Tame, Anker and Mease Catchment Partnership

Catchment Management Plan

December 2013

- The Wildlife Trust for Birmingham and the Black Country
- Trent Rivers Trust
- Warwickshire Wildlife Trust

Environment Agency

Birmingham & Black Country

Lead Partner Birmingham & Black Country Nature Improvement Area

Warwickshire

trent rivers trust

Merged with the OnTrent Partnership

Stakeholders

Alison Millward Associates
Alvecote Wood
Angling Club, Nuneaton
Angling Trust
Anker Valley Canoe Club
Atkins Global
Black Country Geological Society
Birmingham and Black Country Botanical Society
Birmingham and Black Country Geodiversity Partnership
Birmingham and the Black Country Bat Group
Birmingham Anglers Association
Birmingham City Council
Birmingham City University
Birmingham Natural History Society
Birmingham Open Spaces Forum
Birmingham Trees for Life
Birmingham University
Black Country Archaeology
Black Country Consortium
Black Environment Network
Business in the Community
Campaign for the Protection of Rural England
Canal and Rivers Trust
Castle Vale Community Environmental Trust
Coleshill and District Civic Society
Coleshill C. of E. Primary School
Community and Landowners Association
Consultancy for Environmental Economics and Policy
Country Land and Business Association
CSV Environment
Dudley Council and Museum
EcoRecord
English Heritage
Environment Agency
EON
ESI Ltd.
Forestry Commission
Freshwater Specialist, Ellen Pisolkar
Friends of Babbs Mill Park
Friends of Cotteridge Park
Friends of Deers Leap Wood
Friends of Kings Norton Nature Reserve
Friends of Selly Oak Park
Friends of West Smethwick
Future Health and Social Care Association
Farming & Wildlife Advisory Group
Groundwork West Midlands
Hanson
Heantun Housing Association
Hinckley and Bosworth Borough Council
Holloway Foo Architects
Homes and Community Agency
Icarus
Ideal for All Independent Living Centre
Kings College London
Kingsbury History Society
Kingsbury School
Kingsbury Water Park
Land Care Associates
Landscape Matters
Leicestershire County Council
Leicestershire Wildlife Trust
Lichfield District Council
Local History Society, Coleshill
Local tenants group Nuneaton
MADE
Martineau Gardens
National Farmers Union
National Flood Forum
National Trust
Natural England
North Arden Heritage Trail & Kingsbury WP
North Warwickshire Borough Council
North West Leicestershire District Council
Packington Estate
People and Wildlife Services (CIC)
Revolve – North Warwickshire
Royal Society for the Protection of Birds
RPS Consultancy
Royal Town Planning Institute
Sandwell Council
Sandwell Valley Field Naturalists Club
Severn Trent Water
Solihull Council
Solihull Friends of the Earth
Solihull Metropolitan Borough Council
Southshields Farm
Staffordshire Biodiversity Partnership
Staffordshire Ecological Record
Staffordshire Wildlife Trust
Sustain – Solihull
Sustrans
Tamworth District Council
The Coleshill School
The Conservation Volunteers
The Waterways Trust
Trent Rivers Trust
University of Wolverhampton
Ursus Consulting
Walsall Borough Council
Warley Woods Community Trust
Wardell Armstrong
Warwickshire County Council
Water Orton Primary School
Warwickshire Community and Voluntary Action
West Midlands Bird Club
West Midlands Friends of the Earth
West Midlands Regional Sustainability Forum
Wildlife Trust for Birmingham and the Black Country
Warwickshire Wildlife Trust Whitacre Heath SSSI volunteers
Wolverhampton City Council
The Woodland Trust
WSP Group

Foreword

The Catchment-based approach is one of the initiatives identified in the Natural Environment White Paper in which the government's framework for the natural environment has been set out.

On World Water Day, 22nd March 2011, Richard Benyon (Minister for the Natural Environment) announced the launch of the Government's Catchment Based Approach through the Environment Agency. Having hosted 10 Catchment Pilots in 2011 as a way of setting up improved ways of engagement with people and organisations that can make a difference to the health of all our inland waters, from source to sea, DEFRA and the Environment Agency extended the approach in 2012 to a further 15 Pilots hosted by organisations outside the Agency. The intention was to foster Pilot approaches committing to a more catchment-based approach to sharing information, working together, co-ordinating work and making the case for collaborative action to protect England's water environment. The products of which will enable the delivery of the EU Water Framework Directive in a more effective and coordinated way.

Richard Benyon, Minister for Natural Environment and Fisheries, announced that the pilots should:

> ***"Provide a clear understanding of the issues in the catchment, involve local communities in decision-making by sharing evidence, listening to their ideas, working out priorities for action and seeking to deliver integrated actions that address local issues in a cost effective way and protect local resources."***

The Agency and the Catchment Pilots are exploring better ways of engaging with people and organisations at a catchment level in ways that can make a difference to the health of all our waters and habitats. They want to engage with those we work with at a catchment level to encourage greater local participation and achieve more for communities and the water environment. At its heart is a desire to achieve more for the water environment by working together.

The Wildlife Trust for Birmingham and the Black Country hosts the Tame, Anker and Mease Catchment Pilot. The Trust has been supported in this role by the OnTrent Partnership now merged with the Trent Rivers Trust, the Warwickshire Wildlife Trust, the Environment Agency, and Icarus – a professional consultancy retained to support the Catchment Pilot process to assist and to provide professional support for Catchment Pilots.

The baton for hosting the Tame, Anker and Mease Catchment has now passed to Severn Trent Water. Co-hosts for the three sections of the Catchment are indicated in the Catchment Management Plan:

Wildlife Trust for Birmingham and the Black Country – Upper Tame

Warwickshire Wildlife Trust – Middle Tame

Trent Rivers Trust – Lower Tame

Chris Parry C Env MCIEEM
Principal Ecologist
The Wildlife Trust for Birmingham and the Black Country

A Message From Severn Trent Water, Catchment Hosts

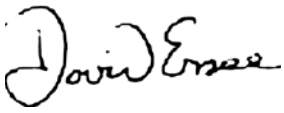
'At Severn Trent Water we're committed to providing excellent quality drinking water, keeping customers' bills affordable and playing our part to create a healthier environment. We have long championed catchment management because it helps us to achieve all three of these aims.

We are particularly keen to support schemes in which stakeholders work together to achieve common objectives. It is possible to achieve more for the environment by working together than if we all worked individually.

This plan for the Tame, Anker and Mease catchment takes exactly this joined up, collaborative approach to achieving environmental outcomes. It is a plan we strongly support.

The challenge now is to implement the plan effectively. We have been appointed as catchment hosts for this river basin and we look forward to working closely with stakeholders and collaboration partners to deliver tangible benefits.

We are grateful to those who have worked so hard to develop the plan. We are equally grateful to those committed to working with us and others over the coming years to make a success of the plan.'



David Essex

General Manager Water Strategy & Innovation *Severn Trent Water*

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1 Introduction

1.1.1 Figures 1-4 show the location of the Tame, Anker and Mease Catchment within the Humber River Basin, the rivers, streams and canals within the Catchment and the local authorities. The Catchment is one of large size, considerable diversity and significant contrasts.

1.1.2 Given these features, a number of challenges present themselves:

- engaging with a potential audience of two million people - how do we get a fair representation of views
- producing a coherent and workable vision for a catchment that has such huge contrasts
- relating the needs of land managers to those of other stakeholders
- capturing the true value of ecosystem services
- aligning the Catchment Management Plan (CMP) with the aspirations of other partnerships, communities and organisations.

1.1.3 In the Tame, Anker and Mease catchment, the process and the challenges have been addressed by:

- securing the services of a dedicated catchment facilitator funded through the Catchment Pilot initiative to assist with engagement and the process
- the formation of a Working Group with representatives of the The Wildlife Trust for Birmingham and the Black Country, Warwickshire Wildlife Trust and OnTrent Project, plus the catchment facilitator, to steer and guide the CMP process
- the preparation of a poster outlining the context, contrasts, challenges, objectives and the process for preparing the CMP
- forming stakeholder and interested parties contact lists for each part of the catchment
- running 4 workshops, two in the urban part of the catchment - Birmingham and the Black Country, and two in the more rural part of the catchment – east and south Staffordshire (Tamworth) and north Warwickshire (Coleshill)
- collecting information and the views of stakeholders and attendees in advance of the workshops, at the workshops, and catchment conference about a vision for the catchment, issues and opportunities, activities and strategies and plans currently relevant, and options and actions for the catchment
- using the River Mease SSSI / SAC Restoration Plan (March 2012) as a basis for informing the Tame CMP
- setting up a Survey Monkey public participation survey with the aim of securing views about attitudes to the water environment in the catchment.

2 Vision and Characterisation

2.1 FOUNDATION OF THE VISION

2.1.1 In collecting information and the views of stakeholders in relation to a potential vision, the issues and opportunities, and options and actions for the catchment at the four workshops, six themes were apparent and broadly represent the priorities that should be reflected in the CMP.

- Pollution
- Restoration and Enhancement
- Physical Access
- Education, Awareness and Engagement
- Planning, Development and Enterprise
- Governance and Partnership

2.1.2 An inclusive, coherent and workable vision for a catchment that has such huge contrasts and a broad diversity can be constructed using the above themes, as priorities. The objectives set out in the River Mease Restoration Plan are fully in line with the above themes, and the resultant vision for the catchment can be inclusive of the requirements of the Restoration Plan. The vision will reflect these themes.

2.2 THE VISION

In the future:

Our catchment has a sustainable and diverse water environment that is valued for the benefits it brings to people, the economy of the region and the natural environment. It has improved resilience to climate change, flooding and pollution events, and is in good ecological condition. People from many sectors and disciplines across the catchment are committed to caring for the catchment by working together, and using innovation, to capitalise on the opportunities presented and solutions to the challenges faced.

Our objectives:

- To promote the value of rivers, streams and wetlands and to increase their natural capacity to ameliorate the impacts of flooding and pollution.
- To create a more sustainable and diverse water environment that is a valued asset for the economy, people and the natural environment.
- To work with local stakeholders to harness their support and enthusiasm to address the opportunities and challenges faced by the water environment and to optimise the benefits.

Why we need to take this approach:

The catchment is a large and complex system of interlinked and interdependent rivers, canals, wetlands and water bodies.

In particular:

- There are major pollution issues across the catchment, particularly from many different diffuse sources – contaminated brownfield land, urban mis-connections and agricultural practices. We recognise that no one body can solve all these problems and we will to work together to seek sustainable and innovative solutions to improve water quality.
- Many of the watercourses across the catchment are heavily modified or degraded in other ways. We recognise the vital role of improving the structure and ecological health of watercourses can greatly improve the resilience of the network to pollution, reduce peak flows and ameliorate flooding and reduce the impact of extreme events on wildlife. We will seek sustainable and innovative ways to restore and enhance the structure and ecology of our waterways.
- Rivers, streams and canals are the arteries of a network of open spaces across the catchment, providing a huge and diverse resource for formal and informal recreation. We will protect the existing value of waterways and strive to further improve their amenity and access value.
- Water plays a multitude of roles in their lives of around two million people living in the catchment. By reaching out to local communities and better explaining the links between the water environment and our everyday actions we can raise public support and participation in addressing the many challenges faced by our waterways.
- We recognise the essential role the water environment can play in the environmental transformation needed to underpin economic regeneration across the catchment. We will ensure new developments protect water assets but will also look for opportunities for the water environment to enhance and protect our economic assets.
- Across the catchment, partnerships of key stakeholders will take ownership of this vision and show leadership by incorporating the needs of the catchment into plans and policies and taking practical action together.

2.3 CHARACTERISATION (based on that from the Humber River Basin Management Plan)

2.3.1 The Tame, Anker and Mease Catchment lies at the southern end of the Humber River Basin (see Fig 1), and includes the larger rivers Tame, Rea, Cole, Bourne, Blythe SSSI, Anker, Sence, Mease SSSI and SAC and the River Trent from its confluence with the River Tame to the River Dove (see Fig. 2).

2.3.2 Canals in the catchment are mostly focussed within the Birmingham and Black Country conurbation but significant lengths of the Birmingham and Fazeley Canal, the Coventry Canal and the Ashby de la Zouche Canal exist outside the urban area in the central and eastern parts of the catchment (see Fig 3).

2.3.3 The rivers within this catchment pass through mainly urban areas including the southern part of Wolverhampton, Walsall, West Bromwich, Birmingham, Solihull, Nuneaton, Tamworth and Burton-upon-Trent. Heavy industry in the area has declined over recent years but pockets remain in urban areas. To the east and the north, much of the land outside the Birmingham conurbation is used for agriculture, particularly arable farming. Local Authority boundaries are shown in Figure 4.

2.3.4 Due to the highly urbanised nature of a large part of the catchment, the largest inputs to the system come from sewage treatment works. During low flow periods, a large proportion of the river flows is made up of these discharges. By far the largest input comes from Minworth sewage treatment works which discharges treated effluent from Birmingham into the River Tame at Water Orton. As the water supply for Birmingham comes from the Severn catchment, the Tame catchment is also a net importer of water.

2.3.5 A major use of water in the Burton-upon-Trent area is for brewing, mineral washing, dust suppression and cooling water. This reflects the number of quarries in the lower part of the River Trent and the occurrence of power stations in the valley.

2.3.6 Historically, water quality has also been the main cause for poor fisheries in the River Tame. A series of lakes at Lea Marston were created from old gravel workings in 1980 and the River Tame diverted through these lakes to provide settlement lagoons to protect downstream reaches from dry weather and storm impacts. This helps in mitigating large pollution events from affecting the lower reaches of the River Tame and downstream on the River Trent.

2.3.7 The whole catchment is a very important angling resource for the highly populated area it serves and comprises of 80 or more clubs. The River Mease is a small lowland river designated as a Special Area of Conservation under the Habitats Directive. The River Blythe is a Site of Special Scientific Interest (SSSI), designated as a fine example of a lowland river on clay.

2.3.8 There are 61 river water bodies and three lakes in the catchment. 31 are artificial or heavily modified. Two per cent of rivers (3 km) currently achieve good or better ecological status/potential. 19 per cent of rivers assessed for biology are at good or better biological status now, with 40 per cent at poor biological status, and 17 per cent at bad status.

2.3.9 Physical modifications due to urbanisation, water storage and supply and flood protection are key reasons for failures in the catchment. Point source discharges from water industry sewage works and diffuse run-off from urban areas also play a key role in determining the status of rivers and lakes in this catchment.

2.3.10 Some key actions identified in the current Humber River Basin Management Plan for this catchment include:

- Improve sewage treatment works at a number of locations to reduce the levels of
- phosphate, for the River Trent designation.
- Target pollution prevention campaigns around industrial areas in the urban areas, particularly around Birmingham and the Black Country.
- Improve sewage treatment works at a number of locations in the River Mease catchment to reduce the levels of phosphate in the SAC site.

2.3.11 The work for the Catchment Management Plan has divided the catchment into 4 areas:

1. Upper Tame Birmingham (see Fig. 5)
2. Upper Tame Black Country (see Fig. 6)
3. Lower Tame East Staffordshire and West Leicestershire (see Fig. 7)
4. Middle Tame North Warwickshire (see Fig. 8)

2.3.12 The River Mease sub-catchment lies in the north eastern corner of the catchment. The River Mease and the lower part of Gilwiskaw Brook are special lowland rivers that are designated as a Special Area of Conservation (SAC) under the EU Habitats Directive, and a Site of Special Scientific Interest (SSSI) under the Wildlife and

Countryside Act. They are designated because the River Mease represents one of the best examples of an unspoilt meandering lowland river, which supports characteristic habitats and species. The needs of this sub-catchment have been given special attention through the preparation of a detailed Restoration Plan which was adopted in 2012.

2.4 PRESSURES AFFECTING RIVERS/CANALS/ WATER BODIES IN THE CATCHMENT

2.4.1 The Tame, Anker and Mease Catchment lies within the much larger Humber River River Basin, subject to the 2009 – 2015 Humber River Basin Management Plan. As part of the River Basin characterisation process, the Environment Agency has assessed the pressures on water bodies, and continues to report on the pressures.

2.4.2 Below is a Table which summarises the main types of pressures faced by the water bodies (including canals) for the main geographical parts of the Tame catchment, as indicated by the Environment Agency:

Location	Birmingham & Black Country	East Staffs & West Leics	North Warks
Pressure			
Heavily modified water bodies	X	X	X
Urban diffuse pollution	X	X	X
Agricultural / rural diffuse pollution	x	X	X
Water industry point source pollution	X	X	X
Point source industrial discharges	X	X	X
Contaminated land	X		
Point source pollution		X	X
Water industry groundwater abstraction		X	
Surface water abstraction			X
Point source pollution landfill leaching	X		
Diffuse pollution from abandoned coal mine	X		
Reasons for failure investigation continuing	X		
Reasons for failure investigation continuing (zinc)		X	X

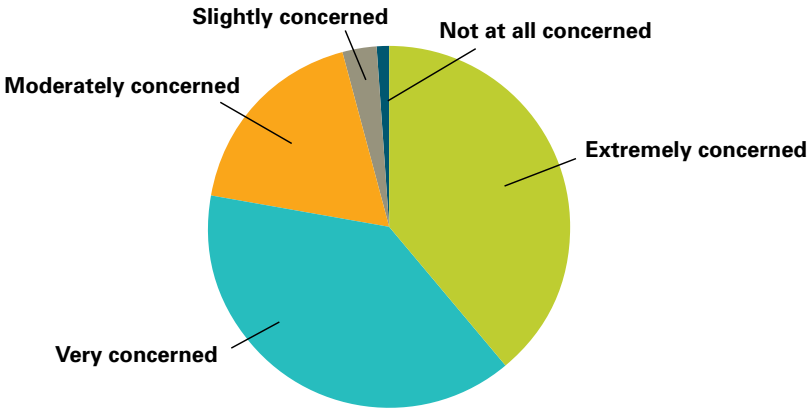
X = to a greater degree **x** = to a lesser degree

2.5 WATER ENVIRONMENT ATTITUDE SURVEY

2.5.1 To support work on developing the Catchment Pilot initiative and Catchment Management Plan, a public attitude survey about the Water Environment was set up using the Survey Monkey On-line Survey Tool. A series of questions about the water environment have been asked: its condition, the resources used to improve it, the relative importance of improving the water environment, and the sorts of actions that may be important in improving the water environment and those that the public may carry out.

Q1 How concerned are you about the quality of your local water environment

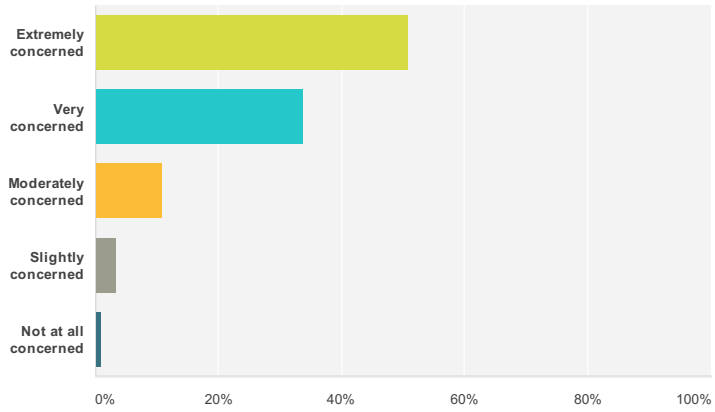
Answered: 175 Skipped: 0



Answer Choices	Responses	
Extremely concerned	41.14%	72
Very concerned	37.14%	65
Moderately concerned	17.71%	31
Slightly concerned	2.86%	5
Not at all concerned	1.14%	2
Total		175

Q2 How concerned are you about water pollution?

