

The following from the notes of Amanda Frame, Chairman, Kensington Society

Environmental Agency taken from the website:

*3.27 Whenever possible, existing assessments of flood risk should be used. This can reduce costs and time implications associated with new assessments, but also provides continuity of approach and, hence, continuity of decision-making. The starting point to gain an overview of broad flood risk issues within a region should be the Environment Agency's Flood Map, bearing in mind that these maps only cover river and tidal flooding. Reference should be made to the Environment Agency's Catchment Flood Management Plans and Shoreline Management Plans and any existing SFRAs which have been produced by LPAs. In addition, **the Environment Agency has provided a map to LPAs (July 2009) showing areas susceptible to surface water flooding. This map is not as sophisticated as the Agency's main Flood Map, but indicates areas of land susceptible to surface water flooding after extreme rainfall.***

Areas susceptible to flooding from surface water

New data is now available to planners to help you identify areas that require further assessment as part of planning applications. We also need you to share data on past floods in your area with us.

From **July 2009**, new data will be available to planners, showing areas susceptible to flooding from surface water.

The main use of the data will be to highlight areas where the potential for flooding from surface water needs particular assessment and scrutiny within Strategic Flood Risk Assessments (SFRAs) / Strategic Flood Consequence Assessments (SFCAs) and Surface Water Management Plans (SWMPs).

Environment Agency Area Teams will be informing Local Planning Authorities directly of how to get this data. If you still need access, please get in touch with your planning liaison contact. Since this data is used under licence, we can only offer it to Local Planning Authorities. We are continuing to develop this data to make it more accurate in future.

Planning Policy Statement 25: Development and Flood Risk

"flood risk area" means:

(a) land in an area within Flood Zones 2 or 3; or

*(b) **land in an area within Flood Zone 1 which has critical drainage problems and which has been notified for the purposes of article 10 of the Order to the local planning authority by the Environment Agency***

London Regional Flood Risk Appraisal – October 2009

97. ...methods of reducing surface water run off from urban development are important. This applies not only to development in or near to a floodplain or river but **right across London**

Recommendation 5

Developments all across London should reduce surface water discharge in line with the Sustainable Drainage Hierarchy set out in Policy 5.13 of the draft replacement London Plan.

Counters Creek Strategic Sewer Flooding Alleviation
 Study findings and proposals for our 2009 Final Business Plan
 Public Domain Version 18/02/09

