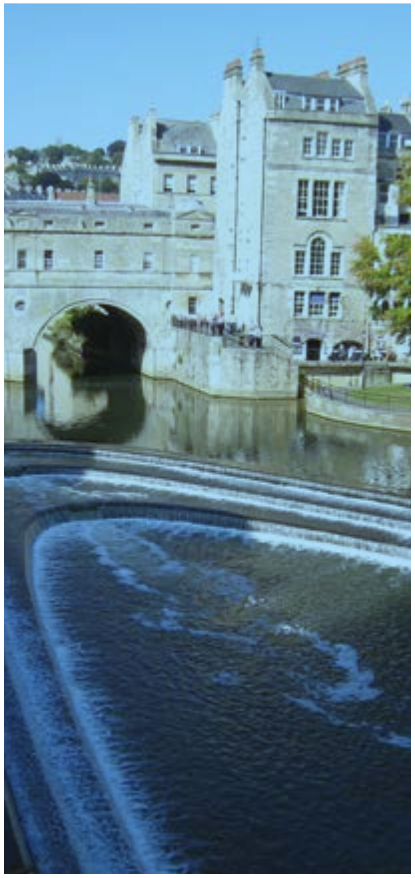
WaterSpace

WATERSPACE STUDY

SEPTEMBER 2017



DUNDAS BATH HANHAM
WaterSpace
REVITALISING OUR WATERWAYS

This Study has been prepared by the WaterSpace Partnership

Bath & North East Somerset Council

Wessex Water
a YTL company

Environment Agency

Canal & River Trust

For more information on the *WaterSpace Study* please contact the Environment & Design team at environment&design@bathnes.gov.uk

This document can also be viewed on our website www.waterspacebath.org.uk. *WaterSpace Study* can be made available in a range of languages, large print, Braille, on tape, electronic and accessible formats by contacting the Council on:

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Design by SteersMcgillanEves
www.steersmcgillaneves.co.uk

This Study has been produced by Bath & North East Somerset Council's Environment & Design Team working together with Atkins.

Environment and Design

ATKINS

This project has been recognised for its contribution to planning for the Natural Environment:

RTPI SOUTH WEST AWARDS FOR PLANNING EXCELLENCE WINNER 2017

RTPI AWARDS FOR PLANNING EXCELLENCE FINALIST 2017

THANK YOU

The Study partners would like to thank all those who have taken part in the preparation of this Study over the last two years, including: the Strategic River Group, the WaterSpace Partnership Steering Group, the River Avon Consultative Committee, the River Safety Group, and outreach officers from charity Julian House.

Thanks to all of those who have engaged with the project, attending and running waterways related events, putting forward project ideas, providing photos and reviewing drafts.

We look forward to working with partners and local people to deliver and develop further the aspirations in this study.

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FOREWORDS

BATH & NORTH EAST SOMERSET COUNCIL

The waterways of Bath and North East Somerset are a fantastic natural and economic asset. They have been shaped by people over generations, with interventions including the creation of the Kennet & Avon Canal over 200 years ago, the installation of flood defences in the 1970s and more recently in the creation of new public parks in Bath, at Quays Waterside and Bath Riverside.

Historically the River Avon has been integral to the growth of the World Heritage City of Bath, facilitating trade and development. In modern times, both the Kennet & Avon Canal and the River Avon offer opportunities for recreation, leisure, sport, angling and boating, and urban regeneration.

The WaterSpace project was identified as a priority in the Council's Green Infrastructure Strategy – the waterways provide green routes, green spaces and water bodies for people to safely enjoy. In addition, the river and canal corridors are designated as protected sites of nature conservation interest. They bring wildlife into the heart of Bath, and allow people to access the countryside on their doorstep. The waterways and the green routes that follow them provide a lifeline for a range of wildlife – including rare and protected species.

The River Avon corridor is undergoing significant redevelopment of brownfield sites, and is the focus for major new development in Bath – the Bath Enterprise Zone, is a 98ha riverside development area which will see the delivery of 9,000 new jobs and 3,400 new homes over the next 20 years. Development within this Enterprise Zone, has the potential to increase the value of the Bath Economy by £620 million per annum. Regeneration is being delivered via the allocation of river corridor sites in the B&NES Local Plan and can be seen with on-site delivery on key riverside development projects such as Bath Riverside and Bath Quays.

We are delighted to have the opportunity to work with our partners to develop this Study. Its completion will help us to identify specific priority projects, develop funding bids and realise opportunities for the Partnership to continue working together to deliver our shared vision to revitalise our waterways.

Louise Fradd
Strategic Director – Place

Bath & North East Somerset Council

CANAL & RIVER TRUST

Compared to the Roman baths in this historic city, the Kennet & Avon Canal is a relative newcomer at just 200 years old. However, it's a perfect complement to Bath's Georgian architecture, leading you through the city and out towards the Wiltshire Downs.

This canal is one of the nation's most loved waterways. From Hanham to Reading, the 87-mile-long green corridor cuts a path through some of the most spectacular scenery in the south-west and links Bristol and the Channel. Like many other inland waterways, it has defied the decline of previous uses, but bounced back with a new vitality to serve future generations.

This beautiful waterway is an escape for locals and visitors from further afield, whether on foot, by boat or on two wheels. The canal in Bath is dotted with destinations perfect for family days out including the Dundas and Avoncliff Aqueducts, Claverton Pumping Station, the deepest lock on the waterways, in Bath itself, and with the iconic Caen Hill flight of locks just 15 miles away. It is also home to 21 conservation sites, 14 Sites of Special Scientific Interest, a world heritage site and a historic battlefield.

The waterways in our care are a fantastic opportunity for people and communities to discover heritage and wildlife or just take a few moments to slow down. They also provide a boost to local economic activity and tourism.

As a partner and contributor to the Bath Waterspace Study, Canal & River Trust is proud to care for the city's historic waterways and ensure they continue to transform places and enrich lives.

Richard Parry
Chief Executive
Canal & River Trust

Canal & River Trust

FOREWORDS

ENVIRONMENT AGENCY

The WaterSpace Study covers 16 miles of the River Avon and Kennet & Avon Canal, starting in Dundas, passing through the world heritage city of Bath and finishing in Hanham. Tackling issues around water quality, river and canal access, flood risk and wildlife habitat is important to many individuals and organisations in the study area. A vibrant, healthy river and canal environment is an increasingly important asset, delivering economic growth, helping to revitalise our waterways and contributing to our health and well-being. It supports recreation, tourism, agriculture and dependent industries. Working in partnership to achieve this is vital to our success.

A joined up approach to understanding these waterways will result in multiple benefits. It will help us become more resilient in respect of flood risk, help us adapt to climate change and will play an important role in enhancing this part of the catchment for future generations. It will link with important planning for the area through the Joint Spatial Plan for the West of England and the Bath and North East Somerset Local Plan.

The Environment Agency is keen to work with partners and local communities to deliver the objectives of this study; listening to ideas, agreeing priorities, and most importantly addressing the issues identified. We want to take part in a co-ordinated approach, making the most of the river and canal. In a competitive funding environment, it is essential that partners work together to seek and use funding efficiently.

Together, we have an opportunity to make a lasting impact for the environment and for local communities.

Nick Gupta
Wessex Area Manager

WESSEX WATER

For centuries, waterways were seen as the waste disposal routes for cities, moving contaminants quickly away from people. It is only in recent decades that society has recognised the value of river and canals, as spaces for amenity, recreation, relaxation and wildlife. Water quality has improved, through better sewerage and sewage treatment, allowing us to look to rivers and canals to provide breathing space and areas of calm in an otherwise hectic world.

Wessex Water is supportive of the Bristol Avon Catchment Partnership as a vehicle to bring together relevant organisations and interested parties around land and water management which influence the river. The Bristol Avon hydrological catchment covers a large area from its source in the Cotswolds near Tetbury, flowing through a rural and urban landscape until it reaches the Bristol Channel at Avonmouth. Land and river management throughout the catchment has an impact on all aspects of the Kennet and Avon Canal and River Avon. Looking at catchments at a strategic level we can understand the interactions, beyond political boundaries, and highlight the issues to be tackled. However, much of the delivery will be more localised through projects and partnerships, such as this one.

We strongly believe that in order to reveal the greatest number of benefits to society and the environment, we need to work in partnership to understand the different roles, functions and aspirations of organisations to deliver complimentary solutions. We recognise the importance of water to society, whether as a basic human need or as a therapeutic part of our landscape and cityscape.

Wessex Water is a keen supporter of this innovative WaterSpace Study. The Study highlights some very exciting new projects to enhance the River Avon and Kennet and Avon Canal. It has reinforced links between the partners fostering new ways of working. We have identified where we have common aspirations, challenges and projects, which could be delivered together. In many cases, we also have similar maintenance and management responsibilities with potential to be combined and delivered more efficiently in future.

David Elliott
Group Director of
Strategy & New Markets

QUICK GUIDE TO THE WATERSPACE STUDY

KEY WORDS

- Vision to revitalise our waterways
- Practical projects
- Priorities
- Funding
- Design Ideas
- Partnership

CHARACTER

16 miles of waterway

2 Waterways – River Avon and Kennet & Avon Canal

15 character areas

1 Bath City Enterprise zone

12 of 18 UK bat species

5 weirs

13 locks

4 marina

2 Linear Sites of Nature Conservation Interest that follow the waterways

710 boats in 2016

1/3 of boaters regularly cruise on the River Avon

80% of boaters surveyed said the waterways were their permanent home

EVIDENCE

102 responses to the Boater Survey

20 1:1 interviews

1 focus group

1 facilities audit

12 months ecology surveys

STUDY AREA

DUNDAS — CLAVERTON — BATHAMPTON — BATH — SALTFORD — KEYNSHAM — HANHAM

QUICK GUIDE TO THE WATERSPACE STUDY

ISSUES

- Management
- Water Quality
- Flood Risk
- Complex ownerships
- Rich wildlife
- Diverse stakeholders
- Major Development & Change
- Under-used River
- Shift from Industrial to Leisure use

ENGAGEMENT

24 Waterways themed events as part of the Bristol to Bath Festival of Nature (2016 & 2017)

River Avon users

Strategic River Group

4 project partners

Bath & North East Somerset Council

Canal & River Trust

Environment Agency

Wessex Water

PROJECT IDEAS

35 Projects

Commercial ventures

Improved public spaces

Ecology enhancements

Community ideas

Art and sports projects

Mooring development

FINANCE

£4m

Over £4million developer contributions identified from existing development, including £500,000 for River Avon Park

£900K

Capital investment in the river corridor (2013-2017)

20 costed projects

£ £ £ £ £ £ £ £ £

£ £ £ £ £ £ £ £ £

INTRODUCTION TO THE WATERSPACE STUDY

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THE VISION

The partners have a common aim, to revitalise the waterways of Bath & North East Somerset.

Through the WaterSpace Study the partners have developed ideas for projects, and have produced design concepts which have the potential to enhance the waterways. The Study provides an evidence base for decision making, and is a starting point for a joint action plan.

The WaterSpace Study has 5 aims:

1. Make best use of the partners' assets and landownership to enhance the waterways, taking a partnership approach and seeking for multi-benefits from projects.

