-display-museum-london-traces-capitals-obsession-ice-skating>





## SECTION 4: POVERTY AND PLEASURE

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### FOLLY DITCH, JACOB'S ISLAND, 1887 JAMES LAWSON STEWART, WATERCOLOUR

This large and highly detailed watercolour depicts two rows of dilapidated buildings with wooden galleries overhanging a waterway filled with stagnant water. This is the Neckinger (or Folly Ditch) as it flows through Jacob's Island. The painting gives a life-like impression of the place from a view along the water, presumably seen from a bridge similar to the one at the lower centre of the image. The varied textures of the fabrics of the buildings with their damp mottled plaster peeling away to reveal red bricks, the broken shutters, the dripping pipe, hanging washing and the figures crossing the bridge convince the viewer that they are looking through the eyes of the artist as he stood on that spot and observed that view as the sun was rising behind the buildings to the left. But

had the painter James Lawson Stewart (1841–1929) stood on that spot on Mill Street near Shad Thames in Bermondsey in 1887, he would not have been able to see any of these details as most of the old houses in the area had burned down in a fire of 1861, others were replaced in subsequent decades and the ditches were filled in.

The artist could therefore not have drawn this scene from life, but instead must have invented, or reconstructed it from other images. Indeed, Stewart specialised in painting scenes of old London, and frequently copied existing prints or used them as source material. The Museum of London holds a large collection of watercolours by Stewart depicting locations that appeared in



the writing of Charles Dickens, so it is likely that the present work was painted as an illustration to *Oliver Twist* in which Jacob's Island figures as the place where Bill Sikes meets his grisly end, hanging from the end of the rope he was using to escape. With this knowledge we are led to ask: how useful is this watercolour for showing us what life was really like on the notorious slum of Jacob's Island? To answer this question we need to consider the available evidence, and so we turn to writing, images and archaeology.

To begin, it is worth considering to what extent Dickens's description of the area can be considered accurate. Stewart's watercolour would seem to illustrate a passage in chapter 50 in which the scene is set for Sikes's last stand:

'In such a neighborhood, beyond Dockhead in the Borough of Southwark, stands Jacob's Island, surrounded by a muddy ditch, six or eight feet deep and fifteen or twenty wide when the tide is in, once called Mill Pond, but known in the days of this story as Folly Ditch. [...] A stranger, looking from one of the wooden bridges thrown across it at Mill Lane, will see the inhabitants of the houses on either side lowering from their back doors and windows, buckets, pails, domestic utensils of all kinds, in which to haul the water up [...]. Crazy wooden galleries common to the backs of half a dozen houses, with holes from which to look upon the slime beneath; windows, broken and patched, with poles thrust out, on which to dry the linen that is never there; [...] wooden chambers thrusting themselves out above the mud, and threatening to fall into it—as some have done; dirt-besmeared walls and decaying foundations; every repulsive lineament of poverty, every loathsome indication of filth, rot, and garbage; all these ornament the banks of Folly Ditch.'<sup>9</sup>

This loathsome scene provides the perfect setting for the novel's dramatic climax, and readers might assume that it is a work of pure fiction. But Dickens was writing, at least in part, from personal observation, as he had previously visited the area while on patrol with officers of the river police.

His account is also corroborated by that of Henry Mayhew writing for the *Morning Chronicle* in 1849:

'Here stands, as it were, the very capital of cholera, the Jessore of London - JACOB'S ISLAND, a patch of ground insulated by the common sewer. [...] On entering the precincts of the pest island, the air has literally the smell of a graveyard, and a feeling of nausea and heaviness comes over any one unaccustomed to imbibe the musty atmosphere. [...] The open doorless privies that hang over the water side on one of the banks, and the dark streaks of filth down the walls where the drains from each house discharge themselves into the ditch on the opposite side, tell you how the pollution of the ditch is supplied.'<sup>10</sup>

**'On entering the precincts of the pest island, the air has literally the smell of a graveyard.'**  
Henry Mayhew, 1849

Although this is a piece of journalism, rather than a work of fiction, the reader should take care when reading Mayhew's account as the writer, like Charles Dickens, was a social campaigner who used his editorial platform to make the case for reform. Some of the working people he wrote about objected to the way he depicted them in writing, claiming that it ruined their reputation.<sup>11</sup> There is no doubt that his language is highly emotive, and he carefully selected the most shocking or distressing examples to elicit a sympathetic response from his readers, but the facts about the polluted state of the water are backed up by the *Report of the General Board of Health*, which provided a strikingly similar account of Jacob's Island and its inhabitants who suffered from the highest incidents of Cholera in 1849 owing to their proximity to open sewers. A 'Cholera Map

**'dirt-besmeared walls and decaying foundations; every repulsive lineament of poverty, every loathsome indication of filth, rot, and garbage; all these ornament the banks of Folly Ditch.'**

of the Metropolis' contained in the volume (and exhibited in Secret Rivers), marks Jacob's Island in black, indicating a disease hotspot, along with a note on the cause: 'poisoned water open ditches'.<sup>12</sup>

In 1996, Museum of London Archaeology excavated the site of Jacob's Island and uncovered parts of the galleried houses, which had been collapsed into the ditch as well as some of the domestic items thrown away or abandoned on the site. Examples exhibited in Secret Rivers demonstrate that the area was indeed impoverished as the tobacco pipes, ceramic and glass vessels and cutlery were all inexpensive items of the sort used by London's poorest families.

