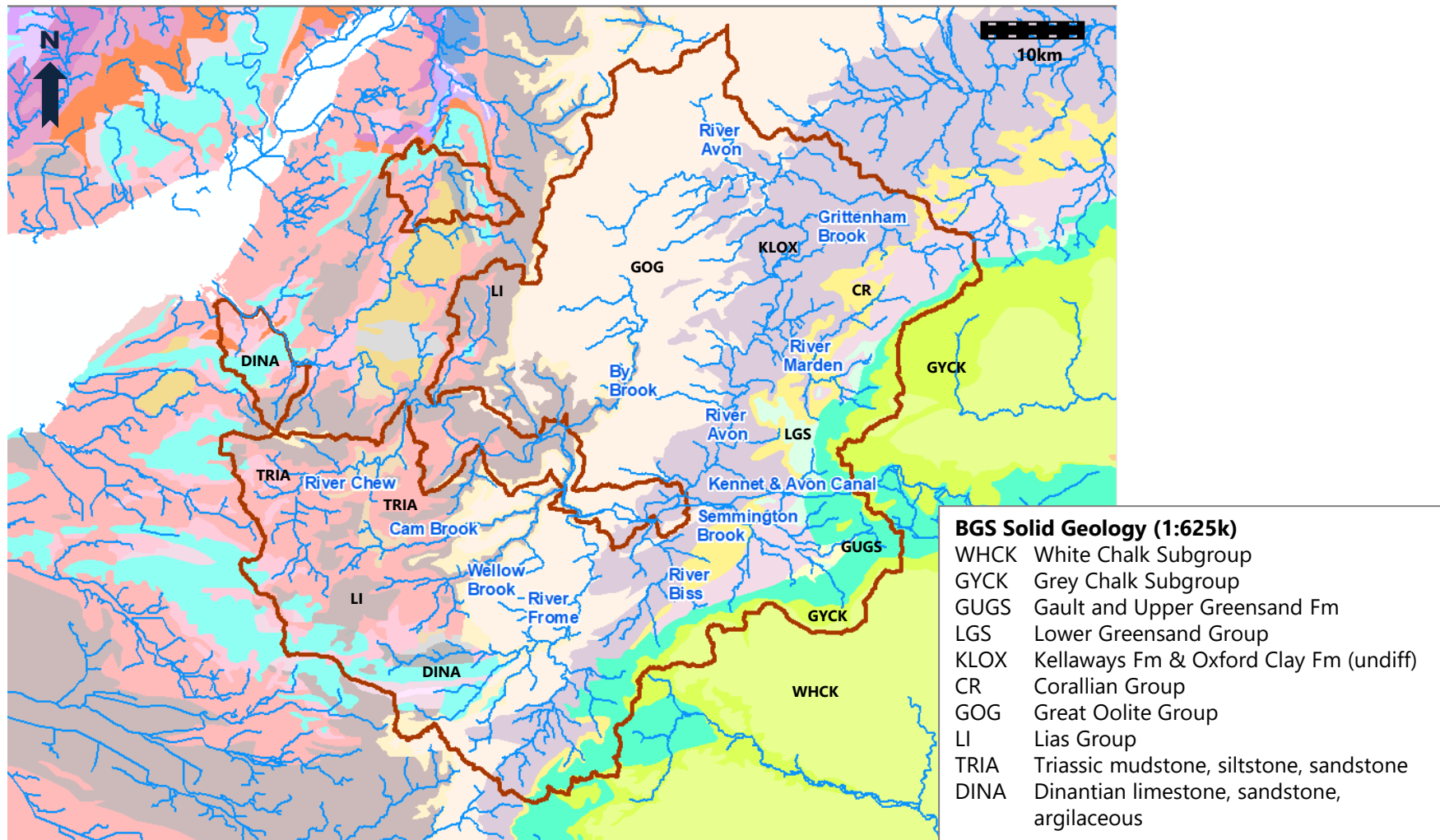




## Environmental Destination

Figures accompanying Annex C: Rural Bristol Avon pilot catchment plan to increase future water supply and low flow environmental resilience

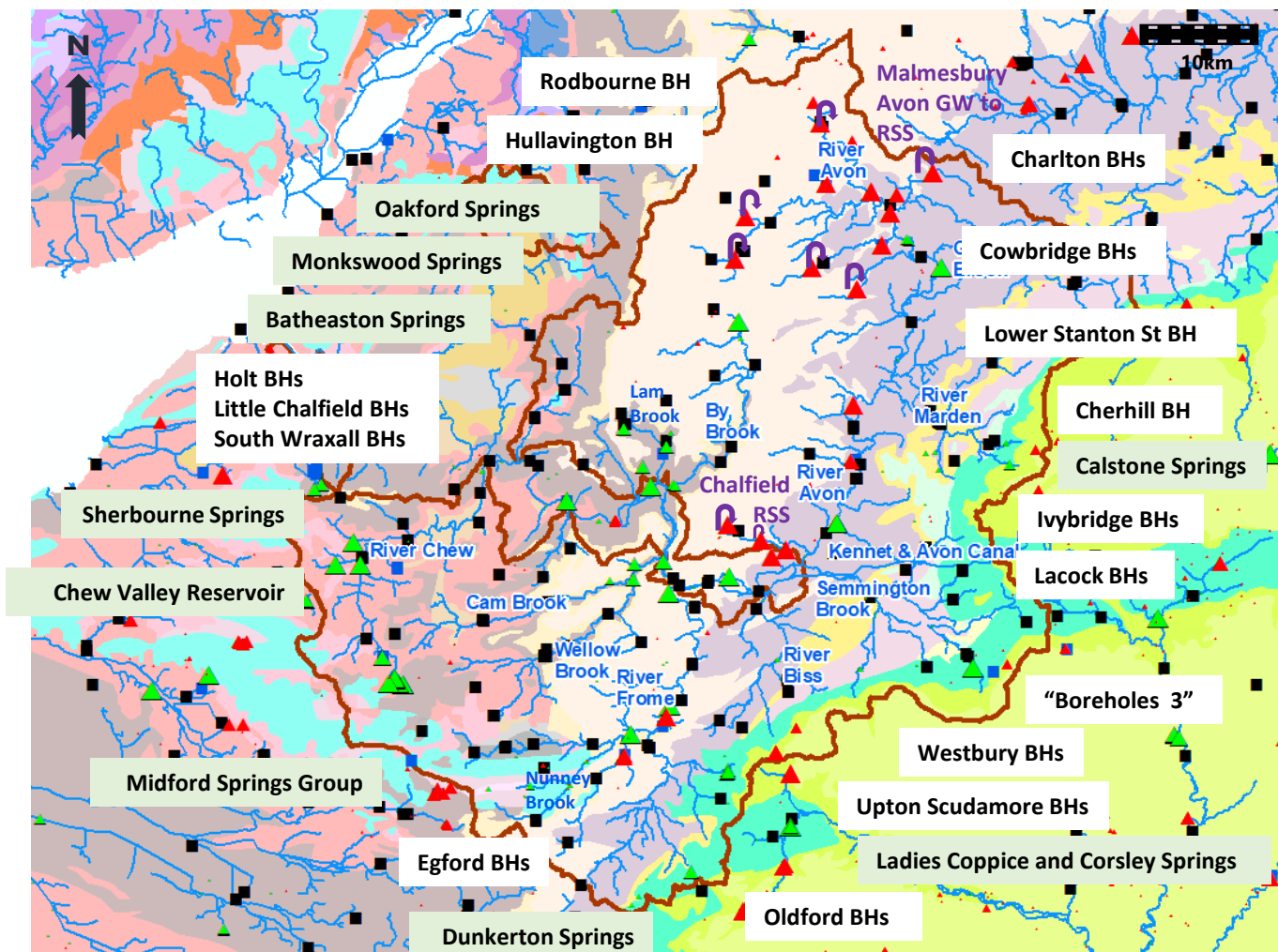
**Figure C2.1 Rural Bristol Avon catchment: rivers and geology**



