the
basement
design
studio

BASEMENT IMPACT ASSESSMENT

PROPOSED BASEMENT
224 FINCHLEY ROAD
LONDON
NW3 6DH

Introduction

In producing this Basement Impact Assessment (BIA), we have referred to and considered the following documentation:

- Camden Local Development Framework (LDF) Policy DP27 – Basements and Lightwells
- Camden Supplementary Planning Guidance – CPG4 (Basements and Lightwells)
- Camden Geological, Hydrogeological and Hydrological Study – Guidance for Subterranean Development Chapter 6
- Camden Map 22: Camden Flooding Map
- 'The Lost Rivers of London' Study and Map by Nicholas Barton

Proposal

The proposal includes excavation to enlarge an existing lower ground floor storey at the above together with a lowered frontage and new lightwells on the side and rear elevations.

Groundwater Flow

The attached Environment Agency map indicates that the application site is not located directly above an aquifer, although it is known to be in proximity to the Westbourne underground tributary.

The intrusive borehole report, carried out by Chelmer Site Investigations on 2nd September 2011, demonstrates that the soil is dry to a minimum depth of 6 metres, which would indicate that the proposed 3.5m Basement dig would not extend beneath the water table surface, indicating that dewatering will not be required as part of the on site works.

The application site is outside of the flood plain, as demonstrated by the attached FRA and environment agency assessment. The site is also outside of the Hampstead Heath Ponds catchment area and not within 100m of a watercourse, well or potential spring line.

There will be no significant change in the proportion of hard surfaced/paved areas, neither will any more surface water than at present be discharged to the ground as a result of this development.

Land Stability

The general geology of the area is underlain by London Clay, as indicated in the submitted Contractors Method Statement, with intrusive boreholes taken to a depth of 6 metres.

The submitted Structural Engineer's Design Philosophy, also demonstrates a safe method of constructing the basement level to ensure the structural stability of neighbouring buildings is not harmed, and the natural environment is safeguarded.

Surface Flow and Flooding

The attached Flood Risk Assessment, based on the criteria set out in PPS25, confirms that this area of Finchley Road is designated on the Camden Flood Map 22 as a 2002 flood street, however risk limitation measures are to be implemented which include that the additional space be used predominantly for recreational and ancillary use in line with Development Policy DP27; low level upstands around lightwells; surface water dual pumps to basement with high level alarm and battery back-up; and a Sustainable Urban Drainage System 'SUDS', will be implemented to hardstanding areas wherever possible.

Impacts to Neighbours

This document, and attached supporting information, namely the Design & Access Statement; Contractors Method Statement; Structural Engineers Design Philosophy and Hydrology Report/Flood Risk Assessment cover the three main issues referred to in Camden Planning Guidance (CPG4) 'Basements and Lightwells', to demonstrate that the cumulative impacts of this development to the build and natural environment and local amenity, including to the local water environment, ground conditions and biodiversity will be negligible.

Neighbour Amenity

The attached Contractors Method Statement clarifies the set-up process and method of construction to keep the disruption to neighbouring properties to an absolute minimum.

A Construction Traffic Management Plan and Considerate Constructors Scheme standards will be adhered to and can be submitted as a condition to any Planning consent, as required.

Sustainable Construction

The attached Sustainability Statement describes how the use of sustainable materials will be considered and applied in the proposal together with measures to improve the energy efficiency of the development, where possible.

Planning and Design Considerations

All of the Design considerations set out in CPG 4 Planning Guidance - Section 2.52 have been considered and addressed within the supplementary information provided.

Size of Development

Externally, the alterations to the property have been limited to a lowered frontage to street level, with new front steps down for access, with protective feature metal railings on a low level brick upstand. The formation of 1no new side lightwell protected with walkable grille and a new rear two tiered patio arrangement with new stairwell up to garden with protective feature metal railings, in order to protect and enhance the recognised architectural character of the buildings and surrounding areas.

The property consists of privately rented flats, previously a family dwelling, and the additional space is predominantly to extend the existing lower ground floor unit for habitable, recreational and ancillary use and although intended to be 'habitable' such as a self contained dwelling, as stated in Development Policy DP27 9Paragraph 27.6), flood risk measures will be taken, as stated above and within the Design & Access statement, and as such the risk to life will be considerably reduced.