Taken together, these written accounts and the archaeological evidence, as well as other visual depictions of the area,<sup>13</sup> largely support James Lawson Stewart's vision of Jacob's Island. He has certainly created a convincing impression

of Dickens's 'crazy wooden galleries' and other details of tumbledown houses. Scraps of rubbish in the ditch, which has areas of film or scum on the surface, hint at the polluted state of the water, but barely come close to the unsavoury details that Mayhew describes. Stewart, who was primarily a landscape and architectural artist, took great interest in surface details, but had little interest in narrative or the human aspects of a scene, so the poor living conditions are apparent, but there is no sign of the actual suffering of the inhabitants. It is only when the watercolour is considered alongside the other evidence that we can begin to imagine what life on Jacob's Island was really like for the poorest Londoners and appreciate that when the city's waterways are abused and neglected so are those people who live alongside them and rely on them for sustenance and sanitation.

Thomas Ardill

<sup>9</sup> Charles Dickens, *Oliver Twist*, 1837-39, chapter 50

<sup>10</sup> Henry Mayhew, A Visit to the Cholera Districts of Bermondsey, *Morning Chronicle*, 23 September 1849

<sup>11</sup> Ole Münch (2018) Henry Mayhew and the Street Traders of Victorian London — A Cultural Exchange with Material Consequences, *The London Journal*, 43:1, 53-71, DOI: 10.1080/03058034.2017.1333761

<sup>12</sup> *Report of the General Board of Health on the epidemic cholera of 1848 & 1849*, HMSO, London, 1850: <https://archive.org/details/b24751315>

<sup>13</sup> See for example: Robert Bremmell Schnebbelie's watercolour, View of London Street, Dockhead, 1813, on loan to the Secret Rivers exhibition from the London Metropolitan Archives: <https://collage.cityoflondon.gov.uk/view-item?i=6397>



## SECTION 5: DAYLIGHTING

### WET, DARK & BURIED, 1992 PLATFORM FOR THE 'STILL WATERS' PROJECT, 1992

In 1992, commuters at Vauxhall and Oval Underground stations were alerted to an ambitious proposal to bring the buried River Effra back to the surface by the following statement, boldly emblazoned on posters: 'WET DARK and BURIED Help us unearth the River Effra'. To find out more they were invited to a temporary visitor centre in Hearn Hill where the plans of the Effra Redevelopment Agency (ERA) were on show. A large topographical model with raised contour lines mapped out the area of the Effra 'watershed' showing the rainfall catchment area of the Effra valley with a resurrected river winding through. Local residents could see which buildings would have to be demolished and roads redirected or converted into bridges to make way for the river. This was 'the first stage of a project designed to incorporate your ideas'. A grand opening, press conference and debate about 'Digging up a lost river' were all to be held. Would the huge cost and disruption involved be worth it to enjoy the benefits of 'a London where the city and nature live in harmony: a water city – a city of the twenty-first century'? The ERA promised 'a healthier London [...] a proper place for your children to play; a wealthier London – with property values increasing, business prospects booming and tourism growing. [...] The unearthing of the Effra will be Europe's most important and exciting urban renewal programme, and it is happening on your doorstep.'<sup>14</sup>

However, 27 years later, the Effra remains buried as a storm drain serving a stretch of south London from Norwood to Vauxhall. What happened? Did the project fail to win public support? Was it denied planning permission? Did the ERA run out of money?

The truth is that the Effra Redevelopment Agency never had the authority to put its plans in place. In fact, the whole scheme was a stunt masterminded by the curator Andrea Phillips and the artist-activist John Jordan as part of 'Still

Waters' a month of street-based actions, walks, talks and art-interventions staged by Platform, an organisation which seeks social and ecological justice through art, activism, education and research.<sup>15</sup> The ERA aped the language, design aesthetic and activities of regeneration agencies operating in London in the Thatcherite eighties and nineties, especially the London Docklands Development Corporation. Their visitor centre, posters and successful publicity campaign succeeded in gaining considerable public attention and even convincing many of the people who came to the visitor centre that the river was really to be unburied.<sup>16</sup> 'Some were delighted, and inspired, and wanted to get involved. Others were furious, and demanded to know how they were to be rehoused', recalls Jane Trowell, one of the founding members of Platform. This strategy of spoofing and subverting (described by Trowell as a 'double-take' or 'trompe-l'oeil') is informed by the technique of 'détournement',<sup>17</sup> a method of turning expressions of capitalism and media culture against itself that was developed by avant-garde artists and intellectuals in the 1950s and '60s.<sup>18</sup> Trowell acknowledges that this kind of approach carries risk, 'chiefly the danger of the forgettable one-liner – but can be usefully provocative.'<sup>19</sup>

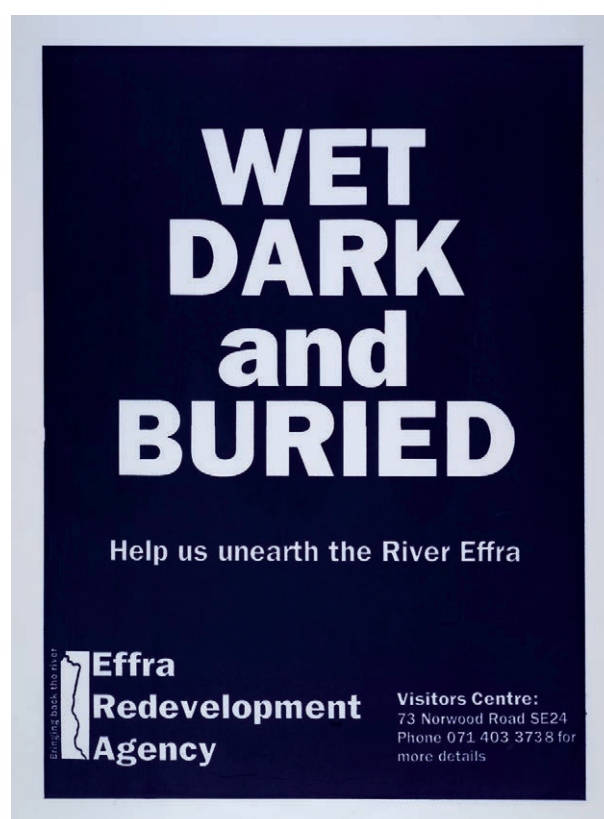
The success of Platform's provocation can be measured against public knowledge of the river, support for daylighting and the possibility that London might once again become a 'river city'. The ERA has made progress on all three counts. The Effra has become the subject of several publications, and its presence is now signposted by various information boards and plaques along its course.<sup>20</sup> Since Still Waters in 1992 there have

