

POLICY AND ACCOUNTABILITY COMMITTEE

Climate Risk Assessment and Adaptation Strategy London Borough of Hammersmith and Fulham

6th February 2024



AGENDA

- 01 Introduction and context (LBHF)
- 02 Our approach (AtkinsRéalis)
- 03 Preliminary findings as of January 2024 (AtkinsRéalis)
- 04 Next steps (AtkinsRéalis)

Introduction and context

LBHF

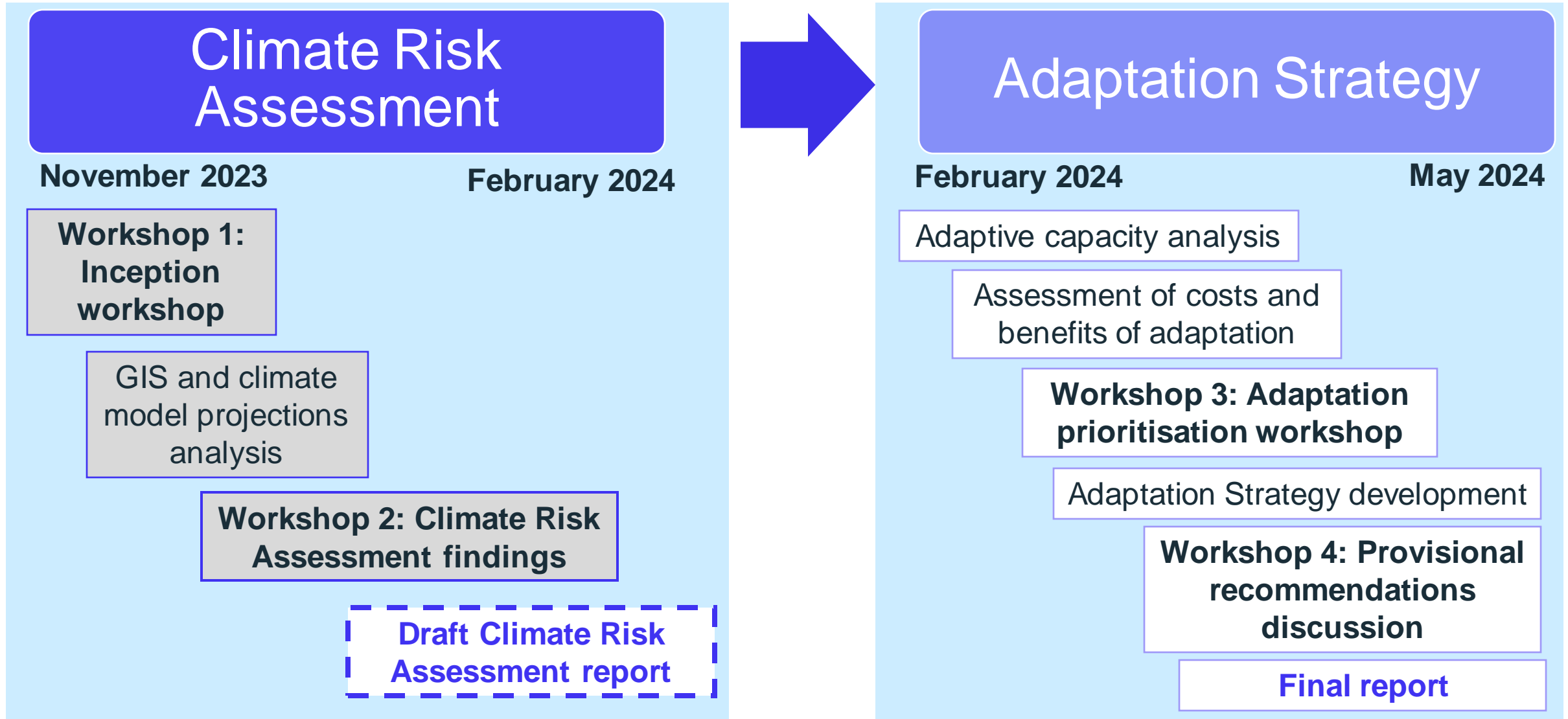