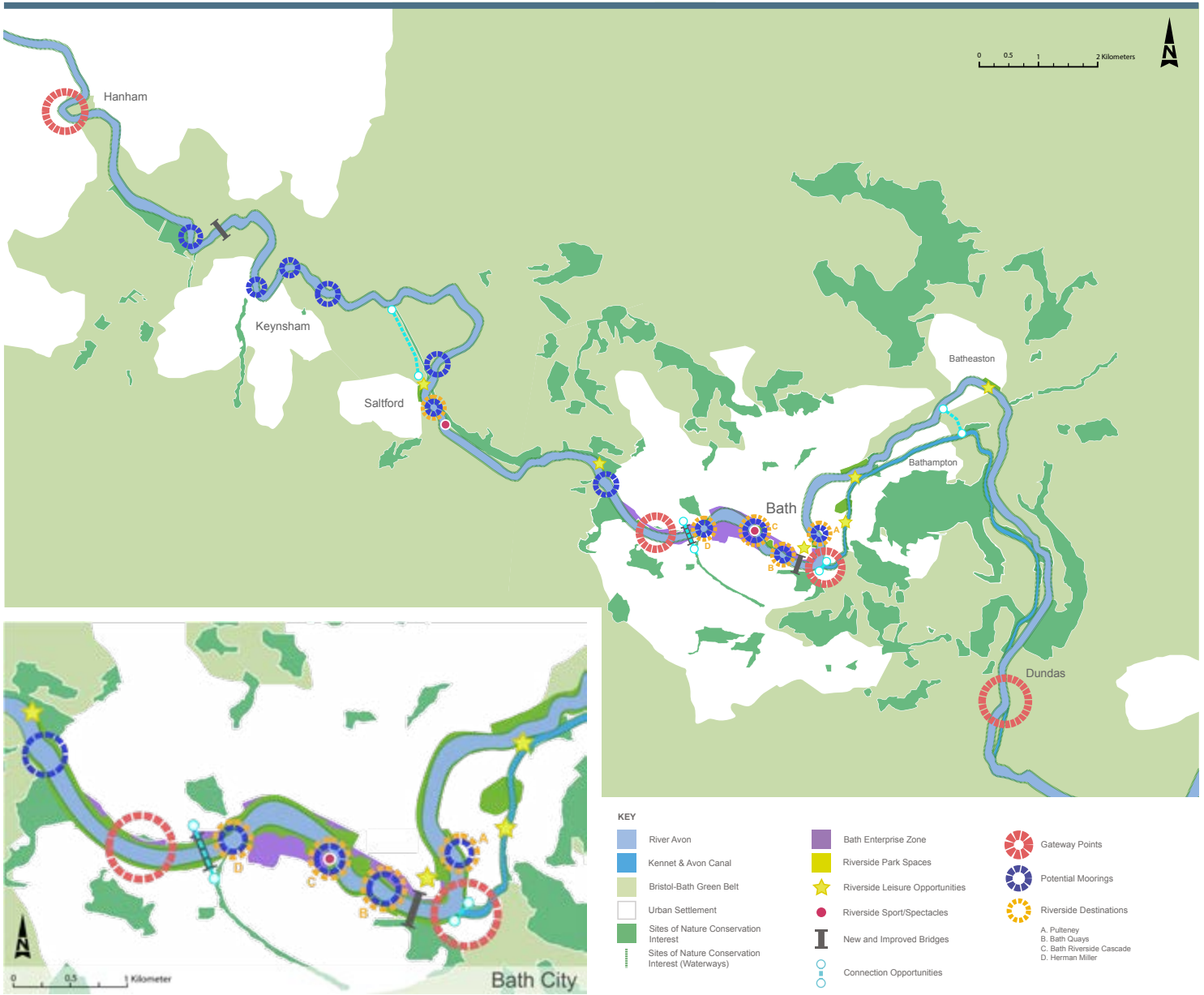
2. Improve the district's mooring offer whilst safeguarding navigation.

3. Realise opportunities from development and regeneration to benefit both the waterways and the quality of new development.

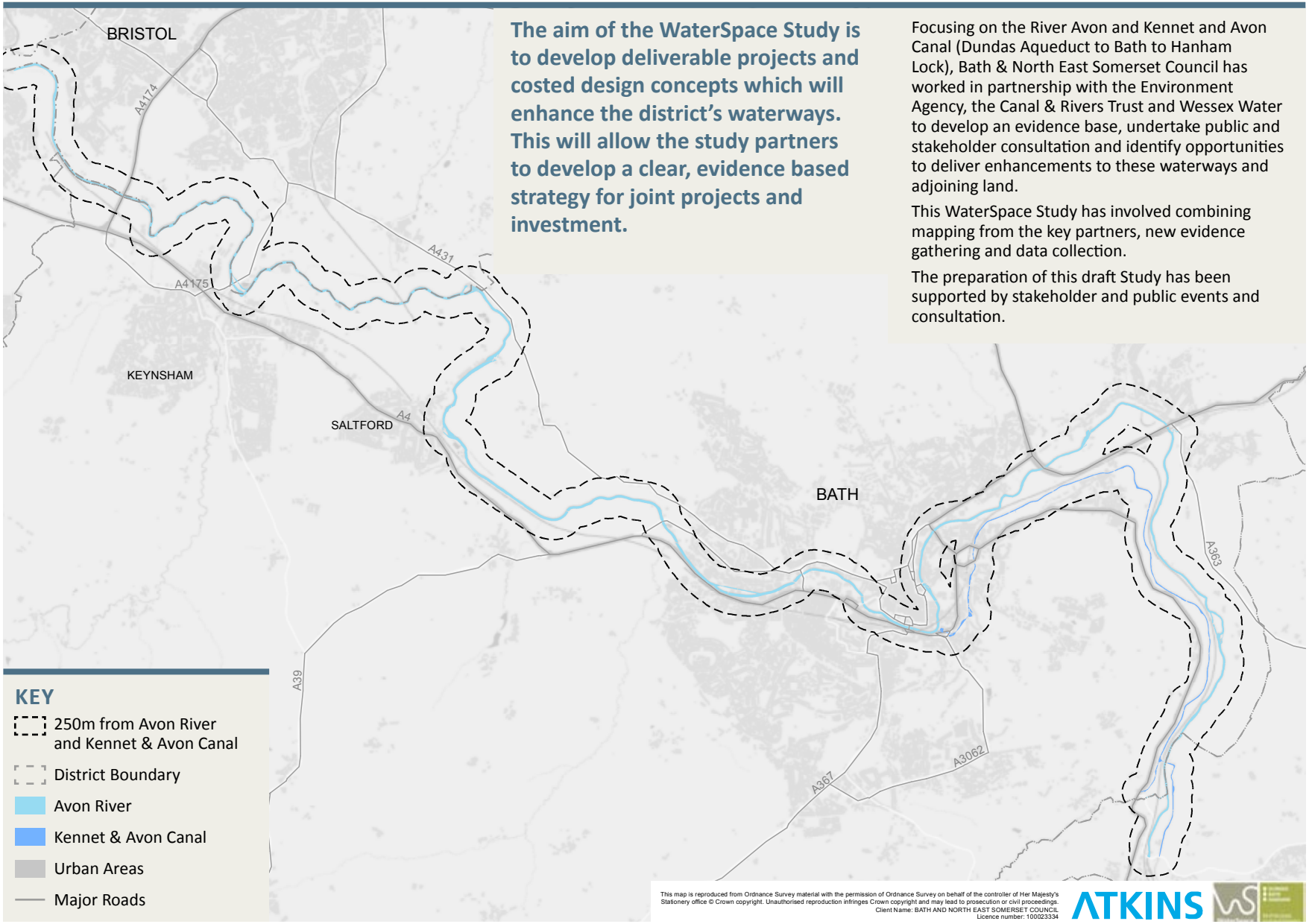
4. Enhance the environmental (including ecology, amenity and water quality) value of the waterways, including retaining dark corridors for wildlife.

5. Protect and improve opportunities for both land and water based leisure and recreation.

The concept diagram expresses some of the key aspirations captured in this study. It is hoped that many of the project ideas included in this Study can be further developed, and delivered over the coming years.



WATERSPACE STUDY AREA & THEMES



The aim of the WaterSpace Study is to develop deliverable projects and costed design concepts which will enhance the district's waterways. This will allow the study partners to develop a clear, evidence based strategy for joint projects and investment.

Focusing on the River Avon and Kennet and Avon Canal (Dundas Aqueduct to Bath to Hanham Lock), Bath & North East Somerset Council has worked in partnership with the Environment Agency, the Canal & Rivers Trust and Wessex Water to develop an evidence base, undertake public and stakeholder consultation and identify opportunities to deliver enhancements to these waterways and adjoining land.

This WaterSpace Study has involved combining mapping from the key partners, new evidence gathering and data collection.

The preparation of this draft Study has been supported by stakeholder and public events and consultation.

The WaterSpace Study focuses on five themes:

- ASSETS & ASSET MANAGEMENT
- MOORINGS & NAVIGATION
- WATER QUALITY & ENVIRONMENT
- DEVELOPMENT & REGENERATION
- LEISURE & RECREATION

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KEY PARTNER STRATEGIES AND PROJECTS

There are a number of key projects and strategies that the WaterSpace Study relates to, the key ones are summarised below. These have been split in accordance with the WaterSpace Study themes, although a number are cross-cutting in nature.

ASSETS & ASSET MANAGEMENT

Capital and revenue partner funding – including WaterSpace Partner funding via B&NES River Corridor Fund, joint projects, Environment Agency Flood Defence Grants, Canal & River Trust management & maintenance investment

Infrastructure Delivery Programme (B&NES Council) – lists essential and desirable infrastructure items and informs Community Infrastructure Levy and Capital bids.

Planning Obligations funding – site specific funding from new development contained within s106 agreements (B&NES Council).

Bath Flood Gate Conditions Survey (Environment Agency, 2017)

Bath River Avon Flood Defence Options Appraisal (Environment Agency & B&NES, 2016)

Community Infrastructure Levy – Regulation 123 List (B&NES Council) – lists items eligible for funding, which incorporates waterways related projects.

Wessex Water Business Plan is structured in 5 year phases.

+ Additional data on assets and asset management gathered as part of this study, includes a map of all of the study partners assets and land ownerships, see section 6 of this study and full asset maps in Appendix 1.

MOORINGS & NAVIGATION

Review of mooring standards on the River Avon between Pulteney Weir and North Parade Bridge (ROSPA for B&NES Council, 2013)

Boat Dwellers & River Travellers: Task & Finish Group Review (B&NES Council, 2013)

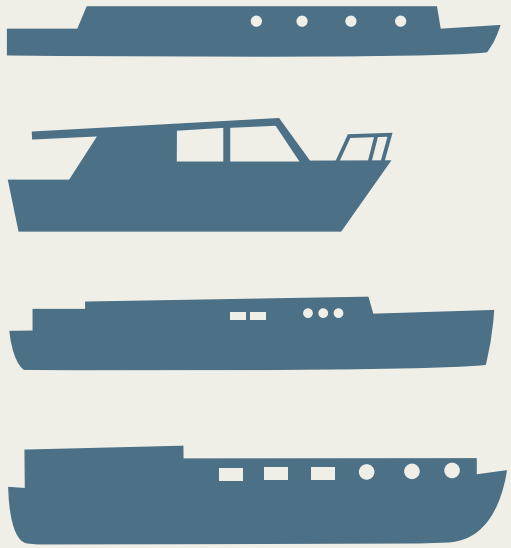
Policy Advice Note: Inland Waterways (Bristish Waterways & TCPA, 2009). Contains helpful guiding principles and checklists for plan making and development control.

Towpath Design Guidance (Canal & River Trust, 2013)

Residential Use of Waterways (AINA, 2011)

Legal report on becoming a navigation authority (B&NES Council, 2013)

Annual Boat Counts (Canal & River Trust, 2013-2016)



Guidance & Advice for Business Boating (Canal & River Trust, 2016)

+ Additional information gathered as part of this study includes results of a boater survey, focus group and 20 one to one interviews with commercial and voluntary sector representatives of the business boating community, see section 6 of this study and Appendices 2, 3 and 4.

KEY PARTNER STRATEGIES & PROJECTS

ENVIRONMENTAL ENHANCEMENT & WATER QUALITY

Ecosystems Services Mapping (West of England Nature Partnership) Highlights existing and future ecological networks and land which contributes to water storage and quality

Health & Well Being and Water Quality Research (Wessex Water) Reducing the impact of pharmaceutical drugs on our water systems.

Environmental Investigations Projects (Wessex Water)

Bristol Avon Rivers Trust a community led organisation delivering education, river management and practical river restoration.

Maximising the Ecosystem Value of the River Avon in Bath & North East Somerset (River Restoration Centre for B&NES Council, 2011)

River Avon Corridor Bat Monitoring Study (B&NES, 2017) and previous data collection.

Environment Evidence Base for the Bath Enterprise zone Masterplan (Biodiversity by Design for B&NES, 2015)

Green Infrastructure Strategy (B&NES Council) Identifies the River Avon and Canal Corridor as a key priority for Green Infrastructure enhancements

Bristol Avon Catchment Plan (BACP) including technical evidence review and mapping

Advice note on the Water Framework Directive for the West of England Authorities (Environment Agency, 2013).

+ Summary information gathered as part of this study can be found in section 6 and in Appendix 7.

LEISURE & RECREATION

Water Event Safety Review (ROSPA for B&NES Council, 2011), with recommendations for water based events such as dragon boat racing.

Avon Towpath Improvements Hanham – Somerdale (B&NES, South Gloucestershire Councils, 2012) which looks at linking towpath improvements on the River Avon Trail.

Bath Transport Strategy (B&NES Council, 2014) which identifies the river and canal corridors as key leisure and commuting routes.

River Avon Trail (Avon Frome Partnership, 2016)

Annual Fisheries Report 2015-16 (Environment Agency) and National Angling Strategy 2013-18 (Angling Trust and the Environment Agency)

Riverside Footpath Feasibility Study (B&NES Council, 2007) which looks at the feasibility of a riverside path north of Pulteney Bridge.

Sustrans Bath Action Plan (B&NES Council, underway) which will consider improvements to the river and canal as sustainable transport routes.

Green Infrastructure Strategy (B&NES Council, 2013) which identify the River Avon and Canal Corridor as a key Green Infrastructure project.

+ Summary information gathered as part of this can be found in section 6 and additional information from sports and leisure users was also submitted as part of the one to one interview process (see Appendix 4).

KEY PARTNER STRATEGIES & PROJECTS

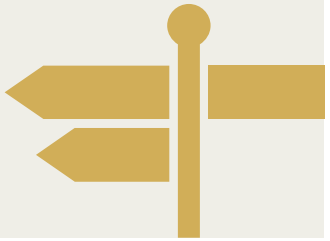
REGENERATION & DEVELOPMENT

Core Strategy (B&NES Council) Strategic planning policies including the identification of the riverside Bath Enterprise zone.