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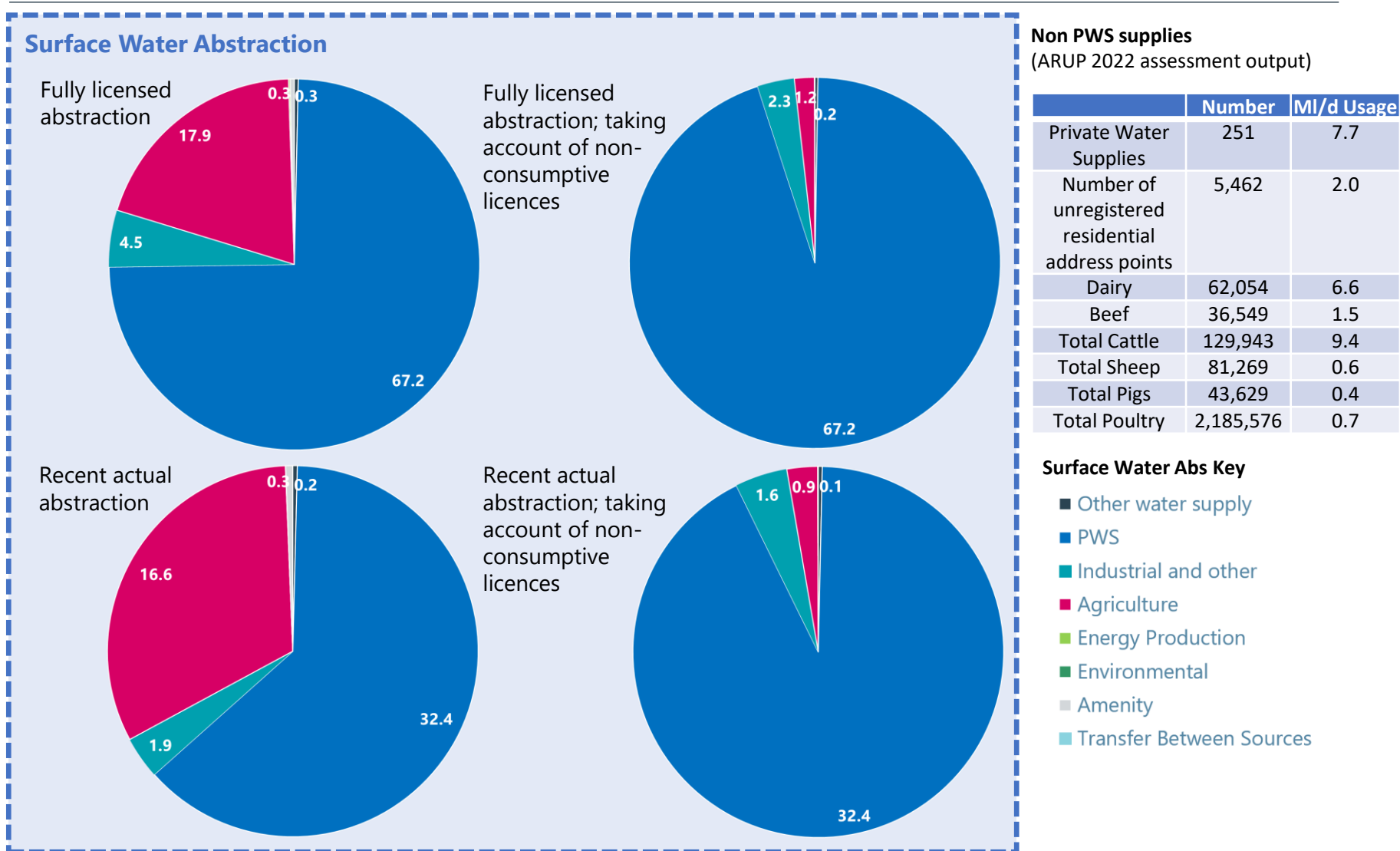
**Figure C2.3 Rural Bristol Avon: PWS Groundwater abstractions, Surface water abstractions, WwTW Surface water discharges & river support schemes**



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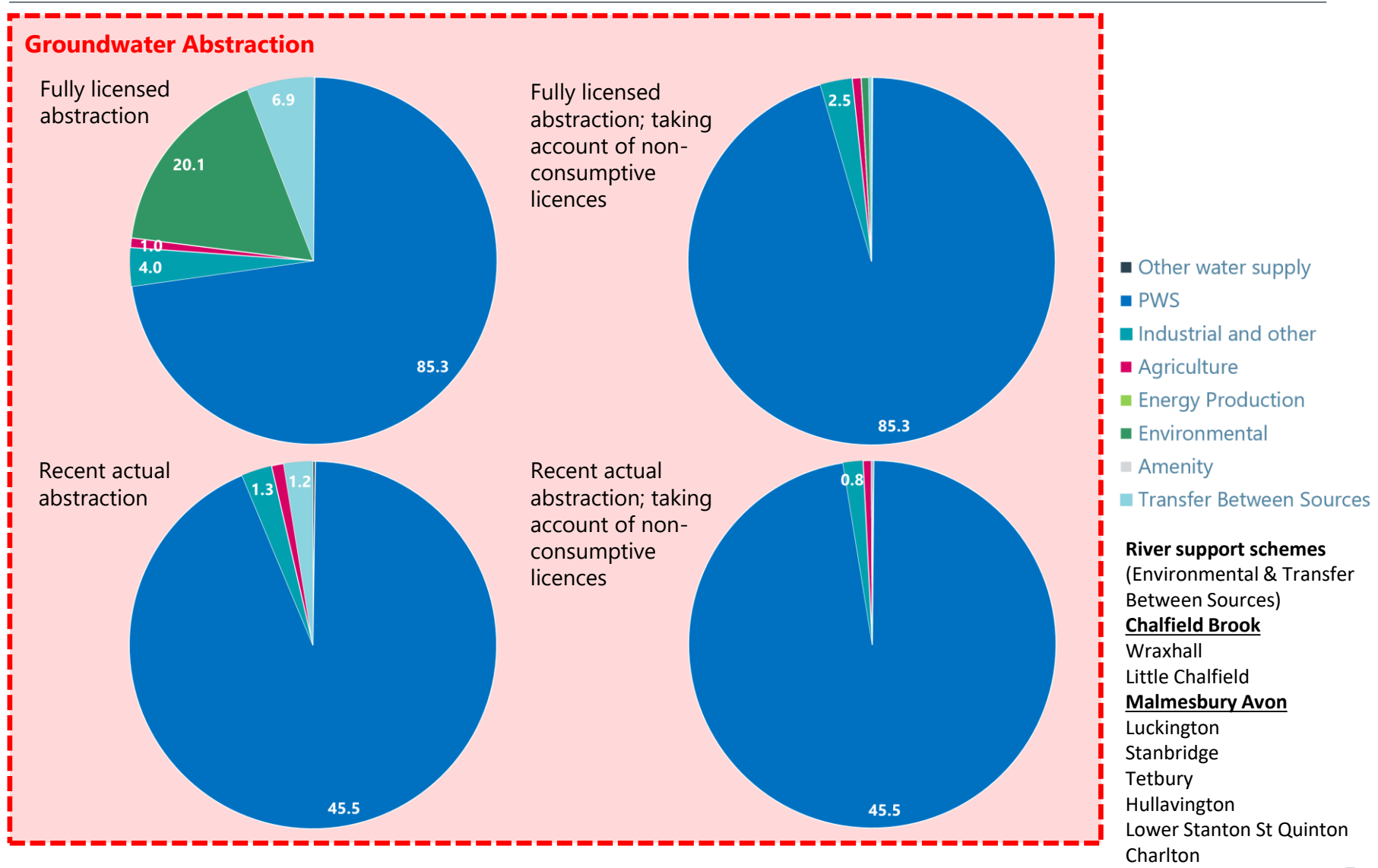
**Annex C: Rural Bristol Avon pilot catchment plan to increase future water supply & low flow environmental resilience**  
Reference 807434-WOOD-WRG-BA-FG-OW-0001\_A\_P01.3

