

Kensington and Chelsea Multi-Agency Flood Plan

Thames Breach/Overtop Flooding

Controlled Document	
Public Version	
Issue Number	3
Date of Issue	04 February 2013



Publishing Information

Document Ownership	Kensington and Chelsea Borough Resilience Forum c/o Contingency Planning Unit (Secretariat) Royal Borough of Kensington and Chelsea Kensington Town Hall Hornton Street, Kensington, W8 7NX
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Publication History	Issue 1 – 18 th January 2010 Issue 2 – 26 th April 2011 Issue 3 (Public) – 04 February 2013
Security Classification	PROTECT Because of the details of emergency management, fallback centres and contact numbers, this document has been classified as PROTECT, and should only be shared with those with a particular need for it. A Public version is available with the restricted details removed.
Distribution	Royal Borough of Kensington and Chelsea Metropolitan Police (Kensington and Chelsea Borough Command Unit) London Fire Brigade (Kensington and Chelsea Borough Command Unit) London Ambulance Service NHS Kensington and Chelsea Chelsea and Westminster Hospital NHS Trust

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1. INTRODUCTION

Due to the risk of flooding from the River Thames and the surface water flooding events throughout the UK in 2007 it was agreed that a multi-agency flood plan (MAFP) would be produced by each Local Authority in order to tackle the specific and bespoke impacts and actions required in a response to a flood incident. This document outlines the multi-agency response to a severe Thames Breach/Overtopping flooding incident in the Royal Borough of Kensington and Chelsea. Below are a list of considerations and guidance to the use of this document:

- Responding agencies within the Royal Borough of Kensington and Chelsea have their own generic and / or specific organisational plans. Multi-agency training and exercising is undertaken, but at present multi-agency plans are primarily developed from a London-wide perspective including the LESLP (London Emergency Services Liaison Panel) Major Incident Procedure Manual and the London Strategic Flood Plan.
- There are two types of flooding that could affect the borough; Surface Water Flooding and a Thames Breach/Overtopping flooding incident. This document only considers a major Thames Breach/Overtopping flooding incident within the Borough. For Guidelines of a multi-agency response to an incident of a Surface Water Flooding please refer to “Kensington and Chelsea Multi Agency Flood Plan: Surface Water Flood Plan”.
- This plan does not include emergency contact numbers and activation arrangements which responding organisations already maintain.
- This plan covers the Royal Borough of Kensington and Chelsea’s multi-agency response; however floods will not have regard for political and administrative boundaries. As such this plan must be shared and liaison arrangements made with other neighbouring boroughs and agencies.
- Detailed information on the flood risks within Kensington and Chelsea can be found in Section 4 of this plan.
- This plan will be reviewed and amended on a yearly basis. However, if any new risks are identified or lessons learned the review may take place at an earlier stage as is deemed necessary. All responders must be notified if any amendments occur.

2. AIMS AND OBJECTIVES OF PLAN

2.1 Aims

The aim of this MAFP is to provide a co-ordinated multi-agency response framework to mitigate the impact of a large scale Thames Breach/Overtopping flooding incident occurring in Kensington and Chelsea. It provides guidance on a multi-agency response to deliver the following objectives:

2.2 Objectives

- To increase awareness and preparedness of communities at risk from flooding through the provision of advice and information;
- Manage the wider impact of flooding events in the borough to reduce disruption to the communities, utilities and environment;
- Manage precautionary actions to preserve life for the highest-impact flood risks;
- To prioritise the identification of and required responses to protect the vulnerable within the community;
- To support the Environment Agency in the provision of warnings to communities at flood risk;
- Provide accurate and timely information to the public and local business on flood response;
- Lead recovery activity to support the recovery of communities and business; and
- Maintain critical services within each organisation as part of business continuity arrangements.

2.3 Overview of Flooding in the Borough

The two types of flooding which pose a significant risk to the borough of Kensington and Chelsea **Surface Water Flooding** or a **Thames Breach/Overtopping flood**. This plan will only focus on the response to a a Thames Breach/Overtopping incident within The Royal Borough of Kensington and Chelsea. However for reference all types of flooding that could affect the borough have been described in the following:

Significant Risks	
Thames Breach Flooding	A breach in the flood defences could result in significant flooding to the Royal Borough of Kensington and Chelsea. The extent of which would be dependent on the location, size and nature of the breach and height of the tide and river levels. Map (1) demonstrates the risk of flooding if a breach of the River Thames were to occur. The predicted extent of tidal flooding due to a breach of the defences has been mapped with colour coding to identify areas at risk of inundation in relation to depth, time and velocity from breach occurring to inundation. Four key breach points were determined by the Environment Agency and can be demonstrated in Map (12).
Low Risks	
Tidal Flooding	The risk of tidal flooding in the south of the borough is from the River Thames due to increasing tide levels from geological causes, global warming and rising sea levels. A tidal surge occurs when a trough of low pressure moves across the Atlantic towards the British Isles, the sea beneath it rises above the normal level creating a hump of water which moves with the depression. A surge occurs when the mass of water reaches a shallow part of the North Sea. The height of the surge can be further increased by strong northerly winds. If a high surge coincides with a high 'spring tide' entering the Thames estuary there could be a real flood danger. However the Community Risk Register for Central London indicates the risk from tidal flooding as high. However, the defence given by the Thames Barrier significantly reduces this risk level.

2.4 Planning Assumptions

It is important to be clear about planning assumptions that are being used by everybody to ensure consistency in approach. The definitions of such assumptions are listed below:

Tidal Flood Warning: Assume approximately 2-12 hours warning of flooding. This does not take account of breaches in existing defences where there is likely to be no warning. Assume approximately 6 hours warning for overtopping of tidal defences.

Breaches: Can be categorised as “immediate impact”. Breaches will lead to a Severe Flood Warning and have the potential to constitute a Major Incident.

Water Rescue: Assumes the use of only emergency services boats helicopters and high clearance vehicles (Not self-presenting voluntary operators whose standard of training is unknown.).

Infrastructure: This plan does not take into account damage or failure of power stations, road and rail links specifically, but references are made to traffic management and evacuation procedures.

3. OWNERSHIP AND AUDIENCE

The Kensington and Chelsea Borough Resilience Forum will be responsible for updating and maintaining the Multi-Agency Flood Plan. The plan will be updated and reviewed on an annual basis. However, if an incident occurs, lessons and risks identified or organisational restructure occur, the plan could potentially be reviewed at an earlier date. Any updates and amendments to the plan must be communicated to all responders.

The intended audience for this plan is all Category 1 and 2 responders under the Civil Contingencies Act 2004 and Key Voluntary response organisations. The list below provides a comprehensive overview of the organisations included in these categories but is not an exhaustive list:

Category 1 Responders:

- The Royal Borough of Kensington and Chelsea
- Environment Agency
- London Metropolitan Police
- London Fire Service
- NHS Kensington and Chelsea
- London Ambulance Service
- NHS Acute Trusts
 - The Royal Marsden
- Health Protection Agency
- Kensington and Chelsea Primary Care Trust

Category 2 Responders:

- EDF Energy
- Thames Water
- Transport Operators
- National Grid
- Health and Safety Executive
- Strategic Health Authority

4. THE RISK OF FLOODING

4.1 Historical context

Recorded flooding in London dates as far back as 1236. More recently however there have been serious incidents such as the Central London flooding in 1928 and the flooding of the Thames estuary in 1953 in which over 300 people died. This incident led to the construction of the Thames Barrier which was opened in 1984 and has significantly reduced the risk of the Thames flooding.

4.2 Methodology

The Thames Breach/Overtopping Maps in Annex B of this document were provided by the Environment Agency. The Methodology for producing the maps can be found in the Environment Agency's report - TH644 - Thames Tidal Flood Map, Improvements Modelling, Phase 2 – Final Report, March 2006. The report is referenced in Section 13 of this plan but additionally The Royal Borough of Kensington and Chelsea Contingency Planning Unit hold a copy of this report as do the Environment Agency.

4.4 Overview of Thames Breach/Overtopping Flood Risk in the Area

There is a significant risk of inundation across the River Bank of the Thames if a breach of the flood defences was to occur. The scale of the impact can be seen on the maps in APPENDIX B. There is very little critical infrastructure located within the flood zone along the bank of the River Thames. However, the risk to residents and commercial businesses is still quite high. There is also a risk of breach flooding affecting the Western boundary of the borough where the underground waterway Counters Creek runs. This would pose a significant flood risk to Kensington Olympia Train and Underground station.

4.5 Communities at Risk

The maps in APPENDIX B and the tables in APPENDIX D and APPENDIX E outline the Communities in the Borough which are at the highest level of risk from a Thames Breach flooding incident. The lists were derived from the flood map data provided by the Environment Agency.

The risk of flooding due to a breach in defences is very low as indicated by the London Resilience Community Risk Register. However for the purposes of this contingency plan key sites at risk have been identified and their contact details and susceptibility have been included in APPENDIX D. Roads and communities who would be in the flood zone have also been identified in Appendix E.

4.6 Key Infrastructure at Risk

There are a number of key Infrastructure points which are at risk from flooding in the area. APPENDIX D identifies key sites and infrastructure in the Royal Borough of Kensington and Chelsea which are at risk Thames Water/Overtopping flooding based on the data provided by the Environment Agency. For the purpose of this report the following lists outlines what is considered key infrastructure for this report and should be prioritised in the case of a Thames Water/Overtopping flooding event. This is a thorough but not an exhaustive list.

- Police Stations
- Fire Stations
- Hospitals / A & E's
- Local Authority Offices / Depots
- Schools
- Transport Links
- Sewage Treatment plants
- Electrical sub-stations;
- Telephone exchanges;

From the results it can be concluded that there are no police or fire stations within the Thames Breach flood zone. There are also no Hospitals or major transport links.

However as the maps in ANNEX D show there are two local authority premises and two schools within the flood zone that need to be prioritised if an incident arises. Additionally there are also two electrical substations and a

sewage pumping station that need to be considered as a high priority if a breach has or is about to occur.

