Branch Hill Pond and the Westbourne

Branch Hill Pond - a new dawn

Interest in the many hidden streams, which had formerly flowed beneath the streets of the Redington Frognal area, was prompted by conversations with the late Dr Stephen Myers, water engineer and author of Walking on Water (2011).

To learn more, Redington Frognal Neighbourhood Forum commissioned Arup to undertake a desk-based mapping assessment. This research was to be a key element of the evidence base for a Neighbourhood Plan policy on underground development.

The streams had formed the headwaters of the River Westbourne but, during the Victorian era, they were combined into sewers. The heritage of the area, its unique hydrogeology and role in providing water to London could be alluded to through the use of glyphs. Building on extensive research, sculptor Robin Lacey designed a cast-bronze glyph to indicate the rivers' former routes.

One of the sources of the historic River Westbourne is the former pond at Branch Hill depicted by John Constable in a number of paintings. The pond was filled in during the 1880s after the Kidderpore Reservoir was constructed.
Thanks to grant funding secured by Redington Frognal Association, the City of London Corporation is now able to reinstate the former pond. The grants were used to pay for exploratory geological and hydrological scoping work, by Jon Sheaff & Associates and Hydreau, which has informed the location and design of the pond.

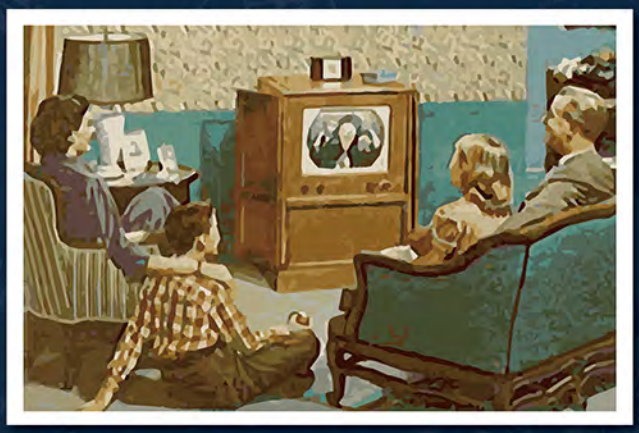
Redington Frognal Association is grateful for financial support from The Mayor of London's *Greener City Fund*, from The City of London Corporation's *Enjoying Green Spaces Fund* and Local C.I.L. funding from Camden Council

The panels were created by Hampstead Heath artist, Dee McLean, with assistance from local geologist Diana Clements (London Geodiversity Partnership) using images researched by Robin Lacey.

www.redfrogassociation.org

The Geology of the Area

What's under your feet...?!



The Heath is within the London Basin, which was formed 45-60 million years ago. It is made up of layers of sand, clay, chalk and bedrock.

Imagine sinking a well from the top of the Heath...this is what you will find...

UNDERGROUND

BAGSHOT SAND

Source of Boundary Stream between Redington Road and Rosecroft Avenue

Spring Line

Source of tributary of Cannon Stream near Redington Gardens

CLAYGATE SILTS

During wet weather these springs are easy to find as you walk on the hills. Even when it is dry you will still find some of them.

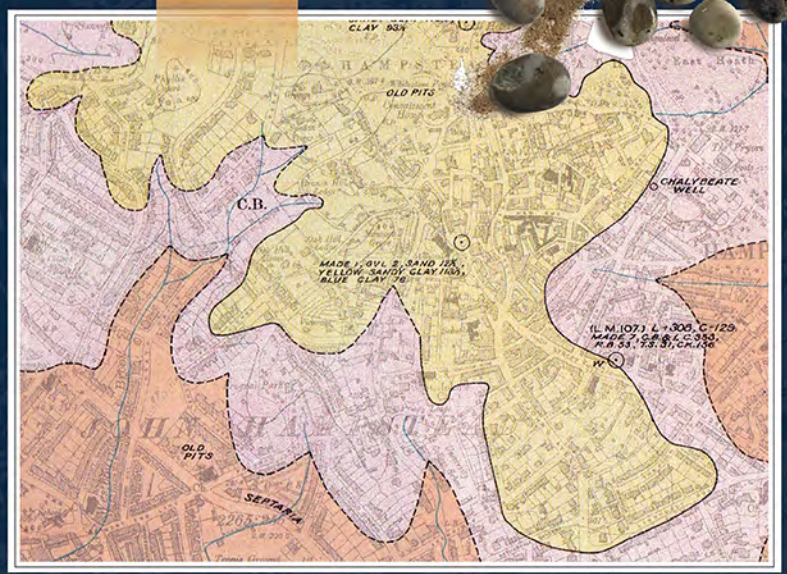
To follow the spring lines look out for buttercups and boggy plants like yellow flag iris and sedges.

Greenaway Gardens near Oakhill Avenue, a pond close the historic source of a tributary of the Westbourne

Spring Line

Pond In Maresfield Gardens, source of a Westbourne tributary

LONDON CLAY



SPANIARDS ROAD

Rainwater falls onto the Bagshot Sand at the top of the Heath. The sands are like a sponge. The water soaks through until it hits the less porous Claygate Silt layer. Here some of the rainwater runs sideways and seeps out as springs on the side of the hills at the junction of the Bagshot and the Claygate layers.

RAINWATER drains very quickly through the sand

BAGSHOT SAND
(sand and pebbles - permeable)

SPRINGS from the SPRING LINE at the junction between the Bagshot Sand and Claygate Silt layers

CLAYGATE BEDS
(silt and sand - less permeable)

SPRINGS from the SPRING LINE at the junction between the Claygate Silt and the London Clay

HAMPSTEAD PONDS in gully of LONDON CLAY

SPRINGS become STREAMS feeding into the ponds

LONDON CLAY
(impermeable)

Why reinstate Branch Hill Pond?