Our approach

AtkinsRéalis



Project overview



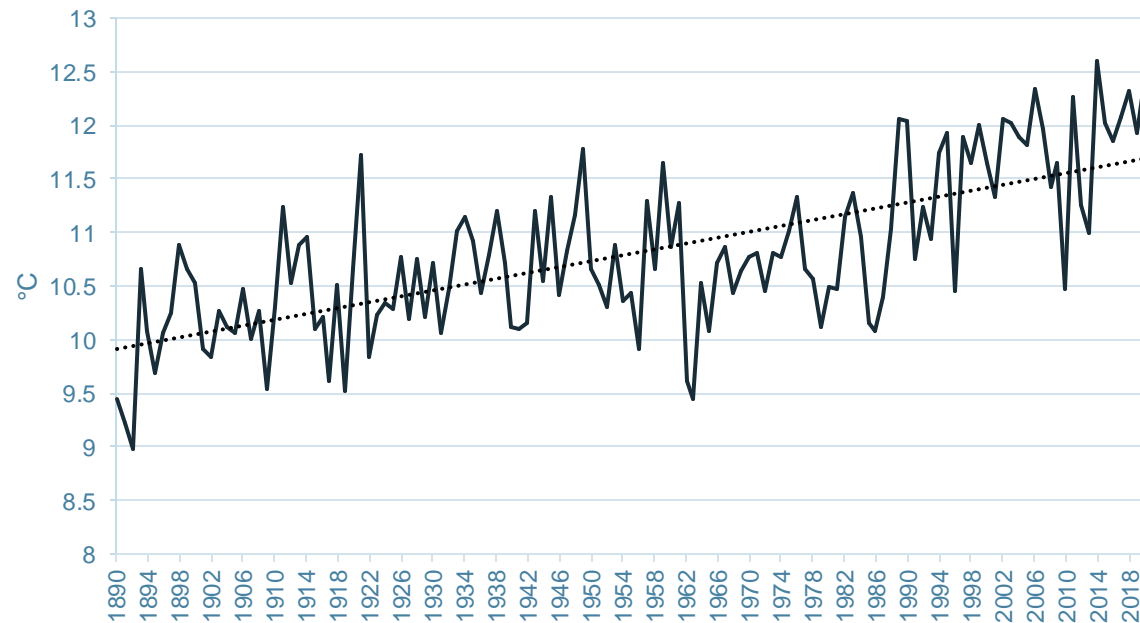
Preliminary findings as of January 2024

AtkinsRéalis



Historical climate events in LBHF

- Hammersmith and Fulham has been impacted by flooding, heatwaves, droughts and storms since 2007.
- Average temperature has steadily increased across Hammersmith and Fulham since the 1890s.



