

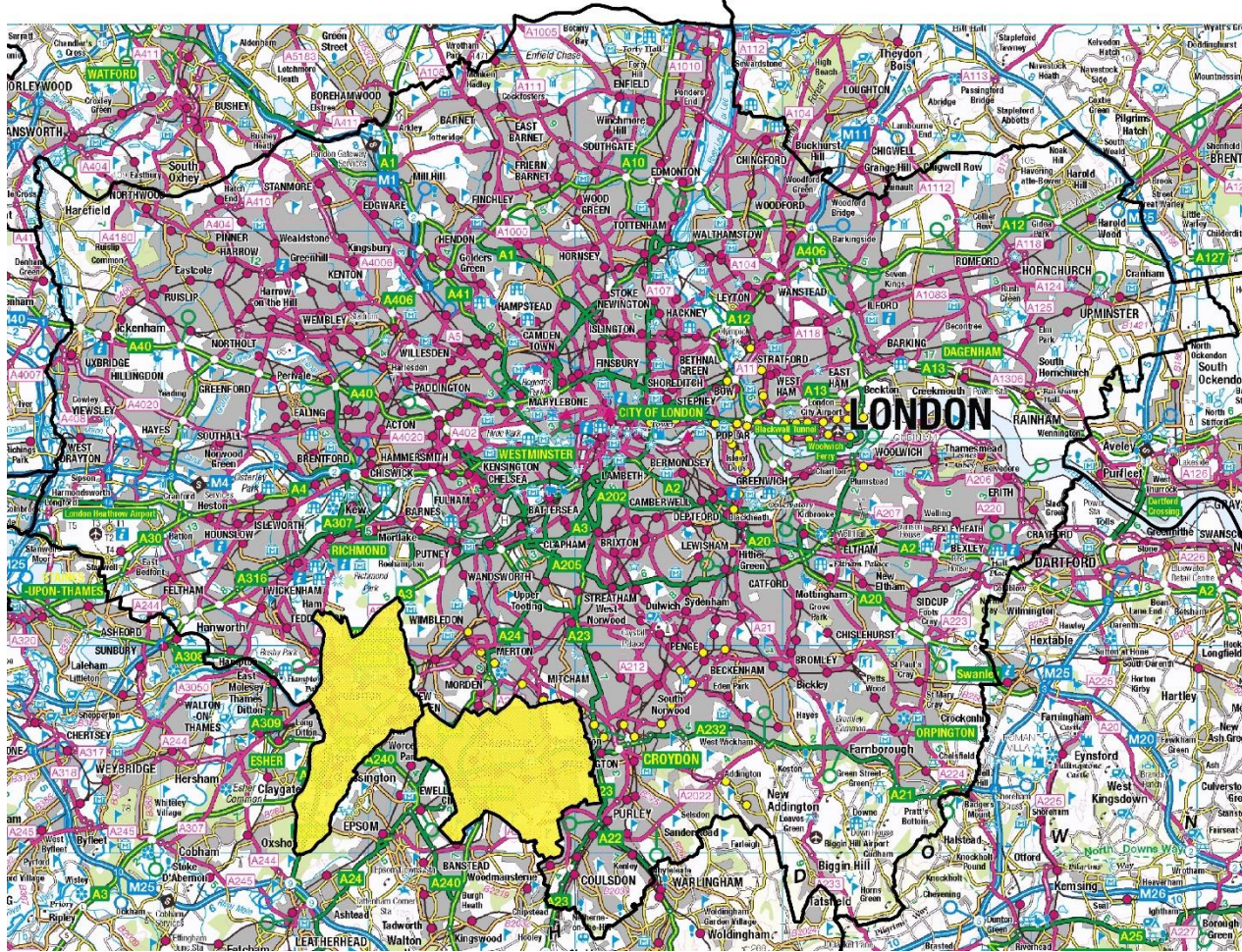


Surface Water Management Plan Updates

A shift to a catchment-based approach to surface water management in the London Borough of Sutton and the Royal Borough of Kingston upon Thames



Coming up...



- Introduction to Surface Water Management Plans (SWMPs)
- Reasons for update
- Approach of update – new catchment-based approach and its benefits
- Outcomes (options to guide future programme of works)

