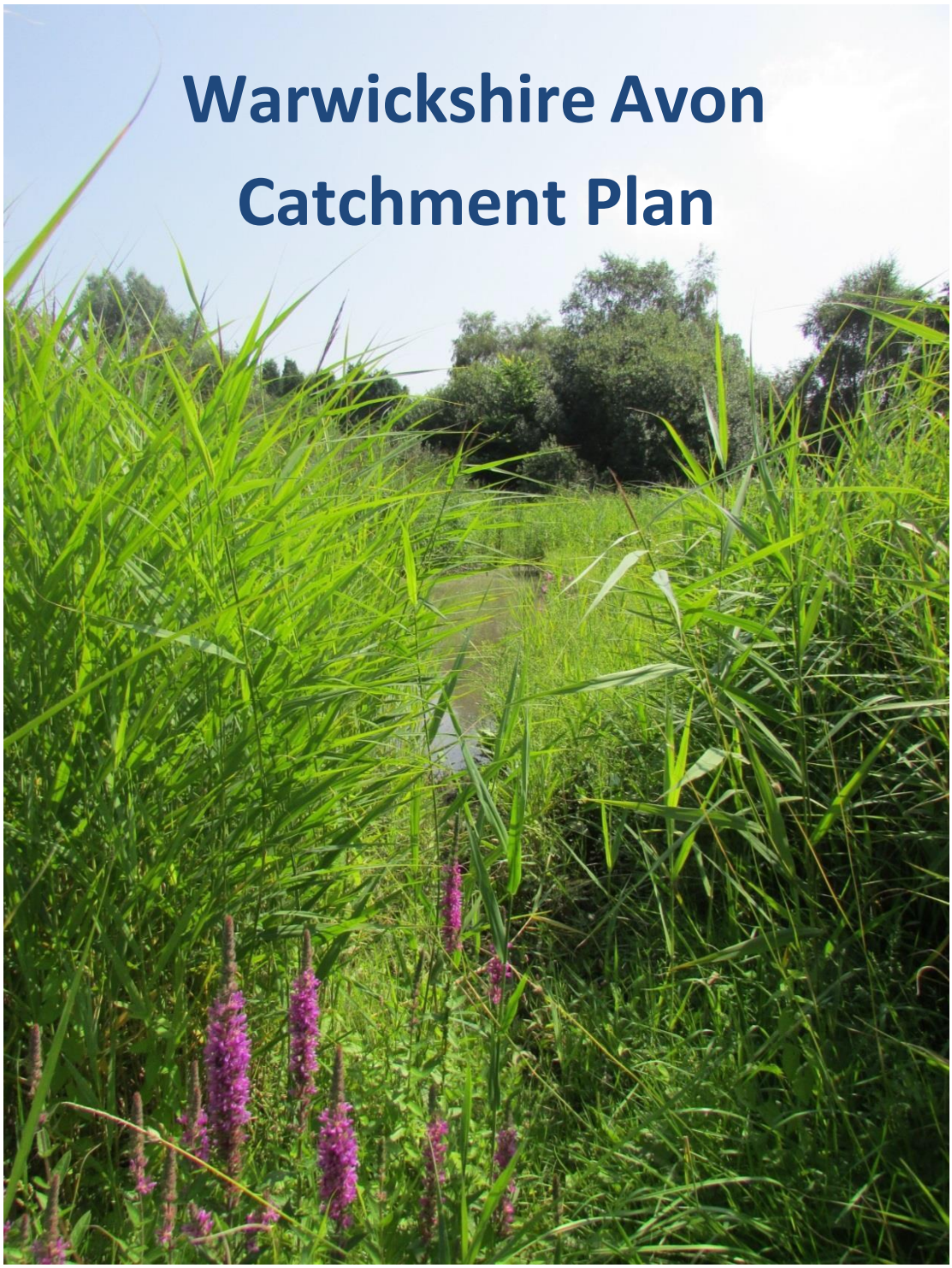
Warwickshire Avon Catchment Plan



Severn Rivers Trust
Preserving and Caring for the Severn Catchment

Warwickshire Wildlife Trust

Catchment Based Approach
Partnerships for Action

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Warwickshire Avon Catchment Vision:

Our vision is for a sustainable catchment of healthy rivers with functioning floodplains, resilient wildlife habitats and appropriate access, with people actively caring for and valuing their natural environment and heritage.

