

Hammersmith and Fulham borough: Environmental summary

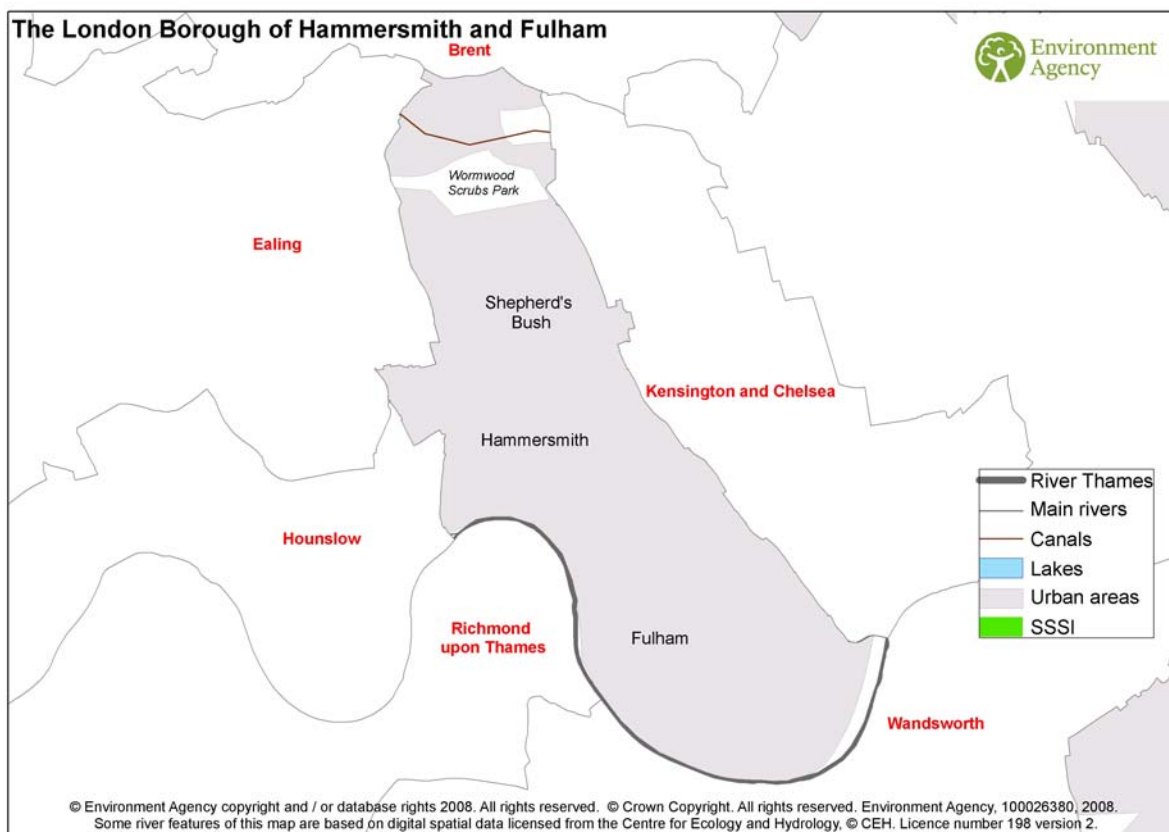
This report provides a snapshot of the environment in the London borough of Hammersmith and Fulham. It outlines trends and changes in the environment, and highlights some of the work being carried out in the local areas to improve the environment, and people's experience of it. The report has been compiled as an extension of the London State of the Environment report to provide a local focus on the boroughs and the health of their environment.

To navigate to other chapters in the fact sheet, click on the following links: Key environmental facts, Sustainability, Climate change, Flood risk, Waste, Water quality, Water resources, Land, Wildlife and Appendix.

Introduction to the London Borough of Hammersmith and Fulham

The London Borough of Hammersmith and Fulham is in central London. The main town centres in Hammersmith and Fulham, as identified in the Unitary Development Plan (UDP) are Shepherd's Bush, Fulham and Hammersmith. The borough has a population of over 172,500 people and is amongst the smallest in London.

Hammersmith & Fulham's neighbouring boroughs are Kensington & Chelsea, Hounslow, Ealing, Brent, Wandsworth and Richmond.



