

# River Severn Partnership



# Overview

- Newly formed – Sept 2019
- Developing a **long term catchment plan**
- Driving **environmental sustainability and resilience**
- **Building capacity across wider work** rather than duplicating
- Harnessing **uniting strength of river network** as a natural asset
  - create efficiencies (move from risk to asset management)
  - capitalise on unique role (catalyst for resilience & recovery)
  - collective whole (deliver more as a strategic collective than individual parts)
- Establishing **long term infrastructure programme**
  - enabling flood risk, water resource and natural capital infrastructure
  - addressing significant national challenges (climate change, Brexit, Covid-19)
  - addressing significant local challenges where actions needed at scale and across multiple organisations- eg Wye and Lugg SAC

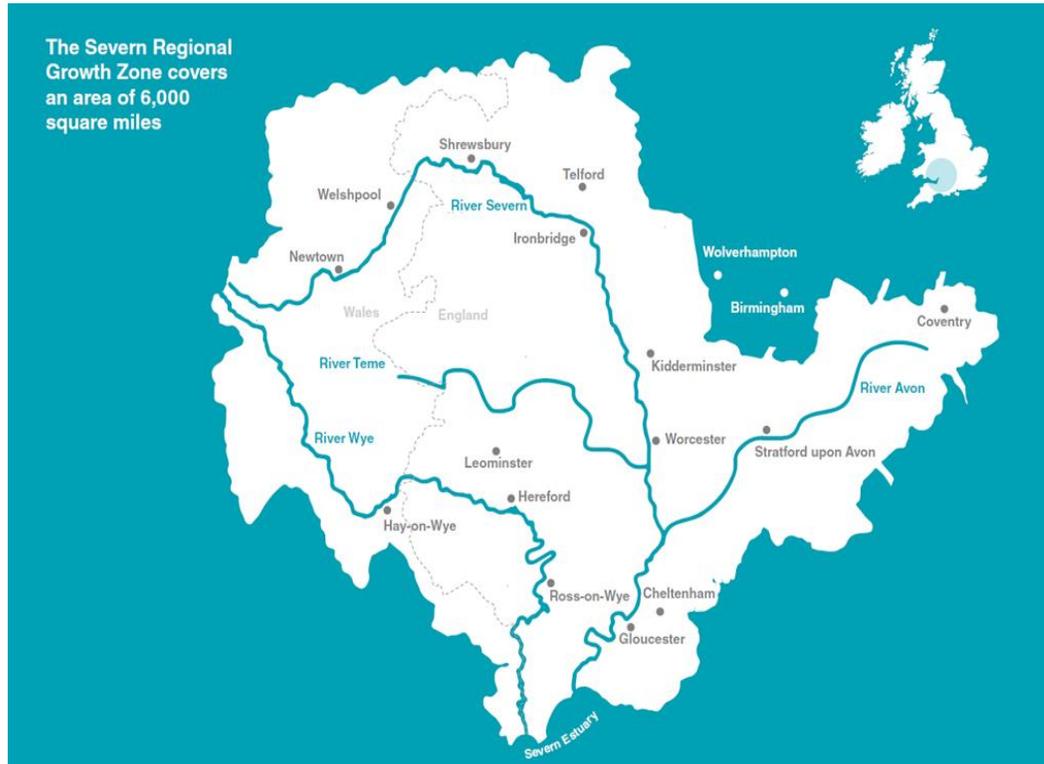


# This is about....

- **A shared holistic approach to water and environmental management**
- **Recognising the catchment is a 'system'**
- **Driving place based resilience**
- **Harnessing opportunities for water and environmental management to provide wider benefits.**
- **Driving efficiencies by moving from reactive risk management.**
- **Reducing pressure on the public purse through piloting new approaches.**

## The Vision

*“To make the Severn catchment Britain’s most vibrant and resilient river network; where an exceptional quality of life, prosperous local economies and an outstanding natural environment is driven by a programme of innovation to reduce flood risk, secure water resources and improve and deliver shared natural assets”.*



Partners	Wider Engagement
<ul style="list-style-type: none"><li>• Environment Agency</li><li>• Shropshire Council</li><li>• Telford and Wrekin Council</li><li>• Herefordshire Council</li><li>• Worcestershire County Council</li><li>• Wychavon District Council</li><li>• Wyre Forest District Council</li><li>• Malvern Hills District Council</li><li>• Worcester City</li><li>• Gloucestershire County Council</li><li>• Tewkesbury Borough Council</li></ul>	<ul style="list-style-type: none"><li>• Marches LEP</li><li>• Worcestershire LEP</li><li>• Gloucestershire LEP</li><li>• Greater Birmingham &amp; Solihull LEP</li><li>• Water Resources West</li><li>• Severn Trent Water</li><li>• Natural Resources Wales</li><li>• Severn Rivers Trust</li><li>• Local Nature Partnerships</li><li>• Wildlife Trusts</li></ul>
	<ul style="list-style-type: none"><li>• National Farmers Union</li><li>• Homes England</li><li>• Midlands Connect</li><li>• Natural England</li><li>• Forestry Commission</li><li>• Dŵr Cymru Welsh Water</li><li>• Powys County Council</li></ul>