# Figure C2.4a Rural Bristol Avon catchment: Surface Water Abstraction by Sector (total, MI/d)

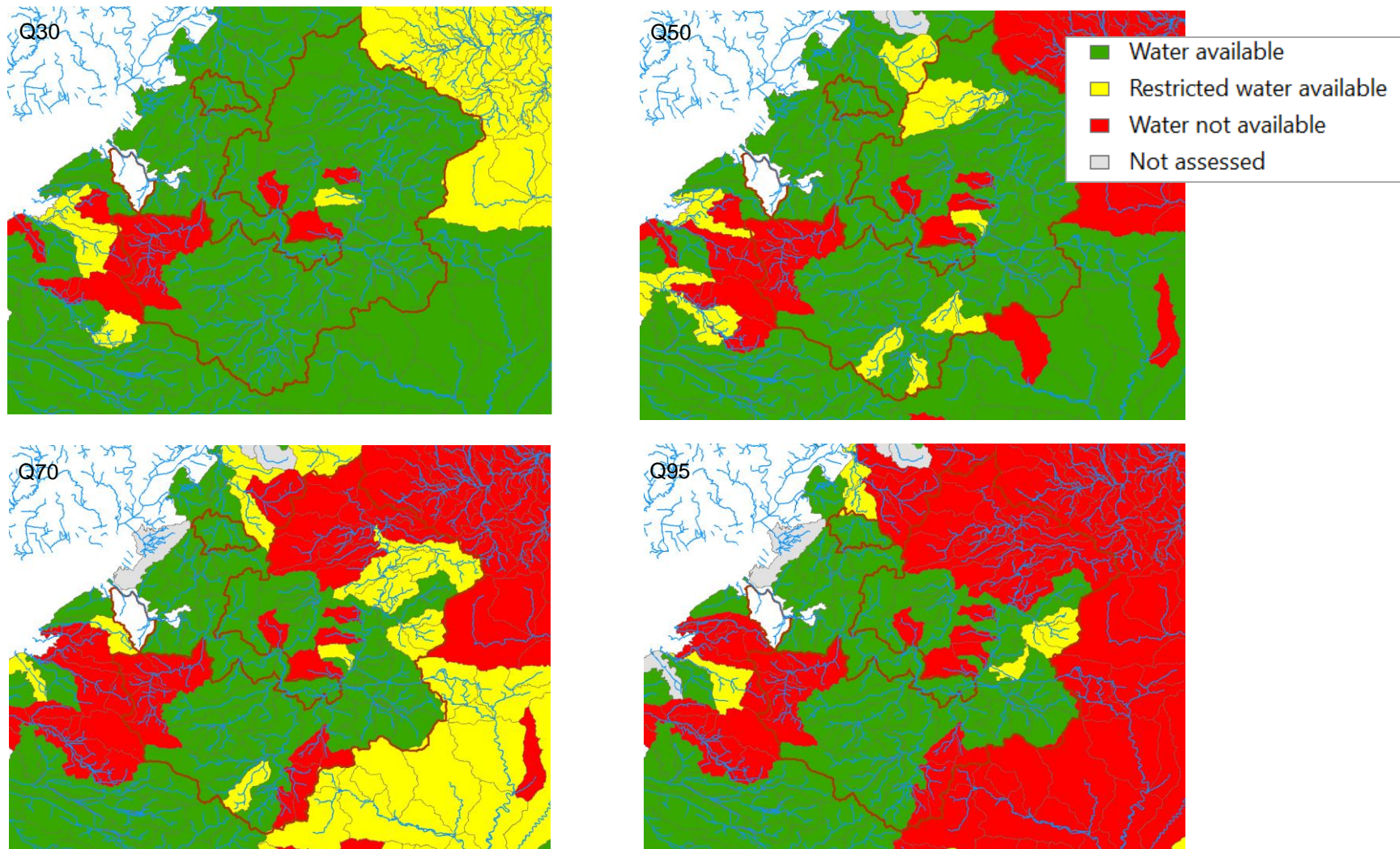




**Figure C2.4b Rural Bristol Avon catchment: Groundwater Abstraction by Sector (total, MI/d)**

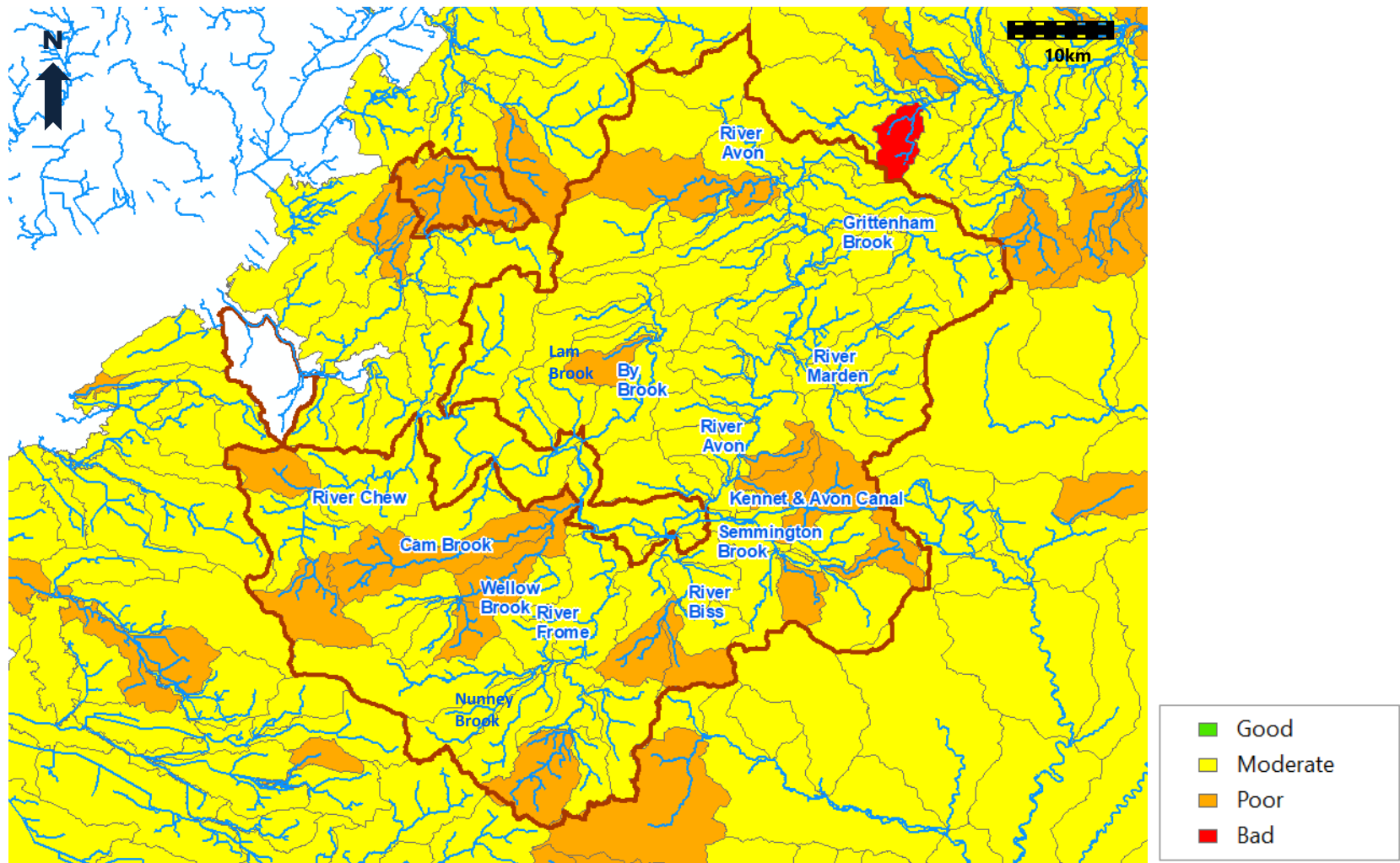


**Figure C2.5 Environment Agency water resource availability at Q30, 50, 70, 95 (Cycle 2, last updated 16 April 2021)**



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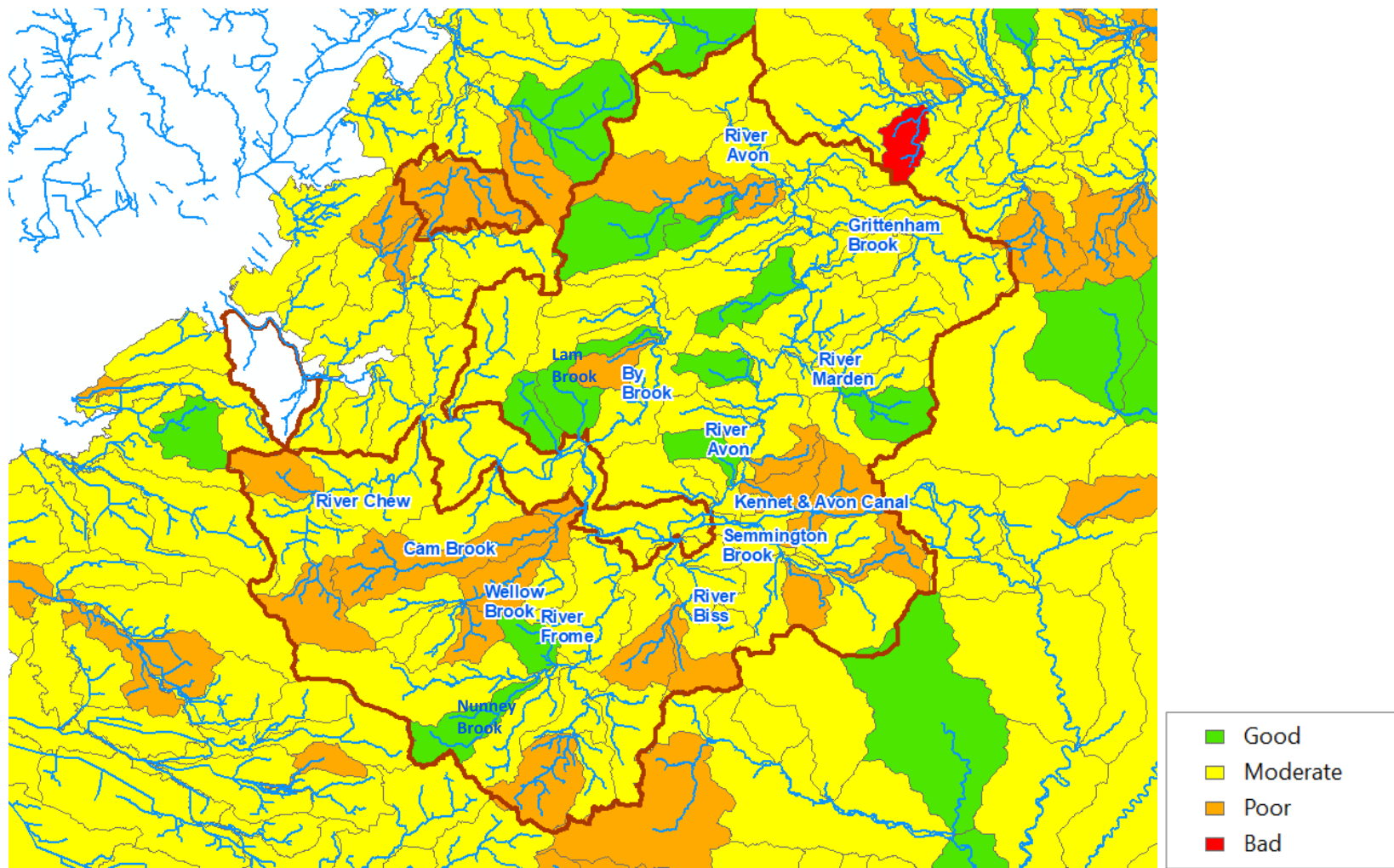
Figure C2.6 WFD water body overall status (Cycle 2, 2019)