The reinstatement of Branch Hill pond was conceived as part of a wider project to celebrate the unique hydrogeological heritage of the Redington Frognal area, to be comprised of three discrete phases:

- Marking the historic rivers of the area
- Reinstating the pond
- Daylighting any clean stetches of sub-surface water

Each of these phases will help to promote public appreciation of the distinct character of the Hampstead Ridge Natural Landscape Area and how it may be enhanced.
The introduction of a pond will transform the way in which this space is used and the scheme will enrich the lives of those living in the area, most notably for children and older age groups.

The pond area today

Another important aim of recreating the pond is to increase the biodiversity in this small corner of the Heath. The pond will attract many insects, including dragonflies, and will provide foraging opportunities for other animals.
Access to nature considerably enhances urban life. At present, this area of Branch Hill is poorly used, in part because it is a linear space, rather than a place to linger.
As well as attracting wildlife, the pond will be a tranquil place to spend time, relax and learn about wildlife.

Constable painted many pictures of the Branch Hill Pond and it is an iconic place in his paintings.
The pond will not look the same as in Constable's paintings, as the former sand pit is now completely grassed over, but nevertheless it will make an aesthetic addition to the view from the top of the small area, looking west or northwest beyond towards Harrow on the Hill.

John Constable 1820-1822 showing the spire of St. Mary's, Harrow on the Hill on the right-hand side

The view today

A QR code at a nearby site will provide an education resource for residents, visitors, local schools and art schools.
This will cover the area's geology and hydrogeology, the natural signature of the Hampstead Ridge and the habitats of Hampstead Heath.

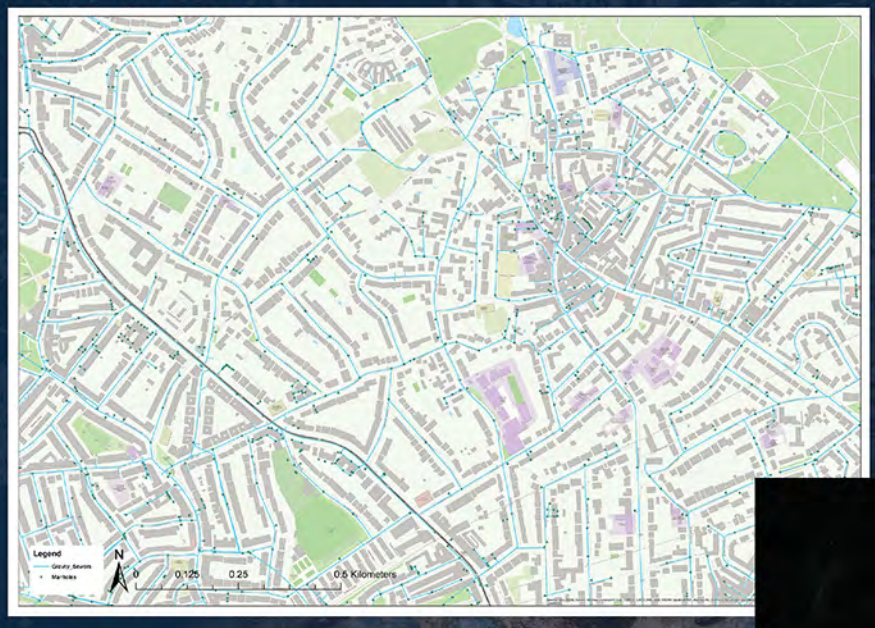
Benefits of the pond to sewer capacity

Reinstatement of Branch Hill Pond would help alleviate pressure on the sewer network, which is operating at capacity.

The pond would capture the rainwater and slow the rate of flow into sewers. This is particularly important in Camden, which has combined sewers, carrying both rainwater and wastewater.

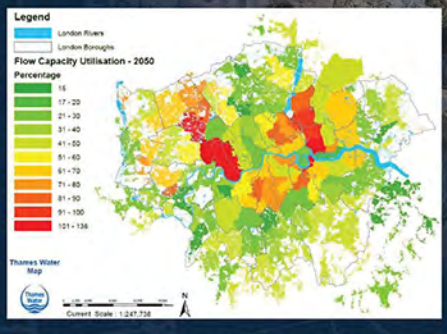
As development, and basement development in particular, increases, this is exerting growing pressure on the sewer network. Projects such as this will slow the flow entering the sewers and increase the capacity of the downstream network to cope with peak flows during storms. This, in turn, will reduce the risk of sewer flooding and the volume of raw sewage that is discharged by overflows into the Thames during high rainfall.

Branch Hill culvert



Thames Water map of Gravity Sewers and Manholes

Thames Water Survey Prior to Sewer Cleaning



Areas in red indicate where the projected flows in the sewer system exceed capacity and some sewer flooding would be expected by 2050.

Thames Water Utilities: Modelled Impact of London's Projected Population Growth and Climate Change on Sewer Capacity, 2050

Evidence of Branch Hill Pond

From the paintings by John Constable 1819-1836

Constable lived close to Hampstead Heath from 1819 until 1837. Branch Hill Pond was a favourite subject, which he painted many times.

His paintings provide evidence, not only of the pond's existence, but also of sand digging at Branch Hill.

The white building in the centre of the painting was known as 'THE SALT BOX', a prominent cottage which is detailed on maps of the time.

Constable began his annual summer migrations to Hampstead in 1819. During 1821 and 1822, he lived at 2 Lower Terrace, where this plaque marks his stay.

Subsequently, he moved to the eastern side of Heath Street, followed by a period at 25 Downshire Hill. In 1827 he took up more permanent residence, leasing the house at 40 Well Walk, where he remained until his death.

Touches, such as the windmill, which had not existed in 1836, show that Constable was more interested in composition than accuracy. He kept a weather diary and was endlessly fascinated by the sky.