## The MOU

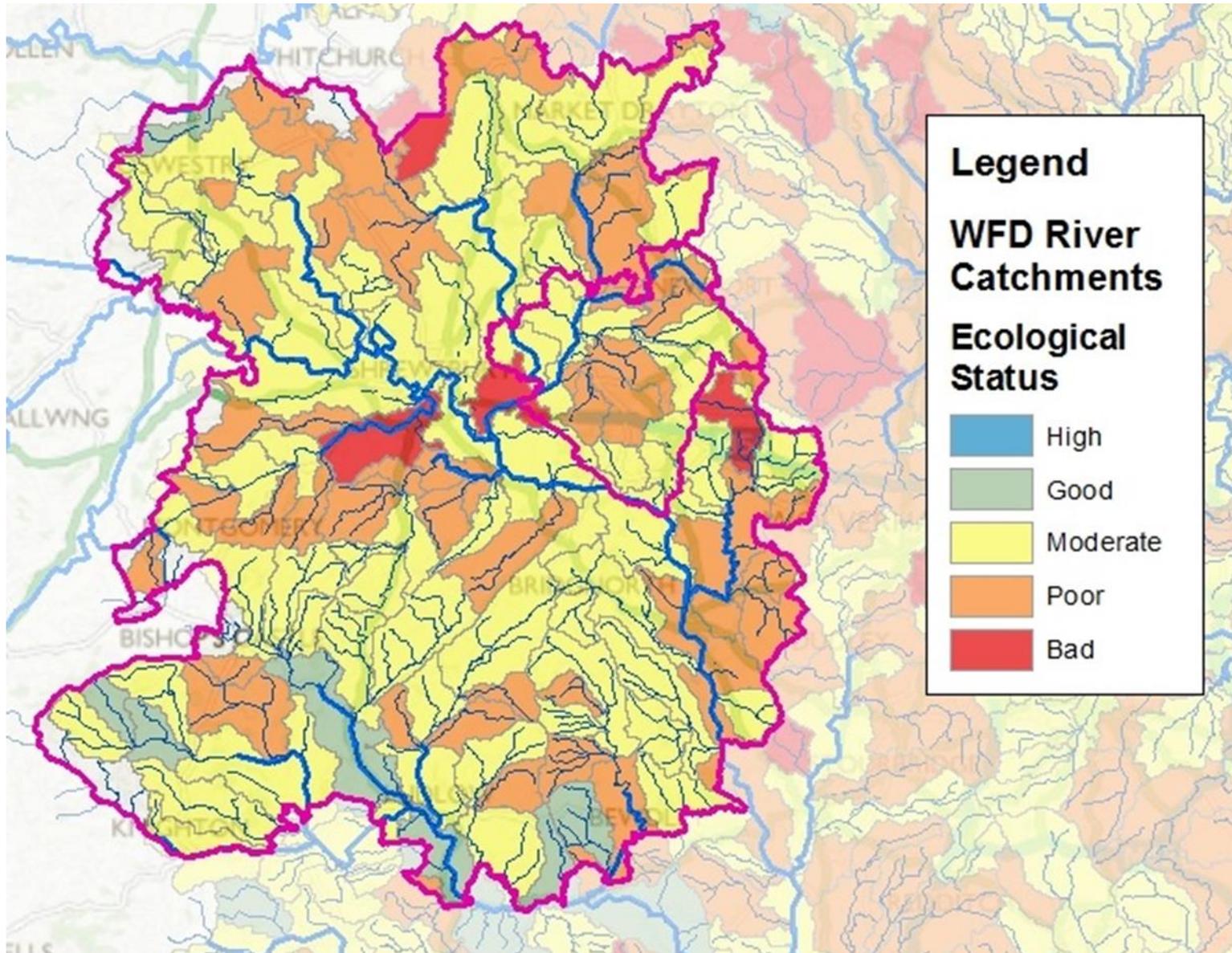
*“The overarching aim of this partnership is to work collaboratively to deliver a long-term comprehensive approach to water management along the River Severn which stimulates sustainable growth and supports environmental betterment and climate resilience”.*

# Why?

- Government commitments
- Beyond environmental mitigation
- Doing nothing not an option
- Significant opportunities
- Systems thinking



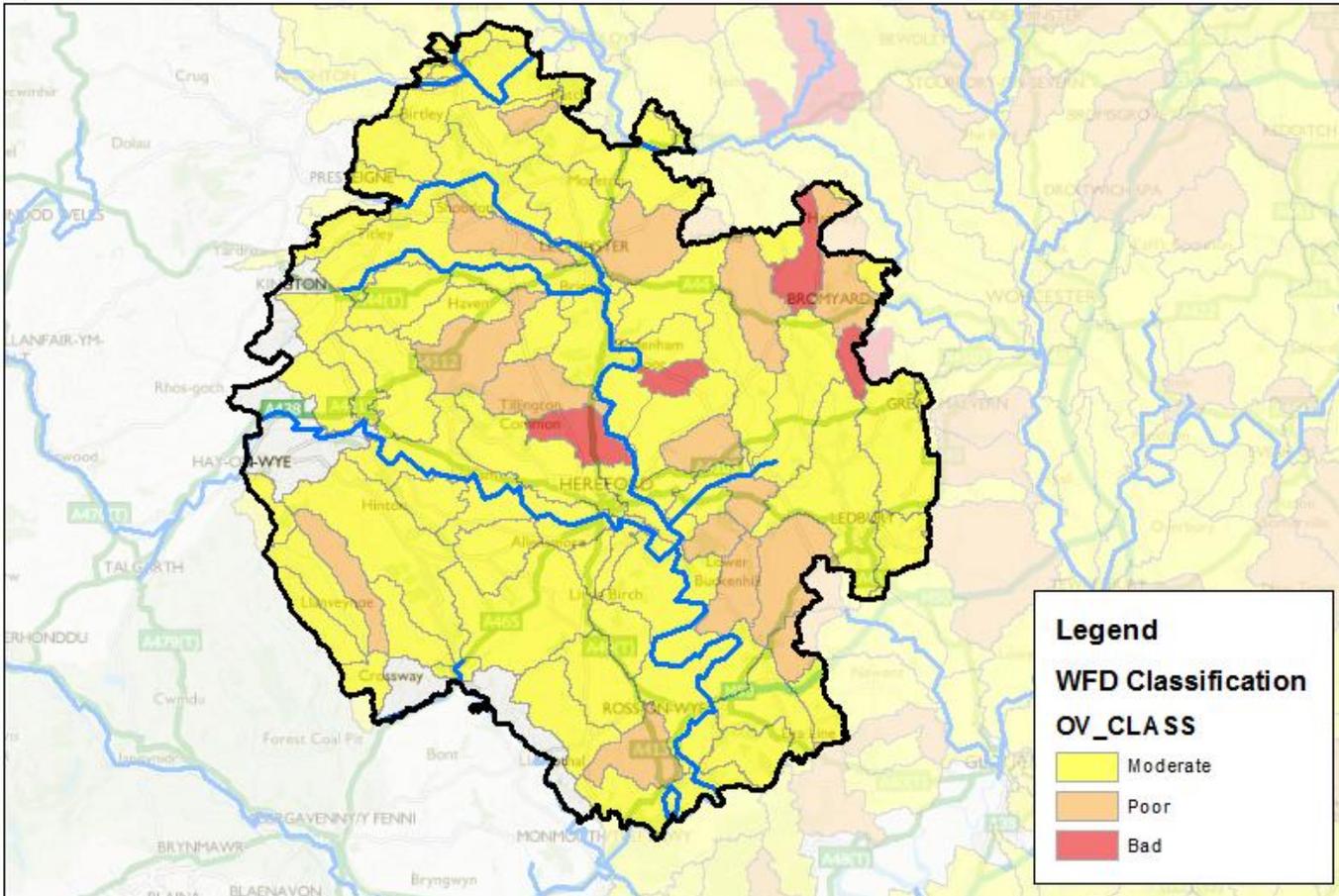
# Ecological Status



- The majority of WFD status across Shropshire & Telford is either **moderate or poor**
- Further abstraction could result in **long-term damage to the environment particularly water quality**
- But... some areas are good and need sensitive management
- **Licensing impacts** need to be considered