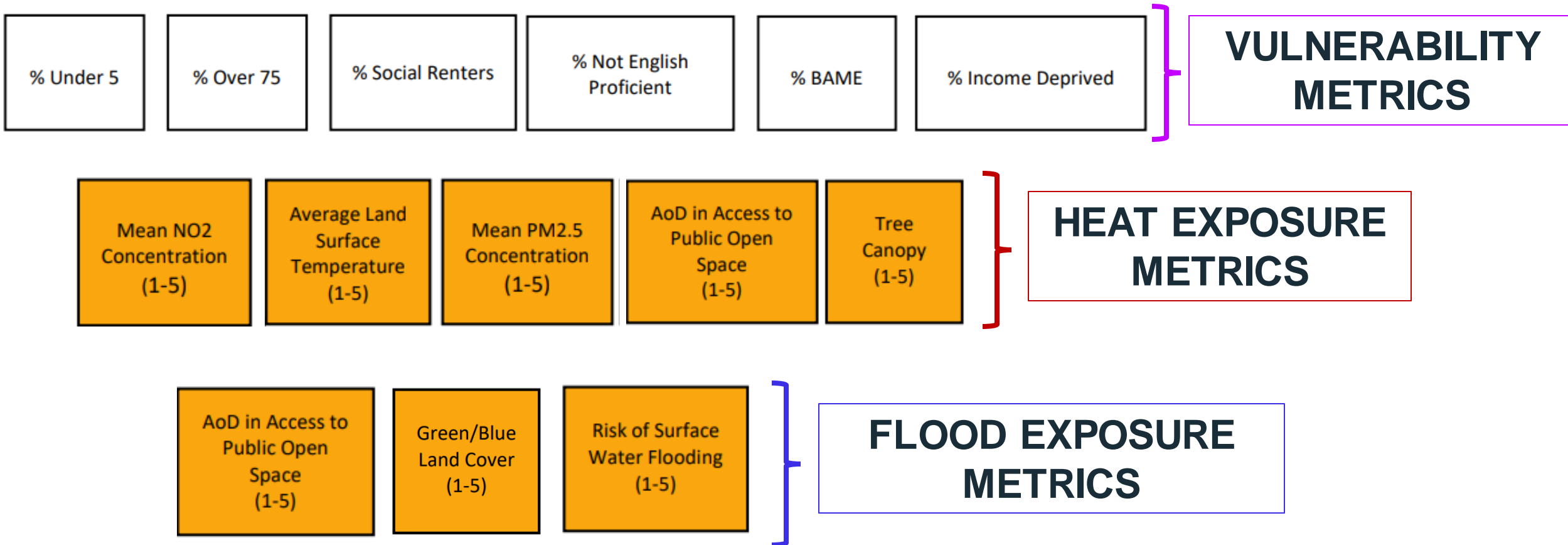
Mean annual air temperature (°C)



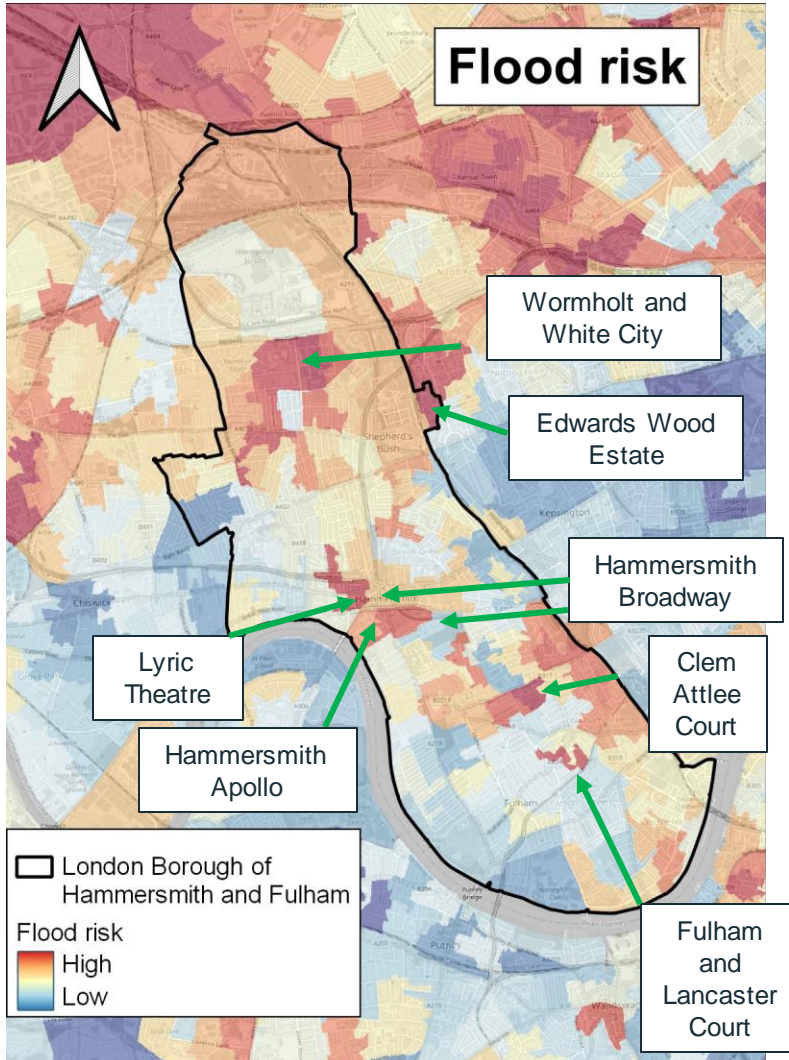
2007	July - Surface water flooding
2011	March-April - drought
2013	July - heatwave
	October - storm
2014	Jan-Feb - storms
2016	November 2016 - Storm Angus flooding
2017	June - heatwave
2018	Feb/March – Beast from the East coldspell
2019	July - heatwave
2020	August - heatwave
	October – Storm Alex
2021	July - flooding
2022	February - Storms Dudley, Eunice and Franklin
	July - heatwave
	August - drought
2023	September - heatwave
	November – Storm Ciaran

