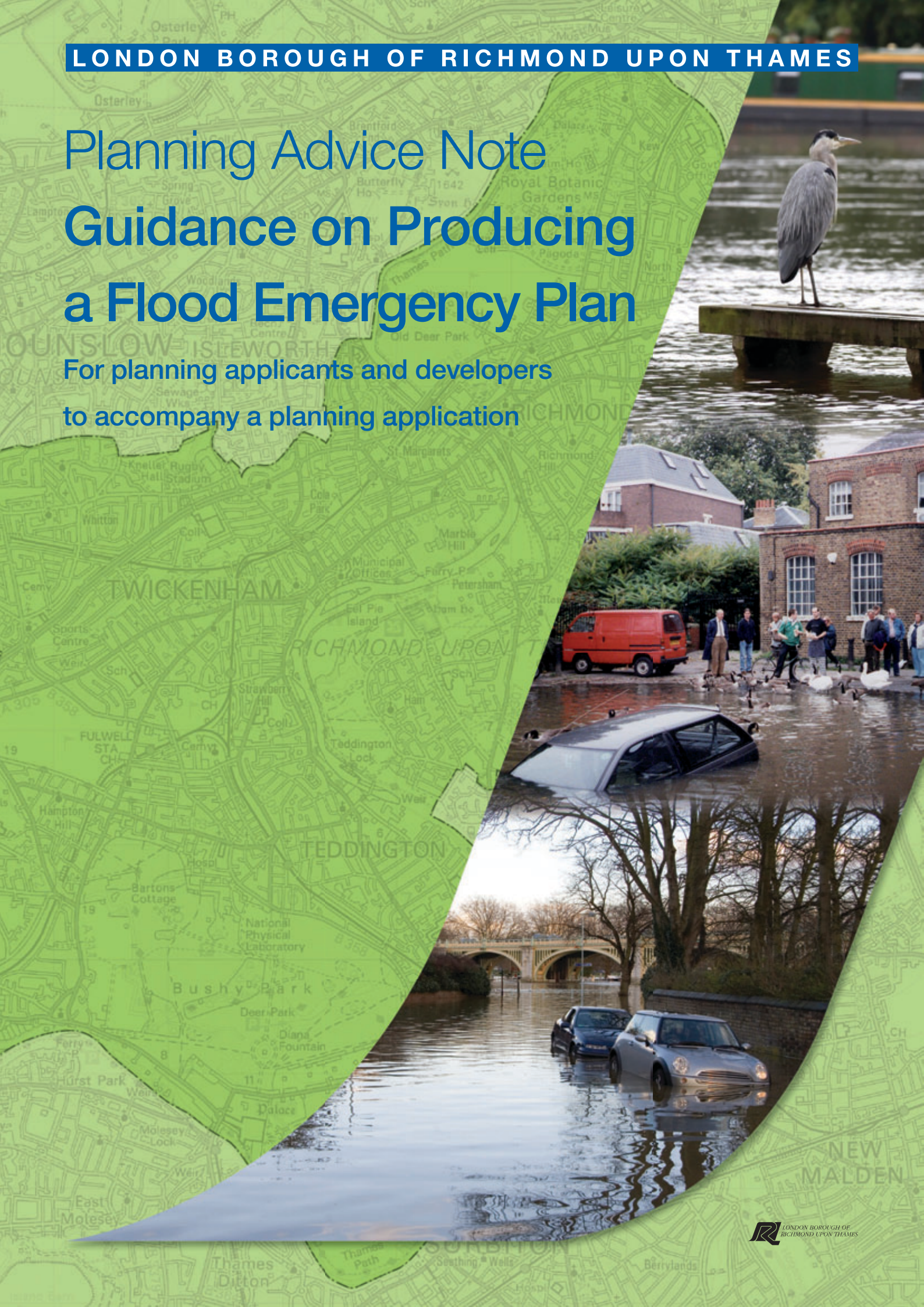


Planning Advice Note Guidance on Producing a Flood Emergency Plan

For planning applicants and developers
to accompany a planning application



DISCLAIMER

The London Borough of Richmond upon Thames, as far as it can ascertain, acknowledges that this flood emergency plan guidance document is suitable for the purposes set out in Planning Policy Statement 25: Development and Flood Risk, including the Practice Guide to Planning Policy Statement 25.

Flood emergency plans are the sole responsibility of the applicant and the London Borough of Richmond upon Thames cannot accept any responsibility for any omission or error contained in any such plan, or for any loss, damage or inconvenience, which may result from such plan's implementation.

Any subsequent approval does not impute any approval of those plans from the Environment Agency or any of the emergency services. Flood emergency plans must be reviewed on a regular basis – at least every three years or when information changes that requires it to be amended – to ensure that they are consistent with good practice and use the latest available information on flood risk.