It is considered, however, that his paintings of Branch Hill are largely accurate, as there is corroborative evidence of both Branch Hill Pond and sand digging.

Evidence of Branch Hill Pond

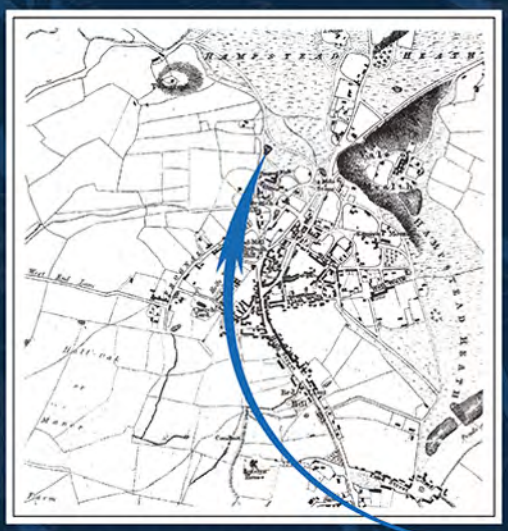
From old maps, the springs and the lie of the land

Branch Hill Pond is the accepted source of London's lost river Westbourne, which is also fed from other springs in this area.

Excavating sands created a hollow into which spring water accumulated. The pond was eventually filled in about 1889.

It is not clear when sand-digging began but the pond is discernible as early as 1746 on the John Rocque map of London and its ten-mile environs. The site was a hollow, even before the pond's creation. Springs are likely to have arisen to the surface there as they do today.

1746 John Rocque



1814 topographical map of Hampstead J.J.Park

Branch Hill Pond

The pond is shown on the topographical map of Hampstead in 1814, before the date of Constable's first painting in 1819.

c.1830-40 Cruchley map

c.1860 OS Map: Red flag is Branch Hill Pond, blue flag Whitestone Pond

Ecological Benefits of Restoration

The UK has lost half of its ponds during the 20th century, with a devastating impact on many endangered species. High quality ponds are now classified as Biodiversity Action Plan Priority Habitats.

The area of Branch Hill is mainly comprised of neutral grassland and currently has little value to wildlife. Elsewhere on Hampstead Heath and the Heath Extension ponds and watercourses create botanical, entomological and ornithological interest.

Pond on the Heath Extension

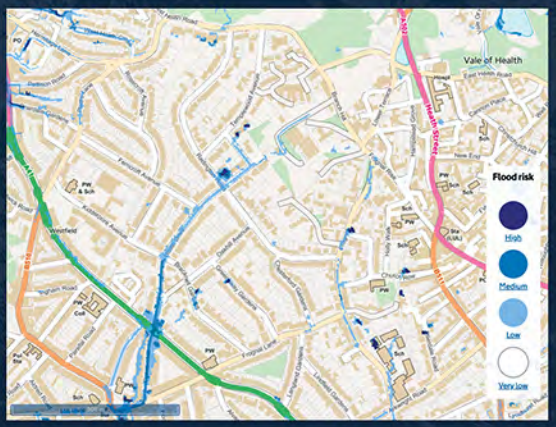
Hampstead Heath has 40 bodies of water, mostly modest-sized ponds, but three that are large enough to be classed as reservoirs built in the 16th and early 17th centuries to provide water for the rapidly expanding population of London.

The Model Boating Pond after remodeling and new planting

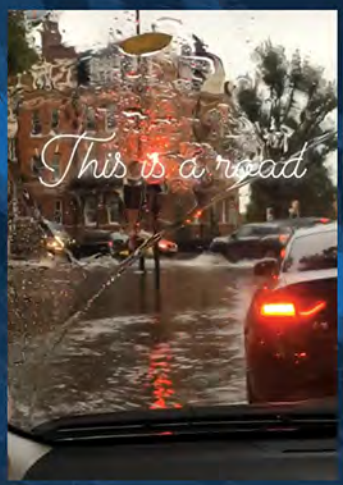
We hope that the reinstated Branch Hill Pond will provide wildlife value benefitting visitors as well as increasing the biodiversity of the area. The pond may provide new and enhanced foraging and commuting habitat for wildlife, ranging from birds, bats, amphibians, dragonflies, butterflies and other insects.

Alleviating Surface Water Flooding

There is occasional surface water flooding in the Redington Frognal area, particularly at the bottom of Heath Drive where it meets the Finchley Road.
During heavy downfalls rainwater cascades down Redington Gardens and Heath Drive, following the route of the hidden Cannon Stream that is now secreted in the sewer system but can still be heard at the gratings in the middle of the road.
Beyond Finchley Road water continues to flow down the steep Cannon Hill and it is West End Green that feels the full force of any flooding.



Environment Agency flood risk map

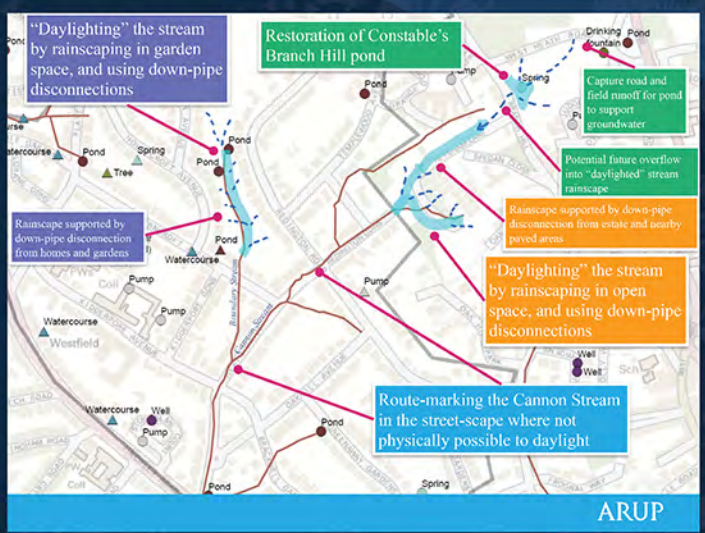


Flooding on the Finchley Road at the Junction of Heath Drive and Cannon Hill 2019