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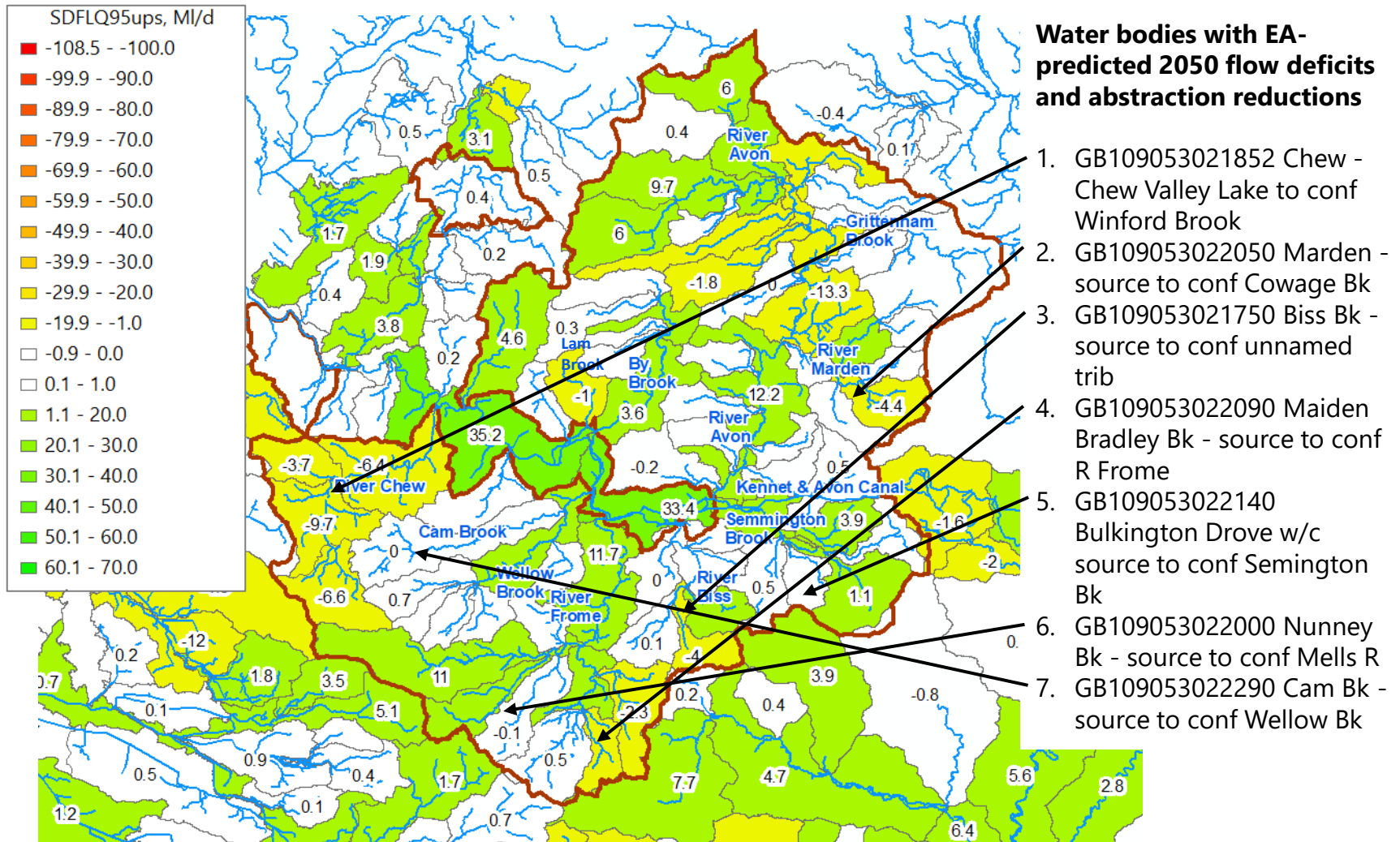


**Figure C2.7 WFD water body ecological status (Cycle 2, 2019)**



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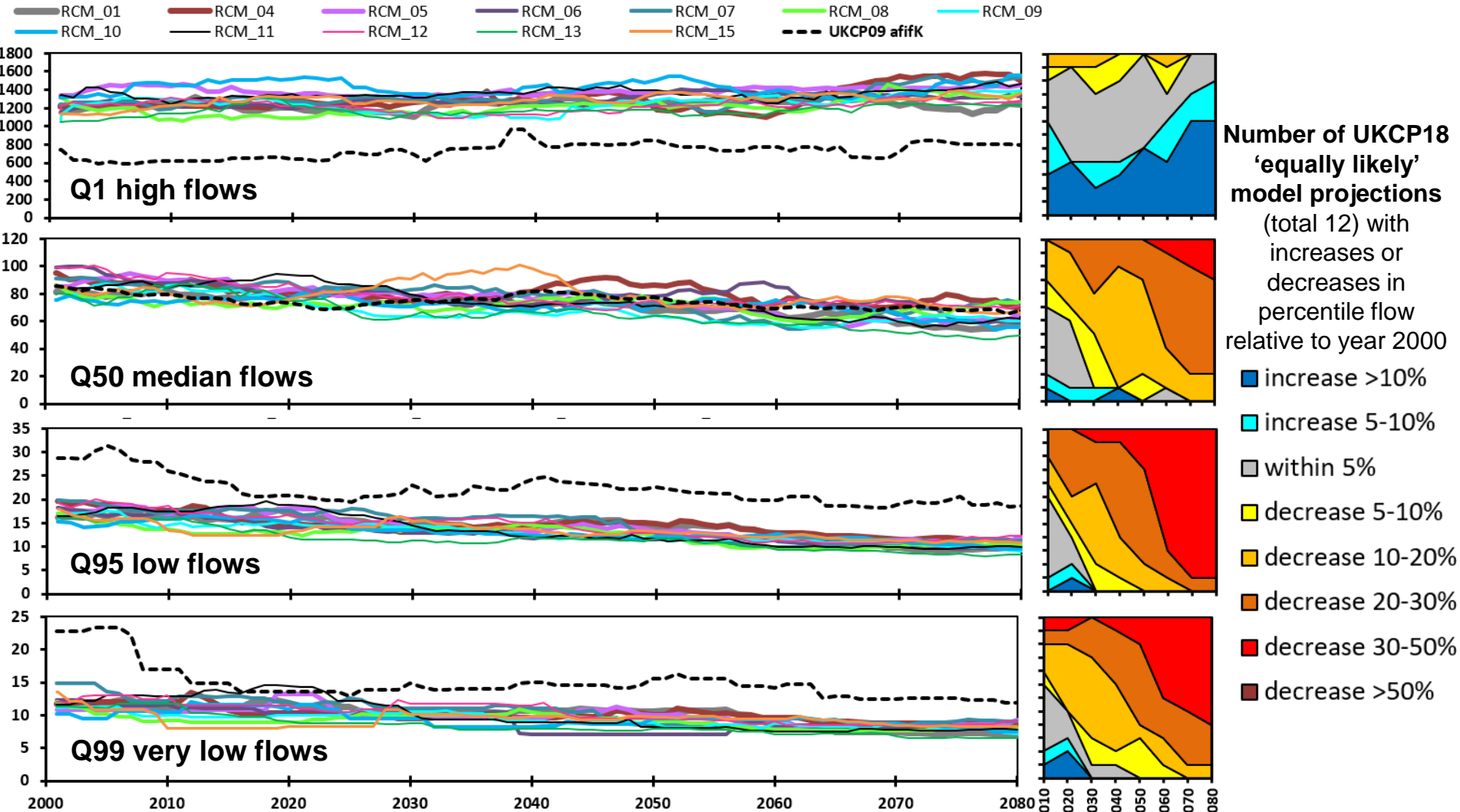
**Figure C3.1 EA predicted fully licensed 2050 flow surpluses and flow deficits (MI/d) for water bodies under Q95 low flow conditions (enhanced scenario)**