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RECOGNITION OF THIS GUIDANCE BY THE ENVIRONMENT AGENCY

The Environment Agency has been actively involved in the drafting and reviewing process of this guidance document. Their advice and input was sought at various stages in the production process and their comments and suggestions on improving the guidance document have been incorporated. The Environment Agency provided the following statement on 13 October 2011:

"The Environment Agency recognises London Borough of Richmond upon Thames' proactive approach towards decision making. We encourage good quality guidance to support effective, locally-based decision making by local authorities. We encourage planning applicants and developers within the London Borough of Richmond upon Thames to use this locally-specific guidance document when preparing and producing a Flood Emergency Plan."

Environment Agency, 13 October 2011

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INTRODUCTION

1. The London Borough of Richmond upon Thames has produced this planning guidance to support applicants and developers who are required / encouraged to produce and submit a flood emergency plan as part of a **planning application**.
2. The Council will not be guaranteeing safety of occupiers and users of new developments by approving flood emergency plans. However, the Council will be requesting flood emergency plans as part of the planning application process to ensure that procedures are in place for occupants/users to retreat to a safe place of refuge via a safe route should a flood event occur.
3. This document sets out the following:
 - General guidance and objectives of flood emergency plans
 - Planning policy context; setting out when and why flood emergency plans are needed
 - Approval process for flood emergency plans
 - Other sources of information to assist in the preparation of a flood emergency plan
 - Suggested **contents and structure** of flood emergency plans
 - The Appendices of this document provide further information and guidance, including PPS25 guidance, a sample of planning conditions and informatives, a **checklist and assessment criteria** and flood warning codes.

FLOOD EMERGENCY PLAN GUIDANCE

4. In addition to a Flood Risk Assessment, a flood emergency plan may be required for a development to ensure it is safe in terms of risk of flooding. It is necessary in some instances to identify whether adequate flood warnings would be available and that people using the development will act on them to keep safe. Depending on the nature of a development and the severity of flooding on a site, a flood emergency procedure may entail retreating to a safe place of refuge within the development, leaving the development by a signed safe access route to dry ground beyond the flooded area, or preparing for rescue by the emergency services to safe locations previously identified in a flood emergency plan.
5. The main aims of a flood emergency plan are to reduce the risk to life, mitigate damage, and enable a safe and well organised evacuation of occupants of premises during a flood event.
6. The objectives of flood emergency plans are to:
 - Raise awareness of the risk of flooding in the location specified
 - Detail the flood warnings and estimated lead time available
 - Detail how the Plan is triggered, by who and when
 - Define any areas of responsibility for those participating in the Plan
 - Describe what actions are required by the people in the development
 - Establish a safe route to a safe location
 - Outline the evacuation procedure and place of refuge to safely evacuate the occupants of a premises
 - Establish procedures for implementing the Plan

7. This guidance document is aimed to be used by applicants/developers for both individual properties and larger premises as well as for residential and non-residential developments. Whilst the majority of the advice and guidance provided in this document can be used for any type of development, there may be sections giving specific advice to for example businesses or individual residential properties. In any case, the flood emergency plan should be proportionate to the risk and appropriate to the scale, nature, location and type of proposed development.
8. The guidance aims to give an idea of the minimum requirements for an effective and acceptable flood emergency plan that the Council expects to be submitted for its approval. All flood emergency plans should be thorough and site specific. This document therefore contains a suggestion for contents and structure of a flood emergency plan, which can be modified to ensure these criteria are met.
9. The guidance outlines key sections that should be present, in some form, in the submitted flood emergency plan. Additionally, this document contains a flood emergency plan checklist and assessment criteria to be used by applicants and Council officers as well as the latest available EA flood warning codes.

PLANNING POLICY CONTEXT

10. In line with adopted Development Management Plan policy DM SD 6, Flood Warning and Evacuation Plans are required to be submitted for all proposals on sites of 10 dwellings or 1000 sqm of non-residential development or more. Minor developments at risk of flooding are also encouraged to produce a Flood Warning and Evacuation Plan.
11. In addition, whilst the Environment Agency (EA) will continue to be a statutory consultee in the planning process and many existing arrangements such as on property design, floor levels etc will remain in place, the EA has adopted a new way of working with regard to safe access and egress to and from developments.
12. The EA continues to object to planning applications where developments can not achieve safe access and egress. However, in line with government guidance and the localism approach, the decision of what is or is not an appropriate flood emergency plan and whether access and egress arrangements are acceptable now rests with the Local Planning Authorities. Therefore, the London Borough of Richmond upon Thames and the EA have agreed that the EA will continue to object to any future development that may have the access/egress above the “very low hazard” rating, but with an advisory note that the objection can be overcome if the Local Planning Authority (LPA) decides that a flood emergency plan is sufficient to keep people safe and not exposed to flood hazards. Upon confirmation from the LPA that the flood emergency plan is acceptable, the EA may then be able to remove an objection to a proposed development.
13. This document provides guidance for developers and applicants, who need to ensure that appropriate evacuation and flood response procedures relevant to their proposed development are in place to manage the residual risk associated with an extreme flood event. This guidance document outlines how a flood emergency plan can be constructed and what it should contain.
14. Note that the Environment Agency has been actively involved in the drafting process of this guidance document and they recommend to planning applicants and developers within the London Borough of Richmond upon Thames to use this locally-specific guidance document when preparing and producing a Flood Emergency Plan.

