Water Resource Management Planning

A developing skill for Broadland abstractors

Broadland Catchment Partnership workshop

April 25 2024

Steve Moncaster

Membership & Technical Advisor

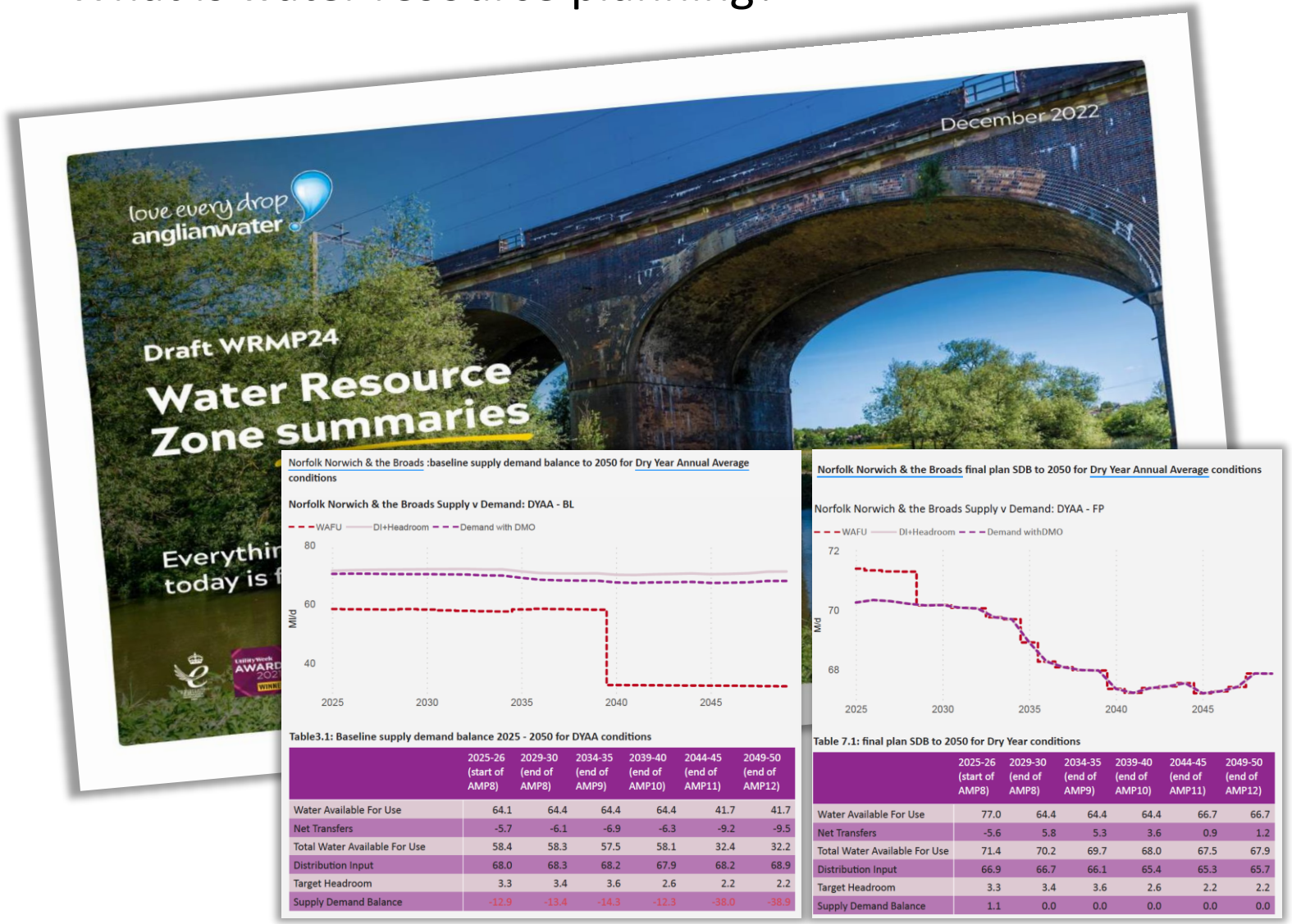
Content

Agricultural water resource planning in Broadland

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Background

What is water resource planning?