Placemaking Plan (B&NES Council) Planning policies include a new policy on moorings, site allocations for a number of riverside sites, lighting and environmental policies are also relevant

Bath Pattern Book (B&NES Council) Includes a city lighting strategy and design spec for the river path and an urban design proposal for the Pulteney Bridge area.

Bath Wayfinding Review (B&NES Council, 2017)



Public Realm & Movement Strategy (B&NES Council) City Centre Public Realm Strategy

Bath Western Riverside SPD (B&NES Council) Masterplan Strategy for major riverside site which included river edge treatment and new riverside park

Enterprise zone Masterplan (B&NES Council) Regeneration Vision for the Bath Enterprise zone which has informed site allocations

Infrastructure Delivery Programme (B&NES Council) Identifies a number of key infrastructure projects including the Bath River Park, new bridge proposals and Strategic Flood Defence Schemes

River Avon Economy Report (River Corridor Group for B&NES Council, 2011)

Getting Around Bath Transport Strategy and Implementation Plan (B&NES Council, 2015) Supports river taxis, use of the river for leisure and segregated cycle routes to protect the river for leisure use and walking.

World Heritage Site Management Plan (2016) Identifies the river corridor as an area for enhancement and historic interpretation

+ Summary information gathered as part of this study can be found in section 6 and in the Funding and Delivery section of this report. Appendices 1 & 10 also include relevant information.

WATERSPACE PROJECT CONSULTATION AND ENGAGEMENT

During the production of the WaterSpace Study, consultation and engagement has underpinned the development of the evidence base and identification of possible projects.

Input has included strategic overview by key partner agencies, technical input from study partners to detailed input from key stakeholders, as well as wider public involvement as part of the Bristol to Bath River Avon Festival of Nature 2016.

+ The consultation process is summarised on the following pages of this study and in Appendices 2–6.

STRATEGIC RIVER GROUP

The Strategic River Group was established in 2014 it is a round table group with top level decision makers from key agencies including the Environment Agency, Canal & River Trust, Wessex Water, the River Regeneration Trust, Natural England and B&NES Council. This group seeks to coordinate efforts and funding and is interested in all issues relating to the River Avon and K&A Canal. The SRG has overseen the production of the WaterSpace Study and has been actively engaged in its development.

WATERSPACE STUDY PARTNERSHIP

The Water Space Partnership was formed in January 2016.

Throughout the study a steering group with senior representatives from each of the partner organisations met monthly to provide steer to the project.

This was supplemented by workshops and meetings with each of the partner organisations.

The WaterSpace Study Partnership members:

Bath & North East Somerset Council

Canal & River Trust

Environment Agency

Wessex Water

CONSULTATION TIMELINE

JANUARY
Project starts

FEBRUARY
Partner discussions and scoping

MARCH
Press launch

APRIL – MAY
Informal Stakeholder engagement

MAY – JULY
Boater Survey

JUNE
Festival of Nature Events – River Avon Theme

JULY – SEPT
Formal Call for Ideas

SEPT
1:1 meetings with commercial boating interests
Focus Group waterway users

NOVEMBER
Informal Stakeholder engagement on projects

MARCH
Consultation on draft Study

2016 2017

WATERSPACE PROJECT CONSULTATION AND ENGAGEMENT

RIVER AVON USERS CONSULTATIVE COMMITTEE (RAUCC)

RAUCC is made up of groups representing river users and meets quarterly.

Members include angling groups, private Marinas, canoeing groups, rowing clubs, Kennet & Avon Canal Trust, Parish Councils, Inland Waterways Association, Avon Frome Partnership.

Throughout 2016 the group was involved in the development of the WaterSpace Study.

BOATER OUTREACH

The project team has been working with Julian House outreach workers who work with liveaboard boaters, and other representative groups to publicise the boater survey and focus groups.

RIVER SAFETY GROUP

A multi-agency group made up of representatives from Avon and Somerset Constabulary, Avon Fire and Rescue, Bath & North East Somerset Council, the Environment Agency and the Canal and Rivers Trust. The group is the first point of contact for river safety matters, and recent actions have included:

- Installing 14 new river rescue cabinets along the stretch of river in central Bath with public access from Windsor Bridge to Pulteney Bridge
- Undertaking safety audits which had led to the installation of grablines, ladders, and river railings
- Educating students about the risks presented by the river through the "Got Ya Back" Campaign at Bath College, Bath Spa University and the University of Bath and attending fresher's fairs
- Producing an online river safety film which has had almost 2,000 views on YouTube
- Providing portable grablines for police cars to ensure equipment is on hand to assist with emergency river rescue
- Supporting information campaigns about river safety

WATERSPACE PROJECT CONSULTATION AND ENGAGEMENT

FESTIVAL OF NATURE 2016 & 2017

The Bristol to Bath Festival of Nature 2016 and 2017 had a River Avon theme. 24 events and activities were held by the Water Space Partnership as part of the programme of events in Bath, Keynsham and Saltford. The events were supported by the Water Space Partnership and volunteers.

Around 7000 people attended the Festival of Nature events within the Bath & North East Somerset area.

+ See the programme for the 2016 River Festival in Appendix 11 to this Study

+ A full consultation report is included as Appendix 5 to this Study.

+ You can find us on twitter at @waterspacebath or online at www.waterspacebath.org.uk

THEMED WALKS

WALKING TRAIL MAPS

SOCIAL MEDIA

BBC NEWS

CRAFT ACTIVITIES

WATERBLITZ WATER QUALITY TESTING

LOCAL NEWS AND RADIO

CITIZEN SCIENCE

OPEN STUDIO

LAUNCH EVENT

OPEN DAYS

KEYNSHAM EVENT

POETRY BOARDS

BATH EVENT

BATH CITY CONFERENCE

MONTHLY NEWSLETTER

WATERSPACE PROJECT CONSULTATION AND ENGAGEMENT

EXAMPLE OF WALKING TRAIL MAPS

During 2016, three trial walking trail maps were prepared with local stakeholders and civic groups, working together with the Avon Frome Partnership. The walking trail maps promote different parts of the River Avon at Bath, Saltford and Keynsham.

The maps contain information about local facilities such as shops, cafe and parks and historic and wildlife facts. The trails were promoted by local businesses and attractions featured on the maps.

+ Three of the themed walking trail maps produced are included as Appendix 8 to this study.

FIELDTRIP HIGHLIGHTS

The Study Partners have been in contact with a number of other areas in the UK who have undertaken similar waterways projects.

In May 2016, the study partners visited projects in London including the Olympic Park, Hackney Wick, Kings Cross and the Paddington Basin, and met with members of the Canal & River Trust's Enterprise team.

Through this approach we have sought to learn best practice and understand practical solutions that have been implemented on other waterways facing development pressure, increasing demand for moorings, opportunities for ecological enhancement and improved public access.

In Summer 2016, the Canal & River Trust's national commercial and business boating teams visited Bath to look at key opportunity sites.

POINTS OF INTEREST

Link boating commerce to complementary operations

Focused on catalyst projects

The importance of a good maintenance regime and demarcation of space for different users

Playful and fun public realm

Boats bring activity and natural surveillance to the river and canal

Electricity points to improve moorings and minimise the impact of generators and wood smoke

BOATERS SURVEY 2016 RESULTS

Between May and July 2016, a survey aimed at those who live aboard boats in the Bath & North East Somerset area was undertaken. Respondents were asked how they use the River Avon and Kennet and Avon Canal, and how their need for better basic services can be met. The survey followed a previous '*Bath and North East Somerset Gypsy, Traveller, Boater, Showman and Roma Health Survey*' in 2013 which examined boater demographics.

The Boaters Survey 2016 ran for six weeks from Tuesday 24th May to Monday 4th July 2016. It looked at how far boaters travel, the type and size of crafts used, and the range of facilities they need whilst on the canal and river in the B&NES area. The aim of the survey was to enable facilities such as water points, sewage disposal and mooring areas to be planned and provided. The survey will help the partners better understand what the needs are for live-aboard boaters and how they can be better provided for.

With assistance from Julian House boater outreach team, the survey was publicised widely in local networks with information distributed via social media (including Facebook), through online forums and websites, via posters, and at local meetings and social events.

102 survey responses were received, which is a statistically significant response rate given that there are approx 700 Boats on the waterways in B&NES, and that many of these are not occupied by liveaboard boaters. The sample is estimated to represent around 20% of the liveaboard boater community (Moss, Naylor Young, 2016).

Our survey template has now been used in London and Wiltshire.

+ The findings of the Boater Survey 2016 are summarised on the following pages of this study. A full report of the Boater Survey including dissemination methods, further analysis and full responses to the survey is included as Appendix 2.

Those who live on-board boats in the Bath & North East Somerset area are being asked how they use the River Avon and Kennet and Avon Canal and how their need for basic services can be better met as part of the Waterspace Study.

ONLINE SURVEY
www.waterspace.org.uk

Hard copies are available on request from Rachel Lambert at Atkins on tel. 01454662840

Closing date:
4th July 2016

Results of the survey will be made available in **September 2016** on the website above.

This is an independent survey commissioned by the Water Space Partnership:

www.waterspace.org.uk

Poster advertising the 2016 Boater Survey that was posted on Facebook, canal and river forum and along the towpath.

BOATER SURVEY 2016 RESULTS

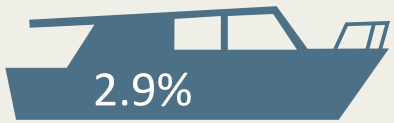
WHAT DO YOU LIKE ABOUT LIVING ON A BOAT?

- 83.3% Peace and tranquillity
- 77.5% Waterway community
- 77.5% Being able to move to new places
- 76.5% Scenery along the canal/river
- 14.7% Artistic inspiration
- 23.5% Other

TYPES OF BOAT

Narrowboat

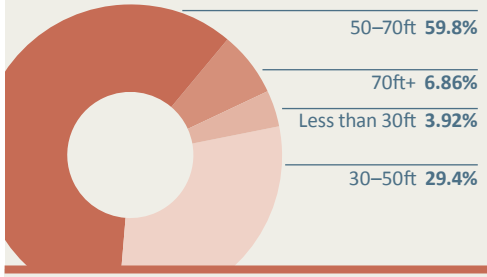
Wide beam canal boat



River cruiser

Dutch barge

SIZE OF BOATS (LENGTH)



SIZE OF BOATS (BEAM)

RESIDENTS PER BOAT

- 33.3% live on their boat alone
- 53.9% live with one other person
- 9.8% have three people living on board
- 2.9% share their boat between four people