**'What kind of city buries its rivers?  
And what kind of city digs them up?'**  
Platform, 2012

been numerous proposals to uncover buried rivers in London.<sup>21</sup> As Mayor of London in 2008, Boris Johnson announced his intention to bring London's 'lost' rivers back to the surface as part of the London River Action Plan.<sup>22</sup> Nothing as dramatic as uncovering an entire river has since come into fruition, but sections of the Moselle, the Quaggy and the Wandle have all been 'daylighted' since then. The possibility of uncovering larger stretches or entire rivers has also been demonstrated in South Korea where 6.8 miles (10.9km) of the Cheonggyecheon stream was uncovered in downtown Seoul in 2005. Since then, the River Roch in Rochdale and part of the Porter Brook in Sheffield have been uncovered. Could the Effra be next?

Platform remain committed to the principal of daylighting, and the redisplay of the Unearthing the Effra campaign in Secret Rivers offers another opportunity to raise awareness of the buried Effra, and test public desire to unearth it. In the meantime the London Wildlife Trust have established a project to make the Effra valley greener and more resilient to flooding. Since 2013, the Lost Effra Project has been working with communities around Herne Hill and Brixton to create new living landscape features such as green roofs and rain gardens and by removing hard paving. These catch rainwater, slowing down its journey into the Effra storm sewer and reducing the risk of flooding.

Thomas Ardill



<sup>14</sup> Seeing is Believing, leaflet, Effra Redevelopment Agency, London, 1992 (Platform collection).

<sup>15</sup> <https://platformlondon.org/2012/05/01/twenty-years-ago-today-still-waters-day-1/>

<sup>16</sup> The visitor centre attracted 800 visitors and Unearthing the Effra was written about at the time in for several years afterwards in the *South London Press* (12 and 22 May 1992), *Time Out* (24 June 1992), *Sunday Express* (14 August 1994), *Evening Standard* (12 February 1996) and numerous local newspapers and newsletter.

<sup>17</sup> Jane Trowell, 'The snowflake in Hell and The Bakes Alaska: Improbability, Intimacy and Change in the Public Realm', in Sarah Bennett and John Butler (eds.), *Advances in Art & Urban Futures volume 1: Locality, Regeneration & Divers[c]ities*, Intellect Books, Bristol, 2000, p.106.

<sup>18</sup> Douglas B. Holt, *Cultural Strategy Using Innovative Ideologies to Build Breakthrough Brands*, Oxford University Press, Oxford, 2010, p.252

<sup>19</sup> Trowell, 2000, p.106.

<sup>20</sup> Ken Dixon, *Effra: Lambeth's Underground River*, The Brixton Society, 1992; Jon Newman, *River Effra: South London's secret spine*, Signal Books, Oxford, 2016; Nicholas Barton, *The Lost Rivers of London*. The location of Lambeth Council's Effra pavement plaques are listed here: <https://diamondgeezzer.blogspot.com/2016/12/marking-river-effra.html>. There is also a mosaic at Lowden Road, and a sign above the Effra's outflow at St George's Wharf. In a visitor poll held at the Museum of London Docklands to test existing knowledge in preparation for Secret Rivers nearly 10% of those asked had heard of the Effra.

<sup>21</sup> <http://www.newlondonlandscape.org/>

<sup>22</sup> Lost Rivers of London to resurface in Boris plan, *Evening Standard*, 16 June 2008: <https://www.standard.co.uk/news/mayor/lost-rivers-of-london-to-resurface-in-boris-plan-6915015.html>



## SECTION 5: DAYLIGHTING

### DAYLIGHTING, 2019 FGREAT STUDIO

The 23rd April is well-known in England as both St George's Day and the day on which Shakespeare's birthday is celebrated. It is also the day of the Tyburn Angling Society's annual dinner, which is generally held at the Flyfishers' Club on Brook Street, not far from the buried Tyburn. This year marks the 1060th anniversary of the Society, which claims to have been founded by royal decree in 959. The first written record of Tyburn Angling ('andlang Teoburnan') appears in a charter listing the privileges and imposts of Westminster issued by King Edgar; it is held in the collection of Westminster Abbey.<sup>23</sup>

Society dinners are an occasion to celebrate the river, report on annual fish stocks (they have remained 'consistent' for several years according to the society's Ghillie) and consider plans for the restoration of the River Tyburn which is currently contained within a sewer beneath the streets

between south Hampstead and Westminster. The Society hopes to see the Tyburn restored with suitable habitat for wild brown trout and salmon. Maps detailing which buildings would have to be demolished to uncover the river in Mayfair and how the restored river would appear, as well as the model for a leaping salmon intended to be installed by the river in Berkeley Square are shown in the Secret Rivers exhibition. The Museum of London also commissioned Fgreat Studio to make a short film on daylighting with an interview of James Bowdidge, the Honourable Secretary of the Tyburn Angling Society.

