



Environment
Agency



The Water Environment – Minerals & Waste Planning

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Introduction

- ⇒ Water Framework Directive
- ⇒ River Basin Management Plans
- ⇒ Water Cycle Strategies
- ⇒ Catchment Flood Management Plans
- ⇒ Relevance to Minerals and Waste Planning

Water Framework Directive

- ⇒ **purpose** – to establish an EU-wide framework for sustainable water management
- ⇒ **objectives** - to achieve ‘good status’ and ‘no deterioration’ for all water bodies (surface water and groundwater) by 2015, or a later agreed date, through River Basin Management Plans and Programmes of Measures.
- ⇒ The WFD was **transposed** into law in England and Wales by Regulations published in 2003.

Water Framework Directive

- ⇒ The WFD encourages an **holistic** approach to water resource management and the sustainable use of water.
- ⇒ The European Water Framework Directive (WFD) has a variety of implications for land use planning and development control.

WFD Objectives

- ⇒ **new ecological standards** for water environment
- ⇒ **new water environment objectives** to protect the baseline ('no deterioration') and to improve water ecology ('Good Ecological Status'),
- ⇒ contributing to **mitigating** the effects of floods and droughts
- ⇒ **evidence relating to 'Tests of Soundness'** for spatial plans including Minerals & Waste Plans, and
- ⇒ **Penalties** if there is a failure to deliver improvements to our water environment.

Standards

WFD- United Kingdom Technical Advisory Group (UKTAG) which sets criteria & methodology for:

- ⇒ Ecological status
- ⇒ Chemical (N,P)
- ⇒ Biological
- ⇒ Physical / morphology
- ⇒ Groundwater (chemical and water levels)

There are more than 6,500 water bodies in England and a water body must pass all 37 criteria to achieve good status

Key Terms

- ⇒ **River Basin Management Plan** – current condition of the river basin and plan of action needed by 2015
- ⇒ **Water Bodies** – smallest compartment of river basin for surface waters and ground water
- ⇒ **Pressures** – adverse impacts of human activity on water bodies
- ⇒ **Measures** – action needed for each water body to achieve ‘good status’