4.7 Flood Warning Service

The Environment Agency's flood warning service covers all those in the Thames flood zone shown in Map (1). Those not in the Thames flood zone have a very low risk of suffering from flooding if a Thames Breach/Overtopping incident were to occur. Following are Community Flood Risk Summary sheets for communities provided with a flood warning service and those that are not.

Community Flood Risk Summary Sheet A – For a Community provided with a flood warning Service:

Description:		
No. of people/properties at risk	No. of vulnerable people at risk	Key Vulnerable Infrastructure
No. of properties registered to flood warning service	Return Period	Lead Time
Flooding History (if known)		
Flood Defences/Alleviation Measures (if any)		
Flood Warning Status		
Flood Warning Status	Area(s) at risk (Refer to Map)	
Flood Watch		
Flood Warning		
Severe Flood Warning		
Risk Assessment		
Likelihood		Final Risk Rating:
Impact		
Health		
Social Economic Environmental		

Community Flood Risk Summary Sheet A – For a Community not provided:

Description:		
No. of people/properties at risk	No. of vulnerable people at risk	Key Vulnerable Infrastructure
Flooding History (if known)		
Flood Defences/Alleviation Measures (if any)		
Risk Assessment		
Likelihood		Final Risk Rating:
Impact		
Health		
Social		
Economic		
Environmental		

5. RELATED AND INTERDEPENDENT PLANS

The Multi-agency Flood Plan for the Royal Borough of Kensington and Chelsea has a number of interrelating plans which are relevant to a serious flooding incident within the boroughs boundaries. The different plans cover different aspects of emergency response and avoid unnecessary duplications.

The diagram below outlines how this Multi-Agency Flood Plan for Kensington and Chelsea is interdependent and related to other plans and protocols within the Borough.

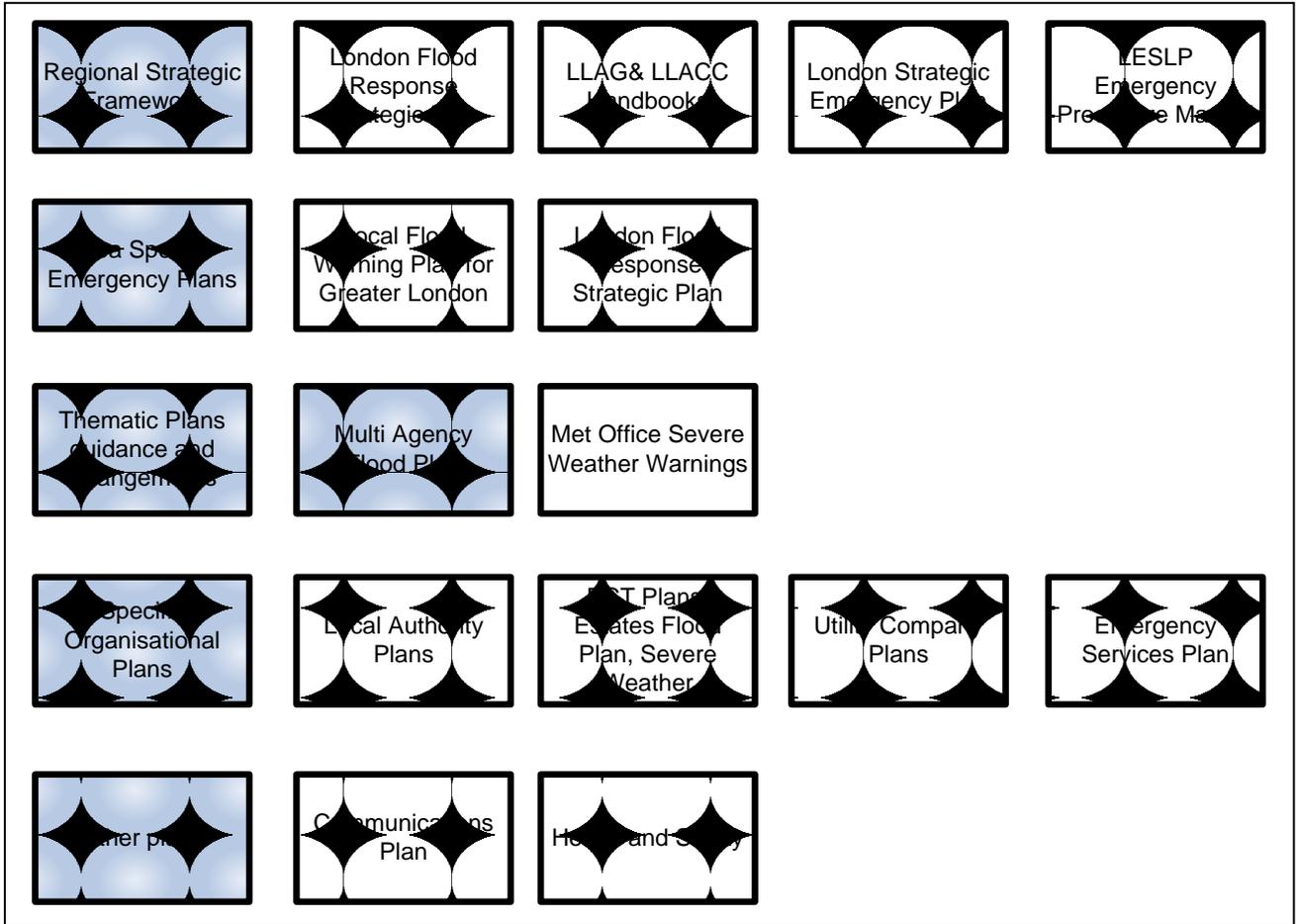
5.1 Regional and National Interrelated Plans

Additionally there are a number of Regional (London) specific and National plans which will be referred to in the case of a flooding incident in The Royal Borough of Kensington and Chelsea and will support this document.

Title	Owned By
London Flood Response Strategic Plan	London Resilience
London Mass Evacuation Plan	London Resilience
Local Flood Warning Plan for London	Environment Agency
London Strategic Emergency Plan and Associated Specific Plans	LRRF
LESPL Major Incidents Procedures Manual	LESPL Panel

Figure (1) demonstrates how regional and national plans can be fitted together.

Figure (1) Fitting Emergency Plans Together:



6. COMMUNICATION PLAN

Communication will be vital in the response to any major flooding event.

6.1 Internal Escalation Procedures

Contact details of key personnel are not held within this plan. If flood warnings given by the Environment Agency are relevant to this borough the emergency planning and resilience team or LALO in conjunction with the communications team will contact the Chief Executive, Directors, relevant Councillors, and any other internal staff as necessary.

6.2 Members

It is essential that in the build up to, during and after a flooding event that Council Members are informed. As a minimum the Leader and appropriate executive members should be provided with a situation report. Where possible ward councillors should be informed and provided with key information. In time all Councillors should be informed. This will be managed as directed in the emergency handbook through the BECC in conjunction with the communications team.

6.3 Organisational Staff

Employees must be kept up-to-date with the latest information. Each agency has their own mechanisms for informing staff as required which is detailed in separate agency emergency plans.

6.4 Cross Boundary Mutual Aid

In the event that mutual aid is required to neighbouring boroughs this will be managed internally by each responding agency. Being separate organisations Local Authorities have a mutual aid agreement where mutual aid would be requested and provided through the LALO or BECC.

Where an incident has resulted in the BECC being activated the communications team will work with partner Local Authorities and agencies, in particular the Metropolitan Police, to deliver a clear and unified multi-agency statement and regular follow ups including well into the recovery phase.

If a pan-London incident has been declared, all local authorities will activate their BECC in response or to provide mutual aid, communications will be managed through this process.

6.5 Media

The local Authority and Police Communications and Media Teams need to ensure there is a single message in relation to the response. Where other agencies are involved, their views on the media strategy will need to be considered. The Local Authority will take the lead media role in relation to Recovery.

Communication between partner agencies will take place at

- Silver meetings
- Gold meetings
- Between agency press teams

6.6 General Public

Information leaflets can be found on the Environment Agency website and in Appendix F of this document which give guidance on before during and after flooding. The Environment Agency states that anyone who is at risk of flooding is advised to develop a flood plan and make sure everyone is aware of what to do should the need arise to use it.

The Council, with consultation with the Metropolitan Police will provide up to date and consistent information for the public through the media. The Council website will be important for these messages as well as the setting up of an information line via the Contact Centre.

6.7 Public Helpline

The Environment Agency has a 24hour telephone information service called Floodline. Contact details of this service can be found in the Environment Agency leaflets in Appendix F. Customers trying to contact the council should call the council contact centre number.

In the event of significant flooding the council may establish a dedicated flood line number for the public.

6.8 Vulnerable People

More information on vulnerable persons can be found in Section 8. It will be the Emergency Services and emergency controllers decision as to the support to be given to these persons on a priority basis.

6.9 Schools

All schools in the floodplain should be signed up to the Environment Agency Floodline Warnings Direct. All decisions made by the Head Teachers must be recorded and coordinated by Family and Children's Services. It is imperative

that Family and Children's Services keep the BECC updated as to whether schools are evacuated, open or closed. The Council's BECC and LALO are on hand to assist with evacuation of any schools affected by flooding or those where pupils are retained for any length of time.