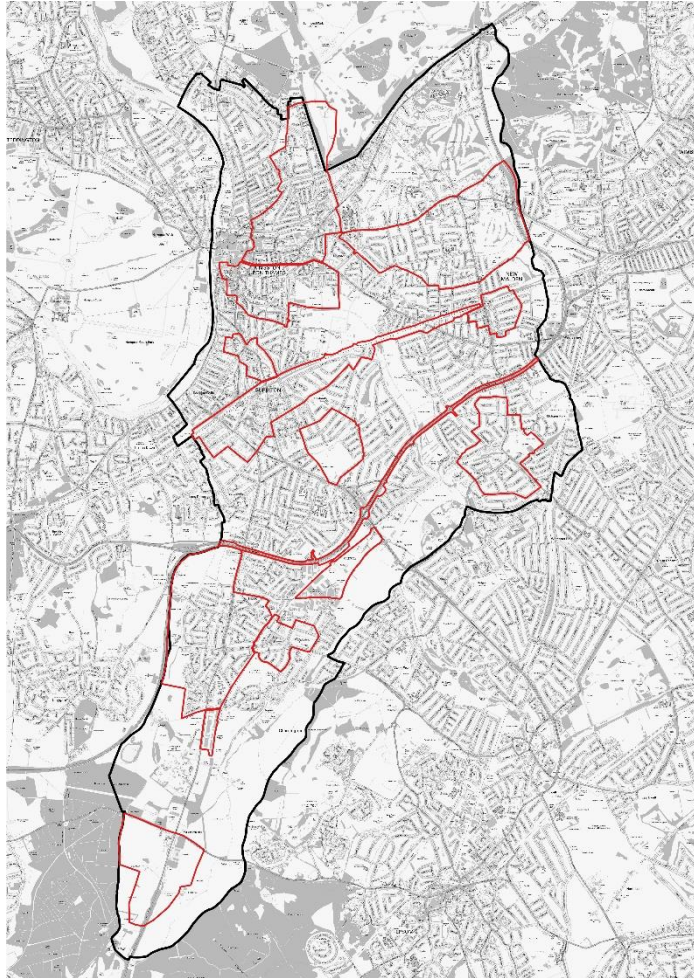


What are SWMPs?

CDAs

Catchments

Sub-catchments



Critical Drainage Area (CDA)

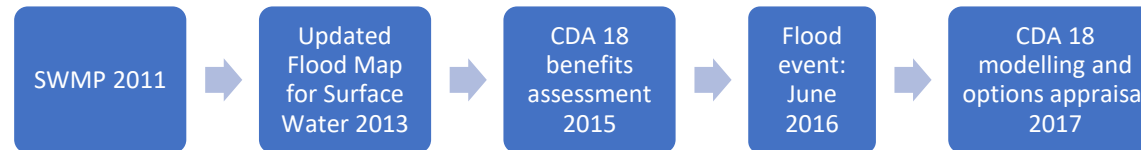
'a discrete geographic area (usually a hydrological catchment) where multiple and interlinked sources of flood risk (surface water, groundwater, sewer, main river and/or tidal) cause flooding in one or more Local Flood Risk Zones during severe weather thereby affecting people, property or local infrastructure'

SURFACE WATER MANAGEMENT PLAN



DRAIN LONDON

ROYAL BOROUGH OF
KINGSTON UPON
THAMES



Catchment-based approach

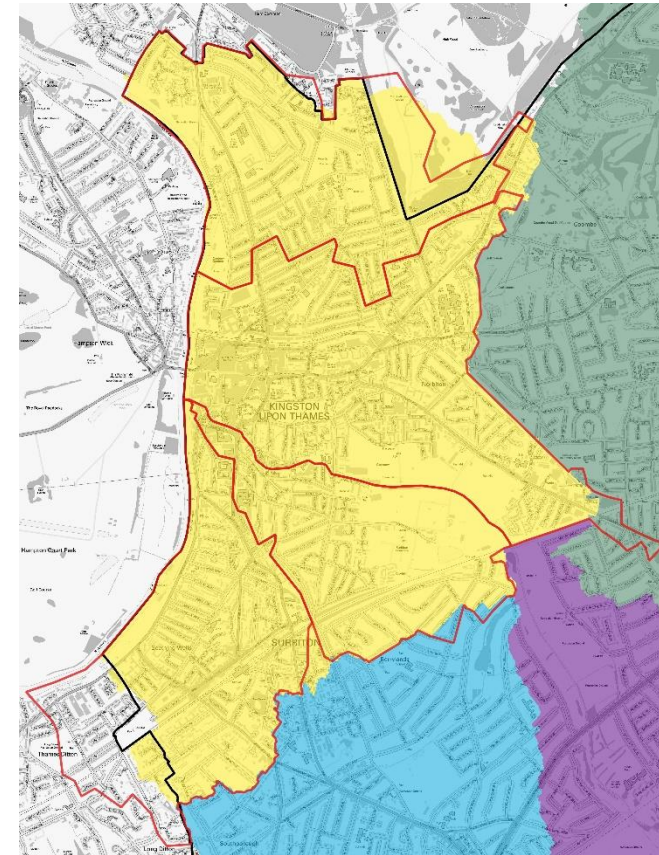
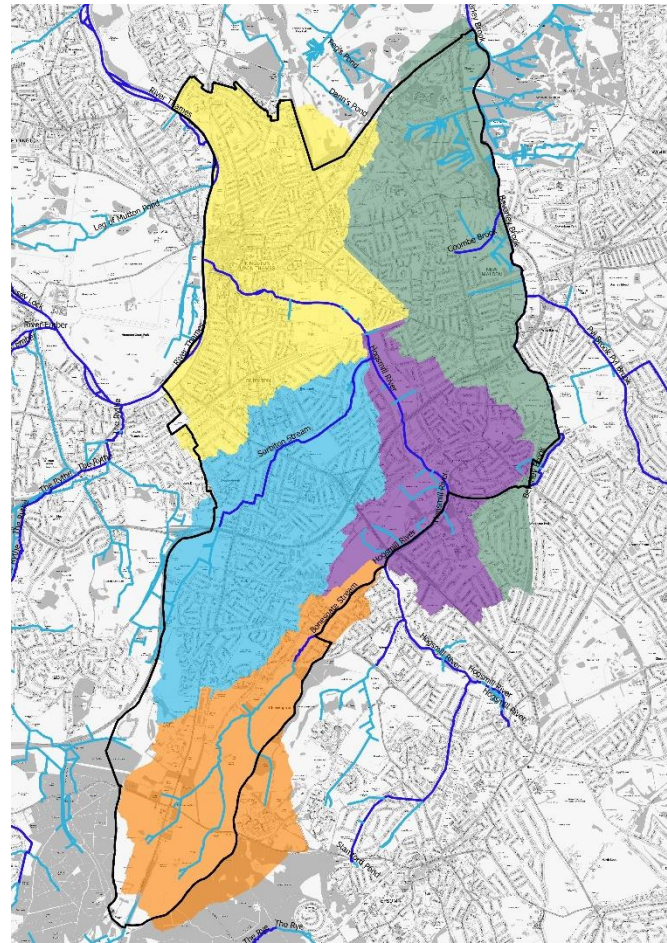
CDAs