	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	64.1	64.4	64.4	64.4	41.7	41.7
Net Transfers	-5.7	-6.1	-6.9	-6.3	-9.2	-9.5
Total Water Available For Use	58.4	58.3	57.5	58.1	32.4	32.2
Distribution Input	68.0	68.3	68.2	67.9	68.2	68.9
Target Headroom	3.3	3.4	3.6	2.6	2.2	2.2
Supply Demand Balance	-12.9	-13.4	-14.3	-12.3	-38.0	-38.9

	2025-26 (start of AMP8)	2029-30 (end of AMP8)	2034-35 (end of AMP9)	2039-40 (end of AMP10)	2044-45 (end of AMP11)	2049-50 (end of AMP12)
Water Available For Use	77.0	64.4	64.4	64.4	66.7	66.7
Net Transfers	-5.6	5.8	5.3	3.6	0.9	1.2
Total Water Available For Use	71.4	70.2	69.7	68.0	67.5	67.9
Distribution Input	66.9	66.7	66.1	65.4	65.3	65.7
Target Headroom	3.3	3.4	3.6	2.6	2.2	2.2
Supply Demand Balance	1.1	0.0	0.0	0.0	0.0	0.0

- Select area (resource zone) and planning scenario (dry year annual average – DYAA, or critical period - DYCP)
- Forecast water available for use (WAFU)
- Forecast volume of water which is put into the supply system (distribution input – DI, combination of demand and leakage)
- Compare the two
- For systems with deficits, plan for schemes to **balance supply & demand**

Why is it needed?

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For security of supply

- 1995-98 drought revived memories of 1976
- In response, water companies told to start planning to meet demand in the long-term*





Environment Committee, Water Conservation & Supply (1996, House of Commons)