Measures

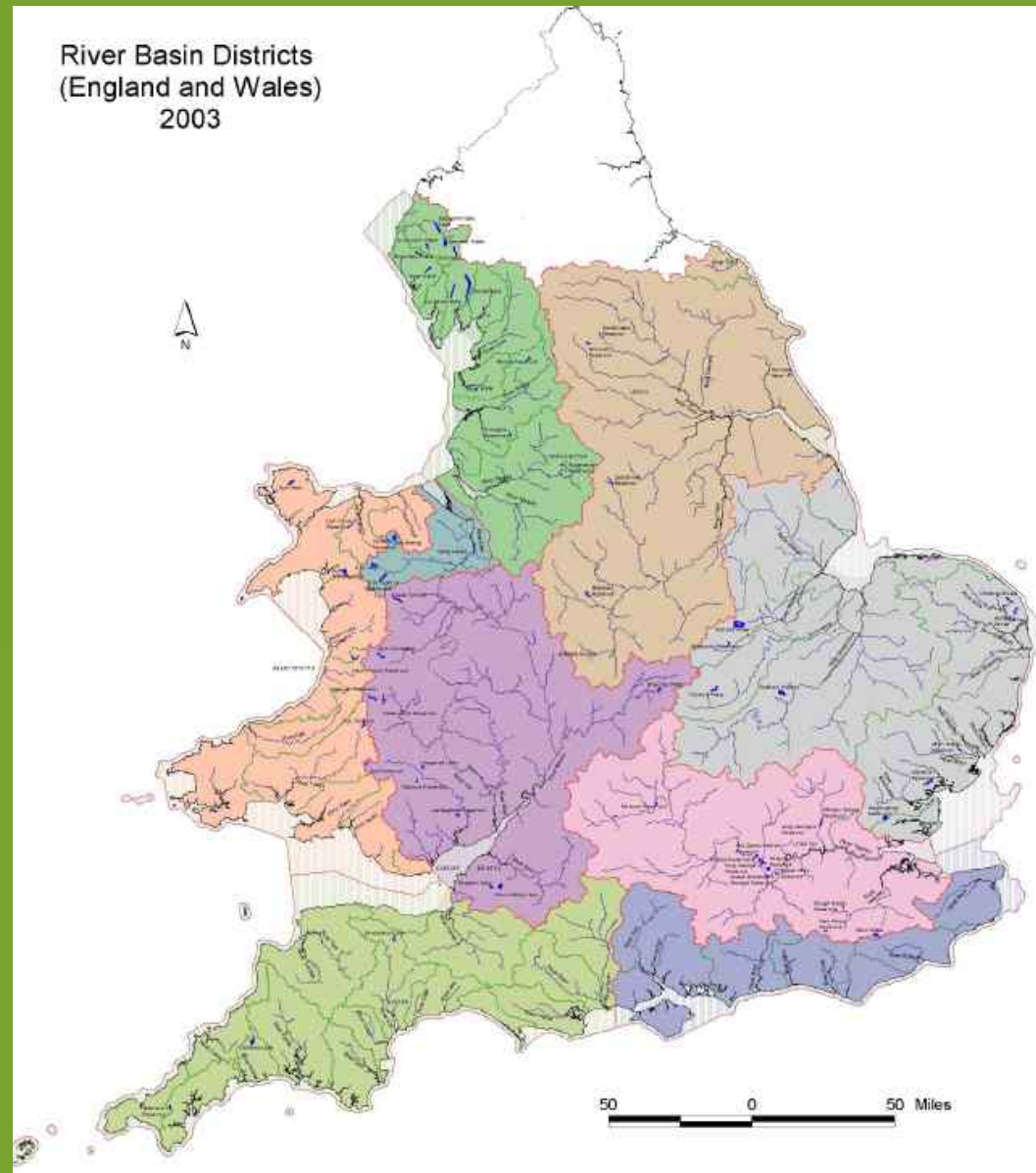
Measures are graded into three scenarios:

- ➔ **A** – actions that already take place and will continue, for example existing consent regime, water company plans etc
- ➔ **B** – actions that are possible and effective that we would like to be used more widely, for example reed beds to treat polluted water discharged from mines
- ➔ **C** – aspirations to improve the water environment, although they may need policy backing and funding.

River Basin Management Plans

- ⇒ Deliver the requirements of the WFD.
- ⇒ Set out measures and objectives to ensure water bodies achieve and maintain good status.
- ⇒ They have implications for location of future development

River Basin Districts
(England and Wales)
2003



North West
Dee
West Wales
Severn
South West
South East
Thames
Anglian
Humber
Northumbria &
Solway / Tweed

River Basin Planning

River Basin Management Plans

- ⇒ Six year cycles
- ⇒ Characterise water bodies
- ⇒ Identify Pressures on river basin
- ⇒ Propose action through a Programme of Measures
- ⇒ Identify who delivers each action ('measure')
- ⇒ Implementation and review

Defra has issued River Basin Planning Guidance
(Vols 1&2)

River Basin Planning

River Basin Management Plans comprise:

➔ Main text (<50 pages) summarises situation and action needed

Supporting appendices, including:

➔ Catchments and status of water bodies

- (Currently about 23% of water bodies are good status)

➔ Programmes of Measures

➔ Action required by sectors – Agriculture, Water, Industry

Summary of key contributions from Mining and Quarrying sector

Humber –

- ⇒ Lead and Coal Mining Legacy and need to manage Minewater
- ⇒ The Coal Authority will continue to manage minewater arising from abandoned coal mines and will aim to prevent significant new pollution;
- ⇒ Establishing a non-coal mining strategy to address environmental risk and piloting possible remediation works;

Severn –

- ⇒ Concerned with former metal and coal mining workings.