Answered: 175 Skipped: 0

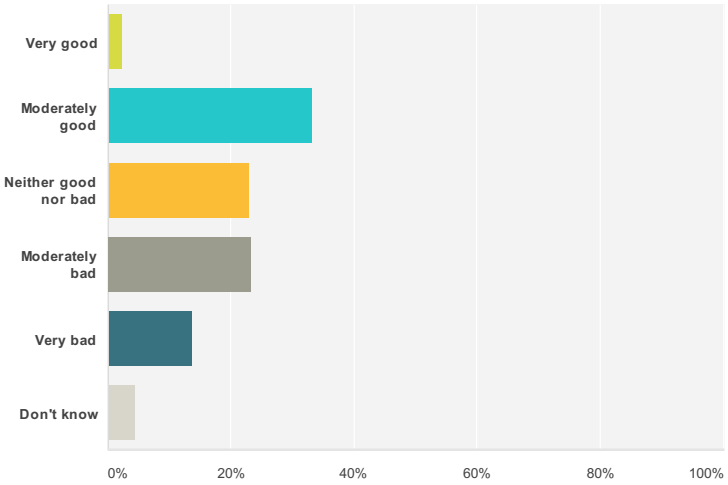


Answer Choices	Responses	
Extremely concerned	50.86%	89
Very concerned	33.71%	59
Moderately concerned	10.86%	19
Slightly concerned	3.43%	6
Not at all concerned	1.14%	2
Total		175

2.5.2 Just over 80% of those replying are extremely or very concerned about the quality of the local water environment and in excess of 80% are concerned about water pollution.

Q3 The Water Framework Directive aims to improve the 'ecological condition' of waterbodies across this area. This is a measure of both the water quality and how good the rivers and canals are for wildlife. How would you assess the ecological condition of your local waterbodies?

Answered: 175 Skipped: 0



Answer Choices	Responses	
Very good	2.29%	4
Moderately good	33.14%	58
Neither good nor bad	22.86%	40
Moderately bad	23.43%	41
Very bad	13.71%	24
Don't know	4.57%	8
Total		175

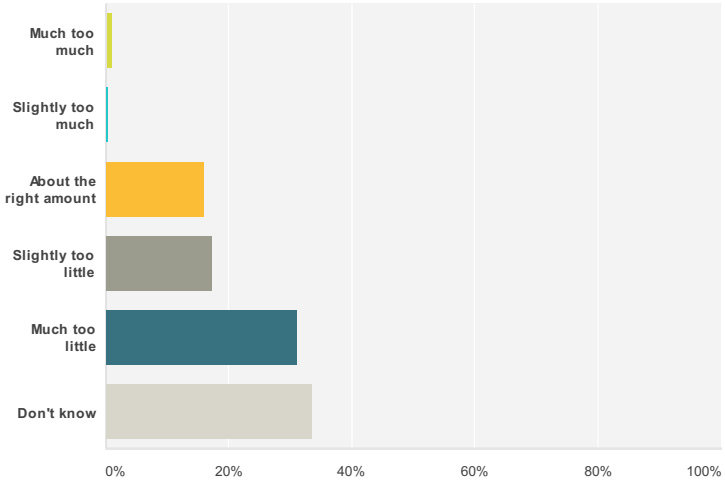
2.5.3 Over one-third thought that water bodies in the catchment are in moderately good or very good condition. About one-quarter thought neither good nor bad and about 35% thought moderately bad or very bad.

Q4 Should the regulations to control water pollution be more strict, less strict, or about as strict as they are now?

Answered: 173 Skipped: 2

Q5 Is the Environment Agency spending too much money trying to improve the water environment, too little money, or about the right amount of money?

Answered: 173 Skipped: 2

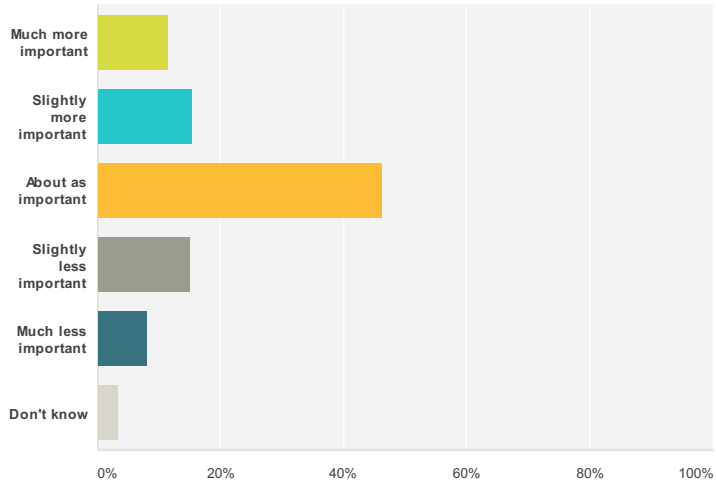


Answer Choices	Responses	
Much too much	1.16%	2
Slightly too much	0.58%	1
About the right amount	16.18%	28
Slightly too little	17.34%	30
Much too little	31.21%	54
Don't know	33.53%	58
Total		173

2.5.4 About 33% think that about the right amount or slightly too little is being spent, just over 30% think much too little, and just over 30% don't know.

Q6 Is improving the local water environment more important than improving the local economy, or about as important as improving the local economy?

Answered: 173 Skipped: 2

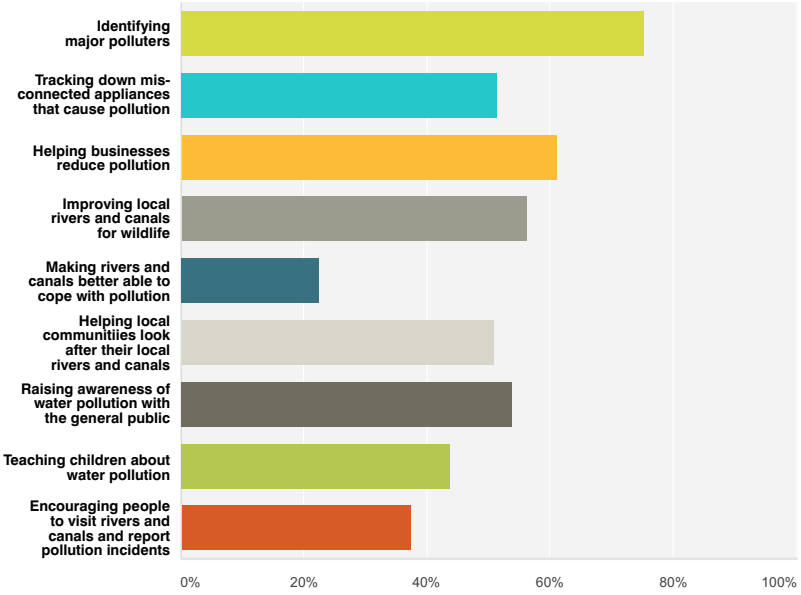


Answer Choices	Responses	
Much more important	11.56%	20
Slightly more important	15.61%	27
About as important	46.24%	80
Slightly less important	15.03%	26
Much less important	8.09%	14
Don't know	3.47%	6
Total		173

2.5.5 About 50% of respondents think that improving the water environment is about as important as improving the local economy, with the balance roughly evenly divided between more or less important.

Q7 Which of the following actions to improve the water environment will be the most important in the next few years?

Answered: 169 Skipped: 6



2.5.7 Over half of responders (see below) identified the following actions as important – identifying major polluters, helping businesses to reduce pollution, improving local rivers and canals for wildlife, raising awareness of water pollution with the general public, tracking down mis-connections, and helping local communities to look after their local rivers and canals. Slightly less than half said that teaching children about water pollution would be important.

Answer Choices	Responses	
Identifying major polluters.	75.15%	127
Tracking down mis-connected appliances that cause pollution.	51.48%	87
Helping businesses reduce pollution.	60.95%	103
Improving local rivers and canals for wildlife.	56.21%	95
Making rivers and canals better able to cope with pollution.	22.49%	38
Helping local communitiies look after their local rivers and canals.	50.89%	86
Raising awareness of water pollution with the general public.	53.85%	91
Teaching children about water pollution.	43.79%	74
Encouraging people to visit rivers and canals and report pollution incidents.	37.28%	63
Total Respondents: 169		

Q8 Should the government spend more money to improve the water environment, less money to improve the water environment, or about the same amount of money to improve the water environment?

Answered: 175 Skipped: 0

Q9 How often do you recycle?

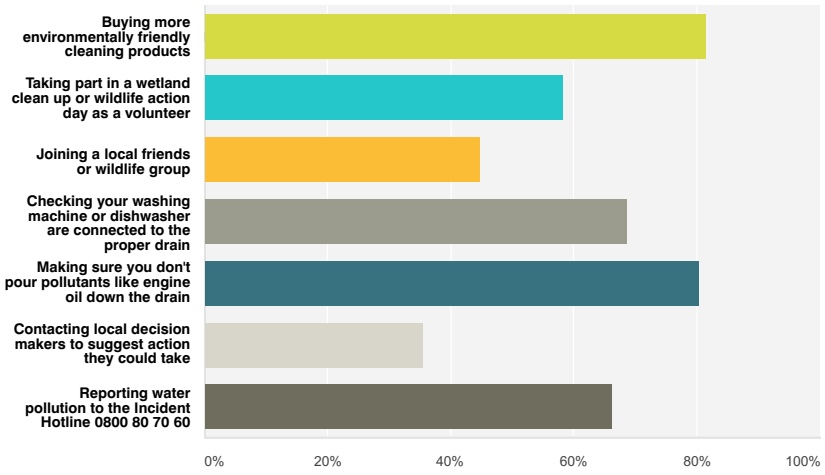
Answered: 173 Skipped: 2

Q10 How willing are you to change your lifestyle to reduce the damage you cause to the water environment?

Answered: 174 Skipped: 1

Q11 What sort of actions would you consider taking to protect your local water environment?

Answered: 172 Skipped: 3



Answer Choices	Responses	
Buying more environmentally friendly cleaning products.	81.40%	140
Taking part in a wetland clean up or wildlife action day as a volunteer.	58.14%	100
Joining a local friends or wildlife group.	44.77%	77
Checking your washing machine or dishwasher are connected to the proper drain.	68.60%	118
Making sure you don't pour pollutants like engine oil down the drain.	80.23%	138
Contacting local decision makers to suggest action they could take.	35.47%	61
Reporting water pollution to the Incident Hotline 0800 80 70 60.	66.28%	114
Total Respondents: 172		

Q12 What sort of actions would you consider taking to protect your local water environment?

Answered: 155 Skipped: 20

2.5.8 Individual and practical actions appear to be popular with respondents.

Full attitude survey findings to be found in the appendix.

3 Catchment Themes

3.1 WORKSHOP THEMES

3.1.1 In collecting information and the views of stakeholders in relation to a potential vision, the issues and opportunities, and options and actions for the catchment at the workshops, six themes could be charcterised and broadly represent the priorities that should be reflected in the CMP. Issues, opportunities, options and actions identified at the four workshops covered the six themes below:

- Pollution
- Restoration and Enhancement
- Physical Access
- Education, Awareness and Engagement
- Planning, Development and Enterprise
- Governance and Partnership

3.1.2 A range of strategies, options, actions and projects is being carried out already for these themes. An array of opportunities for action and project work exist for extending existing work and initiating new and exciting projects which have the potential to deliver many benefits across environmental, social and economic agendas.

3.1.3 An inclusive, coherent and workable vision for a catchment that has such huge contrasts and a broad diversity has been constructed using the above themes as a guide. The objectives set out in the River Mease Restoration Plan are fully in line with the above themes, and the resultant vision for the catchment is inclusive of the requirements of the Restoration Plan.

3.2 POLLUTION

3.2.1 There are major pollution issues across the catchment, particularly from many different diffuse sources. Diffuse urban drainage and run-off, contaminated land, point source water industry and other industrial discharges, urban mis-connections for foul water, and diffuse agricultural / rural run-off from practices are the main sources. A variety of pollutants are responsible, including organic pollution, organic compounds, heavy metals, detergents, pesticides and sediments. Diffuse and point source pollution are significant pressures on water bodies in failing Water Framework Directive requirements. No one organisation can solve all these problems, and sustainable and innovative solutions to improve water quality will require partnership and shared working, and much liaison.

3.3 RESTORATION AND ENHANCEMENT

3.3.1 Many of the watercourses and other water bodies across the catchment are heavily modified or degraded in other ways. Many rivers have been deepened and straightened in the past to speed up flows which has had the negative impact of disconnecting them from their floodplains. Improving the physical structure and ecological health of watercourses can greatly improve the resilience of the network to pollution, reduce peak flows, ameliorate flooding, increase the value of water bodies for biodiversity and reduce the impact of extreme events on wildlife for example and in particular trees and woodlands have a particularly robust ability to deliver on water issues at the same time as on a wide range of green infrastructure benefits. Trees and woodlands can deliver positive outcomes for both water quality and water flow as well as delivering other benefits: these include for both landscape and biodiversity (helping habitats become more robust to adapt to climate change, buffering and extending fragmented ancient woodlands), for quality of life and climate change (amenity and recreation, public health, urban cooling) and for the local economy (timber and woodfuel markets). The restoration and enhancement of the structure and ecology of our water bodies can be achieved in sustainable and innovative ways.

3.4 PHYSICAL ACCESS

3.4.1 Rivers, streams and canals are the arteries of a network of open spaces across the catchment in both urban and rural locations, providing a huge and diverse resource for formal and informal recreation. The existing access value of waterways should be protected and further improvements to their amenity and access value should be sought. Land ownership and land owner permission is an issue in some places but many benefits can result by enabling and encouraging access including increasing the visibility of water courses, enhancing recreational uses, and improving tourism potential. Access improvements to canals in Birmingham and the Black Country by the Canal and River Trust are a good example of what can be achieved.

3.5 EDUCATION, AWARENESS AND ENGAGEMENT

3.5.1 Water plays a multitude of roles in the lives of over two million people living in the catchment. By reaching out to local communities and better explaining the links between the water environment and our everyday actions we can raise public support and participation in addressing the many opportunities and challenges faced by the water environment. There are several current projects which are good examples, including Midlands Urban Rivers Community Initiative (MURCI Waters), Yellow Fish and Waterside Care. There is a wealth of tried and tested methods, techniques and tools for extending knowledge of the water network and no shortage of ideas, to be used both within the catchment and in linking the catchment to other water networks beyond.

3.6 PLANNING, DEVELOPMENT AND ENTERPRISE

3.6.1 The water environment can play an essential role in the environmental transformation needed to underpin economic regeneration across the catchment. Strategic plans and policies should not only encourage absorbent urban environments but also protect and enhance the water environment. Plans and policies should also encourage the take-up of opportunities to benefit the water environment, at the same time as enhancing and protecting our natural, economic and social assets. New developments should protect water bodies and enhance water quality. Techniques, such as sustainable drainage systems, are well-known and more innovative means, such as green and brown roofs, are gaining much wider credibility. Economic, development, transport, greenspace, energy and minerals plans all have the potential to drive action to encourage and protect the ecosystem services provided by water and the water environment.

3.7 GOVERNANCE AND PARTNERSHIP

3.7.1 The Tame, Anker and Mease Catchment is a large and diverse catchment. There is an array of existing partnerships with many key stakeholders across the catchment. There is significant potential for the ownership of the vision, objectives and priorities, and actions set out in the Catchment Management Plan to be extended amongst these already existing partnerships and mechanisms and for contributions to actions to be led and encouraged by them. All levels of partnership working exist including Local Enterprise Partnerships, Local Nature Partnerships, Catchment Partnerships, the Birmingham and Black Country Nature Improvement Area Partnership, Local Waterways Partnerships, Rights of Way Forums, Historic Environment Forums, and Biodiversity & Geodiversity Partnerships. Some partnerships are geographically specific such as the Tame Valley Landscape Partnership. Good leadership, communication and co-operation will be a necessity in incorporating the needs of the catchment into our plans and policies and taking practical action together.

4. Catchment Area-Based Action

4.1 UPPER TAME – BIRMINGHAM AND BLACK COUNTRY

4.1.1 Local Characterisation – Black Country

a) The Black Country lies at the head of the Tame, Anker and Mease Catchment, east of the main watershed of England. Not all of the Black Country lies within the catchment. The bulk of Sandwell and Walsall form the major part together with the south-eastern part of Wolverhampton and the eastern strip of Dudley. Two major arms of the River Tame (the Wolverhampton and Oldbury Arms) drain this area, combining with the major tributaries of the Ford Brook and Sneyd Brook draining Walsall. Small streams and brooks forming the headwaters drain into the major rivers though many are hidden away or culverted within the urban matrix. Many of the water bodies are heavily modified with rivers and streams in artificial deepened channels or highly managed to ensure the efficient movement of water at times of heavy rain or flood.

b) Land use is primarily urban with a dense matrix of residential and industrial uses interlaced with an array of transport and infrastructure corridors of national and regional importance. A web of open space and canal corridors criss-crosses the urban matrix providing an ecological network appreciated by residents for informal recreation and a wealth of wildlife. The Tame flows from the north in to Sandwell Valley Country Park, a large area of captive countryside and open space lying at the heart of the conurbation. The valley of the Tame is the major focus of the Country Park. An array of statutory and non-statutory nature conservation sites, some of geological importance, and protected and important species, such as water voles, occur within this part of the catchment. Small-scale and larger scale landscapes and features of historical and heritage importance add a further layer to the urban matrix. The whole of the Black Country is within the Birmingham and Black Country Nature Improvement Area (NIA), one of the government's flagship initiatives in the Natural Environment White Paper and of only 12 NIAs in England.

c) There are still some small sewage works discharging to the water network though the Black Country Trunk Sewer now takes much sewage to Minworth Water Treatment Works east of Birmingham. Small-scale abstractions of water take place through bore holes and can cause temporary changes in water levels to some water bodies. Overall, water quality is assessed as moderate though there are point sources where heavy metal pollution, contaminated land and the legacy of the Industrial Revolution are apparent and problematic.

d) Black Country canals within the catchment are assessed as having good water quality, except for the part of the network relating to the Birmingham – Wolverhampton Main Line and Old Main Line where the assessment is for moderate quality.

e) Diffuse urban run-off is a significant issue. Urban diffuse pollution resulting from the drainage of hard surface is a significant water management issue. Mis-connections from domestic, industrial and retail properties contribute to this. Development pressure on the remaining porous or "soft" surface is an issue.

4.1.2 Local Characterisation - Birmingham

a) Birmingham, the country's second city with a population of 1m people, also lies at the head of the Tame, Anker and Mease Catchment, east of the main watershed of England. The entire city area lies within the catchment. The River Tame is the main river of the city, into which drain with the major tributaries of the Rea and Cole. Many small streams and brooks forming the headwaters drain into the Tame, Rea and Cole though many are hidden away or culverted within the urban matrix. Many of the water bodies are heavily modified with rivers and streams in artificial deepened channels or highly managed to ensure the efficient movement of water in times of heavy rain or flood. The River Rea is a good example, flowing in a deepened, straightened and brick-lined channel from Cannon Hill Park to the south of the City Centre as far as its confluence with the River Tame.

b) Land use is densely urban with a matrix of city centre, residential and industrial uses interlaced with an array of transport and infrastructure corridors of national and regional importance. A web of open space, partly based on open corridors along the courses of the Rea, Cole and other streams and brooks, and canal corridors criss-crosses the urban matrix providing an ecological network appreciated by residents for informal recreation. The Tame flows in to the city as it passes through Sandwell Valley Country Park, lying at the heart of the Birmingham and Black Country conurbation. An array of statutory and non-statutory nature conservation sites, some of geological importance, and protected and important species, including water voles, occur within Birmingham. Sutton Park National Nature Reserve is the "jewel in the crown". Small-scale and larger scale landscapes and features of historical and heritage importance add a further layer to the urban matrix. The whole of Birmingham is within the Birmingham and Black Country Nature Improvement Area (NIA), one of the government's flagship initiatives in the Natural Environment White Paper and of only 12 NIAs in England.

c) The main discharge to the River Tame is at Minworth Water Treatment Works on the eastern edge of Birmingham, a smaller WTW exists at Frankley in the Southwest. Smaller discharges to smaller water courses and the canal network take place. Rising groundwater is an issue in parts of the city. Overall, the water quality of Birmingham's rivers, streams and brooks is assessed as moderate, though there are two stretches of the River Rea which are assessed as bad. Point source pollutions and land contamination issues are present but not at the same scale as the Black Country. Canals within Birmingham are assessed as having moderate water quality.

d) Diffuse urban run-off is a significant issue. Urban diffuse pollution resulting from the drainage of hard surface is a significant water management issue. Mis-connections from domestic, industrial and retail properties contribute to this. Development pressure on the remaining porous or "soft" surface is an issue.