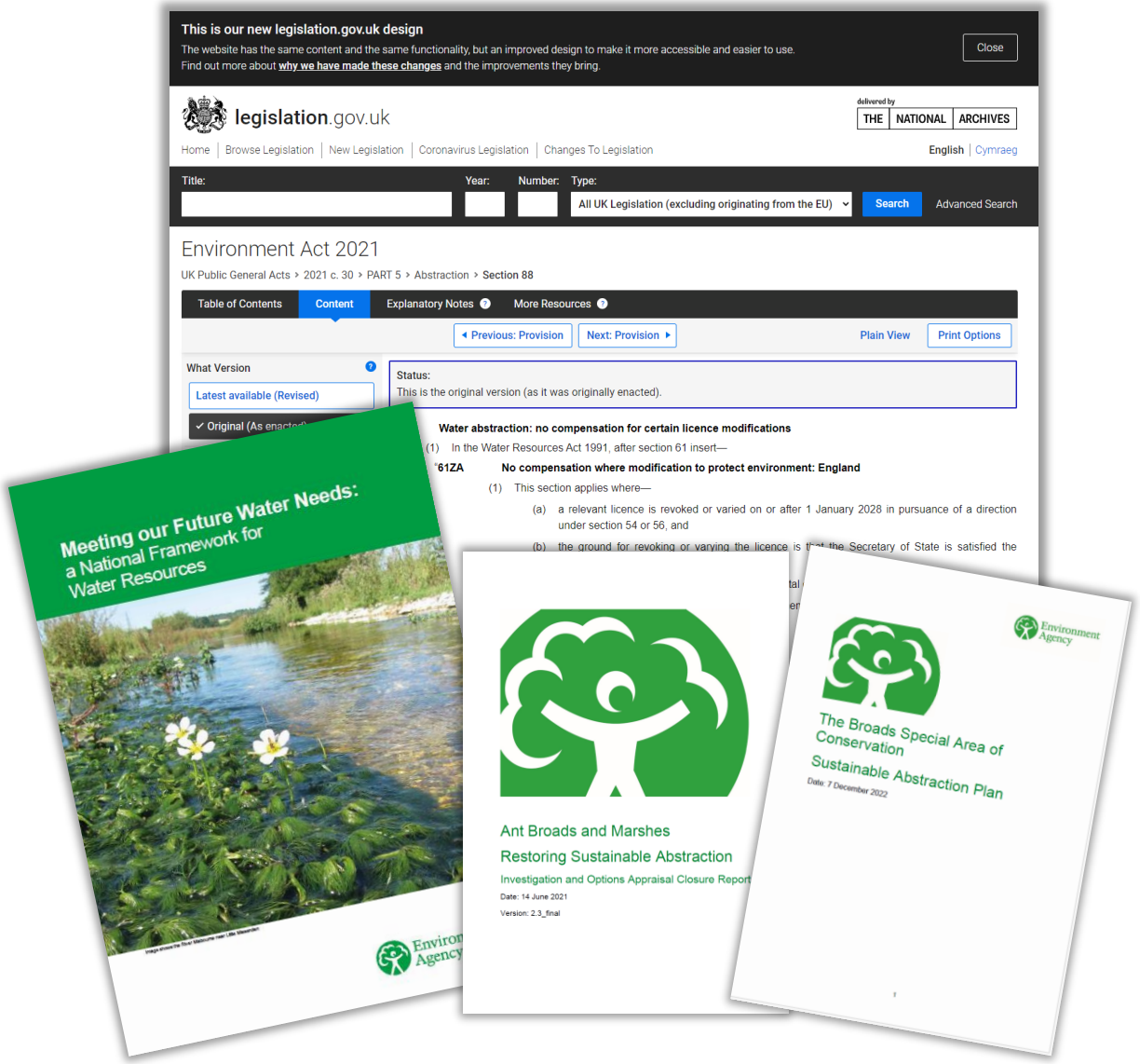
Water resources & agriculture

Water for Food

What's changed?

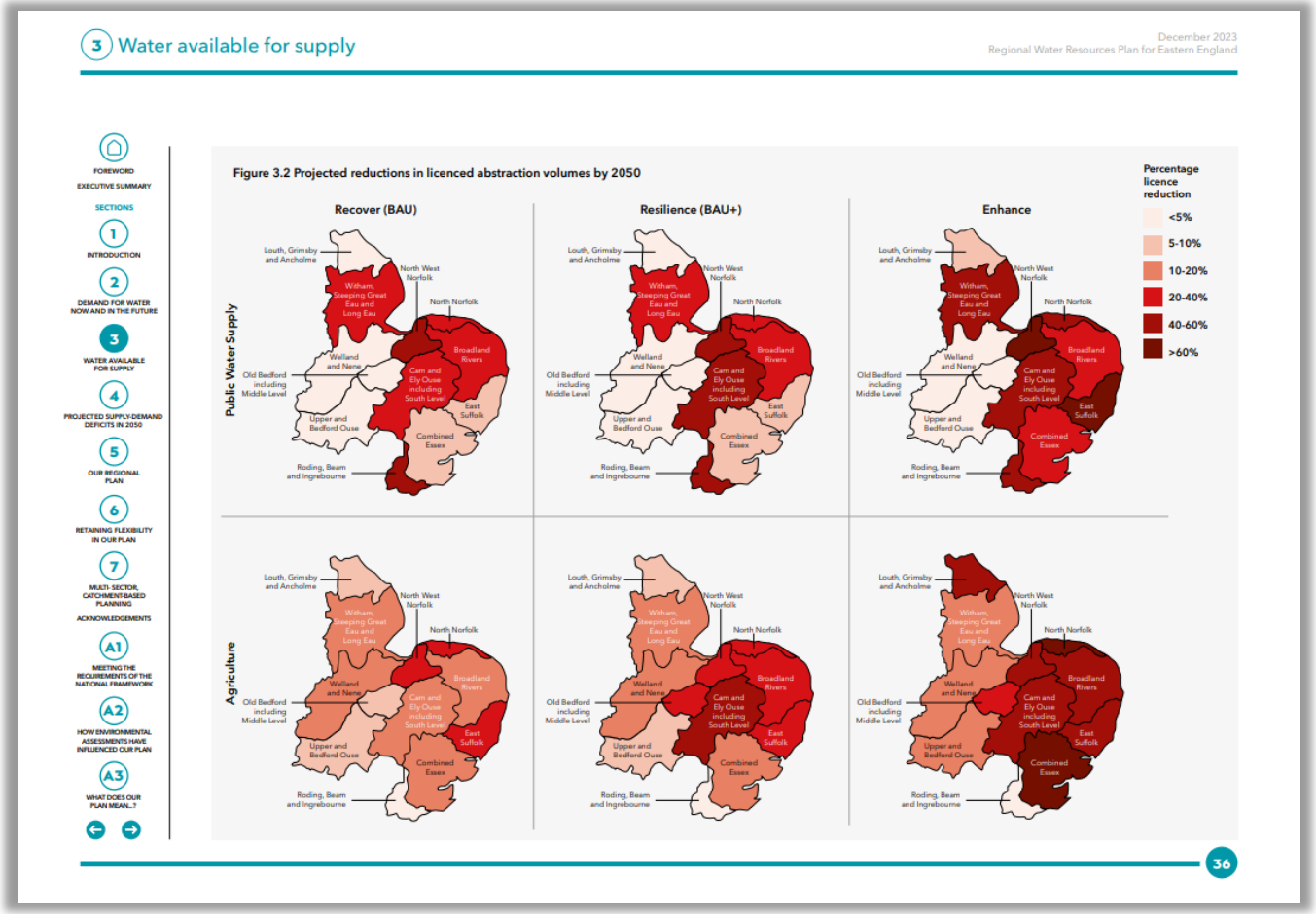
1. Familiar planning problems:
   - Reductions needed to restore abstraction to sustainable levels
   - Climate change
   - Drought, and
   - Growth & new development
2. Potential for further reductions from "environmental destination"
3. Abstraction reform, regional planning & catchment reviews will accelerate the process