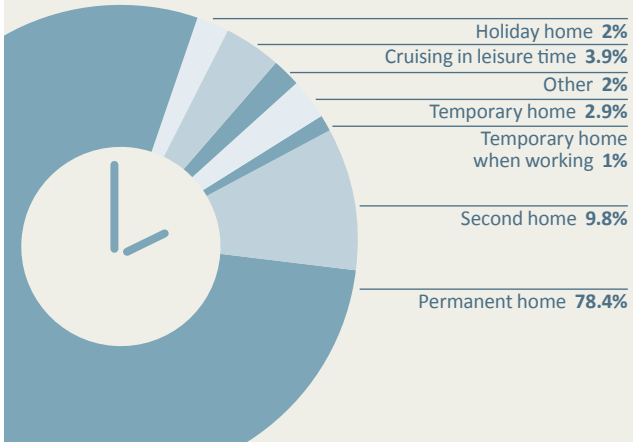
HOME MOORINGS

25.5% of those surveyed have a home mooring

22.2% of which are residential moorings

BOATER SURVEY 2016 RESULTS

TIME SPENT ON BOARD

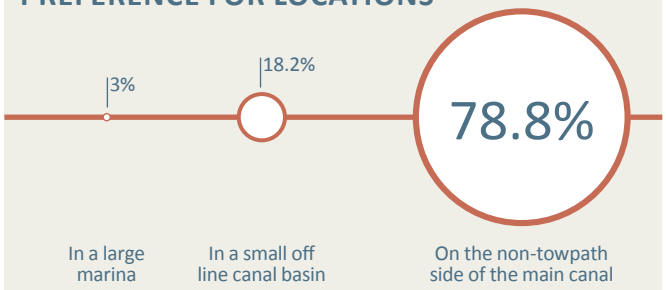


PERMANENT SERVICED MOORINGS

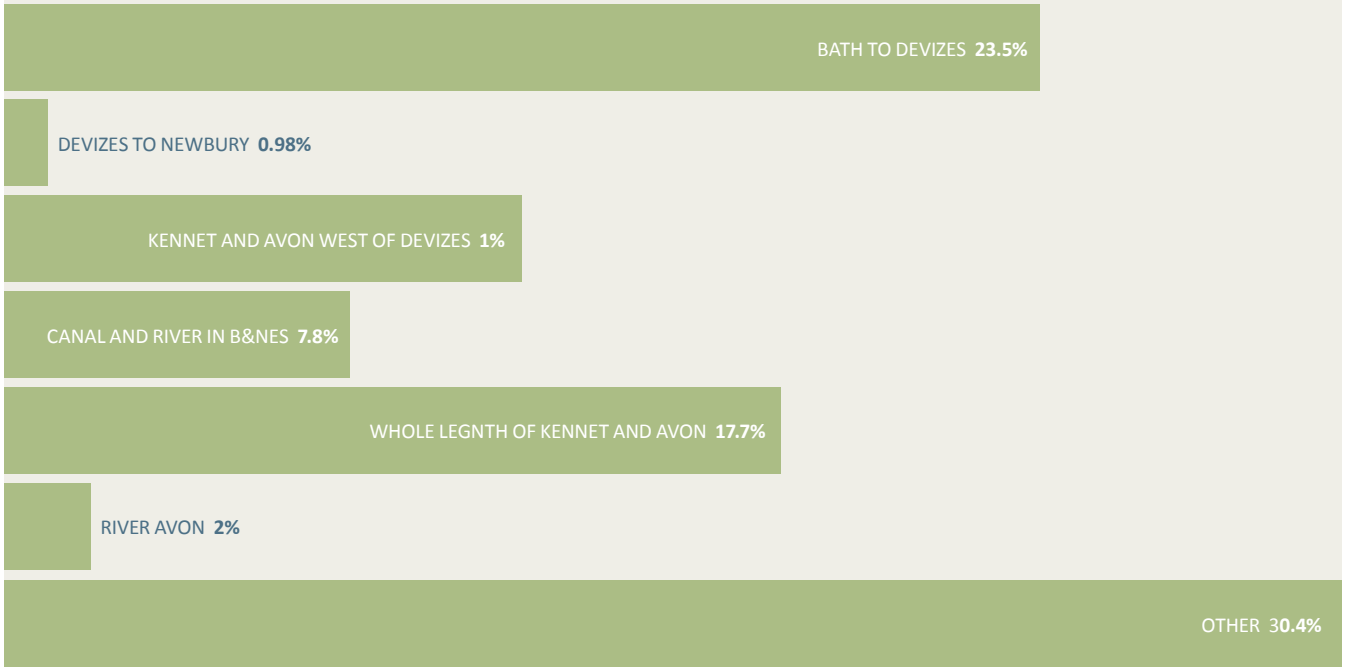
58.8%

of those surveyed would consider taking a permanent serviced mooring if available

PERMANENT SERVICED MOORINGS, PREFERENCE FOR LOCATIONS



CRUISING AREAS



USE OF THE RIVER AVON

36.3%

of those surveyed regularly cruise on the River Avon

SHORT TERM SERVICES FOR CRUISING

63.7%

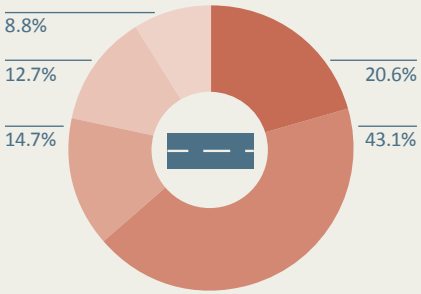
of those surveyed would consider paying for short term serviced moorings while cruising

23.5%

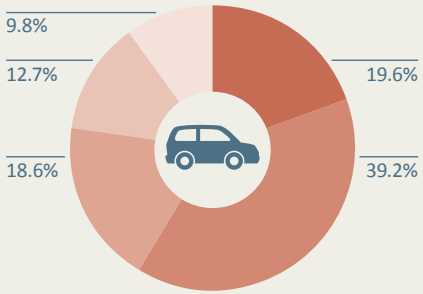
would not consider short term services

BOATER SURVEY 2016 RESULTS

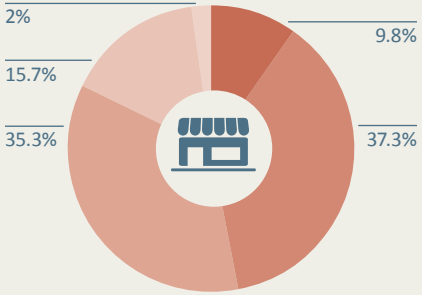
IMPORTANT FACTORS FOR MOORING LOCATIONS



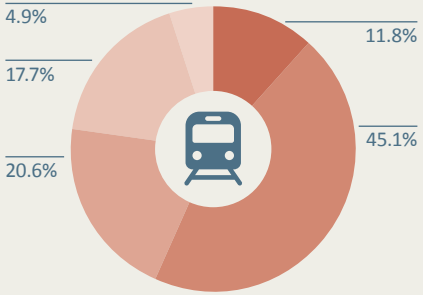
Road access



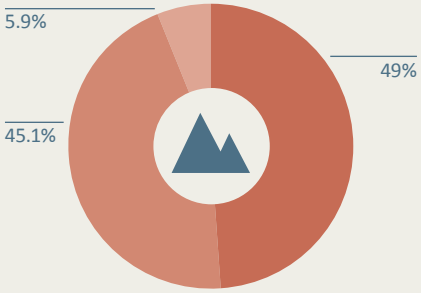
Parking



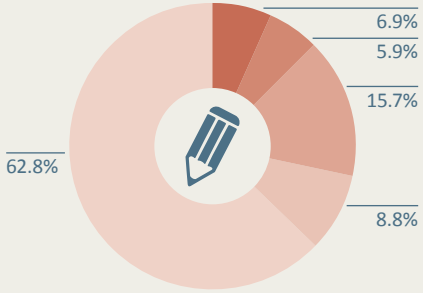
Local shops



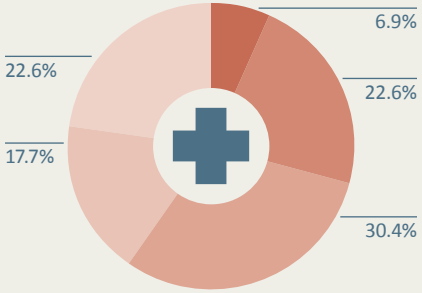
Public transport



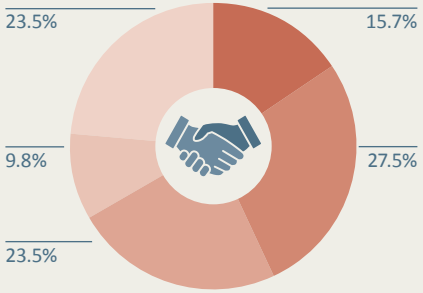
Attractive scenery



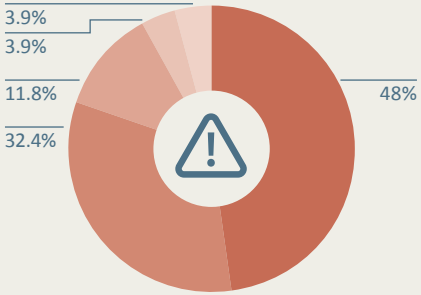
Schools



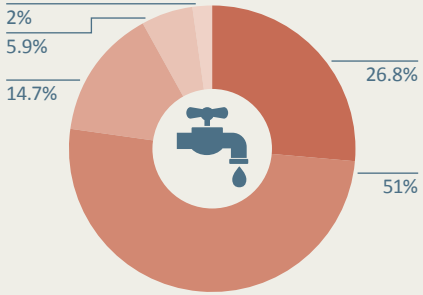
Health services



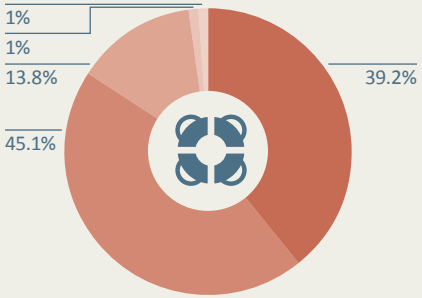
Employment



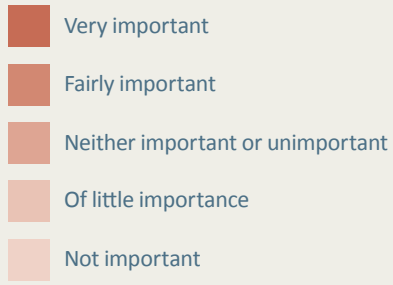
Avoiding flood risk



Services



Safety



BOATER SURVEY 2016 RESULTS

Some of the survey questions were open questions, allowing respondents to respond in free text, a range of key words and responses are shown here.

+ The full responses to all questions can be found in Appendix 2.

WHAT DO YOU LIKE ABOUT LIVING ON A BOAT?

- Live sustainably
- Low cost housing
- Close to nature and wildlife
- Boat handling
- Working locks
- Travelling
- Living on water
- Canal history and heritage

WHAT WOULD YOU CONSIDER A REASONABLE PRICE PER MONTH FOR PERMANENT, SERVICED MOORINGS?

Figures ranged between

£50-£5000

Just under

50%

of respondents said they would pay £200 or more month

Just under

20%

of respondents said they would pay £300 or more month

10%

said they would pay £50 or less per month

WHAT WOULD ENCOURAGE YOU TO CRUISE THE RIVER AVON MORE REGULARLY?

- Accessible moorings
- 48 hr Visitor moorings
- Safety measures
- Boat handing experience
- Pontoons available for safety at times of spate
- More services
- Facilities
- Pump outs
- Water & Elsan points

BOATER SURVEY 2016 RESULTS

WHAT ARE YOUR TOP 3 IMPROVEMENTS TO THE RIVER AND CANAL NETWORK?

- More moorings
- Better moorings
- Disabled moorings
- Enforcement of moorings to comply with law
- Towpath improvement
- More facilities – Elsan points, rubbish, water and showers
- More dredging and vegetation maintenance
- Better understanding between different users
- Fewer hire boats
- Looking after heritage
- Basic rights of boaters to be respected

BOATER SURVEY CONCLUSIONS

In summary, the survey findings suggested for a majority of liveaboard boaters:

- Living on board is seen to offer a distinct, high quality lifestyle
- Most boats are narrow beam and long (over 50 feet) but provisions is needed for shorter and wider craft as well
- A significant minority of boaters with no home mooring would consider one if an appealing options were offered – offside on the canal is favoured rather than marina berths
- For most liveaboard boaters cost is a factor but it is not the defining reason for their choice, and correspondingly other low cost options have limited appeal
- Access to roads, parking, public transport and services is very significant in choice of short term mooring location
- Nearly all boats are owned outright by their occupants
- There is demand for improved facilities and services including additional moorings
- There are real barriers to the use of the River Avon by liveaboard boaters, notably the lack of accessible moorings

RESIDENTS' SURVEY 2017 RESULTS

In 2017, a representative sample of over 1000 B&NES area residents were asked questions about waterways as part of the Council's Annual Voicebox Survey. The results are presented here. The results note the frequency of daily and weekly use if the waterways, mainly for walking and cycling. They also highlight opportunities to get more younger people to be more engaged in volunteering and community projects.

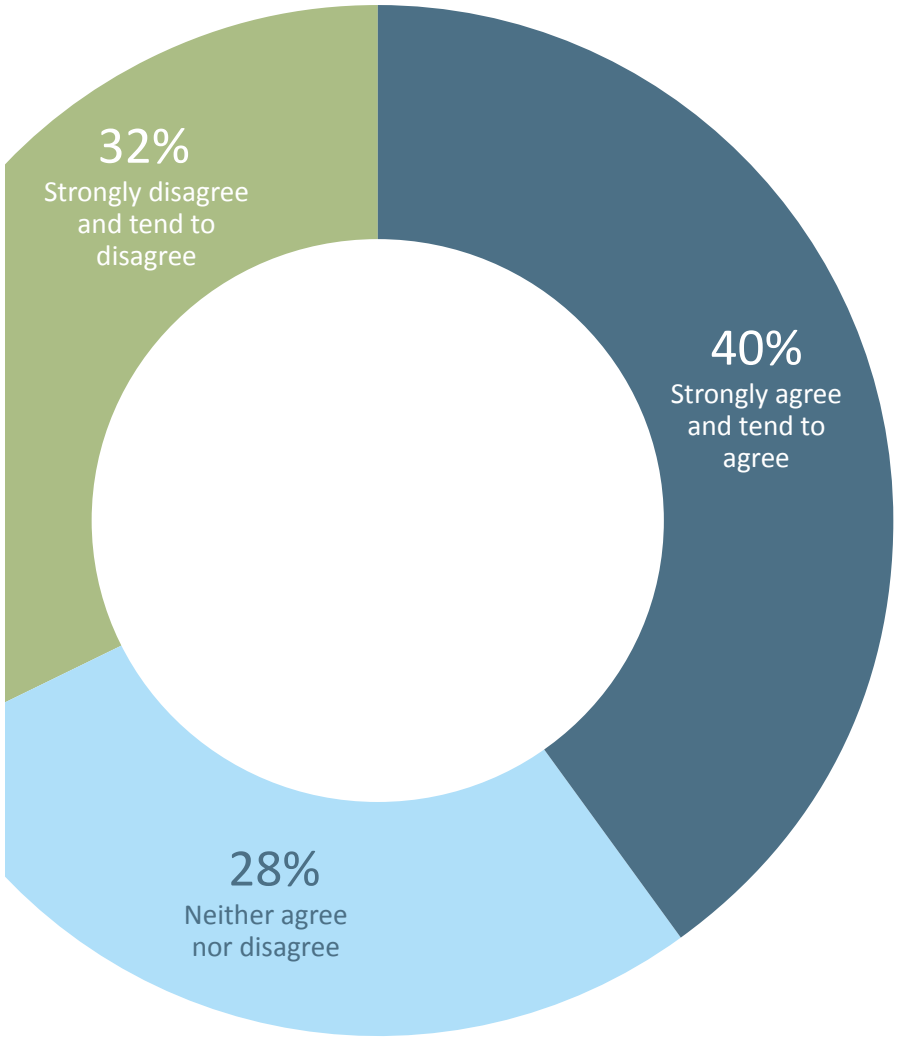
TO WHAT EXTENT DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT

'The waterways (rivers, streams and canals) in Bath & North East Somerset are being used to their full potential in terms of recreational activities such as water sports, walking and cycling'?