4.1.3 Local Objectives

Objectives for the Birmingham and Black Country parts of the Tame Catchment are essentially the same and so have been considered as joint objectives.

a) Identify and remediate sources of point source pollution, resulting from land contamination related to the legacy of the Industrial Revolution, impacting on the water environment using a range of tools including engagement and raising awareness, enforcement, partnership working, known techniques, technological innovation and training.

b) Identify opportunities and undertake action to tackle diffuse urban run-off impacting on the water environment using a range of tools including engagement and raising awareness, enforcement, partnership working, technological innovation and training.

c) Restore and enhance water courses, wetlands and floodplains wherever possible, by naturalising channels, banks, removing or modifying barriers, and habitat creation and restoration in seeking to deliver "good ecological condition", particularly through the Birmingham and Black Country Nature Improvement Area initiative and programme.

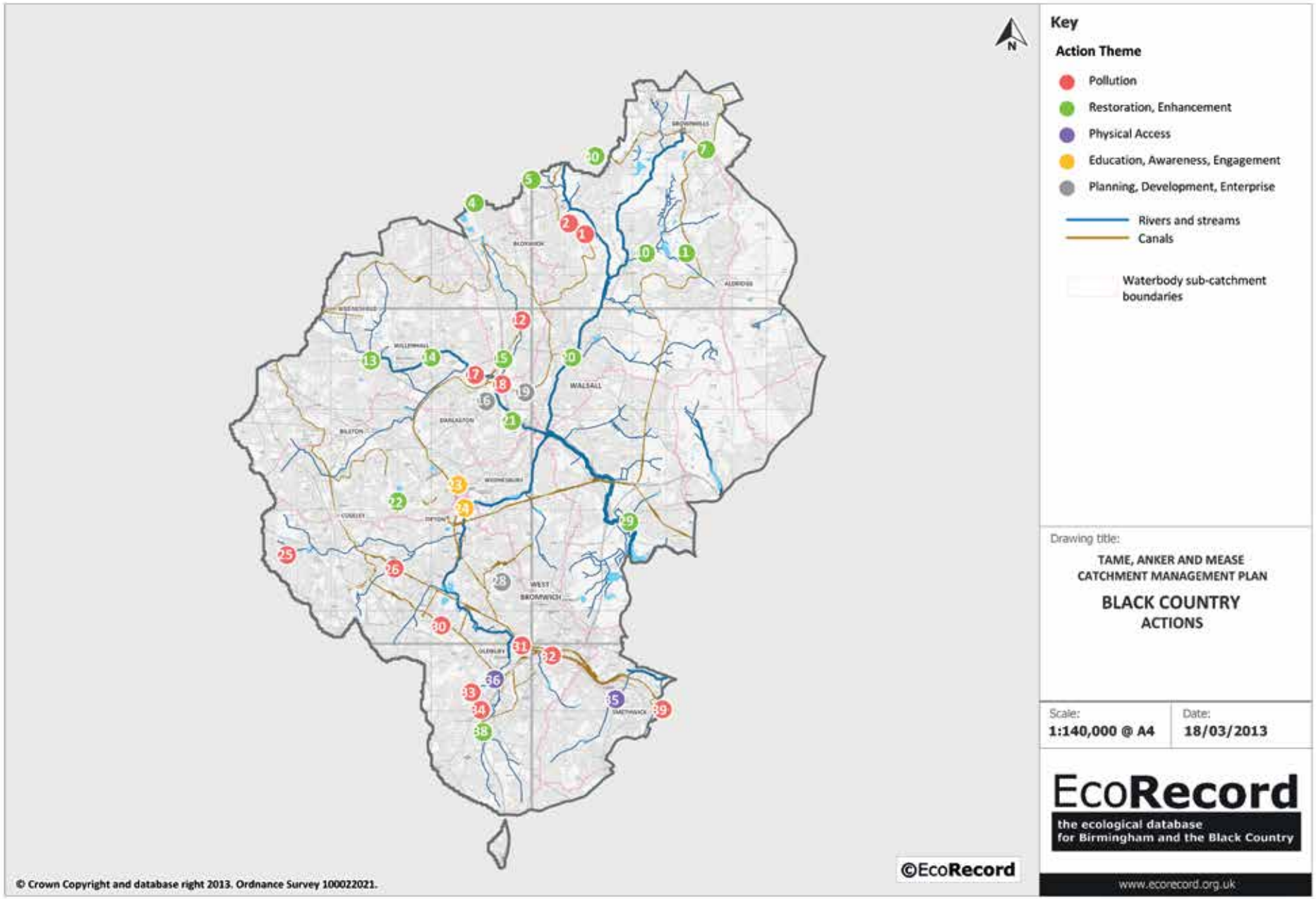
d) Ensure that water bodies and the water environment and network contribute to the creation, improvement, restoration and management of Green Infrastructure.

e) Ensure that the water environment makes a full contribution to the economic, health and social well-being of the population of Birmingham and the Black Country through providing opportunities for economic development, health improvements, formal and informal recreation, tourism, and community engagement and involvement.

f) Use the potential of the planning system to maximise benefits to the water environment and catchment by ensuring its needs and requirements are built into plans and policies, opportunities provided by development are taken and catchment plan objectives and actions are integrated into and delivered by development schemes.

g) Encourage awareness, engagement, partnership and joint working, and involvement amongst a range of sectors, partnerships, organisations and local groups to promote action and develop projects to benefit this part of the catchment.

4.2 UPPER TAME – BLACK COUNTRY LOCAL ACTIONS



For each area of the catchment (Birmingham, Black Country, East Staffordshire and North Warwickshire) there are two tables, one being a generic action table, the other a local action table for the area. Within the generic action tables the issue/opportunity, the action related to the issue, the location (which for many will be 'various') and suggested action lead have been identified. From the conference attended by the stakeholders, feedback was reviewed and resulted in priority actions and flagship projects being selected. Actions with a star symbol are identified as priority actions whilst those with a flag symbol are the selected flagship projects. See further information on these in part 5.

Upper Tame Black Country Action Table

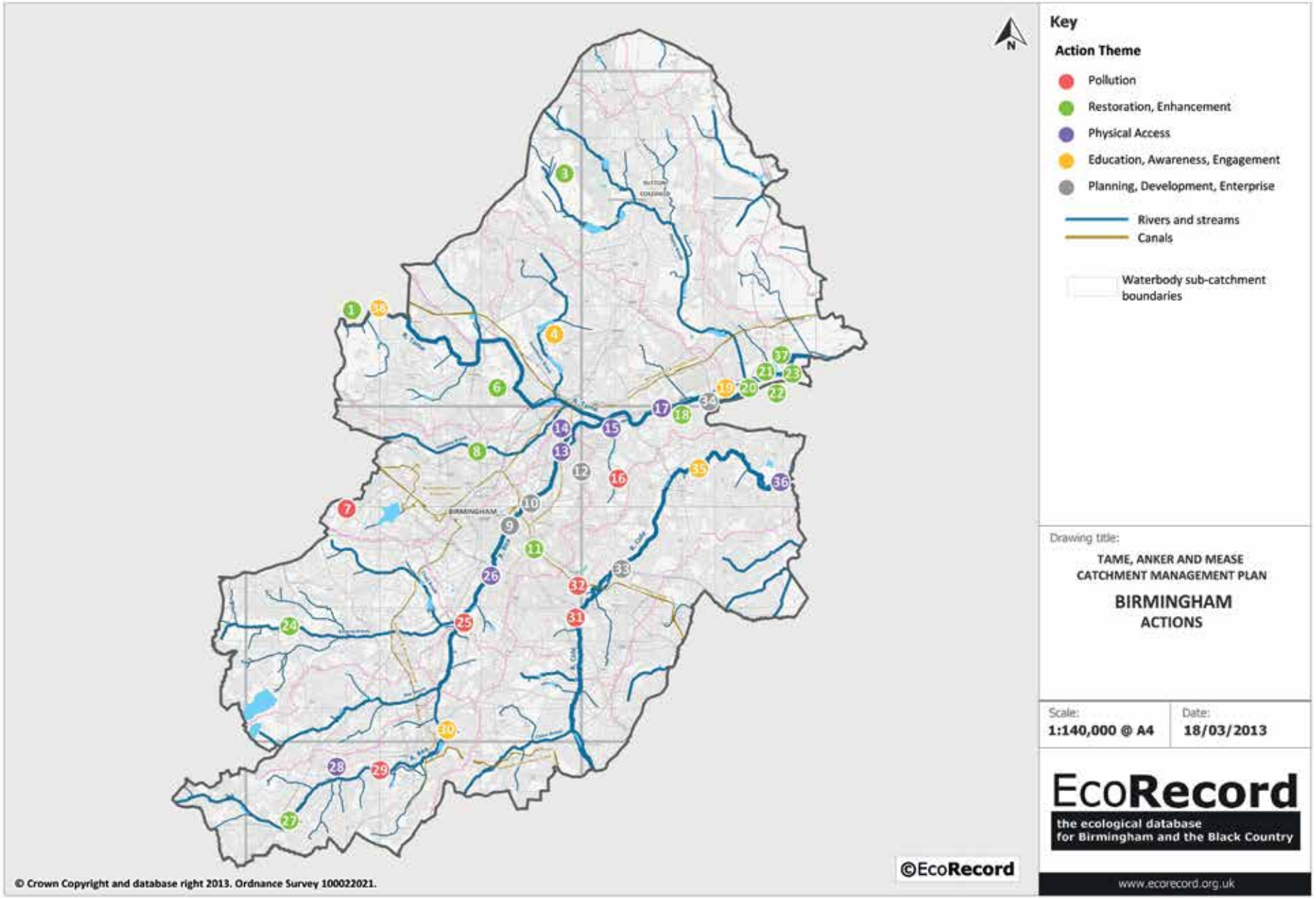
Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Pollution				
Generic				
Point Source Pollution	Identify individual sources and discharges, mis-connections, engagement, enforcement, partnership working, technological innovation	Various	EA / C&RT / STW / LAs	☆
Diffuse Pollution	Identify opportunities, sources and discharges, mis-connections, retrofit SUDS, engagement, enforcement, partnership working, technological innovation	Various	EA / LA	☆
Pollution Prevention Control	Visit industrial premises to engage / give guidance	Various	EA / C&RT / STW / LAs	
Diffuse Pollution	Chemicals (e.g. oil)	Birmingham Main Line Canal	STW / EA	
River - Canal Intersection Discharges	Identify individual points of discharge	Various	EA / C&RT	
Water Company Discharges	Identify sewage outfalls to canals	Various	STW / C&RT / EA	
Restoration, Enhancement				
Generic				
Encourage self-purification water mechanisms	Identify and map opportunities to de-culvert and open up water courses	Various	EA	
Adjoining / surrounding regional links	Investigate and provide links along rivers and canals	Various	EA / LAs	
Canal enhancement projects	A renewal of "Project Aquarius" initiative	Various	C&RT / LAs / EA	
Creation & restoration of habitats and connectivity along canal and water course corridors	Develop and implement projects via Nature Improvement Area Programme and opportunities through flood mitigation and other works	Various	C&RT / LAs / EA / NGOs	☆ ⚑
Consider opportunities for enhancing history and heritage	Develop and implement projects	Various	C&RT / LAs / EA / NGOs	
Invasive, non-native species	Develop and implement control projects	Various	C&RT / LAs / EA / NGOs	
EA producing a priority map for West Midlands area called "Woodlands for Water" (Sam Todd)	Report to highlight where woodland can best contribute to help solve water quality and flow issues		EA, NGOs, LA	⚑

Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Physical Access				
Generic				
Examine physical access in holistic fashion	Map existing access and provision, examine opportunities to enhance and remove barriers, look at links and signage, support community groups, develop projects and take opportunities e.g. R. Tame at Bescot and M5 / M6 Junction 8	Various	C&RT / LAs / EA / NGOs	☆
Education, Awareness, Engagement				
Generic				
Engagement with property owners / occupiers	Misconnections - issue of costs - penalty or incentive	Various	STW	☆
"Love Your River" Initiatives	Potential projects for Dudley, Sandwell, Wolverhampton, Walsall	Various	ALL	
Initiatives to contain a range of project elements	Routes, signage, schools and education projects, history and heritage, oral history, the use of new technology including “apps”, information about recreation uses, targeting users including health, communities, corporates and businesses, training and volunteering, and “river wardens”	Various	ALL	
Planning, Development, Enterprise				
Planning, Development, Enterprise				
Generic				
Engage construction industry	Encourage constructors / developers to join Considerate Constructors Scheme		?	
Use potential of planning system	Maximise benefits to water environment and catchment by ensuring needs and requirements are built into plans and policies, opportunities provided by development are taken and integrating objectives and actions of catchment plan into development schemes	Various	LAs / EA / Developers	☆
Engage with influential partnerships or organisations	Seek to influence Black Country LEP to improve the water environment and catchment	Various	ALL	
Governance, Partnership				
Generic				
No Issue or Action				

Theme / Issue / Opportunity		Action - what will happen	Location	Action Lead	Priority/Flagship
Pollution					
Map Ref.	**Individual**				
1	Heavy metals - Cu, Zn	Remediation, improvement, prevention	Slacky Lane, Walsall	EA	
2	Heavy metals - Cu, Zn	Remediation, improvement, prevention	Slacky Lane, Walsall	EA	
12	High Fe levels in Sneyd Brook	Monitor / explore action to reduce levels	Sneyd Brook, Leamore, Walsall	EA	
17	Heavy metals - Cu, Zn	Remediation, improvement, prevention	Bentley Mill Way, Walsall	EA	
18	Pollution from former industry	Remediation, improvement, prevention	IMI site, Bentley, Walsall	EA	
25	Swan Brook culvert and poor water quality	Explore deculverting, improvement of ammonia and phosphate levels	Swan Brook, Dudley	EA	
26	Combined Sewer Overflows	Remediation, prevention	Watery Lane, Tipton Brook, Sandwell	STW / EA	
30	Sewage discharges and misconnections	Identify points, remediation, improvement, prevention	Elm Terrace Brook, Tividale, Sandwell	EA	
31	Industrial point source discharges to canal	Identify points of discharge, improvement	B'ham -W'ton Main Line Canal	EA / C&RT	
32	Drainage from M5 and industrial premises	Identify points of discharge, improvement	Spon Lane, Smethwick, Sandwell	EA / C&RT	
33	Ammonia from tip leachates	Identify points of discharge, improvement	Lion Farm OS, Titford Pools, Sandwell	EA	
34	M5 discharges to Titford Pools	Identify points of discharge, improvement	Titford Pools, Sandwell	EA / C&RT	
39	Diffuse urban pollution - oil	Improvement, prevention	B'ham - W'ton Main Line Canal, B'ham Level	C&RT / EA	
Physical Access					
Map Ref.	**Individual**				
4	Canal connectivity	Restore disused canal link	Sneyd Farm, Walsall	LA / C&RT	
5	Possible canal network extension	Look at implications for extending canal system northwards	Fishley area, Walsall	LA / C&RT	
7	Possible canal network extension	Look at implications for extending canal system northwards	Shire Oak, Walsall	LA / C&RT	
10	Brook / corridor enhancement	Opportunity to enhance brook corridor for recreation and ecology	Anchor Brook, Stubbers Green, Walsall	EA / LA	
11	SSSI restoration opportunity	Potential restoration of Stubbers Green Bog SSSI	Stubbers Green, Walsall	NE	
13	De-culverting opportunity	De-culvert Tame to restore channel and help with sewage pollution remedy	Willenhall, Walsall	EA / LA	
14	De-culverting opportunity for Tame	Heavily culverted section of Tame through Willenhall	River Tame, Willenhall, Walsall	EA / LA	
15	Canal connectivity	Re-connect Anson Branch Canal to Walsall Canal	Bentley, Walsall	LA / C&RT	

Theme / Issue / Opportunity		Action - what will happen	Location	Action Lead	Priority/Flagship
20	Corridor connectivity	Overcome lack of connectivity using canals / rivers in Walsall	Walsall Town Centre	LA / EA / C&RT	
21	Development opportunities	To open and use water features positively	Bescot, Walsall + Sandwell	LA / EA	
22	Canal restoration opportunity	Bradley Canal	Lower Bradley, Sandwell + Wolverhampton	C&RT	
29	Flagship river project (see also Birmingham action 38)	Use Tame in Sandwell Valley as a flagship project of what a river can be and do	River Tame in Sandwell Valley	EA / LA	⚑
38	Stream improvement project	Stream improvement project	Blackheath Stream	EA	
40	Canal restoration opportunity	Lichfield-Hatherton Canal	Lichfield-Hatherton Canal	C&RT	
Physical Access					
Map Ref.	**Individual**				
35	Connecting access opportunity via bridge	Construct bridge to connect access with and over brook (funding from Community Spaces)	Thimblemill Brook, Smethwick	EA / LA	
36	Opportunity to establish a main route	Open up access and clean the water course	Oldbury	EA	
Education, Awareness, Engagement					
Map Ref.	**Individual**				
23	Case Study for reclamation	Major reclamation of contaminated land for employment	ACP site-Patent Shaft Steelworks S'well	?	
24	Case Study for reclamation	Major reclamation of contaminated land for safe stable development	Parkway North, Wednesbury, S'well	?	
Planning, Development, Enterprise					
Map Ref.	**Individual**				
16	Land reclamation for employment	Long term clean up focussed around Tame and Walsall Canal	Darlaston Strategic Development Area	LA?	
19	Large-scale reclamation to improve groundwater	Heavily contaminated land reclamation for groundwater and water improvements	Phoenix 10 site (IMI site + Alumwell	LA?	
28	Encourage SUDS and Green Roofs	Implement SUDS and Green Roofs in development schemes	West Bromwich, Sandwell	LA / EA	
Governance, Partnership					
No issue or action					
Action/joint leads: the agencies identified have clear statutory or ownership roles in relation to the action					

4.3 UPPER TAME – BIRMINGHAM LOCAL ACTIONS



Upper Tame Birmingham Action Table

Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Pollution				
Generic				
Improve water quality	Identify individual sources of discharges and problems, and report to EA	River Rea	EA / LA	
Contaminated land	Contamination affecting river sediments, identify locations	Various	EA / LA	☆
Rising groundwater levels	Increase and investigate rising levels	Various	EA / LA	
Mis-connections	Education projects to inform public and plumbers, and examine feasibility of central funding to support remedial actions	Various	STW / EA	☆
Fly tipping	Education and enforcement	Various	LA / EA / C&RT	
Water Company Discharges	Identify sewage outfalls to canals	Various	STW / C&RT / EA	
Restoration, Enhancement				
Generic				
Reduction of negative environmental impact	Introduction of Green Infrastructure	Various	EA / LA / NE	
Green Infrastructure	Opportunities to link water courses and GI networks - water quality / diffuse pollution improvement	E.g. Sandwell Valley	EA / LA	☆
Creation & restoration of habitats and connectivity along canal and water course corridors	Develop and implement projects via Nature Improvement Area Programme and opportunities through flood mitigation and other works	Various	C&RT / LAs / EA / NGOs	☆
Woodland opportunity	Sustaining the urban forest	Various	LA / NGOs	
Protect high quality nature cons sites	Creation of buffers	SSSIs and NNR (e.g. Sutton Park)	EA / NE / LA	
Surface water management	Improve techniques - mutual provision of ecological benefit	Various	LA	
Introduction of small-scale improvements	Use local community groups to implement small-scale projects	Various	ALL	
Environment Agency projects	Includes proposed weir removal on water courses	Various	EA	
Culverts	Produce de-culvert opportunity map and prioritised plan	Various	EA / LA / NGOs	

Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Physical Access				
Generic				
Access improvements to watercourses	Visibility, walkways, crossing points, off-course connections, signs, naming of rivers	Tame and tributaries	LA / EA	
Water-based recreation opportunities	Canoe hubs	Various?	LA / NGOs	
1st Walkable City in UK - Walkable Waterways	Deliver the vision and projects	Various	ALL	☆
Case Study	Project Kingfisher, UK MAB site	River Cole, Hey Barnes - Kingshurst	EA / LA	
Examine physical access in holistic fashion	Map existing access and provision, examine opportunities to enhance and remove barriers, look at links and signage, support community groups, develop wide range of access and recreation projects and take opportunities	Various	C&RT / LAs / EA / NGOs	
Examine health impacts	Pay further attention to health if access to watercourses increased	Various	LA / EA	
Education, Awareness, Engagement				
Generic				
Increase all for watercourses in City	Projects to celebrate and educate re naturalisation of watercourses, ecology, heritage, benefits of access and management using a variety of engagement tools e.g. milk floats, internet, leaflets, town twinning	Rivers, tributaries, canals, water bodies	ALL	
Fostering and supporting interest and involvement	Stimulate, support local Friends Of groups and businesses	Various	ALL	☆
Increase misconnection education	Projects to deliver misconnection education	Various	STW / EA	
Reservoirs / eutrophic urban pools	Project opportunity to link local people with watercourses and pollution	Various	LA	
Flood risk management	For joint working to engage those living where flood risk is high			
Planning, Development, Enterprise				
Generic				
Promotion of water networks	Use planning system, policy and development to promote networks and as vehicle for regeneration	Various opportunities	LA / EA	
Use potential of planning system	Maximise benefits to water environment and catchment by ensuring needs and requirements, especially in the emerging growth scenarios, are built into plans and policies, opportunities provided by development are taken and integrating objectives and actions of catchment plan into development schemes	Various opportunities	LAs / EA / Developers	☆
Influence actions in RBMP	Seek to incorporate relevant actions from this CMP into Humber RBMP	Various opportunities	ALL	
Community Infrastructure Levy	Explore feasibility to benefit water environment and networks	Various opportunities	LA / EA	

Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Engage Growth and Enterprise Zones, regeneration areas	Dialogue, case studies, project encouragement, guidance	Various opportunities	LA / EA	
Engage with Black Country councils re regeneration corridors	Partnership working with Black Country councils to secure benefits to water environment / catchment in Birmingham	Various opportunities	LA / EA	
Highways drainage	Look at opportunities to mitigate impact - scoping study to look at links to regeneration and river water quality	Various	HA / LA /EA	
Regeneration - health - well-being	Link to water environment and catchment needs and opportunities - scoping project?	Various	ALL	
Failure to take opportunities to benefit water environment, catchment and ecosystem services approach	Increase training / CPD for planners - many tools available for small projects and to allow input to planning processes	Various	ALL	
Ensuring co-operation for dealing with water issues (as above)	To use the 'duty to co-operate' tool to enable co-operation			
Governance, Partnership				
Possible CMP legal status	Explore possibility of securing legal status for CMPs, and incorporation of actions to RBMPs		EA	
Action/joint leads: the agencies identified have clear statutory or ownership roles in relation to the action				

Theme / Issue / Opportunity		Action - what will happen	Location	Action Lead	Priority/Flagship
Pollution					
Map Ref.	**Individual**				
7	Pollution of the Boundary Brook	Investigate and undertake relevant action	Deer's Leap Wood, Edgbaston	EA	
16	Washbrook diffuse pollution	Misconnections, poor quality channel, awareness raising	Washbrook	EA / LA	
25	Cannon Hill Park Goose droppings	Reduce amount of droppings entering pools	Cannon Hill	LA	
29	River Rea Improving water quality	Improve water quality	River Rea, Kings Norton	EA / LA	
31	River Cole litter and diffuse pollution	Litter, fly-tipping, misconnections – remedial action	River Cole - Sparkbrook confluence - Sarehole Mill	EA / LA	
32	Sparkbrook diffuse pollution	Misconnections, poor quality channel, awareness raising	Sparkbrook	EA / LA	
Restoration Enhancement					
Map Ref.	**Individual**				
1	Habitat / GI networks opportunities	Extend GI adjacent to e.g. R. Tame	River Tame, Sandwell Valley	EA / LA	
3	Protect high quality water environment of SSSI	Consider / introduce buffers to protect water quality	Sutton Park SSSI / NNR	LA / EA	
6	Surface water management	Surface water flooding solutions	Witton	LA / EA	
8	Inner City opportunity re urban forest	Consider the introduction of woodland planting	Newtown and similar areas	LA	
11	Waterway project potential	South Birmingham Waterways	South Birmingham watercourses, canals	BBCWT / EA / C&RT / LA	
18	Proposed HS2 route opportunities	De-culverting watercourses, SUDs, river re-alignment	HS2 route	EA / HS2 / LA	
20	Channel management	Vegetation and debris clearance	Plants Brook and River Tame	EA	
21	Woodland creation opportunity	Wet woodland enhancement and creation	Castle Bromwich / M6	LA / EA / NGOs	
22	River course enhancement for flood control / wildlife	Wetland tree planting along R Tame	River Tame + others	LA / EA / NGOs	
23	Proposed HS2 route opportunities	De-culverting watercourses, SUDs, river re-alignment	HS2 route	EA / HS2 / LA	
24	Canal restoration	Restoration of waterway along former route	Lapal Canal, Woodgate, Selly Oak	C&RT / LA	
27	Opportunities for River Rea	De-culverting, restoration of river	Longbridge	LA/ Developer / EA	
37	Park Hall Nature Reserve	Restoring and managing the nature reserve to deliver multiple benefits	Park Hall Nature Reserve	BBCWR / NGO	

Theme / Issue / Opportunity		Action - what will happen	Location	Action Lead	Priority/Flagship
Physical Access					
Map Ref.	**Individual**				
13	River Walkways	Establish walkways	Inner City possibilities	LA /EA / NGOs	
14	Improve visibility of water course	Introduce visibility points	River Rea, Neachells	LA?	
15	Access along River Tame	Look at potential for establishing access	Washwood Heath	LA / EA	
17	Public access potential	Access, walkways, signage and habitats	Bromford River Tame	EA / LA / NGOs	
26	River Rea access	Look at potential for improving access and crossing points	Balsall Heath	LA	
28	Extend access to and along water courses	Introduce access	E.g. River Rea	LA	
36	Use example of Project Kingfisher	Use as case study for access arrangements	Project Kingfisher	LA / EA / NGOs	
Education, Awareness, Engagement					
Map Ref.	**Individual**				
4	Eutrophic urban pools pollution	Opportunity to involve community in solutions to pollution	Witton Lakes area	LA / EA / NGOs	
19	Clearing debris	Remove fly-tipping, litter, refuse	River Tame, near Castle Vale	LA / EA / NGOs	
30	River Heritage / History	River Rea - communicate more widely	River Rea	LA / NGOs?	
35	Community engagement potential	Management of River Cole and corridor	Project Kingfisher	LA / EA / NGOs	
38	Sandwell Valley Nature Reserve (see also Black Country action 29)	Managing the nature reserve to deliver multiple benefits	Sandwell Valley Nature Reserve	RSPB	
Planning, Development, Enterprise					
Map Ref.	**Individual**				
9	HS2 inner city opportunities	Explore / liaise / identify opportunities	River and canal inner city opportunities	HS2 / LA / EA	
10	Inner city opportunity to promote water network	Explore / liaise / identify opportunities	Bordesley area	EA / LA / C&RT / NGOs	
12	Future Birmingham Regeneration Areas	Explore and secure benefits for water environment / catchment - multi-sector approach e.g. River Rea Eastside	E.g. Saltley area	LA	
33	Severn Trent Water	Engage, secure input	Opportunity along River Cole	EA / STW	
34	High Speed Rail HS2	Explore opportunities for creation, enhancement, restoration of water environment			
Governance, Partnership					
No issue or action					
Action/joint leads: the agencies identified have clear statutory or ownership roles in relation to the action					

4.4 LOWER TAME – EAST STAFFORDSHIRE AND WEST LEICESTERSHIRE

4.4.1 Local Characterisation

a) The lower reaches of the Tame catchment are mostly rural in character. Throughout the area many of the rivers have been deepened and straightened in the past to speed up flows which has had the negative effect of disconnecting them from the floodplain. The River Tame itself is a wide and slow flowing river of poor to medium water quality, with a large proportion of its water made up of surface water from the conurbation upstream. Much of the floodplain adjacent to the river has been worked for gravel in many areas and is now a landscape rich in wetlands and other water bodies.

b) The Tame flows through Tamworth where it is joined by the River Anker. There is a large amount of public open space within the town immediately adjacent to both rivers and their confluence. After Tamworth the river continues to flow slowly past the rural landscapes of eastern Staffordshire again interspersed by restored and current gravel pit workings. The wider catchment and floodplain of this length is agricultural, dominated by large fields with cereals and some livestock. There are occasional small pockets of woodland.

c) The land to the west of Tamworth is the catchment area of the Black Bourne Brook and some smaller Tame tributaries which drain the northern fringes of Sutton Coldfield, Burntwood, Lichfield, adjacent villages and the surrounding rural areas. The landscape is dominated by farmland with smaller field sizes, mixed hedgerows and some arable land. There is a greater mix of land use types with more trees, scrub and woodland. The corridor of the Black Bourne Brook is particularly attractive with a good range of woodlands and wetland habitats along some of its length. The M6 toll and the A38 both bisect this area.

d) To the east of Tamworth lies the catchment areas of the River Anker, flowing from north Warwickshire and the River Sence from western Leicestershire. The River Sence rises in Coalville with a lightly urbanised upper catchment, then flows through an almost entirely rural area with a number of attractive villages where it is joined by a number of smaller tributaries. The farmland is varied with a mix of livestock and arable land. This distinctively rural area has a more undulating feel and includes the villages of Market Bosworth, Ibstock, Sheepy Magna and Stoke Golding.

e) The River Anker is a larger river starting close to the M69, and flows through the towns of Nuneaton and Atherstone. The catchment area is again predominantly rural with a mix of pastoral and arable landscapes. Alvecote Pools SSSI downstream of Nuneaton is a well known series of wetlands, again created from historical mineral extraction. The Anker is in “good ecological status” and is important for species such as otter and water vole. The best chance for the recolonisation of the Lower Tame catchment by water voles is via the River Anker.

4.4.2 Local Objectives

a) Where gravel pits are restored to a range of uses providing a mixture of wetland habitats and are valued by the local community.

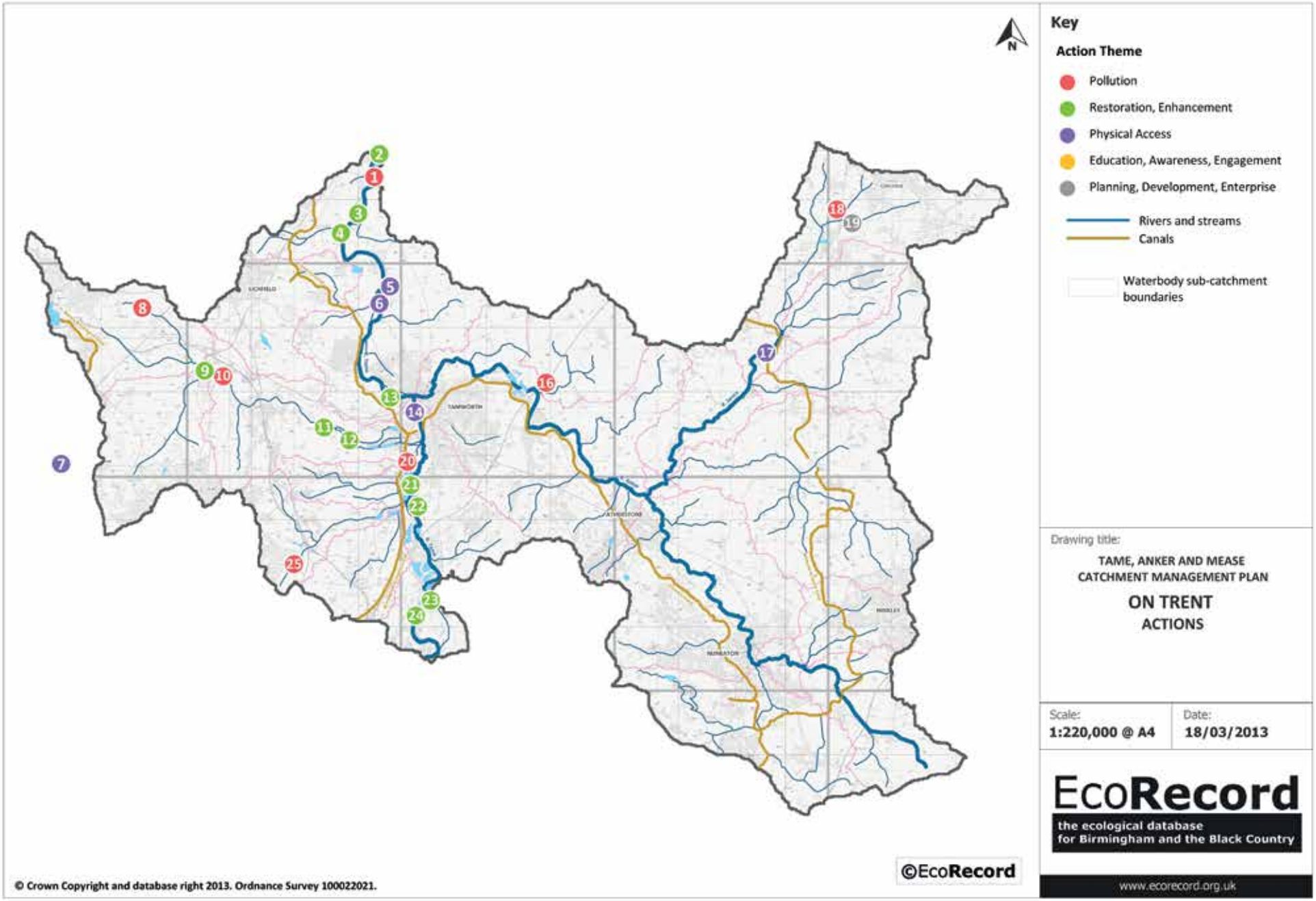
b) Floodplain wetlands and gravel pits are linked to the main river.

c) Agri-environment schemes on farms create and improve habitats along the river corridor.

d) Nutrients and fertilizers are used efficiently on farms to reduce phosphates and nitrates reaching watercourses.

e) Development in urban areas is designed to enhance the river corridor, space is allowed for improved access and natural riverine processes wherever possible.

f) New building faces the river and uses the river or wetland as a focus for development.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Key
Action Theme
Pollution
Restoration, Enhancement
Physical Access
Education, Awareness, Engagement
Planning, Development, Enterprise
Rivers and streams
Canals
Waterbody sub-catchment boundaries
Drawing title:
TAME, ANKER AND MEASE CATCHMENT MANAGEMENT PLAN
ON TRENT
ACTIONS
Scale:
1:220,000 @ A4
Date:
18/03/2013
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Lower Tame Action Table

Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Pollution				
Generic				
Catchment-wide issue of phosphates from STW works and small private poorly maintained treatment works	Work with water company and property owners (for small sites) to increase investment in STW	Various	EA, STW	☆
Catchment-wide issue with diffuse water pollution from agriculture	Work with farmers to improve water and nutrient management on farms.	Various	EA, NE	
Specific research to show diffuse pollution from agriculture	Awareness campaign about risks to water quality from farming.	Various	EA, RT, WT	
Improvements to septic tanks - see work from Game Conservation Trust (?) Loddington	Investigate discharges, take action where necessary.	Loddington		
Restoration, Enhancement				
Generic				
Landscape-scale floodplain habitat enhancement via mineral extraction and restoration, re-instating river - floodplain connectivity through wetland and river channel restoration	Review all mineral restorations in area and identify opportunities for additional floodplain re-connection and biodiversity enhancement.	Various	LMPA, EA, Mineral Operator	☆
Focus on balance that will need to be struck on reconciling fish pass reel directive with localised needs for flood risk management (storage, flow slowing, wetlands, wet woodlands, soft engineering)				
River Mease SSSI and SAC	Implement River Mease Restoration Plan adopted 2012	Mease sub-catchment	ALL	
Physical Access				
Generic				
Existing footpaths that essentially nowhere could be better linked up to the catchment to increase access and awareness	Develop network of circular walks across catchment, to promote access	Various	LA, EA	
Development of circular walks including river stretches to support local economy e.g. pubs etc.	Promote series of river walks, and raise awareness using interpretation.	Various	LA, EA, RT	
Fencing of watercourse but still allow some access to graze cattle	Programme of buffer strip creation	Various	EA, NE, RT, WT	

Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Education, Awareness, Engagement				
Generic				
Encourage increased public "ownership" through education	Develop a 'Love Your River' campaign, promoting care, awareness and involvement with local rivers by communities.	Catchment wide	EA, WT, RT	
Change the view of rivers so they are not viewed as drainage challenges	Develop a 'love your river' campaign, promoting care, awareness and involvement with local rivers by communities.	Catchment wide	EA, WT, RT	
Celebrate how much better the Tame has got in the last 30-40 years and generate optimism for future improvements	Publicity campaign on improved water quality	Catchment wide	EA, WT, RT	
Work with landowners and farmers to show how they can help the environment	Awareness campaign about risks to water quality from farming.	Catchment wide	EA, WT, RT	☆
Balancing land uses - multi-functionality - understanding interactions between different land uses (seeing the bigger picture)	Develop a catchment strategic land use map	Catchment wide	EA, WT, RT	
Addressing mis-connections, improving access, reviewing, targeting action for improvement and integration	Promote a mis-connections campaign	Catchment wide	EA, WT, RT	
Sub-catchment basis - joint marketing of attractions to bring long stay visitors e.g. Drayton Manor and Middleton Hall	Develop an eco-tourism strategy to water based sites of interest.	Catchment-wide	EA, WT, RT	
Planning, Development, Enterprise				
Generic				
Upstream pressure from Birmingham & Black Country conurbation - Minworth 50% of flow in Tame at discharge	Support water quality improvements upstream in catchment			
HS2 - rivers and brooks threat or opportunity to corridors	Strategic approach to route, identifying risk and enhancement opportunities	HS2 corridor	EA, HA, LA, HS2	
Governance, Partnership				
Generic				
Educating people, raising awareness and aspirations, strategic thinking e.g. Central Rivers Initiative	Awareness raising project, through partnerships	Catchment-wide	All	
Joint working with other agencies to mutual benefit e.g. National Forest	Support partnership approach to achieve mutual objectives	Catchment-wide	All	

