

A Summary of the Flood Warning Process for Thames Ditton (Mainland)

Floodline: 0345 988 1188

Introduction

Early in 2020, flood alerts and flood warnings were issued by the Environment Agency (EA) for Thames Ditton.

This note has been produced mainly by the EA with updates by the Residents Association Flood Group to explain the flood alert and flood warning process that specifically applies for Thames Ditton and the surrounding areas.

The Residents Association Flood Group is working at a finer level of detail to develop a Community Flood Plan that will provide more detailed flood information which will, for example, indicate when residents in particular streets should move cars and take other necessary action. The Flood Plan will also provide more detailed information on what to do in the event of a flood.

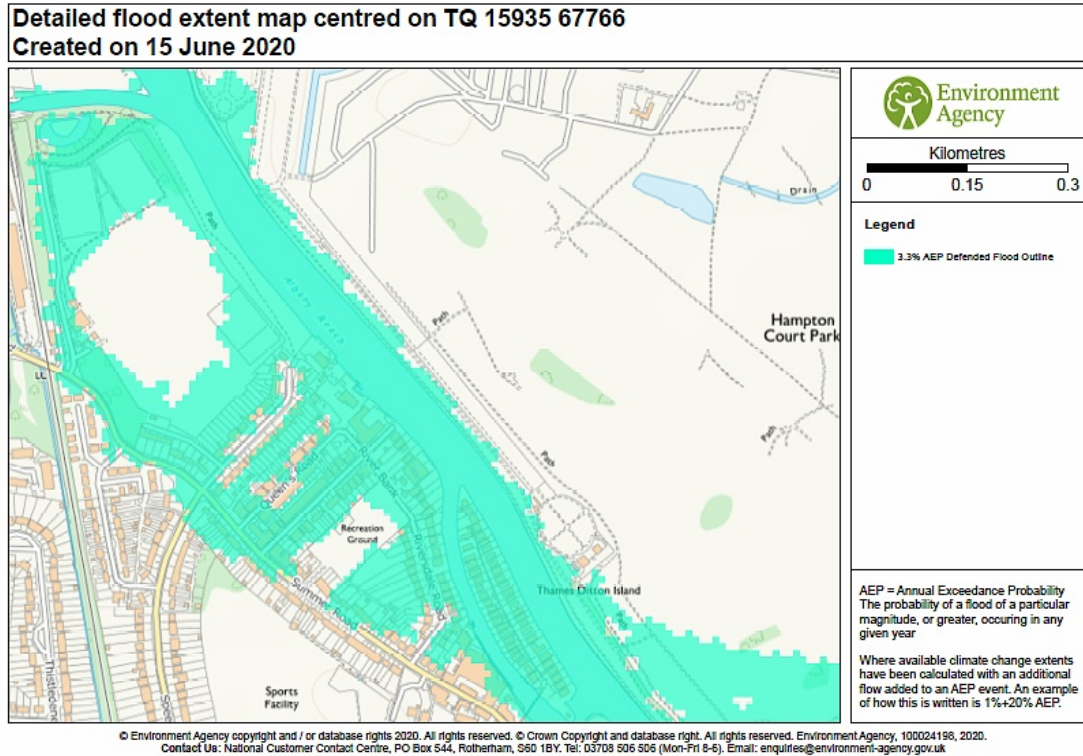
Critical to understanding flood warnings is the actual river height. For Thames Ditton there is a measuring station opposite Thames Ditton Island, as described later in this note. The actual measured river heights are relatively meaningless in absolute terms, but they allow measured river levels to be compared with the normal summer river height, which is around 4.5m AOD (related to a local datum). During the worst flooding in February 2014 the level went up to a peak of around 6.7m, which flooded much of Alexandra Road and River Bank and some properties in the area. The maximum river height in February 2020 was 6.27m AOD with 6.35m AOD reached the previous December. This did not cause flooding along Alexandra Road because the Residents Association had arranged with Thames Water to install a non return valve in the street drain to prevent this happening.

Assessing flood risk

You can assess your properties long term flood risk on the EA website:
<https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>

This information is used for lots of purposes including people submitting permit and planning applications and buying properties. It is useful to find out if a property is at risk. There are data sets and maps for fluvial, surface water and reservoir flooding.

The latest map showing flood risk is shown below. This has been revised and updated based upon the latest modelling and is more up to date than that shown on the EA web site (July 2020).