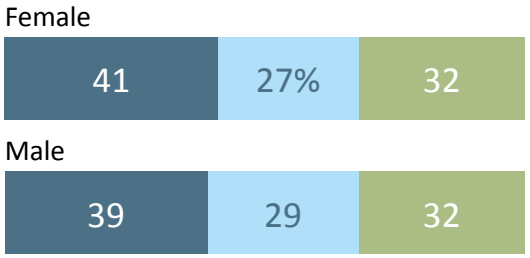
Overall, 40% of respondents agreed that waterways in Bath & North East Somerset are being used to their full potential in terms of recreational activities, and 32% disagreed with this statement.

A slightly higher proportion of women (41%) agreed with the statement compared to men (39%).

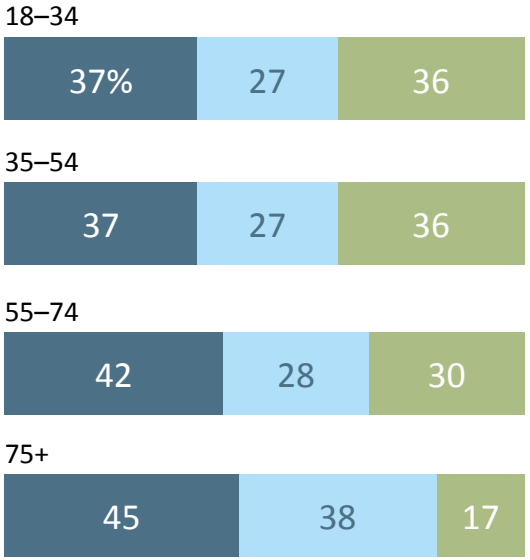
The results also indicate that older people are more likely to agree with this statement than younger people, as 45% of 75 + year olds agreed with the statement, and 42% of 55–74 year olds, compared with 37% of 18–34 and 35–54 year olds.



RESPONSE BY GENDER



RESPONSE BY AGE



RESIDENTS' SURVEY 2017 RESULTS

How often do you use the canals, rivers or streams, or the paths alongside them in Bath and North East Somerset for the following activities?

Walking was the activity that the greatest proportion of respondents said they used B&NES waterways or paths alongside them for, at least once a week or almost everyday, 33% compared with 10% who said they used them that frequently for cycling, and less than 1% for both canoeing/rowing, and canal boating.

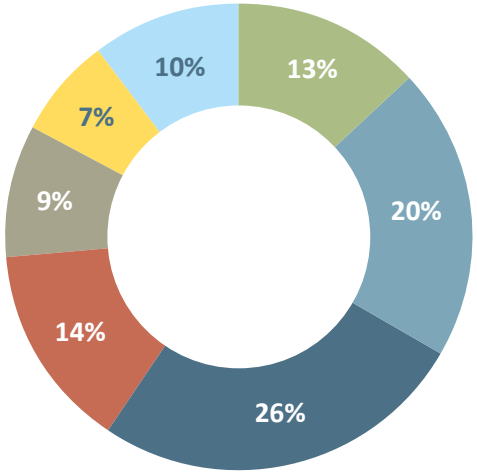
A greater proportion of men said they used the waterways or paths alongside them at least once a week or almost everyday for walking (36%) and cycling (11%), compared to women (29%, 9%). A greater proportion of younger people (18–34 and 35–54 year olds) said they used the waterways or paths alongside them at least once a week or almost everyday, for walking (37% for both age groups) and cycling (12%, 13%), compared to older people (55–74 and 75+ year olds), (31% and 14% walking, 14% and less than 1% cycling).

The other activities respondents said they used the B&NES waterways or paths alongside them for were: bird and wildlife watching, fishing, horse riding, running/ jogging, painting, swimming, model boats and activities with children.

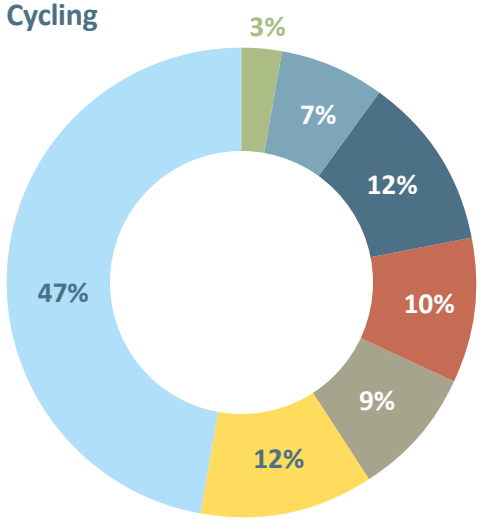
Key

- Almost every day
- At least once a week
- About once a month
- With the last six months
- Within the last year
- Longer ago
- Never

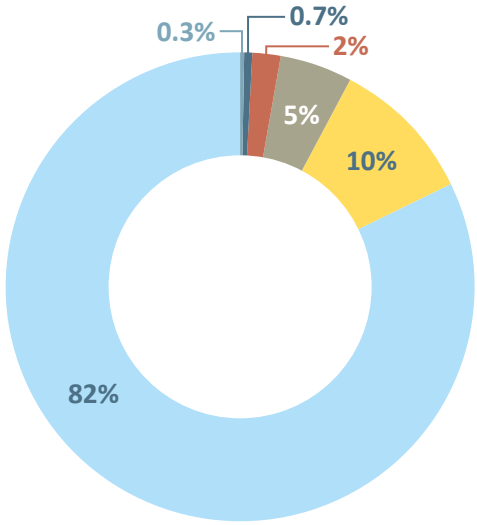
Walking



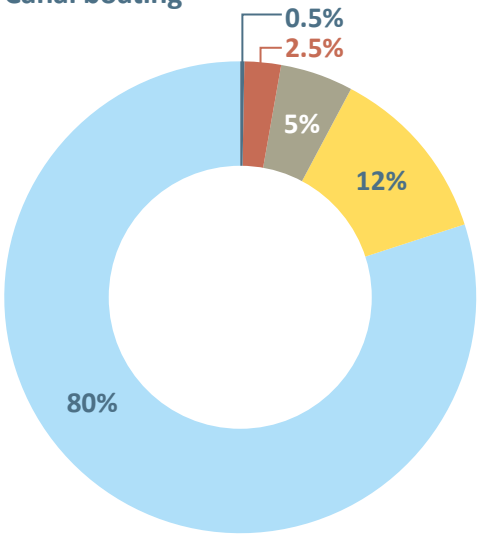
Cycling



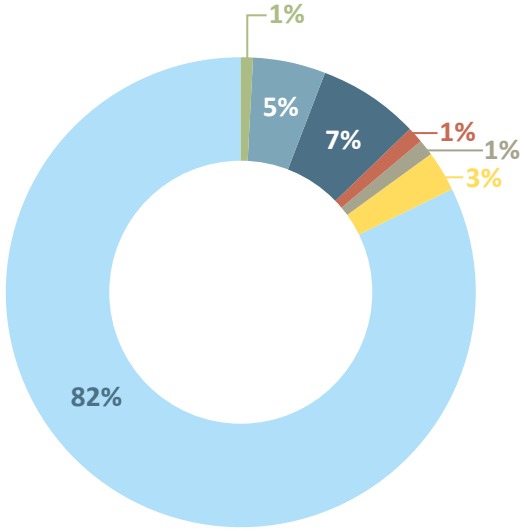
Canoeing/rowing



Canal boating



Other



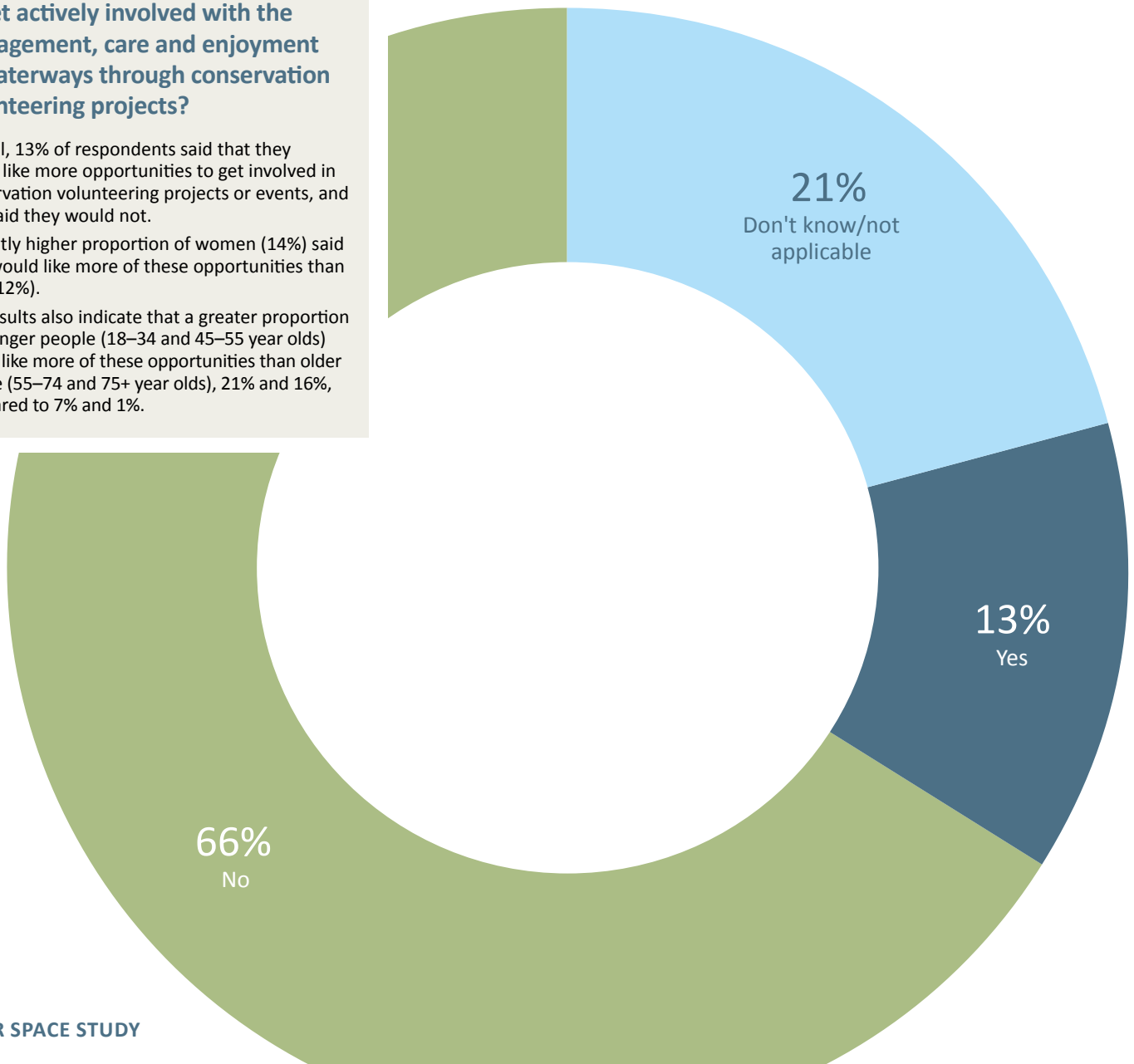
RESIDENTS' SURVEY 2017 RESULTS

Would you like more opportunities to get actively involved with the management, care and enjoyment of waterways through conservation volunteering projects?

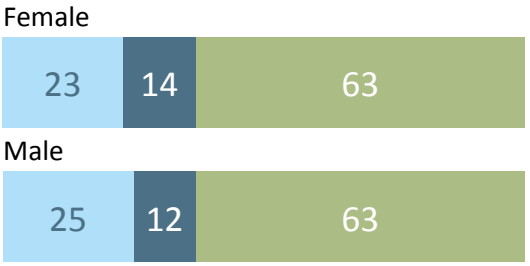
Overall, 13% of respondents said that they would like more opportunities to get involved in conservation volunteering projects or events, and 66% said they would not.

A slightly higher proportion of women (14%) said they would like more of these opportunities than men (12%).