# Water Framework Directive Status Herefordshire

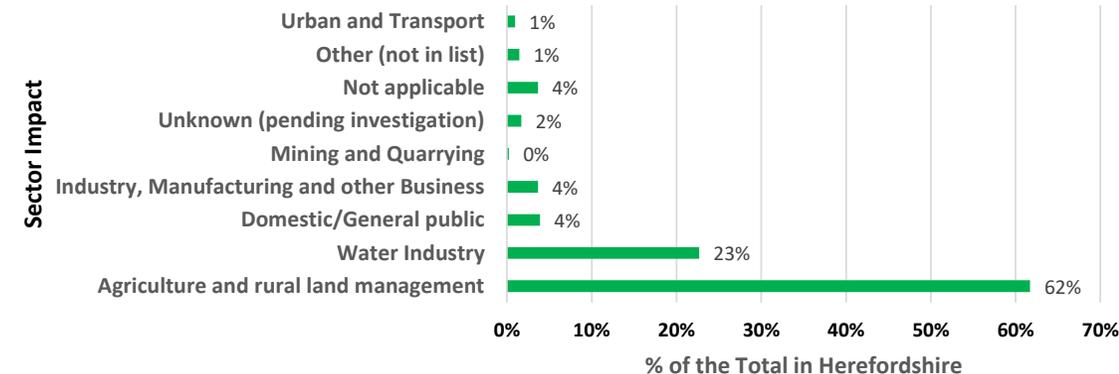
## Water Framework Directive (WFD) Overall Waterbody Classification



- **Agriculture land management** is the main reason behind WFD Failure, followed by **Water Industry** (62% and 23% respectively)
- Risks to housing growth in the River Wye / Lugg Special Area of Conservation

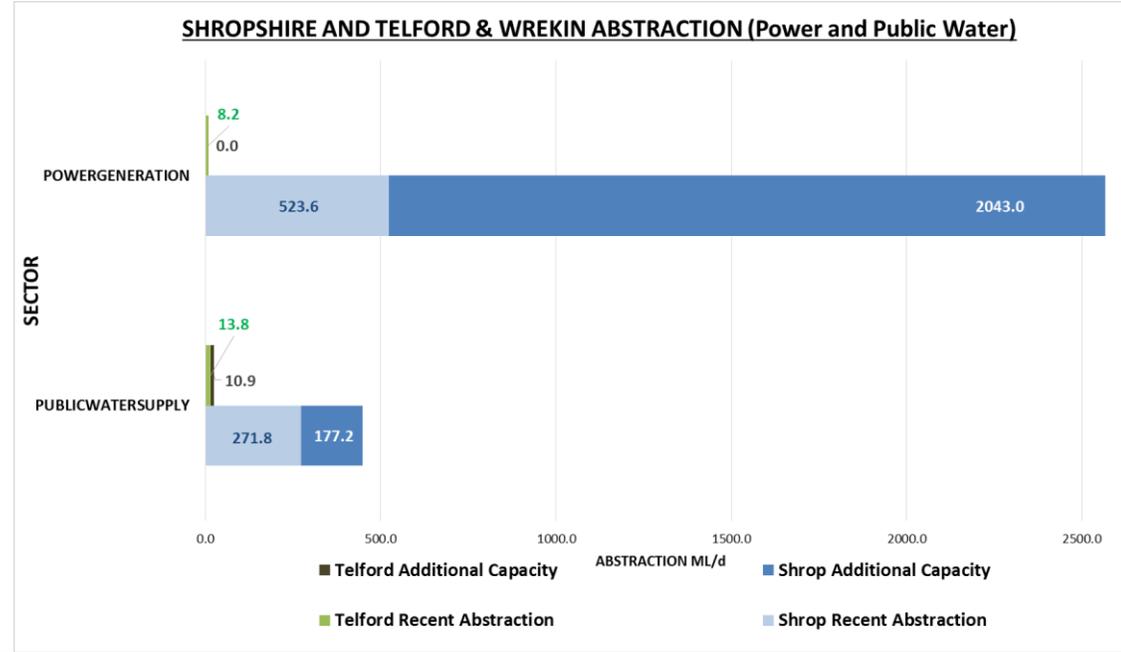
- The majority of WFD status is either **moderate or poor**, with some **bad**
- Further abstraction could result in **long-term damage to the environment particularly water quality**
- **Licensing impacts** need to be considered