WFD timetable – key stages

- ⇒ 2004 – characterisation
- ⇒ 2006 - monitoring programmes
- ⇒ 2007 – strategic water management issues (SWMI)
- ⇒ -----
- ⇒ 2008 – consultation: River Basin Management Plans
 - (22nd December to June 22nd 2009)
- ⇒ 2009 – final RBMPs & programmes of measures
- ⇒ 2012 – programmes of measures operational
- ⇒ 2015 – meet environmental objectives
- ⇒ Every 6 years – review RBMP

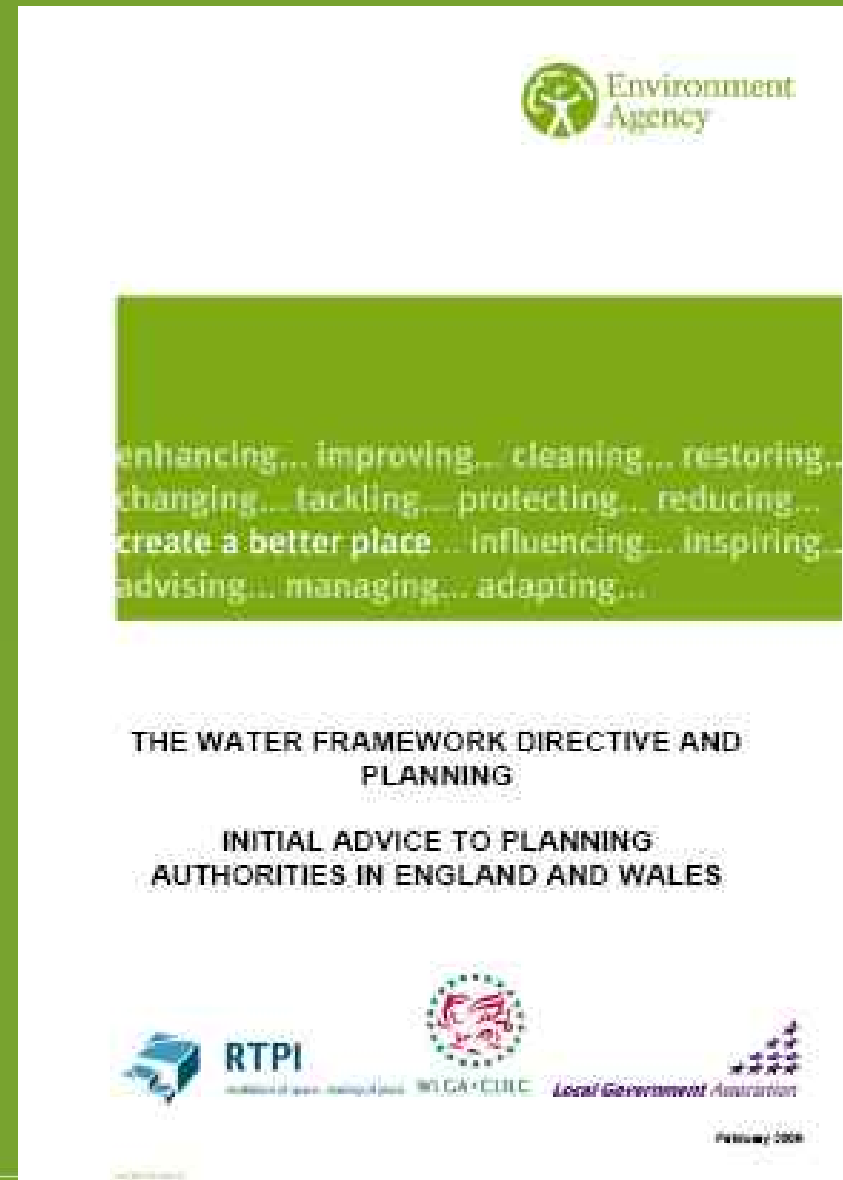
Relationship to Planning

- ⇒ Sustainable development
- ⇒ Spatial planning framework –
 - ⇒ RSS, LDF, SPD
- ⇒ Environmental assessment
 - ⇒ HRA, SA, SEA, EIA
- ⇒ Evidence base

Guidance

Includes:
EA/LGA/RTPI joint guidance

Not less than existing
measures:
PPS23 Pollution
PPS25 Flood Risk



Key issues for Minerals & Waste

Minerals (quarries, & mines)