APPROVAL PROCESS

15. There is no statutory requirement on the EA or the emergency services to approve evacuation plans. However, as the EA has all the skills and knowledge on any technical information contained within a flood emergency plan, they will review the FRA which provides the foundations for a flood plan and make comments on the accuracy of such technical information (i.e. flood hazard, onset of flooding, flood depth, flood warning availability and timing etc.). However, the EA will not comment on the acceptability of the flood plan, i.e. whether the access and egress arrangements are “safe”. The London Borough of Richmond upon Thames will make the final decision on whether the flood plan and the proposed development are acceptable.
16. In addition, if flood emergency plans are used to overcome an objection by the EA, then such a plan will have to be agreed at planning application stage and not as a planning condition. The compliance of a development with the agreed flood emergency plan shall be enforced by planning condition (see Appendix 2 for some possible planning conditions which might be attached to certain planning approvals).
17. Any flood emergency plan shall be submitted to the London Borough of Richmond upon Thames Local Planning Authority (LPA) and not to the Council's emergency planning unit. The LPA may consult the Council's emergency planning staff to provide local knowledge and advice with regard to potential flood events and situations as well as on the acceptability of the flood plan and any of its proposed measures.

OTHER SOURCES OF INFORMATION

18. To aid the formulation of a flood emergency plan, developers should also utilise the following documents and websites:
 - [Richmond upon Thames Strategic Flood Risk Assessment](#) (SFRA, August 2010 – updated regularly), especially Appendix E on Safe Access & Egress Design Requirements:
http://www.richmond.gov.uk/flood_risk_assessment.htm
 - [Planning Policy Statement 25: Development and Flood Risk, Practice Guide](#) (December 2009)¹, especially figure 7.2 and supporting paragraphs 7.25 – 7.33; <http://www.communities.gov.uk/documents/planningandbuilding/pdf/pps25guideupdate.pdf>
 - [Planning Policy Statement 25: Development and Flood Risk](#) (March 2010):
<http://www.communities.gov.uk/documents/planningandbuilding/pdf/planningpolicystatement25.pdf>
 - [Environment Agency Flooding Advice](#):
<http://www.environment-agency.gov.uk/homeandleisure/floods/default.aspx>
 - [National Flood Forum](#): an independent body that supports flood preparedness and flood recovery, including advice about flood protection products and clean up processes
<http://www.floodforum.org.uk/>

¹ Note that the National Planning Policy Framework (NPPF) will replace the current PPGs and PPS's, including PPS 25, with a single document in 2012. The draft NPPF has been taken into account in drafting this document, and no changes are anticipated in relation to Flood Emergency Plans as a result of replacing PPS 25 with the NPPF.

FLOOD EMERGENCY PLAN – SUGGESTED CONTENTS AND STRUCTURE

Scope, Objectives and Background

19. To begin, briefly explain the reason for making a flood emergency plan. State the aim, purpose, objectives and important aspects of the Plan. Explain to the reader the importance of preparation in flood risk management.
20. Some background information on the history of flooding in the area, if applicable, could be useful for the reader.

Location and Proposal

21. Detail the nature and extent of the site that the Plan is covering. Describe the location of the site/premises particularly in relation to the Environment Agency's flood zones and Strategic Flood Risk Assessment flood maps, and indicate exit routes.
22. Outline the land use and purpose of the site and its development. Consider the vulnerability of occupants, and whether rescue by emergency services may be required. It must be demonstrated that there is the ability to maintain key infrastructure and services during a flood event. Important infrastructure and vulnerable or sensitive areas should be listed and identified on plans. Describe the proposed everyday use of the site by people and vehicles and list busy areas and access/egress points. This section should be accompanied by an annotated map(s).
23. For residential properties it is necessary to explain to occupants the reasons why the property is at risk of flooding and the level of risk the development could be exposed to in an easy and understandable format. A brief explanation of the factors leading to flooding, i.e. a storm surge, heavy rainfalls, river flooding, surface water flooding etc may be useful. All occupants should be aware of the likely frequency and duration of flood events.