It is important to understand what this general information means in relation to river heights and potential flood warnings as well as what the various risk levels actually mean and the number of properties likely to be affected in Thames Ditton.

Firstly the risk levels are given numerically as an AEP (Annual Exceedance Probability). This is a percentage that shows the likelihood that the associated river level will be reached in any year. For example, a 10% AEP means that in any year, there is a 10% chance that the associated river level (6.77m) will be reached. The second method is to show a ratio such as 1 in 10 or 1:10. This means effectively the same, that in any year there is a 1 in 10 chance of the river level being reached, which is the same as a 10% chance. The ratios commonly used by Environment Agency and the associated river height level for Thames Ditton and their relationship to risk are as in the following table. It should be noted that this does not include an allowance for increased risk due to climate change.

AEP	Ratio	River Level	Environment Agency Risk	Street Flooding	Property Flooding
10% AEP	(1:10)	6.77m		97	
5% AEP	(1:20)	7.00m		143	
3.33% AEP	(1:33)	7.38m	High Risk	218	90
2% AEP	(1:50)	7.63m			
1%AEP	(1:100)	7.88m	Medium Risk	285	276
0.1%AEP	(1:1000)	9.04m	Low Risk		

The figures quoted for street flooding give the approximate number of properties where the street outside is likely to flood and cars will need to be moved. Property flooding gives the approximate number of properties where flood water will actually pass across the property threshold. The Residents Association does not have data for heights above Medium Risk.

It is very important to understand that the risk figures are averages based upon predictions of rainfall etc. In flooding conditions, the river level in Thames Ditton is also affected by the tide, which can affect the water flow over Teddington Lock. At the height of the flooding in 2014, the extent of flooding was significantly reduced by the operation of the Thames Barrier which was closed some 35 times.

Also, much has been made of the River Thames Scheme and its potential impact on flood risk in Thames Ditton. It has been determined that the impact of the main scheme in Thames Ditton will be very small and will not affect the risk. However, the EA are looking at the potential for Community Resilience measures which should significantly reduce the risk to some properties in the High Risk area if implemented. Details of these proposals will be provided to residents when they are finalised.

Signing up for Flood Alerts and Warnings

There are two stages to the overall Flood Warning process. The first is the **Flood Alert**, which is given when the river is likely to burst its banks in the area covered and the second is the **Flood Warning** that is given when properties are likely to be flooded.

You can sign up for flood warning and alerts either online :

<https://www.gov.uk/sign-up-for-flood-warnings> or by calling **Floodline: 0345 988 1188**. In addition some phone numbers are automatically signed up based on living in flood warning areas using their landlines and some mobile phone networks and although they can opt-out of this system most people tend not to do so.

Areas you can get warnings for

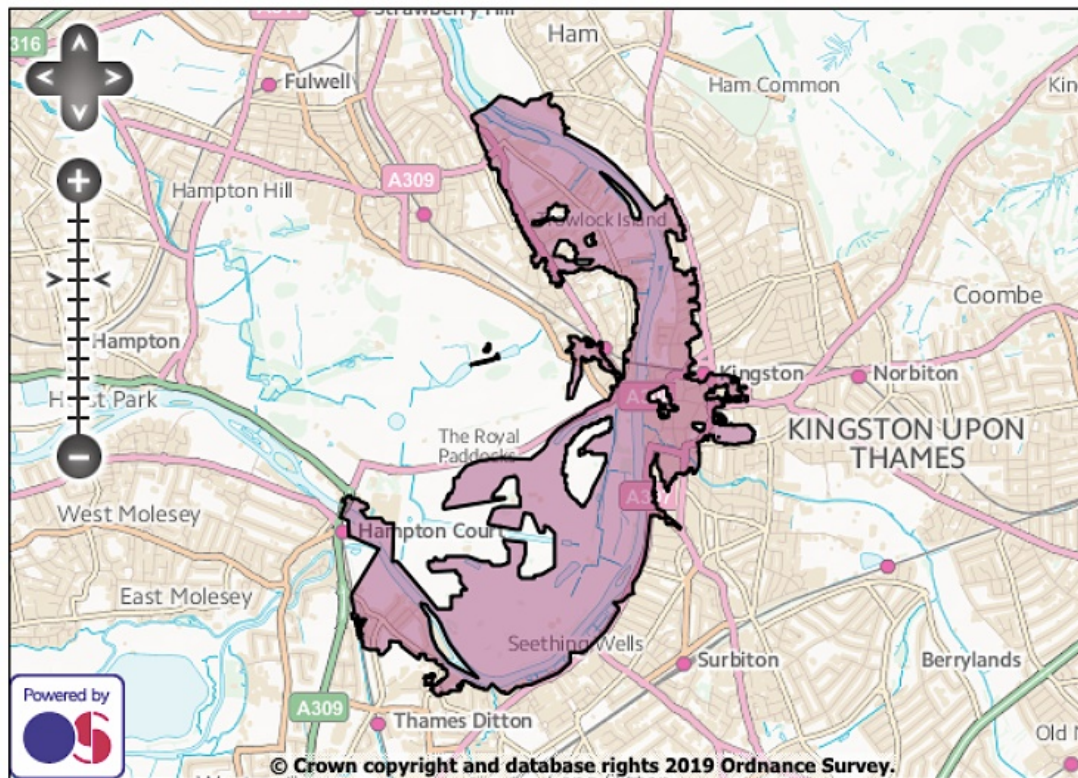
Area	Warning type
River Mole at Esher and East Molesey	Flood Warning
River Thames at Hampton and Hampton Wick	Flood Warning
River Thames at Thames Ditton	Flood Warning
River Thames at Thames Ditton Island	Flood Warning
The River Rythe between Oxshott and Thames Ditton	Flood Warning
Lower River Mole Area at Esher and East Molesey	Flood Alert
River Thames at Thames Ditton Island	Flood Alert
River Thames from Hampton and Thames Ditton to Teddington	Flood Alert
The River Rythe Catchment	Flood Alert