- ⇒ Surface water management (quality & water table)
- ⇒ Groundwater management
- ⇒ Physical changes to water bodies
- ⇒ Flood risk



Abandoned mines and the water environment

Science project SC030136-41

MINES

Coal & metal mines

Water pollution – ochre and metal ions

Contamination – soils and sediments

Ecological impacts

Economic impacts

Minewater Treatment



Coal Authority

Figure 3.5: Horden active treatment plant



Coal Authority

Figure 3.4: The Mouse Water wetlands

Key issues - Waste

Waste (landfill & waste management facilities)

⇒ Pollution of surface & ground water eg leachates

⇒ Surface water management

⇒ Effluents – e.g. from composting plants

Emerging best practice

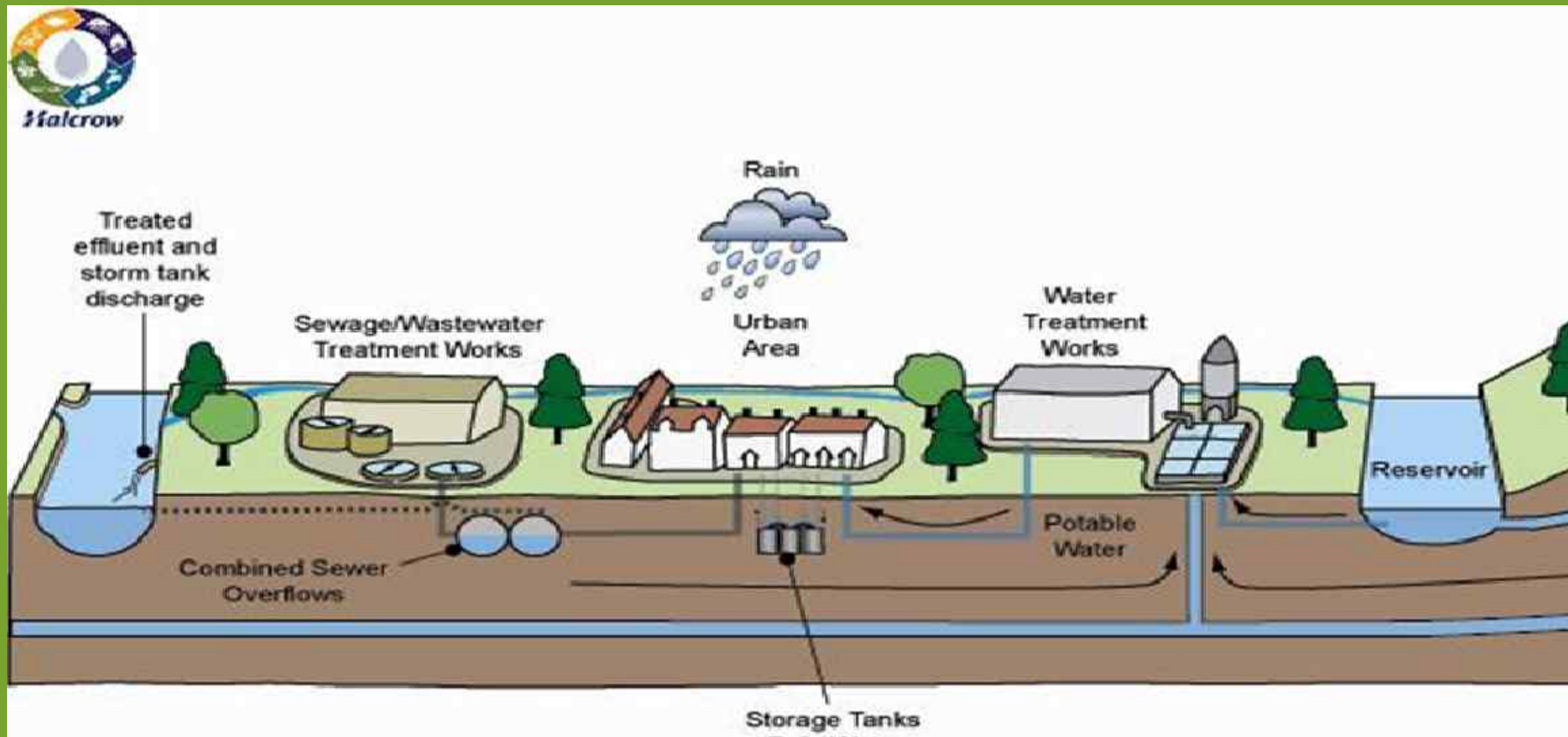
- ⇒ **Restoration schemes** – e.g. where wetland habitat is created
- ⇒ **PPS25 Practice Guide**
- ⇒ **RSS policies on Water** e.g. RSS14 East of England Plan that require LDFs to take account of WFD
- ⇒ **Water Cycle Strategies** – that evaluate impacts of new development on the water environment