Risk Assessment Summary

24. Summarise the findings of the site's detailed Flood Risk Assessment (FRA). This should include the risk from all sources and types of flooding. Flood maps should be inserted here. The FRA should also include an assessment of risk to life (flood hazard²) should a flood event occur. The flood hazard rating for a proposed development site should be clearly stated in the flood emergency plan.
25. The risk to life is largely a function of the depth and velocity of the floodwater as it crosses the floodplain. For example, if a flood flow is relatively deep but is low energy (i.e. slow moving), then an average adult will be able to remain standing. Similarly, if the flow of water is moving rapidly but is very shallow, then once again an average adult should not be put off balance. If however the flow is both relatively deep and fast flowing, then a person will be washed off their feet, placing them at considerable risk. The risk to health and safety as a result of submerged hazards during flooding conditions (given the often murky nature of floodwaters) is also a consideration. Speed of inundation is also an aspect to consider and although it is a related issue, flood hazard mapping is normally

² Flood hazard can be calculated in accordance with the Supplementary note on flood hazard ratings and thresholds for development planning control purposes (Environment Agency and HR Wallingford, May 2008). It can be found at: http://evidence.environment-agency.gov.uk/FCERM/Libraries/FCERM_Project_Documents/FD2321_7400_PR_pdf.sflb.ashx

based on flood depths and velocities. While the speed of inundation of the Thames may be slow, the hazard can still be high because of its depth and velocity. Further advice on flood hazard can be found in the Council's SFRA (section 6.3 and Appendix A) and in the Supplementary note on flood hazard ratings and thresholds for development planning control purposes³.

26. Developers and applicants should note that a flood emergency plan is considered to be an acceptable way of managing flood risk where the flood hazard has been given a "very low hazard" rating. In some instances, flood emergency plans may also be acceptable where the rating is "danger for some". However, it is unlikely to be an acceptable way of managing residual flood risk where the hazard to people classification is "danger for most". Where the hazard rating is a "danger for all", the Council considers that the danger to risk of life is too high to allow new developments and as such, flood emergency plans are not an acceptable way of managing flood risk in these high hazard areas.

Flood Hazard Rating (HR)	Colour Code	Hazard to People Classification	Use of flood emergency plans to manage flood risk
Less than 0.75		Very low hazard – caution	Acceptable
0.75 to 1.25		Danger for some – includes children, the elderly and the infirm	Maybe acceptable
1.25 to 2.0		Danger for most – includes the general public	Unlikely to be acceptable
More than 2.0		Danger for all – includes the emergency services	Unacceptable

Table 1: Hazard to People Classification and acceptability of using flood emergency plans

27. In addition to the FRA and the flood hazard assessment, a risk assessment of the impact of flooding and evacuation of vulnerable persons should be undertaken. This can be linked with the hazard to people assessment. Further assessments of risk could be done, depending on the nature of the site and the vulnerability of its users and occupiers. For example, a site holding hazardous material would require consideration of the impact of flooding on the risk to people from direct or indirect contact with the material.

Assessment of potential Mitigation Measures

28. Assess the worthiness of implementing or purchasing products to lessen the threat and impact of flooding to the site. This information may have already been incorporated into the site's FRA. If the assessment outcomes are favourable, detail how such measures can/will be put into place. The following websites and documents should be used for identifying methods of mitigation:

- [Planning Policy Statement 25: Development and Flood Risk, Practice Guide](#) (December 2009), paragraph 6.32 gives advice regarding how to identify which form of flood proofing is most appropriate.
- [How to Reduce Flood Damage:](#)
<http://www.environment-agency.gov.uk/homeandleisure/floods/105963.aspx>
- [Flood Protection Products:](#)
<http://www.environment-agency.gov.uk/homeandleisure/floods/105979.aspx>

³ Supplementary note on flood hazard ratings and thresholds for development planning control purposes, Environment Agency and HR Wallingford, May 2008

Flood Warnings

29. There should be an explanation of Flood Warnings, flood codes, how the Floodline operates and contact numbers within the Plan. Note that the EA's flood warnings are only in relation to fluvial and tidal flooding, and do not cover other sources of flooding such as surface water or groundwater flooding.
30. It is crucial to fully explore the variety of flood warnings available to a development. The EA provides a number of methods for receiving flood warnings. These are:
- [EA Three Day Flood Risk Forecast](http://www.environment-agency.gov.uk/homeandleisure/floods/125305.aspx):
<http://www.environment-agency.gov.uk/homeandleisure/floods/125305.aspx>
 - [EA Flood Warnings in Force by Region](http://www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx) (updated every 15 minutes):
<http://www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx>
 - [EA Floodline Warnings Direct](https://fwd.environment-agency.gov.uk/app/olr/home) (phone, text or email):
<https://fwd.environment-agency.gov.uk/app/olr/home>
31. Other sources of warning include flood wardens, sirens and the media. Call the EA Floodline for advice on what is available for the proposed development site.
32. It is also useful to understand the lead time for flood warnings⁴. This is the time between the issuing of a warning to when flooding will occur. For some rivers such as the Thames, there is a long lead time as the river takes hours to rise. However, for some watercourses, especially with urban catchments, the lead time may be only 1-2 hours.
33. If you are preparing a flood emergency plan for locations along the **Tidal Thames** within this borough (from Putney Bridge to Teddington Weir), flood warnings will be issued by the EA no later than 2 hours before the tide reaches this area; however, it is expected that warnings will generally be issued about 6 hours in advance of high tide. The likely flood events in this flood warning area are going to be due to overtopping of defences or a breach in the defence line.
34. The lead time for locations along the **River Crane** is generally 6 hours. Parts of the River Crane have flood defences, in which the likely flood events are going to be due to overtopping of defences or a breach in the defence line. For the non-defended parts along the River, the EA believes that the response time is 6 hours.
35. The lead time for the **Beverley Brook**, which is protected from tidal flooding by a tidal flap, is between 1-6 hours.
36. If your development site is affected by fluvial flooding (between Teddington Weir to upstream areas, including Molesey), the response time for the **Fluvial Thames** within this borough is 18+ hours; the EA will endeavour to give at least a 2 hour lead-time, however, in all cases this may not be possible.
37. For further details on lead times of river flood warnings in your area, check the [Richmond Multi-Agency Flood Plan](http://www.richmond.gov.uk/lbrut_flood_plan.pdf): http://www.richmond.gov.uk/lbrut_flood_plan.pdf