Flood Alerts

Flood alert areas are usually much bigger than a flood warning area and the one for Thames Ditton (excluding Thames Ditton Island – which has its own) includes the whole reach between Moseley and Teddington locks, as shown coloured on the plan below.

Flood warning or alert map

River Thames from Hampton and Thames Ditton to Teddington



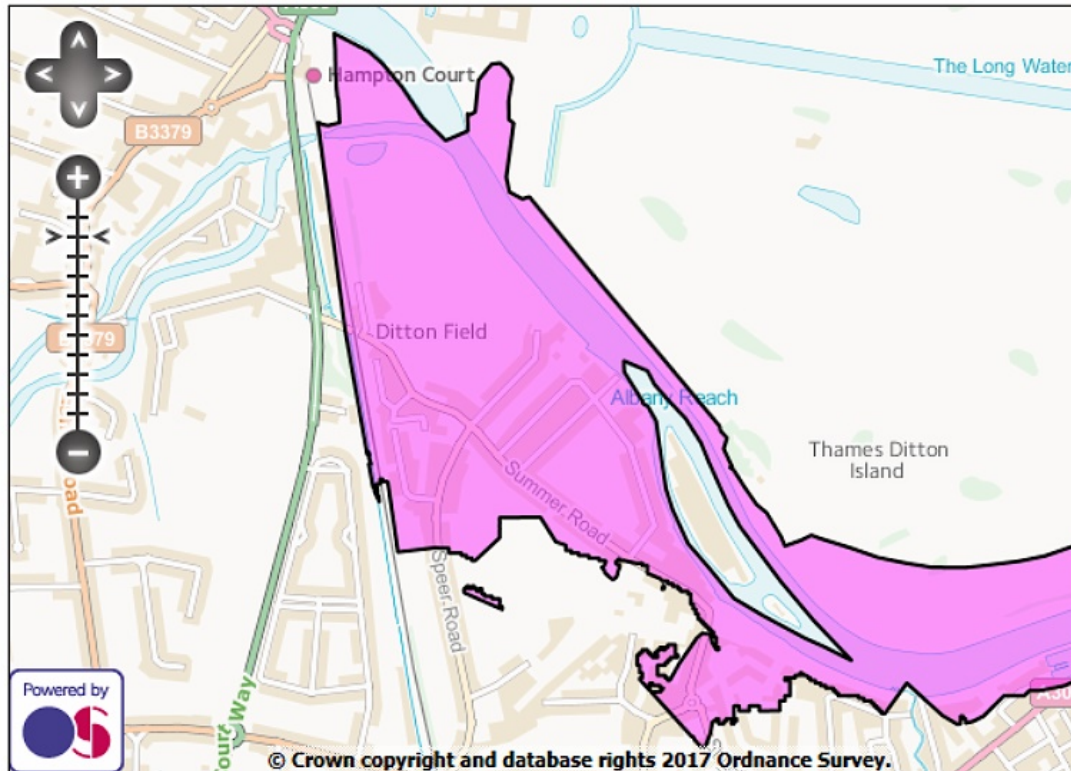
Quite a few people choose not to receive flood alerts. These are issued more frequently, and warn of flooding to low lying land and roads rather than property flooding. Instead they will just receive flood warnings. You can check whether you have chosen to receive both and opt in/ out by calling Floodline.