Current **surface flood** and **heat** risk mapping

- GLA / Bloomberg study of current flood and heat risk mapping taking into account **vulnerability** and **exposure**



Current **surface flood** and **heat** risk mapping

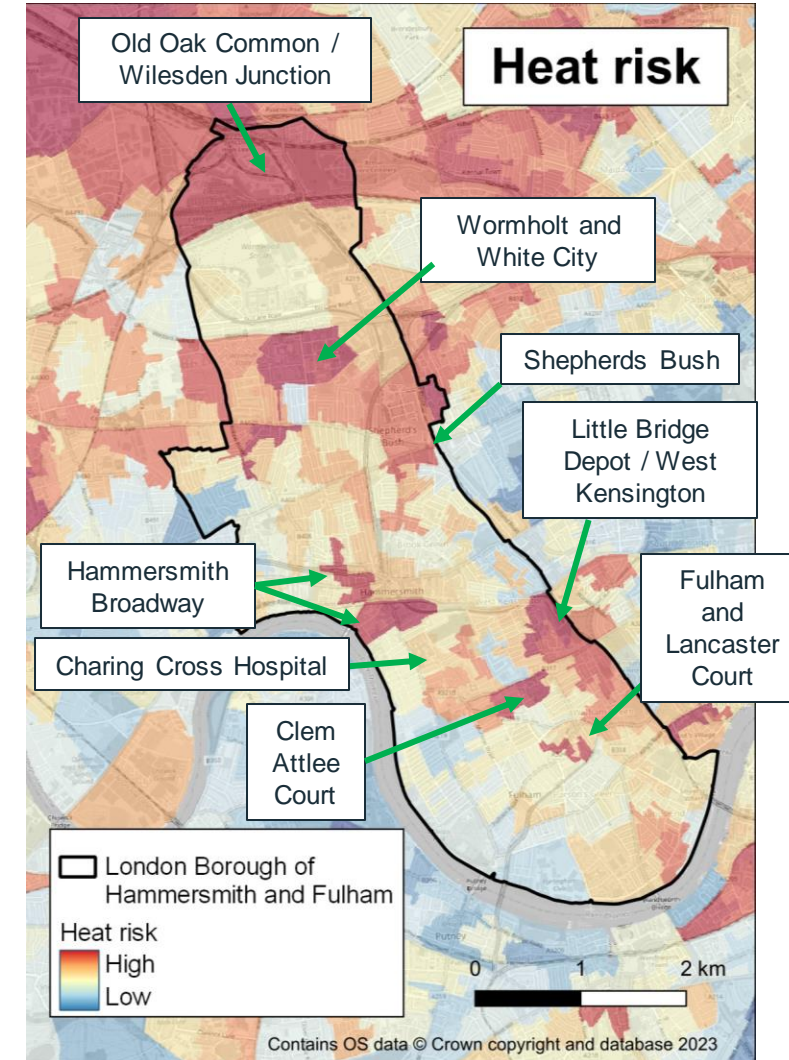


Key areas of risk:

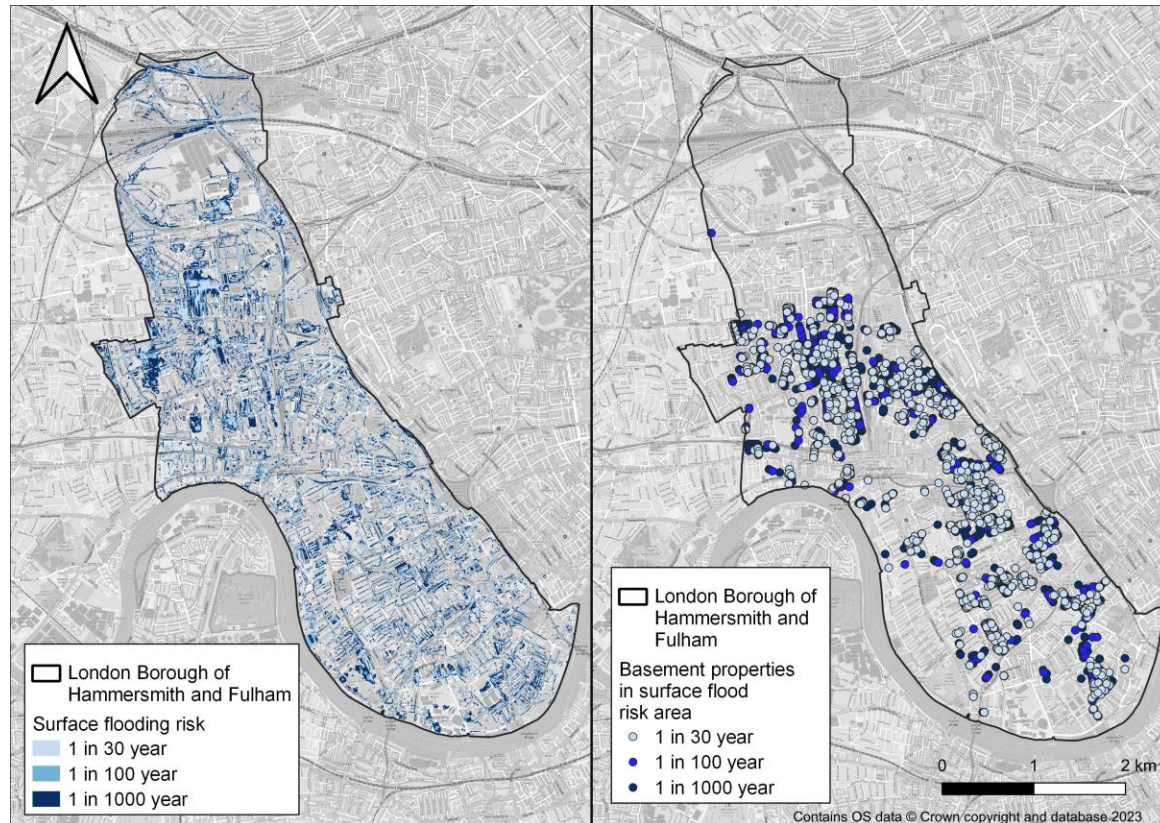
- Clusters of risk in Hammersmith and north of Fulham
- Old Oak Common/Willesden Junction (**heat**)
- Shepherds Bush (**heat**)
- Edwards Wood Estate (**heat & flood**)
- Wormholt and White City (**heat & flood**)
- Hammersmith Broadway (**heat & flood**)
- Clem, Fulham and Lancaster Court estates (**heat & flood**)

Common risk hot-spots:

- Dense and tall buildings
- Smaller areas of green space
- Large housing estates
- Depots and transport infrastructure
- High streets