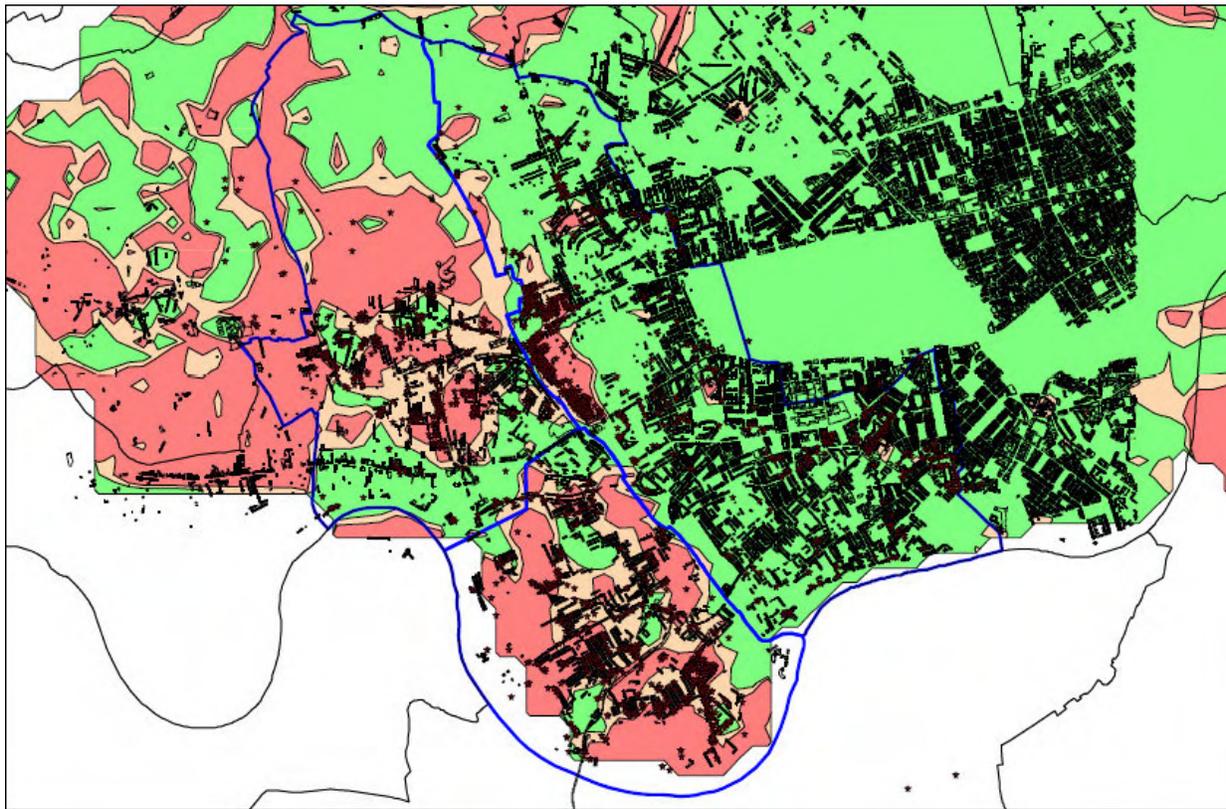


Figure 3: Results from hydraulic modelling

A key assumption in the model is that 70% of basements are actually connected to the sewerage network. This figure was arrived at by calibrating the modelled results with actual flooding incidents. **The results from the model are presented below and indicate that over 7,000 properties will be at risk of internal flooding from a 1 in 10 or more frequent event by 2020.** The model also shows that average sewage levels in the Counters Creek area have risen from around 2.13m below ground level in 1971, to 1.92m below ground level in 2008. This is a rise of more than 10% and a sufficient increase to cause sewage to overtop a doorstep of a basement previously at a low risk of flooding.

	1971*	2007	2020**
2 in 10 risk	5423	5438	5628
1 in 10 risk	1144	1829	2161
1 in 20 risk or greater	1823	2189	2222

* 1971 model excludes the Local Storage Tank Solution in Greyhound Road W6 and Strategic extension of North Western SRS to Camden

** 2020 model assumes a 5% increase in impermeability for the period 2007 – 2020 (based on a straight-line extension of the increase over the period 1971 - 2007 of 6.5% minus an allowance of 1.5% for implementation of SUDS)

Table 1: Results from hydraulic modelling of Counters Creek

Whilst there is a disparity between reported flooding incidents and the number of properties modelled to be at risk, the results demonstrate that there has been a substantial erosion of headroom in the storm relief network since 1971. **If nothing is done to alleviate this risk, we will have to respond to a catastrophic sewer flooding event in the Counters Creek area at some point in the near future. It would be completely unacceptable for us to do nothing and let this happen.**

Our conclusion is that a solution to the problem lies with improving the supply capability of the network. However, we need to work closely with the boroughs to minimise any further increases to the impermeable area, by ensuring that Sustainable Urban Drainage Systems are incorporated into all new developments and that any further drop-kerb applications and basement planning applications in the catchment are rigorously appraised.

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Royal Borough of Kensington and Chelsea and London Borough of Hammersmith and Fulham Strategic Flood Risk Assessment Final Report

- Zone 1: Low Probability. This zone comprises land assessed as having a less than **1 in 1000** annual probability of flooding in any year (<0.1%). The percentage coverage of this flood zone within RBKC = 92%.
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Risk: the threat to property and life as a result of flooding, expressed as a function of probability (that an event will occur) and consequence (as a result of the event occurring).

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1.2 SFRA Objectives

Current policies requires local authorities to demonstrate that due regard has been given to the issue of flood risk as part of the planning process. It also requires that flood risk is managed in an effective and sustainable manner. To this end, the key objectives of the RBKC and LBHF SFRA are:

- To investigate and identify the extent and severity in flood risk in the area.
- To determine the effect of an increase in surface water drainage as a result of the proposed development sites and **highlight any areas where the drainage system is known to be inadequate.**
- To supplement current policy guidelines and to provide a straightforward risk based approach to development control in the local area.
- To provide a reference document to which all parties involved in planning and flood risk can reliably turn to for initial advice.