2 Location

Figure 1: River Severn Basin District (EA Catchment Summary)

The Warwickshire Avon catchment lies within the River Severn Basin District and is the most easterly sub catchment.

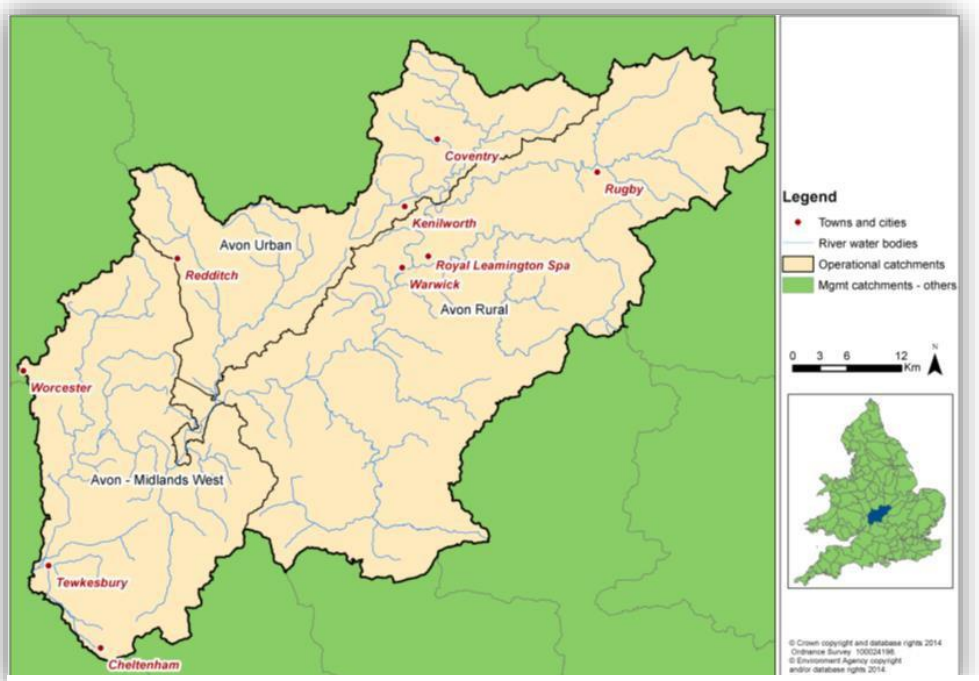


Figure 2: Warwickshire Avon Catchment showing the three operational catchment boundaries Source: EA Catchment Summary)

2.1 Warwickshire Avon Catchment Partnership & CaBA

The Catchment Based Approach (CaBA) is a Government policy framework that empowers local action to improve the water environment through community partnerships. A renewed focus on the catchment-based approach has led to Catchment Partnerships being set up to drive local delivery. The Warwickshire Avon Catchment Partnership (WACP) was initiated in 2014.

2.1.1 Partners

We have a wide variety of partners across all sectors, including the following - Country Land and Business Association, Coventry City Council, Environment Agency, Forestry Commission, National Farmers Union, Natural England, Severn Rivers Trust, Severn Trent Water, Solihull MBC, Warwickshire County Council, Warwickshire Rural Hub, Warwickshire Wildlife Trust, Woodland Trust, Worcestershire Wildlife Trust.

2.2 Description of Catchment

The Warwickshire Avon catchment extends from the source of the River Avon near Naseby east of Rugby to its confluence with the River Severn near Tewkesbury, and includes tributaries such as the rivers Alne, Arrow, Leam, Stour and Swift. It is a largely rural catchment holding a population of around 800,000 with some large urban conurbations, notably: Coventry, Redditch, Rugby, Stratford-upon-Avon, Tewkesbury and Warwick. The catchment has a high value for wildlife and the area provides a variety of recreational activities including boating, canoeing, fishing and walking. Agriculture accounts for a high proportion of the land use including arable, livestock, horticulture, and market gardening around Evesham.

exhibiting an artificially straightened, flat river bed lacking in pools, riffles and naturally formed river features photo © Tim Precious, Warwickshire Wildlife Trust

The Warwickshire Avon catchment is characterised by low-lying undulating hills. There is a long history of flooding, but the dispersed nature of the settlements has meant traditional flood defence schemes have often not been viable.

Water within the catchment is abstracted primarily for public water supply, agriculture and industry. Draycote Water, which receives water from the rivers Avon and Leam, is the largest water supply reservoir in the area and the principal aquifers in the catchment are important sources of drinking water. These are at risk from pesticides originating within the catchment.