Theme / Issue / Opportunity		Action - what will happen	Location	Action Lead	Priority/Flagship
Pollution					
Map Ref.	**Individual**				
1	Mineral sites - diffuse pollution where pre-extraction buffer zones were established as advance restoration along river banks to reduce impact of intensive agriculture, before minerals extracted completely and replaced by wetland restoration	Review land use and management of restored mineral sites wrt water quality.	Dosthill, River Tame. Alrewas, River Trent.	Mineral Operator, EA	
8	Burntwood STW copper issue - trade discharges from abattoirs in Burntwood suspected	Investigate discharges, take action where necessary.	Burntwood STW	EA, STW	
10	Flooding stops STW working - pollution to footpaths	Investigate discharges, take action where necessary.	Shenstone STW	STW?	
16	Motorway run-off from M42	Improve or develop SUDS schemes and maintenance practises.	M42 corridor	HA, EA	
18	STW pollution	No details	South of Ravenstone	STW?	
20	Mineral sites - diffuse pollution where pre-extraction buffer zones were established as advance restoration along river banks to reduce impact of intensive agriculture, before minerals extracted completely and replaced by wetland restoration	Review land use and management of restored mineral sites wrt water quality.	Dosthill, River Tame. Alrewas, River Trent.	Mineral Operator, EA	
25	Sewage treatment works	Discharges?	Lindridge / Langley	STW?	
Physical Access					
Map Ref.	**Individual**				
2	Landscape-scale floodplain habitat enhancement	Via mineral extraction and restoration, re-instating river - floodplain connectivity through wetland and river channel restoration	Near Whitemoor Haye	EA	
3	Require Lafarge to re-profile river bank and connect wetland as part of restoration plan	Work with mineral operator to enhance river bank through restoration.	Whitemoor Haye (?)	LMPA, EA, Mineral Operator	
4	Quarry extensions - biodiversity and recreation opportunities	Review restoration for biodiversity and recreation benefits.	U/s Whitemoor Haye (?)	LMPA, EA, Mineral Operator	
9	Himalayan balsam	Undertake control programme.	Footherly Brook, Shenstone	EA, Volunteers	
11	Poor quality tributaries require focus	Work required to improve quality of tributaries	Black-Bourne Brook	EA	
12	Poor quality tributaries require focus	Work required to improve quality of tributaries	Black-Bourne Brook	EA	
13	Weirs, fish and canoe pass	Install fish and canoe pass	Ladybridge Weir, River Tame, central Tamworth	LA, EA, RT	
21	Landscape-scale floodplain habitat enhancement	Via mineral extraction and restoration, re-instating river - floodplain connectivity through wetland and river channel restoration	Dosthill	EA / Mineral Operator / LA	
22	Bund next to river cutting off floodplain	Move bund where appropriate to re-connect river to floodplain.	Mineral site d/s Cliff, River Tame	Mineral Operator, LPA, EA	
23	Weirs and silt under flood conditions	Undertake enhancement project	Lea Marston Lakes, near Kingsbury	EA	

Theme / Issue / Opportunity		Action - what will happen	Location	Action Lead	Priority/Flagship
Physical Access					
Map Ref.	**Individual**				
5	River severance makes cycle trips across catchment more difficult	Look at opportunities for circular cycle routes within catchment	Tamworth to Whittinton	LA, Sustrans	
6	negotiate and promote a canoe trail from Tamworth to Burton if possible with zoning of sensitive areas	Create canoe trail	River Tame and Trent between Tamworth and Burton		
7	Chasewater Reservoir - Balancing biodiversity and recreation	Develop management plan	Chasewater Reservoir	LA	
14	Two Gates Aqueduct - bank improvements to allow launching (canoes?)	Create canoe access	Two gates aqueduct, Tamworth	LA, CE, landowner	☆
17	Best place in Leics for water voles	Address issues of boating and river bank works	River Sence, Congerstone	EA / NGOs	
Education, Awareness, Engagement					
Map Ref.	**Individual**				
No issue or action					
Planning, Development, Enterprise					
Map Ref.	**Individual**				
19	River Sence sewage overflowing into river – likely to be worse with new housing developments but no improvements to sewage infrastructure	Work with LA to ensure flood risk measures incorporated into all developments.	Ibstock	EA, LA	
Governance, Partnership					
No issue or action					
N.B. No number 15 Action/joint leads: the agencies identified have clear statutory or ownership in relation to the action					

4.5 MIDDLE TAME – NORTH WARWICKSHIRE

4.5.1 Local Characterisation

a) The character of the Tame changes as it leaves Birmingham, flowing through increasingly agricultural land. The River Tame runs from Water Orton through Kingsbury and on to Tamworth. It is joined by the River Cole running from Birmingham through Coleshill and the River Blythe SSSI running from just the other side of Packington Park. There is a strong influence of riverine vegetation with lines of willow pollards and poplars defining the course of the rivers. The floodplain widens where the three rivers meet near Hams Hall, with a large number of pools, mostly the result of former sand and gravel extraction. There are historic mill and water works buildings, and modern small scale works and mineral extraction set against the open backdrop of the Hams Hall industrial estates and pylons. There is a strong influence of urban development, sand & gravel extraction & transport links, all of which are key influencers of the current state of the valley.

b) Mineral extraction has left derelict land and large extraction pits. Many of the sand and gravel extraction pits have filled with water and become nationally important wetland sites for birds and are key for other wildlife.

c) The extensive transport networks that cross the Tame Valley have resulted in a fragmented landscape, with many of the wetland areas isolated from one another. The industrial revolution saw great changes within the Tame Valley, with the expansion of the road network and improved turnpike roads, the building of the Coventry Canal and the Birmingham and Fazeley Canal, and the opening of the Birmingham and Derby Junction Railway, serving local industries and connecting them to the rest of Britain. Today the M42 and the M6 toll slice across the landscape, with the nearby huge modern distribution parks such as Hams Hall and Birch Coppice together with large industrial estates, for example at Coleshill.

d) There is some remnant common and heathland. The Enclosure Act of the 18th Century established the current pattern of blackthorn and hawthorn hedges. There is evidence of medieval Deer parks that once covered large areas.

e) Previous channelling of the River Tame, creation of the settlement lakes at Lea Marston through which the River Tame flows, and construction of engineered banks together with artificial concrete weirs have altered the natural flow of the river, reducing the natural shingle banks, impacting on fish refuges, and in some cases causing erosion of the banks due to the change in flow. Forty two per cent of the Tame river basin is urbanised, making it the most heavily urbanised river basin in the UK.

f) In many places the river has become disconnected from its natural floodplain, with attendant change in water levels in the surrounding areas. The River Tame is also affected by water abstraction, altering levels of flow, as well as diffuse pollution from a variety of sources.

g) Although there has been a gradual recovery of otter population over the last ten years, the numbers are still very low. The lack of vegetation buffers of suitable width and management along the river side, and the increase in road traffic and subsequent road kills at crossing points mean that there is significant downward pressure on the recovery.

h) Invasive species such as North American mink and Indian balsam displace and threaten to outcompete native species.

i) The human population of the Tame Valley is projected to increase, with a trend towards an ageing population living longer. This will increase issues of access to services and transport, as well as the need for both social and health care. Some communities within the rural part of the Tame Valley are within the top 10-30% most deprived areas for access to services.

j) The area also contains four Sites of Special Scientific Interest (SSSIs): Whitacre Heath, Middleton Pool, Kingsbury Wood and Kingsbury Brickworks. There are six Local Nature Reserves (LNR) (Dosthill Park, Hodge Lane, Kettlebrook, Tameside, Warwickshire Moor and Park Hall) and two proposed Local Nature Reserves (Kingsbury Meadows, and Cole End Park). In addition there are four Local Wildlife Sites / Nature Reserves (Middleton Lakes managed by the RSPB, Ladywalk Nature Reserve managed by West Midlands Bird Club, Lea Marston Lakes, and Kingsbury Meadows). Both Kingsbury Water Park and Shustoke Reservoir are designated Country Parks.

4.5.2 Local Objectives

a) To reconnect the river to parts of its floodplain, by naturalising the channel, river banks and removing or modifying barriers to allow species migration. We aim to create in-stream habitats and improve them by reinstating gravel riffles, creating braided channels and re-profiling river banks to create conditions suitable for sustainable fish populations and otter passes.

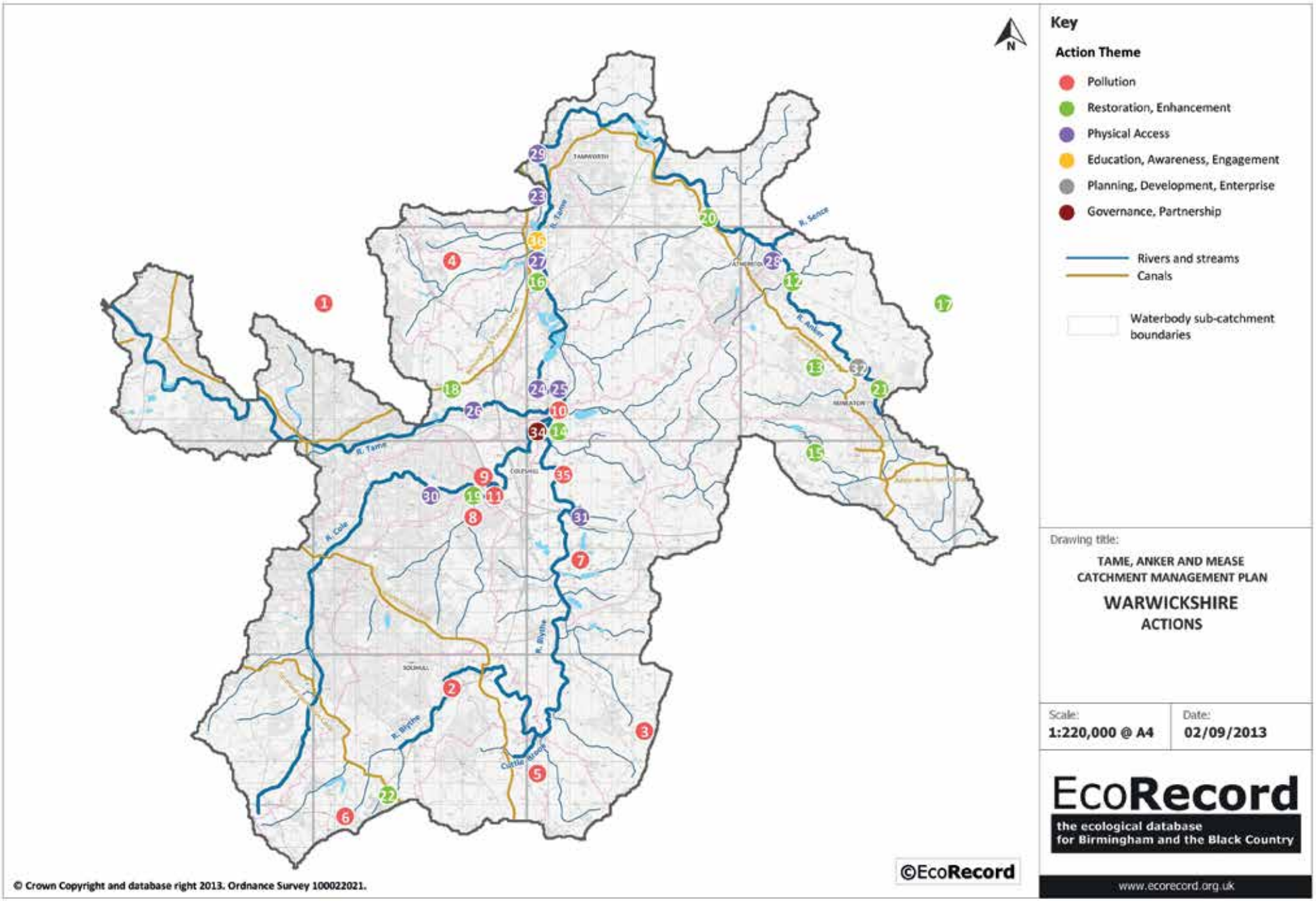
b) To restore priority areas including Kingsbury Water Park, Middleton Lakes and the Hams Hall site in Coleshill near to the confluence of the rivers Tame, Cole and Blythe SSSI.

c) To remove concrete river bank reinforcements where appropriate, reconnecting the river with its floodplain, enabling the creation of new wetlands and improving the wetland landscape and natural heritage.

d) To restore semi-natural habitats and to improve connectivity, to improve resilience to climate change.

e) To create new areas of buffer strips and habitat along the rivers and in the floodplain, to reduce sediment and chemical pollution run off into water bodies.

f) To develop a large-scale, long-term strategy and partnership of targeted control towards invasive non-native species on the Tame and (initially) its tributaries, working with landowners and the public.


Key
Action Theme
Pollution
Restoration, Enhancement
Physical Access
Education, Awareness, Engagement
Planning, Development, Enhancement
Governance, Partnership
Rivers and streams
Canals
Waterbody sub-catchment boundaries
Drawing title:
TAME, ANKER AND MEASE CATCHMENT MANAGEMENT PLAN
WARWICKSHIRE ACTIONS
Scale:
1:220,000 @ A4
Date:
02/09/2013
EcoRecord
the ecological database for Birmingham and the Black Country
www.ecorecord.org.uk
N
R. Tame
R. Cole
R. Blythe
R. Anker
R. Sence
Cuttle Brook
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Middle Tame Action Table

Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Pollution				
Generic				
All businesses sign up to clean water quality badge (e.g. food hygiene certificate)	All businesses sign up to clean water quality badge (e.g. food hygiene certificate)	Various	EA, STW	
Diffuse and point source pollution is a significant problem	Identify practical sites to retro-fit SuDS to create improvement	Various	EA, NE	☆
Litter pollution related to flooding	Identify the actions necessary to deal with litter pollution		EA, RT, WT	
Restoration, Enhancement				
Generic				
EA producing a priority map for West Midlands area called "Woodlands for Water" (Sam Todd)	Report to highlight where woodland can best contribute to help solve water quality and flow issues		EA, NGOs, LA	⚐
Establish buffer zones beside all rivers and tributaries 6 - 12m (10m for otters)	Examine feasibility of establishing and managing buffer zones		EA	☆
Relationship with Biodiversity Offsetting Pilot in Warks, Coventry and Solihull	Explore the potential for tying in the Biodiversity Offsetting Pilot into getting buy in from landowners to provide land for offsetting driven enhancements		EA	
Physical Access				
No generic actions				
Education, Awareness, Engagement				
No generic actions				
Planning, Development, Enterprise				
Generic				
Tie in with imminent GI Strategy for Warks, Coventry and Solihull (big emphasis on valuing ecosystem services				☆
HS2 (impact of potential enhancements)	Explore opportunities for creation, enhancement, restoration of water environment		HS2	

Theme / Issue / Opportunity	Action - what will happen	Location	Action Lead	Priority/Flagship
Governance, Partnership				
Generic				
Cross-border communication and co-operation			All	
EA grass cutting on river banks flood defence VS ecology	Review of EA/LA grass cutting procedures		EA, LA	
Over a number of years look at linking up and comparing work on different areas of a waterway for best practice and to ensure problems don't get pushed downstream or upstream	Linked up working between water bodies. Sharing good practice case studies and communicating successes			
Need for partnership working / community engagement to help address issues.			EA	
Action/joint leads: the agencies identified have clear statutory or ownership roles in relation to the action				

Theme / Issue / Opportunity		Action - what will happen	Location	Action Lead	Priority/Flagship
Pollution					
Map Ref.	**Individual**				
1	Urban diffuse pollution	Opportunity to use woodland creation as buffer to impede surface water run-off	Sutton Park	EA	
2	Impacts from leisure activities e.g. 5 golf courses near Solihull	Identify impacts, improvement & prevention	Solihull		
3	Agricultural diffuse pollution	Woodland creation as buffer to diffuse pollution, river bank stabilisation, and slowing surface run-off incidents	?	EA	
4	Diffuse pollution	Identify source, improvement	Langley Brook	EA	
5	Agricultural diffuse pollution	Identify source, improvement	Nr Chadwick End	EA, C&RT	
6	Small sewage works and agricultural diffuse pollution	Identify source, improvement	Terry's End nr M42	EA, STW	
7	Agricultural/ rural diffuse pollution	Use of Environmental Stewardship schemes to help address run-off	Packington Park	EA	
8	Fly-tipping and shopping trolleys in river	Clean up	R Cole, Chelmsley Wood	LA	
9	Shopping trolleys etc. preventing kingfishers from nesting -	Banks require management and commercial organisations need to take responsibility	R Cole, Chelmsley Wood	LA	
10	STW pumping station discharge	Identify problem, improvement	STW Minworth	STW	
11	Mis-connections residential and commercial	Education of tradesmen. MURCI waters?	River Cole	EA	
35	River Blythe SSSI issues	Ensure the necessary actions to deal with the issues are taken	River Blythe	EA	
Physical Access					
Map Ref.	**Individual**				
12	Old water/flood meadow in need of restoration + outfall needs addressing to River Anker from industrial estate	Restore flood meadow	Atherstone, near industrial estate	EA	
13	Hartshill Quarry Recent reptile surveys have revealed good populations	Improve connectivity of good habitat in this area	Hartshill	WT, EA	
14	Whitacre WTW, sand and gravel extraction	Control of water abstractions in this area	Blyth End		
15	White-clawed crayfish opportunities towards Nuneaton (tie in with SAC site)	Improve connectivity of good habitat in this area	Arbury/Nuneaton	WT, EA	
16	Wetlands of national importance for wildlife		Kingsbury Water Park		
17	Ashby Canal invasive species	Bank protection and towpath improvements	Ashby Canal	WT, LA, EA	
18	B'ham and Fazeley Canal canalised	Remove hard edges to improve for wildlife, deculverting	near Curdworth	EA, C&RT	
19	Meriden Park weir and water measuring station on Cole are barriers for wildlife movement up and down river	SuDS, redesigning weir for better wildlife mobility	Meriden Park	EA, LA	
20	River Anker mink populations	Control measures to encourage spread of water voles and to act as a future source of population expansion	Grendon area	WT, EA	

Theme / Issue / Opportunity		Action - what will happen	Location	Action Lead	Priority/Flagship
21	Remnant water vole population	Need mink control put in place	Nuneaton	WT, EA	
22	Long Marston area water vole population doing well near Stratford	Water vole habitat enhancements towards Earlswood end	Long Marston (out of tame area)	EA, C&RT	
Physical Access					
Map Ref.	**Individual**				
23	Tame Valley Way	Tame Valley Way footpath	Birmingham and Fazeley canal ?, near Drayton Manor	EA, LA	☆
24	Tame Valley Way	Tame Valley Way footpath	Hams Hall	EA / LA	☆
25	Shared river access Kingsbury downstream		Whitacre/Ladywalk		
26	River Tame Water Orton - Tamworth access issues	Tame Valley Way footpath	Water Orton	EA, LA	☆
27	Canoe trail Kingsbury - Burton	Canoe Hubs	Birmingham and Fazeley canal, near Middleton	C&RT	⚐
28	River Anker after Atherstone canoe access point	Bank alteration for better access	Atherstone	EA	
29	Two Gate Aqueduct canoe access bank alteration	Bank alteration for better access	near Bitterscote	EA	
30	Breakdown of canalised sections of river for better access for people and wildlife improvement	Deculverting, restoration of banks	Kitts Green	EA	
31	River Blythe agreement to canoe	Arrange stakeholder meeting	River Blythe	EA	
Education, Awareness, Engagement					
Map Ref.	**Individual**				
36	Middleton Lakes Nature Reserve	Restoring and managing the nature reserve to deliver multiple benefits	Middleton Lakes Nature Reserve	RSPB	⚐
Planning, Development, Enterprise					
Map Ref.	**Individual**				
32	River Anker near Nuneaton floodplain re-connection and housing development	SuDS	Judkins Quarry development	Developers, EA	
Governance, Partnership					
33	North Warks Council boundary by R. Anker	Opportunity for partnership working	Mancetter	All	
34	Cole End Park River Cole runs through park	Good opportunity to link Kingfisher Project, Whitacre Heath, Lea Marston, Kingsbury where work is taking place	Coleshill	Listed	

Action/joint leads: the agencies identified have clear statutory or ownership roles in relation to the action

5. Catchment Priorities And Flagship Actions

5.1 Catchment Priorities

Priorities for Sub-catchments	Upper Tame Black Country	Upper Tame Birmingham	Lower Tame Staffordshire	Middle Tame Warwickshire
Pollution	• Action to deal with point source and diffuse pollution	• Action to deal withcontaminated land. • Action to deal with mis-connections	• Action to deal with Catchment-wide issue of phosphates	• Identify diffuse and point source pollution
Restoration and enhancement	• Creation and restoration of habitats through NIA programme and other initiatives	• Creation and restoration of habitats through NIA programme and other initiatives • Green Infrastructure projects	• Post-mineral extraction, management of restored mineral sites	• Establish buffer zones alongside watercourses
Physical access	• Green infrastructure projects to create accessible waterways	• Create and enhance access for walkable waterways and links	• Two Gate aqueduct to create canoe access, no other priorities indicated	• Establish Tame Valley Way
Education, awareness and engagement	• Misconnections - engagement with property owners and others	• Stimulate, encourage and support Friends of groups and businesses	• Working with landowners and farmers to help the environment	• No priorities indicated
Planning, development and enterprise	• Use planning system to maximise potential benefits for the water environment	• Use planning system to maximise potential benefits for the water environment	• No priorities indicated	• Ensure implementation and links to GI strategy for Warwickshire/ Coventry/Solihull

5.2 Overall Catchment Priority

Governance and partnership	**OVERALL PRIORITY:** PARTNERSHIP WORKING AND COLLABORATION BY STAKEHOLDERS BEYOND BOUNDARIES

5.3 Catchment Flagship Projects

Flagship Projects for Catchment	
Current	• Birmingham & Black Country Nature Improvement Area
	• Tame Valley Wetlands Partnership
	• Middleton Lakes (RSPB)
Planned/Future	• South Birmingham Waterways Project
	• Sandwell Valley Tame Demonstration Project
	• Tame Canoe Trail
	• West Midlands Woodlands for Water Project

6. CONCLUSION – CALL TO ACTION

The Tame, Anker and Mease Catchment was chosen as one of the second phase of Catchment-based initiatives by DEFRA in extending the collaborative approach as one of those to be hosted by organisations outside of the Environment Agency. The Wildlife Trust for Birmingham and the Black Country was selected to host the pilot for the catchment. Pilot hosts were chosen for their variety so that new ways of working could be applied to a range of local circumstances to seek new and effective ways to protect and improve the water environment.