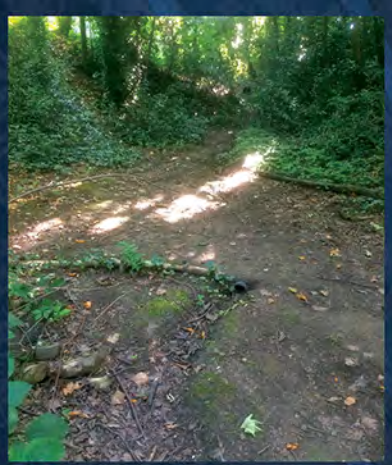
Newspaper cuttings of flooding in West Hampstead 14 August 1975

Making use of desk research, together with citizen science, springs and former ponds are identified in the Arup study and map of Redington Frognal Sub-Surface Water Features.

Recommendations for further work include removing clean water from sewers by uncovering and separating lost springs, watercourses (and rainwater) into surface water features. This process is known as "daylighting" and could offer benefits to Thames Water, as well as reducing the overall risk of sewer overflow flooding to residents.
Daylighting in this way could form a case study / pilot for improving the future resilience of the sewer network. It is recommended that Camden Council should engage with Thames Water.

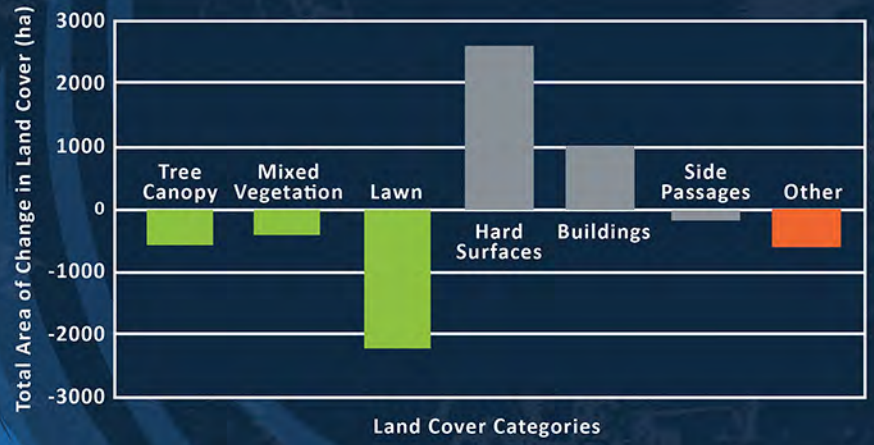


Arup's map of streets in the Redington Frognal with the hidden streams, ponds and springs superimposed. Areas suitable for daylighting are highlighted in aquamarine.



Area of potential wetland of the Cannon Stream within Branch Hill woods.

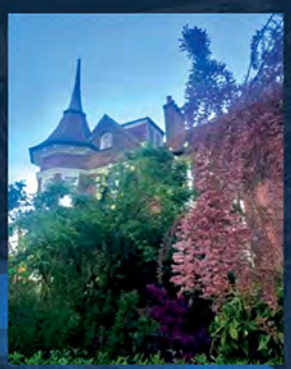
Re-greening the Environment to Alleviate Flooding



This graph shows that between 1998 and 2008 London has been losing its green space at an alarming rate in the recent past. Trees, vegetation and lawn have been lost to buildings and hard surfaces, particularly front gardens have been given over to car-parking.

This pattern has been replicated in the Redington Frognal area, where more than 70,000 sq.m of garden (equivalent to one in eight gardens) has been covered in hard surface since the properties were originally built.

An analysis of ProximiTREE data by Bluesky International has demonstrated that, between 2010 and 2016, the Redington Frognal area saw a net loss of almost 3,000 trees and a 26% reduction in leaf canopy cover. These losses are continuing at an unsustainable and alarming rate.



The garden of this house provides much wildlife habitat, including a hedge and a wildlife pond.

The former garden setting of this Quennell house has been destroyed and wildlife displaced.

What can be done to alleviate the situation and reduce flooding in the area?

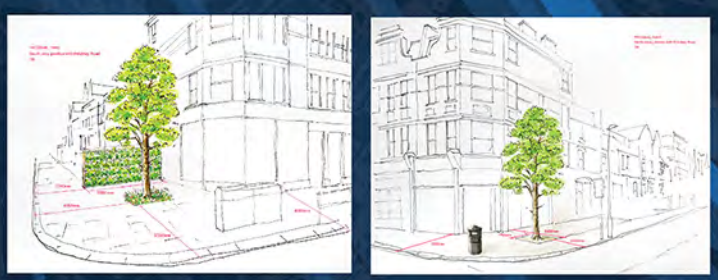
Many ideas are available on how to incorporate soft natural surfaces, collect rainwater, or otherwise enhance gardens to maximise wildlife habitat and help minimise flooding. Here are some links:

Royal Horticultural Society recommendations include tree planting, minimise paving in favour of permeable surfaces, collect rainwater in tubs
www.rhs.org.uk/science/pdf/climate-and-sustainability/urban-greening/gardening-matters-urban-greening.pdf

Rewild my Street addresses public street areas as well as private with the planting of street trees, creepers on railings, green roofs to bike sheds/bin housing, rain gardens and many more ideas
www.rewildmystreet.org/habitats

Mayor or London: Grey to Green – community led de-paving projects and many ideas for community planting with potential funding sources
www.london.gov.uk/sites/default/files/grey_to_green_guide.pdf

Link to neighbourhood plan
www.redfrogforum.org/wp-content/uploads/2021/07/Redington-Frognal-Neighbourhood-Plan-Adoption-Version-September-2021.pdf



Greening the area: ideas from the Redington Frognal Neighbourhood Forum, in association with TfL for the corner of Frognal with Finchley Road (South side & North side).
Sketches by Paul McKenzie Studio.