## WFD Reasons for Not Achieving Good

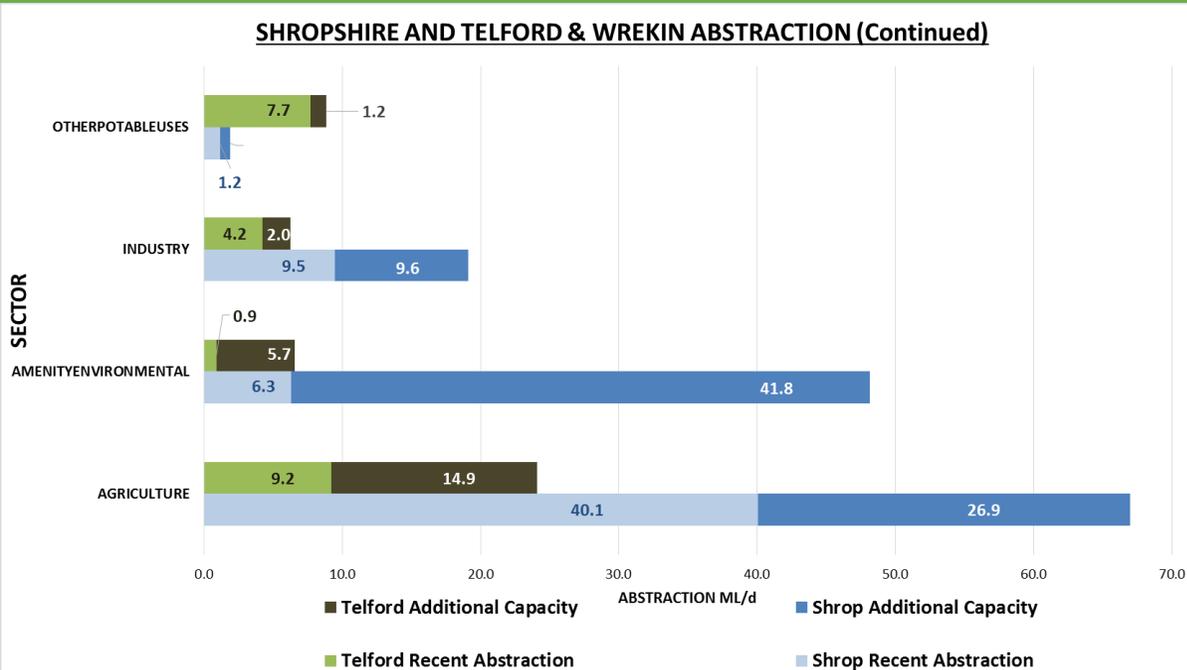


# Abstraction in Shropshire and Telford

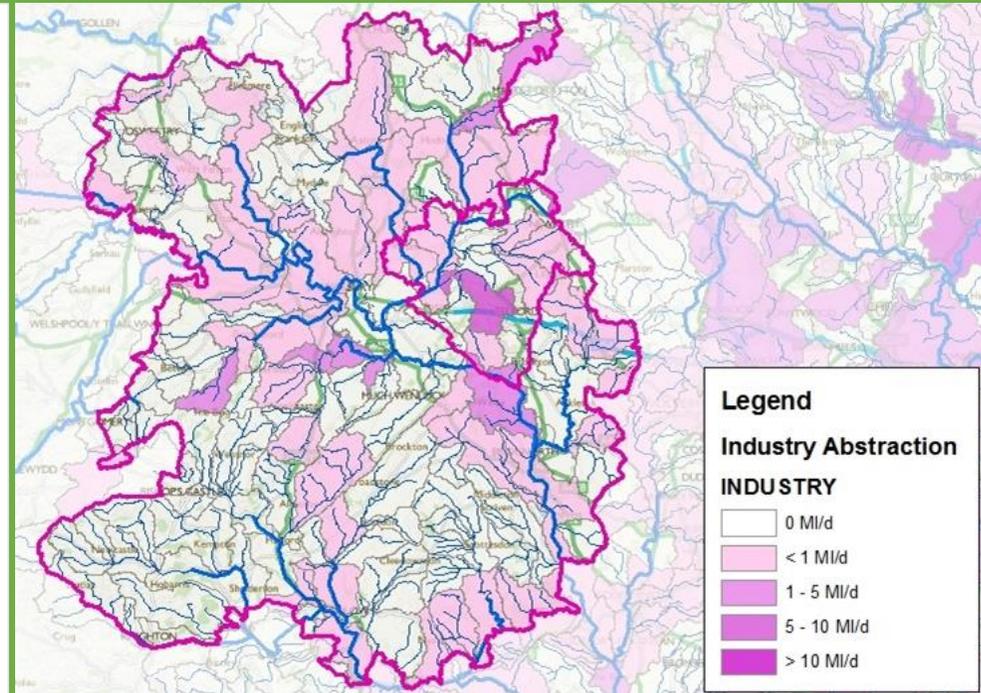
- Public Water Supply biggest consumptive abstractor
- Public Water Supply using approximately 60% of fully licensed volumes
- Power Generation biggest non-consumptive abstractor
- Industry using approximately 50% of its fully licensed volumes



## Overview of Abstraction



## Abstraction by Industry

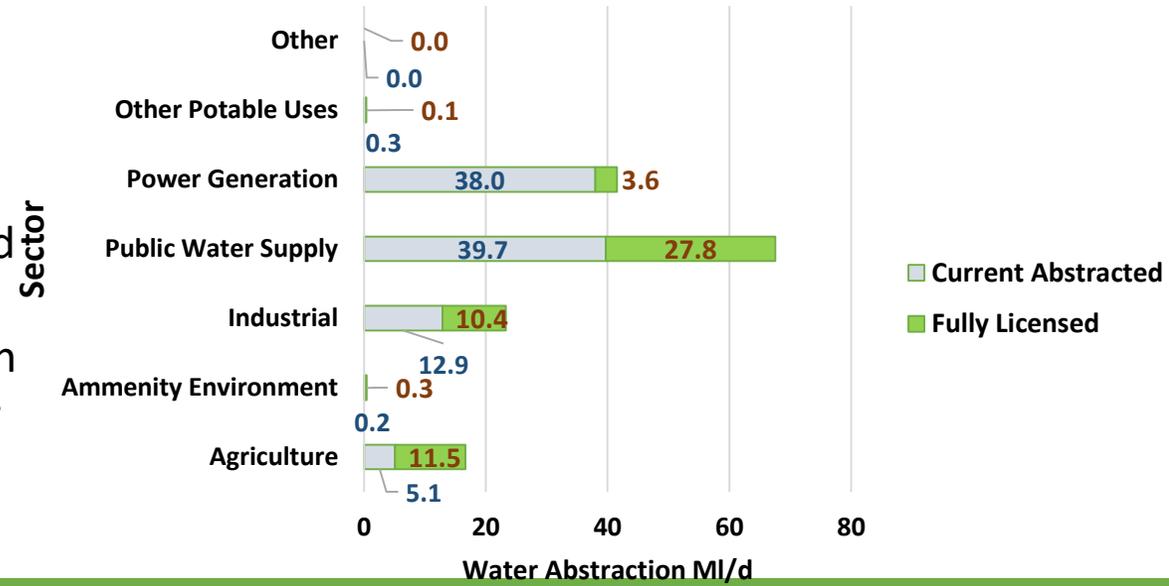


- Quarrying
- Manufacturing of construction products
- Food & drink (e.g. milk production & poultry)
- Leisure (e.g. sport facilities & golf courses)

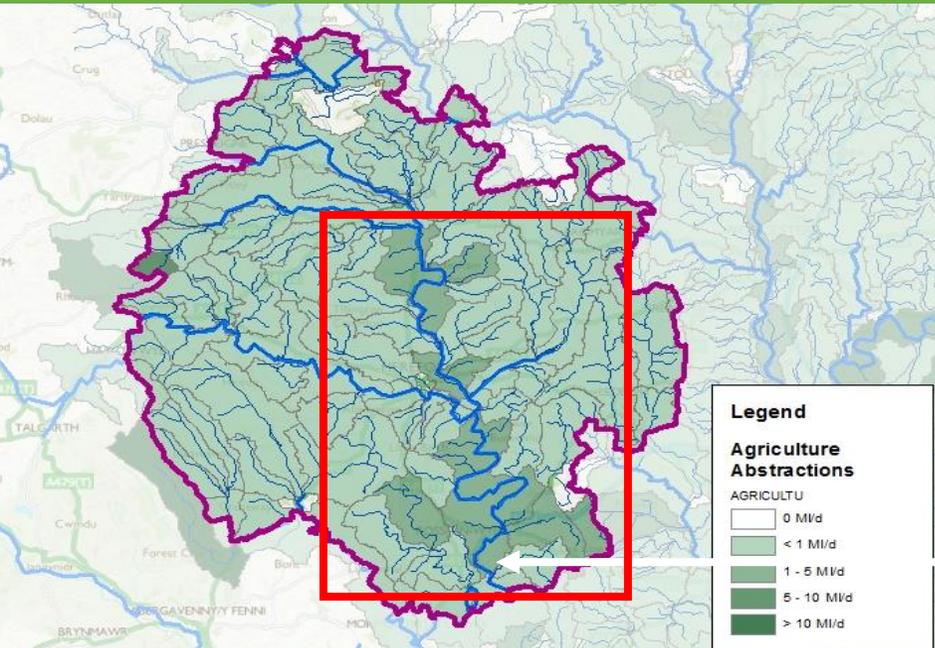
# Abstraction in Herefordshire

- Industry abstractors primarily **food and drink sector**
- Some businesses in manufacturing, management of real estate and leisure sectors too
- Agriculture and food and drink are key growth areas for abstraction
- Interestingly, 5 to 10 percent of the population use a private water supply for domestic purposes.