Data from EA's National Framework modelling in 2020

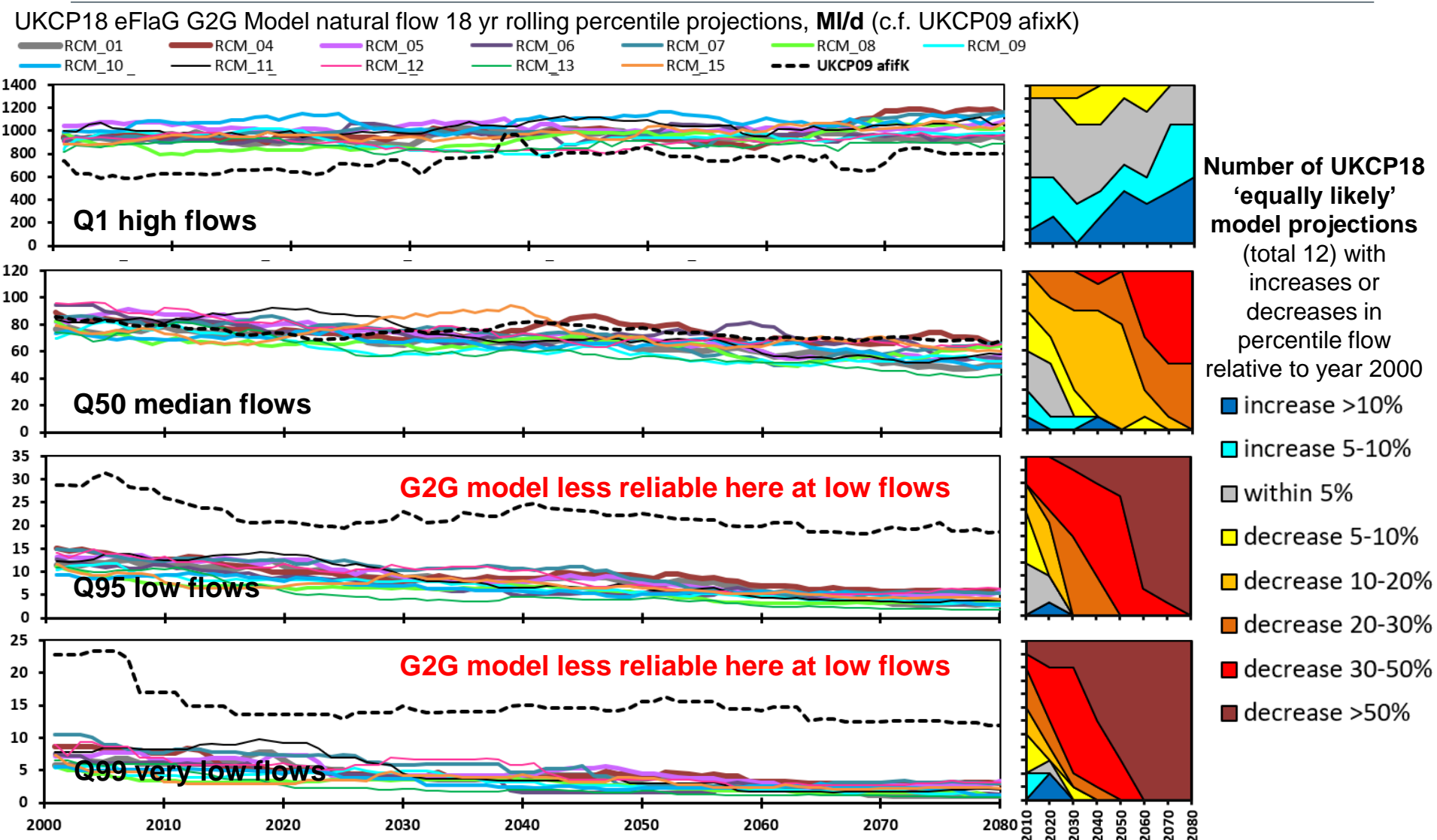
# Figure C3.2 Flow changes expected due to climate (Bristol Frome at Frenchay): Projections from UKCP18 climate & PDM gauge-calibrated river flow models

UKCP18 eFlaG PDM gauge-calibrated model flow 18 yr rolling percentile projections, **MI/d** (c.f. UKCP09 afixK)



Data source: natural flows from 12 equally likely UKCP18 regional climate models (with UKCP09 afixK natural projection for comparison): <https://eidc.ac.uk/>

# Figure C3.3 Flow changes expected due to climate (Bristol Frome at Frenchay): Projections from UKCP18 climate & G2G national natural river flow models