Reinstating Branch Hill Pond

Photo of the Branch Hill Pond area after rain. Note the puddles in the foreground and reeds in the background.

Springs and run-off show that the Branch Hill Pond site is a natural collecting point for water. At times of mass rainfall and flash flooding water disappears into the grille leading to the culvert beneath Branch Hill.

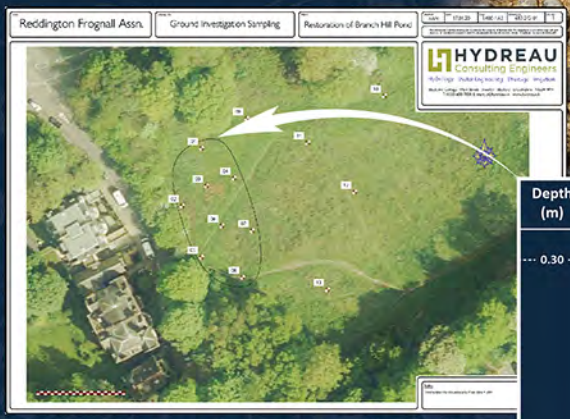
The location for the reinstated pond shows it will be fed by run-off from the steep slope above, filtered through gravel and sand, as well as by springs in the immediate area. It may be necessary to top up from a borehole if this is insufficient to fill the pond.

Arup image showing potential sources of run-off

The top of the pond will lie beneath the level of the road, so it will not be possible for the pond to overflow onto the road. Instead, the pond will serve to attenuate water flowing into the culvert beneath Branch Hill, thereby reducing any risk of surface water flooding.

A thorough ground investigation by Hydreau showed Bagshot Sand underlying accumulated silt and other material above.

Bagshot Sand was located at the base of most of the boreholes.
As it is porous it is possible that in order to retain water, Constable's pond was artificially sealed by lining the sand with London Clay and then 'puddled' in by the feet of animals and people.

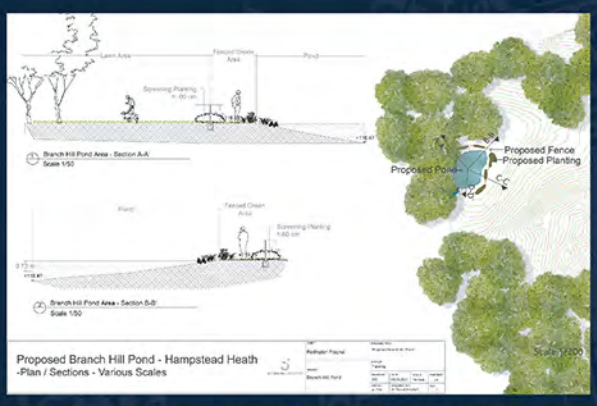


Hydreau image showing borehole sites

Borehole results

Depth (m)	Level (m AOD)	Legend	Stratum Description
0.30	117.70		Brown clayey SAND with rootlets. Sand is fine to medium (TOPSOIL)
			Grey brown sandy gravelly CLAY with occasional dark brown mottling. Sand is fine to medium. Gravels are fine to coarse sub-angular and rounded flint and red brick fragments. (MADE GROUND)
2.40	115.60		
			Orange brown clayey SAND. Sand is fine to medium. (Possible BAGSHOT FORMATION)
3.00	115.00		

To reinstate the pond so that it is capable of holding water, it will again need to be lined with puddle clay. Nowadays however, puddling is compacted with machinery.



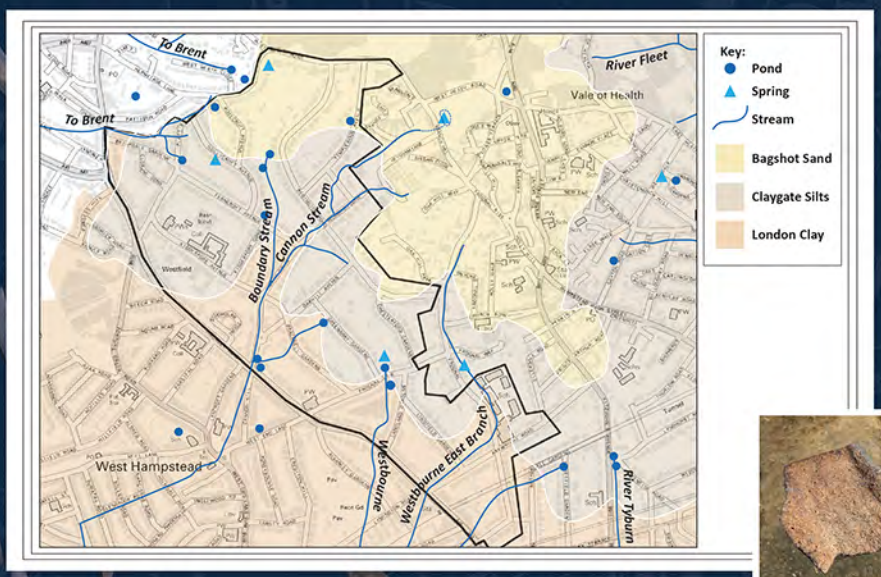
Drawings by Jon Sheaff & Associates for submission by City of London Corporation for planning permission

Sketch of pond by Jon Sheaff & Associates

The Source of the River Westbourne

...in the Redington Frognal area

Geology superimposed on the street map of the Redington Frognal area shows how there are many historic routes of the water courses, mostly emanating from a change in the geology at the junction of the 50 million year-old Bagshot/Claygate Beds higher up and the Claygate Beds with the London Clay lower down.