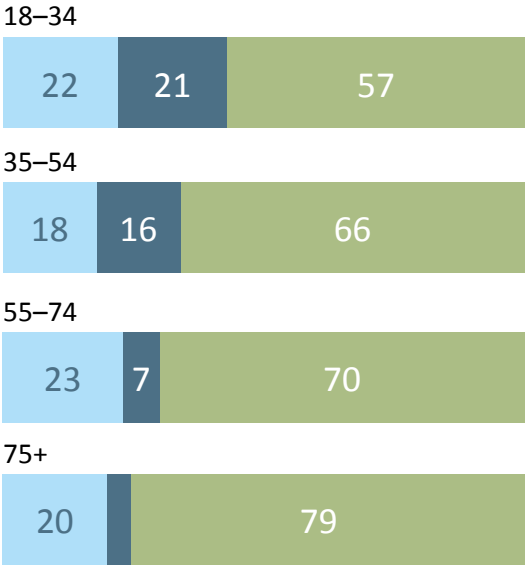
The results also indicate that a greater proportion of younger people (18–34 and 45–55 year olds) would like more of these opportunities than older people (55–74 and 75+ year olds), 21% and 16%, compared to 7% and 1%.



RESPONSE BY GENDER



RESPONSE BY AGE

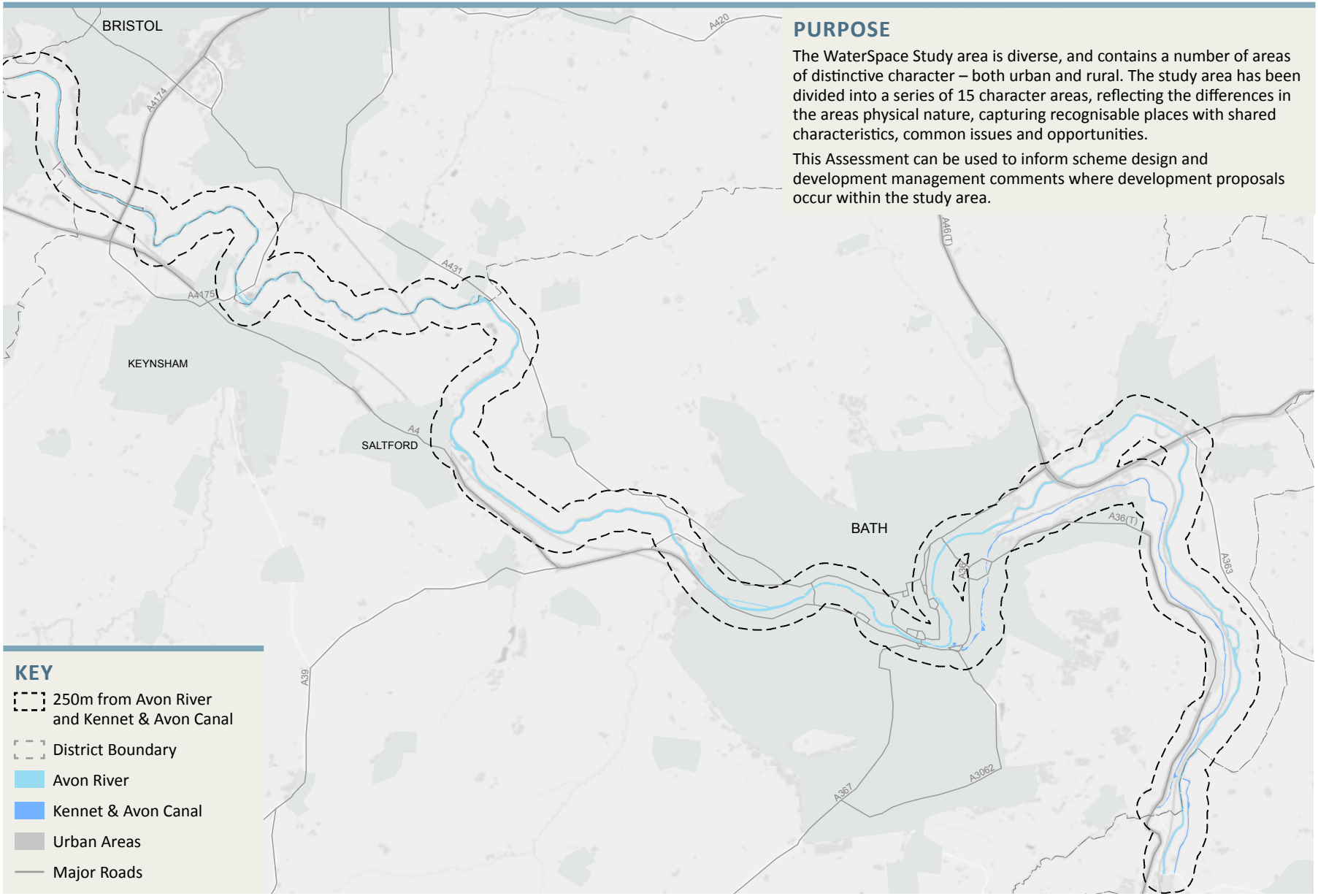


CHARACTER ASSESSMENT: OVERVIEW

PURPOSE

The WaterSpace Study area is diverse, and contains a number of areas of distinctive character – both urban and rural. The study area has been divided into a series of 15 character areas, reflecting the differences in the areas physical nature, capturing recognisable places with shared characteristics, common issues and opportunities.

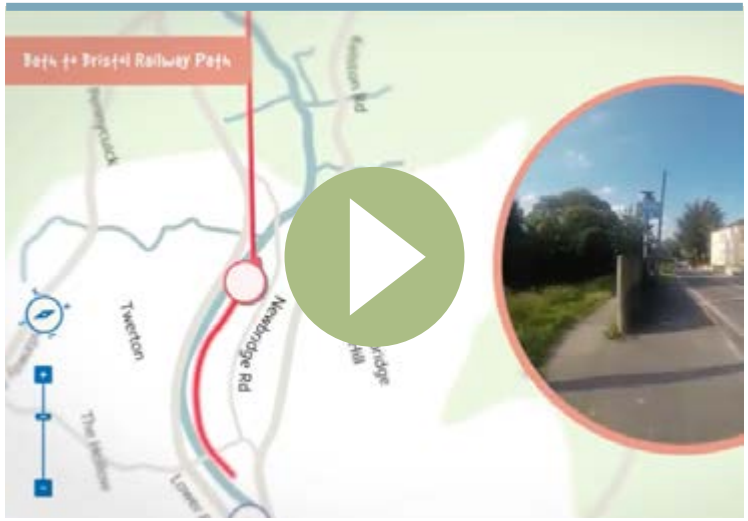
This Assessment can be used to inform scheme design and development management comments where development proposals occur within the study area.



CHARACTER ASSESSMENT: VIRTUAL TOURS

B&NES Council has prepared video footage showing of the Kennet and Avon Canal and the River Avon corridors so you can experience movement through these before you plan a cycle trip or walk.

B&NES Council together with Canal and River Trust volunteers and a local mapping company have created a river view mapping with 360 degree photography taken from a boat. Similar to street mapping this starts at Pulteney Weir and ends at Saltford, therefore the area in between can be viewed from the river. A short video was prepared to show how this was done and an extract image from the mapping is reproduced here (right).



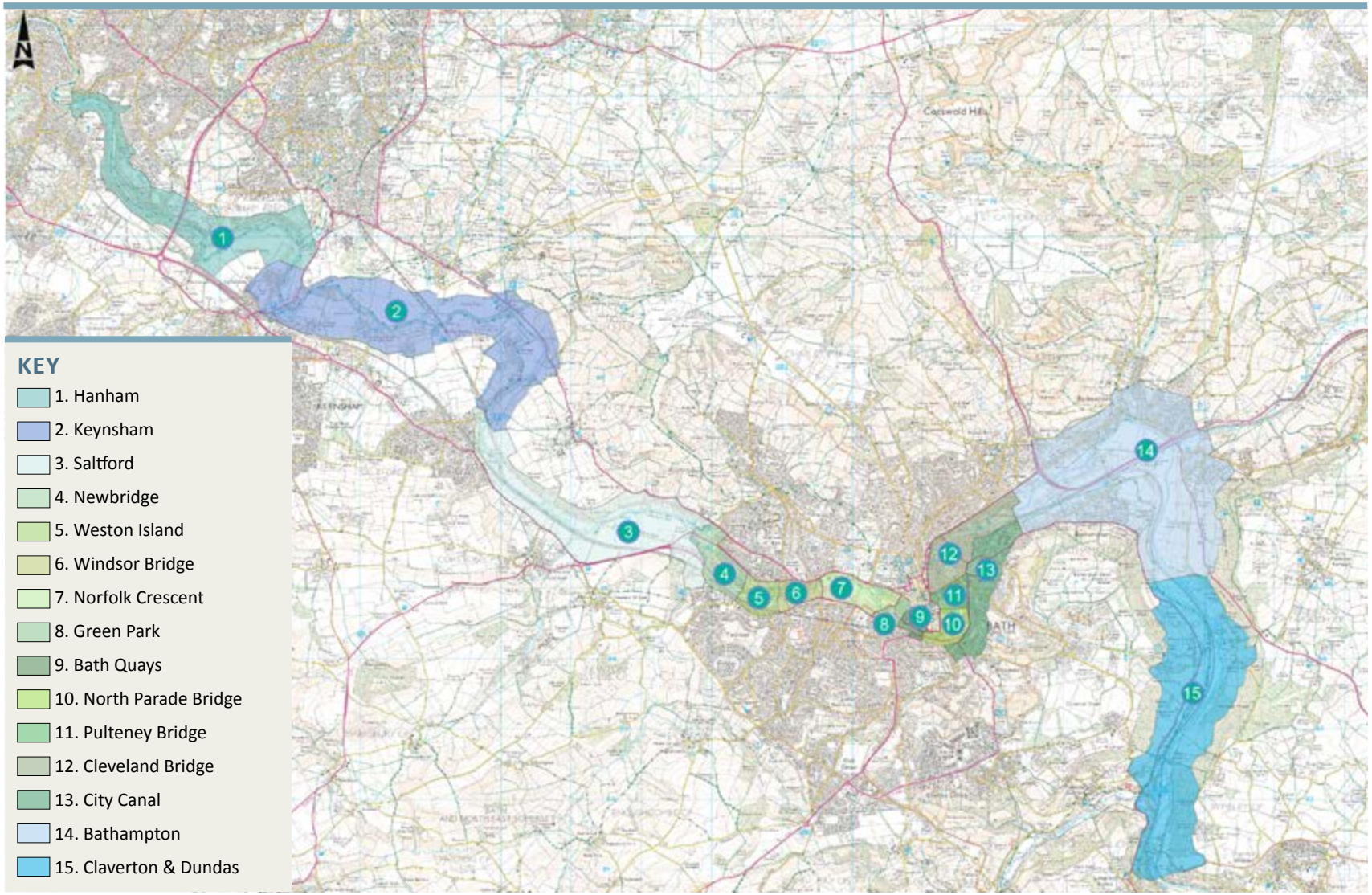
Virtual Tour of the River Avon through Bath

