



CKC Resources & Considerations when planning Thames paddles from Kew when we have extreme weather

Key contextual considerations:		Map
1) Tides – are they close to neap or spring tides and at what stage of the tide is the paddle planned to occur?		
2) Wind – especially when paddling on exposed stretches of the Thames. E.g. paddling on Syon reach towards Richmond into a headwind from SW – will put the paddler directly into the headwind, because Syon reach is a long straight exposed section – so there is the possibility that small waves could build up. Also the section downstream of Hammersmith is exposed. If the water level is up, due to highish state of tide and/or flooding – then the paddler is more exposed, than at lower tide, when they will be paddling below the top of the river bank which can give some shelter.	<p>Syon Reach (2)</p> <p>Faster flow around corners at both North and South end of Isleworth Aid (3 a)</p> <p>Upswelling from Mogden discharge pumps (6)</p> <p>Choppy water by the outlet from Richmond ½ lock. (5)</p>	
<p>3) Places where localised flow may increase.</p> <p>a) This can be around the outside of a bend – eg on the bend by the pink house by Isleworth (& London Apprentice pub), or the bend that is upstream of Isleworth Ait and downstream of Richmond lock. The caution is needed by the bend at the upstream end of Isleworth Ait to ensure kayakers are not pushed against the moored boats.</p> <p>b) Localised flow can also increase when water in the Thames is being funnelled into a smaller cross-section of the river. Ie when the tide drops then the channel behind the islands dries out, and then the</p>		



water can no longer flow behind the islands. So all the water will need to flow down the main channel and will flow faster. At the point when the cross-section of the channel reduces significantly (e.g. upstream of Isleworth Ait when the river goes from being wide to all the water only being able to exit down the main channel at lower states of tide) – then the water will also speed up in that location.

- 4) Fluvial flow – ie quantity of water due to rainfall upstream in the catchment area of the Thames. The rest of this blog looks at this.
- 5) How the Richmond half-lock is being operated. When there is high fluvial flow through Richmond but not high enough that they just leave the gates open. What they do is adjust how low the gates go to regulate the fluvial flow and maintain a fixed level for Richmond. When the reading was 165m³/sec through Kingston in previous 12 hours to a paddle the flow under the gates was extremely violent. Staying by the right/west bank by the rollers was quite difficult as a strong eddy was trying to pull kayakers towards the partially open gates. Water was very choppy and not a place to take beginners.
- 6) Caution can be needed when river levels are *low* – along the east side of Isleworth Ait where the Mogden sewage treatment plant has several discharge pumps coming up from the river bed. At low river levels you can see up-swelling above these discharge points.

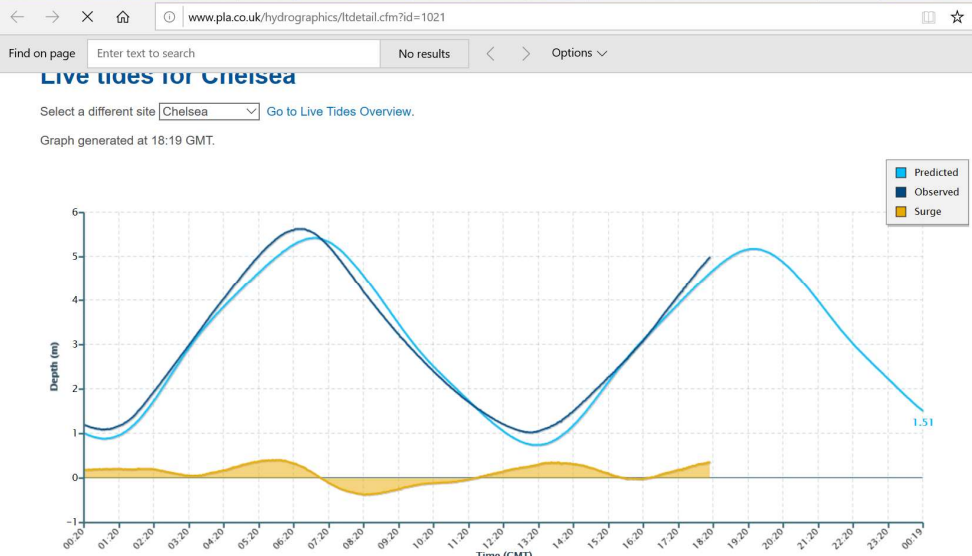
Resources to help assess quantity of water & timing of HW/LW on Thames, & assessing river water quality