Rivers and wetlands in the Warwickshire Avon catchment are vital for wildlife but they are also invaluable to society for reasons beyond the wildlife benefits they bring. They store floodwater, such as at Brandon Marsh SSSI Wetlands alongside the River Avon in Coventry. They provide recreation and tourism opportunities; towns such as Stratford upon Avon and Warwick are major international tourist destinations benefiting immensely from the River Avon and its accessibility.

Wetland habitat improves water quality by filtering pollutants and removing excessive sediment such as the farmland scrapes created on the Bow brook in Worcestershire http://www.worcswildlifetrust.co.uk/water-wetlands/bow-brook-project and the Longford Community Nature Park Project which restored 2500m² of defunct reedbed alongside the River Sowe in 2014 helping to filter pollutants running off the M6 and A444. http://www.warwickshirewildlifetrust.org.uk/what-we-do/projects

©Tim Precious 2014

Figure 4: Created agricultural run off holding pools in Bow Brook Catchment

©Tim Precious 2014

Figure 5: Longford Nature Park Reed bed Restoration during excavation work, March 2014

They can also act as the focus for raising awareness of flooding issues in local communities which local groups including Shipston Area Flood Action Group are continuing to progress.

The management of every parcel of land, small or large, in rural or urban areas can help to reduce flood risk for the 800,000+ people living in the Warwickshire Avon Catchment.

2.2.1 Protected Areas

There are areas in the catchment where the water environment is recognised as being of particular importance because of the benefits they provide to society including rare wildlife habitats, bathing waters or areas around drinking water sources.

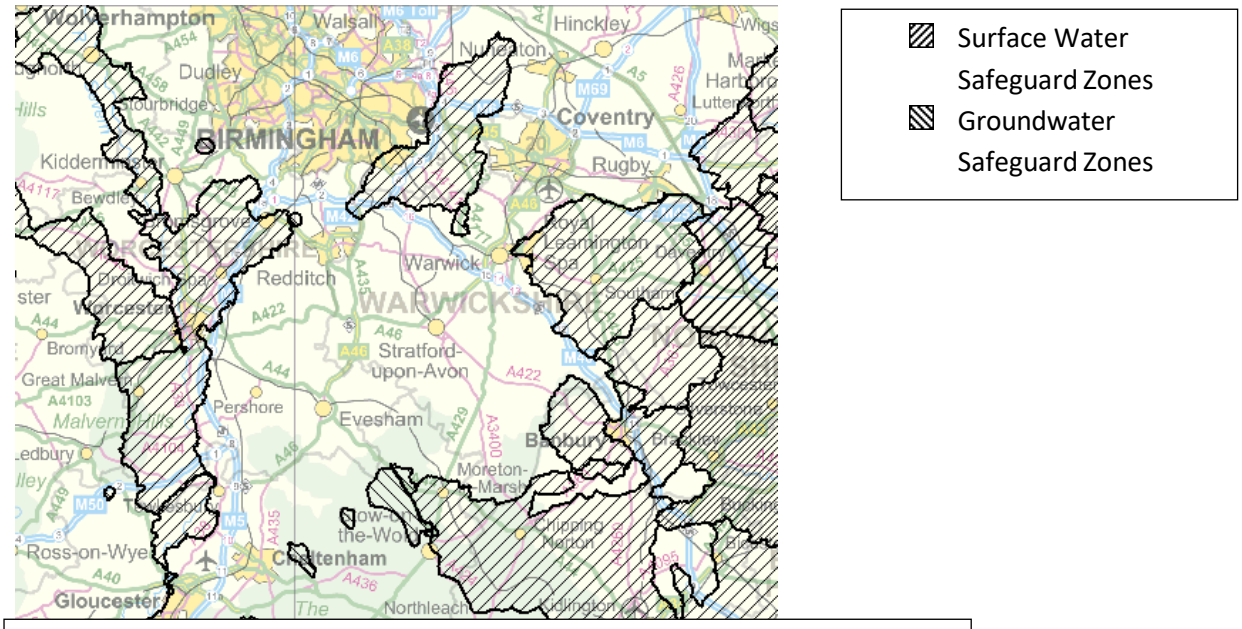


Figure 6: Drinking Water Safeguard Zones in Warwickshire Avon Catchment (Catchment Data Explorer)

2.2.2 Main Issues with Catchment

The Warwickshire Avon Catchment Partnership recognises that this catchment is a large and complex system of interlinked and interdependent rivers, canals, wetlands and water bodies affected by many different land uses.