Hammersmith and Fulham Key Environmental Facts

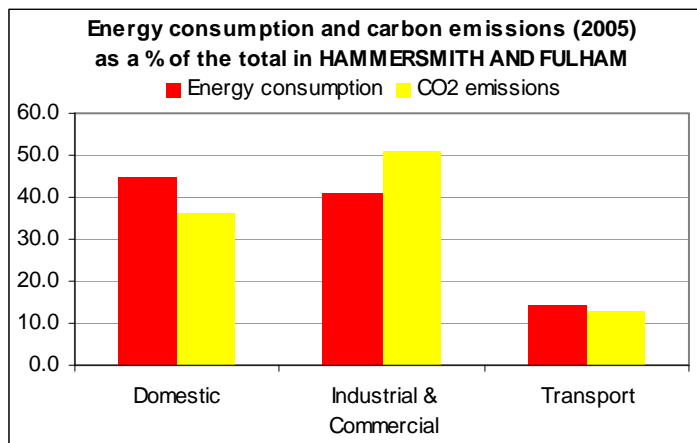
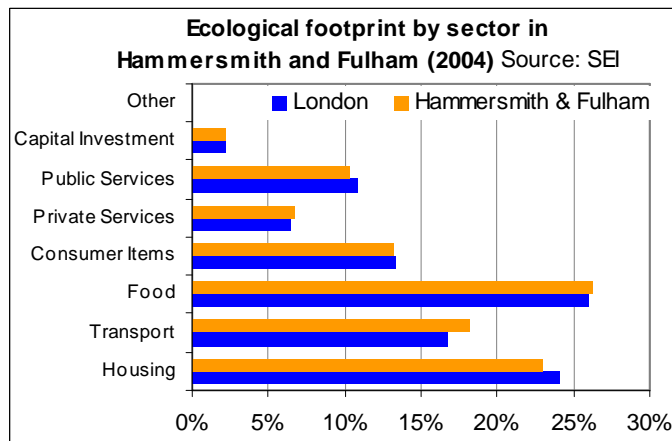
- Almost 70% of all properties in Hammersmith and Fulham are at risk of flooding from the tidal River Thames. However, the protection provided by the Thames tidal defences, including the Thames Barrier, means that these are at low likelihood of flooding and flooding has not occurred since 1928.
- There has been a decline in the amount of municipal waste sent to landfill and an increase in that recycled or composted. The household recycling rate is increasing but composting remains low.

The Environment in Hammersmith and Fulham

Sustainability

The ecological footprint is an indicator of 'how much land and sea is needed to provide the energy, food and materials we use in our everyday lives, and how much land is required to absorb our waste'. This is measured in global hectares per capita.

The ecological footprint in Hammersmith and Fulham is 5.76¹ global hectares per capita (2004). This footprint is higher than the overall London footprint of 5.48, and the UK footprint of 5.30¹. The primary contributors to this footprint are food and housing, accounting for 26% and 23% respectively. This is consistent with the London trend.



Climate change

The carbon footprint in Hammersmith and Fulham is 11.82¹ tonnes/CO₂ per capita, (2006) which would cost £313.14 if valued using the shadow price of carbon (2009). This represents the cost to society of the damage caused by a tonne of carbon emitted into the atmosphere. The sector with the highest contribution to this footprint is housing, and more specifically the electricity, gas and other fuels used in the home. This carbon footprint is higher than the London average of 11.38 tonnes CO₂ per capita but lower than the UK average of 12.12 CO₂ per capita.

Using the London Emissions and Greenhouse Gas Inventory (LEGGI):

Energy consumption:

- Energy consumption was 3,764 gigawatt hours per year (Gwh/yr) in 2005². This has decreased from 3,890 in 2004.
- In 2005, around 45% of this consumption was from the domestic sector (1,680 Gwh/yr)². The transport sector had the lowest energy consumption in 2005, accounting for 14% (543 Gwh) of the total consumption.
- The total energy consumption in Hammersmith and Fulham equates to 2.44% of the total energy consumption in London². Energy consumption in this borough ranks 23rd out of all the London boroughs.

Carbon emissions:

- The industrial and commercial sector has the highest carbon emissions in Hammersmith and Fulham, accounting for 51% of the total. Electricity is the highest contributor.
- The transport sector has the lowest carbon emissions accounting for 13% of the total in the borough.
- The carbon emissions associated with Hammersmith and Fulham account for 2.49% of the total London emissions in 2005, ranking 23rd.

Hammersmith and Fulham borough has signed up to the Local Area Agreement indicator 185 - reduction in CO₂ emissions from local authority operations. Progress with this target will be monitored and reported next year.

Flood risk

Flood zones

The London borough of Hammersmith and Fulham has some land within flood zones 2 and 3. Flood zone 2 represents the 1 in 1000 year probability of flooding, and flood zone 3 represents the 1 in 100 year probability of flooding. The area of land within flood zones 2 and 3 covers a large area of the borough, from the centre down to the south of the borough around the tidal River Thames. **Locations of the floodplain and the likelihood of flooding are shown in appendix 1.**

In Hammersmith and Fulham, there are just under 58,500 properties (69% of all properties) at risk of tidal flooding*, the majority of which are residential. Despite the high number of properties at risk, these are all classified as low likelihood of flooding due to the high standard of protection provided by the Thames tidal defences. This includes the Thames Barrier, which became operational in 1982.

