

14. Flooding and drainage



14.1 Introduction

- 14.1.1 The Borough is a densely populated inner / central London Borough. It is characterised for its urban built environment with over 70% of its land designated within a Conservation Area. It has important local and national infrastructure and over 30 parks.
- 14.1.2 The Borough's topography is low-lying in the south but steeper in the central and northern parts. The elevation ranges from 0 meters above ordnance datum (mAOD) close to the River Thames, to 40 mAOD in Holland Park.
- 14.1.3 The River Thames forms the southern boundary of the Borough and is the only exposed watercourse. There are two historic watercourses, the Westbourne River and Counters Creek, which are known as 'lost rivers'. These have been culverted to become part of the local sewerage system. The main trunk sewer runs along the boundary with the London Borough of Hammersmith and Fulham (LBHF). The closest water reservoirs are the Serpentine and the Round Pond in Kensington Gardens. The Serpentine was formed as a result of damming the Westbourne 'lost river' which runs through Hyde Park. The Grand Union Canal runs close to the northern boundary of the Borough.

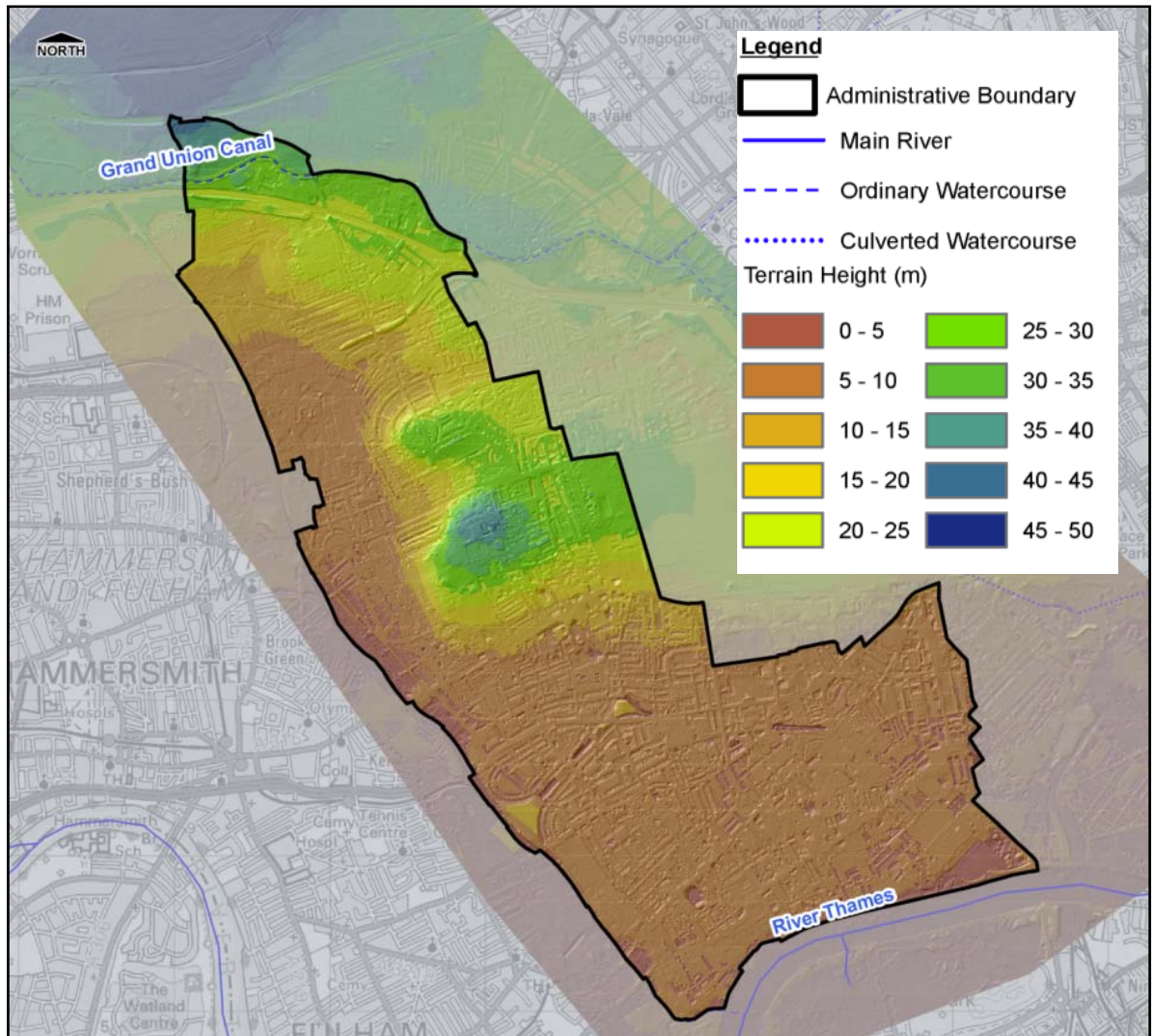


Figure 14.1: The Borough's topography and open watercourses (Source: RBKC Surface Water Management Plan, 2014²³¹)

14.1.4 The Strategic Flood Risk Assessment identifies the most significant sources of flood risk within the Borough as:

- a breach or overtopping of the Thames tidal defences;
- flooding from surface water; and
- sewer flooding due to lack of capacity in the sewerage system.