There are 91 river water bodies and 3 lakes in the catchment. Environment Agency data in 2015 reveals only 18% of rivers currently achieve a 'good' overall status; the majority are classed as 'moderate' with 18% classed as either 'poor' or 'bad'. (Catchment Data Explorer) These classifications are based on multiple 'elements' such as; number and diversity of fish, dissolved oxygen levels, phosphate levels etc.

The Environment Agency assesses the data gathered and formulates reasons why the watercourses are not reaching an acceptable quality. This data provides evidence and focus for WACP to formulate priorities and strategy and in delivering considered actions.

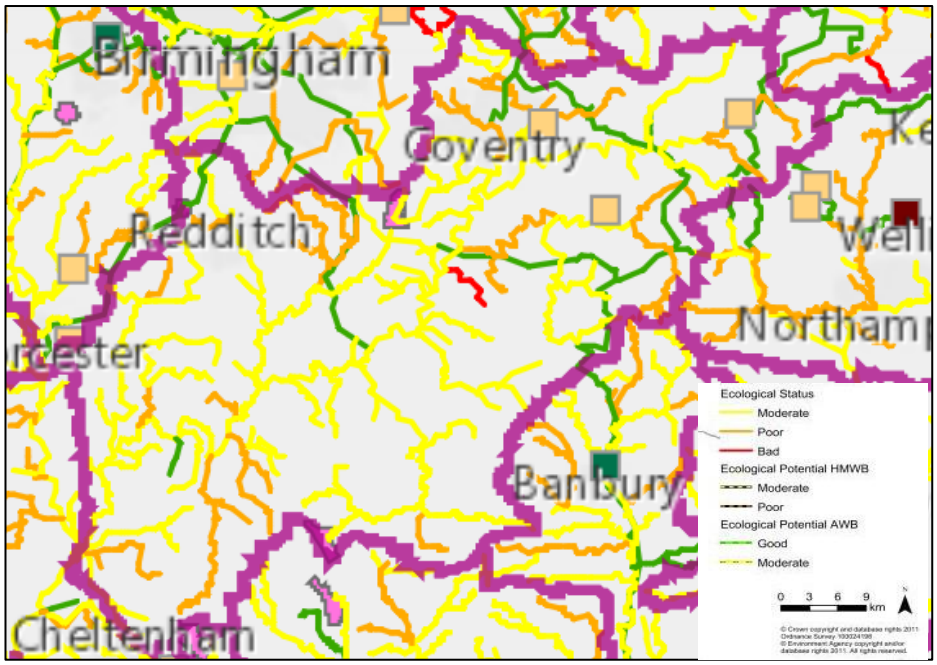


Figure 7: Map showing WFD ecological quality status of Warwickshire Avon watercourses
(EA Warwickshire Avon Management Catchment) 2022 Catchment Data Explorer map Ecological status of rivers and canals

Some of the main reasons for rivers not reaching an acceptable quality identified by the Environment Agency (EA), were pollution from rural and urban areas, physical modifications, including barriers to fish movements such as weirs, narrow riverside habitat or 'buffer strips' (includes increase of soil run off and bank erosion) and invasive non-native species.

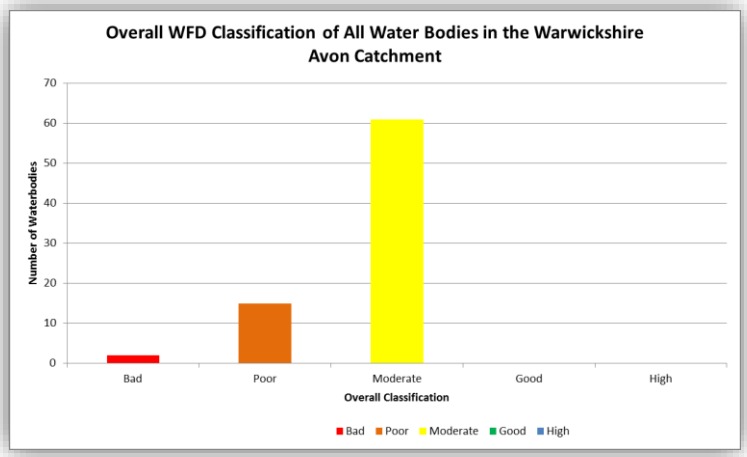


Figure 8: WFD overall classification in Warwickshire Avon Catchment (EA Catchment Data Explorer) To be updated with 2019 data.