⁴ Note that the lead times provided in this document are taken from the LBRuT Multi-Agency Flood Plan, which are based on the 0.1% flood; however, for planning purposes, a 1% flood is being considered, which may not have the same lead time.

38. This section of the Plan should also include details of how flood warnings will be transmitted to everyone on site, the availability of staff/occupants/users to respond to a flood warning as well as the time taken to respond to a flood warning. This requires planning of the methods of information dissemination and the people responsible for ensuring this occurs.
39. There should be clear statement that the occupants/organisation will sign up to the Floodline service. If you are a business, the individuals responsible for receiving the calls must be clearly identified (see Section below on Actions upon receiving alerts and warnings).

Flood Alert Notice

40. Display a notice in a prominent, clearly visible place, or places, on the premises and/or site to indicate to everyone the current flood alert status issued by the Environment Agency. The following is an example of a Flood Alert Notice.

Flood Alert Notice

This building is located in an area at risk of (*insert here tidal and/or fluvial*) flooding. Flooding may occur when a combination of weather conditions, such as heavy rainfall, high river levels and/or high tides coincide (*amend accordingly*).

The current flood warning status issued by the Environment Agency is:

(*INSERT THE APPROPRIATE CODE HERE*)

Up-to-date flood warning information and advice can be obtained from:

Floodline on 0845 988 1188 (24 hours a day)

Or alternatively visit the Environment Agency's website:
www.environment-agency.gov.uk/floodline

Actions upon receiving Alerts and Warnings

41. It must be ensured that there are plans in place for reacting to information from the EA. The EA provides useful guides on how to react to different flood warning levels. The EA's Flood Warning Codes are found in the Appendix 4 of this document. There should be a site specific escalation plan, based around the EA's flood warning codes.
42. If you are proposing a non-residential development, describe the procedures on how to close down the premises in an orderly fashion so that people and assets can be safeguarded, the site can be made safe and secure, and the premises evacuated well within the time afforded by the warning. Also see the Business Continuity Plan section of this document.
43. There should also be a description in the Plan on what will be done to protect the development and its contents, such as how easily items (i.e. cars, furniture, other equipment etc.) can be relocated or flood barriers across doors deployed. At this stage there should also be a description on the preparation for evacuation procedures.

Safe Egress Procedures & Evacuation Routes

44. This is a very important section of the flood emergency plan and will be highly scrutinised. There should be safe access to and from the development. Planning a safe route of egress is important to ensure people are safe in the event of a flood. Minimising the risk to life is the most important goal of flood risk management.
45. Questions to address in the flood emergency / evacuation plan include:
- When should evacuation procedures be implemented? What circumstances will trigger an evacuation?
 - Will there be an alarm system?
 - How will evacuation be organised?
 - Will there be an assembly point?
 - Where will people be evacuated to? What route? Will it be signposted?
 - Would rescue by emergency services be necessary and feasible?
 - During the evacuation, how will the welfare of people be looked after?
 - What are the procedures after an evacuation and how will the people's welfare be looked after?
46. The above points need to be fully addressed in the Plan and supported by maps and plans that clearly identify all the important locations and routes.

On-Site and/or Temporary Refuge

47. Depending on the safe access/egress procedures and whether occupants will be evacuated during a flood event, on-site and/or temporary refuge may be required. Designated on-site refuge will be required if people will remain on the site/premises when flooding occurs. If on-site refuge is considered appropriate, the place of refuge should be well above the predicted flood level, as a minimum above the 1 in 100 fluvial or 1 in 200 tidal flood level – whichever is greater – including an allowance for climate change, and where applicable, taking into account breach of flood defences. This is to ensure that the place of refuge is safe during a flood event.
48. The quality of the refuge in terms of facilities, communication and warmth provided should reflect the timescales that people would be trapped. It will be necessary to provide the expected duration of flooding on site within the Plan if a temporary refuge option is considered. Additional information may also be required regarding the duration of flooding from other sources of flooding.
49. Any place of refuge should be clearly identified in the Plan. All staff/occupants and/or residents should be made aware of this location. It is further suggested that a Flood Kit should be stored and kept at the on-site refuge to support a short-term stay.
50. If occupants are going to be evacuated to an off-site place of refuge via a safe egress route, an easily accessible “grab-bag” / Flood Kit should be prepared and kept at an identified location within the property.
51. The EA has a suggested flood kit list; depending on the location of the development and the needs of the occupants, additional items other than suggested in the EA's list may also be required.