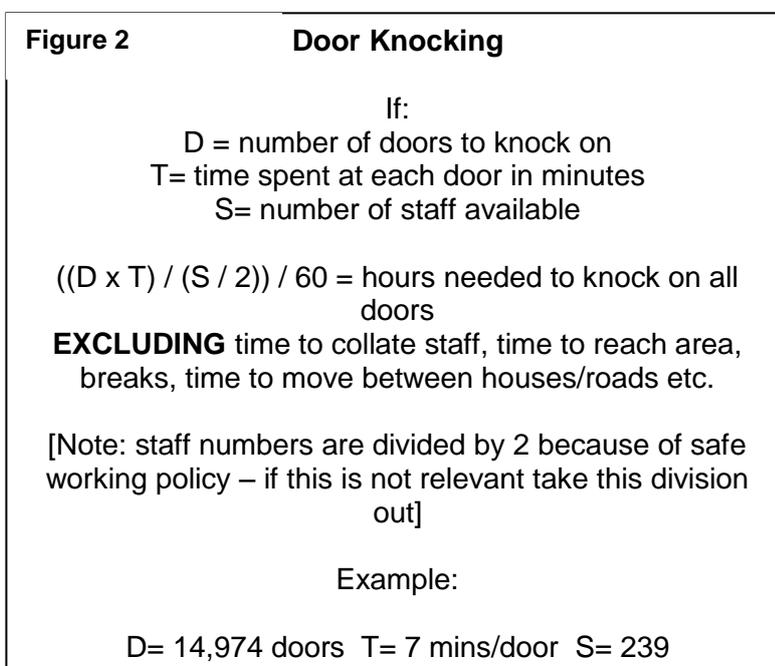
6.10 Faith/Minority Groups

Where necessary faith groups and minority groups may be asked to assist with communications to their communities. This will enable appropriate religious and ethnic community leaders to ensure warning and information messages are passed to the community and to ensure customs and beliefs are respected.

6.11 Door Knocking

As can be seen from figure 2, literal door knocking may not be successful due to constraints on time and staff. Therefore we cannot confirm that The Royal Borough of Kensington and Chelsea Council will always knock on doors in the flood zone areas. We may knock on one door of a road and ask those persons to inform the rest of their street. We may prioritise vulnerable persons (if applicable) in a flood zone area. We suggest that those people in flood zones sign up to the Environment Agency Floodline Warnings Direct, as they will then be informed of any potential threats.

The only time door knocking will be used is to communicate with vulnerable people in circumstances of a public network failure.



7. PLAN ACTIVATION

7.1 Trigger Points for Thames Breach Flooding Plan Activation

No multi-agency action will be taken on receipt of a Flood Watch. However on receipt of a Flood Warning or Severe Flood Warning communications will be undertaken internally and to external partners where identified.

Similarly on receipt of national severe weather warning of extreme rainfall key partners will also be notified.

The flood plan will require activation if:

- The Environment Agency issue a severe flood warning;
- There is an indication that flooding is about to, or is occurring; which may pose a significant risk to life, property and or infrastructure;
- Responding organisations are unable to cope with the demand placed upon them to respond to a flooding incident;
- Declaration of a major incident by the emergency services as a result of flooding.
- Following a severe weather warning from the Met Office where the rainfall prediction indicates a high probability that a Thames Breach/Overtopping incident may occur within the borough.

Figure (4) demonstrates the activation process of the Multi Agency Flood Plan arising from particular triggers and thresholds in a Thames Breach Flooding scenario.

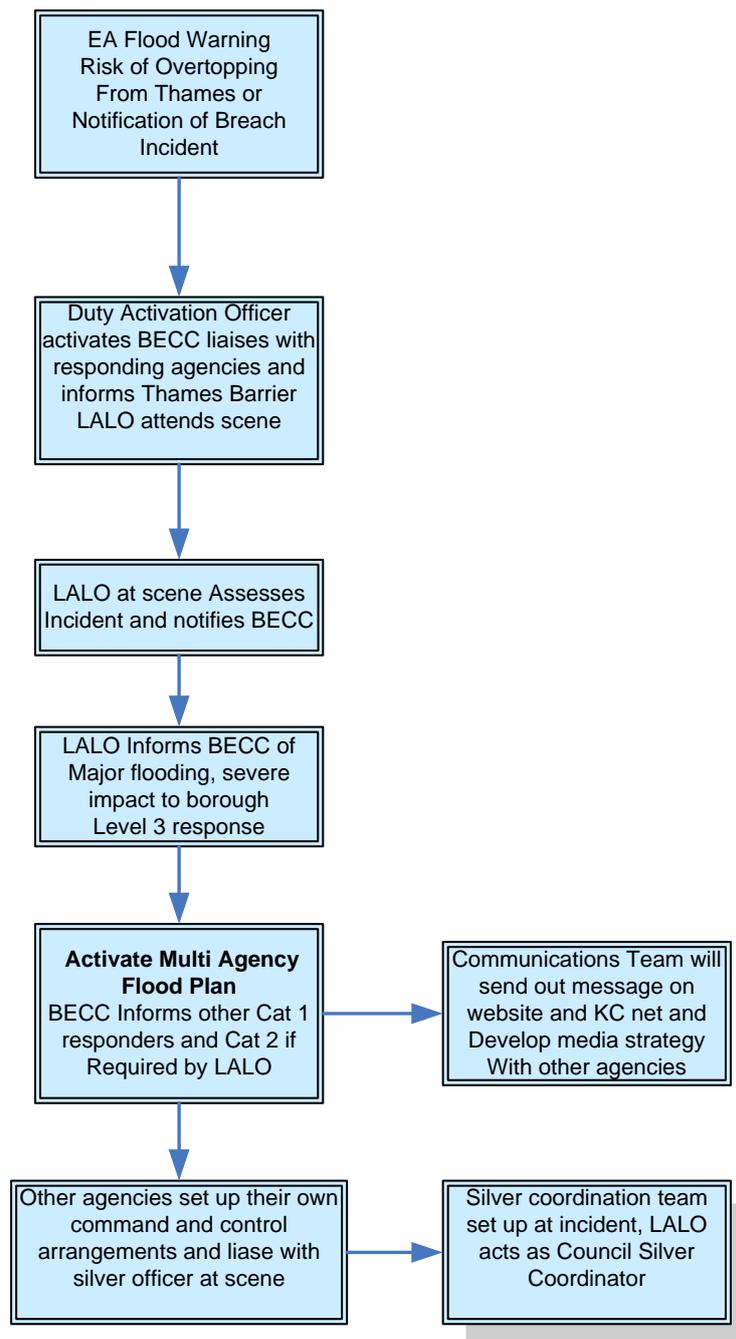
7.2 Rationale

Flood Watch: No multi-agency action would be taken on receipt of a flood watch. The Environment Agency has confirmed that no flood watch would be distributed in the Kensington and Chelsea area due to the nature of the flood defences;

Flood Warning: On receipt of a flood warning from the Environment Agency, communications will be undertaken internally.

Severe Flood Warning: Upon receipt of a Severe Flood Warning from the Environment Agency the Contingency Planning unit will activate the multi-agency flood plan via normal communications, to all partners / stakeholders and pre identified internal departments, to ensure mitigating actions can be put in place immediately.

Figure (4) Thames Breach/ Overtopping Activation Flow Chart for The Royal Borough of Kensington and Chelsea



8. ACTION, ROLES AND RESPONSIBILITIES

The different agencies responding to a Thames Breach/Overtopping flood event will carry out their duties as stated in the LESLP Procedure Manual (with focus on Annex E of said document), the London Strategic Flood Plan and will also carry out any borough and site specific arrangements as appropriate. The following pages state the different responding agencies responsibilities with regards to a Thames Breach/Overtopping flooding event only.

8.1 Activation and Response

Response to a Thames Breach/Overtopping flooding incident will require a multi-agency approach, and liaison with all blue light responders, the environment agency and other stakeholders as required is essential. Upon activation of the plan all relevant organisations should be notified and meet at a prearranged safe rendezvous point (RVP) to establish the multi-agency coordinating group.

Should a major incident be declared the Police will chair any silver and gold meeting in response to a flooding incident with input from all responding agencies. If search and rescue activities are being undertaken the chair will stay with the Police, but the LFB will advise and oversee search and rescue actions.

8.2 Escalation of Response

A major incident will be declared if the incident requires implementation of special arrangements by one or more of the emergency services and will generally include the involvement, either directly or indirectly, of large numbers of people. For example:

- Rescue and transportation of a large number of casualties
- Large-scale combined resources of Police, LFB and LAS
- Mobilisation and organisation of the emergency services and support services

If a Major Incident is declared a Silver Coordinating Group will be established, with Borough Gold being established as required. Representatives from the following organisations should be contacted and attend silver meetings:

- Metropolitan Police
- London Fire Brigade
- London Ambulance Service
- The Royal Borough of Kensington and Chelsea
- Other specialist advisors e.g.:
- PCT
- EA
- Thames Water
- Red Cross etc.