3.2.2 PPS25 Development and flood Risk

The aim of PPS25 is to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding...The key planning objective is that "Regional Planning Bodies (RPBs) and Local Planning Authorities (LPAs) should prepare and implement planning strategies that help to deliver sustainable development by:

- **Identifying land at risk and the degree of risk of flooding for river, sea, and other sources in their areas;**

3.2.3 Other Planning Policy Statements

PPS1 *Delivering Sustainable Development* published in February 2005 ...explicitly states that development plan policies should take account of flooding, including flood risk. It proposes that new development in areas at risk of flooding should be avoided. Planning authorities are also advised to ensure that developments are “*sustainable, durable and adaptable*” including taking into account natural hazards such as flooding.

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Refer to bar chart on page 33 (unable to copy chart)

4.7 Flooding from Other Sources

In addition to tidal flooding risk, alternative sources of flooding including groundwater, overland flow and drainage systems also need to be considered when planning development. Although explicit consideration of these sources of flooding is not a requirement for flood zone allocation, local drainage issues have a potential to cause substantial damage and distress. When considering development proposals, know drainage and surface water problems need to be taken into account.

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Refer to Strategic Flood Risk Assessment maps, Map 17

www.rbkc.gov.uk/PDF/LDF%20-%20flood%20risk%20map.pdf

Map 18 – Spatial Distributions Sewer Flooding Events in Past 10 Years

www.rbkc.gov.uk/PDF/LDF%20-%20flood%20risk%20map.pdf

Planning Policy Statement 25

Key Planning Objectives

5. The aims of planning policy on development and flood risk are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk.

Reducing risk

- reducing flood risk to and from new development through location, layout and design, incorporating sustainable drainage systems (SUDS);

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Zone 1 Low Probability

Definition

This zone comprises land assessed as having a less than **1 in 1000** annual probability of river or sea flooding in any year (<0.1%).

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Annex F: Managing Surface Water

F5. The effective disposal of surface water from development is a material planning consideration in determining proposals for the development and use of land.

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Surface Water Drainage and Sustainable Drainage Systems (SUDS)

F8. Regional planning bodies and local authorities should **promote** the use of SUDS for the management of run-off.²⁹

(29 ODPM, 2005. *Planning Policy Statement 1: Delivering Sustainable Development* para. 22

website:www.communities.gov.uk/index.asp?id=1143804

F10. The surface water drainage arrangements for any development site should be such that the volumes and peak flow rates of surface water leaving a developed site **are no greater than the rates prior to the proposed development**, unless specific off-site arrangements are made and result in the same net effect.

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Thames Water: Response to Core Strategy review:

Paragraph 36.3.12. Subterranean Development.

The following should also be noted with reference to subterranean extensions and the associated risk of flooding. Sewage networks are designed to surcharge to just below cover level. The introduction of subterranean development could mean that point becoming the lowest release point on the network and therefore flooding of a basement could occur in an area not previously affected. **Therefore all subterranean development should have a pumped sewage system and protection from backflow to reduce the risk of flooding.**

Part H of Buildings Regulations 2000 states that manhole covers in the road should be assumed to surcharge to just below cover level. **Protection to basements needs to be provided either by the installation of a pumped system where the risk of flooding is high or by the installation of a flap valve where the risk to flooding is low. The best option is for the basement to be protected by pumped systems. Flap valves have a habit of failing when you need them most.**

Thames Water has provided to the Royal Borough of Kensington and Chelsea details of areas at highest risk of sewer flooding and we understand that this information has been incorporated in sequential tests as part of the overall Flood Risk Assessment and in LDF documentation. We understand that subterranean development will not be permitted in areas at high risk of flooding, notwithstanding any protective measures that a developer may put in place. Where we identify or are consulted on third party planning applications for construction/conversion of basements, we seek to ensure that the following informative is included in any planning approval:

“Thames Water request that the applicant should incorporate within their proposal protection to the property by installing for example a non-return valve or other device to avoid the risk of backflow at a later date, on the assumption that the sewage network may surcharge to ground level during storm conditions.”