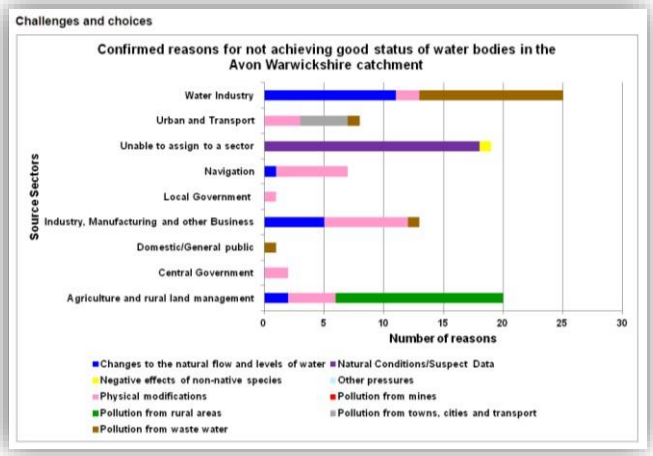


Figure 9: Reasons for Not Achieving Good for each Source Sector

2022 Catchment Data

This is data collected and analysed by the Environment Agency on the condition of waterbosies.

Ecological status for surface waters

Ecological status or potential	Bad	Poor	Moderate	Good	High	Total
Number of water bodies	1	22	54	1	0	78
Number of water body elements	5	84	96	95	461	741

Chemical status for surface waters

Chemical status	Fail	Good	Total
Number of water bodies	78	0	78
Number of water body elements	226	822	1048

Note: For the 2019 assessment of chemical status Environment Agency has changed some methods and increased the evidence base. All water bodies now fail chemical status; this assessment is not comparable to previous years' assessments.

2.3 Strategy

Data shown in figure 7 from the EA highlights the need for the partnership to prioritise work on both urban diffuse and rural diffuse pollution as these are the main reasons rivers are not reaching internationally agreed acceptable levels. This is supported by the EA River Basin Management Plan which also identified pollution from urban and rural areas as some of the main challenges to the Warwickshire Avon catchment.

The Partnership can actively impact upon Urban and Rural diffuse pollution sources through engagement and on the ground enhancements.

When working on restoring or enhancing detrimental physical modifications WACP will focus on priority sub catchment areas, listed below, where quick win solutions can be achieved or where impetus to deliver river enhancements already exists such as Shipston on Stour or the River Alne. Linking up potential projects to form connecting habitats is desired to maximise benefit to cost ratio and deliver catchment wide improvements. It will support the forthcoming Local Nature Recovery Strategies.

WACP will prioritise any work to remove invasive non-native species issues occurring in the upper reaches of the catchment in order to reduce the cumulative negative effects on lower reaches. There will be a focus on working in the downstream reaches to resolve barriers to enable fish to gain access to greater lengths of river more swiftly.

Severn Trent Water is working as the main water company in the catchment to resolve issues arising from changes to the natural flow and levels of water. Through employing agricultural advisors, it is also targeting reducing pollution from rural areas. By using more considered practices, landowners are able to reduce elements such as excessive soil run off and high phosphate inputs which are shown to be some of the main reasons behind rivers in the Warwickshire Avon catchment not meeting internationally agreed acceptable levels.

2.3.1 Priority Sub-Catchment Areas

1. Coventry Brooks and Rivers
2. River Stour catchment including tributaries
3. River Alne Source to Confluence with Preston Bagot Brook
4. River Arrow including Batchley Brook
5. Upper River Avon, Rains Brook and Upper River Leam
6. Forest of Feckenham
7. Carrant Brook

2.3.1.1 Coventry Brooks and Rivers

The production of the 'Coventry Brooks Plan' by Warwickshire Wildlife Trust (WWT), in March 2013, spawned by the Yellow Fish and Love Your River projects, to identify opportunities and issues within the water bodies in the city to improve the water environment. Implemented at Longford Park, funded by Midland Urban Communities Initiative (MURCI) project.

Coventry Brooks restoration projects include 400m of improved bank and river corridor, creation of fish refuges (pool areas are approx. 150sqm and 65sqm.) and installation of woody debris, eight black poplar trees (Populus nigra) planted and spiling along eroding river bank to create protected bank area at Guphill Brook in 2016.