The Tame and its headwaters rise within one of the country's largest conurbations. This has a profound impact and influence on the landscape and waters downstream. Yet the catchment also has rivers of exceptional quality. The catchment is extraordinarily diverse, from Birmingham and the Black Country to rural Leicestershire, East Staffordshire and North Warwickshire. River quality varies from the good (River Mease SSSI and SAC and River Blythe SSSI) to the bad (River Rea). Nearly two million people live and work in the catchment and Minworth WTW is the biggest sewage treatment works in Europe. Diffuse pollution is a challenge in both the urban and rural areas, though the causes and remedies are very different.

This plan captures the actions that pilot collaborators and catchment stakeholders have identified over the last 12 months to benefit the catchment. Some actions are being delivered as the catchment plan process moves forward, more rely on securing funding, whilst others will be taken on by collaborators and stakeholders as worthy of support.

But none of us can do this on our own. The best way to implement the projects, meet our objectives and achieve the Vision is through collaboration and co-operation between all those with an interest in the well-being of the water environment in the catchment. In particular, the key organisations set out below;

- the Environment Agency in adopting the plan as a contribution to River Basin Management Planning activities and in targeting resources to achieve some of the actions
- local authorities throughout the catchment in using the plan to inform their strategies, plans, policies and delivery across all sectors
- OFWAT as the water regulator in accepting the plan as evidence that outcomes and opportunities to benefit the water environment in a broad sense are relevant and desirable
- Severn Trent Water, as the local water company, whose investment and other support, can help to achieve the objectives and deliver actions set out in the plan
- the Birmingham and Black Country Nature Improvement Area Partnership and Board whose objectives, themes and priorities align with the plan to support mutually beneficial projects
- mineral operators in the Tame Valley who can assist with practical actions
- nature conservation organisations and projects such as the Birmingham & Black Country Wildlife Trust, Staffordshire Wildlife Trust, Warwickshire Wildlife Trust, the Canal & River Trust, the Trent Rivers Trust and Central Rivers Initiative, all of whom have a range of skills, expertise and knowledge, combined with an array of local community groups working on projects on the ground

The baton for hosting the Catchment has now passed to Severn Trent Water. Three co-hosts and local leads for the Catchment are:

Wildlife Trust for Birmingham and the Black Country – Upper Tame

Warwickshire Wildlife Trust – Middle Tame

Trent Rivers Trust – Lower Tame

As initial Pilot Host for the Tame, Anker and Mease Catchment, we commend this Catchment Management Plan, and its Vision, Objectives, Actions and Priorities, to the range of sectors, partnerships, organisations and interested parties and to commit to work together to realise an improved water environment for the benefit of the economy, the health and well-being of its people, and the natural environment.

The Wildlife Trust for Birmingham and the Black Country
December 2013

7. Case Studies

7.1 Midlands Architecture and the Designed Environment

TAMED

Who: MADE and the Environment Agency

What: Arts based project focusing on The River Tame and its flood defences.

Where: Witton area of the River Tame

When: Summer 2013-Summer 2014

Contact: sally@made.org.uk 0121 3487980

'Tamed' is a G4A funded project involving three artists residencies working with communities, engineers and landscape architects as new flood defences and a pedestrian/cycle way are created along the River Tame in Birmingham by the Environment Agency. Artistic exploration of how the Tame has been 'tamed', from Roman times through the industrial revolution to the current planned flood defence will enable creative links to be made between the history of the place, the experience of the community and the purpose of the planned works, aiming to transform the environment and local people's experience of it.

7.2 Freshwater Invertebrate Network

Who: Freshwater invertebrate network (FIN)

What: Biological monitoring programme, carried out by local (trained) volunteers

Where: Black Country and Birmingham area

When: 2012 onwards

Contact: Andy Slater – EcoRecord, the Biological Record Centre for Birmingham and the Black Country

The freshwater invertebrate network is a partnership project between EcoRecord, the biological record centre for Birmingham and the Black Country, The Wildlife Trust for Birmingham and the Black Country and the Environment agency which aims to establish a biological monitoring programme carried out by local volunteers. The health of water bodies across targeted areas of the Black Country and Birmingham will be monitored by volunteers who are trained to survey and identify the freshwater animals that live in the water bodies. Freshwater animals can be good indicators of water quality and therefore through identifying the invertebrates present, the health and status of the water can be determined.

7.3 Recognising the Economic Impacts of Restored Gravel Sites – Central Rivers Initiative

Who: Central Rivers Initiative

What: 'From gravel to great days out'

Where: Along the river valley between Burton, Lichfield and Tamworth

When: 2013

The Central Rivers Initiative is a partnership working towards shaping and revitalising the River Valley between Burton, Tamworth and Lichfield. The areas along the river have been transformed to create a landscape to be enjoyed by all with an emphasis on attracting wildlife as well as a thriving, sustainable, economy. A significant part of this partnership has focused on recognising the economic impacts of the restored gravel sites along the river valley. Five sites in particular, including the Barton marina and Whitemoor Lakes, have generated a total of £14 million in tourist spending, £1.6 million gross value added (GVA) for the local economy and approximately 380 full time jobs in the area demonstrating just how successful restoring the gravel sites along the River Valley has been.

7.4 Tame Valley Wetlands Landscape Partnership

Who: Tame Valley Wetlands Landscape Partnership.

What: A large-scale scheme to create and restore a wetland landscape, working with local communities, landowners and organisations.

Where: Tame Valley in North Warwickshire and south-east Staffordshire.

When: 2005 onwards (the Landscape Partnership Scheme funded by HLF started in 2013 and will continue until 2018).

The Tame Valley Wetlands Landscape Partnership is a large, landscape scale scheme led by the Warwickshire Wildlife Trust with support from 12 active organisations. The Partnership Board consists of the Canal & River Trust, Environment Agency, North Warwickshire Borough Council, RSPB, Staffordshire Wildlife Trust and Warwickshire County Council. The vision of the Partnership is 'to create a wetland landscape, rich in wildlife and accessible to all'. In 2013, funding from the Heritage Lottery Fund and partner organisations has enabled the development of a Landscape Partnership Scheme, which will be delivered between 2014 and 2018. Covering a 95 km^2 area along the Tame Valley, the Partnership will work with local communities to restore the landscape and the built and natural heritage features within it, whilst enhancing its importance for wildlife and people. With the four principal aims of conserving built and natural heritage features, increasing community participation, improving access routes, and providing training opportunities for local people, projects will be delivered that will promote, enhance and conserve the Tame Valley as an important wildlife corridor and an invaluable area for society.

8. Key Links / Funders / Contacts

Angling Trust
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Black Country Geological Society
http://www.bcgs.info/

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Birmingham Open Spaces Forum
http://bosf.org.uk/birmingham-open-spaces-forum/

Black Country Consortium
http://www.the-blackcountry.com/

Black Environment Network
http://www.ben-network.org.uk/index.asp

Campaign for the Protection of Rural England
http://www.cpre.org.uk/

Canal and River Trust
http://canalrivertrust.org.uk/

Castle Vale Community Environmental Trust
http://www.environmentaltrust.org.uk/

Coleshill and District Civic Society
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Consultancy for Environmental Economics and Policy
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Leicestershire Wildlife Trust
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North West Leicestershire District Council
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Staffordshire Ecological Record
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Keith Boyle, Environment Agency

Helen Bovey, Icarus

Ruth Needham, Trent Rivers Trust

Gina Rowe, Matt Cox and **Tim Hasleden,** Warwickshire Wildlife Trust

Sara Carvalho and **Andy Slater,** EcoRecord, the Ecological Database for the Black Country & Birmingham