14.1.5 It is important to note the interaction of rainfall and the combined sewer system which takes both surface and foul water. Under heavy rainfall events the sewer system can become overwhelmed and discharge water into the lower parts of properties such as basement areas. This is known as sewer water flooding events. In addition to these main sources of flood risk, there is a risk that a rise in groundwater levels may lead to localised groundwater flooding. Groundwater flooding could be seasonal or happen as a result of periods of heavy rain. Flooding can also occur as a result of the Serpentine's reservoir walls

²³¹ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/lead-flood-authority/surface-water-management

or the Grand Union Canal being breached. This is considered unlikely.

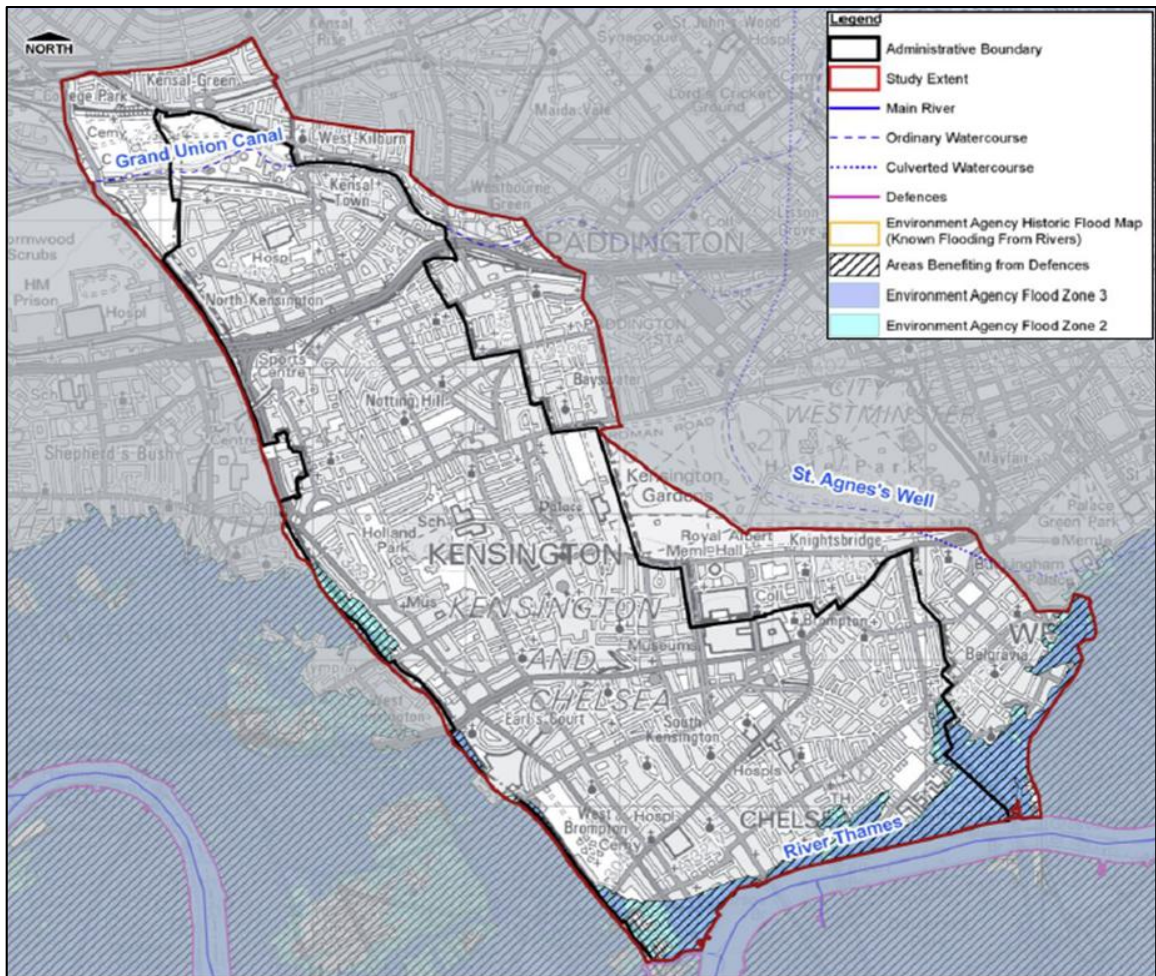


Figure 14.2: Flood Zones and defence locations within the Borough (Source: RBKC Surface Water Management Plan, 2014)

14.1.6 There have been several episodes of flooding in the Borough. The main reason for flooding is the inability of the sewers to cope with the fast intake of surface water run-off, adding to the foul water in the sewers during intense storm events. The Borough is located at the lower end of the sewer system's catchment area which means surface and foul water from other Boroughs such as Camden and Brent are already in the sewer system reducing its capacity. Other causes that can lead to an increase in surface water and sewer flooding include:

- an increase in population and pressure for development which can lead to an increase in foul water discharge;
- an increase of impermeable surfaces as a result of actions such as paving gardens and building more houses and roads. As a result, rainfall does not soak away into the soil - it drains directly into an already close-to-capacity sewer system.