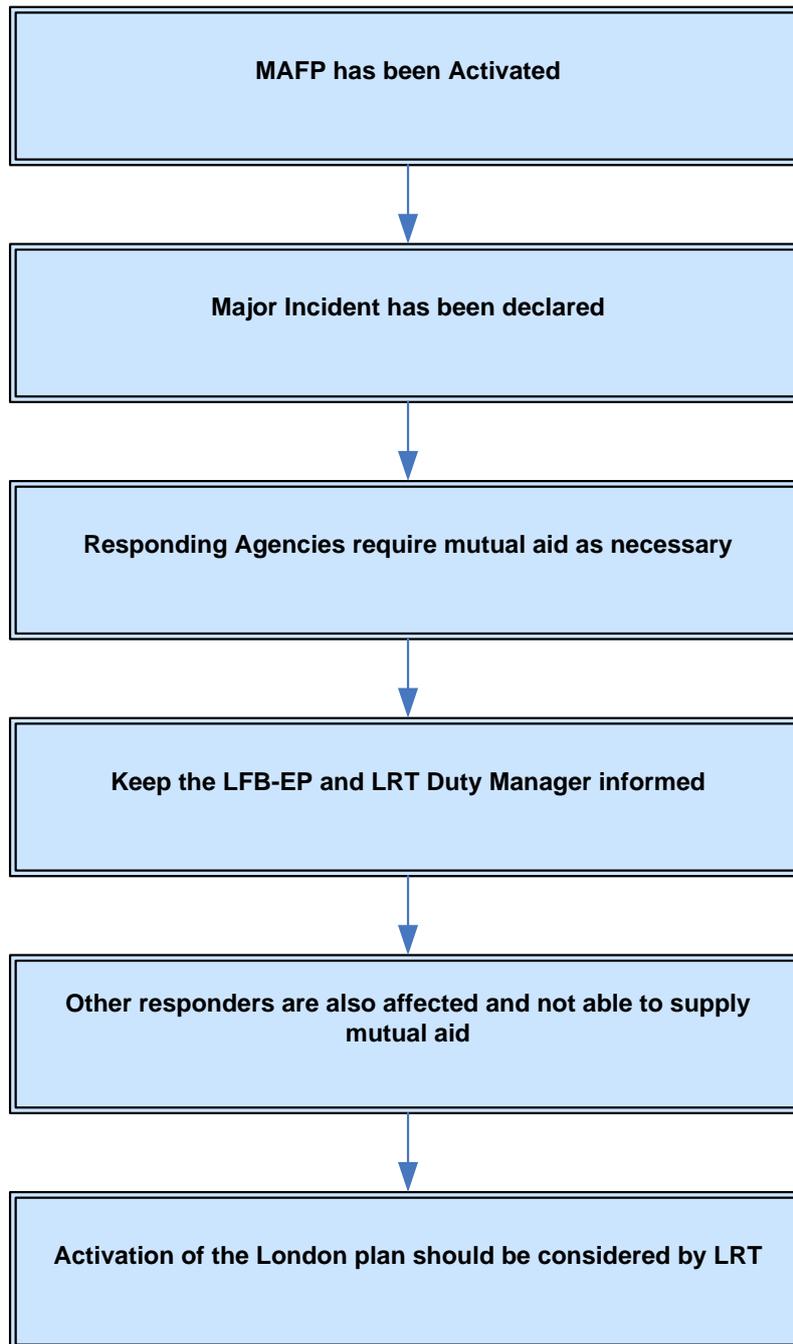
8.3 Further Escalation

A larger incident may involve the activation of London's Strategic Coordination Group (SCG) which would have Police lead as Gold during the response phase and would include activation of the London Strategic Flood Response Plan.

In these circumstances our primary objective would be to inform the LLACC that we have activated our Borough Emergency Control Centre. In addition to this, where possible, we would inform the LRT and the LFB-EP of this activation in terms of a flooding incident. Figure 5 demonstrates the escalation process of the incident response once the MAFP has been activated.

Figure (5) outlines the Escalation Process once the MAFP has been activated.

Figure (5) Escalation Process



8.4 Health and Safety Considerations

Health and safety considerations and information for responders are held by each of the responding agencies. These considerations are not in this plan; responders needing more information should speak to their own agency.

8.5 Flood Specific Responders Actions, Roles and Responsibilities

Each of the coordinating agencies has provided the MAFP plan with their organisations' roles and responsibilities during a Thames Breach Flooding incident in Kensington and Chelsea. The table has been compiled from the London Strategic Flood Plan (Section 8) and additional borough specific roles have been added where appropriate. For general roles and responsibilities of responding agencies in an emergency that is not just flood specific please London Emergency Services Liaison Panel's Major Incident Procedures Manual (V.7, 2007). References for both of these external documents can be found in Section 13. of this document.

A (*) in the table denotes where the roles and responsibilities have been taken from the London Strategic Flood Plan.

Organisation	Preplanning	Emergency Response			Recovery
		Minor Flood (medium consequence)	Major Flood (high consequence)	Notes	
The Royal Borough of Kensington and Chelsea	Identifying extent of impact of flooding from the Thames to the borough and areas most at risk. Producing a Multi Agency Flood Plan (MAFP) with key partners.	The EA or Emergency Services will notify the Contingency Planning Unit (CPU). The CPU will activate the MAFP at level 2 borough response if required and liaise with emergency services. Local Authority Liaison Officer (LALO) will attend scene and assess impact damage. LALO will call forward any resources required from the council.	The EA or Emergency Services will notify the Contingency Planning Unit (CPU). The CPU will activate the MAFP at level 3 borough response and open the Borough Emergency Control Centre (BECC) which will initially liaise with emergency services. Local Authority Liaison Officer (LALO) will attend scene and assess impact damage. LALO will call forward any resources required from the council.		The Royal Borough will act as lead responder during the recovery phase. This will include collection of flood damaged goods from properties. Housing issues will be handled through the relevant agencies including the Tenant Management Organisation (TMO). Utilities will liaise with highways on any infrastructure impacts including repairs. Will liaise with EA in the event of any breach repairs.
Metropolitan Police Service*	Legal responsibilities as per civil contingencies act. Specifically:- Maintain business continuity awareness. Liaison with environment agency at local and pan- London level on risk assessment/ current planning requirements. Staff training and awareness. Testing and exercising of major incident procedures	Attendance and assessment at scene Assist other agencies by coordination of incident. Especially cordon control Traffic control and diversion Evacuation/invacuation as per evaluation. Assist EA where necessary with warning and informing arrangements. Security of property	Generic LESLP response Using objectives as per major incident procedure specifically saving of life Evacuation/invacuation Cordoning Traffic control and diversion Warning and informing Security of scene- nb iconic sites	Major incident declaration to be made by blue light or local authority personnel. Major incident procedure –Command and control-provision of gold coordination chair and location Consideration as to Casualty bureau etc Use of gold media cell.	Recovery cell built into command and control protocols

Organisation	Preplanning	Emergency Response			Recovery
		Minor Flood (medium consequence)	Major Flood (high consequence)	Notes	
Environment Agency*	<p>Prepare and maintain London Local Flood Warning Plan;</p> <p>Advise on development proposals; Update flood risk maps; Support LRF flood risk assessments;</p> <p>Maintain watercourse capacity; Maintain flood management structures</p>	<p>Issue warnings;</p> <p>Monitor catchment;</p> <p>Operate defences;</p> <p>Support LAs and emergency services</p>	<p>as for minor flood]</p>		<p>Support LAs and community as resources allow;</p> <p>Repair any damaged defences.</p>
London Fire Brigade					
London Ambulance Service*	<p>Met office weather warning system in place.</p> <p>Major incident plan in place.</p> <p>Business continuity plan in place.</p> <p>On call officer cadre in place.</p> <p>Pager / SMS system in place.</p> <p>Airwave radio major incident deployment in place.</p> <p>Health on call cadre rota up to date.</p> <p>HPA on call cadre rota up to date.</p> <p>LAS fall back control facility.</p> <p>Identified LAS premises at risk of flooding and consider impact on service delivery</p> <p>EA mapping information received by emergency planning unit for distribution</p>	<p>Act according to the plan</p>	<p>Act according to the plan</p>	<p>Available via the services own internet</p>	<p>Work with colleague and complete own and multi agency debriefs.</p>

Organisation	Preplanning	Emergency Response			Recovery
		Minor Flood (medium consequence)	Major Flood (high consequence)	Notes	
Kensington and Chelsea Primary Care Trust					
British Transport Police*	<p>Identify areas policed by the BTP which are susceptible to flooding. This includes railway property and the BTP estate.</p> <p>It should be noted that flooding may affect the BTP ability to respond to locations which are not flooded.</p> <p>Liaison with the environment agency and railway partners to ensure that the necessary warnings are disseminated to railway and police staff.</p> <p>Liaison with the metropolitan police regarding a joint police response using LESLP guidelines.</p> <p>Staff training and awareness testing and exercising major incident procedures.</p>	<p>Liaison with the metropolitan police to determine a joint response under the Benbow scheme.</p> <p>Assessment of the incident to determine the risk to life and property.</p> <p>Assist with the evacuation of premises if necessary paying particular attention to vulnerable people.</p> <p>Assisting to secure premises to prevent damage and or theft.</p>	<p>metropolitan police to determine a joint response under the Benbow scheme.</p> <p>Provide senior officers in respect of any command and control requirement (gold co-ordination group)</p> <p>If necessary provide staff for a gold "transport" or "media" cell.</p> <p>Assessment of the incident to determine the risk to life and property.</p> <p>Assist with the evacuation of premises if necessary paying particular attention to vulnerable people.</p> <p>Assisting to secure premises to prevent damage and or theft.</p>	<p>The BTP in London will work closely with the railway industry, guardian police forces and if necessary the military whilst monitoring the situation reports provided by the environment agency.</p>	<p>The BTP will consider a representative at any recovery management cell.</p> <p>The BTP will work with the railway industry to assist in the implementation of recovery plans.</p>

Organisation	Preplanning	Emergency Response			Recovery
		Minor Flood (medium consequence)	Major Flood (high consequence)	Notes	
Met Office	The Met Office does not have a borough specific plan but, through the National Severe Weather Warning Service and the Extreme Rainfall Alerts aims to provide some advance warning of rainfall which may lead to flooding. Also the Public Weather Service Advisor can provide additional weather advice to the BECC leading up any potential incident.	n/a	n/a	The Met Office Public Weather Service Advisor can provide weather information to the BECC during the incident as required.	The Met Office Public Weather Service Advisor can provide weather information to the BECC during the recovery phase as required.
EDF Energy	EDF Energy does not have Borough specific flood plans. Please refer to the London Flood Plan for details of EDF Energy's emergency planning arrangements for flooding incidents across London	n/a	n/a	n/a	n/a
E Port of London Authority	Maintain flood risk awareness for operational staff Liaison with response organisations to ensure the role of port authority is understood. Defined communication strategy for river users.	Information for river users in area via UVF radio. Impose location-specific navigation control schemes where required. Provide vessels for movement of people ("rescue" rather than "mass evacuation")	Maintain safety of navigation at all times Promulgation of information on marine vhf channels. Establish specific navigation controls		Repair and maintenance of navigation aids and other river works Re-establish routine navigation safety regime Provide appropriate information to river users via UHF radio.