Kathryn Hamilton, The Wildlife Trust for Birmingham and the Black Country

Appendices

Fig. 1 Humber River Basin

Fig. 2 Catchment river system

Fig. 3 Catchment canal system

Fig. 4 Local Authority Boundaries

Fig. 5 Tame - Birmingham

Fig. 6 Tame – Black Country

Fig. 7 Lower Tame – East Staffordshire and West Leicestershire

Fig. 8 Lower Tame – North Warwickshire

Water Environment Attitude Survey

Fig. 1 Humber River Basin

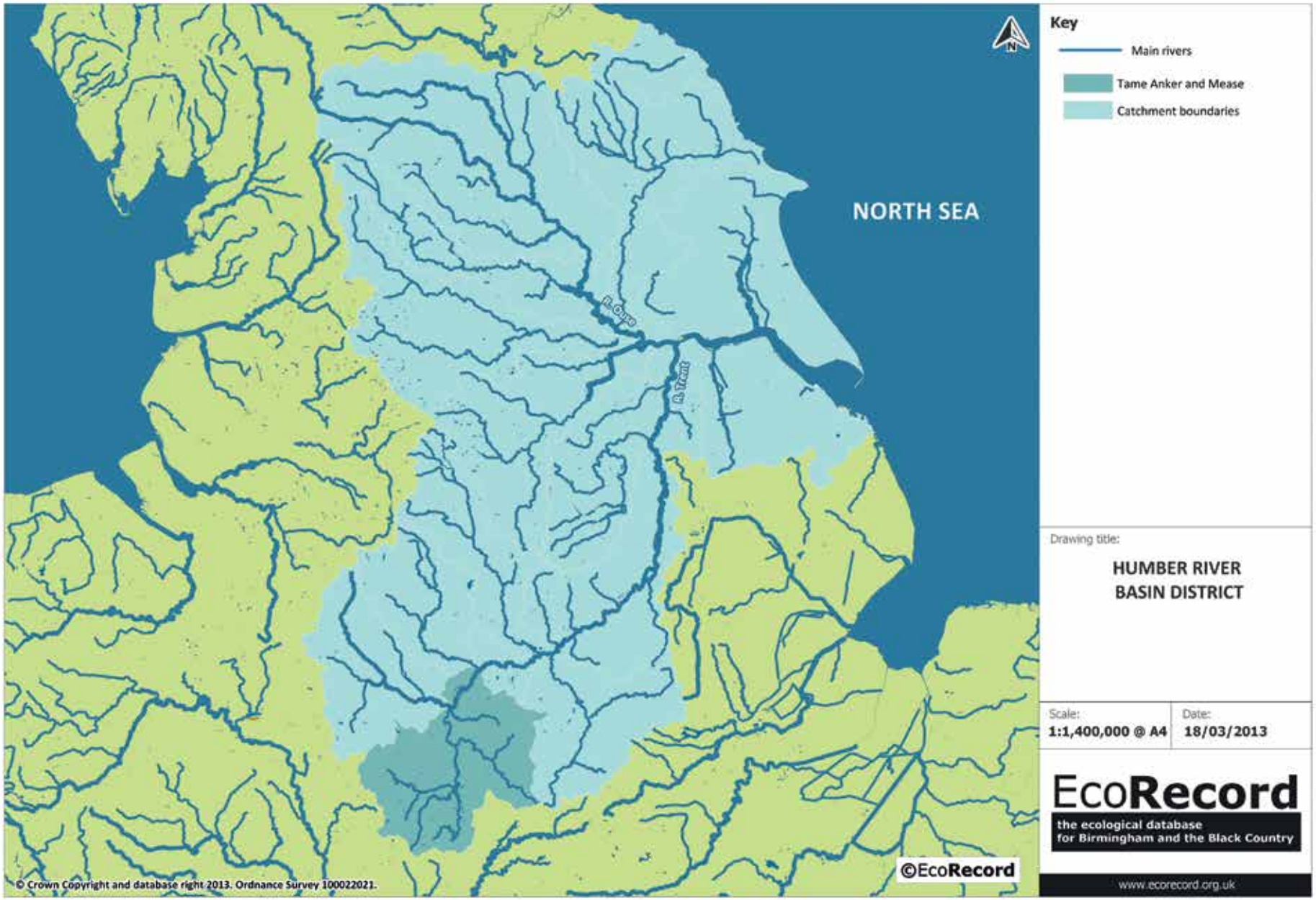


Fig. 2 Catchment river system

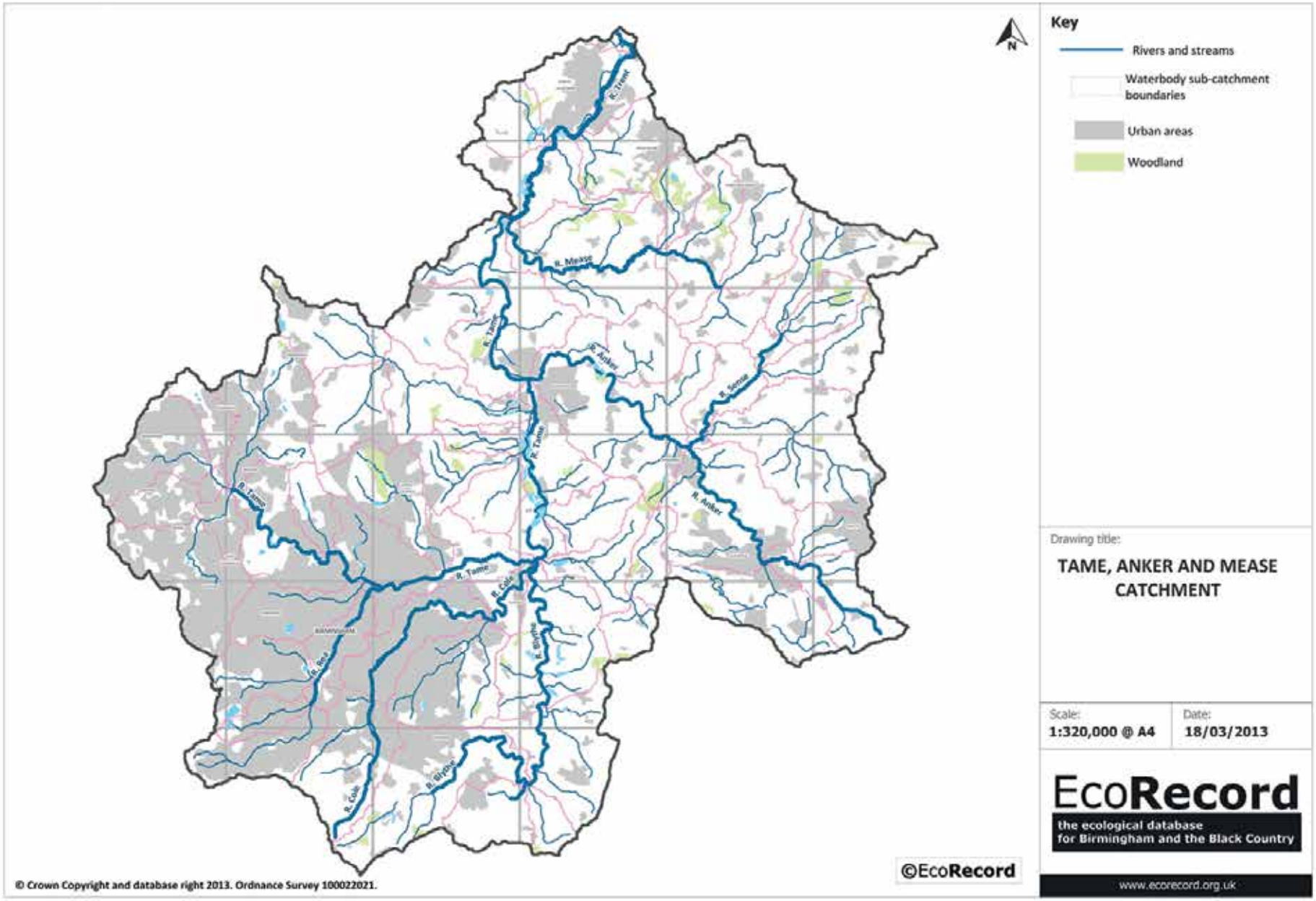


Fig. 3 Catchment canal system

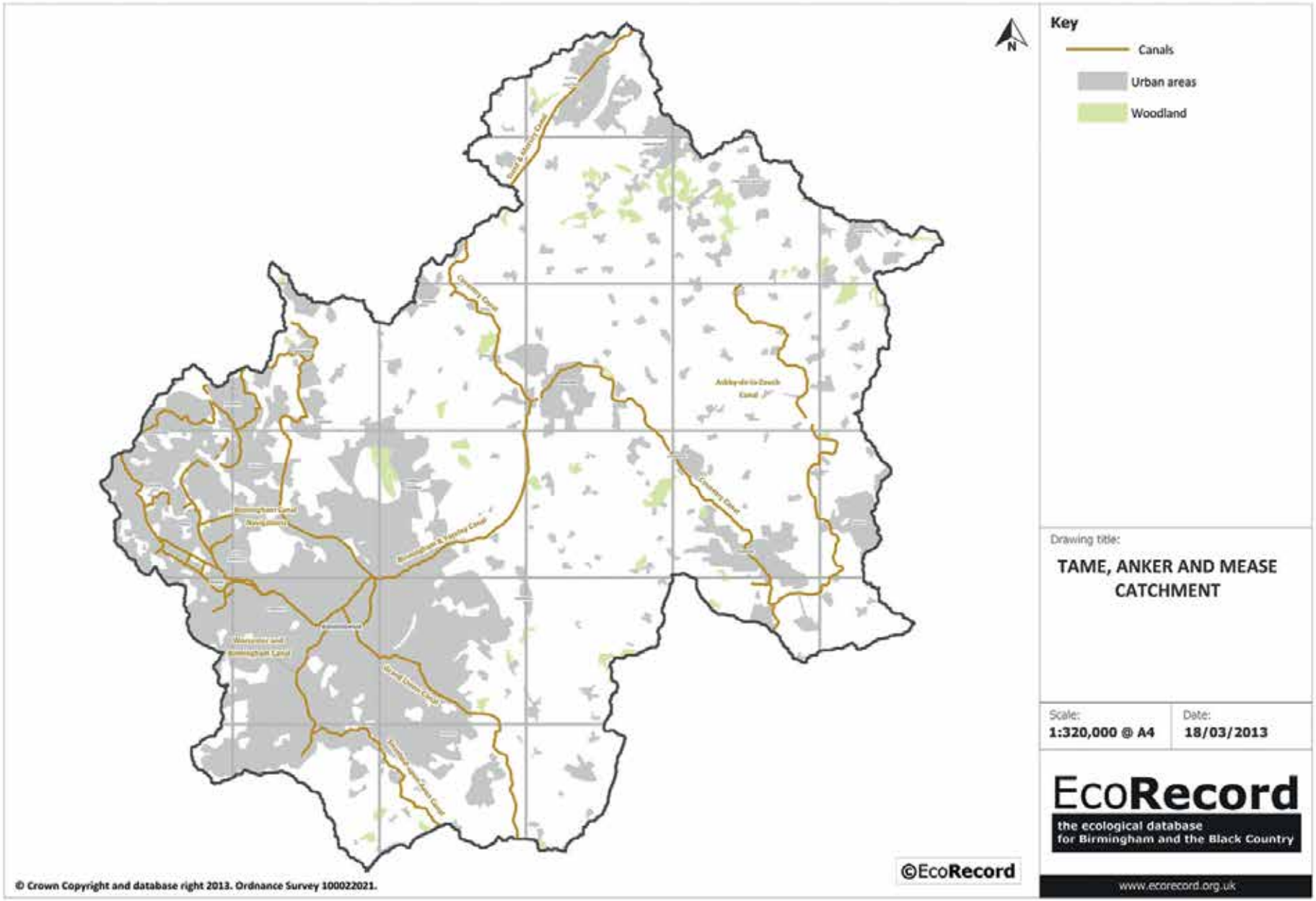


Fig. 4 Local Authority Boundaries

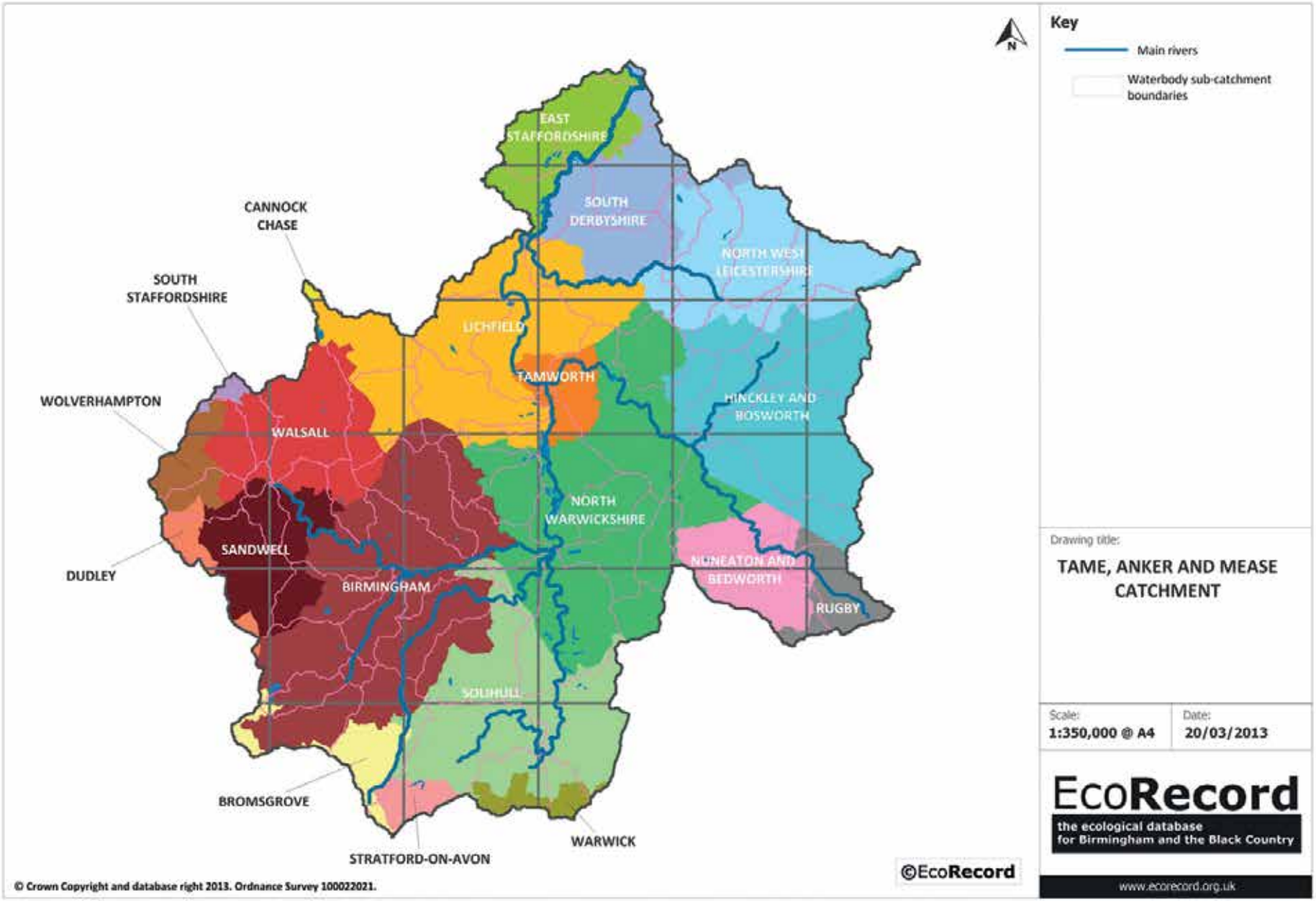


Fig. 5 Tame - Birmingham

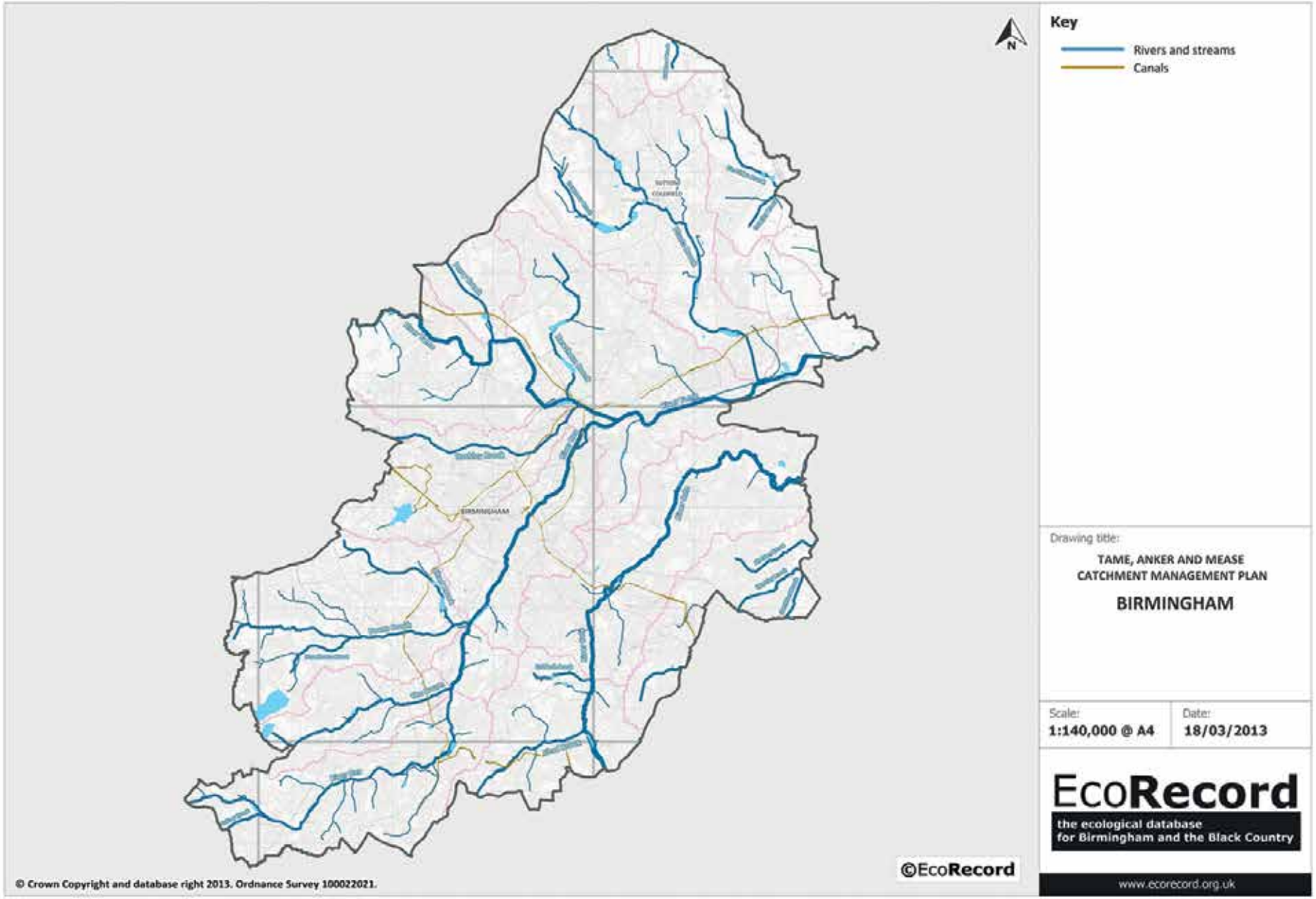


Fig. 6 Tame – Black Country

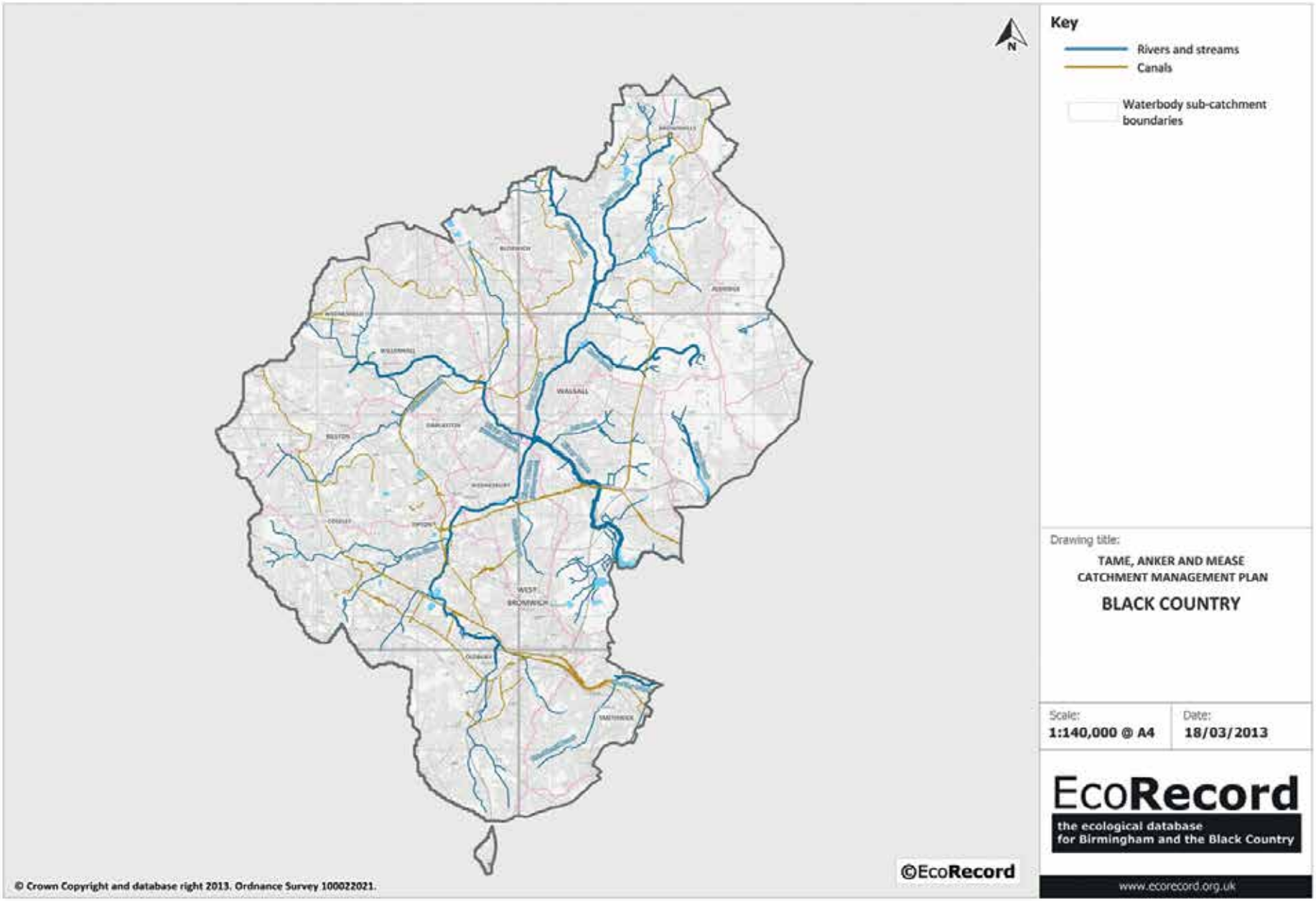


Fig. 7 Lower Tame – East Staffordshire and West Leicestershire

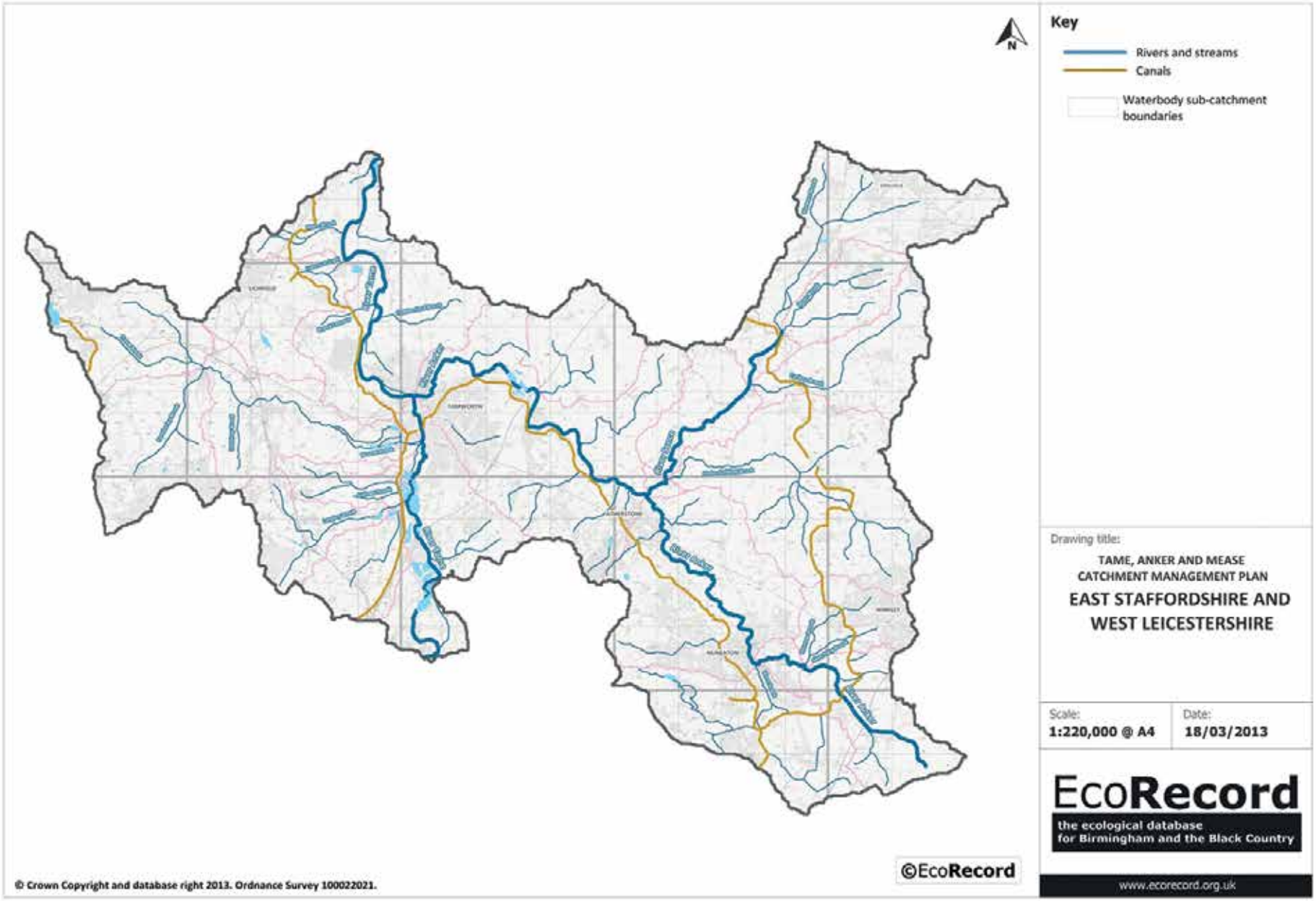
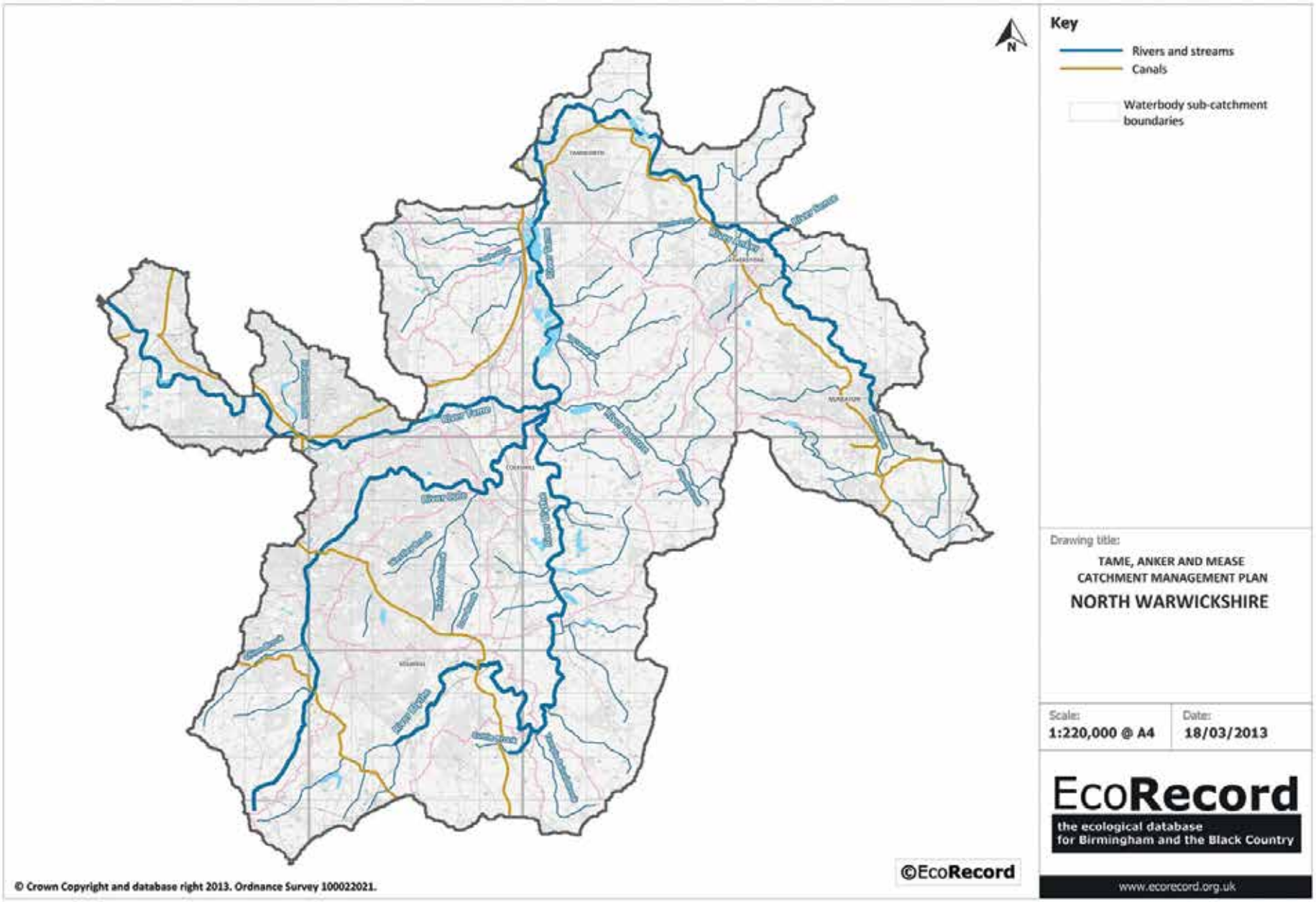