## Recent Abstractions and Full License Volumes in Herefordshire



### Agriculture



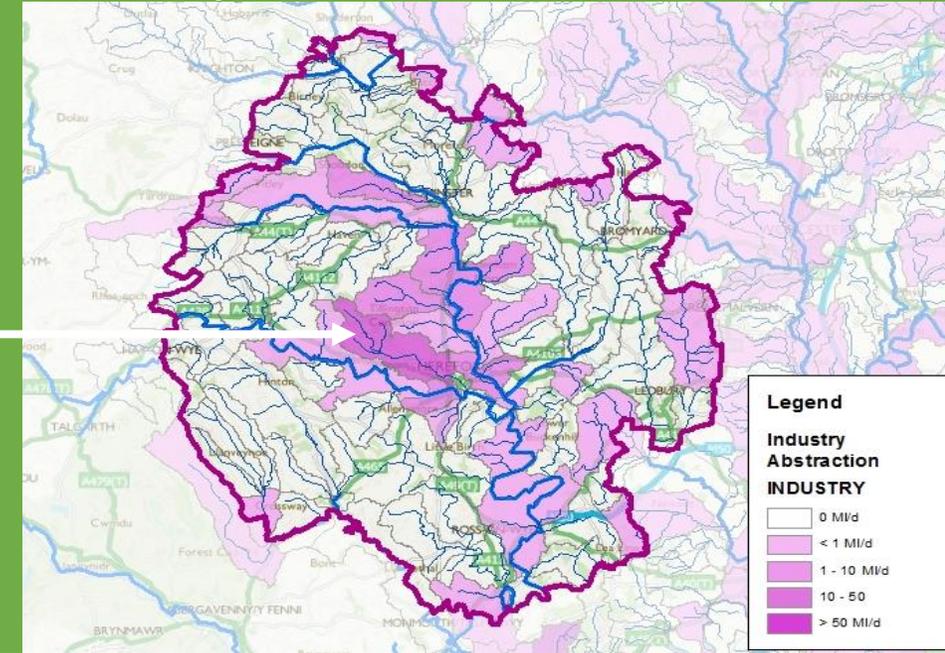
### Food and Drink around Hereford:

- Big employers such as Heineken, Freemans of Newent and Sun Valley Foods

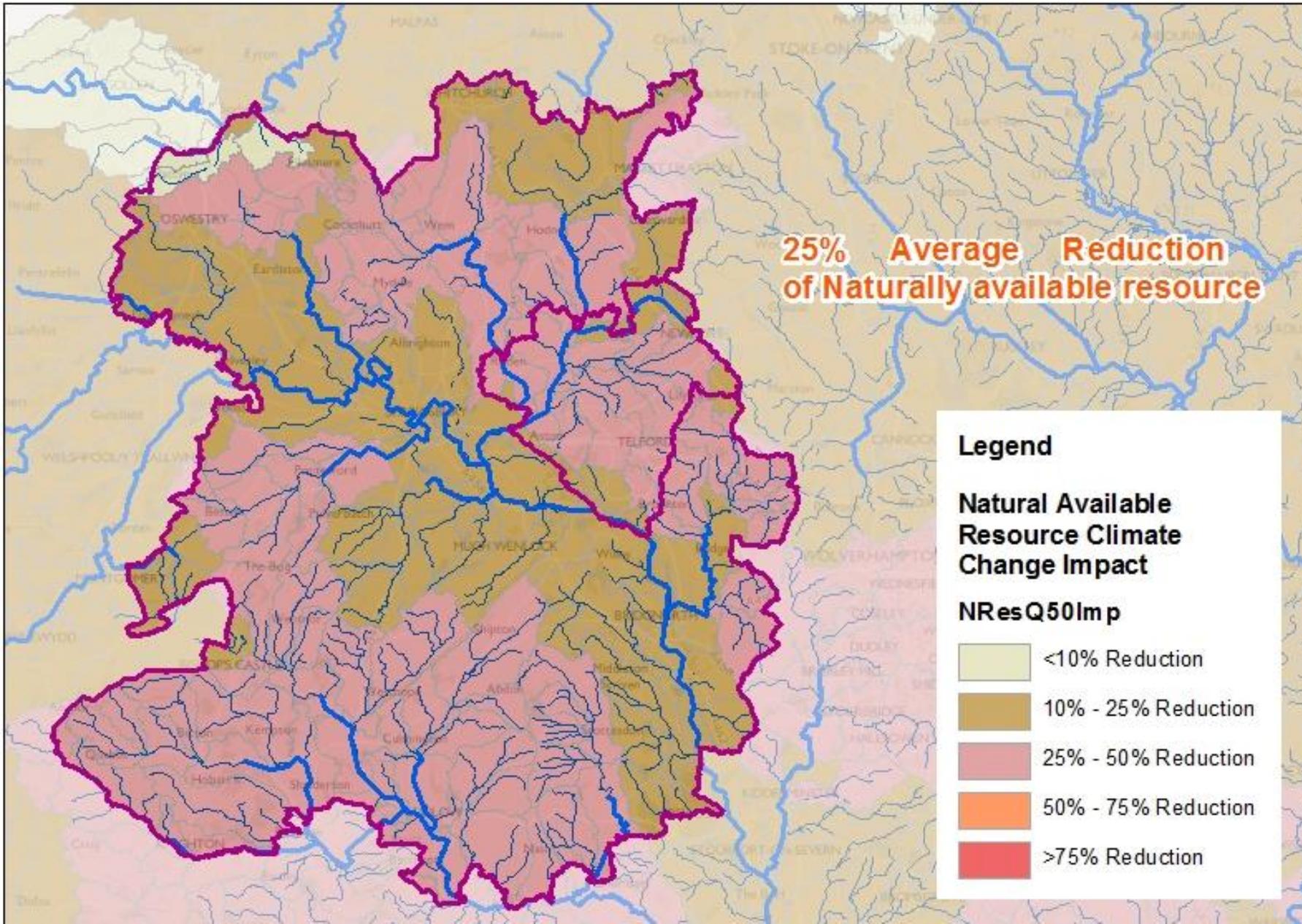
### Agriculture:

- Concentrated abstraction around the River Lugg Corridor

### Industry



# Climate Change Impacts



## Headline Figures

- Climate change = reduced water availability
- **25% -20% water availability reduction on average by 2050**
- What risks might this pose for your organisation & growth?
- Can you identify any opportunities to support water security?