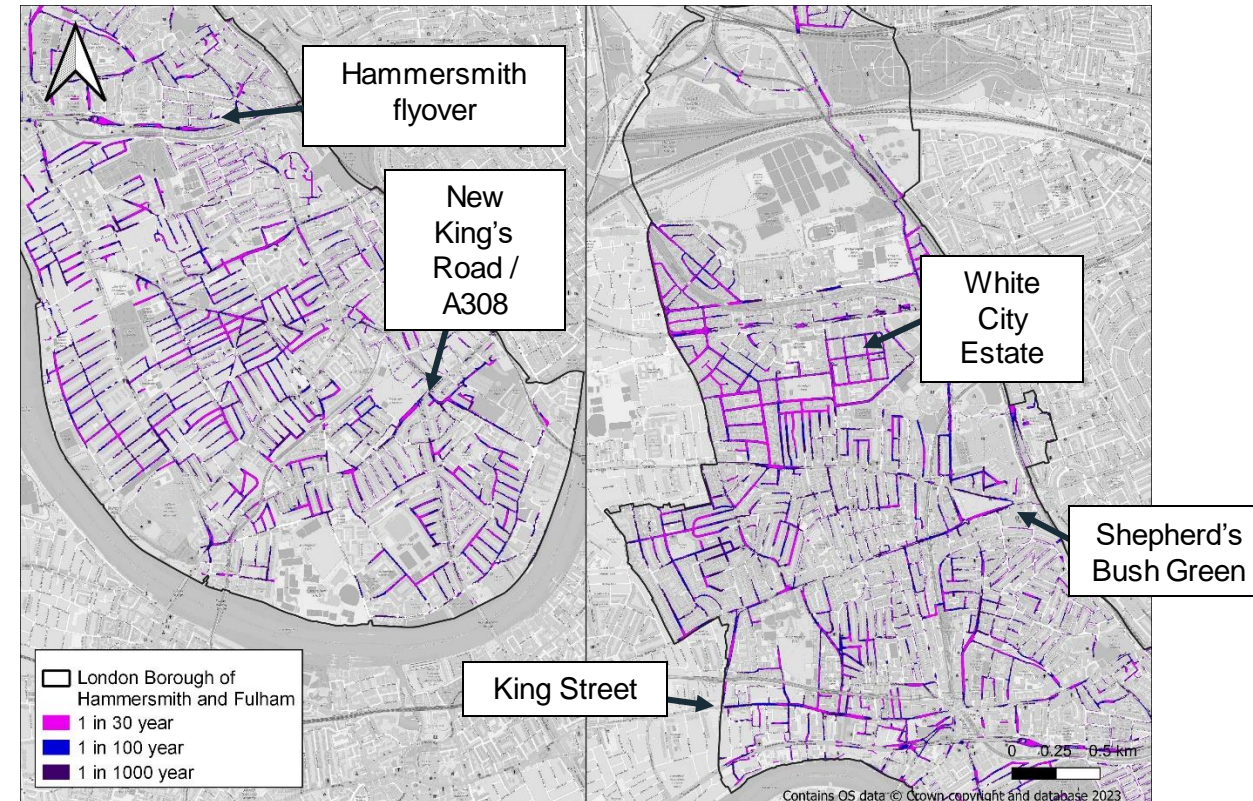


Current surface flooding risk

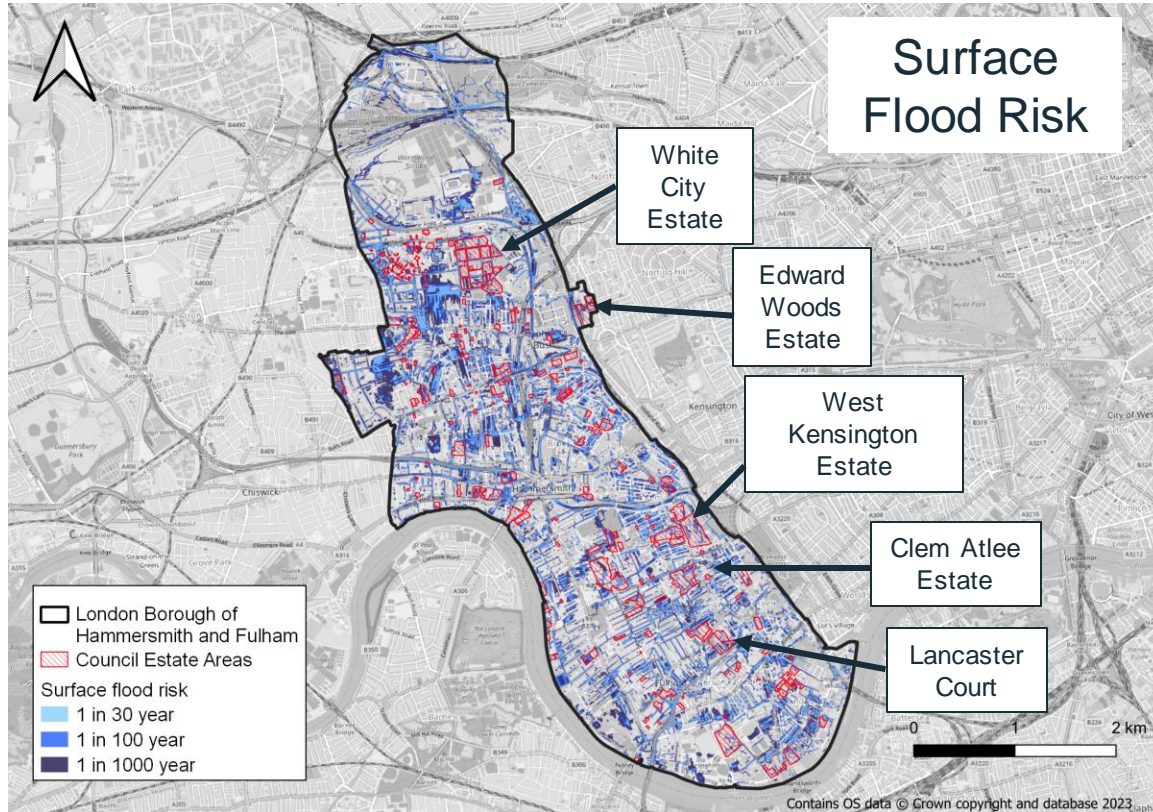


Basement properties currently located within areas of surface flood risk:

- 1 in 30-year flood = 1,543, 1 in 100-year flood = 2,267 and 1 in 1000-year flood = 4,257