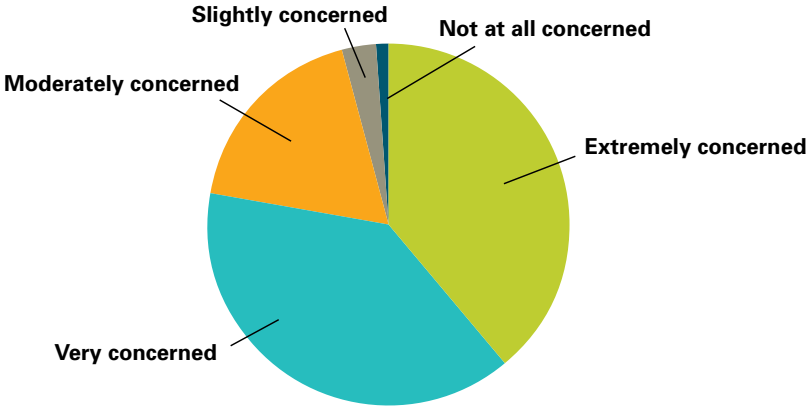
Fig. 8 Lower Tame – North Warwickshire



Water Environment Attitude Survey

Q1 How concerned are you about the quality of your local water environment

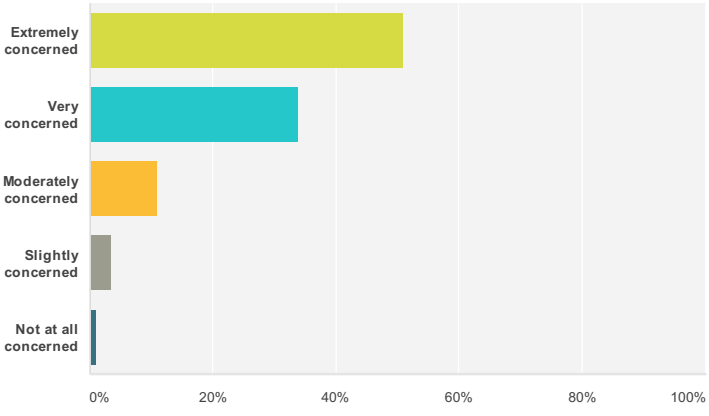
Answered: 175 Skipped: 0



Answer Choices	Responses	
Extremely concerned	41.14%	72
Very concerned	37.14%	65
Moderately concerned	17.71%	31
Slightly concerned	2.86%	5
Not at all concerned	1.14%	2
Total		175

Q2 How concerned are you about water pollution?

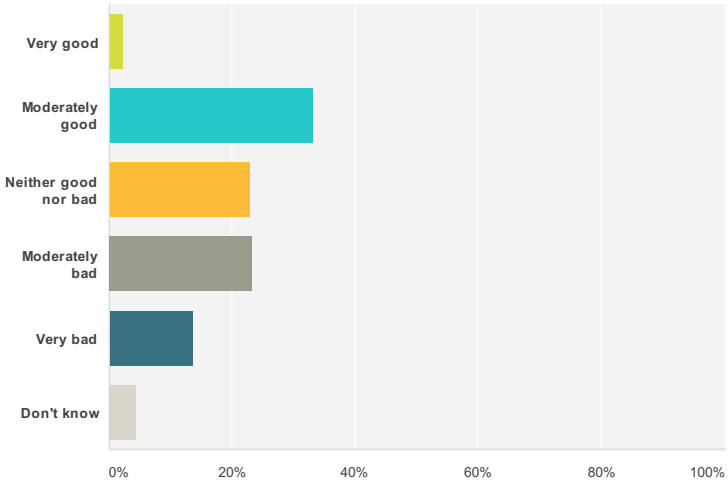
Answered: 175 Skipped: 0



Answer Choices	Responses	
Extremely concerned	50.86%	89
Very concerned	33.71%	59
Moderately concerned	10.86%	19
Slightly concerned	3.43%	6
Not at all concerned	1.14%	2
Total		175

Q3 The Water Framework Directive aims to improve the 'ecological condition' of waterbodies across this area. This is a measure of both the water quality and how good the rivers and canals are for wildlife. How would you assess the ecological condition of your local waterbodies?

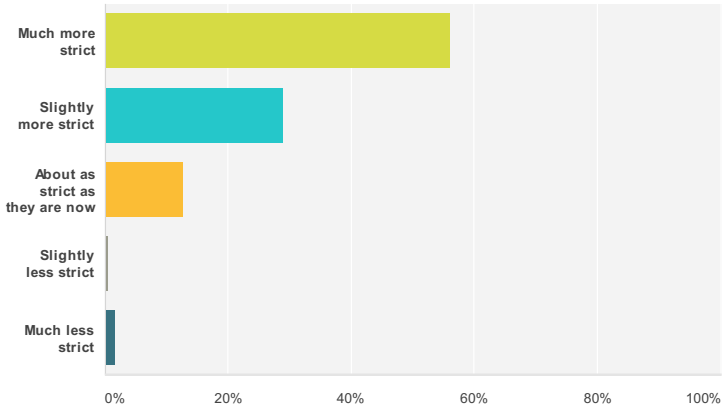
Answered: 175 Skipped: 0



Answer Choices	Responses	
Very good	2.29%	4
Moderately good	33.14%	58
Neither good nor bad	22.86%	40
Moderately bad	23.43%	41
Very bad	13.71%	24
Don't know	4.57%	8
Total		175

Q4 Should the regulations to control water pollution be more strict, less strict, or about as strict as they are now?

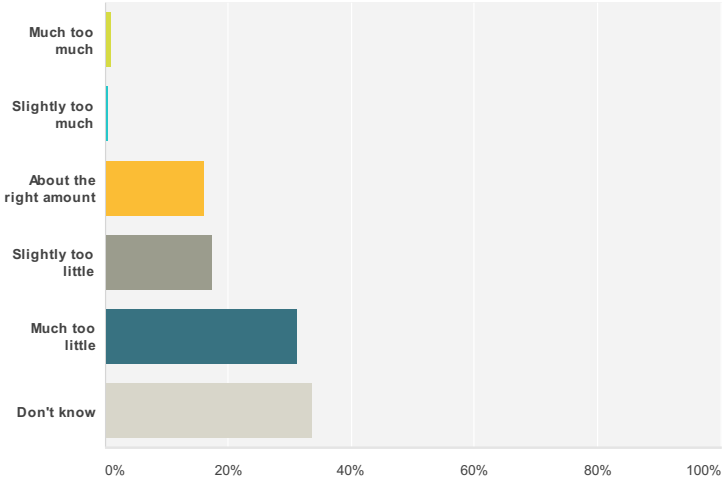
Answered: 173 Skipped: 2



Answer Choices	Responses	
Much more strict	56.07%	97
Slightly more strict	28.90%	50
About as strict as they are now	12.72%	22
Slightly less strict	0.58%	1
Much less strict	1.73%	3
Total		173

Q5 Is the Environment Agency spending too much money trying to improve the water environment, too little money, or about the right amount of money?

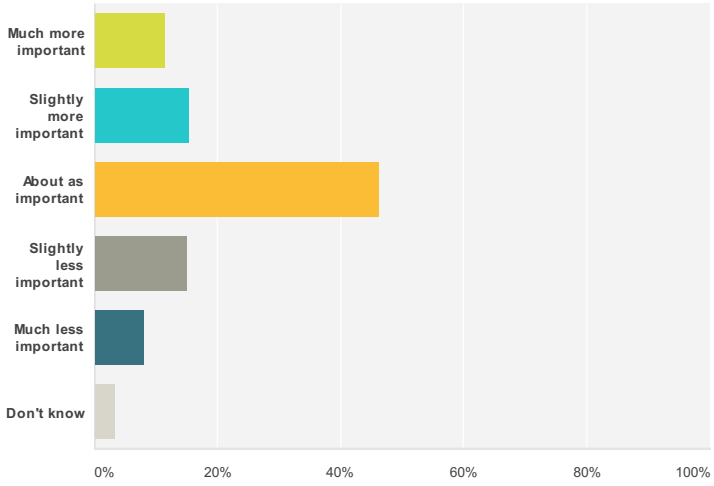
Answered: 173 Skipped: 2



Answer Choices	Responses	
Much too much	1.16%	2
Slightly too much	0.58%	1
About the right amount	16.18%	28
Slightly too little	17.34%	30
Much too little	31.21%	54
Don't know	33.53%	58
Total		173

Q6 Is improving the local water environment more important than improving the local economy, or about as important as improving the local economy?

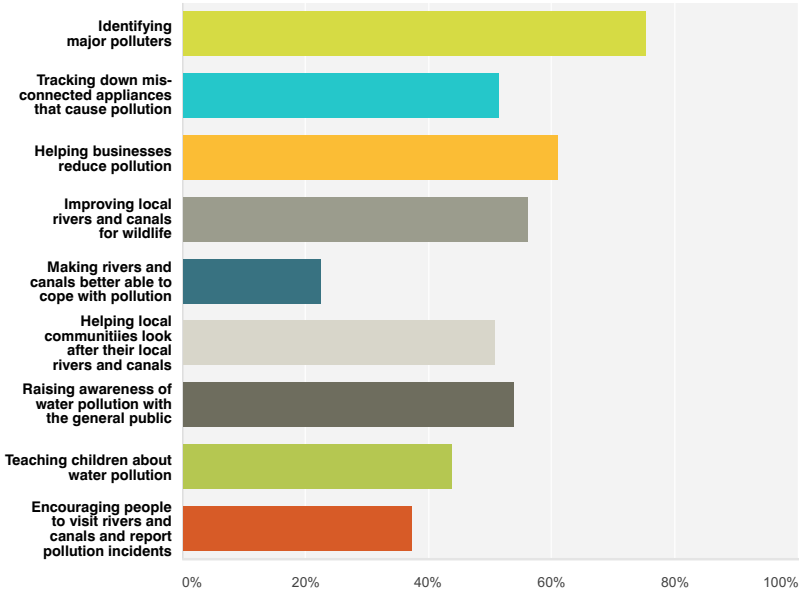
Answered: 173 Skipped: 2



Answer Choices	Responses	
Much more important	11.56%	20
Slightly more important	15.61%	27
About as important	46.24%	80
Slightly less important	15.03%	26
Much less important	8.09%	14
Don't know	3.47%	6
Total		173

Q7 Which of the following actions to improve the water environment will be the most important in the next few years?

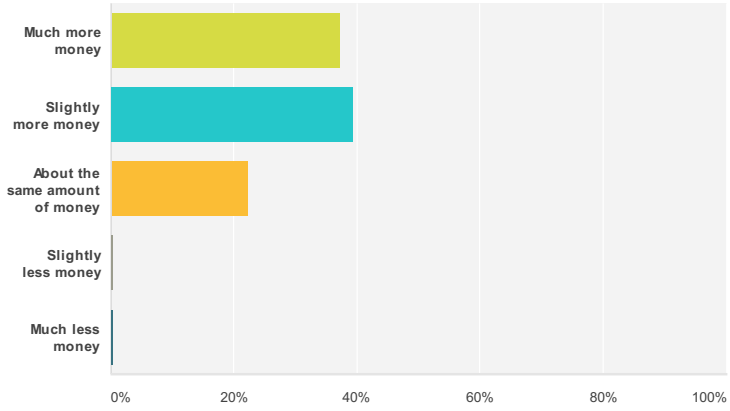
Answered: 169 Skipped: 6



Answer Choices	Responses	
Identifying major polluters.	75.15%	127
Tracking down mis-connected appliances that cause pollution.	51.48%	87
Helping businesses reduce pollution.	60.95%	103
Improving local rivers and canals for wildlife.	56.21%	95
Making rivers and canals better able to cope with pollution.	22.49%	38
Helping local communitiies look after their local rivers and canals.	50.89%	86
Raising awareness of water pollution with the general public.	53.85%	91
Teaching children about water pollution.	43.79%	74
Encouraging people to visit rivers and canals and report pollution incidents.	37.28%	63
Total Respondents: 169		

Q8 Should the government spend more money to improve the water environment, less money to improve the water environment, or about the same amount of money to improve the water environment?

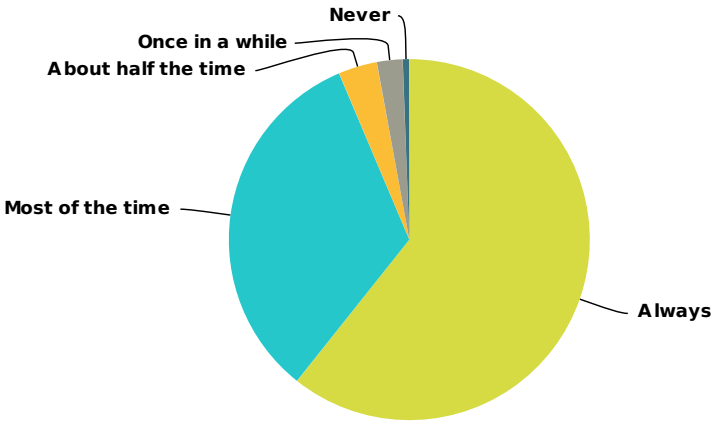
Answered: 175 Skipped: 0



Answer Choices	Responses	
Much more money	37.14%	65
Slightly more money	39.43%	69
About the same amount of money	22.29%	39
Slightly less money	0.57%	1
Much less money	0.57%	1
Total		175

Q9 How often do you recycle?

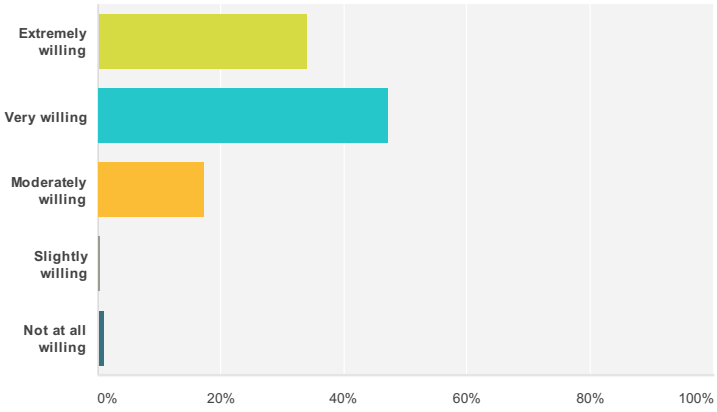
Answered: 173 Skipped: 2



Answer Choices	Responses	
Always	60.69%	105
Most of the time	32.95%	57
About half the time	3.47%	6
Once in a while	2.31%	4
Never	0.58%	1
Total		173

Q10 How willing are you to change your lifestyle to reduce the damage you cause to the water environment?

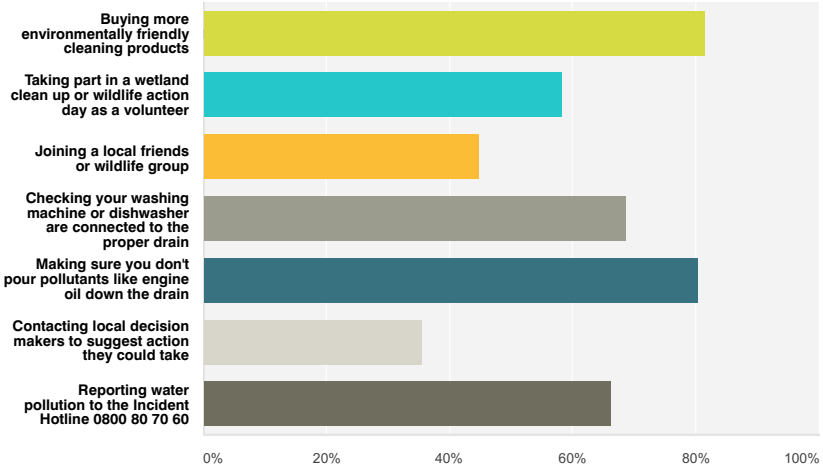
Answered: 174 Skipped: 1



Answer Choices	Responses	
Extremely willing	33.91%	59
Very willing	47.13%	82
Moderately willing	17.24%	30
Slightly willing	0.57%	1
Not at all willing	1.15%	2
Total		174

Q11 What sort of actions would you consider taking to protect your local water environment?

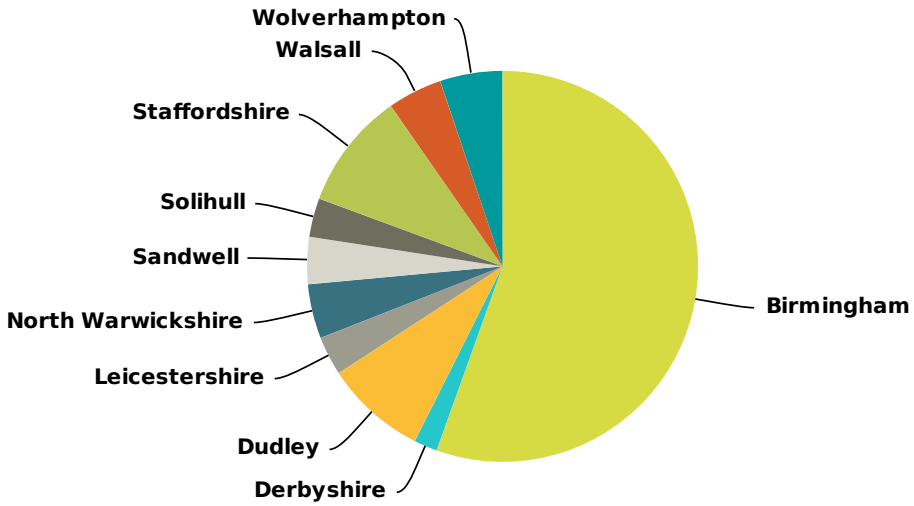
Answered: 172 Skipped: 3



Answer Choices	Responses	
Buying more environmentally friendly cleaning products.	81.40%	140
Taking part in a wetland clean up or wildlife action day as a volunteer.	58.14%	100
Joining a local friends or wildlife group.	44.77%	77
Checking your washing machine or dishwasher are connected to the proper drain.	68.60%	118
Making sure you don't pour pollutants like engine oil down the drain.	80.23%	138
Contacting local decision makers to suggest action they could take.	35.47%	61
Reporting water pollution to the Incident Hotline 0800 80 70 60.	66.28%	114
Total Respondents: 172		

Q12 What sort of actions would you consider taking to protect your local water environment?

Answered: 155 Skipped: 20



Answer Choices	Responses	
Birmingham	**55.48%**	86
Derbyshire	**1.94%**	3
Dudley	**8.39%**	13
Leicestershire	**3.23%**	5
North Warwickshire	**4.52%**	7
Sandwell	**3.87%**	6
Solihull	**3.23%**	5
Staffordshire	**9.68%**	15
Walsall	**4.52%**	7
Wolverhampton	**5.16%**	8
Total		155

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Birmingham & Black Country

Lead Partner
Birmingham & Black Country Nature Improvement Area

Warwickshire

Merged with the OnTrent Partnership