* Figures are indicative only and are taken from the 2008 National Flood Risk Assessment (NaFRA) – Environment Agency

Fluvial (river) and tidal flood events

Flooding has not occurred in the Hammersmith and Fulham borough since 1928. The flood event in 1928 occurred in the south of the borough, predominantly along the banks of the River Thames, in both the towns of Hammersmith and Fulham. There was a larger area of flooding in the north east of Fulham. **Locations of these flood events are shown in appendix 2.**

Flood warning

In Hammersmith and Fulham borough, there are 481 people registered (mid 2009) to Flood Warnings Direct (FWD). This is less than 1% of the properties at risk of flooding. However, this low percentage can be attributed to the fact that those at tidal risk receive alternative warnings and are protected by the Thames Barrier. The Environment Agency offers the FWD flood warning service, which gives advance warning of flooding via phone, text, email, pager or fax. We would encourage all households at risk of flooding to register. Warnings are also broadcast on local radio, particularly LBC who have agreed to broadcast flood warnings in London.

Future flood risk management

National Indicator (NI)189 is defined as: the percentage of agreed actions to implement long-term flood and coastal erosion risk management plans that are being undertaken satisfactorily. This refers specifically to the Thames Catchment Flood Management Plan (CFMP) which focuses on flooding from rivers and the Thames Estuary 2100 (TE2100) Plan which is concerned with flooding from the sea. Both of these plans make recommendations for how flood risk will be managed in the future and through NI189 we will be working together with Local Authorities to implement them.

Waste

As waste collection authority, the council is due to operate a weekly collection system in February of black rubbish sacks and orange recycling sacks in a new fleet of split compartment vehicles. All waste is taken to Western Riverside facilities at either Smugglers way in Wandsworth, Cringle Dock in Battersea, or Cremorne Wharf in Chelsea. Recycled material is taken to a Materials Recovery Facility (MRF) in Kent, non recyclables are compacted into ISO containers and taken to landfill in barges.

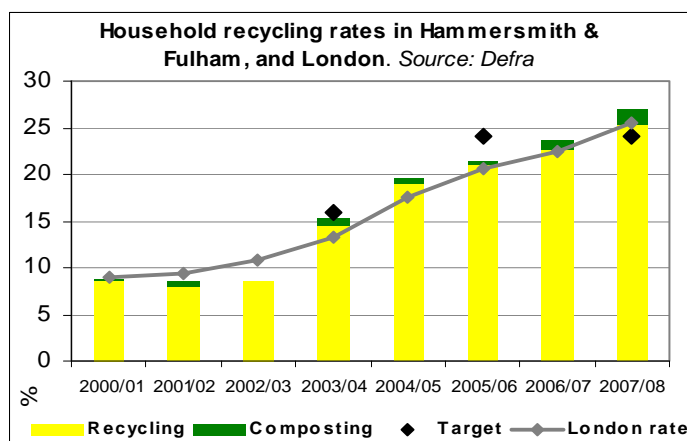
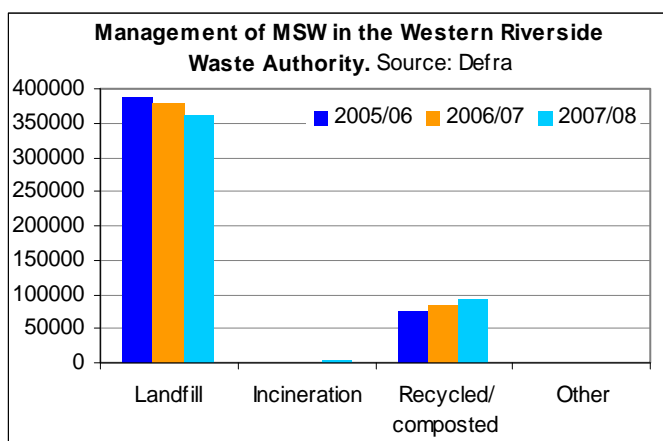
Hammersmith and Fulham, along with Kensington and Chelsea, Lambeth, and Wandsworth form the collection authorities that deliver waste to Western Riverside Waste Authority as disposal authority. There are no re-use and recycling centers in the borough, however there are 45 Bring Banks. There are 4 regulated facilities (ex-waste management licenses), 2 permitted installations (ex-IPPC permits), and 87 exempt waste operations.

For more information on waste in Hammersmith and Fulham, visit Capital Waste Facts.