14.2 Existing Local Plan policies

14.2.1 The existing Local Plan policy relating to flooding and drainage is set out below:

Policy CE2 Flooding

The Council will require development to adapt to fluvial flooding and mitigate the effects of, and adapt to, surface water and sewer flooding. To deliver this the Council will:

- a. resist vulnerable development, including self-contained basement dwellings, in Flood Risk Zone 3 as defined in the Strategic Flood Risk Assessment;
- b. require a site-specific Flood Risk Assessment, including an 'Exception Test' for all development in Flood Risk Zone 2 and 3 as defined in the Strategic Flood Risk Assessment, for sites in areas with critical drainage problems and for all sites greater than one hectare;
- c. where required undertake the 'Sequential Test' for planning applications within Flood Risk Zones 2 and 3, and for sites in areas with critical drainage problems;
- d. require development at risk from flooding in Flood Risk Zones 2 and 3, in areas with critical drainage problems, or sites greater than 1ha²³² to incorporate suitable flood defence or flood mitigation measures in accordance with the recommendations of the site-specific Flood Risk Assessment;
- e. require sustainable urban drainage (SUDs), or other measures, to reduce both the volume and the speed of water run-off to the drainage system ensuring that surface water run-off is managed as close to its source as possible in line with the hierarchy in the London Plan. In particular, major development must make a significant reduction in the current volume and speed of water run-off to the drainage system;
- f. resist impermeable surfaces in front gardens;
- g. require development adjacent to the Thames to be set back from the Thames flood defence to enable the sustainable and cost effective upgrade of flood defences over the next 50 to 100 years;
- h. require works associated with the construction of the Thames Tideway Tunnel to:
 - i. preserve or enhance the character or appearance of the Cheyne, Royal Hospital and Thames Conservation areas;
 - ii. preserve listed buildings and their settings, and Parks and Gardens of Special Historic Interest (i.e. the Royal Hospital grounds);
 - iii. not adversely impact on amenity;
 - iv. not compromise the future of Cremorne Wharf which is a Safeguarded Wharf.

14.2.2 Policy CL7 of the Local Plan states that the Council will require all basement development to:

- i. include a sustainable drainage system (SuDS), to be retained thereafter;

²³² ha = hectare. 1ha = 10,000m²

j. include a minimum of one metre of soil above any part of the basement beneath a garden;

n. be protected from sewer flooding through the installation of a suitable pumped device.

14.2.3 Policy CL7 is not up for review as part of the Local Plan Partial Review as it was recently adopted in 2015.

14.3 Legislation, policy and guidance context

14.3.1 Since the Council last reviewed the flooding Local Plan policy as part of the Core Strategy (2010) there have been numerous changes in the legislative and policy framework at national, regional and local levels which are explained in the following paragraphs.

Council duties as a Lead Local Flood Authority

14.3.2 The Flood and Water Management Act 2010²³³ and the Flood Risk Regulations 2009²³⁴ placed new duties on Councils. As a Lead Local Flood Authority (LLFA), the Council has a responsibility for leading the co-ordination of local flood risk management within the Borough. This includes ensuring that flood risks from local sources, including surface water runoff, groundwater and ordinary watercourses and their interactions, are identified and managed. The Council has the duty, under Section 9 of the Flood and Water Management Act 2010, to put in place a Local Flood Risk Management Strategy²³⁵ (LFRMS) to manage all sources of flood risks consistent with a risk management approach. The Council adopted the LFRMS in July 2015. The review of the current flooding policy needs to consider the Council's responsibilities as an LLFA and the objectives of the LFRMS.

Provision of sustainable drainage systems (SuDS) and the LLFA statutory consultee role

14.3.3 On the 18th December 2014, the Government published a written statement to Parliament²³⁶ explaining changes to the planning system which took effect on the 6th April 2015. The written statement represents Government planning policy with similar weight to the National Planning Policy Framework (NPPF)²³⁷ and so is capable of being a significant material consideration in determining planning applications.

14.3.4 The statement explains that local planning policies and decisions on planning applications relating to major development (developments of 10 homes or more and to major commercial development) should ensure that sustainable drainage systems (SuDS) for the management of run-off are put in place, unless

²³³ www.legislation.gov.uk/ukpga/2010/29/pdfs/ukpga_20100029_en.pdf

²³⁴ www.legislation.gov.uk/uksi/2009/3042/pdfs/uksi_20093042_en.pdf

²³⁵ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/local-flood-risk-management-strategy

²³⁶ www.gov.uk/government/speeches/sustainable-drainage-systems

²³⁷ <http://planningguidance.planningportal.gov.uk/blog/policy/>

demonstrated to be inappropriate.

- 14.3.5 Local planning authorities should consult the lead local flood authority (LLFA) on the management of surface water; satisfy themselves that the proposed minimum standards of operation are appropriate and ensure through the use of planning conditions or planning obligations that there are clear arrangements in place for ongoing maintenance over the lifetime of the development. The sustainable drainage system should be designed to ensure that the maintenance and operation requirements are economically proportionate. The LLFA became a statutory consultee on planning applications in April 2015.

National

National Planning Policy Framework (NPPF)

- 14.3.6 The National Planning Policy Framework explains that Councils should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change and water supply and demand considerations (paragraph 94). It also states that sustainable development should not increase flood risk elsewhere and gives priority of the use of sustainable drainage systems (paragraph 103).

National Planning Practice Guidance (NPPG): Flood Risk and Coastal Change

- 14.3.7 The National Planning Practice Guidance²³⁸ on Flood Risk and Coastal Change has been updated (March 2015) to include information about involving the LLFA (chapter 16) and the importance of SuDS (chapter 21). Table 2²³⁹ of the guidance shows the classification of land uses in relation to flood risk vulnerability as essential infrastructure, highly vulnerable, more vulnerable, less vulnerable and water compatible development. Table 3²⁴⁰ explains the relation between land uses vulnerability and their compatibility with flood zones. This could be taken into consideration when addressing flood risk in the Council's designated Critical Drainage Areas.