Virtual Tour of the River Avon through Bath

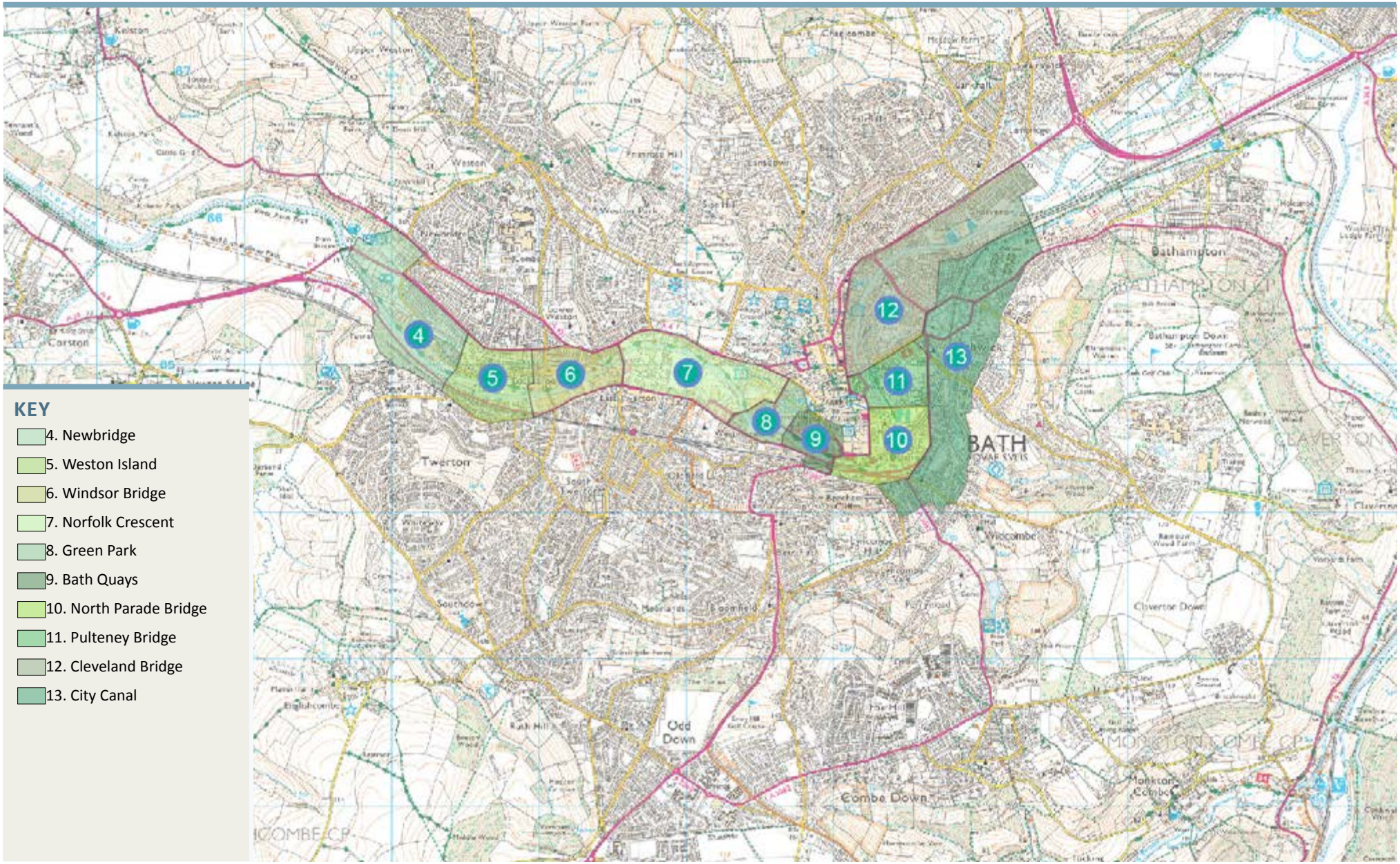
Virtual Tour of the Kennet & Avon Canal within Bath & North East Somerset

CHARACTER AREAS: WHOLE STUDY AREA

DUNDAS | CLAVERTON | BATHAMPTON | BATH | SALTFORD | KEYNSHAM | HANHAM



CHARACTER AREAS: BATH CITY



KEY

- 4. Newbridge
- 5. Weston Island
- 6. Windsor Bridge
- 7. Norfolk Crescent
- 8. Green Park
- 9. Bath Quays
- 10. North Parade Bridge
- 11. Pulteney Bridge
- 12. Cleveland Bridge
- 13. City Canal

CHARACTER AREAS

AREA 1: HANHAM

Characteristics:

- Meandering tree lined river edge
- Small clusters of residential areas
- Gently sloping topography
- Intimate riverside walkways with dense tree cover
- Steep vegetated riverside banks with naturalised woodland along the water's edge

Issues & Opportunities:

- Lack of pathways
- Need for more clear/extensive access

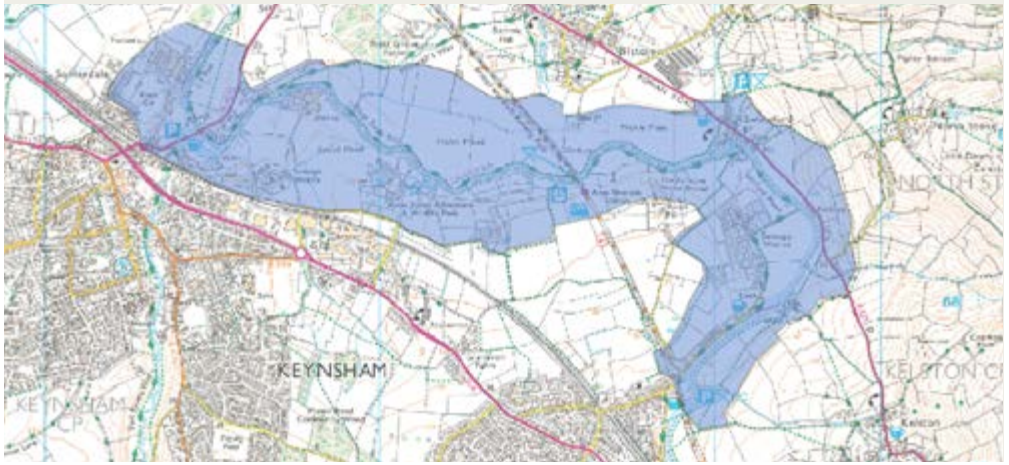
AREA 2: KEYNSHAM

Characteristics:

- Undulating, steep banks with varying degrees of exposure and enclosure
- Small scattered urban settlements and light industrial
- Cadbury's Somerdale Factory re-development is a prominent feature
- Generally small to medium sized fields enclosed by fencing and hedging
- Patchwork of arable and grassland (Keynsham Hams)
- Water habitat areas (Otters)
- Scattered woodland areas
- Wide open valley with a generally flat valley floor

Issues & Opportunities:

- Informal moorings – boats tied to trees
- Lack of pathways – need for extended access along river corridor
- Meeting points of Bristol-Bath Cycle route and the River have the potential to be recreation hubs



CHARACTER AREAS

AREA 3: SALTFORD

Characteristics:

- Patches of arable fields with bordering hedgerows
- A mixture of informal and formal mooring areas
- Light industrial/businesses
- Steeply sloping banks towards the river, with low-lying shrub vegetation and mature riverside trees
- Views open into large areas of grassland with bordering hedgerows
- Riverside recreation & leisure (Saltford Marina, Boat & rowing club, fishing, pubs/ restaurants)
- Small pockets of riverside residential areas

Issues & Opportunities:

- Overgrown areas limiting access and views for local residents to the river corridor
- Steep valley sides limit accessibility
- Lack of pathways and pedestrian access along much of the riverside

AREA 4: NEWBRIDGE

Characteristics:

- Natural river edge with varying slopes down to water level
- Wooded feel – contained and intimate corridors
- Tree-lined banks with wooded slopes
- Semi-rural with glimpses of countryside
- Firm river path with natural woodland appearance
- Leisure activities include: Informal fishing, cycling, walking, rowing

Issues & Opportunities:

- Trading estate buildings, plots & boundary fences baring no relating to the river
- Exposed waste, fencing and parking areas degrade the natural setting
- Engineered, angular river embankments which detract from the surrounding landform
- Surface conditions of path & width

CHARACTER AREAS

AREA 5: WESTON ISLAND

Characteristics:

- Enclosed and intimate Weston Cut Canal
- Well-treed, with trees lining much of the Weston Island
- Naturalised river banks with the exception of the lock weir and island
- Narrow river pathway characterful of the natural area
- Sheet-piling at Weston Island with overhanging vegetation
- Areas of residential mixed with trading estate & impermeable boundaries
- Significant presence of wildlife (birds, fish)
- Leisure activities include: Informal fishing, cycling, walking, riverboats

Issues & Opportunities:

- Deterioration of tree cover
- Trading estates relate poorly to surrounding areas
- Graffiti/ signs of antisocial behaviour
- Narrow paths make cycling and walking difficult
- Surfaces are varied progressing westwards

AREA 6: WINDSOR BRIDGE

Characteristics:

- Open character with views of the countryside and Cotswolds
- More open river valley with relatively well treed feel
- Trees and shrubs line much of the river banks
- Deterioration in tree cover – lacking benefits for wildlife
- Buildings meet closely to the bankside
- Soft and sloping vegetated river banks
- Tarmac path surfacing
- Small-scale residential open spaces (Windsor Villas) with open grassed areas framed with park trees

Issues & Opportunities:

- Little access to right Bank
- Lack of quality spaces for wildlife
- Trading estate poor relationship with river edge
- Access via steep steps adjacent to bridge only
- Narrow Path Width

CHARACTER AREAS

AREA 7: NORFOLK CRESCENT

Characteristics:

- Open area lacking in trees/vegetation cover
- Influenced by redevelopment on both sides of the river
- Overall hard and engineered/urban feel, dominated by the built environment, 3–5 storeys
- Sheet piling on river banks with limited softening vegetation
- Railing and fencing along river edge for safety

Issues & Opportunities:

- Exposed fencing/ walls have strong negative visual impacts
- Lack of habitat provision
- Inconsistent tarmac surfacing of pathways
- Lack of signage
- Safety and waterside isolation in some places
- Lack of views to/from river corridor from surrounding areas

AREA 8: GREEN PARK

Characteristics:

- New path gives good connectivity to Green Park
- Trees lining river boundary form a wooded entrance and exit to the area
- Attractive Georgian buildings set amongst the trees
- Sheet piling on much of the banks with overhanging vegetation

Issues & Opportunities:

- Poor signage
- Poor linkage to surrounding residential areas
- Generally mixed river banks with stone, concrete, sheet piling
- Lack of views to/from river corridor

CHARACTER AREAS

AREA 9: BATH QUAYS

Characteristics:

- Formal public park with tiered steps wide path and trees, recently built to incorporate a flood defence with a new park
- Open views to the water and level access to boats
- Strong sense of industrial history with quality natural green space
- Gradient from natural to urban leading to the city centre

Issues & Opportunities:

- Decreased ecological presence with increased urban development
- Opportunities to increase boat based activity and commerce
- Opportunities to widen the towpath and improve connectivity to green space adjoining Green Park road
- Opportunities to link the large verge into Green Park and provide better linkage between upper and lower levels
- Opportunity to increase urban riverside activities
- River boats and canal interface could be celebrated

AREA 10: NORTH PARADE BRIDGE

Characteristics:

- Soft edged left banks with a steep well-treed slope rising to the city centre
- Eastern bank is hard with stone cladding and a significant level change
- Wide river path promenade, narrower continuing upstream towards Skew Bridge
- Spots of grass/treed banks between the canal and road
- Banks transition into sheet piling and well vegetated
- Backdrop of classical architecture characteristic of Bath
- Tree-lined river corridor with views to the west bank, weeping willows overhang into the river

Issues & Opportunities:

- Lack of ecological connectivity
- Poor entrance/access to the canal
- Dark, overshadowed pathways
- Graffiti and littering

CHARACTER AREAS

AREA 11: PULTENEY BRIDGE

Characteristics:

- Iconic views of Pulteney Bridge and the Pulteney Weir
- From an elevated position the area engages with its backdrop of containing wooded hillsides
- From down the river a greater sense of intimacy and containment formed by riverside trees set back behind paths
- Left bank opens up into Parade gardens, a large well maintained public open space

Issues & Opportunities:

- Poor/ cheap 1970s materials uncharacteristic of the historic views in the west
- Unclear sense of public access: Path interrupted by buildings and fencing
- Limited opportunity for engagement with the river edge: paths raised and offset from water edge with barriers
- Unused waterside areas / under-utilised public realm areas around Pulteney Bridge

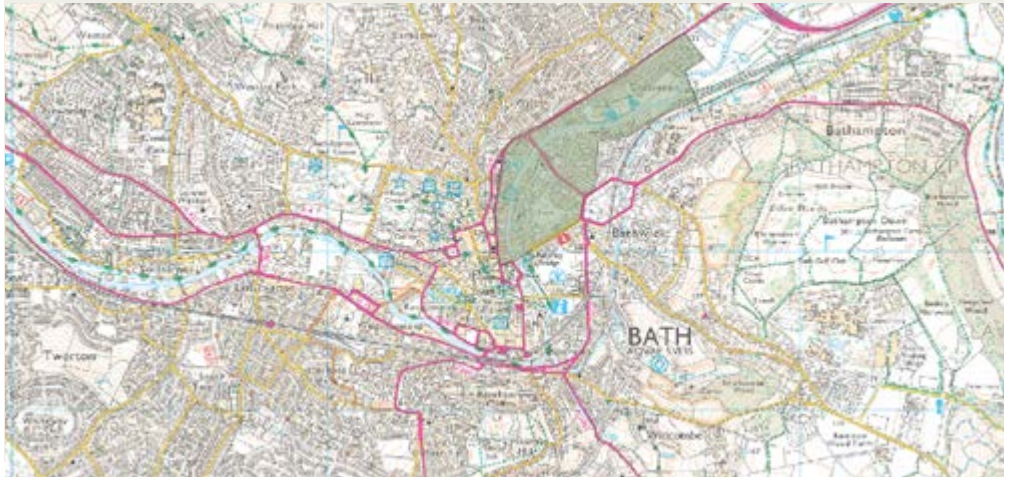
AREA 12: CLEVELAND BRIDGE

Characteristics:

- Commonly experienced through tourist boats due to limited access
- Wooded and contained corridor of increasing rural character
- Strong sense of history and privacy/secrecy
- No public access on right bank, however a small area open to the public on St. John's Road – however visually disconnected
- Bat roost under Cattle Market
- Wooded, soft-edged river banks with overhanging trees provide ideal habitats

Issues & Opportunities:

- Erosion of banks due to increased boat use – habitat damage and reduced tranquillity
- Limited/no public access
- Opportunity to increase visual connectivity to and from the river where the riverside is physically inaccessible
- Opportunities for access using the waterways via river taxi and canoe



CHARACTER AREAS

AREA 13: CITY CANAL

Characteristics:

- Contained, intimate pathways: Narrow but adds character, but difficult for some users
- Strong sense of privacy and secrecy
- Strong presence of history
- Tall stone walls create a strong sense of direction
- Bold, imposing buildings and bridges on steep, artificial banksides
- Southern portion has a strong residential character with private plots meeting up to the canal edge
- Many canal boats, cyclists and walkers

Issues & Opportunities:

- Poor pavement surfacing in southern portions
- Limited access to surrounding areas
- Poor access points from the roads
- Opportunity to improve Canal and River Trust signage and include nearby destinations in Bath City Centre e.g. Sydney Gardens
- Reports of illegal tree works and use of trees for wood burners.