Conservation Area

The property falls within the Frognal & Fitzjohns Conservation area, and as such a Construction Traffic Management Plan and Considerate Constructors Scheme standards will be adhered to and can be submitted as a condition to any Planning consent, as required.

The property is not Listed.

Basement walls, windows and doors

All windows and external glazed doors to the new Basement will be subordinate in appearance to the main building, respect the original design and proportions of the building and the lightwell size indicted will retain a reasonable to generous sized garden.

The new windows and doors will line through with the existing openings above and match the same in style and proportion.

Trees and Landscape

The proposal includes excavation to enlarge the existing basement level directly beneath the existing buildings' footprint, and therefore complies with Policy DP27 of the Camden LDF in terms of sustaining plant and tree growth; although an Arboricultural statement is not required for this application as there are no nearby trees which will be affected by the works.

The additional external landscaping comprises mainly of replacement planting to a lowered front driveway and rear two-tier courtyard lightwell. Therefore, any effect on the existing surface water run-off will we minimal.

Lightwells

The new side lightwell is designed to be of modest size and finished flush with a grille to ground level, so as to be discreet and not harm the architectural character of the building.

The new rear stairwell is to follow the outline of the existing courtyard area to be removed and increased in depth to provide a staircase for access to the rear garden.

The external changes to the front of the property have been limited to a lowered frontage to street level, with new front steps down for access, with protective feature metal railings on a low level brick upstand.

It is considered that these alterations will enhance the overall appearance of the street scene.

Railings and grilles

The new lowered frontage has a small set of steps down to the lower ground level with protective feature metal railings.

The side lightwell is protected with a walkable grille.

The new rear stairwell is to be protected with protective feature metal railings and glazed folding/casement door screen to the elevation, in order to protect and enhance the recognised architectural character of the buildings and surrounding areas.

Summary

This document, and attached supporting information, namely the Design & Access Statement; Contractors Method Statement; Structural Engineers Design Philosophy; Sustainability Statement; Environment Agency Groundwater map and Flood Risk Assessment cover the three main issues referred to in Camden Planning Guidance (CPG4) 'Basements and Lightwells', to demonstrate that the cumulative impacts of this development to the build and natural environment and local amenity, including to the local water environment, ground conditions and biodiversity will be negligible.