Actions Post-Evacuation

52. This section should offer site specific guidance on post evacuation procedures. The Floodline (0845 988 1188) will almost always be an important resource.
53. The EA have published [advice on how to react when a flood event occurs:](http://www.environment-agency.gov.uk/homeandleisure/floods/31632.aspx)
<http://www.environment-agency.gov.uk/homeandleisure/floods/31632.aspx>
54. In the event of flooding it is the duty of the Council to coordinate authority responses. An important task that the Council undertakes is to set up Rest Centres. A Rest Centre is a temporary, short-term emergency accommodation (up to 48 hours) where evacuated people can rest and obtain refreshments and information about the flood. The London Borough of Richmond upon Thames' call centre can be contacted on 0845 6122 660. Returning to site should only be permitted when advised by emergency services or local authority officials that it is safe to do so.
55. Further information on the sheltering of evacuees and procedures can be found in the London Borough of Richmond upon Thames Rest Centre Activation and Operating Procedures.
56. Guidance on how to [clean up after a flood](http://www.direct.gov.uk/en/HomeAndCommunity/WhereYouLive/FloodingInYourArea/DG_180028) can be aided using Environment Agency instructions:
http://www.direct.gov.uk/en/HomeAndCommunity/WhereYouLive/FloodingInYourArea/DG_180028

After a Flood

57. A section within the flood emergency plan should be dedicated to the actions that should be taken after a flood event. This should also include the procedures and expected time taken to re-establish normal use following a flood event, including clean-up times and the time to re-establish services.
58. Advice on what to do after a flood event can be found on the EA's website and in their booklets.

Dangers of Flood Water

59. Include a reminder of the dangers associated with flood waters in both flood plans for businesses and residential properties. The following is a brief guide that can be incorporated in the Plan as a reminder.

REMEMBER!

- Don't walk through flowing water – Currents can be deceptive, and shallow, fast moving water can knock you off your feet!
- Don't swim through fast flowing water – You may get swept away or struck by an object in the water!
- If you have to walk in standing water, use a pole or stick to ensure that you do not step into deep water, open manholes or ditches!
- Don't drive through a flooded area – You may not be able to see abrupt drop-offs and only half a metre of flood water can carry a car away!
- Avoid contact with flood water – It may be contaminated with sewage, oil, chemicals or other substances!

Business Continuity Plans

60. If the proposed development is of commercial/retail nature (office, shop, restaurant etc), the future occupiers should develop a business continuity plan (BCP) in the event of a flood, or in the event of any emergency or disruption to activities. A BCP anticipates disruptions to normal activities and identifies critical activities that need to be maintained to deliver services, run the business and survive the crisis.

List of Key Contacts

61. Useful numbers such as the Floodline, Local Authority (London Borough of Richmond upon Thames Emergency Planning - 08456 122 660), utilities (electricity, water, gas, phone), local public transport (buses, taxis) and insurance company should be included in the Plan.

Plan Usage and Dissemination

62. Details should be given on how it is intended to ensure that occupiers of the site/premises know and understand the flood emergency plan. For businesses, this could include briefings to staff/occupiers as well as practicing flood evacuation drills and placement of the Plan/summaries for people to read.
63. If you are a business, flood preparedness measures and awareness training should be carried out as part of the staff induction. A refresher of the awareness training should be held every year.
64. For larger residential premises, you can also consider flood preparedness measures and awareness training for residents. For individual householders, the need to be familiar and comfortable with the Plan and its contents should be emphasised. Occupants should be encouraged to practice evacuation and make sure they become familiar with the safest route from the property to the designated safe place of refuge.
65. A statement on a resident/staff/user awareness policy should be contained within the Plan.

Document Control and Monitoring

66. The flood emergency plan must be kept up to date to maintain safety. The Plan should be reviewed and updated a minimum of every 3 years. If your site changes in a way that is relevant to the Plan, an update must be completed. Responsibility for this must be assigned to a person/position.

APPENDIX 1 – PPS25 GUIDANCE

Planning Policy Statement 25 Practice Guide | Residual Risk | Figure 7.2 | p. 163:

Flood warning and evacuation plans should include:

How flood warning is to be provided, such as:

- availability of existing flood warning systems;
- rate of onset of flooding and available flood warning time; and
- how flood warning is given.