Catchments

Sub-catchments

Benefits

- ✓ *DEFRA and MHCLG focus*
- ✓ *Environment Agency fluvial studies*
- ✓ *Neighbouring and partnership approach*
- ✓ *Upstream attenuation potentials*

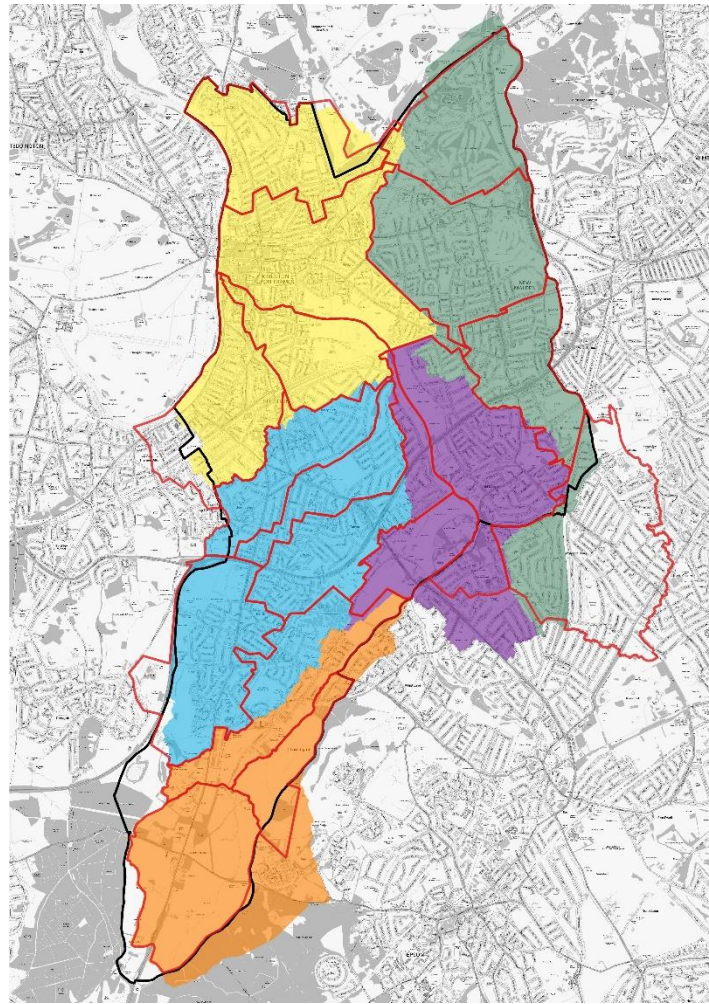
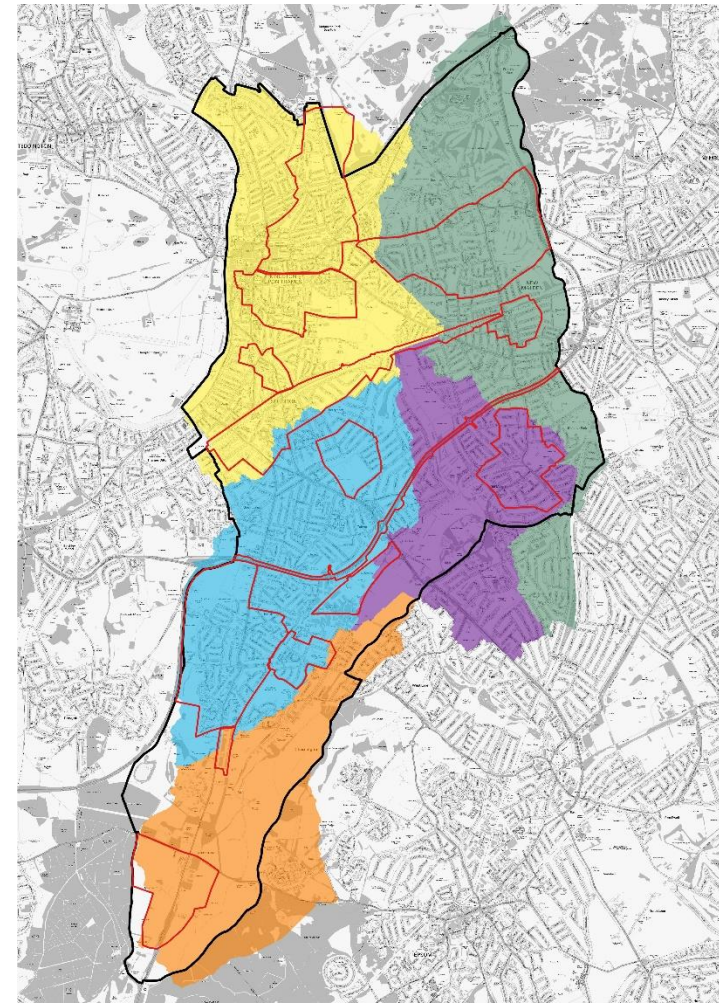