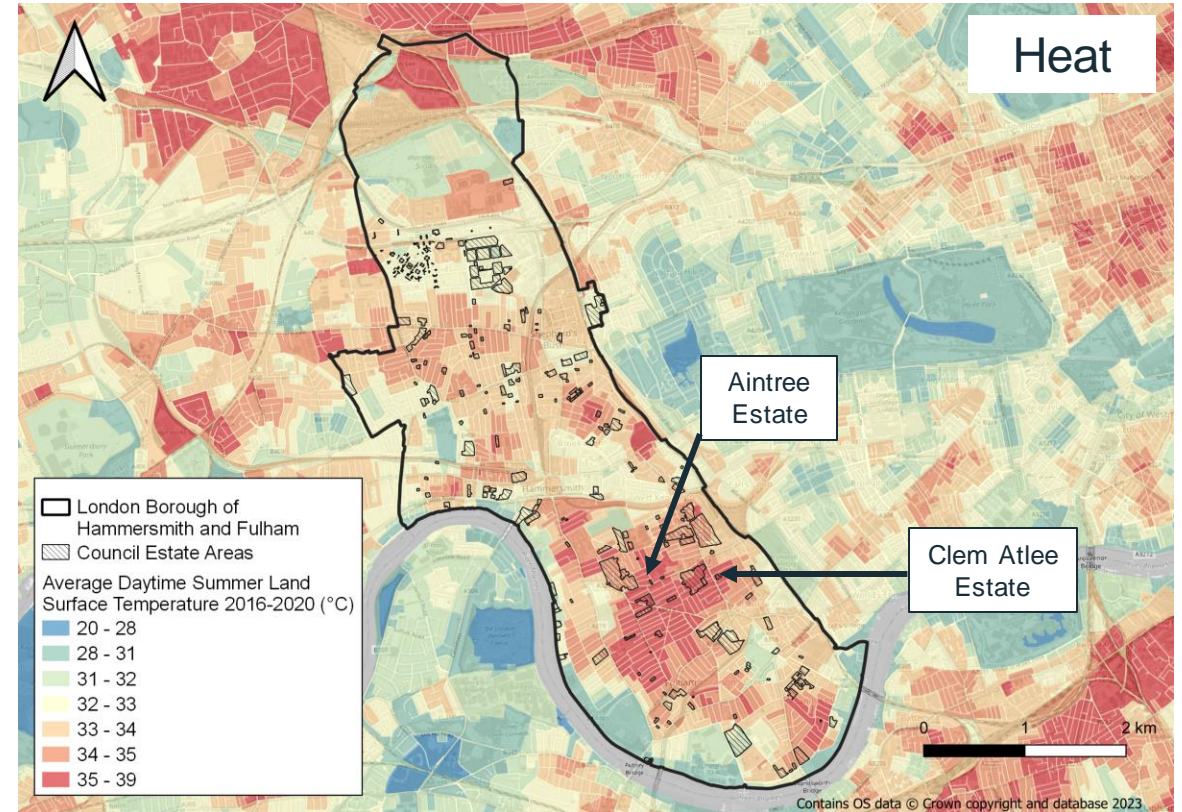


Council estate areas in current **surface flood** and **heat** risk areas



Council estate areas and surface flood risk for LBHF

Environment Agency



Council estate areas and Land Surface Temperature for LBHF

GLA/Bloomberg

Climate change projections for LBHF

- Increased maximum summer air temperatures are projected by the mid-century across a medium (RCP4.5) and high (RCP8.5) emissions scenario.
- Annual 1-day total rainfall is expected to increase by the mid-century under both emissions scenario.
- Overall summer rainfall is expected to decrease on average under both emissions scenarios.
- However, there is high uncertainty across projected rainfall shown by the projected increase and decrease in both annual 1-day total rainfall and summer rainfall between the 10th and 90th percentile.

Indicator	Baseline (1981-2010)	2050s (2041-2070) (Median with 10 th and 90 th percentiles in brackets)	
		RCP4.5 (medium emissions scenario)	RCP8.5 (high emissions scenario)
Maximum summer air temperature (°C)	35.2°C	36.8°C ↑	37.5°C ↑
		(34.8°C - 39.2°C)	(35.2°C - 40.2°C)
Annual 1-day total rainfall (mm)	45.5mm	47.9mm ↑	49.1mm ↑
		(39.2mm – 59.2mm)	(39.9mm – 61.0mm)
Summer rainfall % change (%)	0%	-17.7% ↓	-12.4% ↓
		(-38.5% to +1.5%)	(-30.0% to +5.1%)

Source: UKCP18 Probabilistic Projections

Preliminary findings for selected sectors

	Heatwaves & temperature increase			Surface water flooding			Drought, water scarcity & subsidence			High winds & storms		
Sector	Likelihood	Impact	Risk	Likelihood	Impact	Risk	Likelihood	Impact	Risk	Likelihood	Impact	Risk
Public health & health services	5	4	20	4	4	16	3	3	9	3	3	9
Public housing & residences	5	4	20	4	4	16	4	2	8	3	3	9
Infrastructure services	5	3	15	4	4	16	4	2	8	3	3	9
Community facilities & services	5	3	15	4	3	12	4	2	8	3	3	9
Natural assets & ecology	5	3	15	4	2	8	4	3	12	3	2	6
Businesses & economy	5	2	10	4	3	12	4	2	8	3	2	6

Next steps

AtkinsRéalis



Next Steps

- **Climate Risk Assessment**

- Draft Climate Risk Assessment for review in February 2024

- **Adaptation Strategy**

- Adaptive capacity survey for LBHF teams / departments
- Building evidence base for adaptation costs & benefits - Jan 2024 onwards
- Adaptation prioritisation workshop with LBHF & external stakeholders (Feb/Mar)
- Draft Adaptation Strategy for review in April/May 2024