What will be done to protect the development and contents, such as:

- how easily damaged items (including parked cars) will be relocated;
- the availability of staff/occupants/users to respond to a flood warning, including preparing for evacuation, deploying flood barriers across doors etc; and
- the time taken to respond to a flood warning.

Ensuring safe occupancy and access to and from the development, such as:

- occupant awareness of the likely frequency and duration of flood events;
- safe access to and from the development;
- ability to maintain key services during an event;
- vulnerability of occupants, and whether rescue by emergency services will be necessary and feasible; and
- expected time taken to re-establish normal use following a flood event (clean-up times, time to re-establish services etc.).

APPENDIX 2 – POSSIBLE CONDITIONS AND INFORMATIVES

In certain instances it may be necessary to attach planning conditions or informatives to planning permissions. The typical wording for these conditions or informatives is set out below. However, these conditions or informatives are not used for all planning applications and the wording is not fixed; the use and content of the conditions will be subject to the characteristics of the site and/or the proposal. The conditions must be in line with Circular 11/95: Use of conditions in planning permission.

In accordance with the Town and Country Planning Act, the Council can use its discretion to attach conditions to planning approvals. The Council reserves the right to change any of the conditions at the Council's discretion.

Flood Emergency Plan – Residential development

CONDITION: The development shall not be occupied until a Flood Emergency Plan (based on the submitted Flood Risk Assessment) has been submitted to, and approved in writing by, the Local Planning Authority. The commitments explicitly stated in the Flood Emergency Plan shall be binding on the applicants or their successors in title. The measures shall be implemented upon the first occupation of the building hereby permitted and shall be permanently kept in place unless otherwise agreed in writing with the Local Planning Authority. Upon written request, the applicant or their successors in title shall provide the Local Planning Authority with written details of how the measures contained in the Flood Emergency Plan are being undertaken at any given time.

REASON: To ensure the safety of the residents of the development against the risk of flooding.

Flood Emergency Plan – Commercial/Mixed development

CONDITION: The development shall not be occupied until a Flood Emergency Plan (based on the submitted Flood Risk Assessment) has been submitted to, and approved in writing by, the Local Planning Authority. The commitments explicitly stated in the Flood Emergency Plan shall be binding on the applicants or their successors in title. The measures shall be implemented upon the first occupation of the building hereby permitted and shall be permanently kept in place unless otherwise agreed in writing with the Local Planning Authority. Upon written request, the applicant or their successors in title shall provide the Local Planning Authority with written details of how the measures contained in the Flood Emergency Plan are being undertaken at any given time.

REASON: To ensure the safety of the occupiers and users of the development against the risk of flooding.

Flood Emergency Plan

CONDITION: A Flood Emergency Plan, covering place of refuge, flood evacuation and safe/escape routes, shall be submitted and approved by the Local Planning Authority prior to the commencement of works at the site and shall be complied with.

REASON: To ensure the safety of the occupiers and users of the development against the risk of flooding.

INFORMATIVE – For approvals of development in Flood Zones 2 and 3

You have been granted planning permission for a development in a flood risk area. We strongly advise that you sign up to the free Flood Warning Direct service by calling Floodline on 0845 988 1188.




APPENDIX 3 – FLOOD EMERGENCY PLAN CHECKLIST & ASSESSMENT CRITERIA

Assessment Area/ Section	Sub-criteria	Priority	Assessment			Notes Comments
			Satisfactory	Improvements required	Unacceptable	
Scope, objectives and background	Scope, objectives and purpose of Plan	L				
Location and proposal	Detailed site description, incl. location	M				
	Source of flooding	M				
	Flood zone (SFRA and EA)	M				
	Proposed land use/ use of building	M				
	Important infrastructure and vulnerable areas, people and equipment	H				
	Access/egress points	H				
Risk assessment summary	Satisfactory FRA summary	L				
	Flood maps	M				
	Flood hazard rating incl. assessment and maps	H				
	Impact of flooding, incl. vulnerable people, structures, other hazards etc.	H				
Mitigation measures	Assessment of potential mitigation measures and products	M				
Flood warnings	Assessment of available flood warnings	M				
	Advanced warning time	M				
Flood alert notices	Dissemination of flooding warnings	M				
Actions upon receiving flood alerts and warnings	Site specific escalation plan based on EA flood warning codes	H				
	Alert procedures	M				
Safe egress and evacuation routes	Safe access to and from development	H				
	Evacuation procedures	H				
	People/property	M				
	Evacuation routes (shown on map)	H				
	Safe place of refuge (shown on map)	H				
	Welfare of people	L				
On site and/or temporary refuge	Details of refuge, including on-site and/or temporary	M				
	Quality of refuge	L				
	Flood kit	L				
Actions post evacuation	Welfare of people after evacuation	M				
	Contact details of relevant authorities	L				
	Post flooding clean up plan	L				
After a flood	Estimated time taken for return to normal use	L				
	Procedures required post flood	M				
Business continuity	Advice to businesses; Continuity plans	L				
List of key contacts	List all relevant key contacts	M				
Dangers of flood water	Education on dangers of flood water	M				
Plan usage and dissemination	Methods to raise plan awareness	M				
	Awareness policy	L				
	Exercise/test/practice of plan and evacuation	M				
Document control	Document monitoring and review plan	L				
	Responsibility for plan maintenance	L				