CDAs v Sub-catchments

CDAs

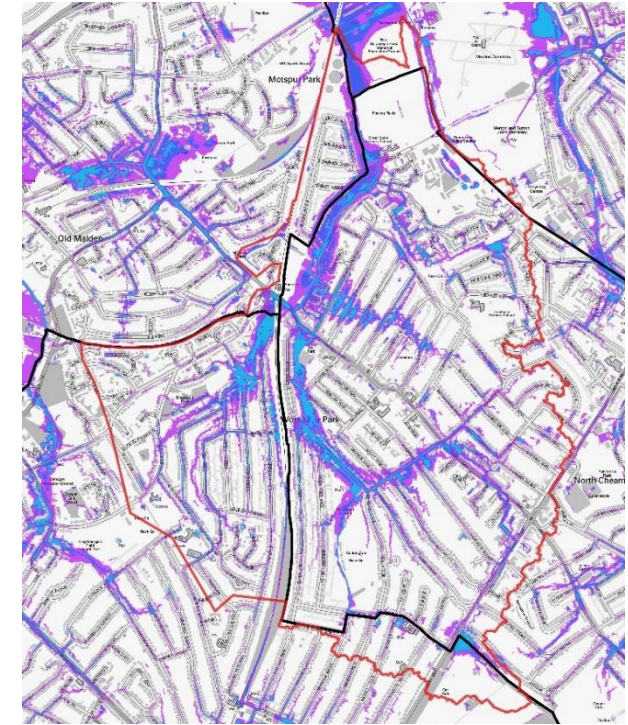
Catchments

Sub-catchments



Benefits

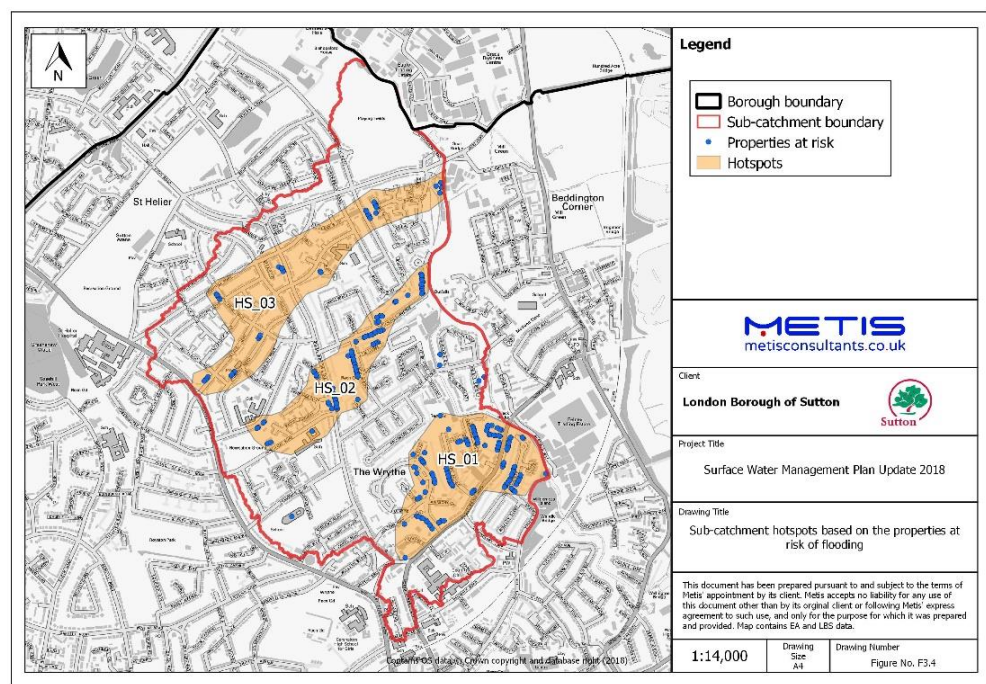
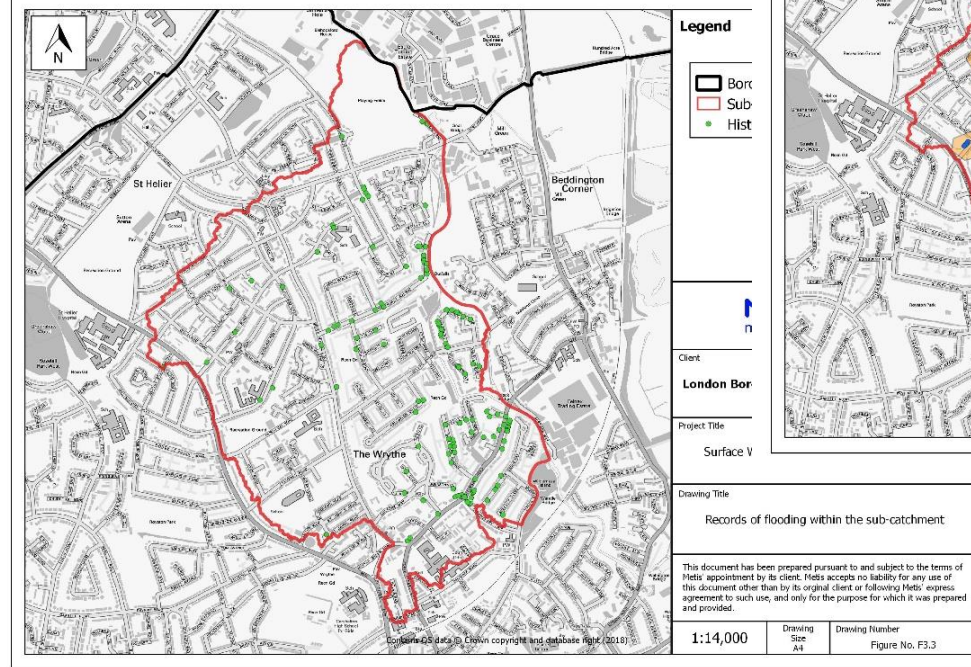
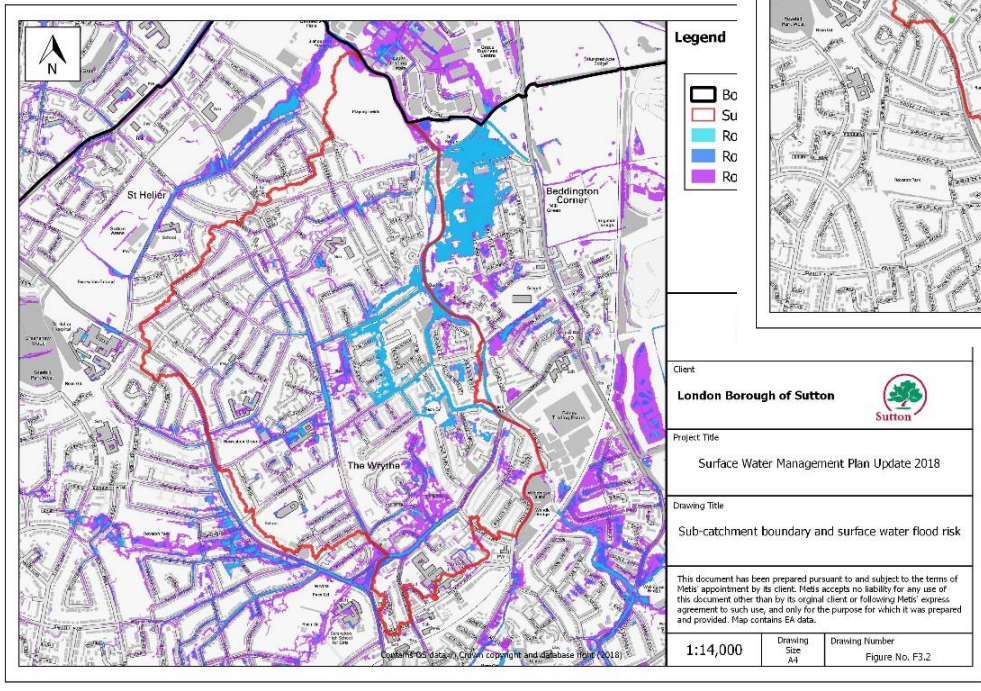
- ✓ *Consistency*
- ✓ *Not just risk delineation*
- ✓ *Modelling studies and mandates*