Bowdidge was working as a property developer when he first became involved in the Society, and the story of the Tyburn's burial, as well as the plans for its future, are closely tied up with the London property market. 'The river Tyburn was buried in the 1700s, when Mayfair was developed', he tells



us in Daylighting. Standing on Marylebone Lane he explains: 'The reason it's a wiggly lane is it followed the course of the Tyburn.' He even proves the existence of the subterranean river by pointing out the sounds of rushing water beneath a manhole cover in Bruton Lane near Berkeley Square. Later in the film we see him poring over maps with the Society's architect, Alan Francis of Gaunt Francis Architects. The firm produced the 'demolition zone' map, that is displayed in *Secret Rivers*, along with the corresponding restoration designs which show two fishing huts and roads converted into bridges, including the Tyburn Bridge on Oxford Street, formerly Tyburn Road. Several billion pounds of property would have to be cleared, according to Bowdidge, including Buckingham Palace as the river runs beneath it.<sup>24</sup> To compensate property owners for this loss, the Society consulted Mr Schatunowski of GVA Schatunowski Brooks, a specialised Rights of Light consultancy. Together they developed the concept of a 'reverse rights of light' under which 'properties whose light and aspect is improved would pay a betterment levy.' Other incentives might include 'riparian fishing rights' being awarded to landowners who were supportive of the scheme.<sup>25</sup>

There is some precedent in Croydon, where the uncovering of a buried stretch of the Wandle in Wandle Park was part-funded by property developers who built new homes nearby.<sup>26</sup> In recent years, riverfronts have been identified as offering major development opportunities in London,<sup>27</sup> although few developers would argue that Mayfair is in need of redevelopment. The case for a restored Tyburn has more to do with London's lost natural heritage and the benefits of living and working close to water. 'It would be for all of London to enjoy, we hope' says Bowdidge. 'But mainly fishing.' Members of the public were asked their opinions by the producers of *Daylighting*. Most were sceptical about the feasibility of restoring the Tyburn – 'It sounds like a lot of digging' said one – but they could see the benefits: 'It adds to the lifestyle of the city.'

'What would I say to someone who doesn't believe in the project?' Asks Bowdidge: 'The world's full of doubters, but have some imagination, have some belief. This is an entirely deliverable project. [...] Believe in it. It can be done.'

Thomas Ardill



<sup>23</sup> <http://www.esawyer.org.uk/manuscript/682.html> The Anglo Saxon 'andlang Teoburnan' has also be translated as 'along the Tyburn', referring to the transfer of lands on the north side of the River Thames between the rivers Fleet and Tyburn.

<sup>24</sup> West End's secret river, *Evening Standard*, 8 July 2008

<sup>25</sup> Tristan McConnell, A river runs through it, *Property Week*, 17 May 2002

<sup>26</sup> <https://www.barratthomes.co.uk/new-homes/London/news/news-archive/new-south-quarter-helps-clean-up-the-wandle/>

<sup>27</sup> <https://www.telegraph.co.uk/property/buy/exploring-lea-valley-londons-lesser-known-river-hotspot-first/>



## SECTION 6: RENEWAL

**CROYDON CHURCH, SURREY, 1800-1848**  
JAMES BOURNE, WATERCOLOUR

**CROYDON MINSTER, 2018**  
JOHN CHASE, PIGMENT PRINT

Although the Wandle has largely remained an open river, small sections have been buried including the streams forming the eastern source at Croydon. These two images – a watercolour painted in the early 19th century and a photograph taken in 2018 – depict St John the Baptist Church (now Croydon Minster) from across the Old Town road to the west, the first with a stream and the second without it. The river has not disappeared completely, however, it has been buried in pipes beneath the road.

It is tempting to bemoan the river's disappearance from this view, especially when a comparison of the two images reveals that a car park now occupies the former graveyard, the picturesque cottage has been replaced with a 1980s block of apartments and the river itself has been covered by a dual carriageway. But in the middle of the 19th century the burial of the Croydon streams was celebrated as a great benefit, not only to the people of Croydon, but also for those living further downstream, for at that time the streams



were being used as open sewers. In 1861 Mr W Drummond, the Chairman of the Croydon Local Board of Health, recalled the state of the Wandle in Croydon ten years previously:

'The usual position for the privy of a cottage, was over one of the streams feeding the Wandle, and there were hundreds of these cottage conveniences. There were in the town, two large ponds, each about half an acre in extent, with copious springs in them; but these ponds served as two large cesspools for the sewage of the town, and they were choked with black mud, to a depth of from 2 feet to 5 feet. When the Board of Health undertook the drainage of Croydon, the river just below the town, was foul with deposits of offensive mud, on each side of the stream, which meandered through these banks of filth. It was the object of the Local Board, not merely to drain Croydon, but also to purify the Wandle, which was much esteemed as an ornamental and interesting feature of the neighbourhood.'<sup>28</sup>

By 1849, when the Croydon Board of Health was established, the situation was drastic, there having been several outbreaks of water-borne cholera and typhoid. They took the decision to culvert (cover over) the streams, install sewage pipes and provide clean drinking water through groundwater extraction. These were pioneering measures made possible by the passing of the Public Health Act in 1848 which gave the Board the necessary powers to take these measures. Mistakes with the new infrastructure, however, made the integrated supply and disposal system ineffectual and may even have worsened the problem as the death rates from water-borne diseases increased and there was a typhoid outbreak in 1853.<sup>29</sup>

The problems took many years to resolve and were much compounded by the growth of polluting mills and industries along the course of the Wandle. It was not until the 1960s and '70s that serious improvements with sewage treatment and the decline of industry began to improve the state of the water. Today waste water management is much better integrated with the river. Indeed 80 percent of the river's flow downstream of Beddington is supplied by the sewage works, which

**'When I was a child I grew up by the River Lea. There was something in the water, now that something's in me.'**  
Adele, 2015



pumps cleaned water back into the river (although a chemical leak in 2007 devastated fish stocks).<sup>30</sup> Furthermore, a short section of the river in Wandle Park (just 300 metres to the west of Croydon Church) was dug out of its concrete culvert and restored to the surface in 2012.