English Inshore and Offshore Waters Plan

- 14.3.8 The English Inshore and Offshore Waters Plan²⁴¹ explains how marine plans apply to the marine sector and highlights policies that apply to the area. The Marine Management Organisation's guidance²⁴² explains marine planning, compares land-use and marine planning and aims to inform plans and strategies in understanding the important links across the land and sea.

The CIRIA SuDS Manual

- 14.3.9 The Construction Industry Research and Information Association (CIRIA) SuDS

²³⁸ planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change

²³⁹ planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/flood-zone-and-flood-risk-tables/table-2-flood-risk-vulnerability-classification

²⁴⁰ planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/flood-zone-and-flood-risk-tables/table-3-flood-risk-vulnerability-and-flood-zone-compatibility

²⁴¹ www.gov.uk/guidance/east-inshore-and-east-offshore-marine-plan-areas

²⁴² www.gov.uk/government/publications/marine-planning-a-guide-for-local-authority-planners

Manual²⁴³ gives detailed advice regarding SuDS, the need for SuDS and provision in different environments and the process to follow to ensure successful implementation. Chapter 10, Designing for urban areas is particularly relevant for this Borough.

Regional

The London Plan

14.3.10 Policy 5.13 of the London Plan states that:

Development should utilise sustainable urban drainage systems (SUDS) unless there are practical reasons for not doing so, and should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible in line with the following drainage hierarchy:

1. Store rainwater for later use
2. Use infiltration techniques, such as porous surfaces in non-clay areas
3. Attenuate rainwater in ponds or open water features for gradual release
4. Attenuate rainwater by storing in tanks or sealed water features for gradual release
5. Discharge rainwater direct to a watercourse
6. Discharge rainwater to a surface water sewer/drain
7. Discharge rainwater to the combined sewer

Drainage should be designed and implemented in ways that deliver other policy objectives of the Plan including water use efficiency and quality, biodiversity, amenity and recreation.

14.3.11 Other London Plan policies relevant to flood risk and drainage are: Policy 5.10 Urban greening, Policy 5.11 Green roofs and development site environs, Policy 5.12 Flood risk management, Policy 5.13 Sustainable drainage, Policy 5.14 Water quality and wastewater, and infrastructure, and Policy 5.15 Water use and supplies.

Sustainable Design and Construction Supplementary Planning Guidance (SPG)

14.3.12 The Mayor of London's Sustainable Design and Construction SPG (April 2014)²⁴⁴ aims to maximise the opportunities to achieve greenfield run-off rates in development proposals.

Thames Estuary 2100 Plan

14.3.13 The Thames Estuary 2100 Plan²⁴⁵ sets out recommendations for flood risk management for London and the Thames estuary through to the end of the century and beyond.

²⁴³ www.ciria.org/Memberships/The_SuDs_Manual_C753_Chapters.aspx

²⁴⁴ www.london.gov.uk/priorities/planning/consultations/draft-sustainable-design-and-construction

²⁴⁵ www.gov.uk/government/uploads/system/uploads/attachment_data/file/322061/LIT7540_43858f.pdf

Summary

14.3.14 Figure 14.3 summarises the main legislation, policy and guidance of particular relevance to this section.

Date	Document	Organisation
Apr 2010	The Flood and Water Management Act 2010 ²⁴⁶ Makes provision about water and the management of risks in connection with flooding and coastal erosion	HM Government
Dec 2009	The Flood Risk Regulations 2009 ²⁴⁷ Places duties on the Environment Agency and Councils to prepare flood risk assessments, flood risk maps and flood risk management plans	HM Government
Dec 2014	Written statement to parliament: Sustainable drainage systems ²⁴⁸ The provision of SuDS in major developments and the statutory role of the LLFA	DCLG
Mar 2014	National Planning Policy Framework (NPPF) ²⁴⁹ Paragraphs 94 (flood risk) and 103 (SuDS)	DCLG
Mar 2015	National Planning Practice Guidance (NPPG): Flood Risk and Coastal Change ²⁵⁰ LLFA (chapter 16) and SuDS (chapter 21)	DCLG
November 2015	The CIRIA SuDS Manual ²⁵¹ Particularly chapter 10, Designing for urban areas	CIRIA
Nov 2012	Thames Estuary 2100 Plan ²⁵² Sets out recommendations for flood risk management for London and the Thames estuary through to the end of the century and beyond	Environment Agency
Jun 2014	The English Inshore and Offshore Waters Plan ²⁵³ Includes policies for the different sectors	Marine Management Organisation
Jun 2014	East Inshore and East Offshore marine plan areas ²⁵⁴ Highlights policies that apply to a chosen area to inform strategies and plans	Marine Management Organisation

²⁴⁶ www.legislation.gov.uk/ukpga/2010/29/pdfs/ukpga_20100029_en.pdf

²⁴⁷ www.legislation.gov.uk/uksi/2009/3042/pdfs/uksi_20093042_en.pdf

²⁴⁸ www.gov.uk/government/speeches/sustainable-drainage-systems

²⁴⁹ <http://planningguidance.planningportal.gov.uk/blog/policy/>

²⁵⁰ <http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change>

²⁵¹ www.ciria.org/Resources/Free_publications/the_suds_manual.aspx

²⁵² www.gov.uk/government/uploads/system/uploads/attachment_data/file/322061/LIT7540_43858f.pdf