Sub-catchment chapters

Benefits

- ✓ Consistent structure
- ✓ User-friendly for all



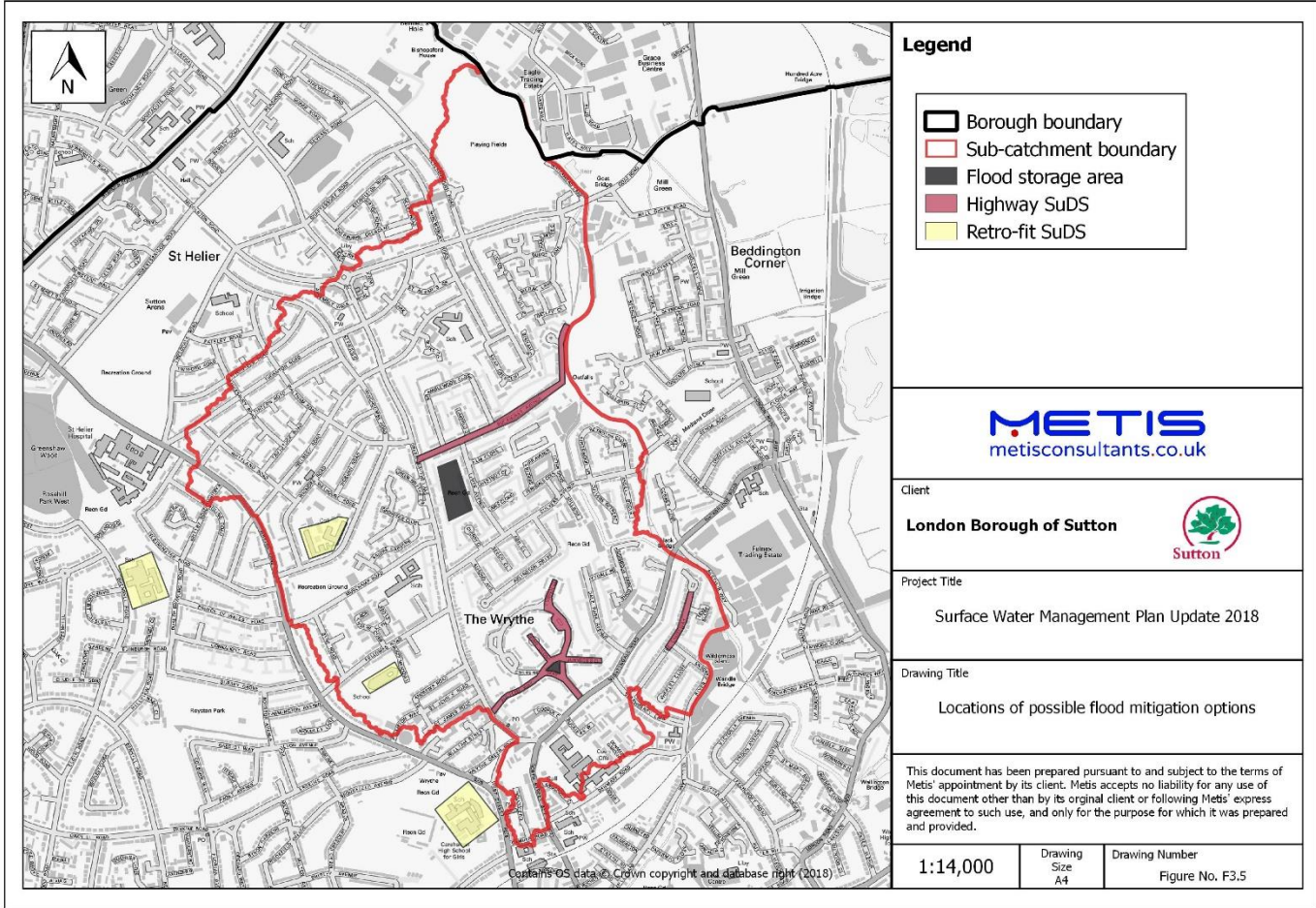
✓ Updated 'at risk' counts

✓ Approach-setting for strategic uses

✓ Validation with reality

- 9.1 UPDATE ON CHANGES SINCE 2011 SWMP
- 9.2 DEFINING THE SUB-CATCHMENT BOUNDARY
- 9.3 PROPERTIES AT RISK
- 9.4 HISTORIC FLOOD RECORDS
- 9.5 HOTSPOTS
- 9.6 POTENTIAL FLOOD MITIGATION OPTIONS
- 9.7 RECOMMENDATIONS

Mitigation options

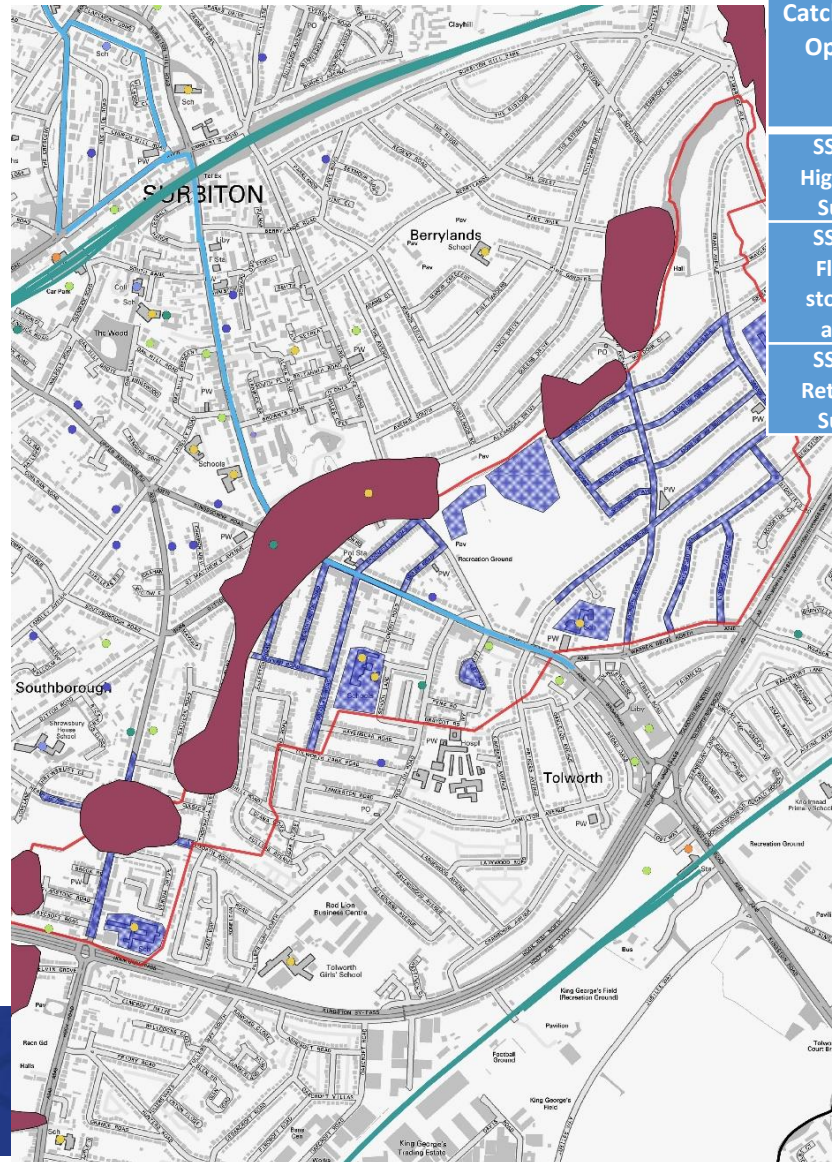


Benefits

- ✓ *Borough-wide option identification*
- ✓ *High-level 'starter for ten'*
- ✓ *SuDS incorporation ease*
- ✓ *Option-type standardisation*



The scoring of options



Sub-Catchment Option	Scoring Factors								Cost – Benefit Ratio	Total Option Rank Number
	Benefitting Residential Properties	Benefitting Non-Residential Properties	Benefitting Infrastructure	Historic Flooding	Other Flood Risk Sources	Collaborative Schemes	Social / Environmental Benefits	Socially / Environmentally Designated Sites		
SS_B3 Highway SuDS	+2	+2	+2	+2	+2	+1	+2	+1	1.1	15.4
SS_B3 Flood storage area	+2	+2	+2	0	+2	0	+2	+1	2.3	25.3
SS_B3 Retro-fit SuDS	+1	+1	+2	+1	+2	+1	+1	-1	0.9	7.2