Water Cycle Strategies

Water Cycle Strategies are:

- ➔ a method to ensure that we provide sustainable water infrastructure,
- ➔ a way for spatial planners to ensure that their decisions stay within environmental limits, and
- ➔ a process to which stakeholders contribute to achieve sustainable growth

Water Cycle Process



Catchment Flood Management Plans

A Catchment Flood Management Plan (CFMP) is a high-level strategic planning tool through which the Environment Agency will seek to work with other key decision-makers within a river catchment to identify and agree policies for sustainable flood risk management.

Warwickshire

Trent CFMP
Severn CFMPs
(Thames)

Developing a CFMP

- ➔ Collect and review flood risk management information
- ➔ Build a broad scale hydraulic model – where necessary
- ➔ Sub-divide catchment into ‘Policy Units’
- ➔ Evaluate damages for the current day situation and for a future scenario
- ➔ Assess which policy is appropriate for each Policy Unit
- ➔ Produce an Action Plan for each CFMP
- ➔ Consultation on draft CFMP
- ➔ Quality Review CFMP – adapt, refine, re-draft, adopt
- ➔ Implementation of the CFMP - **EA will involve and work with stakeholders and local communities to achieve best overall outcomes for flood risk management**

Policy Units

Policy units are areas within a catchment over which the same preferred flood management policy applies. Policy units have been defined using the following criteria:

- ➔ source of flooding;
- ➔ catchment processes influencing flood mechanism;
- ➔ receptors affected by flooding;
- ➔ history of flooding;
- ➔ risk.

Flood Risk Management Policies

Policy 1 - No active intervention (including Flood Warning and maintenance). Continue to monitor and advise.

Policy 2 - Reduce existing flood risk management actions (accepting that flood risk will increase over time).