The project has created multiple online backwater refuge pools to provide fish and water vole with areas of slack water and cover in times of high flow. Regrading of 4 inside meander banks has been undertaken to improve the hydromorphology of this over deepened and channelised river by increasing gravel deposition, light levels and ultimately macrophytic growth. These outcomes will provide increased spawning area for fish, increased habitat for invertebrates e.g. mayfly, increased cover for fish from predation and cover and food for water vole.

2.3.1.2 River Stour catchment including tributaries

The focus project for this catchment is predominantly the Natural Flood Management Project associated with Shipston-on-Stour. The Shipston Area Flood Action Group (SAFAG) was formed in 2014 as a part of the work delivered through the National Flood Forum. The project has achieved a substantial amount over the years and used a number of Natural Flood

the installation of woody debris leaky dams to slow the flow.

The SAFAG catchment extends to 180Km^2 embracing parts of Oxfordshire and Gloucestershire from where the largest of some 36 tributaries, Knee Brook emanates. This source alone accounts for more than 30% of the water eventually feeding the River Stour. Nethercote Brook from the Long Compton area and Upper Stour passing through Brailes and Cherington are the other two major sub-catchments.

Slow the Flow is part of an integrated plan for the catchment. Other equally important elements are working with the many housing developers within Shipston and the

surrounding villages to ensure that the building of roads, footpaths and driveways does not exacerbate the runoff issue (SAFAG, 2019).

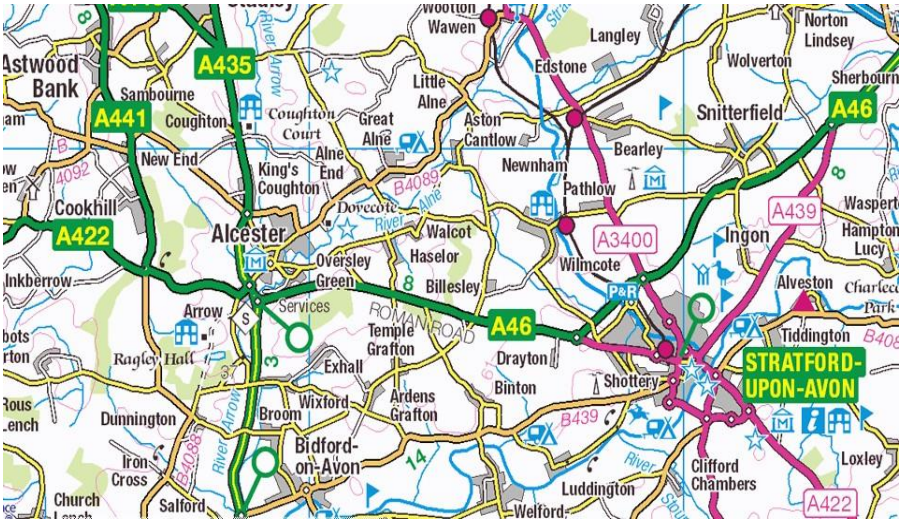
2.3.1.3 River Alne Source to Confluence with Preston Bagot Brook

In 2017 the Environment Agency (EA) received reports from anglers on the River Alne that the fish population was in serious decline and the poor quality of angling was impacting membership of the clubs fishing along the river. The Alne is well regarded by anglers and one of the few River Avon tributaries that has well structured, publicly available access to angling through club membership. Meetings between Severn Rivers trust (SRT) and the Environment Agency initiated a plan of action to identify the status of fish stocks, problems and actions to remediate any issues.

In conjunction with this, the EA Rod Licence generated Fisheries Improvement Fund (FIP) was applied to in 2018 to drive forward habitat restoration work along the river, delivered by Severn Rivers Trust. There are several reaches along the Alne where habitat is poorly managed or impacted by land use. The funds allowed SRT to work with an angling club controlling a large section of the lower River Alne down to its confluence with the River Arrow just outside Alcester. This work installed 1.5km of stock fencing to keep sheep and beef cattle away from the riverbank where they were causing damage to the bank, creating siltation issues and removing riparian habitat. Two stock drinking points were built as part of this work. Regeneration of the 5m+ riparian buffer strip will reconnect habitats along the river corridor, generate habitat that is beneficial to fish stocks and other wildlife along the river, along with reducing inputs of silt to the channel. This will be enhanced with tree planting in the autumn of 2019 with the added benefit of creating shading to the channel to keep water temperatures down. To strike a balance between undisturbed quality habitat and angler access the club agreed to install stiles behind each fishing spot. This removes the need for an access path to be created along the whole of the buffer strip leaving large sections of bankside area undisturbed for wildlife.

