

## TECHNICAL NOTE

JBA Project Code	2021s0534
Contract	Royal Borough of Kensington and Chelsea Level 1 SFRA
Client	Royal Borough of Kensington and Chelsea
Day, Date and Time	5th October 2022
Author	L Archer-Lock
Reviewer / Sign-off	A Beasley
Subject	Updates to PPG and implications on Level 1 SFRA



# 1 Royal Borough of Kensington and Chelsea (RBKC) Level 1 Strategic Flood Risk Assessment (SFRA)

## 1.1 Updates to PPG and implications on Level 1 SFRA

The Draft Level 1 Strategic Flood Risk Assessment for Kensington and Chelsea was submitted in February 2021 as part of the Regulation 18 consultation, and reviewed by the Environment Agency. Royal Borough of Kensington and Chelsea are currently in the final stages of the local plan review and are finalising the document and evidence base for Regulation 19 consultation.

Since the Regulation 18 consultation, updates to the Planning Practice Guidance (PPG) were issued on 25th August 2022. This technical note sets out the key changes to the PPG and the implications for the SFRA.

## 1.2 Changes to the Sequential Test for flood risk

The Sequential Test must now be performed to take account of all sources of flood risk. It must demonstrate that development is located in areas with the lowest risk both now and in the future. Previously the PPG set out that the Sequential Test should be performed using the Flood Zones for River and Sea flooding (as described in the Environment Agency's Flood Map for Planning). There is no specific guidance given about the process by which other forms of flood risk should be included in the assessment or the appropriate data sets to use.

Kensington and Chelsea is a highly urbanised borough. The Risk of Flooding from Surface Water (RoFSW) mapping is based on local detailed modelling from 2014 here and shows extensive surface water risk following the road network across the borough. As set out in the SFRA, the sewer network layout and capacity also has a strong influence on flooding here and standard surface water mapping does not tell the whole story.

For this reason, Critical Drainage Areas have been defined and are used to delineate the known zones of high combined surface water and sewer flood risk. The CDAs have already been included in the Sequential Test in the SFRA.

Groundwater risk has been considered by the SFRA and acknowledged in the sequential test report but that at present there is insufficient spatial data of a sufficient level of detail to apply the sequential test to groundwater.

The Environment Agency have previously agreed with the approach to the sequential test in Kensington and Chelsea.

## 1.3 Changes to the functional floodplain (Flood Zone 3b)

Whilst the delineation of the functional floodplain is still for the Local Planning Authority to decide through their SFRA, further criteria have been included. Additional criteria are:

## TECHNICAL NOTE

JBA Project Code	2021s0534
Contract	Royal Borough of Kensington and Chelsea Level 1 SFRA
Client	Royal Borough of Kensington and Chelsea
Day, Date and Time	5th October 2022
Author	L Archer-Lock
Reviewer / Sign-off	A Beasley
Subject	Updates to PPG and implications on Level 1 SFRA



- The Guidance requires that the functional floodplain must now be considered as the extent of floods with a 1 in 30 (3.3% AEP) or greater probability of flooding (defended) rather than 1 in 20 (5% AEP) as was previously the case.
- Land designed to flood even in extreme events (i.e. exceeding the 0.1% annual probability flood).

To address potential issues involving relocation of development it will be a requirement to identify “areas likely to be permanently inundated by the sea or tidal estuaries/ rivers or with sufficient frequency as to become intertidal, Flood Zone 3b or areas likely to be in 3b in future” – so Flood Zone 3b is required for rivers and the sea now and for climate change.

In Kensington and Chelsea, there is no functional floodplain due the presence of flood defences along the River Thames. All areas of Flood Zone 2 and 3 in Kensington and Chelsea benefit from defences with a 0.1% AEP standard of protection, and therefore the updates to the PPG are not considered to have an impact when considering functional floodplain now or in the future.

### 1.4 Changes to the design flood

Flood Risk Assessments must now include the 1% annual probability flood (with an allowance for climate change) for surface water. This is in addition to the previous design flood of 1% plus climate change for fluvial flooding and 0.5% plus climate change for areas at risk of tidal flooding. This has implications for the assessment of safe development and implies that the performance of drainage systems should be assessed for the 1 in 100-year event with an allowance for climate change.

### 1.5 Climate change and the lifetime of development

Climate change is explicitly stated as a consideration through the updated PPG, however the Flood Zones remain current day rather than future flood zones.

For the lifetime of development, the 100-year lifetime for residential remains unchanged, however the guidance now confirms a 75-year lifetime for commercial as a starting point.

There is a specific requirement that an SFRA should be used to help demonstrate how adaption to climate change has been met.

The Risk of Flooding from Surface Water dataset available at GOV.UK does not include climate change runs. The local RBKC surface water model was run for a climate change +30% scenario at the time, which has little impact on the extent of the areas affected. For the 1% AEP event, the 0.1% AEP extent can be used a proxy for climate change, again this has little impact on the areas affected

In Kensington and Chelsea, the Thames Estuary 2100 (TE2100) plan is in place to adapt to climate change. The flood barrier and flood defences will be raised in line with climate change. There are no areas of Kensington and Chelsea in Flood Zone 2 or 3 that are not benefitting from defences, therefore climate change is unlikely to affect the areas of actual flood risk in Kensington and Chelsea

## TECHNICAL NOTE

JBA Project Code

2021s0534

Contract

Royal Borough of Kensington and Chelsea Level 1 SFRA

Client

Royal Borough of Kensington and Chelsea

Day, Date and Time

5th October 2022

Author

L Archer-Lock

Reviewer / Sign-off

A Beasley

Subject

Updates to PPG and implications on Level 1 SFRA



Existing breach modelling was provided by the Environment Agency for the SFRA and is a standard dataset used in London. This shows the impact of a breach of defences in 2005 and in 2100 including allowance for climate change. The SFRA should be updated when there is new climate change modelling available.

### 1.6 Conclusion

This note has identified that the updates to the PPG have no significant impacts on the decision-making process or outcomes of the SFRA. It is therefore not proposed to update the SFRA document at this stage. However the SFRA should be updated when new modelling is available, for example, an update to the RoFSW mapping, new breach modelling, or updates to climate change on the thames tidal model.