Meanwhile the Croydon Bourne may be buried, but it is not forgotten. Rectory Grove follows the line of the stream and mill pond, and Church Road follows another connected stream, a local history group, the Bourne Society, has published a history of the seasonal flood waters,<sup>31</sup> and the stream even makes its presence known on occasion: the 1960s concrete pipe containing the stream has been reported to leak into the underpass in front of the church.<sup>32</sup>

Thomas Ardill

<sup>28</sup> Mr W Drummond, 'On the Rise and Fall of the River Wandle; Its Springs, Tributaries, and Pollution,' January 8 and 15, 1861, in *Minutes of the Proceedings of the Institution of Civil Engineers*, vol.20, 1861, p.238: <https://www.icvirtuallibrary.com/doi/pdf/10.1680/imotp.1861.23461>

<sup>29</sup> Nicholas Goddard, *Sanitate Crescamus: Water Supply, Sewage Disposal and Environmental Values in a Victorian Suburb*, in Bill Luckin, Geneviève Massard-Guilbaud, Dieter Schott, *Resources of the City: Contributions to an Environmental History of Modern Europe*, Routledge, London, 2017

<sup>30</sup> Hadrian Cook (2015) 'An Unimportant River in the Neighbourhood of London': The Use and Abuse of the River Wandle, *The London Journal*, 40:3, 225-243, DOI: 10.1179/1749632215Y.0000000009

<sup>31</sup> *The Bourne Society: A Celebration of the Bourne*, 2nd edition, 2002: <http://bournesoc.org.uk/bslivewp/wp-content/uploads/A-Celebration-of-the-Bourne-Web-fileCS.pdf>

<sup>32</sup> Peter Ball, 'The Wandle pollution scandal isn't going away', *The Croydon Citizen*, 16 May 2017, <https://thecroydoncitizen.com/politics-society/wandle-sewage-scandal/>



## SECTION 6: RENEWAL

### VIEW OF THE NEW BRIDGE AT BOW, C. 1834 UNKNOWN ARTIST, WATERCOLOUR

This watercolour (by an unknown artist) depicts a view of Bow Bridge in East London as seen from the towpath to the north with the Bow Back River re-joining the main channel of the Lea at the left. The bridge in question is the single-span structure that replaced a triple-arched medieval stone bridge on the same spot in 1835. It is likely that the picture was painted as a design for a print to commemorate the completion of the new bridge. Two companion prints, presumably by the same artist, depict *Bow Bridge, as it appeared in the year 1834* and *The old bridge in process of demolition*.<sup>33</sup> Together they mark the passing of the old and the

coming of the new, emphasising the contribution that this river-crossing made to London's industrial development in the 19th century.

A bridge was first built over the River Lea at this spot around 1110. Before this time travellers between Essex and London were obliged to wade through the river about half a mile to the north at Old Ford in Stratford. According to a popular story, Queen Matilda, the wife of Henry I, ordered the building of a bow-shaped (arched) bridge after having fallen in the river. Although a more reliable account states that she paid for the bridge



after hearing about how dangerous the crossing was during heavy rain.<sup>34</sup> Various alterations, and perhaps complete rebuilding, took place over the subsequent centuries until it was decided that the old structure was no longer fit for purpose.<sup>35</sup> In contrast to the old bridge, with its three gothic arches, aged stonework and rickety wooden additions, the new structure (designed by the eminent civil engineers James Walker, 1781–1862 and Alfred Burges, 1797–1886) was of a rather plainer, though far more practical neoclassical design. Its single arch was better suited for barges to pass beneath, and its increased width, and slight reorientation, were designed to cope with the increasing road traffic to and from London. The opening of the new bridge was therefore heralded as a great public benefit, improving access along and across the river. This in turn contributed towards the development of Bow and the wider Lea Valley as London's industrial heartland during the 19th century.

The commercial utility of the bridge is emphasised in the watercolour which shows three lanes of traffic carrying goods in and out of London. Stacks of building materials are piled up on the wharf to the right and behind the bridge is the Bow Brewery, whose riverside location enabled them to send their produce to the docks by barge, giving them a competitive advantage in sales to the East India Company.<sup>36</sup> The left-hand side of the picture, by contrast, is less built up. The river bank in the foreground is still grassy and home to a family of ducks, while buildings from an earlier age have survived demolition. Crossing the bridge is a hay wagon, bringing feed for London's horses from the fields of Essex. This theme of opposing contrasts is continued in the sky. On the right above the factories the sky is a glowering mass of slate-grey, while the lighter clouds to the left are tinged with red. Both are reflected in the river beneath which alternates grey, blue, white and pink.<sup>37</sup> This might be interpreted as a Romantic metaphor for the sun setting on traditional rural life and the coming storm of a new industrial era. This approach of using nature as a metaphor to heighten the emotion of a subject, and the artist's ambivalence towards the new industrial era can be compared to other Romantic-era landscape painters, most famously J M W Turner whose oil painting, *The Fighting Temeraire*, 1838 (National Gallery) similarly contrasts old and new technologies against the background of a setting sun. Like Turner, the painter of the New Bridge at Bow adopted the aesthetic category of the 'sublime' as a visual strategy for depicting this contemporary subject.

This approach is rather different from that taken towards the old Bow Bridge by previous artists, who typically drew out the 'picturesque' qualities of the subject by emphasising its roughness and irregularity.<sup>38</sup>

In the present watercolour, the new utilitarian bridge plays a central role in a drama of change and contrast by connecting two worlds divided by water. The River Lea, which mirrors and mingles the sunset and the storm, plays a more ambiguous part. It belongs to both the country and the city, the old and the new, and is simultaneously a meeting place and a borderline. As such it can be regarded as 'liminal', both in the sense of occupying a position at, or on both sides of, a boundary or threshold and in relation to a transitional or initial stage of a process.<sup>39</sup>

Thomas Ardill

<sup>33</sup> British Museum: 1897,0512.43-45.