Prepared by: **the basement design studio** For: **Mr. K. Ayoubi**

A Factual Report on the

Site Investigation undertaken for

London Basement / Holbase Ltd

at

224 Finchley Road
London NW3

CSI Ref: 2782

Date: 2nd September 2011

Chelmer Site Investigation Laboratories Ltd. Unit 15 East Hanningfield Industrial Estate, Old Church Road, East Hanningfield, Essex CM3 8AB
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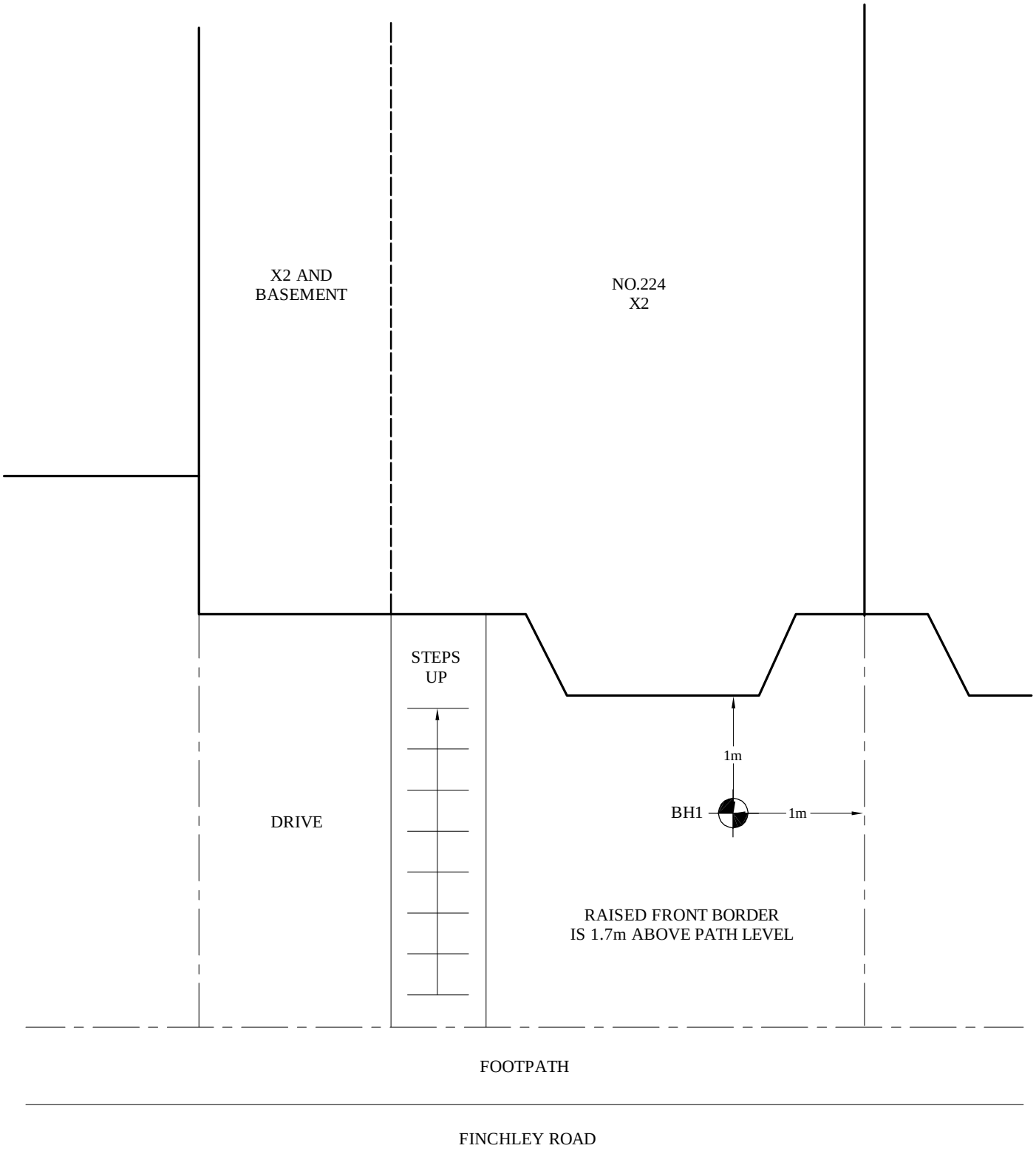
Client:	London Basement/Holbase Ltd	**Scale:**	N.T.S.	**Sheet:**	1 of 1	**Date:**	2.9.11
Location:	224 Finchley Road, London NW3	**Job No:**	2782	**Weather:**	Sunny	**Drawn by: JG**	**Checked by: ME**



Notes:

On site tree identification for guidance only. Not authenticated.

Key:

Tree/Shrub | Borehole | Trial Pit | G Gully | Tree Stump | Rain Water/ Soil Pipe | MH Manhole

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Client: London Basement/Holbase Ltd	**Scale:** N.T.S.	**Sheet No:** 1 of 1	**Weather:** Sunny	**Date:** 2.9.11	
Site: 224 Finchley Road, London NW3	**Job No:** 2782	**Borehole No:** 1	**Boring method:** Hand auger		

Depth Mtrs.	Description of Strata	Thick-ness	Legend	Sample	Test Type	Test Result	Root Information	Depth to Water	Depth Mtrs
G.L.									
0.15	SHINGLE OVER TOPSOIL	0.15							
	MADE GROUND: medium compact dark brown very silty clay with gravel and brick pieces and fragments.	0.65		D			Hair and fibrous roots to 1.3m.		0.5
0.8									
	Stiff mid brown/orange grey veined silty CLAY with partings of orange/brown silt and fine sand and crystals.	0.5		D	V	128 136			1.0
1.3							No roots observed below 1.3m.		
				D	V	140+ 140+			1.5
	Very stiff fragmented as above.	1.9		D	V	140+ 140+			2.0
				D	V	140+ 140+			2.5
				D	V	140+ 140+			3.0
3.2									
				D	V	140+ 140+			3.5
				D	V	140+ 140+			4.0
	Very stiff mid brown grey veined silty CLAY with partings of brown and orange silt and fine sand and crystals.	2.8		D	V	140+ 140+			4.5
				D	V	140+ 140+			5.0
				D	V	140+ 140+			5.5
				D	V	140+ 140+			6.0
6.0	Borehole ends at 6.0m								

Drawn by: JG **Approved by:** ME

Remarks: Borehole dry and open on completion.