²⁵³ www.gov.uk/guidance/east-inshore-and-east-offshore-marine-plan-areas

²⁵⁴ www.gov.uk/government/publications/marine-planning-a-guide-for-local-authority-planners

Date	Document	Organisation
Mar 2015	The London Plan ²⁵⁵ Policy 5.10 Urban greening Policy 5.11 Green roofs and development site environs Policy 5.12 Flood risk management Policy 5.13 Sustainable drainage Policy 5.14 Water quality and wastewater, and infrastructure Policy 5.15 Water use and supplies	Mayor of London
Apr 2014	Sustainable Design and Construction SPG ²⁵⁶ Aims to maximise the opportunities to achieve greenfield run-off rates in developments	Mayor of London

Figure 14.3: Summary of legislation, policy and guidance

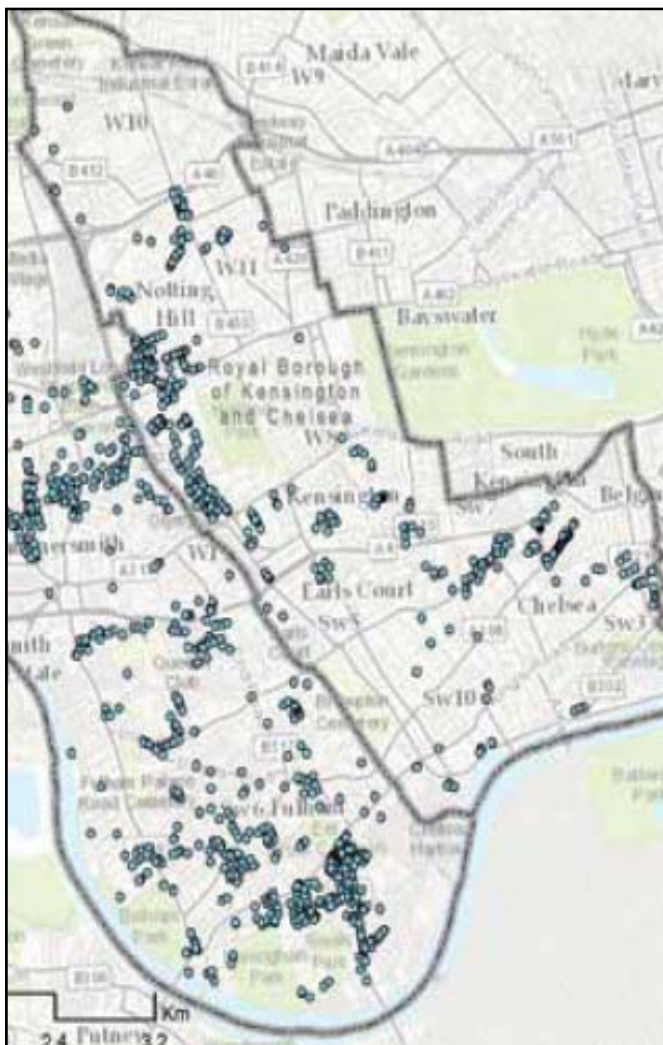


Figure 14.4: Map of properties where sewer flooding reported to Thames Water since 2007 (Source: Counters Creek Storm Relief Sewer Consultation – Phase 1; Thames Water, 2014²⁵⁷)

²⁵⁵ www.london.gov.uk/priorities/planning/london-plan

²⁵⁶ www.london.gov.uk/priorities/planning/consultations/draft-sustainable-design-and-construction

²⁵⁷ www.thameswater.co.uk/counterscreek/Customr_consultation_document.pdf

14.4 Evidence base

- 14.4.1 The evidence base documents give information on flood risk in the Borough and also update information since 2010 and explain how the Council and other partners are addressing flood risk.
- 14.4.2 Information goes from site specific (Sequential Test) to Borough wide (Strategic Flood Risk Assessment, Surface Water Management Plan, Air Quality and Climate Change Action Plan). Critical Drainage Areas²⁵⁸ have been identified in the Borough (as per paragraph 36.6.19 of the existing Local Plan). They are North Kensington CDA Holland Park CDA, Kensington CDA and Sloane Square CDA. This means that development proposals in these areas need to be supported by Flood Risk Assessments.
- 14.4.3 The evidence base also includes work done within different Council departments and external bodies (Local Flood Risk Management Strategy) and what to do in emergency situations (Multiagency flood plan and Thames breach flood plan). There is also information regarding a very specific type of development, basements, which are particularly vulnerable to flooding (Residential Basement Study Report).
- 14.4.4 A summary of the principal evidence base documents is provided in Figure 14.5

Date	Document	Organisation
Mar 2014	Strategic Flood Risk Assessment ²⁵⁹ Gives an overall assessment of flood risk in the Borough	RBKC
Mar 2014	Surface Water Management Plan ²⁶⁰ Focuses on surface water and identifies and gives information on Critical Drainage Areas ²⁶¹	RBKC
Jul 2015	Local Flood Risk Management Strategy ²⁶² Gives information regarding flood risk in the Borough and how the Council and other partners are addressing it. It contains an action plan with clear objectives and actions to tackle flood risk	RBKC
Jun 2011	Preliminary Flood Risk Assessment ²⁶³ A high level screening exercise with information on local flood risk from past and future flooding events	RBKC
Feb 2013	Multiagency flood plan ²⁶⁴ Outlines the multi-agency response to a severe surface water flooding incident	RBKC