<sup>34</sup> Daniel Lysons, 'Stratford-le-Bow', in *The Environs of London: Volume 3, County of Middlesex* (London, 1795), pp. 489-502. British History Online <http://www.british-history.ac.uk/london-environs/vol3/pp489-502> [accessed 16 April 2019].

<sup>35</sup> Edward Walford, 'The northern suburbs: The Lea and Stratford-le-Bow', in *Old and New London: Volume 5* (London, 1878), pp. 570-576. British History Online <http://www.british-history.ac.uk/old-new-london/vol5/pp570-576> [accessed 16 April 2019].

<sup>36</sup> The October beer that the brewer George Hodgson sold to the East India Company matured in its barrels during the sea crossing to India turning into a new type of beer that became known as India pale ale.

<sup>37</sup> Most of these elements were either toned down or omitted from the print, perhaps to bring it more in line with the other images in the series.

<sup>38</sup> For example, John Rogers after William Henry Bartlett, *Bow Bridge Essex*, Museum of London collection: LIB20775/8(10).

<sup>39</sup> <https://en.oxforddictionaries.com/definition/liminal>

## SECTION 7: TRACING THE RIVERS

### DATA FLOW, 2019

MICHAEL TAKEO MAGRUDER WITH DREW BAKER,  
INTERACTIVE VIRTUAL ENVIRONMENT, INFINITE DURATION

Commissioned by the Museum of London  
as part of the Curating London project



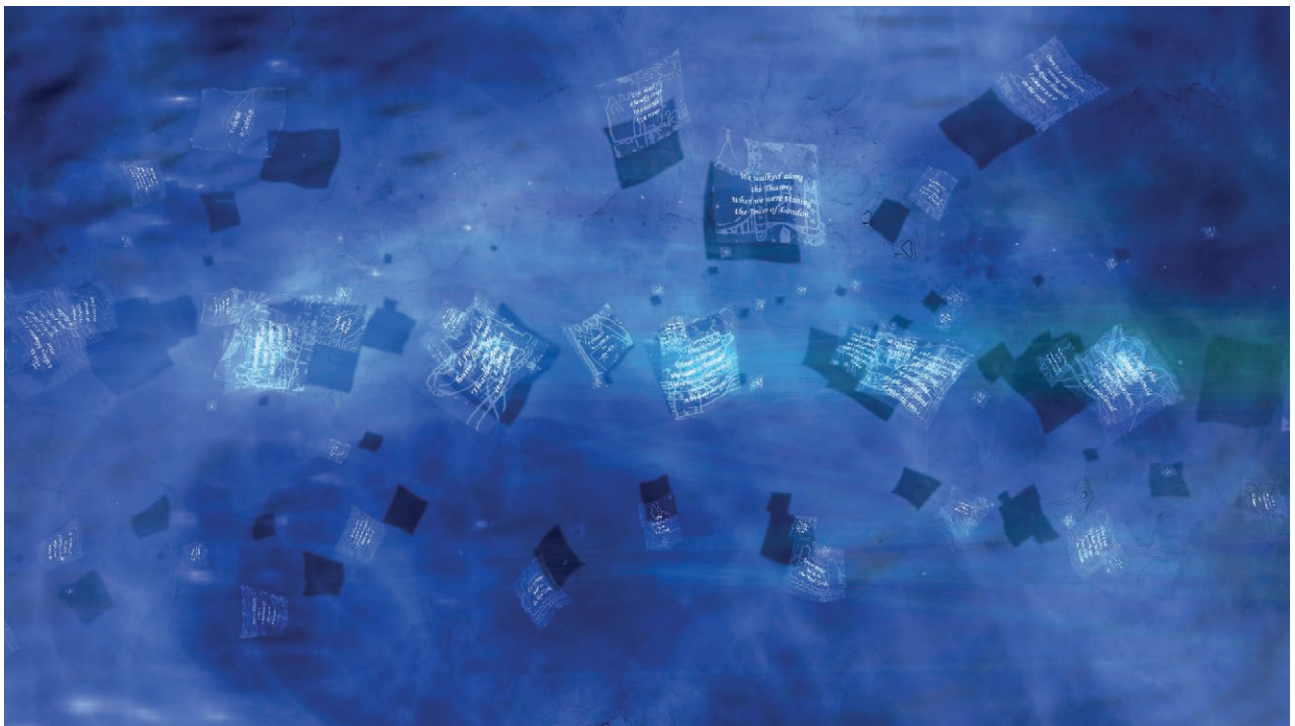
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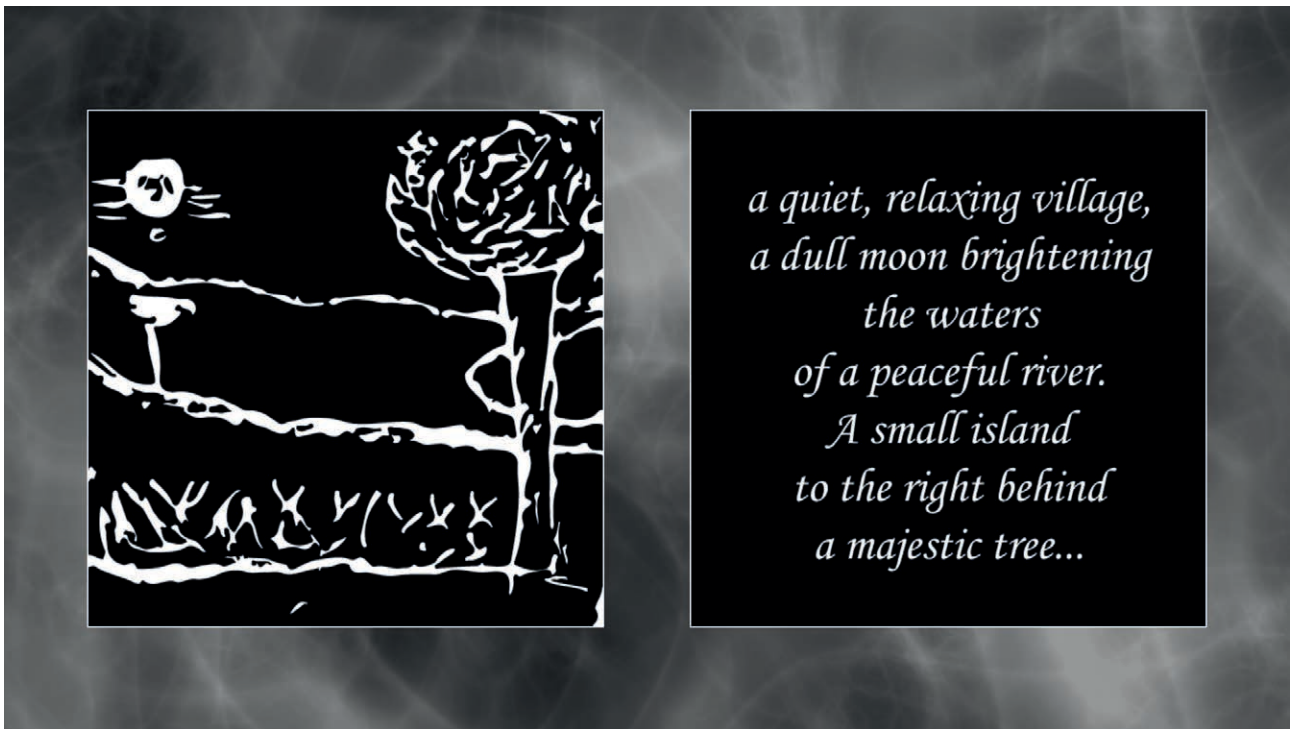
Michael Takeo Magruder is an artist and researcher working with various forms of new media, immersive environments and virtual worlds. In recent years his practice has involved (among other things) working with collaborators to create artworks generated from the vast and ever-changing sea of collective data that has increasingly come to underpin nearly all aspects of everyday existence – even our rivers! His new work – *Data Flow (River Lea)* – was commissioned by the Museum of London as part of the Curating London project and is being exhibited for the first time in the Secret Rivers exhibition.