2.3.1.4 River Arrow

The River Arrow (Spernall Hall Farm, Studley to conf R. Alne) is currently failing for macroinvertebrates under the Water Framework Directive (WFD). During a walkover survey in January 2012 and subsequent fisheries habitat survey in May 2012 it was determined that the issues within the catchment contributing to these reasons for failure include high levels of suspended sediments in the river caused by bank erosion and agricultural runoff.



This long-term partnership project between the Environment Agency, Severn Rivers Trust, WACFAC angling club and landowners is looking at undertaking river restoration, removal of barriers to fish movement, de-culverting, Sustainable Drainage Schemes (SuDS) and angler engagement.

2.3.1.5 Upper River Avon, Rains Brook and Upper River Leam

The Leam catchment was one of the few catchments selected by DEFRA as a pilot to trial the Catchment Based Approach in 2012. A tremendous amount of partnership work has been undertaken over the years including 5 years of the Leam Catchment Partnership delivering improvements to reduce agricultural diffuse pollution delivered by Severn Rivers Trust and funded by Severn Trent Water and Natural England. The project ran for 5 years and in the first 3 years alone delivered:

- over 10Km of watercourse fencing and riparian protection

- engaged 300 farmers
- soil testing and nutrient management plans to 30 farmers
- pesticide training to over 75 farmers and contractors
- one to one farm infrastructure advice to 50 farms
- farm pesticide trials, including hosting the Metaldehyde Stewardship Group pilot catchment work
- fertiliser calibration and sprayer MOT's for 30 farmers
- 5 events per year to learn new techniques & share best practise farming
- the very first bioreactor outside the United States!

Severn Rivers Trust have also been working in partnership with the Woodland Trust to plant trees in the catchment to restore riparian shading and enhance structural diversity.

2.3.1.6 Forest of Feckenham

Enhancing Public Good in the Forest of Feckenham Project is a partnership project between Worcestershire Wildlife Trust and local landowners. This project will restore function to under-performing riparian corridors in tributaries of the River Avon through the management of trees and herbaceous flora to mitigate phosphate pollution from diffuse arable run-off. This management will intercept and remove phosphates and sediment in the source-to-receptor pathway through soil organic matter management, sediment traps and sustainable usage of woody debris collected from the riparian pollarding management.

The Forest of Feckenham is comprised of small family farms and it is intended that this project will create a sustainable farming community with stewardship of, and responsibility for the watercourses on their land for the future.

2.3.1.7 Carrant Brook

Carrant Catchment Area Restoration Project is an open collaborative partnership project that invites everyone interested in the aims and objectives of the group to join. The project works throughout the catchment of Carrant and Isbourne; particularly along waterways to restore, enhance and improve wildlife habitats, reduce water and silt run-off, reduce soil erosion and enjoy shared learning opportunities.

Funding was secured for 5 years from Natural England to support and guide the restoration and learning opportunities for the project area. We hope to install, restore or improve habitats such as former river meanders, river meadows, wet woodland, ponds, silt traps, orchards, native trees, grassland, grass and arable field margins and road verges.

The project partnership includes the Kemerton Estate, Kemerton Conservation Trust, Overbury Enterprises, Overbury Stallions, Manor Farm, Shaw Green Farm (Ashto-Under-Hill) and Middle Farm (Kersoe). Other Partners/Supporters include the Environment Agency, Worcestershire County Council, Worcestershire Biological Records Centre, Breedon Aggregates, Avonbank Nurseries, FWAGSW and LEAF. Cotswold Agricultural Merchants has become our first sponsor. To find out more please contact FWAGSW: joanne.leigh@fwagsw.org.uk or John Clarke of Kemerton Conservation Trust: kctoffice@btinternet.com.

3 Catchment Priorities for 2023 - 2026:

Our priorities for the Warwickshire Avon Catchment between 2023 and 2026 are:

1. To stimulate and co-ordinate action for the catchment through liaison with a diverse range of partners and stakeholders.

2. To endorse priority projects identified in the Delivery Action Chart which are delivering multiple benefits including enhancing ecological condition, addressing flood and water resources issues, improving water quality, and promoting involvement and education on catchment priorities.