Flood Warnings

Below is an extract of the EA mapping system showing the flood warning area TD is located within. As with Flood Alerts, TD Island is not included and has a separate flood warning area. **The flood warnings you receive only relate to this purple coloured area.** There are also severe flood warnings at higher flood levels.

Plan of Flood Warning Area

River Thames at Thames Ditton



The three different warnings and the relevant Thames River levels for Thames Ditton are:

- Flood alert = river out of banks - 5.7m (but because of large area covered, alert may come when river at much lower level)
- Flood warning = property flooding expected – 6.66m (and 6.35m for Thames Ditton Island)
- Severe flood warning = based on impacts rather than river level threshold e.g. threat to life

Note that 5.7m is unlikely to cause any problem to mainland residents and at 6.66m some properties are likely to be already flooded and certainly some cars should have been moved. **It is suggested that those interested should sign up for Alerts and Warnings related to TD Island as they seem more relevant to the main area at risk on the mainland.**

When flood alerts and flood warnings are issued you receive a phone call, text or email depending on what method you selected when you signed up. You can update these details by calling Floodline.

In order to get the full details of the flood alert or warning you will need to look at the EA pages on the internet:

<https://flood-warning-information.service.gov.uk/warnings>, or call Floodline.

Exactly the same wording is used on the website and by the recorded message on Floodline. There are also some twitter accounts which publish this information: <https://twitter.com/FloodAlerts>

The wording of the alert or warning will include:

- Whether property flooding is expected
- The current river situation and what is forecast to happen
- Brief details of the flooding expected (e.g. “properties closest to the river are expected to flood”)
- What action you can take
- The action we (the E.A) are taking (e.g. “our field teams are out in the area inspecting flood defences and trash screens”)

EA usually update the wording of the warning or alert twice a day with current information about levels and forecast, and it will be issued at least two hours before any impacts but with more notice where possible. Flood alerts are only issued in daytime hours (7am-10pm). Flood warnings can be issued at any time although we will try not to issue them during the night if at all possible.

The warning also includes a map of the relevant area. **The map will show the whole flood warning area even if only part of it is at risk.** The examples below show a flood alert and warning for Thames Ditton Island issued in February 2020.



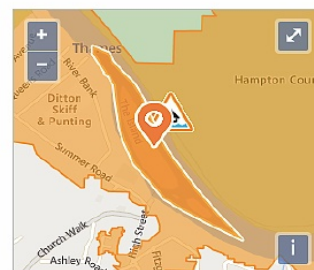
Flood alert in force now

River Thames at Thames Ditton Island

Flooding is possible - be prepared

Property flooding is not expected. River levels have risen on the River Thames as a result of recent heavy rainfall. Therefore, flooding of low lying land is expected to continue. No rainfall is forecast this evening and overnight. The next high tide at 02:00 (21/02/2020) is forecast to be approximately 5.9m. The following high tide at 14:15 (21/02/2020) is forecast to be approximately 5.8m. Please remain safe and aware of your local surroundings, and refer to the 'River and Sea levels in England' webpage for current river levels. This message will be updated tomorrow morning, 21/02/20, or as the situation changes.

This information was last updated at **8:36pm Thursday 20 February 2020**



[Hide other warnings and alerts](#)



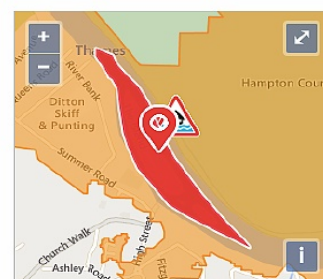
Flood warning in force now

River Thames at Thames Ditton Island

Flooding is expected - immediate action required

Property flooding is possible. River levels have risen on the River Thames at Thames Ditton as a result of persistent heavy rainfall from Storm Dennis coinciding with high tides. Therefore, flooding of property is possible and flooding of low lying land and roads is expected today (18/02/20) and into tomorrow morning (19/02/2020). The next high tide is forecast for 10:30am. The predicted level of this tide is between 6.1 and 6.2 mASD. The following high tide is forecast for 23:45 and is between 6.05 and 6.15mASD. Further light rainfall is forecast over the next 24 hours. We expect river levels to remain high. We are closely monitoring the situation. Our incident room is open and operational staff are operating weirs and checking defences. Please move possessions and valuables off the ground or to safety and refer to the 'River and Sea levels in England' webpage for current river levels. This message will be updated this evening, 18/02/2020, or as the situation changes.