Benefits

✓ *Reduces need for initial assessments*

✓ *Standardised costing*

Comments

CI: Police Station (Broomfield Road), Southborough High School, Grand Avenue Primary School, Electricity sub-station x2 (Princes Avenue, King Charles Road)

LI: TfL Strategic Route (A3 Kingston Bypass)

Other flood risk sources: Fluvial flood zone 3 (and zone 2), area susceptible to groundwater flooding

Collab Schemes: Go Cycle (Ewell Road), Brownfield Land Register x2 (former Cap in Hand on Hook Rise North, Vale Road South)

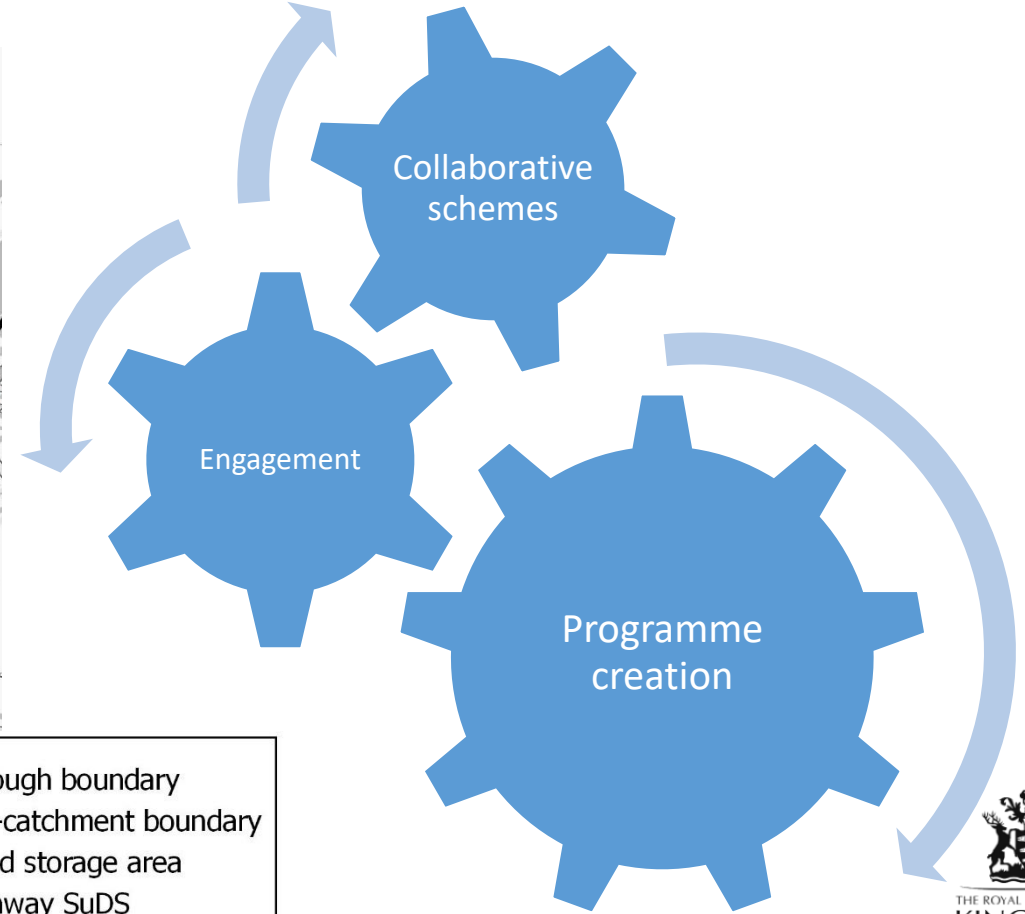
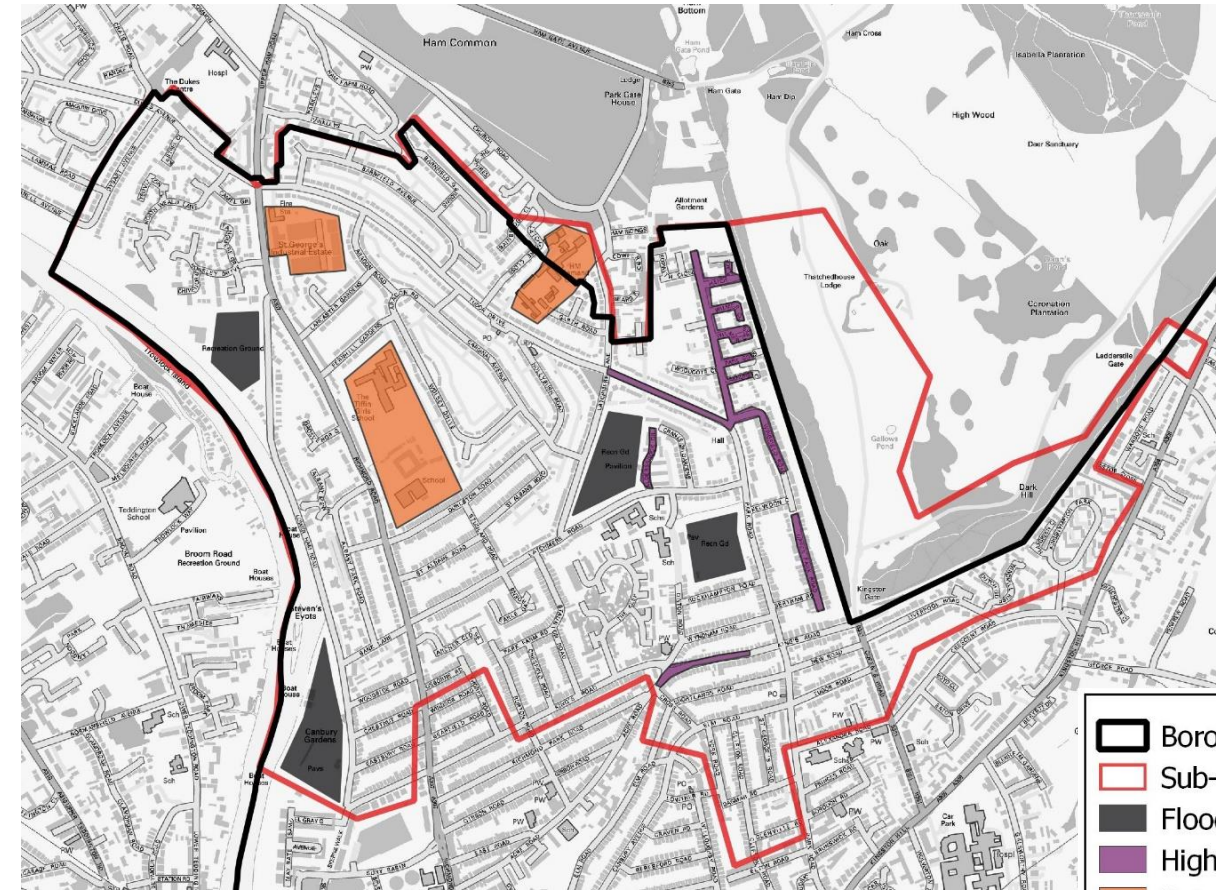
Benefit: Education, health, water quality