Key: T.D.T.D. Too Dense to Drive
D Small Disturbed Sample J Jar Sample
B Bulk Disturbed Sample V Pilcon Van (kPa)
U Undisturbed Sample (U100) M Mackintosh Probe
W Water Sample N Standard Penetration Test Blow Count

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REPORT NOTES

Equipment Used

Hand tools, Mechanical Concrete Breaker and Spade, Hand Augers, 100mm/150mm diameter Mechanical Flight Auger Rig, GEO205 Flight Auger Rig, Window Sampling Rig, and Large or Limited Access Shell & Auger Rig upon request and/or access permitting.

On Site Tests

By Pilcon Shear-Vane Tester (Kn/m^2) in clay soils, and/or Mackintosh Probe in granular soils or made ground and/or upon request Continuous Dynamic Probe Testing and Standard Penetration Testing.

Note:

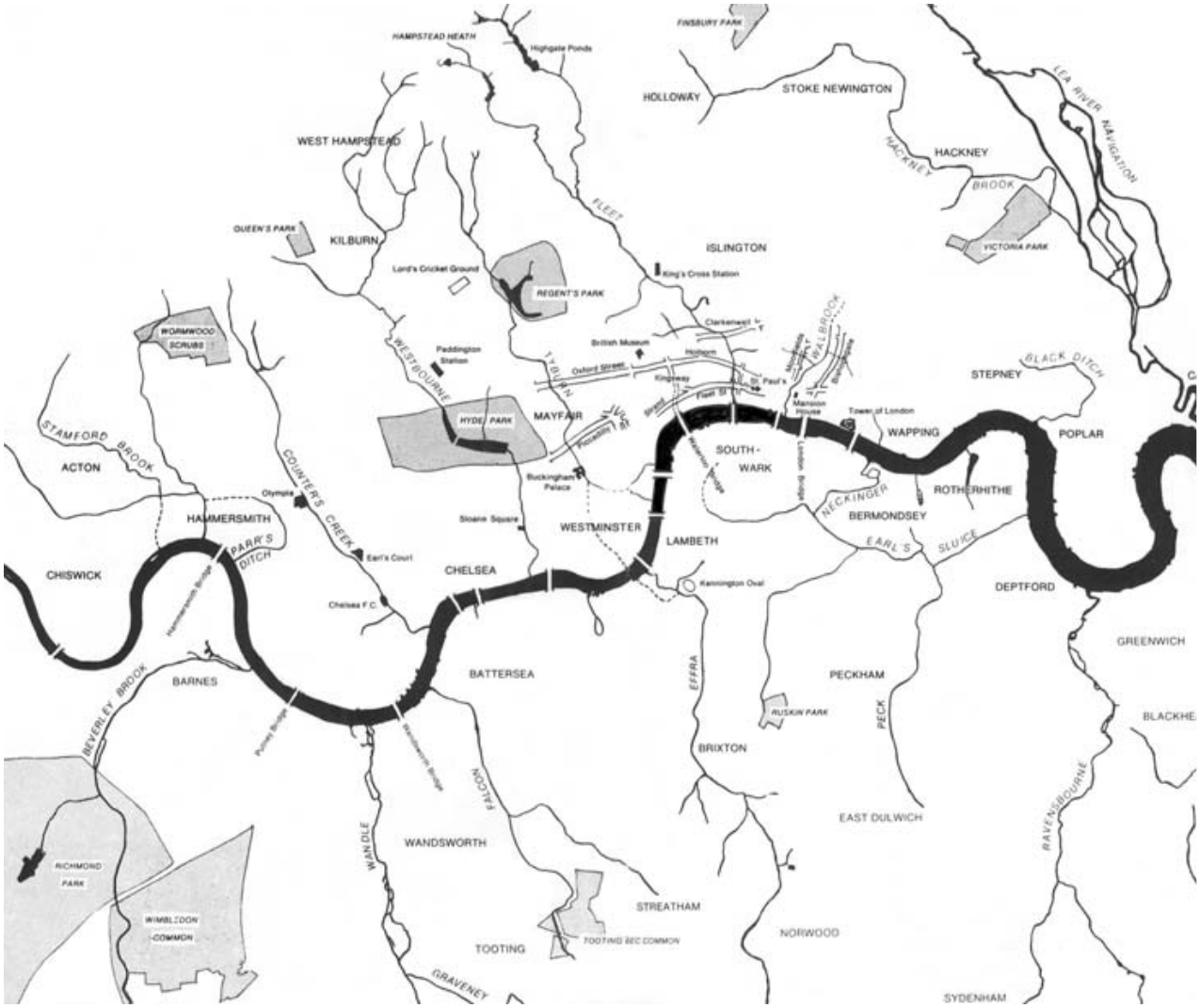
Details reported in trial-pits and boreholes relate to positions investigated only as instructed by the client or engineer on the date shown.