This is the second iteration of *Data Flow*. The first was made in 2015 for the Living Data exhibition at Watermans art centre in Brentford, West London. The work was intended to respond to the town, which lies at the confluence of the River Brent and the Thames, so Michael decided to gather data about the river in real time to create a virtual river out of an ever-changing stream of data. The 'water' – projected onto the gallery floor – was created from photographs of the Brent mined using relevant tags from the image hosting service Flickr and manipulated by live environmental data generated at a series of monitoring stations



Data Flow (River Lea): still image of the real-time  
virtual environment projection





*Data Flow (River Lea)* - Memories of a River:  
still image from the participant data screen

along its course. For Secret Rivers, Michael set out to develop a new version of the work, created in response to the themes of Secret Rivers and the aims of the Curating London project.<sup>40</sup>

*Data Flow (River Lea)* was conceived for the final part of the exhibition: Tracing the Rivers. This section showcases contemporary works of art and literature that were made in response to London's rivers, their histories and mythologies, especially the fragments they have left in the landscape, memory and consciousness of London and Londoners. They are concerned with the task of describing, visualising or bringing to the surface that which is invisible, hidden, disguised or intangible. In some cases this has involved drawing or in some other way marking out the routes of 'lost' or buried rivers. *Data Flow*, by contrast, takes as its subject a river that still flows on the

surface (for 42 miles and in multiple channels). But like other works in the section, it does not simply reproduce what can be seen, but uses traces of the river – in this case statistics and memories – to bring it to life for the visitor.

*Data Flow* recreates the River Lea as an interactive real-time virtual environment within the gallery. The work consists of a projection onto a low white plinth, an accompanying data screen and a video camera which acts as a motion sensor. The projection consists of several layers. A river 'bed' (which, like a real river, almost imperceptively shifts over time) and multiple layers of flowing 'water' that are born digital (ie produced digitally rather than being converted from photographs or other analogue sources). Running through this flow are 37 'streams' of memories created from images made by workshop participants (with accompanying texts) recollecting their personal experiences and associations of rivers; these also appear as a slideshow on the data screen. The scale, movement and speed of these streams are controlled by environmental data (depth, direction and flow rate) collected in real time by 38 monitoring stations placed at different points along the River Lea. Each stream represents the intersection of two stations. When water levels are high in a particular section

**'They're not lost, not at all...The rivers continue, hidden and culverted as they might be, to flow through out dreams.'**  
Iain Sinclair, 2013

of the Lea the images in the corresponding memory stream will appear larger (or closer to the surface). After heavy rain the streams will flow more quickly. Finally, the flow is affected by the movement of visitors around the work; ripples appear in the digital water as they are tracked by the camera. The result is an ever-changing stream of virtual information that is as 'live' and unpredictable as the River Lea itself.

The work will continue to change throughout the exhibition, cycling every 240 seconds through a simulated day and night sequence, responding to the behaviour of the real River Lea and the interaction of visitors, and incorporating new memories as more images and texts are added to the work's digital archive through Curating London's partnership with schools in the Lea Valley. Curating London is a four-year engagement and contemporary collecting project inspired by the lived experience of Londoners. Each project is based on a set of research questions. With *Data Flow* we hope to further our understanding of the significance of the River Lea for the local community. We are interested in how children and their families interact with the river and what

part it plays in their experience of their local area. Does it offer a green haven away from the streets and traffic, or is it a secluded no-go area unsafe to walk alone? Is it a neighbourhood landmark or barely noticed? Does it connect them with other riverside communities or feel like a barrier? *Data Flow* will shift each time a new set of images and texts are added to the archive, reflecting multiple perceptions of the river. At the end of the exhibition an archived version of the work (made up of the completed image and text archive along with the environmental data collected over the period of the exhibition) will join the Museum of London's collection.