Municipal waste (MSW)

Municipal waste arisings in the Western Riverside Waste Authority in 2007/08 are 457,397 tonnes. This has decreased by 4,698 tonnes from the 462,095 tonnes produced in 2005/06.

There has been a 5% decrease in the amount of waste sent to landfill, from 2005/06 to 2007/08, and a 4% increase in the amount recycled and composted. However, MSW to landfill is the main disposal method, with 79% being disposed in this way. This diversion of waste from landfill needs to continue on a larger scale, alongside an increase in the amount recycled/composted.

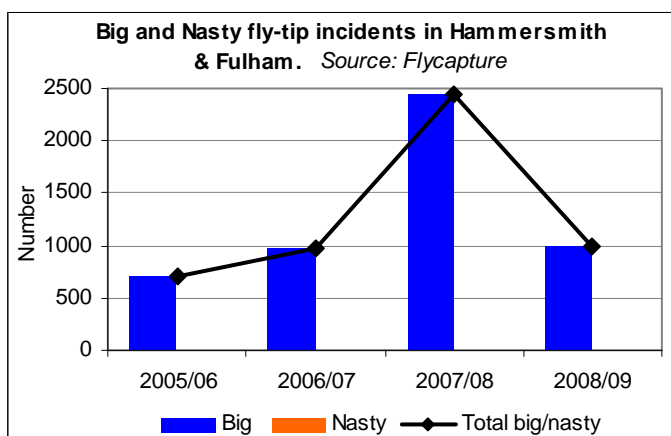
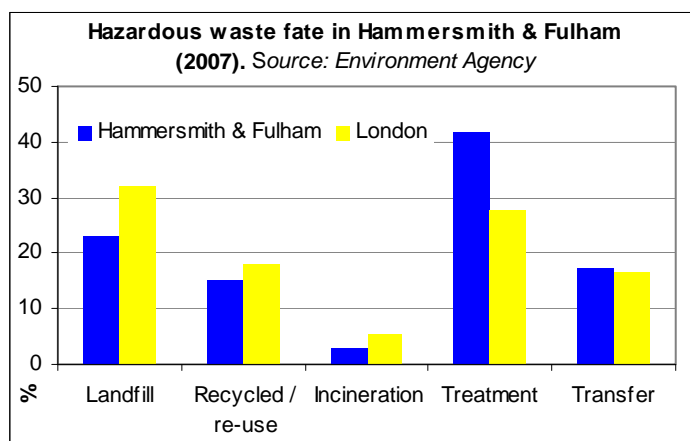


The Western Riverside Waste Authority is currently not achieving its 2009/10 target, of 198,694 tonnes, under the Landfill Directive. Under the Landfill Allowance Trading Scheme (LATS), each waste disposal authority is given an allocation for the amount of biodegradable municipal waste (BMW) that they can landfill each year. This is to reduce the amount of waste landfilled in order to meet the requirements of the Landfill Directive. The amount of BMW going to landfill in the Western Riverside Waste Authority has declined from 262,096 tonnes in 2005/06 to 244,825 tonnes in 2007/08. This is within the allocation provided. The Western Riverside Waste Authority needs to reduce the amount of BMW sent to landfill by 46,131 tonnes over the next few years in order to meet the 2009/10 target.

Hammersmith and Fulham have signed up to the Local Area Agreement indicator N192 – percentage household waste sent for re-use, recycling and composting. This aims to see the local authority maximise waste recycling in order to achieve the Governments targets for waste management. The targets for this, in Hammersmith and Fulham, are 28% by 2008/09, 28% by 2009/10 and 30% by 2010/11.

Recycling and composting

- Hammersmith and Fulham borough ranks 16th for the recycling and composting rate, out of all 33 boroughs. The recycling only rate is 25.39% ranking 5th, and the composting only rate is 1.5% ranking 27th³.
- The household recycling and composting rate in Hammersmith and Fulham has increased dramatically since 2000/01, although the rate of composting has remained very low over the last few years.
- The overall rate of 26.89% is higher than the total London rate of 25.5% and just higher than the Western Riverside waste Authority rate of 26.14% (2007/08).
- Hammersmith and Fulham met the statutory household recycling and composting targets set in 2007/08 but did not meet the previous targets in 2003/04 and 2005/06³.



Hazardous waste

The volume of hazardous waste arising in the borough of Hammersmith and Fulham was 3,567 tonnes in 2007, a marginal increase from the 3,484 tonnes in 2006. This accounted for 21% of the hazardous waste produced in the Western Riverside Waste Authority and just over 1% of that produced in London. The primary method of waste fate was treatment, in 2007, accounting for just over 40% of the waste produced. Just over 20% was sent to landfill and 15% was recycled or re-used.