Organisation	Preplanning	Emergency Response			Recovery
		Minor Flood (medium consequence)	Major Flood (high consequence)	Notes	
Royal National Lifeboat Institute	RNLi does not have borough specific flood plans. Please refer to the LESLP Manual for information on their roles and responsibilities.	n/a	n/a	n/a	n/a
Thames Water		n/a	n/a	n/a	
Transport for London*	<p>Pre-planning with LA's on rups, transport routes etc.</p> <p>Link with LA's/TfL communications strategy</p> <p>Pre-arranged helpline for staff</p> <p>Review of key premises in flood plain</p> <p>LTCC up to date plans and contacts etc</p> <p>Liaise with LA's/ TfL communications strategy</p>	<p>Activate stewards/ silver command</p> <p>Co-ordinate with 'blue lights' to co-ordinate responses</p>	<p>Activate stewards/ gold command</p> <p>Co-operate with 'blue lights' to co-ordinate responses</p>		n
Red Cross					

Organisation	Preplanning	Emergency Response			Recovery
		Minor Flood (medium consequence)	Major Flood (high consequence)	Notes	
British Telecom*	Flood warning received from the Environment Agency and distributed to key players and operational teams in BTW	Minor Flooding - Possibility of water ingress to BT building. People and operations at risk identified following risk assessment	Major Flooding –Water ingress into BT building which threatens BT equipment	Risk assessment vital for People, operations and buildings information from Government ital from which to base risk assessment	Once safe action may be taken to remove water. Building closed to BT teams.
	People and operations at risk identified	Activation of BT Group Incident response process	People and operations at risk identified following risk assessment	Safety of BT people is paramount and may precluded BT teams attending on site.	Water tested for contaminants.
	BT holds copies of flood plain information and this can be mapped to BT buildings.	Co-operation with emergency services and EA	Activation of BT Group Incident response process	Customer service prioritisation as important part of the process to ensure ongoing communications.	Remedial action taken if contaminants found.
	BT key operational buildings flood plan activated upon notification from the Environment Agency	Provision of anti-flooding measures (e.g. sandbags)	Co-operation with emergency services and EA	All to be managed through activated Incident management response	Building is dried out.
	BT critical access network assets [underground] to be affected identify and plans in place for service reprovision in the event of a major flood	Workforce tasked to site if safe to do so	Provision of anti-flooding measures (e.g. sandbags)	Workforce tasked to site if safe to do so	Structural survey if required.
	BT service controls workforce determine on customer driven service priorities review requirements for blue light service communications	Communications to workforce on action to take.	Local Liaison Managers [LLMs] and Regional managers [RMs] working with Government	Forward Control Point Manager appointed/engaged Local Liaison Managers	Equipment tested
	BT threat Assessment Review Group [TARG] in place working with Government on increasing threat	Key personnel identified as part of Incident management process	Regional leads to coordinate on the ground requirements to feed into BT Incident response teams	working with Government incident teams feeding back to BT operational teams	Building re opened.
	BT Business Continuity Management structure and Group wide prioritisation put in place with BT to engage all Lines of Business in Impact of flood on service workstack scoped to identify impact on wet joints	Customer impact identified and mitigation plan enabled	BT Controls team rescheduling work flow and prioritising all customer service requirements	BT livered fleet to be repositioned outside the danger zone where possible	Ongoing review of impact on networks and customer service – regular reports.
					Incident management level
					reduced and timescale for Business As Usual identified
				Ongoing risk assessment	

8.6 Environmental Impacts

In a Thames Breach/Overtopping flooding event a number of environmental issues will occur. Each organisation involved in environmental impacts responsibilities are listed below:

Health protection Agency

The Health protection Agency monitors floods affected communities post a flooding incident in case a threat to human health was to arise. In the UK this is very unlikely. However, the Health protection agency does offer practical advice on post-flooding clean up on their website to reduce the threat to human health through infection or injury. Please see APPENDIX G for more information.

Environment Agency

The Environment Agency offers comprehensive guidance to the public on preparing for and recovering from a flooding including advice on health, safety and environmental issues. For more information please APPENDIX G.

The Royal Borough of Kensington and Chelsea

Environmental Health: will make an assessment of habitable conditions and the safety of electrical installations. They will liaise with contractors to clear worst of debris and to remove accumulations of foul water and contaminated materials. Additionally Environmental health will also liaise with the HPA regarding infection control and pest control issues.

Waste Management: The Council has a duty to continue collecting household waste, or resume waste collection services as quickly as possible. Flood Damage and Waste Clearance on private property are the responsibility of the owner. The Council runs a “Too Big to Bin It” service at a charge but it is likely this would be overwhelmed post flooding.

Animal Carcasses: the Council are responsible for the disposal of animal carcasses found on Council property;

Personal Property: The Council will facilitate recycling and waste collection for flood damaged goods as part of the emergency response and recovery.

Silt: the Council are responsible for clearing silt on public land, but not on private property.

Contaminated Sandbags: The Council will dispose of its own contaminated sandbags, but not privately owned sandbags.

9. VULNERABLE PEOPLE

- The Royal Borough of Kensington and Chelsea's Adult Social Care Service are the lead Department for Kensington and Chelsea welfare issues including the maintenance of a data base of vulnerable persons. This can be accessed electronically via Adult Social Care Services.
- There are a number of agencies that retain information on potentially vulnerable persons including: Housing and partner organisations: Health; PCT's, GP's, Pharmacists, Acute Hospitals, Mental Health Trusts; Independent Health Organisations; Utilities companies and Voluntary Sector.
- The Royal Borough of Kensington and Chelsea's Adult Social Care Services work in partnership with PCT and Housing contractor and in the event of the MAFP being activated will be the lead department responsible for identification of vulnerable persons within the flood risk area. If it is necessary to share information with other responders, in relation to the welfare of any individuals on the vulnerable person's data base, then this should be authorised.
- APPENDIX D includes a log sheet of all vulnerable facilities and vulnerable key infrastructure sites that are at risk from flooding in the incident of a Thames breach/Overtopping flood. APPENDIX C includes maps of key infrastructure sites that are at very high risk of flooding if a breach were to occur.

10. EVACUATION AND SHELTERING OF PEOPLE

- Evacuation of the entire area may not be the sensible option and is likely to create more problems than it would resolve given the possible time available to effect the evacuation and numbers of people.
- Premises at risk e.g. basements and ground floor should be evacuated along with vulnerable persons. Anyone else should be encouraged to remain indoors if safe to do so.
- The police will take the decision to evacuate / part evacuate an area.
- The Council will arrange the opening of reception centres, transport, welfare services for evacuees and if required other Council staff to assist with informing residents and businesses. Other responding and voluntary organisations will support the Council with this operation as necessary.
- For details of Rest Centre Contact information and Location please see Annex 15 (Shelter Plan) of The Council's Contingency Management Plan. If there is a need to contact specific agencies dealing with vulnerable people this can be facilitated through the BECC.
- The Royal Borough of Kensington and Chelsea has a Memorandum of Understanding with the British Red Cross for working in partnership to deal with the initial impact upon the community and assisting with the operation of reception and rest centres.

11. RECOVERY

The purpose of providing recovery support is to assist the affected community towards management of its own recovery. It is recognition that where a community experiences a significant emergency, there is a need to supplement the personal, family and community structures which have been disrupted.

The recovery phase of a flooding incident must begin as soon as practicably possible and run along side flood response operations. Following the end of the emergency response phase to a flooding incident, the BECC will decide when it is appropriate to stand down. At this point control will officially be handed back to departments to run as 'business as normal' or to the designated recovery team as required.

Recovery is more than simply the replacement of what has been destroyed and the rehabilitation of those affected. It is a complex social and developmental process rather than just a remedial process. The manner in which recovery processes are undertaken is critical to their success.

11.1 Common Issues following flooding

Common issues following flooding include:

- Clean up and waste disposal;
- Repairs to public assets/infrastructure – schools;
- Buildings; roads etc.
- Restoration of power, communications and water;
- Domestic and business insurance issues;
- Displaced businesses;
- Political involvement and implications;
- Humanitarian assistance needs, including; homeless; displaced residents; psychological impacts
- Communication to the communities and affected groups – including help lines

- Business continuity of all category 1 and 2 organisations.

If established the regional strategic co-ordinating group (SCG) may form a regional recovery group, who will set the standard strategic priorities which will support and inform the Royal Borough of Kensington and Chelsea recovery co-ordinating group.

The Royal Borough of Kensington and Chelsea will take the lead on recovery after a flooding incident and will address issues including:

- Clean up and waste disposal
- Repairs to public assets/infrastructure
- Restoration of power, communications and water
- Domestic and business insurance issues
- Displaced businesses
- Humanitarian assistance needs including homeless/ displaced residents and psychological impacts

The Council's Contingency Management Plan includes further details of this process.

11.2 Formal Handover

In the event of a Thames Breach or overtopping the police will have overall command of the response. When it is suitable to do so official handover must take place from the police to the Local Authority.

12. TRAINING AND EXERCISING

12.1 Training

It is essential to train responding officers in their roles and responsibilities before they need to use the plan during an exercise or an actual event. Training should take place at appropriate intervals to maintain awareness and to inform responding officers of any amendments.

12.2 Exercising

Exercising the plan and responding officers will identify areas for improvement and ensure that staff are able to deal with a flooding incident, should one occur. Exercises aim to validate the plan, train staff and test procedures.

Such exercises may be internal, or tied into other multi-agency exercises to confirm roles and responsibilities of responding departments / agencies as well as the adequacy of communications, resources and equipment.

It is recommended that exercising this plan at operational and strategic levels is undertaken whenever there is a major revision or at least every three years.