Iron pan from Sandy Heath (Sand grains cemented by iron)

Gone but not Forgotten

However, in relation to the springs where Branch Hill Pond had been situated, it is possible that water is forced to the surface by a layer of iron pan (as at Sandy Heath). Alternatively, the springs could arise due to a thick clay layer (as seems to be the case at the sphagnum bog within Kenwood). Or, could it be that Branch Hill Pond in Constable's day had remained full of water because the sand had been excavated to the level of the water table?

The routes of these historic streams are indicated in the map above, which combines Arup's research, street names and the underlying geology.

Following Arup's work to map the underground streams, it is proposed to celebrate these historic water features by embedding glyphs into the pavements at selected locations.

Westbourne Glyph designed by Robin Lacey (c.32 cm long)

These photos show some of the places where there is a reasonable indication of historic water features and steams flowing into the Westbourne. The locations (or absence of locations) should not be considered as conclusive evidence of sub-surface water features, due both to the inherent uncertainty of the locations and the limited nature of the scope of Arup's research.

Letterbox on Redington Road

Telegraph Hill

BT cover outside 10 Greenaway Gardens

Frognal south - corner of Church Row

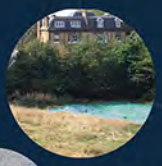
Lindfield Gardens opposite 36 Arkwright Rd

Tributaries of the former Westbourne flow in sewers in Lymington Road just by JW3, and beneath a corner of the O2 site. Redevelopment of the O2 site provides an opportunity to create a linear water feature above ground.

The River Westbourne

... from the Source to the Thames

From its source at Branch Hill Pond the Cannon Stream is joined by the Boundary Stream and several other streams in the Redington Frognal area to form the Westbourne. Could the origin of the name be because the stream (bourne) flows to the west from Hampstead Heath or from West End Lane or even Westbourne in the Paddington area?

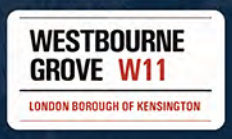


The pond at Branch Hill

Daylighting Branch Hill Pond

It flows through Kilburn, where it is joined by a tributary arising from lower down the Hampstead hill

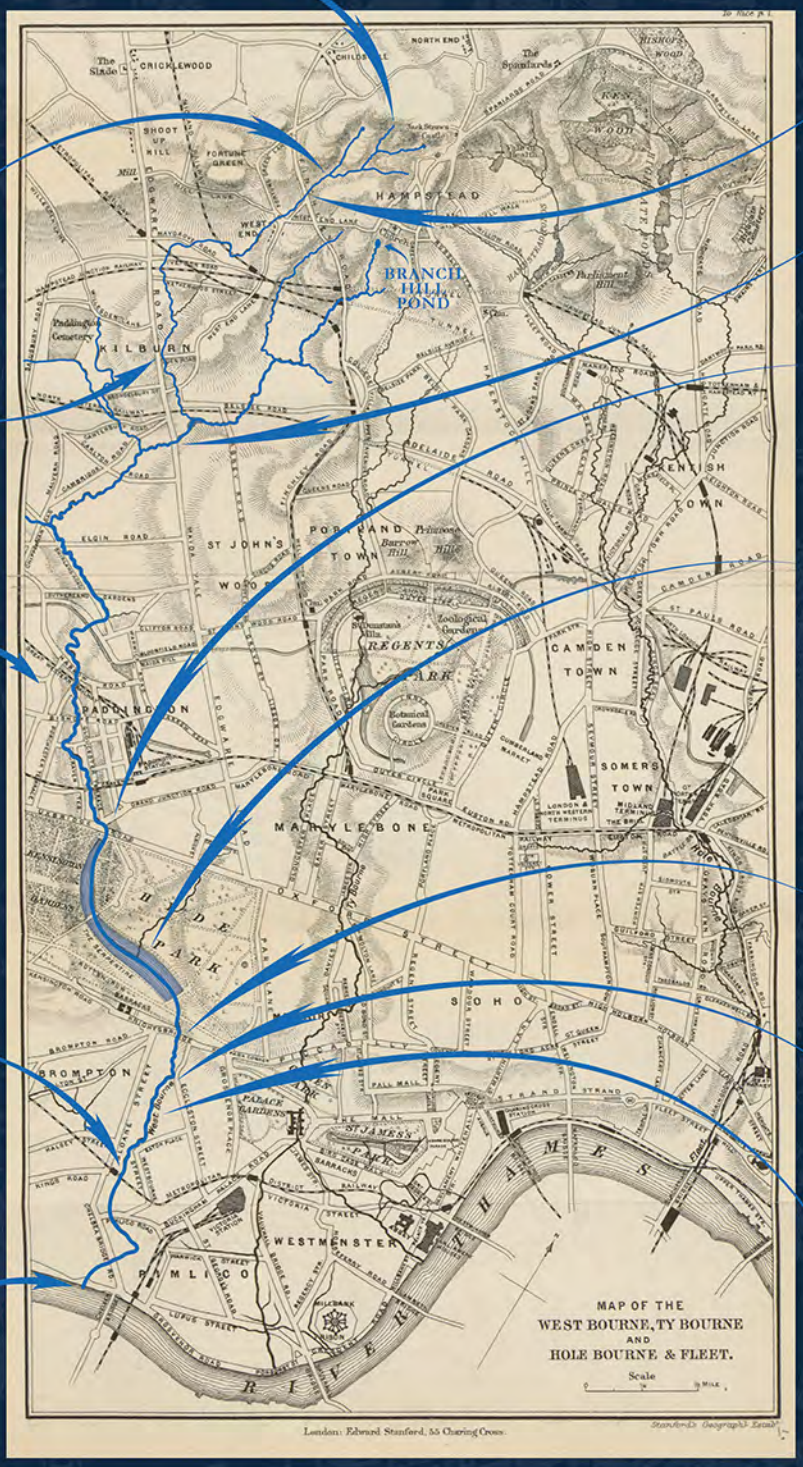
Kilburn Wells



The Westbourne is commemorated by several street names in the area around Westbourne Green.