Out of the 3,567 tonnes arising in Hammersmith and Fulham, just over 43% was disposed of within London. The remaining hazardous waste was diverted to other regions for disposal. The main recipient was the East of England, which received 24% of the waste. The South East received 15%.

Fly-tipping

The number of big and nasty fly-tipping incidents recorded in Hammersmith and Fulham increased between 2005/06 and 2007/08, but declined in 2008/09. Big incidents are those of tipper lorry load size or larger, and 'nasty' incidents are those involving oil, fuel or chemical drums. There are no nasty incidents recorded between 2006/07 and 2008/09 (3 were recorded in 2005/06). There was a significant increase in the number of big incidents recorded in 2007/08, which is more than 3 times that recorded in 2005/06.

Water Framework Directive

Under the Water Framework Directive (WFD), the only designated watercourse within the borough is the Grand union Canal. The overall ecological status has been classified as good, in the draft plan (October 2009). The Brent (below Silk Stream to Thames) water-body falls within the boundaries of Hammersmith and Fulham – this is classified as having poor ecological status. **These are shown in appendix 3.** Under WFD, this needs to achieve good status by 2027. A programme of measures to improve the status is being developed. The Water Framework Directive (WFD) will introduce a series of measures to address urban diffuse pollution (where it is having an impact on water quality), in order to achieve the 'good' ecological status required for the Directive.

Water quality

Chemical water quality

There are no watercourses currently designated under the chemical General Quality Assessment (GQA), in the borough. There has been a reduction in the GQA network over the last few years, and the biological oxygen demand has been removed as one of the parameters in the calculation. This means the calculation is now based on ammonia and dissolved oxygen levels to grade each river reach.

The Grand Union Canal (Paddington Arm – canal feeder to Camden road) was previously designated. It showed historically poor water quality, achieving grade E in the GQA classification since 1991. There was a slight improvement in 1994, to a grade D (fairly good quality) but the quality declined in 1997 to grade E and remained through to 2006. This reach of the GUC was removed from the network in 2007. A possible reason for the poor quality recorded could be urban diffuse pollution from the surrounding areas.

Hammersmith & Fulham is served by Beckton sewage treatment works. This works is situated in Beckton (Newham) and discharges into tidal River Thames. Beckton has been identified by Thames Water as having future growth/capacity issues. Beckton currently serves a population equivalent of 3,280,000, which will be subject to increase once the proposed housing growth scheme is implemented. Beckton was identified for improvements to ensure that it meets with new Tideway standards.

Water pollution incidents

The only water pollution incidents to be recorded in Hammersmith and Fulham between 2004 and 2008 resulted in minimal environmental damage (category 3) – there were no incidents to result in major or significant damage. However, the number of incidents recorded each year during this period has increased. Only one incident was reported in both 2004 and 2005. This figure jumped to five in 2006, four of which were the outcome of fires. There were two incidents recorded in 2007, and the figure rose to four in 2008

Water resources

- Thames Water supplies water to the London Borough of Hammersmith & Fulham and falls within the London Water Resource Zone (WRZ). This WRZ is highly water stressed.
- The 5 year average (2004 to 2009) per capita consumption (PCC) in the London WRZ is 158.4 litres per person per day⁴. The 5 year mean for England and Wales is 148 litres per person per day and for the GLA it is 161 litres per person per day.
- The Government has set a target for households to achieve 130 litres per person per day so work needs to be done on making changes to consumption patterns to protect water resources in order to meet this target.
- The majority of London's public water supplies come from the rivers Thames and Lee (with about 80% of London's supply taken from the freshwater River Thames upstream of Teddington Weir). The remaining supplies are obtained from groundwater sources situated beneath the London Borough's from the confined Chalk aquifer.
- The Borough is underlain by London Clay and provided this remains intact, it protects the Chalk aquifer below from contamination at the surface.

Water abstractions

There are 4 active abstraction licences in Hammersmith & Fulham which are predominantly from groundwater. The majority of these licences (75%) are within the Industrial, Commercial and Public services sector. Other abstractions are for Water supply (25%).

Due to stresses on water availability it is unlikely that licences for large water abstractions (>1-2Ml/d) will be granted unless the applicant can demonstrate that the resources are available. However the South East of the borough of Hammersmith and Fulham is also covered by the Central and South London Policy which states that new consumptive licences are restricted to <0.2Ml/day annual average, subject to the local assessment being favourable. This is subject to review.

There are no watercourses within the Borough of Hammersmith & Fulham. There is the Grand Union Canal which is managed by British Waterways. The London Catchment Abstraction Management Strategy (CAMS) covers this area.

Land

Land-use and development

The land use in Hammersmith and Fulham is dense urban land, with an area of open space in the north of the borough. The Grand Union Canal flows through the northern tip.