13. REFERENCES

- Major Incident Procedures Manual, London Emergency Services Liaison Panel, Eight Edition, 2012
www.leslp.gov.uk
- The Royal Borough of Kensington and Chelsea Contingency Management Plan, Issue Six, January 2013
- National Risk Register for Civil Emergencies, Cabinet Office, 2012
<http://www.cabinetoffice.gov.uk/resource-library/national-risk-register>
- Kensington and Chelsea Borough Risk Register, 2012
- Environment Agency Flood Data for the Borough
- London Evacuation Plan, London Regional Resilience Forum (In development)
- The Royal Borough of Kensington and Chelsea Strategic Flood Assessment
http://www.rbkc.gov.uk/PDF/RBKCSFRA_Final_reduced.pdf
- TH644 – Thames Tidal Flood Maps Improvements Modelling, Phase 2, Final Report, Environment Agency, March 2006

14. APPENDICES

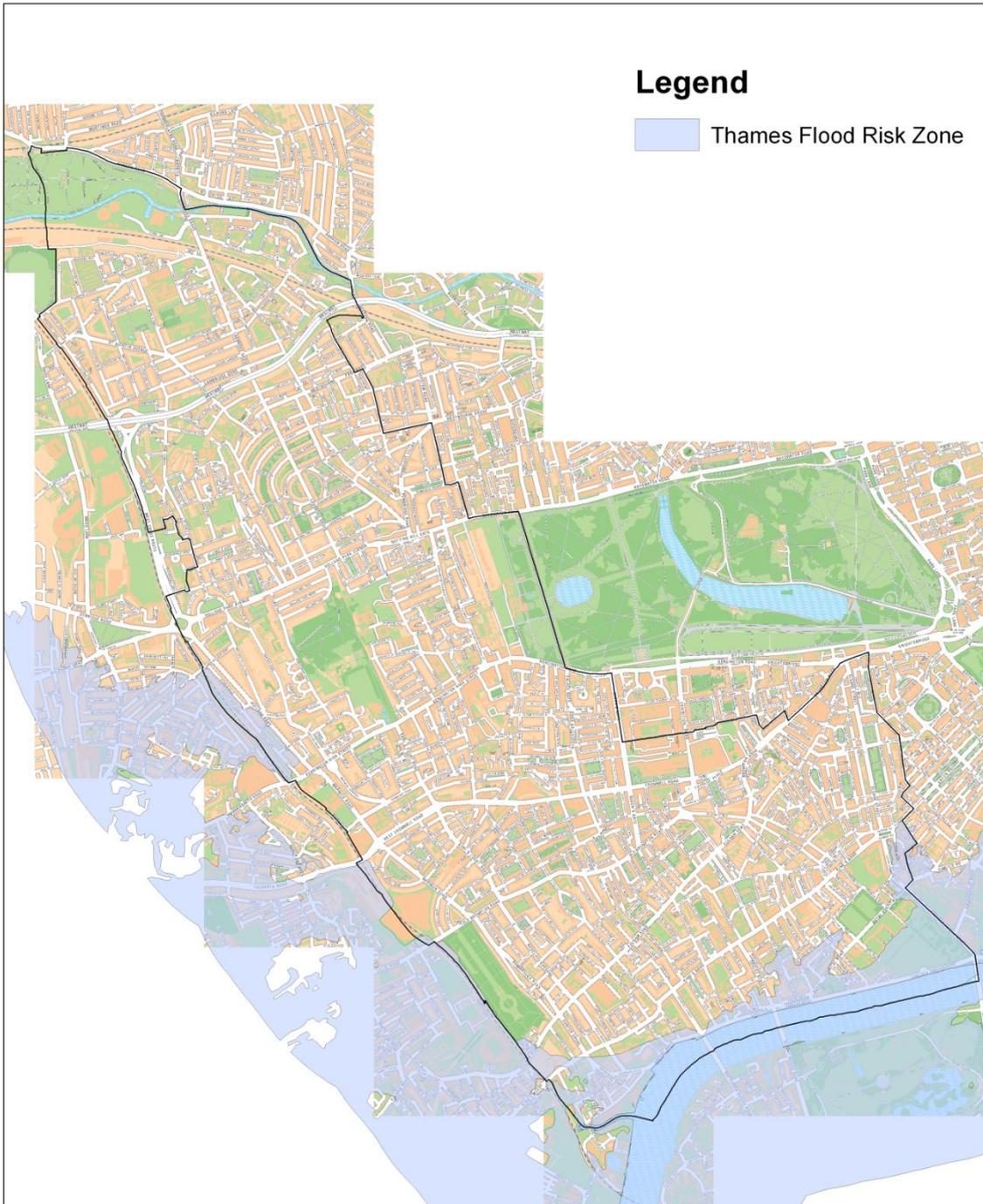
APPENDIX A – KEY EMERGENCY CONTACTS

Organisation	Name	Phone Number
The Royal Borough of Kensington and Chelsea	Contact Centre Mon – Fri 0830 to 1730	020 7361 3000
	Out of Hours Service	020 7361 3000 option 4
Environment Agency	Floodline	0845 988 1188
	Incident Hotline (Freephone, 24/7) to report an incident	0800 807060
	General Enquiries Mon-Fri, 8am to 6pm	03708 506 506
Utilities	Gas – National Grid	0800 111 999
	Electricity - UK Power Networks	0800 028 0247
	Thames Water	0800 714 614
Hospitals	Chelsea and Westminster	020 8746 8000
	Royal Marsden	020 7352 8171
	Royal Brompton	020 7352 8121
	St Charles	020 8969 2488
Health Protection Agency	Emergency Response	01980 612100
	Regional Office	020 8327 7181
	Central Office	020 7811 7000
Voluntary Sector	Red Cross	0844 871 11 11
	St John Ambulance	020 7324 4000
	Salvation Army	020 7367 4500
Metropolitan Police Service	Police Stations in Kensington and Chelsea	101

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APPENDIX B – THAMES BREACH FLOODING MAPS

Map 1: Thames Breach/Overtopping Flood Risk Zones in The Royal Borough of Kensington and Chelsea