The Westbourne combines with sewage water and the large drain can be seen above the tracks at Sloane Square tube station

The natural confluence with the Thames is within the gardens of Chelsea Hospital.



Crossing the dip in the Finchley Road

Bayswater conduit

Bayswater Road is named after 'Bays Watering Hole' which was the river.

The Serpentine

The 'Serpentine River' was dammed in 1730 by order of George's II's wife, Queen Caroline, to form the Long Water of the Serpentine and prettify Hyde Park.

Knight's Bridge

"Water's Murmur" (Westbourne) by Julian Stocks, 11 Kinnerton Street, Knightsbridge

Map of the West Bourne, Ty Bourne, and Hole Bourne & Fleet 1883 Stanfords

Thanks for coming, keep in touch!

Credits and References

Branch Hill Pond and the Westbourne

Credits

Painting of Branch Hill by John Constable 1821 from Jack Straw's Castle ©Victoria & Albert Museum: 'A new Dawn' concept by Robin Lacey
Westbourne Glyph conceived & executed by Robin Lacey
Particular thanks to the following individuals who have assisted with the project:
Arup: Dr Adam Broadhead, water scientist and specialist in historic urban rivers
Jon Sheaff & Associates: Jon Sheaff (Director)
Hydreau: Marcus White (Director)
Thames Water Utilities Ltd: David Harding, Customer and Stakeholder Engagement Analyst
Dr Stephen Myers (deceased, water engineer)
Robin Lacey (sculptor)
Dee McLean (artist)
Diana Clements (geologist)
Nancy Mayo (Redington Frognal Association)

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Dr. Stephen Myers: *Barton N. & Myers S. 2016. The Lost Rivers of London.* Historical Publication
Dr. Stephen Myers: 2011. *Walking on Water.* Amberley.
Dee McLean: 2018. *It Started on Hampstead Heath.* Anaid Publishing. www.deemclean.co.uk/product/it-started-on-hampstead-heath
Diana Clements (compiler): 2012: *Geologists' Association Guide No. 68, The Geology of London.* Geologists' Association (itinerary 3 Hampstead Heath: www.geologistsassociation.org.uk/digital-downloads).
London Geodiversity Partnership: www.londongeopartnership.org.uk

The Geology of the area

Credits

Sofa images created by Robin Lacey
Geological Map: British Geological Survey 1934, adapted from original survey 1862-65. London nl SE.
Geological Section: adapted by Dee McLean from image in *Geologists' Association Guide No. 68.*
Other images: Dee McLean

Why Reinstate Branch Hill Pond?

Credits

Photograph of present pond area Dee McLean
Bramble artwork Dee McLean
Painting of Branch Hill Pond John Constable 1820-1822 Harrow on the Hill with the spire of St. Mary's in distance extreme right © Tate:
www.tate.org.uk/art/artworks/constable-hampstead-heath-with-harrow-in-the-distance-n01237
Comparative photograph of view from the top of the hill to pond area Dee McLean 2021
Skool Stuff created by Robin Lacey

References

Text for this panel draws on *London's Natural Signatures: The London Landscape Framework* / Alan Baxter, January 2011.

Benefits of the pond to sewer capacity

Credits

Photograph of Branch Hill culvert Diana Clements 2019
Thames Water map showing Gravity Sewers and Manholes with permission from Thames Water.
Photograph of Thames Water Survey Prior to Sewer Cleaning: www.thameswater.co.uk/about-us/newsroom/latest-news/2021/mar/record-sewer-cleaning
Thames Water Utilities map: Modelled Impact of London's Projected Population Growth and Climate Change on Sewer Capacity, 2050 [this may be replaced by a Camden equivalent?]

Evidence of Branch Hill Pond from the paintings by John Constable 1819-1836

Credits

1. John Constable 1819 © Victoria & Albert Museum:
https://collections.vam.ac.uk/item/O84528/branch-hill-pond-hampstead-oil-painting-constable-john-ra
2. John Constable 1828 © Victoria & Albert Museum: http://media.vam.ac.uk/media/thira/collection_images/2006AR/2006AR0987.jpg
3. John Constable 1819-20 © Tate www.tate.org.uk/art/artworks/constable-hampstead-heath-with-the-house-called-the-salt-box-n01236
4. John Constable 1820-22 © Tate www.tate.org.uk/art/artworks/constable-hampstead-heath-with-harrow-in-the-distance-n01237
5. John Constable 1836 © Tate www.tate.org.uk/art/artworks/constable-hampstead-heath-with-a-rainbow-n01275
Photographs of Hampstead plaques of Constable's residences Dee McLean 2021

Evidence of Branch Hill Pond from old maps, the springs and the lie of the land

Credits

1746 John Rocque: *An exact survey of the Cities of London & Westminster & Borough of Southwark and the Country near 10 miles round. Begun in 1741 by John Rocque Land Surveyor & engrav'd in 1745 by Richard Parr.*
1814 topographical map of Hampstead J.J. Park. Artist/engraver/cartographer: J & W Newton, Chancery Lane;
J Quilley: The topography and natural history of Hampstead in the County of Middlesex, by John James Park. Type: Antique engraving.
1835 Cruchley's *New Plan of London*
c. 1860 OS Map: with permission from theundergroundmap: www.theundergroundmap.com/map.html?id=37071&mode=fullscreen

References

Cruchley 1835 in *The History of London in Maps* by Felix Barker and Peter Jackson 1990. Barrie & Jenkins. It should be noted that in most of the versions of Cruchley's map the Branch Hill Pond is not shown. This map must come from a larger scale map available from the British Library. The book contains many fascinating maps of London.