²⁵⁸ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/critical-drainage-areas

²⁵⁹ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/strategic-flood-risk-assessment

²⁶⁰ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/lead-flood-authority/surface-water-management

²⁶¹ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/critical-drainage-areas

²⁶² www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/local-flood-risk-management-strategy

²⁶³ www.rbkc.gov.uk/sites/default/files/atoms/files/Preliminary%20Flood%20Risk%20Assessment.pdf

Date	Document	Organisation
Feb 2013	Thames breach flood plan ²⁶⁵ Provides a co-ordinated multi-agency response framework to mitigate the impact of a large scale Thames breach / overtopping flooding incident	RBKC
Dec 2012	Residential Basement Study Report ²⁶⁶ Describes what needs to be considered as part of the planning process when basements are proposed	RBKC
Oct 2015	Air Quality and Climate Change Action Plan 2016 - 2021 ²⁶⁷ Sets out the Council's objectives for the period 2008 to 2015. It advocates a range of measures for cutting emissions and reducing our energy bills	RBKC

Figure 14.5: Summary of principal sources of evidence

Infrastructure projects

Thames Tideway Tunnel

- 14.4.5 The Thames Tideway Tunnel²⁶⁸ is referred to in Policy CE2h of the Local Plan. The Thames Tideway Tunnel was granted a Development Consent Order in September 2014 by the relevant Secretaries of State. The Thames Tideway Tunnel will be built by a company called Bazalgette Tunnel Limited – the ‘infrastructure provider’ and applications to discharge requirements (similar to conditions) will be submitted to the Council for approval throughout the construction phase (which is likely to last until 2022).



Figure 14.6: Visualisation of the Thames Tideway Tunnel site in Chelsea Embankment (Source: RBKC Local Impact Report, 2013²⁶⁹)

²⁶⁴ www.rbkc.gov.uk/sites/default/files/atoms/files/Kensington%20and%20Chelsea%20Multi-Agency%20Flood%20Plan.pdf

²⁶⁵ www.rbkc.gov.uk/sites/default/files/atoms/files/Kensington%20and%20Chelsea%20Multi-Agency%20Flood%20Plan%20-%20Thames%20Breach-Overtop%20Flooding.pdf

²⁶⁶ www.rbkc.gov.uk/wamdocs/Baxters%20Basement%20Report%20Final.pdf

²⁶⁷ www.rbkc.gov.uk/subsites/greenerborough/climatechange/climatechangestrategy.aspx

²⁶⁸ www.rbkc.gov.uk/planning-and-building-control/planning-policy/emerging-site-specific/thames-tideway-tunnel-project

²⁶⁹ www.rbkc.gov.uk/wamdocs/RBKC%20Local%20Impact%20Report.pdf

Counters Creek Storm Relief Sewer

14.4.6 Thames Water has recently been consulting on a project to increase the capacity of the Counters Creek sewer system²⁷⁰. Thames Water's proposal includes four elements:

- A new storm relief sewer to increase the sewer capacity;
- Sustainable drainage systems to reduce surface water run-off entering the sewers (a pilot study is proposed for Arundel Gardens);
- Anti-flooding ('FLIP') devices to stop the sewers surcharging into lower properties; and,
- Local sewer improvements.

14.4.7 The new storm relief sewer must go through several rounds of public consultation to ascertain the suitability of the proposed sites and to engage and inform residents. Once the public consultations on site options are finalised, Thames Water are expected to submit planning applications in early 2016 to the affected Boroughs (RBKC and LBHF). If consent is granted, Thames Water aims to start construction in 2017 and finalise the scheme in 2020.