Legend

 Thames Flood Risk Zone



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0 250 500 1,000 Meters

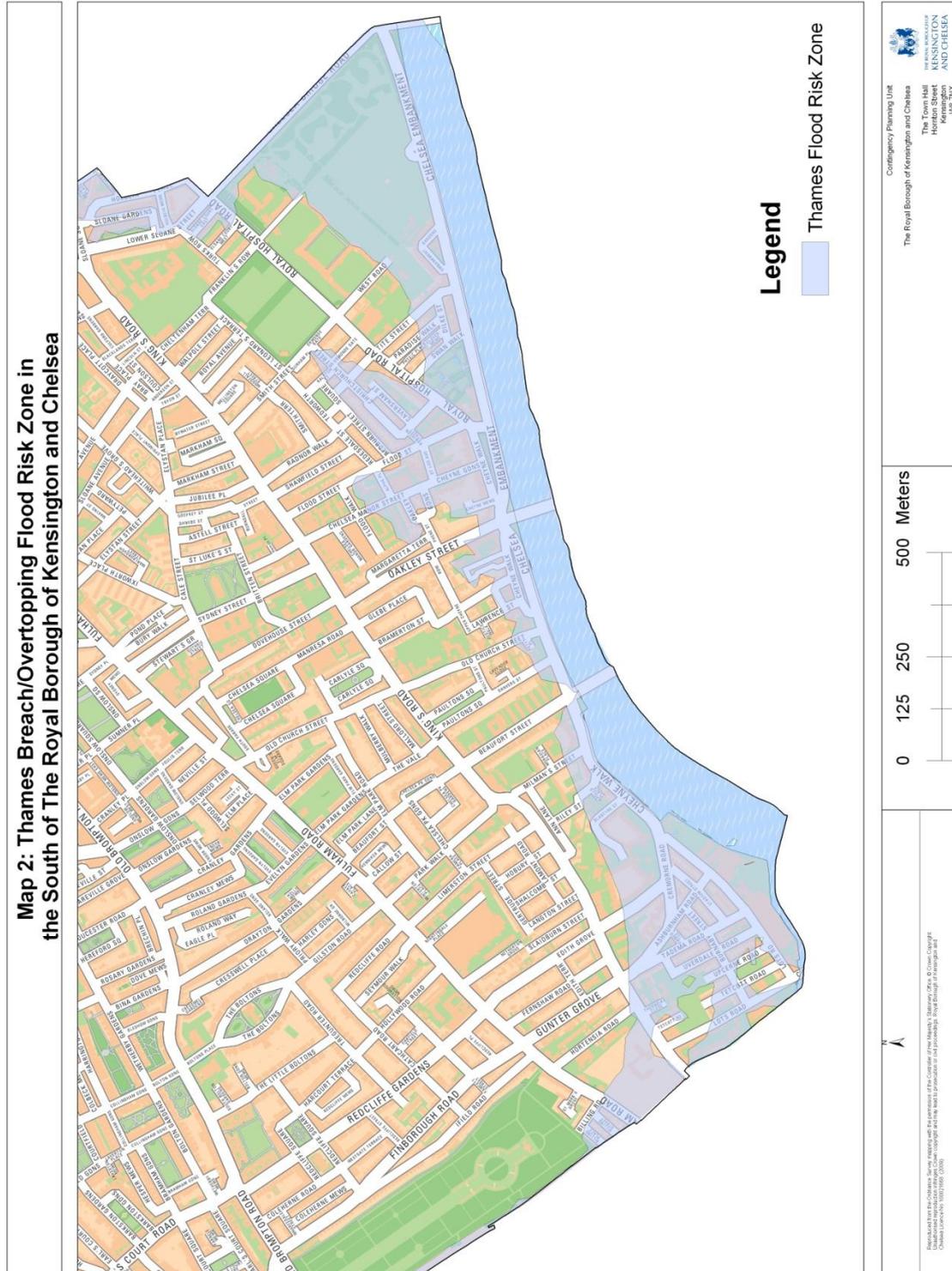


The Contingency Planning Unit
The Royal Borough of Kensington and Chelsea

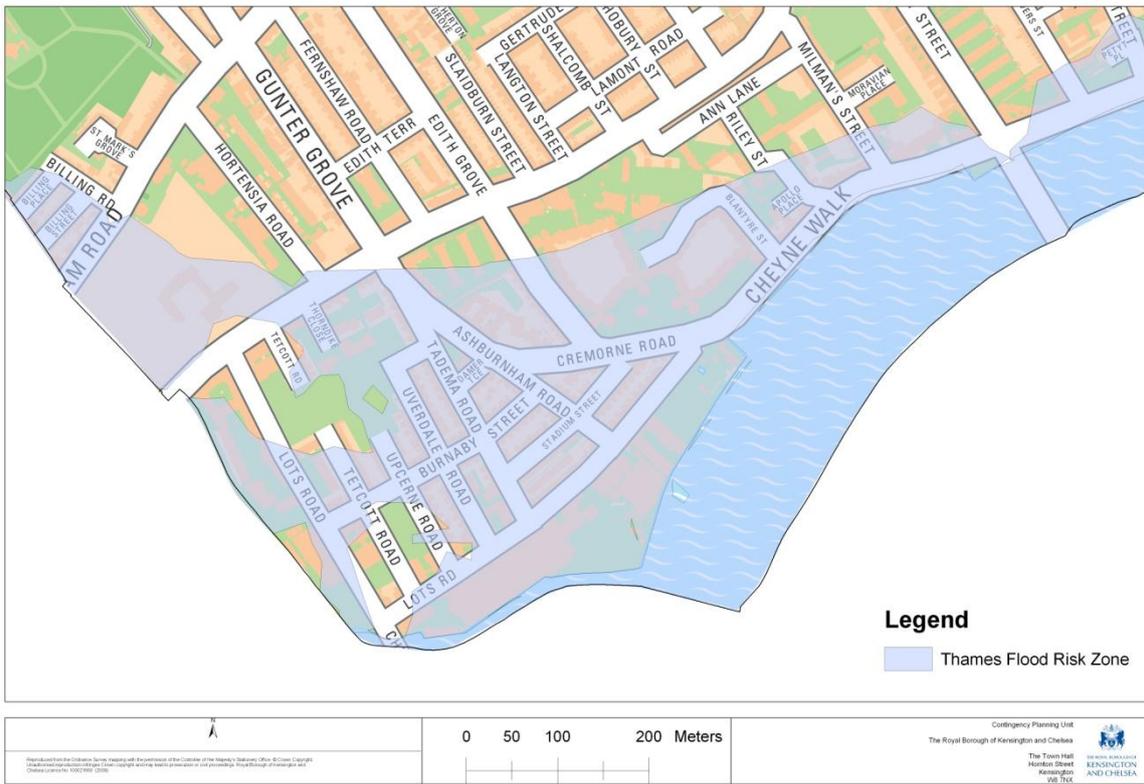


The Town Hall
Hornton Street
Kensington
W8 7XJ

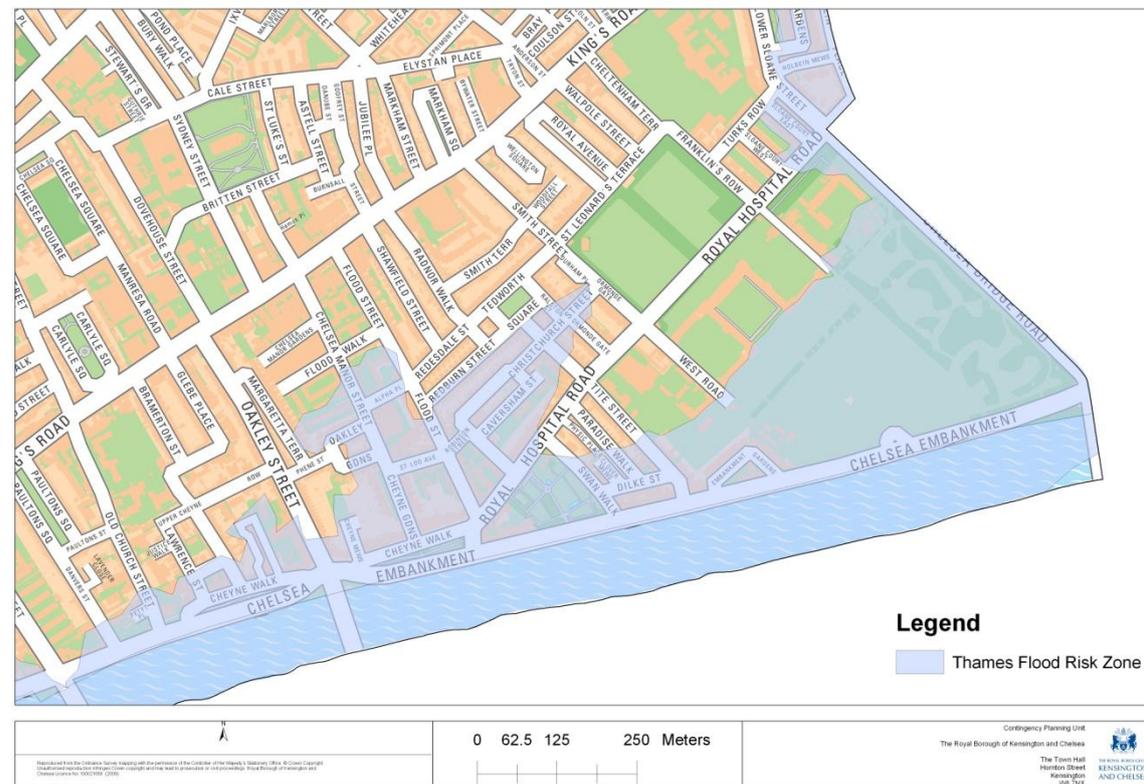
THE ROYAL BOROUGH OF
**KENSINGTON
AND CHELSEA**



Map 3: Thames Breach/Overtopping Flood Risk Zone in the South West border of The Royal Borough of Kensington and Chelsea



Map 4: Thames Breach/Overtopping Flood Risk Zone in the South East border of The Royal Borough of Kensington and Chelsea

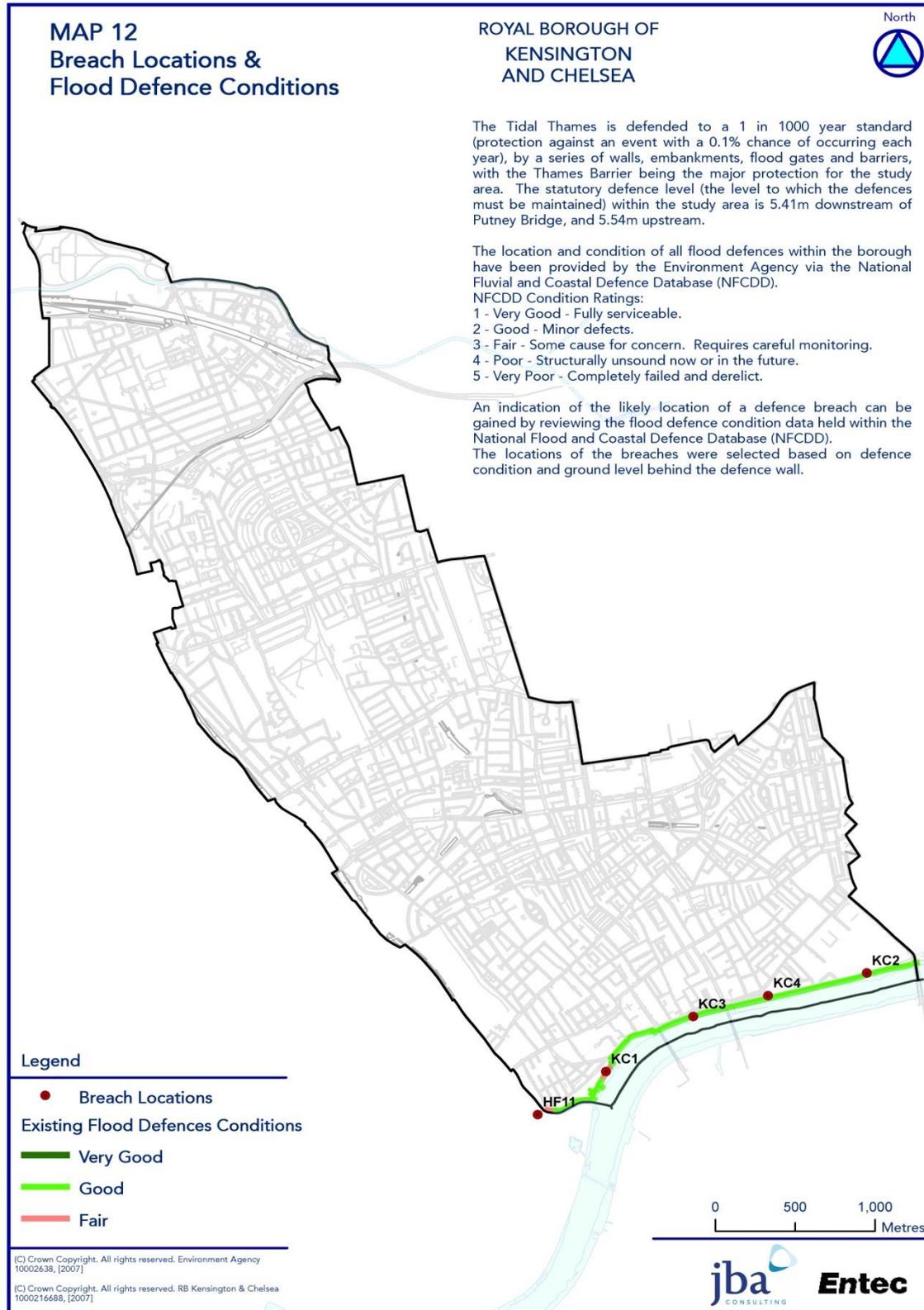


Map 5: Thames Breach/Overtopping Risk Zones on the Western border of The Royal Borough of Kensington and Chelsea