Thomas Ardill

<sup>40</sup> <https://www.museumoflondon.org.uk/discover/curating-london-collecting-community-contemporary-city>



Michael Takeo Magruder, *Data Flow (River Lea)*, installation in Secret Rivers, Museum of London Docklands, UK, 2019.

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## SECTION 7: TRACING THE RIVERS

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### THE HEATH, 2006-2011 ANDY SEWELL

Purchased with the assistance of The Art Fund  
and the V&A Purchase Grant Fund

Andy Sewell's photograph depicts a submerged swimmer. Bubbles rise through the murky water as he exhales and drops of rain dapple the undulating surface, creating an interplay of circles and biomorphic shapes that fill the picture plane up to its white border. The swimmer is anonymous, a broad-shouldered man with long ringlets of grey hair giving him the appearance of Old Father Thames diving back down to the bottom of his river.

Without any landmarks visible in the image, this could be any body of water. Indeed, it was the curators' intention that as the final image of the Secret Rivers exhibition it might serve as a proxy for every London river, representing our hope that the visitor would feel as immersed in the subject as the swimmer is in the water. It also points towards the future by speaking to the hope of environmentalists that the Thames and its tributaries will one day become clean enough



for people to safely swim in them. The location in which the photograph was taken, however, is significant, both to the history of London's rivers that we are concerned with telling and to the original context in which the image is presented.

The body of water in question is not in fact a river but a pond: the men's bathing pond on Hampstead Heath. Yet this and the other principal ponds on the heath are fed by the tributary streams of the River Fleet and drain directly into the Fleet Sewer, so can be regarded as part of that river, just as the Serpentine Lake was originally a part of the Westbourne. The ridge of Hampstead Heath in fact contains the headwaters of four London rivers: the Brent to the north, the Westbourne to the West, and the Tyburn and Fleet to the south. The heath is made up of a porous cap of 'Bagshot sand' over a stratum of impermeable 'London clay' so that rain water drains slowly through the sand and down the clay slope, emerging as springs lower down the hill where the clay layer meets the surface. These springs combined with rainwater runoff fill the 24 ponds on Hampstead Heath. Some of these are formed in natural depressions, while others are the result of sand and gravel mining or were dug as reservoirs to store water by the Hampstead Water Company. The River Fleet has two main tributaries originating in the heath, the Hampstead Brook and the Highgate Brook, along which lie two strings of ponds, which drain into the Fleet Sewer. The men's and ladies' ponds are on the Highgate Brook and the mixed bathing pond is on the Hampstead Brook. In this way it is still possible to swim in the cleanest part of the Fleet by taking a dip in one of the three dedicated swimming ponds on Hampstead Heath.

The photograph of the swimmer, and another illustrated here of a frozen spring on Parliament Hill (one of the sources of the River Fleet), form part of Andy Sewell's series, *The Heath*. With the assistance of The Art Fund and the V&A Purchase Grant Fund, the Museum of London were able to purchase a full series of prints in 2016. The swimmer image was reprinted at a larger size with the kind permission of Andy Sewell for the Secret Rivers exhibition.

Sewell visited the heath repeatedly and spent many hours walking across it and taking photographs over a period of five years. He was drawn to it as 'somewhere that feels natural' but acknowledges that 'this is no pathless wood. The Heath is as managed as any other part of London but managed to feel wild.'<sup>41</sup> This paradox is at the



The Heath – 11, 2006–2011  
©Andy Sewell

heart of the project which documents Hampstead Heath throughout the seasons. Images of dense woodland, bare misty heaths, lush grassland and empty water are interposed with shots of dog-walkers, exercisers, lovers and swimmers. We see a landscape that is apparently wild and uncultivated, yet contains numerous clues of human intervention such as paths, litter and fences. In a particularly telling image a fallen branch has been cordoned off with stakes and tape: evidence that it takes a lot of work to maintain the 'natural' appearance of the heath while making it accessible and safe for thousands of visitors.

This is a reminder of the extent to which London's natural environment – not least its rivers and their associated springs, ponds, streams and drains – has been manipulated and managed throughout the history of human habitation. Nevertheless, even a highly managed ecosystem can hold a strong psychological or even spiritual appeal. Sewell is interested in exploring the phenomenon of 'biophilia', defined by Edward O. Wilson as 'the connections that human beings subconsciously seek with the rest of life.'<sup>42</sup> In the context of Secret Rivers, Sewell's photograph of a swimmer immersed in a remnant of the 'lost' River Fleet offers the hope that we too might find a meaningful connection with London's rivers, even those that have been buried underground.

Thomas Ardill

<sup>41</sup> Andy Sewell, *The Heath*, 2011

<sup>42</sup> Edward O Wilson, *Biophilia: The Human Bond with Other Species*, Harvard University Press, Cambridge, Massachusetts, 1984

# ACKNOWLEDGMENTS

## SECTION 5: DAYLIGHTING

Dark, Wet and Buried. Poster designed and silkscreened by Platform for 'Still Waters' project, 1992  
Daylighting. Film produced by Fgreat Studio, 2019

## SECTION 7: TRACING THE RIVER

The Heath, 2006-2011. © Andy Sewell. Purchased with the assistance of The Art Fund and the V&A Purchase Grant Fund

## BACK COVER

Rivers of London, 2014, Stephen Walter, photogravure etching. Courtesy of Stephen Walter / TAG Fine Arts





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