Next decade will see significant change in water availability – agrifood sector has limited technical & organisational capacity to respond to this



Longer-term view

WRE (2050) vulnerability assessment



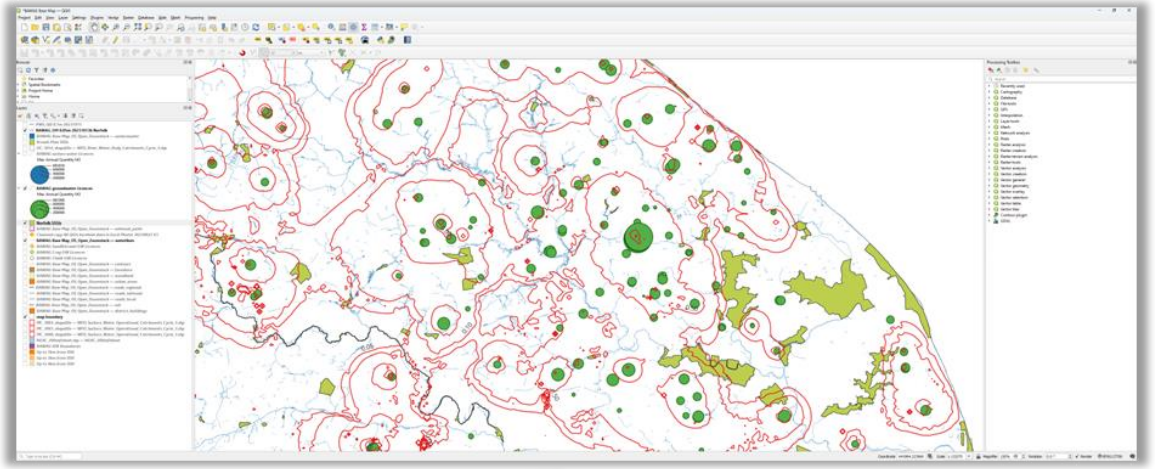
- Modelling for the WRE regional plan separates (2050) licence reductions for agriculture and public water supply
- Agricultural licence reductions in Norfolk vary between 20% and 60% depending on which environmental targets are used

https://wre.org.uk/wp-content/uploads/2023/12/WRE-Regional-Water-Resources-Plan-for-Eastern-England.pdf