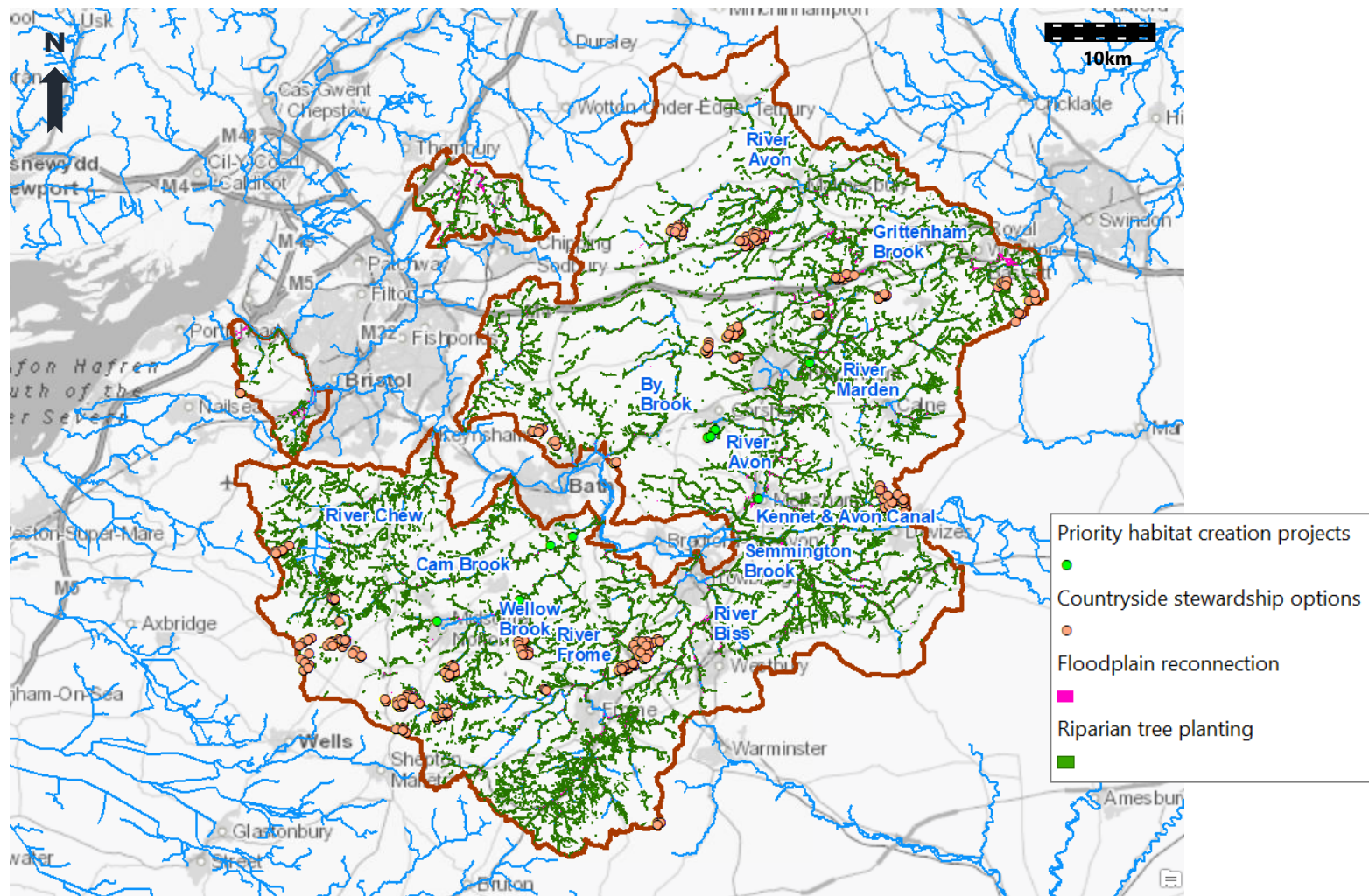


Data source: natural flows from 12 equally likely UKCP18 regional climate models (with UKCP09 afifK natural projection for comparison): <https://eidc.ac.uk/>