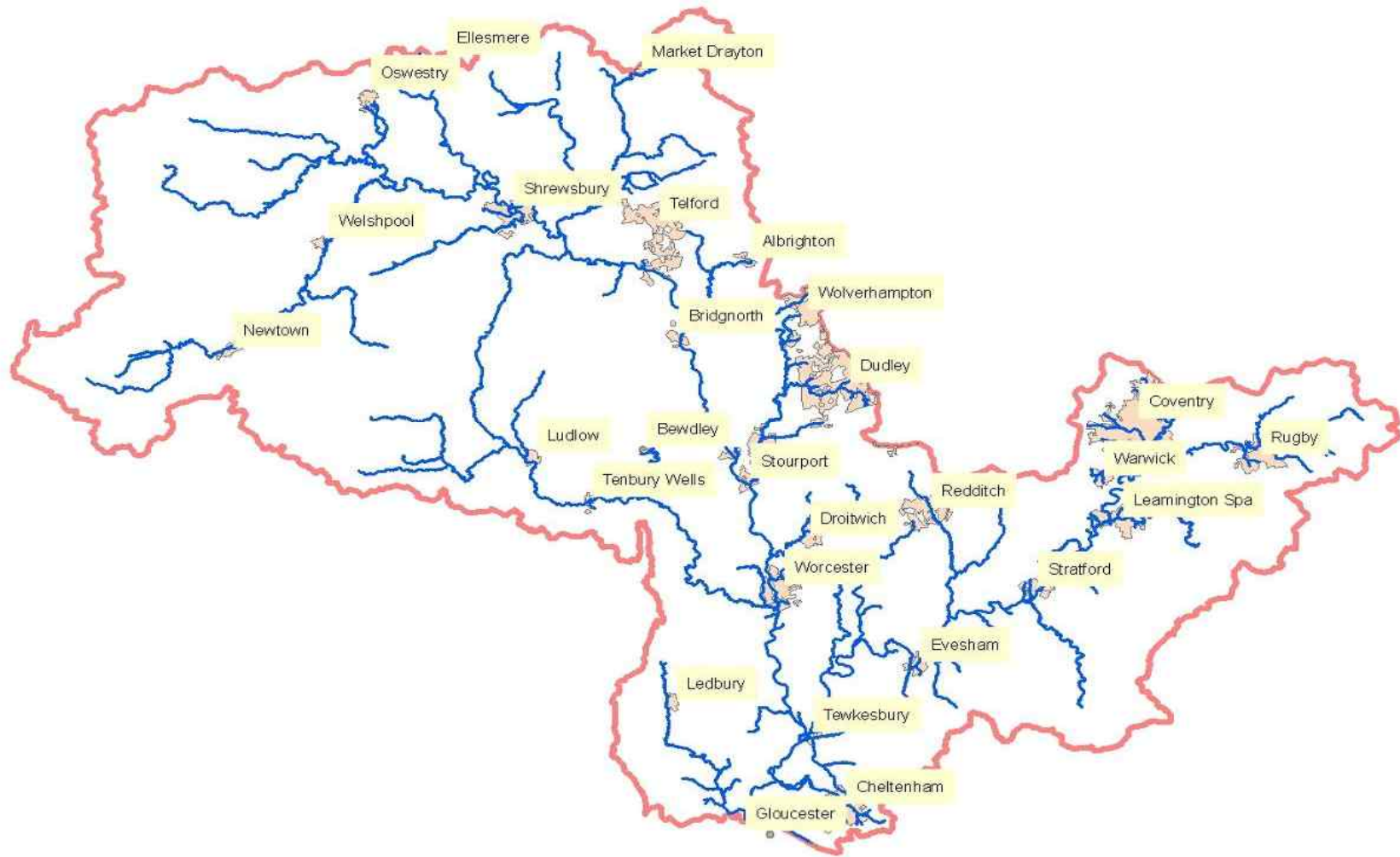
Policy 3 - Continue with existing or alternative actions to manage flood risk at the current level.

Policy 4 - Take further action to sustain the current level of flood risk into the future (responding to the potential increases in risk from urban development, land use change and climate change).

Policy 5 - Take further action to reduce flood risk.

Policy 6 - Take action with others to store water or manage run-off in locations that provide overall flood risk reduction or environmental benefits, locally or elsewhere in the catchment.

Severn CFMP



Severn: Current Flood Risk

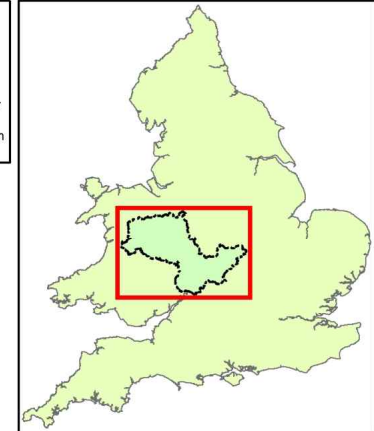
- ⇒ Key flood risks are in **Middle Severn Corridor, Coventry** and Telford and Black Country
- ⇒ Many urban areas such as **Rugby and Coventry** also suffer from surface water and drainage flooding caused by intense rain storms.
- ⇒ Several Sites of Special Scientific Interest (SSSIs), Scheduled Monuments and the World Heritage Site at Ironbridge are also at risk of flooding.