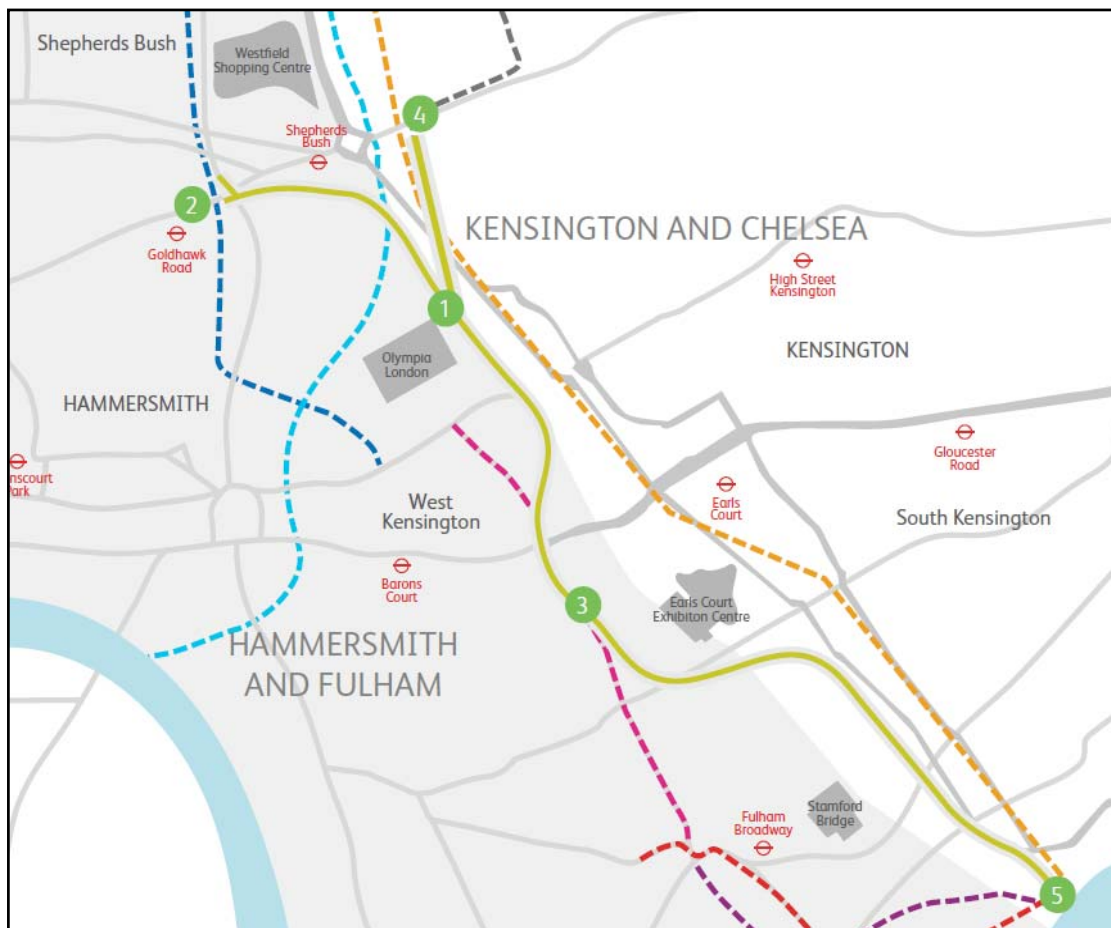


Figure 14.7: The proposed Counters Creek Storm Relief Sewer – colour lines represent sewers and green circles represent potential construction sites (Source: Consultation – Phase 1; Thames Water, 2014)

²⁷⁰ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/counters-creek-project

14.5 Issues and options

Issue 1: Flood risk

Critical Drainage Areas (CDA)

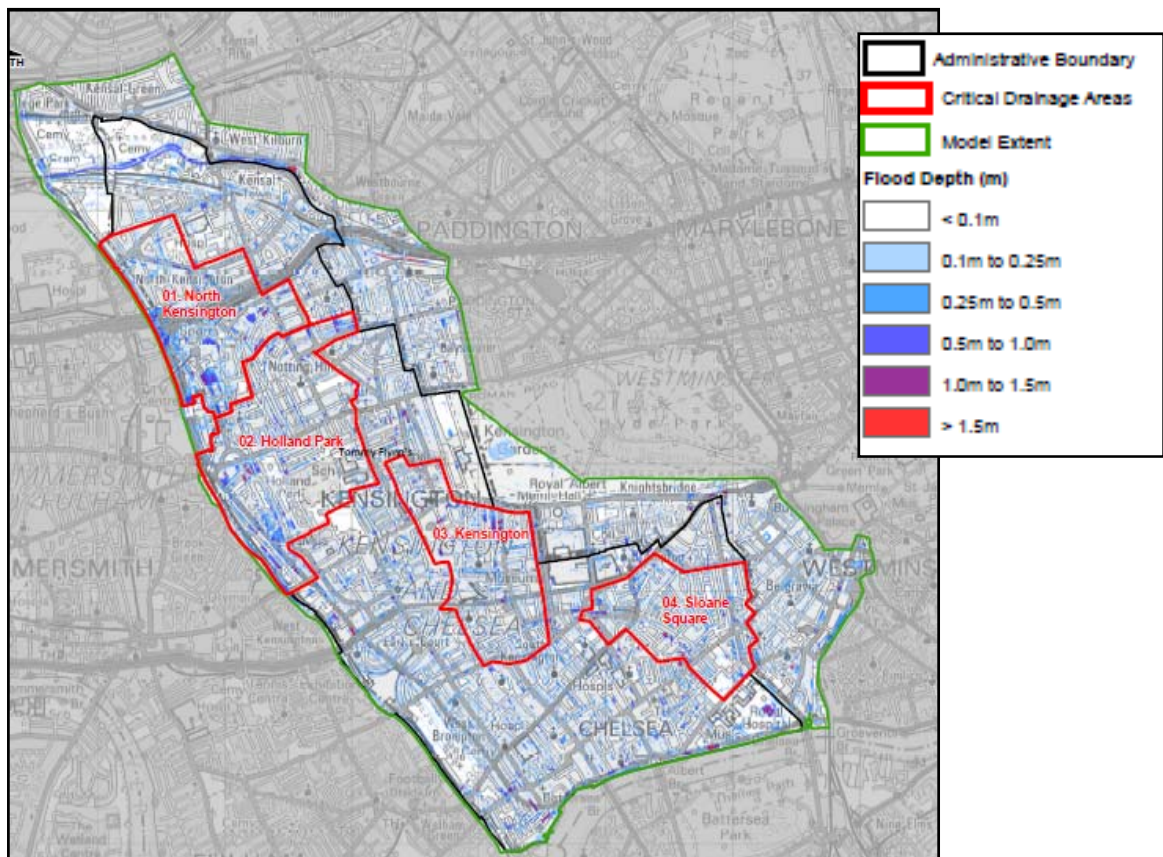
- 14.5.1 Critical Drainage Areas (CDAs) are those which show a complex interaction of surface and sewer water flooding. The Council identified the Council's CDAs²⁷¹ in the Surface Water Management Plan and the Strategic Flood Risk Assessment in 2014. The definition of the CDAs in 2014 meant that Flood Risk Assessments are required when development is proposed in these areas (as required by Policy CE2b).