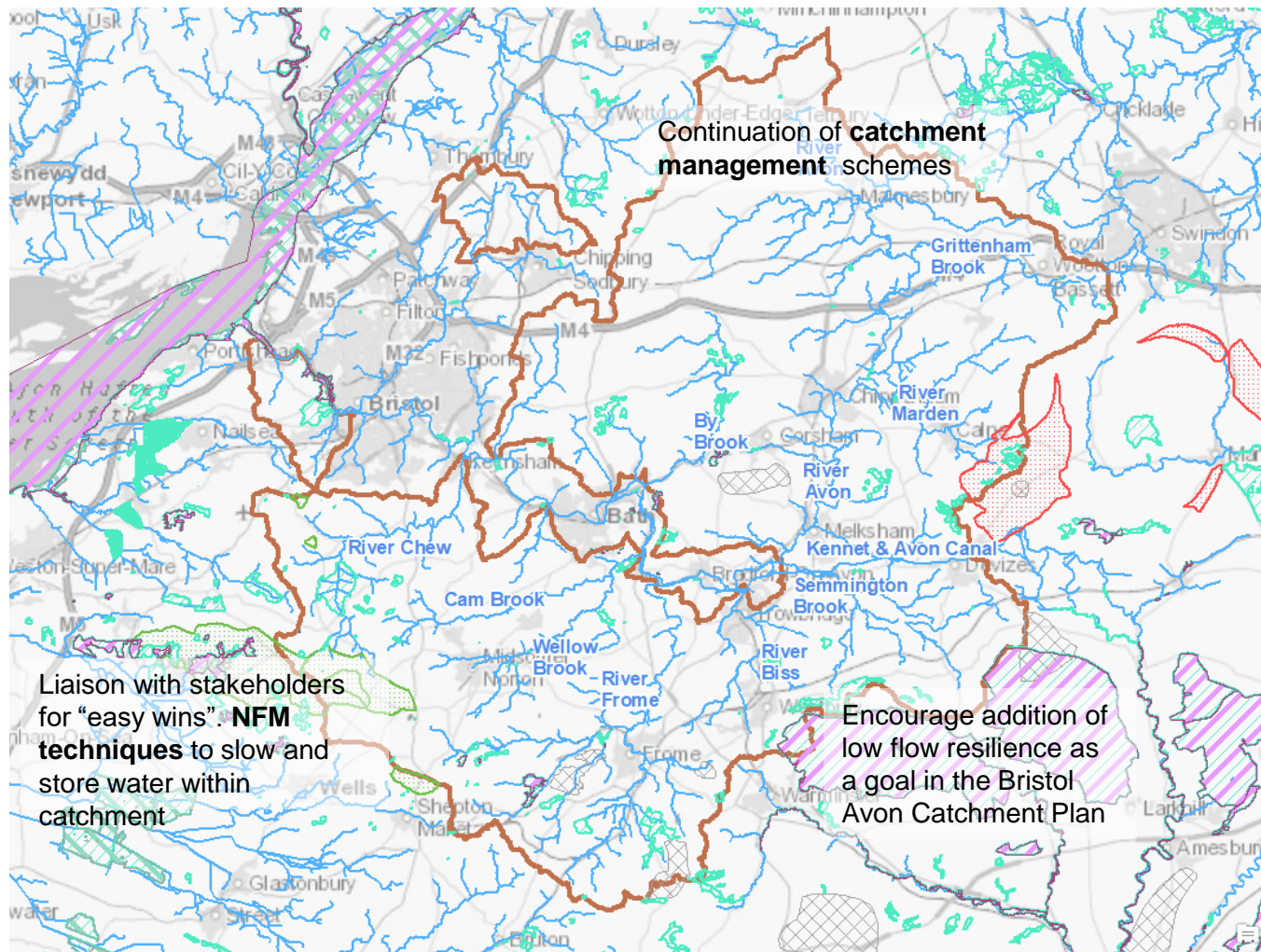


# Figure C4.1 Rural Bristol Avon catchment CaBA opportunity mapping



Data downloaded June 2021 from Catchment Based Approach Data Hub website

**Figure C4.2 Short term 2030 catchment measures: Rural Bristol Avon**



**Investigations:**

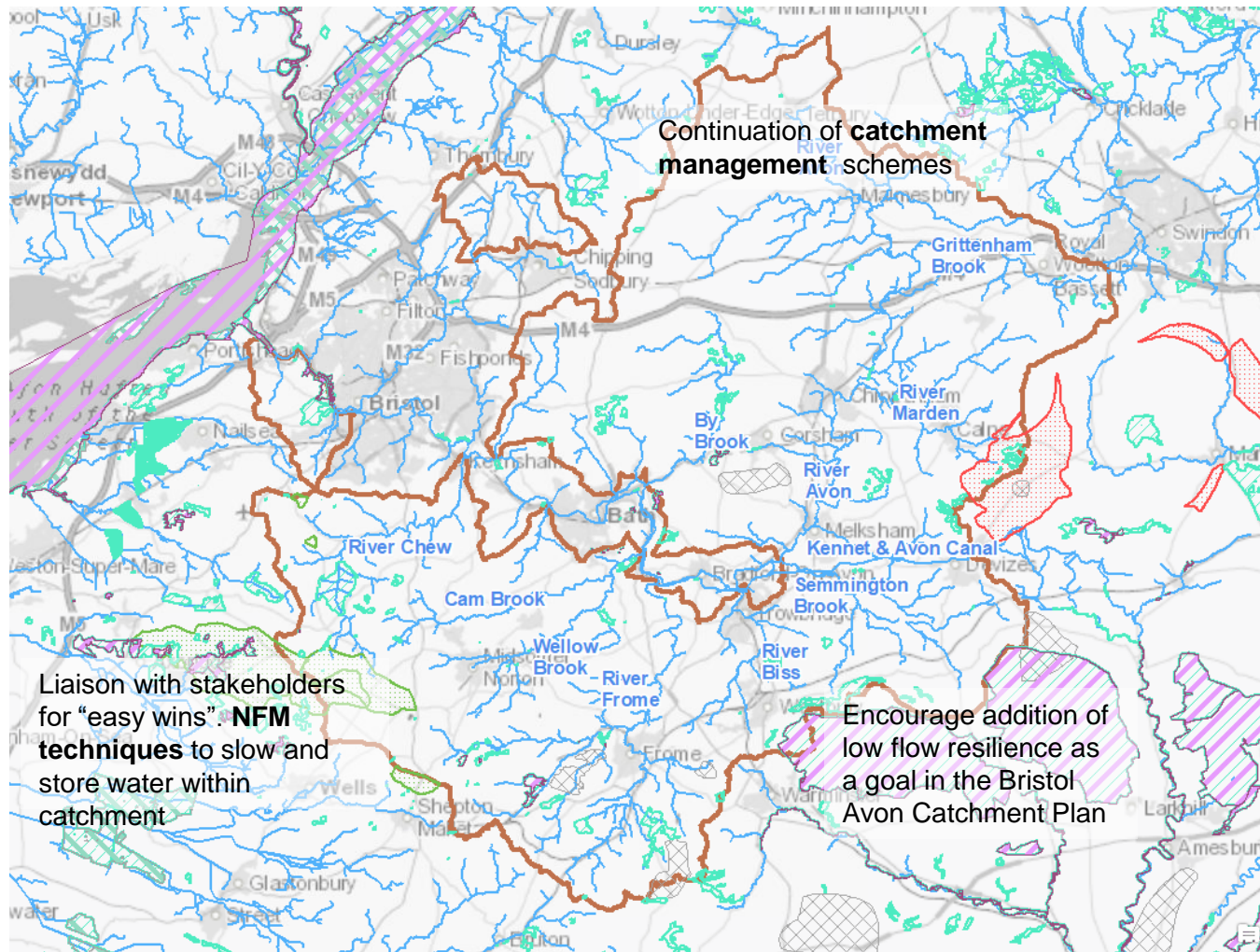
1. Continued review of Environmental Ambition Targets
2. Review potential to refurbish old sources
3. Assessment of viability and potential of new sources in Bristol Water Area
4. Review potential to upgrade WTW to increase deployable output

**Other Activities**

1. AMP7/8 Customer Side Management Options
2. Demand Reduction
3. Leakage Reduction



**Figure C4.3 Medium term 2040 catchment measures: Rural Bristol Avon**



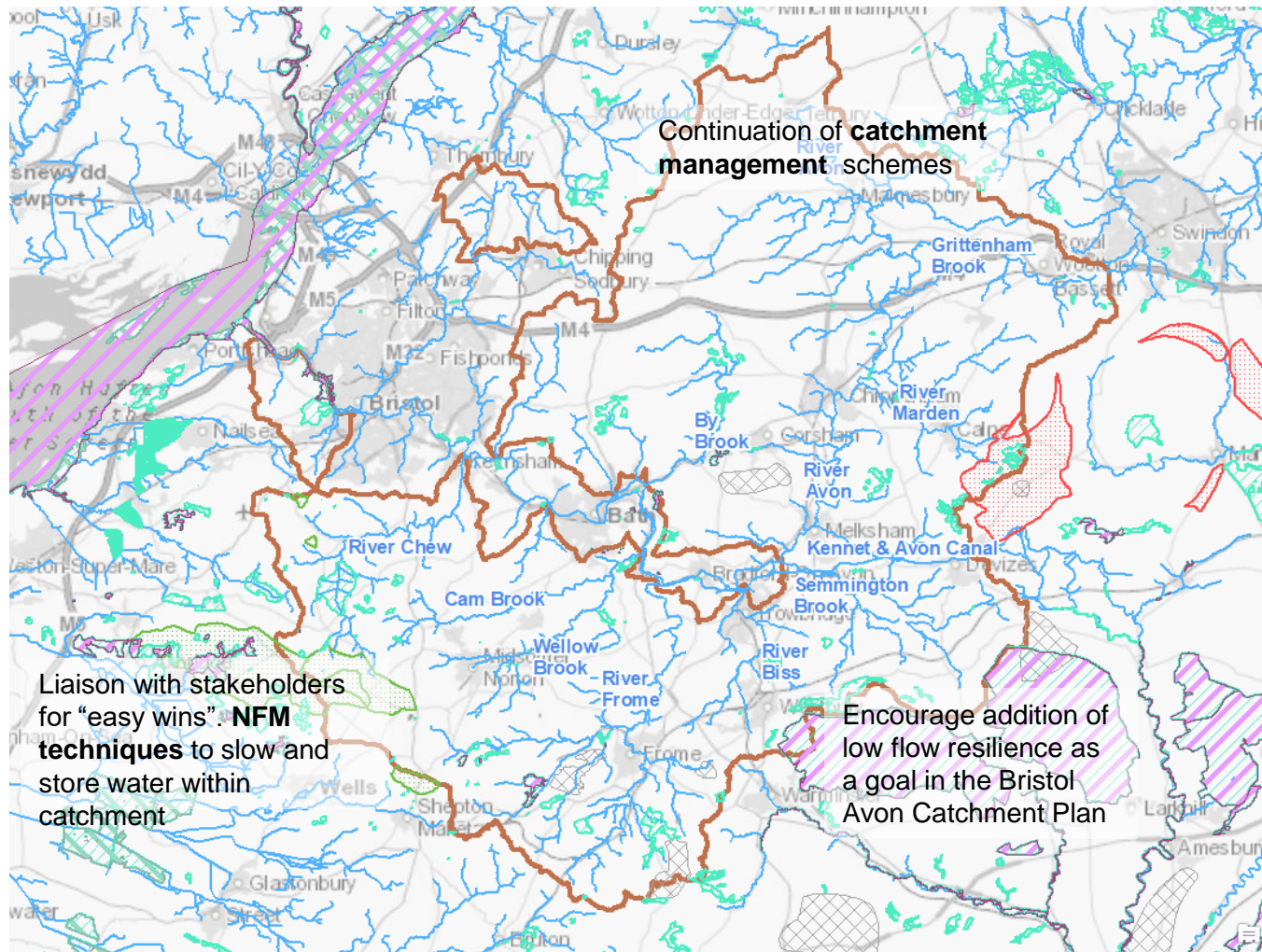
**Investigations:**

1. Continued review of Environmental Ambition Targets
2. Refurbish old sources
3. Drill or connect new water sources
4. Upgrade WTW to increase deployable output
5. Assessment of water resource availability and feasibility in the lower Bristol Avon to allow reduction in abstraction from rural Bristol Avon Rivers. Include strategic review of sources.

**Other Activities**

1. Addition of Cheddar 2 to increase Bristol Water supply resilience?
2. Mendip quarry reservoir to increase Wessex Water supply resilience?

**Figure C4.4 Long term 2050 catchment measures: Rural Bristol Avon**



**Investigations:**

1. Continued review of Environmental Ambition Targets
2. Implement any changes from strategic review of abstraction sources and abstraction patterns between lower Bristol Avon and rural Bristol Avon Rivers.

**Other Activities**

1. Cheddar 2
2. Mendip quarry reservoir
3. Desalinated water import from south coast