Cons: Area of Archaeological Significance

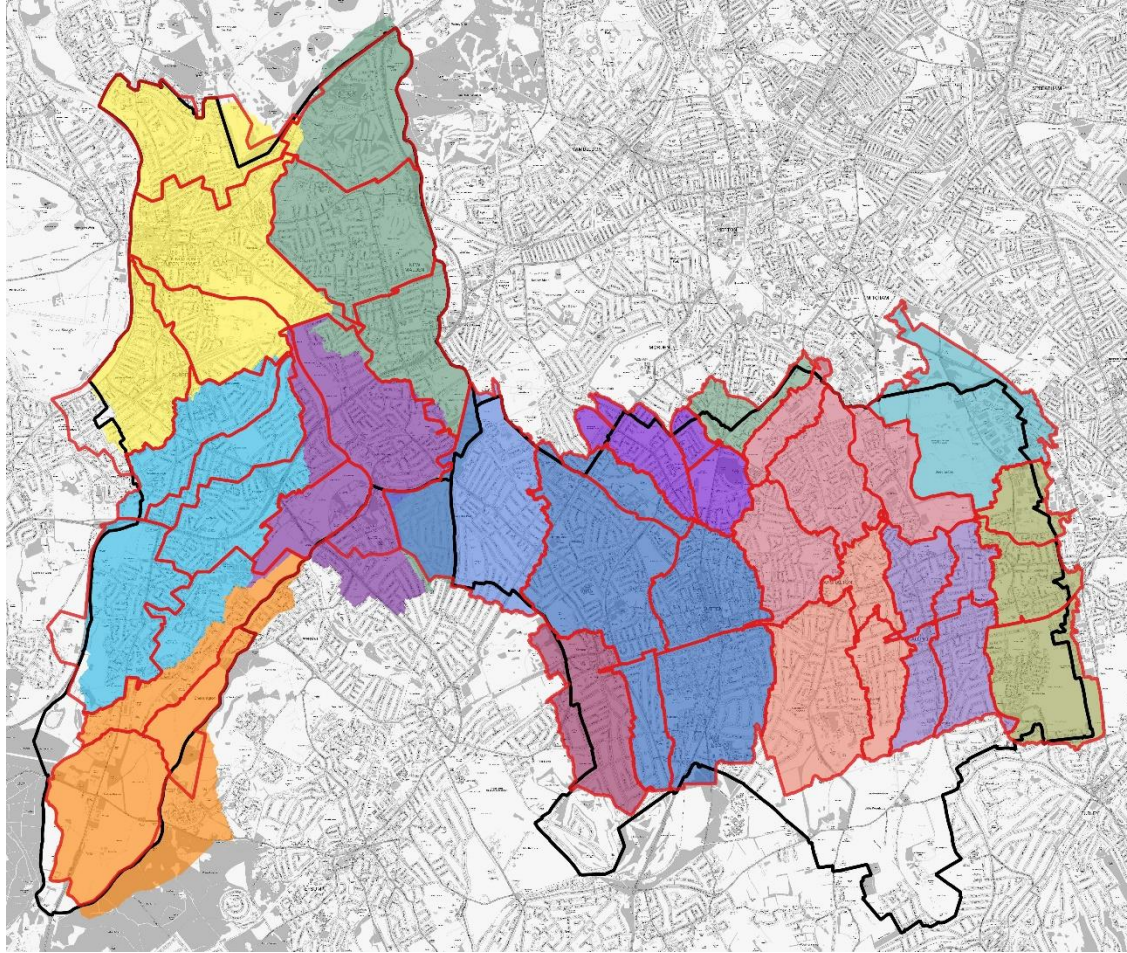
Opps: Metropolitan Open Land, Green Belt, Public Open Space



Next steps



In summary...



- ✓ Catchment & sub-catchment approach
- ✓ Greater consistency and repeatable
- ✓ Mitigation options for all 40 sub-catchments
- ✓ Prioritisation mechanism aligned with Initial Assessments
- ✓ Updated borough local flood risk programmes



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