The Mayor's London Plan sets a 10 year Housing target of 4,500 new homes within Hammersmith and Fulham between 2007/8 to 2016/17. Hammersmith, White City, Earl's Court & Fulham have been identified as the target growth areas.

Land pollution incidents

The number of land pollution incidents remains low in Hammersmith and Fulham with just four minor incidents (category 3) being reported in 2008. Indeed over the last three years there has been a consecutive decline in the number of land pollution incidents. The only significant (category 2) land pollution incident to occur in the last five years was recorded in 2004 and was attributed to unauthorised activity, specifically fly tipping of construction and demolition waste.

Category 4 land pollution incidents, which have no environmental impact, have not been included.

Land contamination

We protect the environment and by so doing assist in bringing sites back into beneficial use through our land contamination work. Since 2000 we have been, or are still, heavily involved in a few sites e.g. Ariel Way and Old Oak sidings. Between 2000 and 2008, 25 sites have been investigated as a result of planning applications or voluntary submissions; 4 sites required no further remedial action, 21 had unrecorded remedial status and no sites were remediated. **Locations of investigated sites are shown in appendix 4.**

Green Flag Award

There are 3 parks or green spaces in the borough of Hammersmith and Fulham that have been awarded the Green Flag⁵. This recognises high environmental quality and management, and access to all members of the community. These are Frank Banfield Park, Margravine Cemetery and Ravenscourt Park.

Wildlife

SSSI Condition

There are no sites of Special Scientific Interest (SSSI) in Hammersmith and Fulham borough⁶.

Conservation sites

Each borough has a number of Sites of Importance for Nature Conservation (SINC). There are 3 types of SINC: Sites of Metropolitan Importance, Sites of Borough Importance and Sites of Local Importance.

The Sites of Metropolitan Importance are designated by the Mayor of London, and the GLA - they are the most important wildlife sites in London. There are 3 of these sites in Hammersmith and Fulham. They are London's Canals, the River Thames and its tidal tributaries, and Kensal Green Cemetery.

Sites of Borough Importance are habitats designated as important wildlife sites by the borough's themselves. The lowest grading wildlife sites are the Sites of Local Importance - these are smaller sites such as parks and gardens that help the community have access to wildlife near their homes. In Hammersmith and Fulham, there are 16 Sites of Borough Importance and 15 Sites of Local Importance⁷.

Biological river quality

The biological quality is assessed using the biological General Quality Assessment (GQA) which uses macro-invertebrate populations to give a long-term indication of water quality. This is because macro-invertebrates can be affected by pollutants that occur at low concentrations or infrequently, and are often missed by chemical sampling.

In Hammersmith and Fulham, the Grand Union Canal (Paddington Arm) is the only designated watercourse. The biological quality of this watercourse, from the Canal Feeder to Camden Road, is poor and has declined in quality since 2000. The biological quality was poor (grade E) from 2000 to 2003, and then declined in 2004 to very poor (grade F) which remained up to 2008. This represents a river where few species are present, and those which are present are tolerant to pollution. In the worst cases, there may be no life at all in a river of this quality.

River and habitat restoration

There are no river restoration projects planned in Hammersmith and Fulham. Historically there was one rehabilitation project on the River Thames at Barn Elms Wetland Centre where the main motivation was habitat gain.

Details of projects in the London area can be found in the London River's Action Plan at <http://www.therrc.co.uk/lrap.php>

Invasive species

Three types of invasive species have been recorded in Barking and Dagenham. The most commonly found invasive species in the borough is Japanese Knotweed. This invasive weed species grows on the river banks and reduce the ability of native species to grow. Japanese Knotweed grows rapidly, colonising river habitats and preventing diversity of plant species. Giant Hogweed and Indian Balsam have also been recorded.

The Wildlife and Countryside Act (1981) is a measure for preventing the establishment of non-native wildlife which may be detrimental to native species. The Act states that it is an offence to plant or cause to grow in the wild any plant which is stated in part II of schedule 9. This includes Japanese Knotweed and Giant Hogweed. Giant Hogweed (*Heracleum mantegazzianum*) is a toxic plant and potentially hazardous to human health, for more information follow this link [http://www.nonnativespecies.org/documents/Giant%20Hogweed%20\(v3b\).pdf](http://www.nonnativespecies.org/documents/Giant%20Hogweed%20(v3b).pdf) or contact your local Environmental Health Officer. It is the riparian owner's responsibility to remove invasive weeds. The Environment Agency only has a duty to remove invasive species that are affecting river flows and increasing flood risk.