We are therefore unable to accept any responsibility for changes in soil conditions not investigated i.e. variations due to climate, season, vegetation and varying ground water levels.

Full terms and conditions are available upon request.

The Lost Rivers of London

By Nicholas Barton



The easiest pub quiz question in the world: name **a river that flows through London**. Answer: the Thames. A somewhat more difficult question: name *another* river that flows through London. A few might know of the river Lee (or Lea) that springs near Leagrave in Bedfordshire and joins the Thames at Leamouth in the London borough of Tower Hamlets. But how about: name a *third* river that flows through London? And a fourth, a fifth, a sixth?

We'd lose all but the more phenomenal pub quiz contestants here, even though there are in actual fact over a *dozen* natural water courses flowing through Britain's capital. Many of them played important role in the development of the city, as the location of mills, the source of drinking water and as open sewers. Most of them have been pushed totally underground, **forced into culverts**, out of sight and out of mind – even

if some of them have left their mark on the city's topology. This map shows and names some of those lost rivers of London, all tributaries to the Thames.

Starting on the *rive gauche* of the Thames (which in this case means the north bank of the river), those are, west to east:

· **Stamford Brook:** the confluence of three smaller streams arising in West London, Stamford Brook flows into Hammersmith Creek before discharging into the Thames. Its name comes from 'stoney ford', and is remembered in Stamford Brook tube station. The stream was covered by 1900 and is now a sewer.

· **Parr's Ditch**: also called Black Bull Ditch, this stream arose north of present-day King Street in Hammersmith, flowing under a bridge at Hammersmith Road and crossing what is now the St Paul's Court estate to flow into the Thames where now Riverside Studios are.

· **Counter's Creek**: arising in Kensal Green and flowing south through Little Wormwood Scrubs, Olympia and Earls Court to Sands End, where it flows into the Thames, Counter's Creek can still sometimes be spotted by commuters on the westbound platform of West Brompton tube station, but only after heavy rainfall. Its tidal mouth is known as Chelsea Creek. Chelsea FC's football grounds is known erroneously as Stamford Bridge because of confusion between Counter's Creek and Stamford Brook.

· **Westbourne:** flowing from Hampstead through Hyde Park onto Sloane Square and thence into the Thames, the River Westbourne has left its mark on London toponymy, mainly by the other names it has been called through the centuries: Kilburn, Bayswater, Serpentine, Bourne, Westburn Brook, Ranelagh and Ranelagh Sewer. Kilburn and Bayswater nowadays are well-known areas in London. The Serpentine, formed in 1730 to beautify Hyde Park, was fed with the Westbourne's waters until 1834, by which time it had become too polluted. Another area owing its name to this stream is Knightsbridge – named after a bridge over the Westbourne. It has been driven underground since the 1850s, when the area it flows through was gobbled up by an expanding London. An original part of the pipes it still runs through can be seen above the platform of Sloane Square tube station. At low tide, its mouth can still be seen some 300 yards west of Chelsea Bridge.

· **Tyburn:** originating in South Hampstead, flowing through St James's Park and flowing into the Thames near Vauxhall Bridge in Pimlico, the Tyburn once branched to form the island of Thorney, the site of Westminster Abbey.