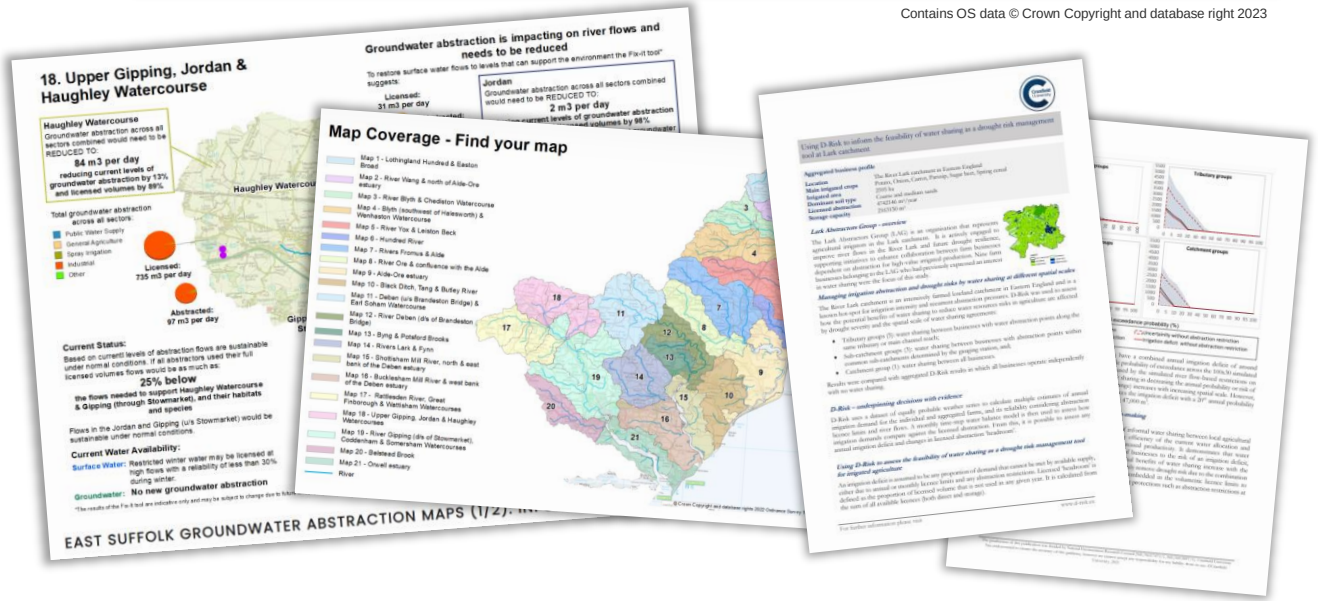
Supporting abstractors

Role of water abstractors groups

1. Main purpose of WAGs is to help abstractors manage water related business risk
   - Sharing cost and risk
   - Using best practice
2. Also represent abstractors in regional planning and other regulatory & legal processes, and
3. Enable collaboration with others to deliver enhanced social and environmental outcomes



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Relevance in the Broads

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Fit with the Broadland Rivers Catchment Plan

1. Immediate focus is on the Environment Agency “Broads Plan”
2. Affected abstractors will need to respond quickly to the licence changes that are proposed
3. This will involve planning for a step-reduction in the supply-demand balance, with related investment needs