Ecological benefits of restoring Branch Hill Pond

Credits

Photograph of the Model Boating Pond Dee McLean October 2016
Photorgraph of dragonfly Adrian Brooker
Photograph of toad and frogspawn Anne-Marie O'Connor
All other photographs Dee McLean

Alleviating surface water flooding

Credits

Surfacing Water Flood Risk in the Redington Frognal area. Environment Agency
Photograph of flooding on the Finchley Road at the Junction of Heath Drive and Cannon Hill Dr. Savanna Laura Harrison 24 September 2019
Newspaper cuttings of flooding in West Hampstead 14 August 1975
Map of streets in the Redington Frognal area with the hidden streams, ponds and springs superimposed. Areas suitable for daylighting are highlighted in aquamarine: Arup report to the Redington Frognal Association 'Daylighting Constable's Branch Hill pond' p.3. 2018
Photograph of area of potential daylighting of the Cannon Stream within Branch Hill Woods. Probably Dr. Adam Broadhead 25.2.16

Re-greening the environment to alleviate flooding

Credits

Graph from Report 2011: *London: garden city? From green to grey; observed changes in garden vegetation structure in London, 1998-2008,* p.15. London Wildlife Trust. © London Wildlife Trust, Greenspace Information for Greater London (GiGL), and Greater London Authority. http://downloads.gigl.org.uk/website/Garden%20Research%20-Full%20report.pdf Comparison of tree cover in the Redington Frognal Conservation Area 2010 – 2016, p.5 and p.7
Source: Analysis of ProximiTREE data by Bluesky International.
Greening the area: ideas from Redington Frognal Neighbourhood Forum for the corner of Frognal with Finchley Road. Sketches by Paul McKenzie Studio.

Reinstating Branch Hill Pond

Credits

Photograph of Branch Hill Pond area after rain Diamond Geezer www.flickr.com/photos/dgeezer/-sets/72157623160146543/
Photo of grille to Branch Hill culvert by Nancy Mayo
Image of Branch Hill Pond showing how it could be filled with potential sources of run-off from: Arup report to the Redington Frognal Association 'Daylighting Constable's Branch Hill pond' p.8. 2018
Photograph of Branch Hill site showing borehole sites: Hydreau Branch Hill Pond investigation
Borehole log for Borehole 1: Factual Site Investigation Report at Land at Branch Hill prepared for the Redington Frognal Association on behalf of Jon Sheaff & Associates. Project Reference: 20.1011 July 2020, p.21.
Drawings by Jon Sheaff & Associates, submitted by City of London Corporation for planning permission 2021.
Sketch of pond by Jon Sheaff & Associates

The Source of the River Westbourne in the Redington Frognal area

Credits

Gone but not Forgotten image created by Robin Lacey
Hidden streams and geology superimposed on map of the Redington Frognal area: Arup Mapping Report prepared for Rdington Frognal Association p.27 for base map and geology lines; rivers on map p.28 combined by Dee McLean.
Photograph of Iron pan from Sandy Heath Dee McLean
Westbourne Glyph designed by Robin Lacey

The River Westbourne from the source to the Thames

Credits

Basemap for route of Westbourne: Map of the West Bourne, Ty Bourne, and Hole Bourne & Fleet Stanfords from *A History of London* by WJ Loftie (1883)
Visionary image of the pond at Branch Hill from Report prepared for the Redington Frognal Association by Arup Daylighting Branch Hill Pond p.4.
Photograph of grating Diana Clements
Westbourne Glyph created by Robin Lacey
Crossing the dip in the Finchley Road Diamond Geezer: www.flickr.com/photos/dgeezer/albums/72157623160146543
Photograph of Kilburn Wells plaque Diana Clements
The conduit near Bayswater Diana Clements Collection
Serpentine Diamond Geezer: www.flickr.com/photos/dgeezer/albums/72157623160146543
Knight's Bridge Diana Clements Collection
Artwork: *Water's Murmur* (Westbourne) Kinnerton Street, Knightsbridge. Photograph Diana Clements.
Photograph of Sloane Square tube station with Westbourne drain above the tracks Diana Clements 2004
Confluence with the Thames within the gardens of Chelsea Hospital Diana Clements 2005

References

Map of the West Bourne, Ty Bourne, and Hole Bourne & Fleet Stanfords facing p.1 *A History of London* by WJ Loftie (1883)
There are many existing books that detail the route of the Lost River Westbourne:
Tom Bolton: 2011. *London's Lost Rivers: A Walker's Guide.* Strange Attractor Press.
Dr. Stephen Myers: *Barton N. & Myers S. 2016. The Lost Rivers of London.* Historical Publication
Dr. Stephen Myers: 2011. *Walking on Water.* Amberley.
Paul Talling: 2011. *London's Lost Rivers.* Random House Books.
Artwork: *Water's Murmur* Julian Stocks: www.julianstocks.com/steel/waters_murmur1.htm

Thanks for Coming

Credits

Painting of Branch Hill Pond John Constable 1820-1822 Harrow on the Hill with the spire of St. Mary's in distance extreme right © Tate:
www.tate.org.uk/art/artworks/constable-hampstead-heath-with-harrow-in-the-distance-n01237
Comparative photograph of view from the top of the hill to pond area with water added Dee McLean 2021
Westbourne Glyph and Water Marks created by Robin Lacey