Fish

The London Borough of Hammersmith & Fulham is adjacent to the main River Thames which is known in this reach to support an extremely diverse and abundant fish population. The inter tidal fish community consists of 125 species, being a combination of marine, migratory and freshwater fishes. Species commonly known to frequent the tidal River Thames include grey mullet, bass, smelt, flounder, dace, roach, bream, eel and carp. Improving water quality and varied marginal fish habitat are extremely important factors in sustaining this diverse and valuable fish community. The section of the tideway within the Borough supports a popular fishery.

There is also a short section of the Grand Union Canal within the Borough. Although we do not have fish survey information for the canal, being managed by British Waterways, we know that fish populations predominantly consist of mixed coarse fish species, generally thought to be in a healthy condition. The most common species are bream, roach, perch, tench and carp.

Angling is a very popular, healthy outdoor activity that generates considerable income for local communities. The Grand Union Canal should be seen as a valuable recreational resource within London.

For more information on biodiversity and open spaces, visit the GIGL website.

Air quality

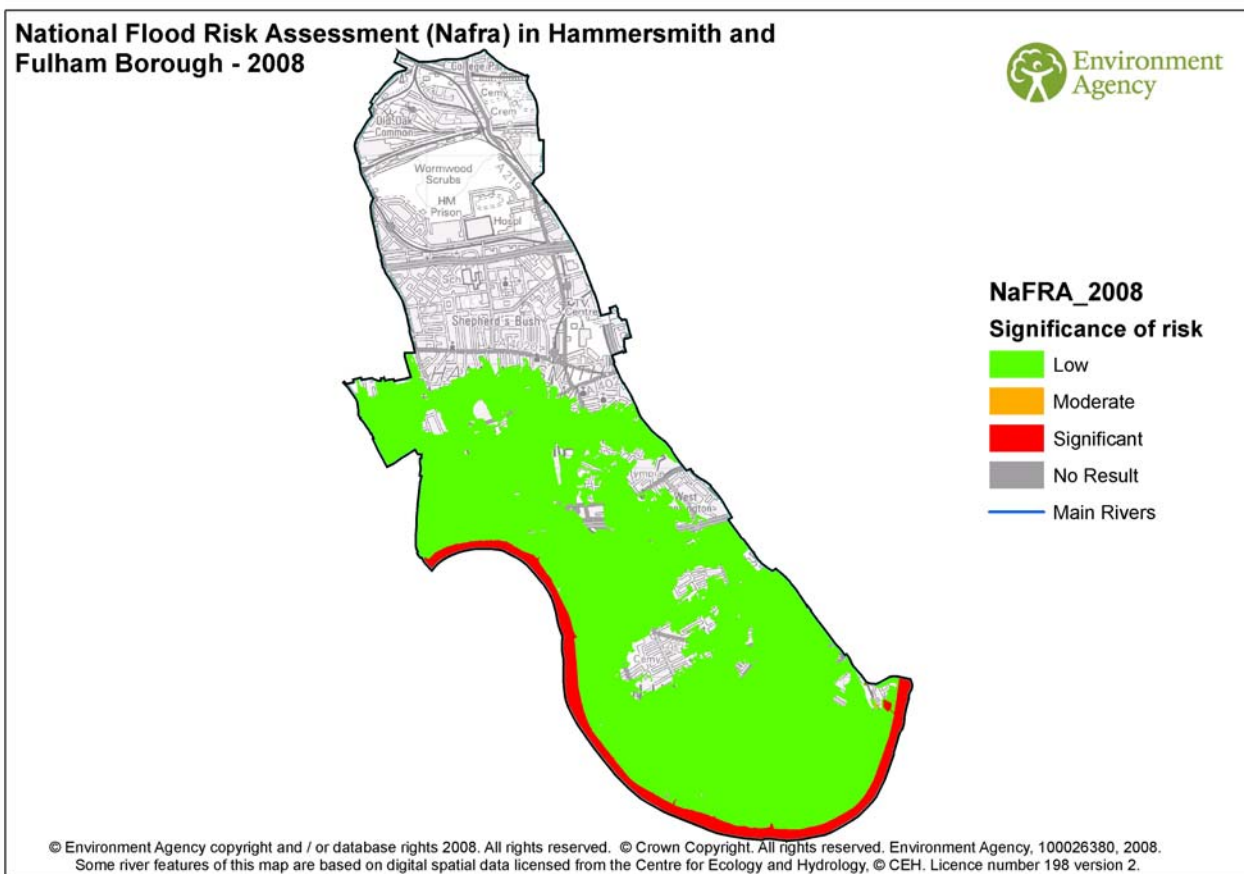
The whole of Hammersmith & Fulham was designated as an Air Quality Management Area in 2000 for nitrogen dioxide (NO₂) and small particles (PM₁₀). Despite some improvements since then, exceedances of the Government's NO₂ and PM₁₀ air quality objectives have continued across the borough, particularly alongside busy main roads. Some roadside sites have experienced higher levels of NO₂ in recent years suggesting that compliance with the Government's air quality objectives, particularly in relation to NO₂, remains a challenging target for the borough.