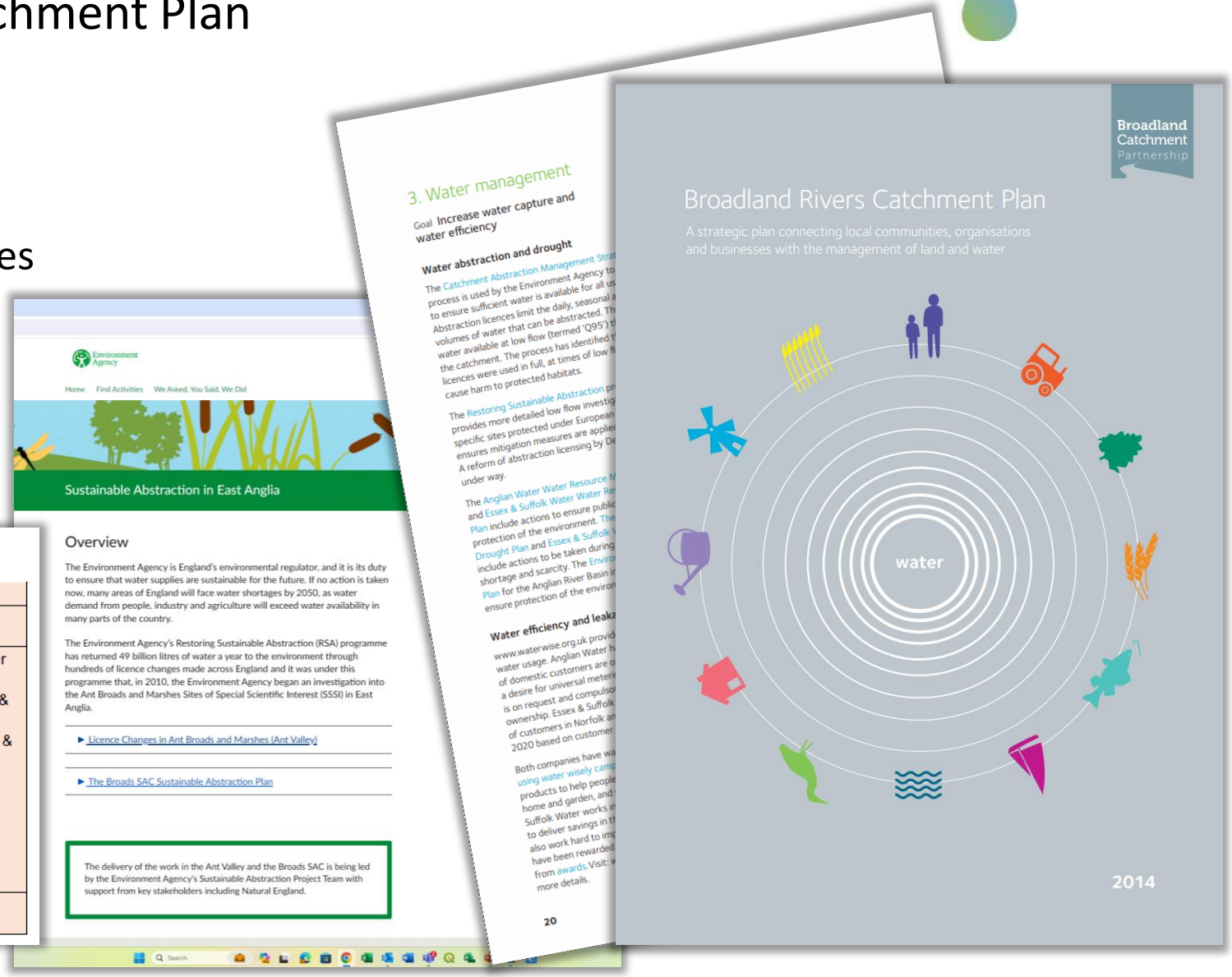


Table 2: SSSI components of The Broads SAC, listed by the five river catchments which form the different phases of the review.

Ant	Bure	Thurne	Yare	Waveney
Ant Broads & Marshes	Crostwick Marsh	Calthorpe Broad	Yare Broads & Marshes	Geldeston Meadows
Broad Fen, Dilham	Bure Broads & Marshes	Priory Meadows	Cantley Marshes	Stanley & Alder Carrs
Alderfen Broad	Upton Broads & Marshes	Upper Thurne Broads & Marshes	Ducan's Marsh, Claxton	Barnby Broad & Marshes
Smallburgh Fen	Damgate Marshes, Acle	Ludham-Potter Heigham Marshes	Poplar Farm Meadows	Spratt's Water & Marshes
	Decoy Carr, Acle	Shallam Dyke Marshes, Thurne	Limpenhoe Meadows	
	Halvergate Marshes (part)	Hall Farm Fen, Hemsby	Hardley Flood	
		Trinity Broads	Halvergate Marshes (part)	
		Burgh Common & Muckfleet Marshes		

Where are we now?

Progress with implementation

1. We have practical planning experience from Ant Broads & Marshes RSA process and the Broads Plan
   - *Masterplan*
   - *ELMs Landscape Recovery grant application*
2. We have delivered a related Farming in Protected Landscape (FIPL) project
3. With the Water For Food (WFF) group, we have developed a simplified framework for agricultural water resource and drought planning
   - *Also working with EA on roll-out of Local Resource Options (LROs)*
4. We are piloting combination of the two in Chalk catchments in West Norfolk
   - *Reports due May 2024*
5. We will implement the planning process across rest of Norfolk in 2024/25
   - *Norfolk Sustainable Abstraction (NSA) programme*



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Thank you for listening

Any questions?