3. To communicate the Catchment Plan and projects to key audiences e.g. liaise with landowners to engage their active support with practical projects, and to facilitate the creation of more feasibility studies for larger scale flood risk reduction or river enhancement schemes.

4. To inform and engage stakeholders and the public of priorities, planned actions and achievements

5. To deliver practical enhancements at a minimum of four priority sites per year across the catchment, and use these as demonstration sites to encourage further action.

6. To secure funds and resources to deliver habitat restoration and enhancement projects on the ground.

7. To deliver enhancements through engaging with major stakeholders, developers and businesses

8. To monitor and report on results achieved and progress across the catchment

4 Delivery Action Plan

This is a rolling programme of projects being developed and delivered in the catchment.

The Delivery Action Plan is developed and agreed at Catchment Partnership meetings. This will be updated annually as projects develop. Please follow the link to the Warwickshire Avon CABA webpage.
http://www.catchmentbasedapproach.org/severn/warwickshire-avon

5 Monitoring and Evaluation Plan

It is important to ensure that action is being monitored and assessed to gain best value and multiple benefits from projects, and to learn for future delivery. Most delivery projects have set outputs which are monitored, some with long term monitoring on site. Resources are needed to enable monitoring. Monitoring includes fixed point photography, kick sampling for invertebrate species, and morphological surveys. Monitoring undertaken varies according to the project and resources available.

The Catchment Partnership will contribute to the CABA reports and evaluation annually. Individual projects will be measured by the outputs identified, and the delivery methods used will be evaluated and reported on. Scientific, citizen science and volunteer monitoring will be used as appropriate to measure success of projects. Engagement of people and organisations will be monitored via the partnership and via responses to consultations on the Catchment Plan and development of new projects.

The Delivery Action Plan will be reviewed at least annually to allow for inclusion of projects in forward budgets, and to update the list re completion of projects and development of new proposals. The Plan priorities have been reviewed and refreshed in 2023, and the text of the plan has been updated in 2023. Case studies are due to be updated during 2023.

6 Communication

6.1 Public Workshops and Partnership meetings

Background on development of the partnership:

To support work on developing an overarching Warwickshire Avon Catchment Plan, the partnership held 2 Public Workshops in September 2014 with a total of 69 attendees from a range of stakeholders.

Existing and planned projects were recorded, and over 100 ideas were suggested to address the issues in the catchment. These will inform the next steps of progressing projects on the ground. The overarching ecosystem services map results were discussed. All stakeholders expressed the importance of actions being implemented.

The results from these workshops were summarised into a report, available on the Warwickshire Avon Catchment Based Approach website.

Partnership meetings:

The partnership is open to anyone who wishes to contribute to fulfilling the vision and objectives of the partnership. Meetings are held to discuss priorities, agree future plans and to share knowledge. There is a Steering Group to guide the planning and review progress.
The partnership is active in inputting to Environment Agency consultations on Severn River Basin Management Plan and Flood Risk Management Plan.

6.2 Help to care for your local catchment

There are many ways for you to get involved in your local catchment:

- *Through hands on volunteering. See contacts below.*
- *By having your say on decision making e.g. from Council surface water management plans to Governmental organisation plans such as Environment Agency River Basin Management Plans during consultation periods*
- *By taking up grant funded opportunities to assist in catchment wide initiatives*
- *Countryside stewardship/agri environment grants for landowners and farmers from Natural England*
- *By reporting pollution incidents rapidly to: Incident hotline 0800* ***80 70 60*** *open 24 hours*

There are practical hands-on volunteering or education and engagement opportunities through your local Wildlife Trusts, Rivers Trust and other volunteer and community organisations. More information can be found at:
http://www.worcswildlifetrust.co.uk/volunteer
http://www.warwickshirewildlifetrust.org.uk/volunteer
Support Us (severnriverstrust.com)

This list is not exhaustive and if you have any queries or further opportunities for people to get involved in the Warwickshire Avon catchment, please use the website addresses above to find the relevant person or contact the CaBA leads; details are given below.

6.3 Further Information

Information and reference documents about the Catchment Partnership can be found on the CABA website at

http://www.catchmentbasedapproach.org/severn/warwickshire-avon

6.4 Contacts

Gina Rowe, Landscape Recovery Development Manager, Warwickshire Wildlife Trust 024 7630 2912 Gina.Rowe@wkwt.org.uk

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