# Economic Impact of Drought

**Impact:** Turnover equivalent to 6% of the total in the following sectors

## Economic impact of Drought in England (DEFRA, 2013)

- Public Water Supply
- Power Generation
- Freshwater aquaculture
- Irrigated crops
- Plant Nurseries
- Landscaping
- Golf

...but greater impacts during extreme drought including potential losses in the **Food and Drink** or **Manufacturing** sectors valued at **£189m** and **£761m** in Herefordshire

*It is estimated that profits are c.4x higher in irrigated potatoes than in rain fed.*

\* Estimated over a 2 year drought scenario

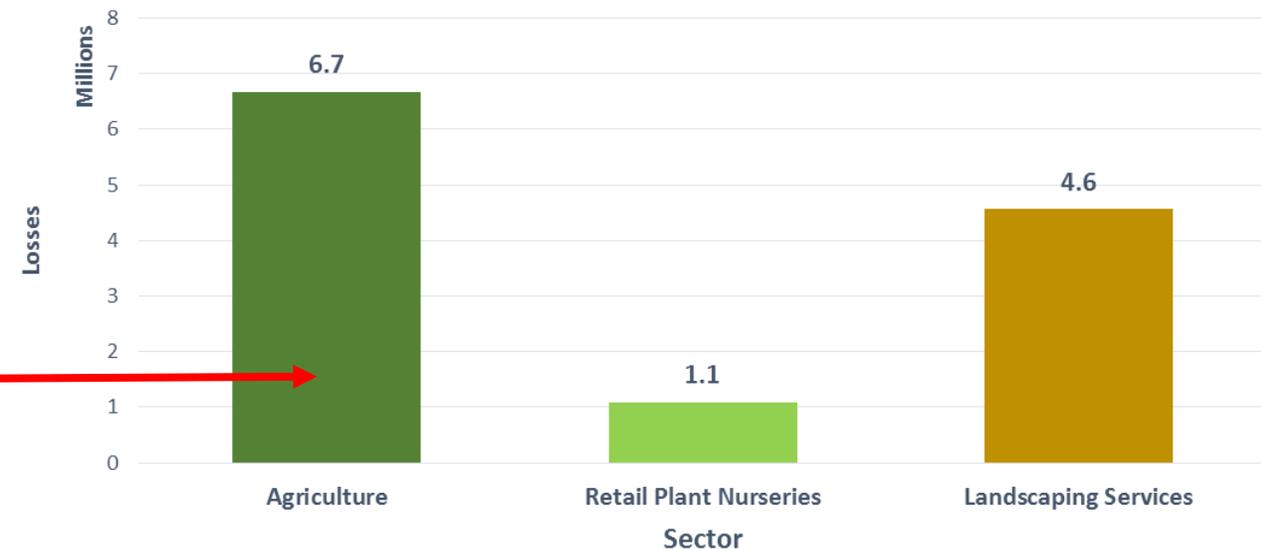
www.defra.gov.uk

## The impacts of drought in England

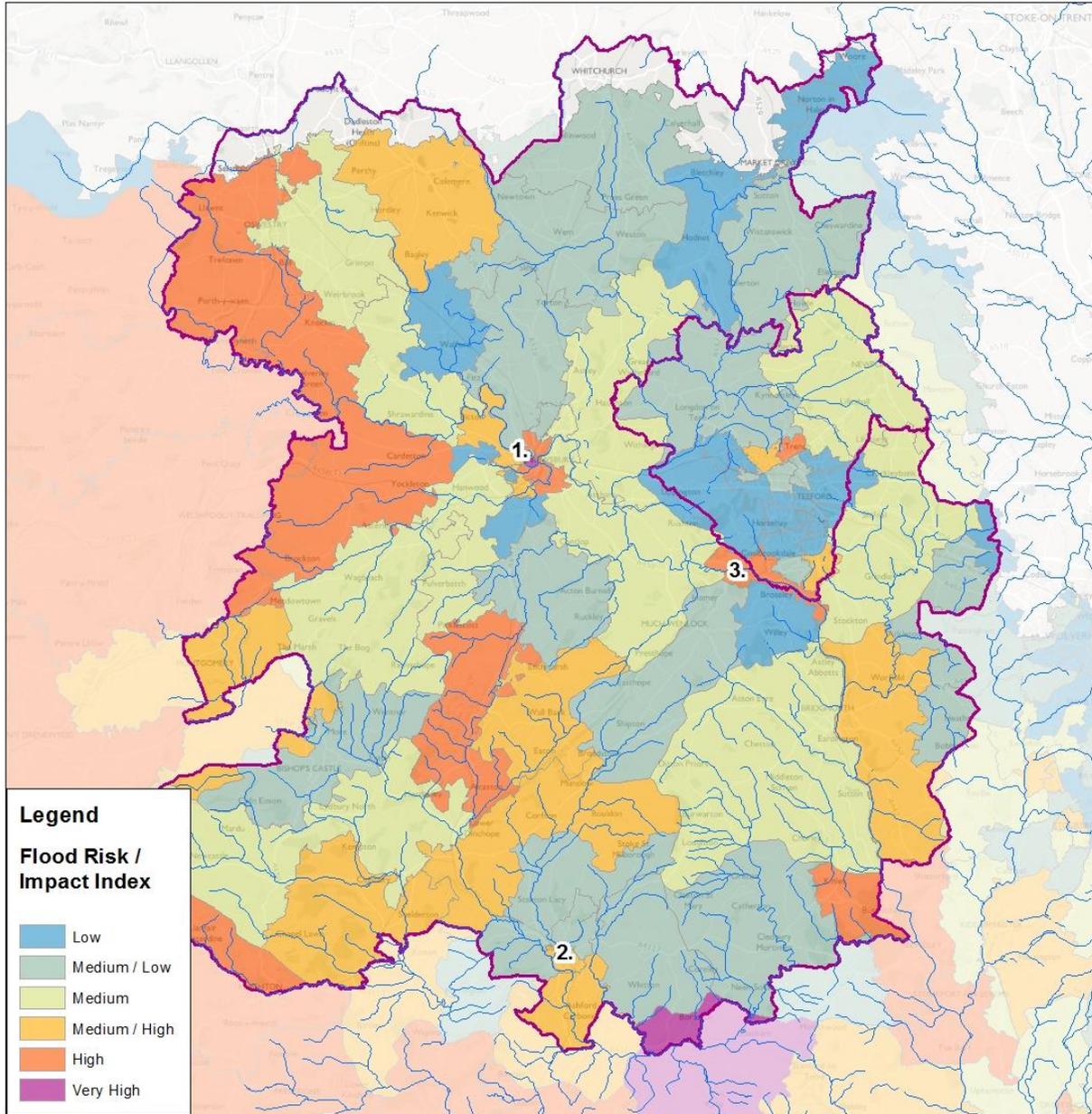
R&D Technical Report WT0987/TR

Produced: March 2013

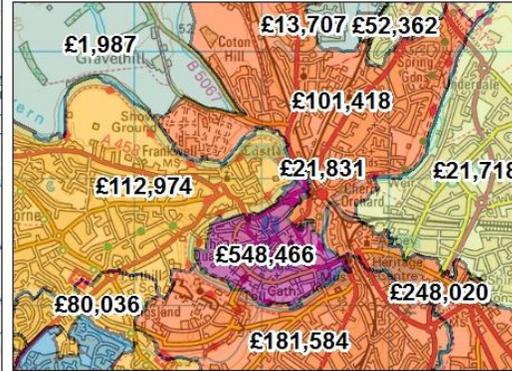
### Potential Economic Impact of Drought: GVA Losses\*