·**Fleet:** two springs on Hampstead Heath, directed into two 18th century reservoirs (Highgate and Hampstead Ponds) thereafter combine to form London's largest underground river. The upper reaches were known as the *hollow stream* ('Holborn' in Anglo-Saxon, hence the name of that London area), its lower reaches as the Fleet (from Anglo-Saxon for 'estuary'). The Fleet flows under King's Cross, which was originally known as Battle Bridge, after a place where Queen Boudicca is reputed to have fought the Romans. It ends in the Thames under Blackfriars Bridge. The river gave its name to Fleet Street, which in turn became a collective term for the British press, as most newspapers had their offices there. It almost gave its name to a tube

line, but since its opening coincided with the Queen's silver jubilee, the Fleet Line was named the Jubilee Line. On a quiet moment in front of the Coach and Horses pub in Ray Street, Farringdon, you can still hear the Fleet's flow through the grating. Another slightly more dangerous location for Fleet-spotting is the grid in the center of Charterhouse Street where it joins Farringdon Road.

· **Walbrook:** starting in Finsbury, flowing straight through the middle of the most ancient part of the city and into the Thames at Cannon Street Railway Bridge, this river's name might derive from the fact that it flowed through or under the wall of Londinium, the Roman settlement on the site of present-day London. Legend has it that when London fell to the Saxons, these forced the original Celtic inhabitants to live on the east side of the river, while they lived on the west side of it – resulting in the still noticeable difference between London's affluent West End and a more working-class East End.

· **Black Ditch:** possibly rising near Spitalfields, this river ran to Mile End, curving into Poplar to end in the Thames at Limehouse Dock. It may have been known by other names but by the late 18th century, it was called the Black Ditch.

Streams joining the Thames on its south bank are, west to east:

· **Beverley Brook:** rising at Cuddington Recreation Park in Worcester Park, Beverley Brook flows through Wimbledon Common, Richmond Park and Barnes and joins the Thames at Barn Elms, near Putney Bridge. Its name derives from the presence of the European beaver, extinct in Britain since the 16th century.

· **Wandle:** the Wandle springs from two sources: one of the Waddon Ponds in Croydon and another at Carshalton Ponds. It flows through Sutton, Lambeth, Merton and finally Wandsworth, where it joins the Thames. Both Wandsworth and the Wandle get their names from Wendle, a Saxon who settled in the area. Exceptionally among London's 'lost' rivers, the Wandle is not subterranean for most of its length. Springing at Thornton Heath as the Norbury Brook, the river Graveney joins the Wandle near Summerstown.

· **Falcon:** the Falconbrook, or Falcon, springs on Tooting Bec Common, flows under Balham and enters the Thames at Battersea. It burst out of the pavement of Falcon Road (named after the stream) in Clapham Junction in July 2007 during floods that affected large parts of England.

· **Effra:** derived from the Celtic word for torrent (compare, in Welsh, 'ffrydlif'), the Effra rises from multiple sources, among others in Crystal Palace and near Westow Hill, flowing under Half Moon Lane in North Dulwich, towards Herne Hill train station, from there towards Brixton's Coldharbour Lane, Brixton Road, on to Kennington and then ending in the Thames, near Vauxhall Bridge. In 1992, an arts project sparked a campaign to unearth the Effra.

· **Neckinger:** rising in Southwark, the Neckinger joins the Thames via St Saviour's Dock, where pirates were hanged in the 17th century. The river's name may derive from the term 'devil's neckcloth' (i.e. the noose). In the 19th century, the mouth of the Neckinger was known as Jacob's Island, a place of great poverty and squalor,

described as *the very capital of cholera* and *the Venice of drains.* Charles Dickens lets one of his best-known characters, Bill Sykes (from Oliver Twist) meet a violent death in the mud of the Dock.

· **Peck:** the Peck, springing in East Dulwich and running through Peckam, was enclosed in 1823. It can still be seen on the west side of Peckham Rye Park.

· **Ravensbourne:** the River Ravensbourne rises at Caesar's Well in Keston, flows through Bromley, Lewisham and Greenwich and is joined by several tributaries, among which the beautifully named River Quaggy (also known as Kyd Brook). It ends in the Thames in Greenwich Reach (also known as Deptford Creek), west of Greenwich proper. In 1580, Queen Elizabeth I knighted Francis Drake on board the *Golden Hind* in Deptford Creek after his circumnavigation of the globe.