References

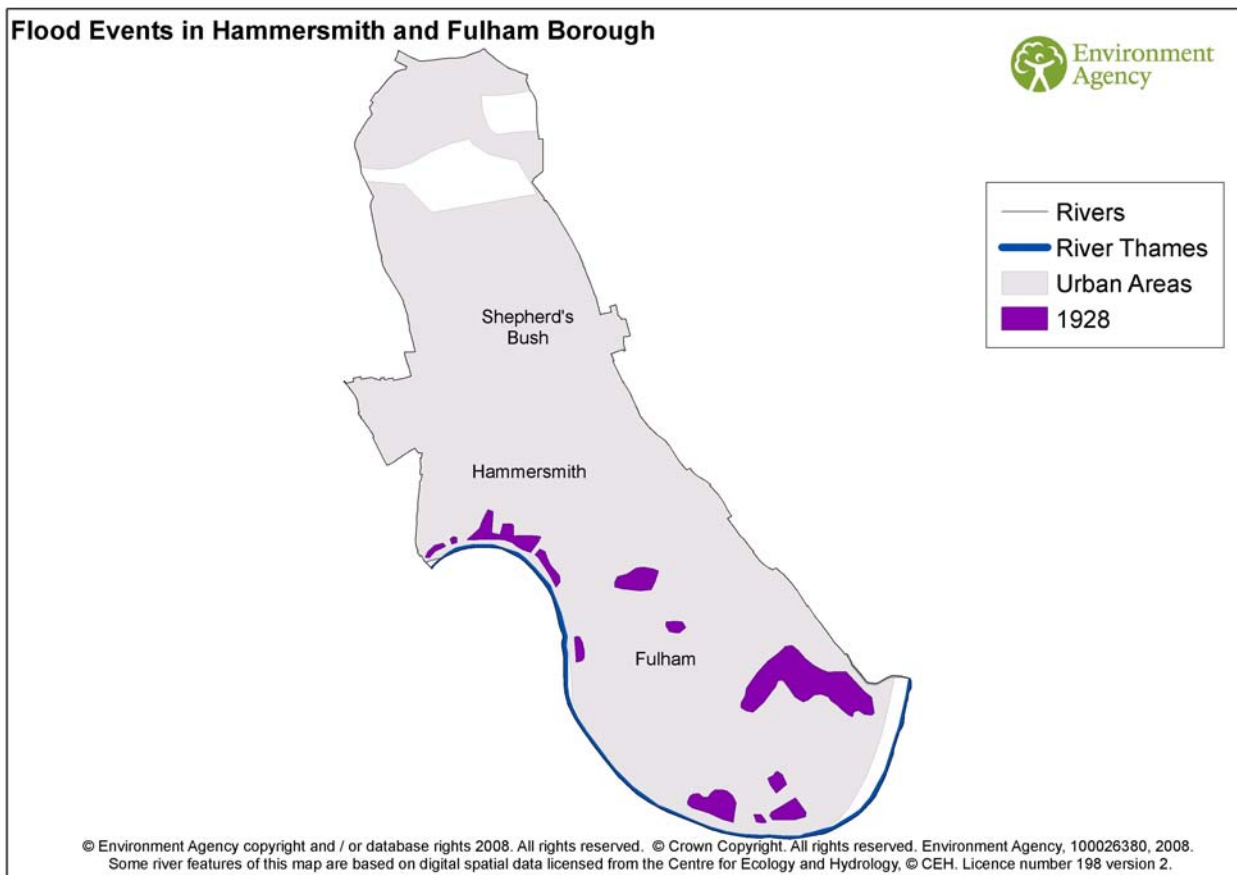
1. REAP data release: Published by SEI - BRIO Model v2 May 2009 Available at <http://www.resource-accounting.org.uk/downloads>
2. LEGGI (London emissions and greenhouse gas inventory) 2004-2005
3. www.defra.gov.uk/environment/statistics/wastats
4. Thames Water draft water resources management plan
5. Communities and Local Government (CLG)
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7. London Wildweb (Mayor of London) – www.wildweb.london.gov.uk/wildweb/About.do

Appendix

Appendix 1 – Map of the flood plain and likelihood of flooding in Hammersmith and Fulham



Appendix 2 - Map of the historic fluvial and tidal flood events in Hammersmith and Fulham



Appendix 3 – Map of the ecological status of rivers under the Water Framework Directive