Information in the resource	Screen shot of Webpage or twitter																														
<p>l) What is the quantity of water flowing down the Thames. There are two places which can give an indication of fluvial flow.</p> <p>a. Environment Agency from Lechlade to Teddington give boat users guidance. Webpage: riverconditions.environment-agency.gov.uk/ Red boxes say “Caution strong Stream”</p>	<p>The screenshot shows the website riverconditions.environment-agency.gov.uk/. It features a table with 12 rows, each representing a section of the river between two locks. Each row has a red button that says "CAUTION STRONG STREAM".</p> <table border="1"> <thead> <tr> <th>Section</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>Temple Lock to Marlow Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Marlow Lock to Cookham Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Cookham Lock to Boulters Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Boulters Lock to Bray Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Bray Lock to Boveney Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Boveney Lock to Romney Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Romney Lock to Old Windsor Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Old Windsor Lock to Bell Weir Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Bell Weir Lock to Penton Hook Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Penton Hook Lock to Chertsey Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Chertsey Lock to Shepperton Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Shepperton Lock to Sunbury Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Sunbury Lock to Molesey Lock</td><td>CAUTION STRONG STREAM</td></tr> <tr><td>Molesey Lock to Teddington Lock</td><td>CAUTION STRONG STREAM</td></tr> </tbody> </table> <p>On the right side of the page, there are several sections: "CAUTION STREAM DECREASING" with a warning for unpowered boats, "Floodline" with contact information, "Contacts" with details for The Environment Agency and Incident Hotline, and "Related Links" with links to river and sea levels and river Thames restrictions.</p>	Section	Status	Temple Lock to Marlow Lock	CAUTION STRONG STREAM	Marlow Lock to Cookham Lock	CAUTION STRONG STREAM	Cookham Lock to Boulters Lock	CAUTION STRONG STREAM	Boulters Lock to Bray Lock	CAUTION STRONG STREAM	Bray Lock to Boveney Lock	CAUTION STRONG STREAM	Boveney Lock to Romney Lock	CAUTION STRONG STREAM	Romney Lock to Old Windsor Lock	CAUTION STRONG STREAM	Old Windsor Lock to Bell Weir Lock	CAUTION STRONG STREAM	Bell Weir Lock to Penton Hook Lock	CAUTION STRONG STREAM	Penton Hook Lock to Chertsey Lock	CAUTION STRONG STREAM	Chertsey Lock to Shepperton Lock	CAUTION STRONG STREAM	Shepperton Lock to Sunbury Lock	CAUTION STRONG STREAM	Sunbury Lock to Molesey Lock	CAUTION STRONG STREAM	Molesey Lock to Teddington Lock	CAUTION STRONG STREAM
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<p>b. Environment Agency flow monitor at Kingston is updated live. https://www.gaugemap.co.uk/#!/Detail/1249/1382 Kingston is above Richmond half lock & Teddington lock.</p> <p>Although the Environment Agency gathers information about the flow at Richmond & Teddington – this is not put into the public domain. When reading the graph - be careful to check the vertical scale on this graph – since it can re-size itself when you refresh the website.</p> <p>The flow through Kingston is a reliable indicator of fluvial flow for the sections of the Thames downstream of Kingston that CKC paddles on. Teddington lock has little to no control of fluvial flow when the river height is high because water can just pour over the top.</p> <p>The average flow through Teddington in the winter is approx 100m³/second. So if Kingston is showing flows more or ~290m³/second and this coincides with an ebb (exiting out of the Thames) tide then it is probably unsuitable to paddle on. At lower flows consider the combined combination of state of the tide and wind when the paddle is due to happen.</p>	<p>Screen shot of the Gaugemap website showing the flow level at Kingston. The graph displays the flow level (m³/s) over time, with a current reading of 277.300m³/s at 05:45pm GMT. The graph also shows the flow level at other stations: Sunbury Lock, Molesey Lock, Thames Ditton Island, Kingston, Trowlock Island, and Teddington Lock.</p> <p>Twitter also can provide notifications</p> <p>Approximately every 12hours @riverlevel_1947 “Thames at Kingston” tweets the height of the river level, and flow in m³/sec</p>



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<p>II) Timing of the tide</p> <p>PLA “live tide” overview – is available for both Chelsea and Richmond, which are either side of Kew.</p> <p>http://www.pla.co.uk/hydrographics/ltdetail.cfm?id=1021</p> <p>This can give an indication as to when high or low tide are not happening as expected.</p>	 <p>Live tides for Chelsea</p> <p>Select a different site <input type="text" value="Chelsea"/> Go to Live Tides Overview.</p> <p>Graph generated at 18:19 GMT.</p> <p>Depth (m)</p> <p>Time (GMT)</p> <p>Legend: Predicted (light blue line), Observed (dark blue line), Surge (yellow shaded area).</p> <p>The graph shows the tide depth (m) over time (GMT) for Chelsea. The predicted tide depth ranges from approximately 1.5m to 5.5m. The observed tide depth is slightly lower than the predicted tide depth. The surge is shown as a yellow shaded area around the predicted tide depth, indicating the range of possible variations. The graph is generated at 18:19 GMT.</p>

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<p>III) Dirty water discharges</p> <p>After heavy rain Thames Water is unable to fully clean all the waste water at its Sewage Treatment works at Mogden & Hammersmith. Thames Combined Sewer Overflow @ThamesCSOAlerts twitter feed is the most useful resource since information is “tweeted” within an hour of discharge from Mogden.</p> <p>Whilst there is a significant quantity of dirty water in the Thames it would be wise not to take beginner paddlers out due to their higher risk of a capsiz an accidental swallowing of Thames river water. (Thames Water gives no indication of the quantity nor the duration of its discharges.)</p> <p>See tweet for both Mogden & Hammersmith.</p> <p>It is also possible to be put on a “rower notification” email distribution list to be advised of dirty water discharges. In practice these emails did not come through every time twitter advised there was a discharge. The contact email address is: rower.notification@thameswater.co.uk</p> <p>@ThamesPoo also tweets notifications.</p>	 <p>The screenshot shows the Twitter profile of 'Thames CSO Alerts' with 363 tweets. Two tweets are visible:</p> <ul style="list-style-type: none"> Tweet 1 (08/03/2020): Rower notification from Thames Water: Mogden Sewage Treatment Works (STW). Within the next hour, Mogden Sewage Treatment Works will be discharging heavily diluted storm water into the River Thames. Storm water is screened, settled in tanks and mixed with fully treated waste... Tweet 2 (05/03/2020): Rower notification from Thames Water: Hammersmith Pumping Station (PS). Following the recent rainfall, Hammersmith Pumping Station has in the last hour discharged untreated sewage into the River Thames, due to lack of capacity in the existing sewer network. Tideway, ...