Severn Policy Units

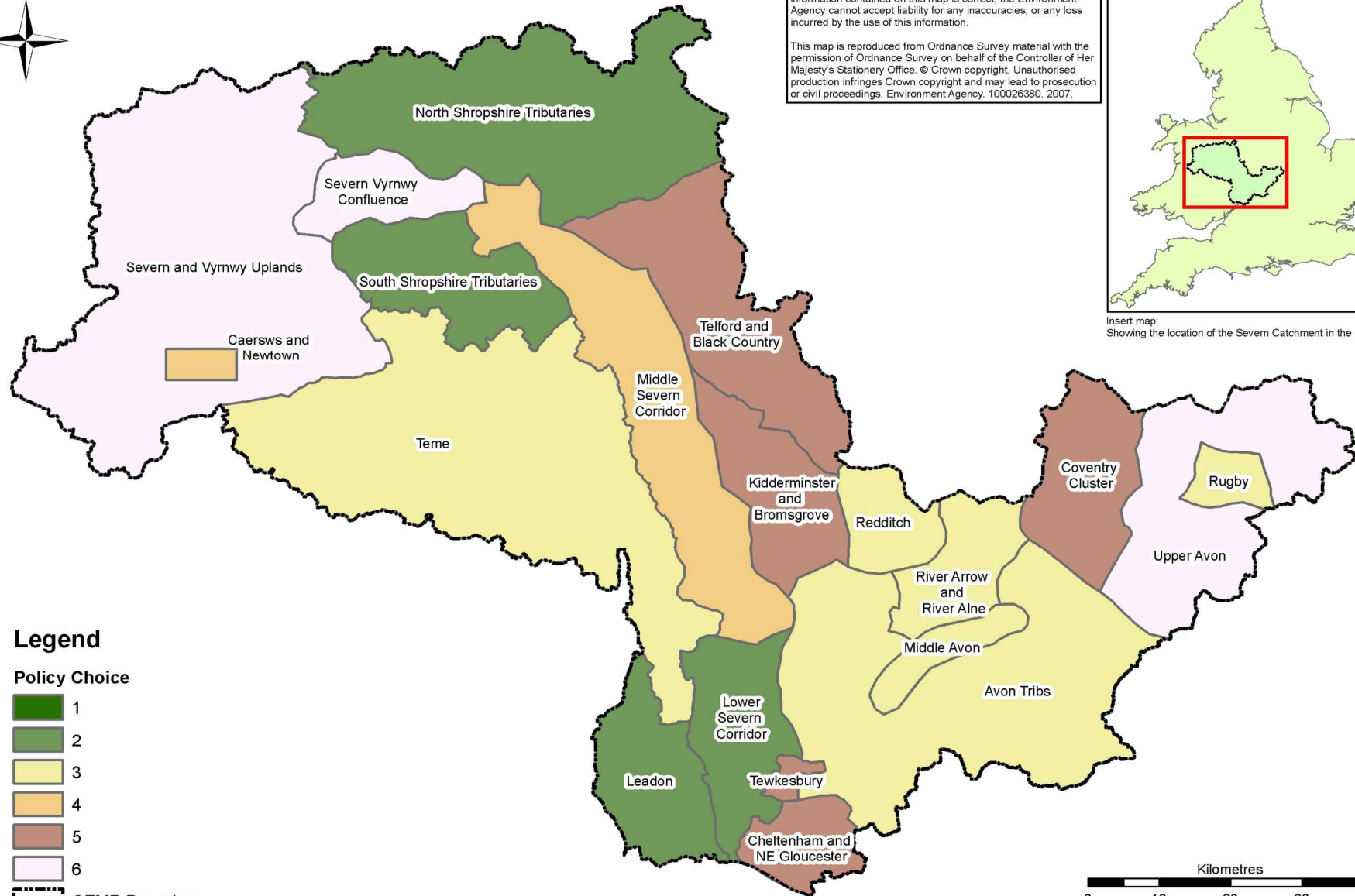


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Insert map:
Showing the location of the Severn Catchment in the UK

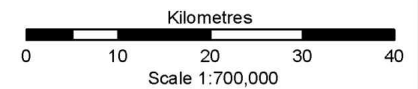


Legend

Policy Choice

- 1
- 2
- 3
- 4
- 5
- 6

CFMP Boundary



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