This information was last updated at **10:16am Tuesday 18 February 2020**



[Hide other warnings and alerts](#)

The actual river levels measured by Thames Ditton Island are shown below. The impact of high tide is clearly seen, particularly around 14th February.

Unfortunately there is currently a problem with the forecast river level, as can be seen in that there is a discontinuity between the current and the forecast levels. This is being resolved and the forecast should currently be ignored. In the event of a Flood Alert and Warning, the predicted levels included in the Alert/Warning message should be used.

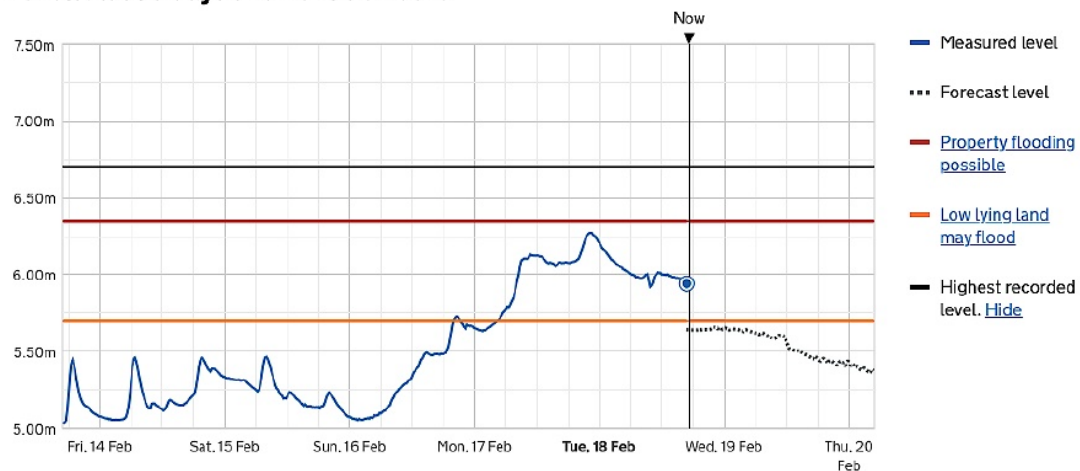


A flood alert is in place nearby.

Flooding is possible. Be prepared. [View details.](#)

Latest recorded level **5.94m** at **4:45pm Tuesday 18 February 2020.**

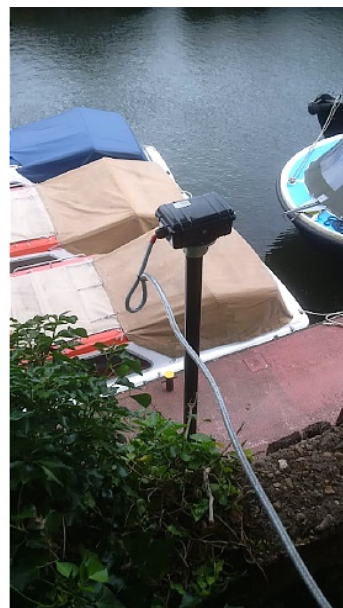
Levels: last 5 days and next 36 hours



River levels on the internet (RLOI)

<https://flood-warning-information.service.gov.uk/river-and-sea-levels>

Both Thames Ditton and Thames Ditton Island are monitored using the same gauges:



The output from the gauge is available on the internet as shown for the Flood Alert above.

The level shown for potential flooding relates to the whole flood warning area – it is the same threshold EA use for issuing flood alerts i.e. the river is coming out of banks. **It is not the threshold for property flooding.** You will note that EA update the level data more frequently if there is a flood risk.

The five day flood risk is only intended to give a high level overview of the levels of risk in regions and nationally – EA use a similar system internally to give an idea of the overall flood risk as the weather forecast and river models cannot reliably look this far ahead.

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This note was primarily prepared by Maddy Adams of the Environment Agency, with additional information and updates included by Tony Thompson, the Chairman of the Residents Association Flooding Sub-committee. If you require further information please contact Tony in the first instance at: aathompson_uk@yahoo.co.uk

May 2020