# Economic Impact of Flood



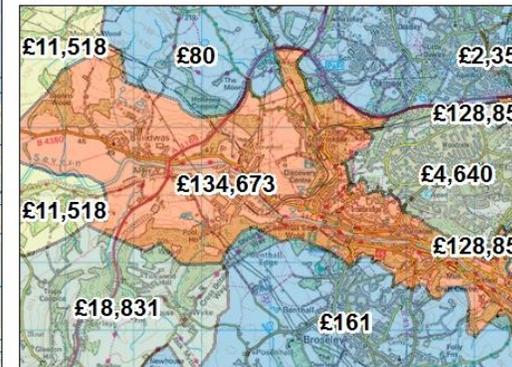
## Annual Average Flood Damages (£)



1. Shrewsbury



2. Ludlow



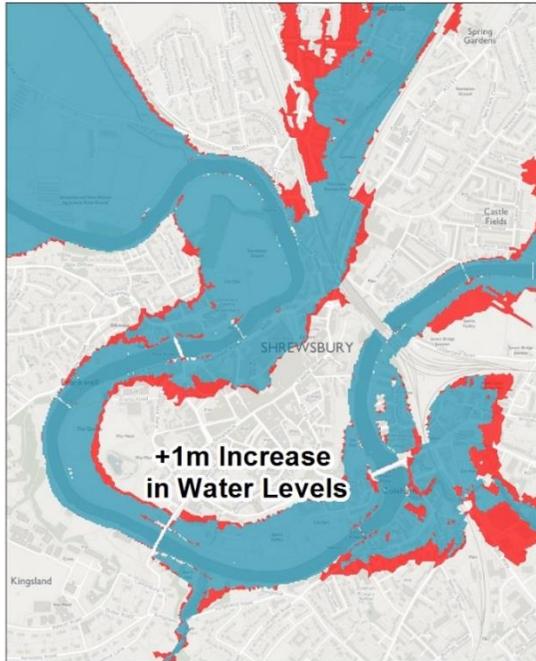
3. IronBridge

## Headline Figures

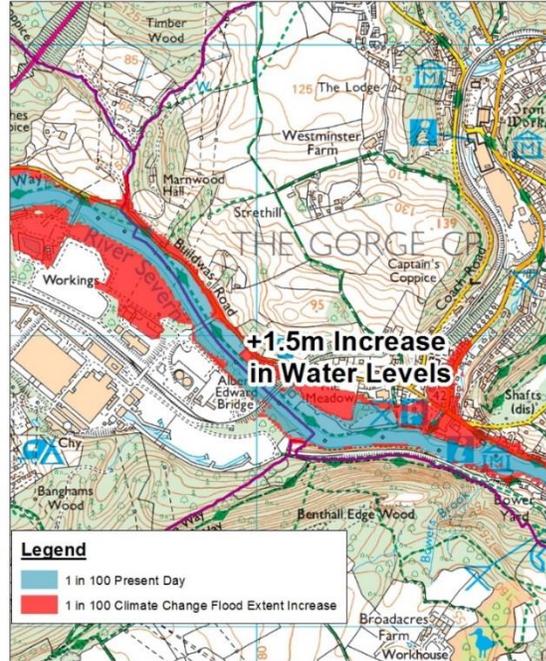
- Annual average damages
- **over £400k Telford and Wrekin**
- **over £2.5 million Shropshire**
- **over £1.8million Herefordshire**
- Potential GVA Losses in flooded businesses:
  - Over **£9m** in Shropshire
  - **c.£4m** in Telford and Wrekin
  - Over **£19m** Herefordshire
- Affecting businesses with a total rateable value in excess of **£18-16m**

# Future flood risk Shropshire and Telford

## Shrewsbury and Ironbridge Climate Change Impact



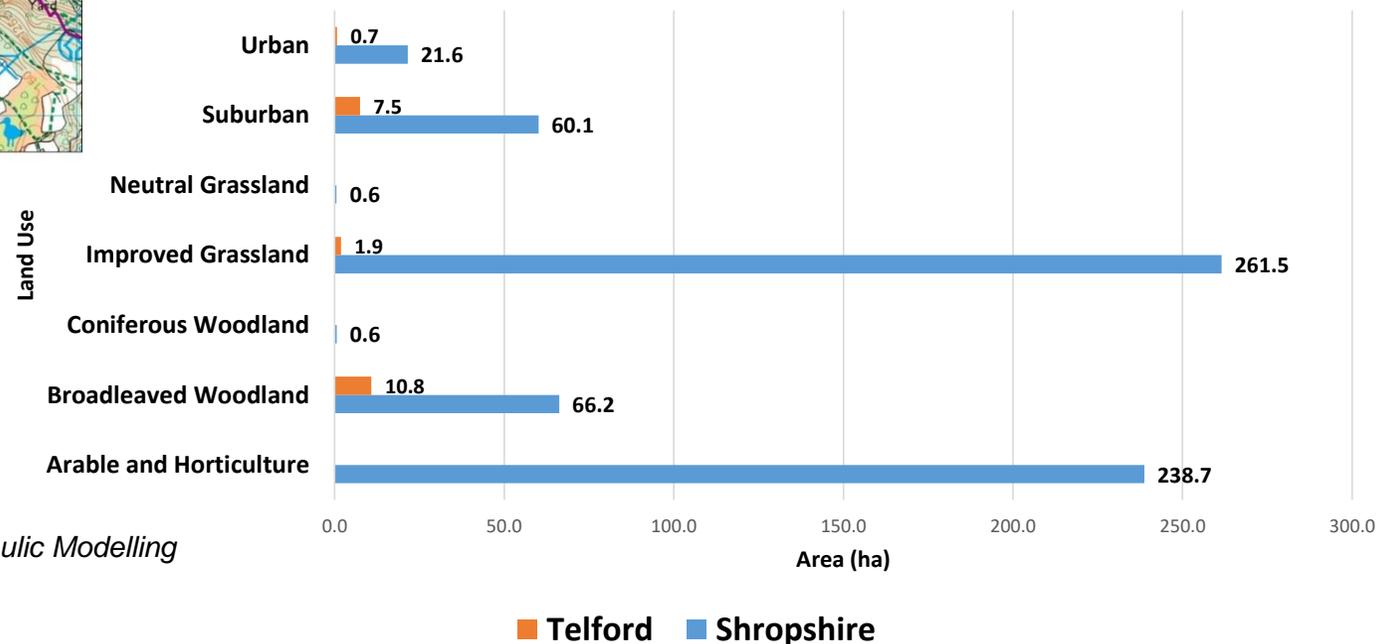
a) Shrewsbury



b) Ironbridge

- **1-1.5m** water level increase during a 1 in 100 year event\* in Shrewsbury and Ironbridge
- An additional **80ha of urban / suburban land at risk** for Shropshire and Telford\*\*