Scoring Scheme			Reviewing Officer
Satisfactory	Meets requirements	Condition can be discharged / Planning permission can be granted	Flood Emergency Plan is considered acceptable / unacceptable (delete as appropriate)
Improvements required	Needs some improvement	Condition cannot be discharged	Condition can / cannot be discharged (delete as appropriate)
Unacceptable	Does not meet the minimum requirements	Condition cannot be discharged	
Priority	L = Low	M = Medium	H = High

APPENDIX 4 – ENVIRONMENT AGENCY FLOOD WARNING CODES

The Environment Agency provides three types of warnings that will help you prepare for flooding and take action. There are three status symbols denoting the threat level and type of action required.

EA Flood Warning	Explanation	What to do
 <p>FLOOD ALERT FLOODING IS POSSIBLE. BE PREPARED.</p>	<p>Flooding of low laying land and roads is expected.</p> <p>Be alert, be prepared, and watch out.</p>	<ul style="list-style-type: none"> ➤ Monitor local news and weather forecasts ➤ Be aware of water levels near you. ➤ Be prepared to act on your flood plan ➤ Check on the safety of pets and livestock ➤ Prepare a flood kit of essential items ➤ Charge your mobile phone
 <p>FLOOD WARNING FLOODING IS EXPECTED. IMMEDIATE ACTION REQUIRED.</p>	<p>Flooding of homes and businesses is expected.</p> <p>Act now!</p>	<ul style="list-style-type: none"> ➤ Move cars, pets, food, valuables and important documents to safety. ➤ Get flood protection equipment in place. ➤ Turn off gas, electricity and water supplies if safe to do so ➤ Put flood protection equipment in place ➤ Be prepared to evacuate your home. ➤ Protect yourself, your family and help others. ➤ Act on your flood plan
 <p>SEVERE FLOOD WARNING SEVERE FLOODING. DANGER TO LIFE</p>	<p>Severe flooding is expected.</p> <p>There is extreme danger to life and property.</p> <p>Act now!</p>	<ul style="list-style-type: none"> ➤ Stay in a safe place with a means of escape ➤ Be ready should you need to evacuate ➤ Co-operate with the emergency services ➤ Call 999 if you are in immediate danger

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FURTHER INFORMATION

Planning Policy and Guidance

Detailed information is contained in other supplementary guidance and leaflets, available from www.richmond.gov.uk/planning_guidance_and_policies.htm

Borough-wide policies and guidance

- Core Strategy
- Development Management Plan
- Sustainable Construction Checklist SPD
- Advice for Householders: Sustainable Development
- Front Garden and Off Street Parking Standards SPD
- Strategic Flood Risk Assessment
- Preliminary Flood Risk Assessment

London-wide policies and guidance

- London Plan (Mayor of London)
- Sustainable Design and Construction SPG (Mayor of London)

Development Control (Planning application advice)

www.richmond.gov.uk/planning_applications_residential.htm

Email: envprotection@richmond.gov.uk

Tel: 0845 612 2660

Building Control

www.richmond.gov.uk/building_control

Tel: 020 8891 7357

Conservation Areas and Listed Buildings

www.richmond.gov.uk/urban_design.htm

Tel: 020 8891 7117

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اگر در فهمیدن این نشریه مشکلی دارید لطفاً به میز پذیرش در آدرس قید شده در زیر مراجعه نمایید تا ترتیب ترجمه تلفنی برایتان فراهم آورده شود:

Farsi

إذا كانت لديك صعوبة في فهم هذا المنشور، فنرجو زيارة الإستقبال في العنوان المعطى أدناه حيث بإمكاننا أن نرتب لخدمة ترجمة شفوية هاتفية.

Arabic

ਜੇਕਰ ਤੁਹਾਨੂੰ ਇਸ ਪਰਚੇ ਨੂੰ ਸਮਝਣ ਵਿਚ ਮੁਸ਼ਕਲ ਪੇਸ਼ ਆਉਂਦੀ ਹੈ ਤਾਂ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਪਤੇ ਉੱਪਰ ਰਿਸੈਪਸ਼ਨ 'ਤੇ ਆਓ ਜਿੱਥੇ ਅਸੀਂ ਟੈਲੀਫੋਨ ਤੇ ਗੱਲਬਾਤ ਕਰਨ ਲਈ ਇੰਟਰਪ੍ਰਿਟਰ ਦਾ ਪ੍ਰਬੰਧ ਕਰ ਸਕਦੇ ਹਾਂ।

Punjabi