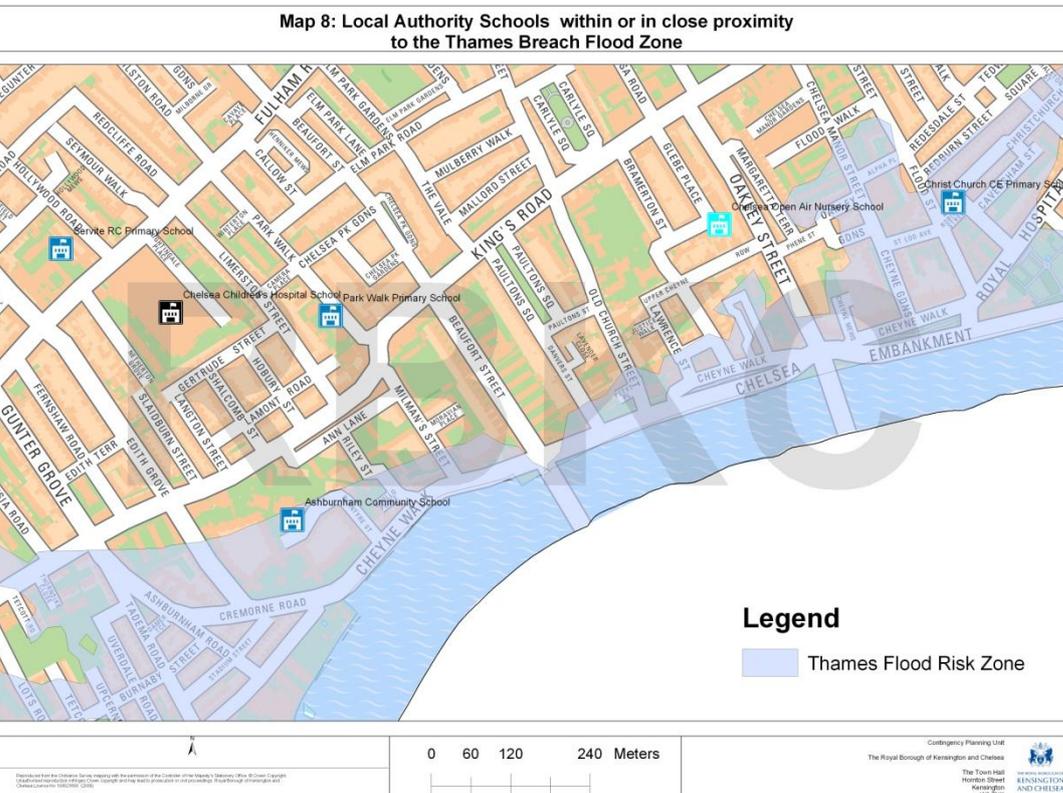
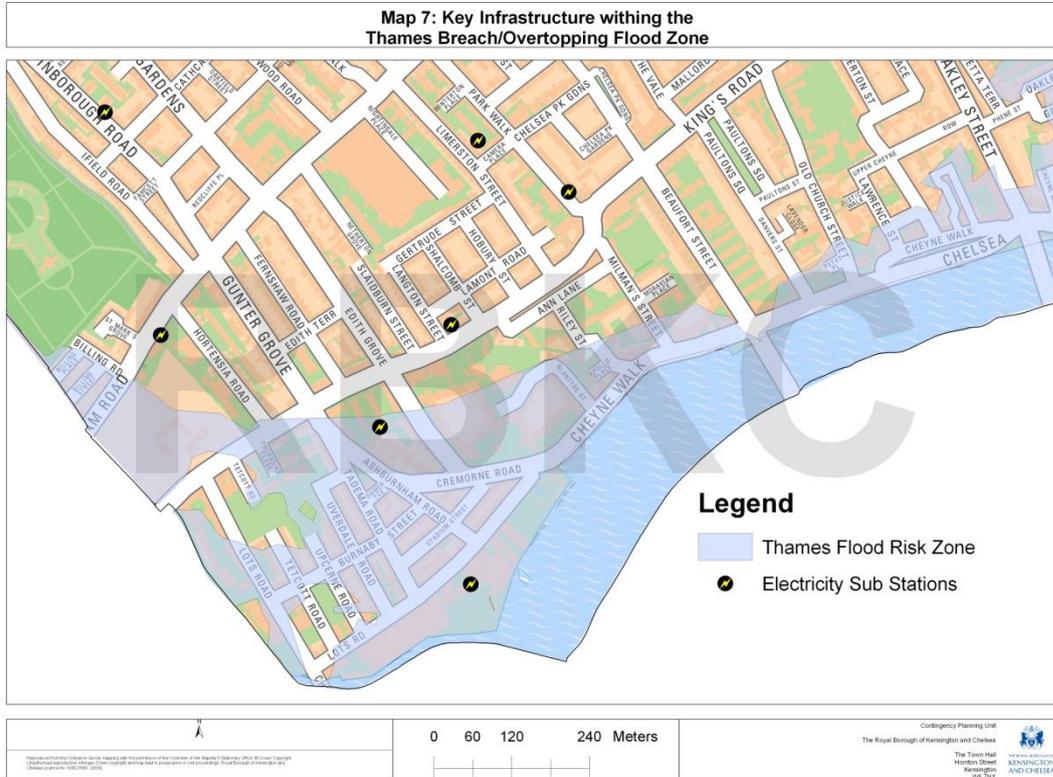


Map 6 – Breach Locations and Flood Defence Conditions The Royal Borough of Kensington and Chelsea.

N.B. Map taken from The Royal Borough of Kensington and Chelsea's Strategic Flood Plan



APPENDIX C – MAPS OF KEY INFRASTRUCTURE SITES AT RISK FROM THAMES BREACH FLOODING



APPENDIX D - VULNERABLE PEOPLE, VULNERABLE FACILITIES AND VULNERABLE KEY INFRASTRUCTURE

Log Sheet for Vulnerable People and Vulnerable Facilities – Thames Breach/
Overtopping Flooding

Type	Facilities	Address	No.	Support needed in emergency	Comm unit	Comm ent	Risk Rating
Schools	Ashburnham Primary School	Blantyre Street, SW10 0DT	020 7352 5740	No support Necessary: Any school impacted to be closed and will be reopened when appropriate or on the advice of the emergency services.	N/A	N/A	High
	Christ Church Primary School	1 Robinson Street, London	020 7352 5708	"			High
Health Facilities	Words End Health Centre	529 Kings Road London	020 7 351035 7	The Royal Borough of Kensington and Chelsea sites have their own emergency and business continuity plans including evacuating and relocation which should suffice in a flooding scenario without the aid of additional emergency services unless extenuating circumstances arise.			High

Type	Facilities	Address	No.	Support needed in emergency	Community	Comments	Risk Rating
Social Care Facilities	Cheyne Childrens Centre	10 Thorndike Close LONDON SW10 0ST	020 7349 1650				High
	Whistler Walk Children's Home	28 Whistler Walk, World's End Estate, London, SW10 0EP	020 7352470 7	The Children's home has its own emergency plans in place that cover flooding scenarios and will be activated if an incident arises.			High

APPENDIX E – ROADS AT RISK FROM THAMES BREACH FLOODING

Table (3) Shows Roads at Risk from Thames Flooding in the case of a Breach of Thames Defences

- Chelsea Embankment
- Cheyne Walk
- Lots Road
- Chelsea Wharf
- Chremorne Road
- Upcerne Road
- Uverdale Road
- Tacema Road
- Stadium Street
- Manor Street
- Christ Church Street
- Russel Road
- Chelsea Bridge Road

APPENDIX F – Public Advice and Guidance

The Royal Borough of Kensington and Chelsea recommend that the public make use of the Environment Agency and the Health Protection Agency's advice.

Environment Agency:

The Environment Agency has various leaflets of advice:

- Preparing for a Flood
- During a Flood
- After a Flood

These leaflets can be found on the Environment Agencies website, in PDF format and in an audio version.

The Environment Agency also provides information on flooding for businesses

<http://www.environment-agency.gov.uk/homeandleisure/floods/default.aspx>

and

Floodline Warnings Direct; A free service that provides flood warnings direct by phone, mobile, email, SMS text message, fax or pager. The number is **0845 988 1188**.

Health Protection Agency (HPA)

The HPA has a list of Frequently Asked Questions available on its website. These can be found at:

http://www.hpa.org.uk/webw/HPAweb&HPAwebPrinterFriendly/HPAweb_C/1213686561005?p=1213686561915

APPENDIX G Sandbag Policy

In keeping with the strategic aim of preventing large scale flooding to the borough, key installations and public infrastructure priority will initially be given to:

- Temporary works as identified by responding agencies to prevent flooding to large areas of the city affecting both residential and commercial properties.
- Repairs to existing flood defences
- Key installations: cc Utility stations, hospitals, schools, communication centres, council buildings (i.e. residential homes) and operational emergency services premises.
- Critical transportation routes and other essential roads.

Situations covered by this Policy

This policy is intended to counter the threat from overtopping of the River Thames, breaches of permanent or temporary defences, or areas of surface water flooding.

Public Supplies

The Royal Borough of Kensington and Chelsea will not provide sandbags to the public in a Thames Breach/Overtopping flooding incident.

Building a Sandbag Wall:

It is essential to fill the sandbags correctly, they must not be over-filled. Sandbag walls should never be constructed with a vertical face, but should be laid in a pyramid shape with never less than two rows at the top of the pyramid.

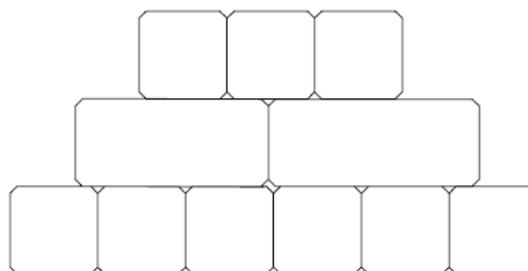


Figure L1 - Sandbag wall cross-section showing pyramid formation

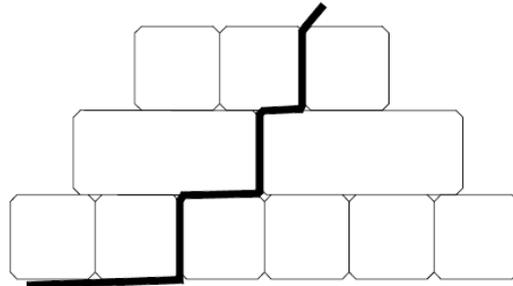


Figure L2 – Location of plastic waterproofing sheeting

Sandbag walls are not waterproof, but waterproofing can be achieved using plastic sheeting which is threaded through the layers. Avoid placing any of the outside wall in the direction of the water.