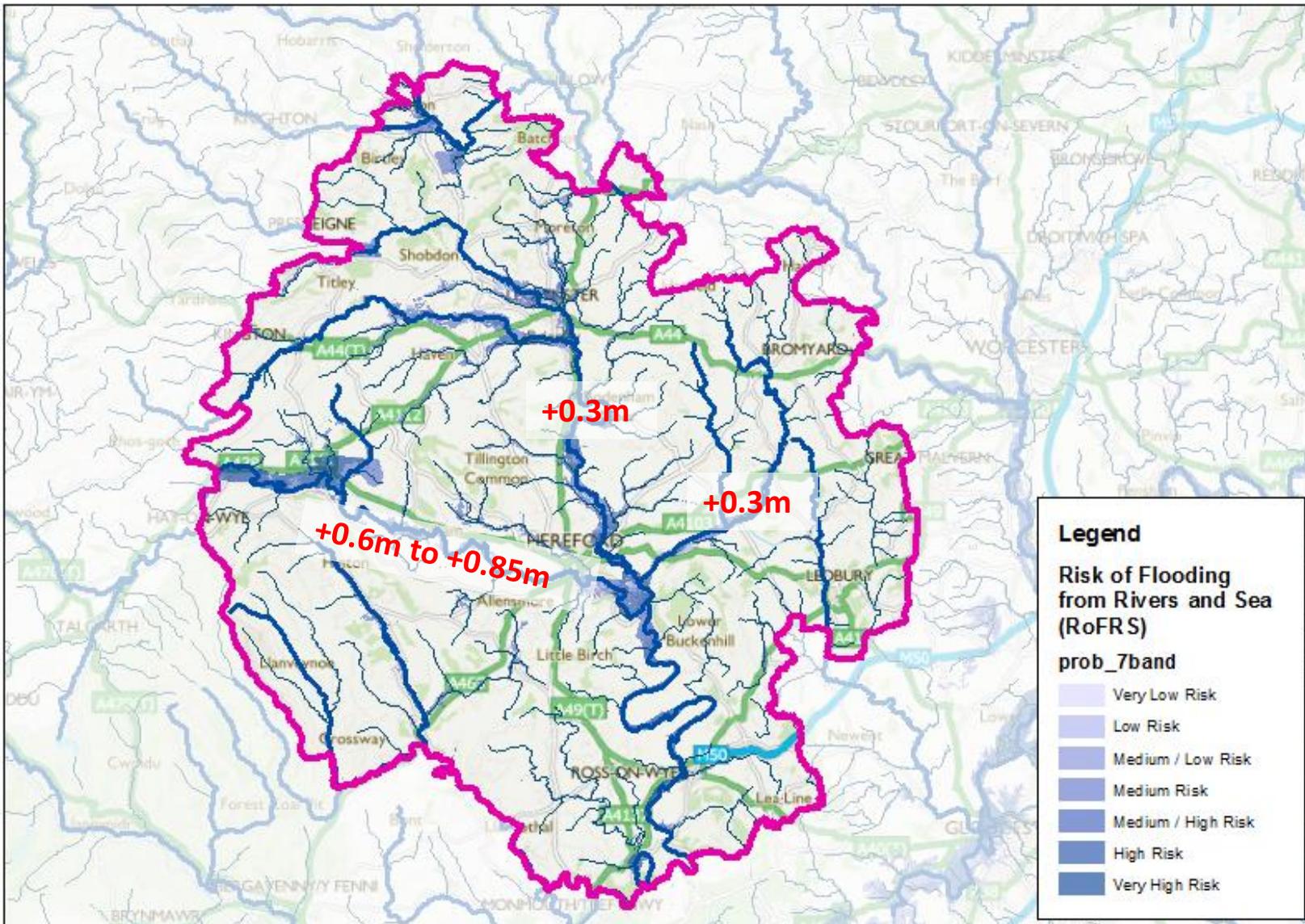
### Climate Change Impact: Additional Land At Risk



\* Event Comparable to Flood Zone 3, Results based on Northern Relief Road Hydraulic Modelling

\*\* Land use results only for the River Severn not all watercourses

# Future Flood Risk Herefordshire...



- Large uncertainty range in peak flow uplift (**25% 70%**)
- River Wye greatest increase in water levels to 2070 (**0.6m to 0.85m**)
- Other Tributaries and smaller watercourses estimated at **0.3m**

# Work to date

- Core partnership
- Draft governance and MOU
- Wider engagement
- All-party MP Consortium
- Ministerial Debate and interest
- High level visioning plan
- Some early success!- £40 million
- Adaptive Pathway Plan pilot
- Innovation Resilience Programme
- Flood Risk Strategy delivery pilot
- Green recovery work- STW

## Outcomes

By 2040 in excess of £100 billion in GVA uplift



Alongside the national ambitions to boost productivity and level up growth, this Infrastructure investment could positively impact on 27 out of the 46 Welsh Government National Indicators for Wales, highlighting the cross border joint working potential and value.

# Current work programme

- **Short term programme:**

- Ambitions across Partnership area
- Partnership wide narrative
- Agree matrix to prioritise full range of interventions
- Understand what value do they create- uplift and financing models

- **Long term strategy:**

- Adaptive Pathway pilot- plan to 2100
- Consider changing risks (environmental change, growth), what is tolerable level of risk and what need to do to maintain this.
- How measure success- productivity?

- **Accelerated infrastructure delivery:**

- Carbon offsetting monies
- Flood pipeline
- Innovation Resilience Programme
- Water Resource Planning and Green Recovery

- **Community Engagement**

- Eden International

# Areas of emerging focus

- **Integrated water management** to support sector based growth and wider growth- eg Wye and Lugg, Agri-Tech
- **Unlocking resilient places** to deliver riverside and wider regeneration plans
- **Carbon offsetting**-£5.4mill carbon offsetting monies and potential to expand
- **Resilient investment decision making** with partners such as Midlands Connect, Homes England
- **Sustainable Asset Management** including existing flood defence assets and our Avon Weirs and Sluices
- **Natural Asset Creation**- National Trust, Regional Park ambitions, HRA
- **Efficiency and multiplier effect** across national policy requirements such as nature recovery networks and natural capital
- **Innovation and Technology** and commercial opportunities for Smart water management and Ofwat