Question 1

Should the Council use the vulnerability classification of the NPPF / Planning practice guidance to restrict highly vulnerable uses²⁷² (in terms of access and egress e.g. self-contained basements) in CDAs? Currently the Environment Agency restricts this type of land use in flood risk zone 3, inside the tidal breach.

Question 2

Should the Council require specific measures to address flood risk in CDAs? What might those measures be?



²⁷¹ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/critical-drainage-areas

²⁷² www.planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/flood-zone-and-flood-risk-tables/table-2-flood-risk-vulnerability-classification/

Figure 14.8: Critical Drainage Areas in the Borough (Source: the Royal Borough of Kensington and Chelsea Surface Water Management Plan, 2014)

Flood risk protection and prevention measures

- 14.5.2 Current policy refers to the implementation of the flood risk protection and prevention measures included in the site specific Flood Risk Assessment.

Question 1

Should the Council ask for standard flood risk measures in specific areas? Should the Council require flood risk mitigation and resilience measures (such as raising threshold/floor levels, protection of light wells and basement entrances, raising electrical sockets, etc) in areas identified in the Surface Water Management Plan at high risk of flooding?

Question 2

Should the Council require information about how these measures will be maintained to ensure they will be operational during a flooding event?

Question 3

Should the Council include a policy about the protection and maintenance of flood defences and flood risk assets?

Question 4

Should the policy cover access and egress and emergency exit routes to ensure development in high risk areas is protected from flooding?

Question 5

The maps in the Surface Water Management Plan show the possibility of surface water flood depth after a 1 in a 100 year storm event. Should the Council use a minimum depth threshold to require flood protection and resilience measures? Will a depth of 0.5m or deeper be an appropriate threshold?

Question 6

Should the Council refer to the importance of addressing flood risk and surface and foul water run-off from upstream development (White City, Old Oak Common and Park Royal, etc) which could have a potential effect in the capacity of the sewer system?

Issue 2: Surface water run-off and SuDS

- 14.5.3 The aim of the current policy is to reduce the speed and volume of surface water run-off into the sewer system through the use of SuDS. The Council produced a SuDS for small development tool²⁷³ to help developers understand the SuDS which could be provided on-site. This tool may be reviewed in light of any new policy.

Question 1

Should the Council specify the percentage improvement required in relation to

²⁷³ www.rbkc.gov.uk/planning-and-building-control/planning-policy/flooding/sustainable-drainage-systems

greenfield runoff rate and different storm events? Or should the Council address only impermeable surfaces (not just in front gardens but any new impermeable surfaces)? Should the Council put an emphasis on requiring the most sustainable SuDS, the need to maximise green infrastructure (links to biodiversity policy), maximise water quality and provide amenity value?

Question 2

Should the Council require extra SuDS when swimming pools are proposed and/or whenever there is groundwater discharged into the sewer system?

Question 3

To ensure SuDS are maintained, should the Council include a policy to require maintenance schedules?

Question 4

Should the Council use DEFRA SuDS non-statutory standards²⁷⁴ or adopt its own standards?

Question 5

Should the Council specify what information regarding the SuDS should be provided (i.e, construction, maintenance, ownership, etc)?

Question 6

Should the Council include a policy to support retrofitting existing buildings with SuDS when an associated planning permission is required, even if the proposal will not have direct drainage implications?

Question 7

Should the Council require permeable surfaces instead of impermeable surfaces when hard surfaces are proposed in any garden / landscaped areas?

Question 8

Should the Council include a separate policy for minor and for major applications in relation to the provision of SuDS? Should the Council require the use of the SuDS tool and if so review the tool to that effect?

²⁷⁴ www.gov.uk/government/uploads/system/uploads/attachment_data/file/415773/sustainable-drainage-technical-standards.pdf



Figure 14.9: Visualisation of Arundel Gardens SuDS pilot scheme with an option of permeable paving (Source: Thames Water, included in the Council's Local Flood Risk Management Strategy, 2015²⁷⁵)

Issue 3: Water infrastructure projects

- 14.5.4 In the last few years the Borough has seen two major sewer upgrade projects proposed, the Thames Tideway Tunnel and the Counters Creek Sewer Alleviation Scheme. Policy CE2 has guided the Council's response to the Thames Tideway Tunnel Project but other policies were also considered in relation to transport, design, legacy, Conservation Areas, employment and infrastructure issues. These policies are likely to be considered in any future sewerage and water infrastructure projects.

Option 1

The Council should not introduce a general policy on flooding and drainage infrastructure provision or upgrade works and instead use its existing wider Local Plan policies to determine any such applications.

Option 2

The Council should introduce a general policy on flooding and drainage infrastructure provision or upgrade works, against which any future proposals could be determined.

Do you have any other comments, issues or options (reasonable alternatives) you would like to raise regarding this section?

²⁷⁵ www.rbkc.gov.uk/sites/default/files/atoms/files/Local%20Flood%20Risk%20Management%20Strategy.pdf