AREA 14: BATHAMPTON

Characteristics:

- The valley opens up into large open fields, exposing distant views of the Costwolds and woodland
- Mix of suburban and rural character entering Bath
- Farming fields on valley sides enclosed by often untrimmed hedges and trees
- East bank predominantly flat grasslands with steeper, more undulating topography on the west bank
- Recreational fields (King Edward's pavilion and playing fields)
- Wetland/Oxbow lake and woodland nature reserve

Issues & Opportunities:

- Enhance signage – no directions to surrounding settlements, distances etc
- Limited access to riverside and weir due to private land
- Somerset canal moorings

AREA 15: CLAVERTON & DUNDAS

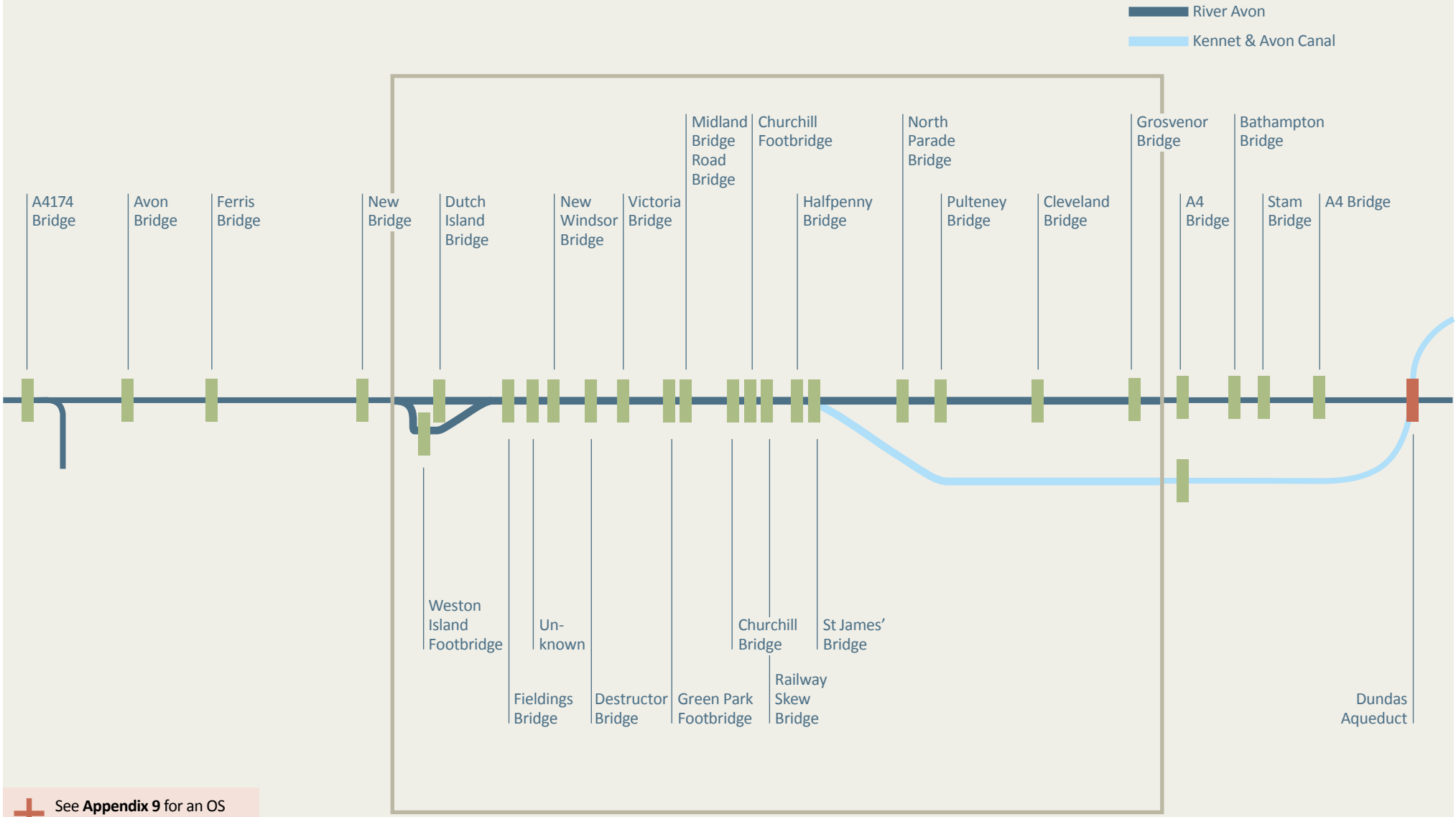
Characteristics:

- Large, dense ancient/semi-natural woodland conceal pathways and canal, blocking views down to the river
- Enclosed and intimate woodland areas
- Many formal and informal mooring sites
- Distinctive canal architecture (Dundas Aqueduct & bridges)
- Steep valley sides with large patches of ancient/semi-natural woodland leading down from the canal to the river
- Small residential and farm settlements on valley sides

Issues & Opportunities:

- Damage at Dundas Aqueduct: Crumbling stone edges, weathered furniture
- Poor waste disposal from moorings
- Inconsistent signage
- Informal moorings with no provisions dominate place with associated bankside clutter
- Opportunity to wayfind to connect to Bath and Bathampton

RIVER AVON BRIDGE NAMES



See **Appendix 9** for an OS Map with all bridge names in the Study Area.

HISTORY

Bath's River and Canal have historically shaped the City's growth. There is now a real opportunity to make the River Avon a significant part of City life once more.

KENNET AND AVON CANAL

The Kennet and Avon Canal is a 140 km long waterway that links the Bristol Channel with London, via the River Avon, River Kennet and River Thames.

The Kennet and Avon Canal was built as a safer solution to transporting goods across the breadth of the country. A combination of Atlantic storms along rugged coastlines and naval conflict with France meant that the sea route from London to Bristol was hazardous during the 18th and early 19th centuries. Bath's distinct Georgian architecture was reflected in many aspects of the canal design.

RIVER AVON

Avon is a cognate of the Welsh word for river, *afon*.

The River Avon is 121 km long overall, stretching from its source in South Gloucestershire to the Severn Estuary. The stretch of the River Avon between Bath and Bristol had been navigable since the early 13th century. However, due to the development of watermills it had been forced to close. It was reopened again in 1727 after the introduction of a Parliamentary Bill in 1712.

The River Avon has always been seen as an integral part of the city's character. As well as being a strategic trade route, the river provides areas for relaxation and leisure activities. In the past, the river was the setting for regattas and other entertainments. Downstream, a legacy of distinctive waterside warehouses have been left post-industrial development. Despite previous uses, the riverside environment is currently an underused asset, especially within the city centre. It has great potential to significantly contribute to the Bath's future.

1600s

Saltford Mill: It is thought that the site of Saltford Mill has been used since the time of the Domesday record when two watermills were listed in Saltford. Due to bankruptcy, the mill ceased working in the late 1600s.

1712

A Parliamentary Bill enabled the Bristol to Bath section of the Avon to be made navigable.

1718

Construction of the Kennet and Avon Canal began.

1720s

Avon Street & Milk Street: In the 1720's the first buildings were developed in Kingsmead when Avon Street was laid out as a fine row of houses. However, it quickly declined and the slip at the end became a place for watering horses.

1721

Saltford Mill: The brass company is known to be in occupation from 1721 and from then many additions and alterations have taken place.

1766

New Quay (known as 'Narrow Quay') was created but was little more than a line of warehouses built along the towing path.

1729

Bath's Town Quay was built.

1727

Avon Navigation from Bristol to Bath reopened.

1723

Kennet Navigation from Newbury to Reading opened.

1790

Green Park: At the western end of Kingsmead Meadow, Green Park was created to take advantage of the river views.

1794

The Kennet and Avon Canal Act received Royal Assent – Construction began.

END OF THE 18TH CENTURY

Avon Street & Milk Street: end of the 18th century Kingsmead became absorbed into the hinterland of the rougher Quay areas.

HISTORY

1800

South Quay – The Lower Road to Bristol, below the Old Bridge (now replaced by Churchill Bridge) was an ancient route, but nothing was built alongside the south riverside until the early 19th century. In 1800 a group of houses stood at the foot of the bridge and further along there was a rope walk.

1801

Trading along the canal commenced.

1804

Canal section from Bath to Foxhangers completed.

1805

The quays provided premises for a diverse range of businesses.

1805

Dundas Aqueduct completed.

1810

Canal section from Bath to Newbury opened.

1818

Coal and stone were the main goods being transported along the canal and by 1818 seventy 60-tonne barges were carrying freight on the canal.

1826

Cleveland House was the Headquarters for the canal company, built by the Duke of Cleveland.

1830

South Quay – Towards Sydenham Mead a series of fine villas were built opposite Green Park in the 1830's.

1830s

Leisure and Recreation: Daily passenger steam boats travelled to Bristol.

1841

Despite offering competitive tariffs, the use of the canal started to decline from 1841 as a result of the opening of the Great Western Railway.

1857

In 1857 the first large scale building to be built next to the river was the Stothert & Pitt crane works, known as Newark Works. Many of Newark Works buildings have been retained including Fuller's 1857 Machine shop.

1870s

Further along is the Camden Flour Mill built in the 1870's and know later as the Recommissioned Mill. Both buildings have been converted into offices and residences.

1890

Beyond Stothert's Works the villas opposite Green Park were progressively replaced after the 1890's by extensive stone and timber yards known as Sydenham Wharf which grew up next to Midland Bridge. The timber stores of a builder's merchant still occupy this site overlooking the river today.

1892

Demolition of buildings: View of the long demolished buildings along the river.

1900

Industrial buildings towards the Churchill Bridge, such as the Bath City Wagon Works and the Camden Bridge Works were cleared away in the early 20th century.

1905

Leisure and Recreation: Warleigh Ferry

c.1910

Leisure and Recreation: Children fishing on the Kennet and Avon Canal.

HISTORY

1913

Caroden Malthouse concrete silos were added in 1913. The silos were considered a model for grain storage at the time.

1918

North Quay – Trade declined after WWI and although many businesses continued to operate after WWII the quay side was no longer used.

C. 1920

Leisure and Recreation: Pleasure boat on the Kennet and Avon Canal near Avoncliff.

1930s

Avon Street & Milk Street: By the Efforts were made to deal with this notorious slum in the 19th century and the whole district was eventually cleared in the 1930's.

1960s

North Quay served as a carpark until it was demolished in the 1960's.

1960s

Green Park East: The eastern terrace was damaged during WWII and was eventually removed for the construction of the ring road in the early 1960's. During this process the bend in the river was removed and the spoil produced a high bank overlooking the tow path.

1962

Kennet and Avon Canal Trust formed.

1962

Gondola at Pulteney Bridge.

1993

Leisure and Recreation: Swimming at Pulteney Weir as part of the Bath triathlon.

1970s

Development and Regeneration: Construction of Churchill Bridge and the ring road.

1972

Leisure and Recreation: Having been used to fishing standing directly on the old weir, children sample the fishing from the banks opposite Grand Parade, following the completion of the flood defence scheme. The Hilton Hotel (Beaufort) can be seen being built in the background.

Pre-1973

Leisure and Recreation: Fishing on the Kennet and Avon Canal.

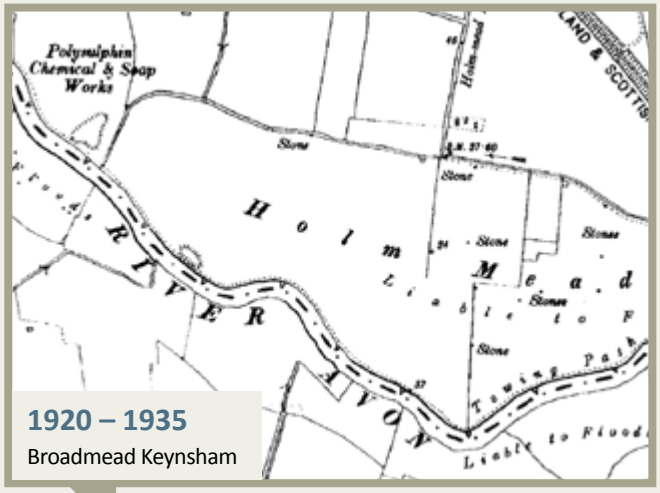
c. 1970s

Leisure and Recreation: Swimmers in Pulteney Weir.

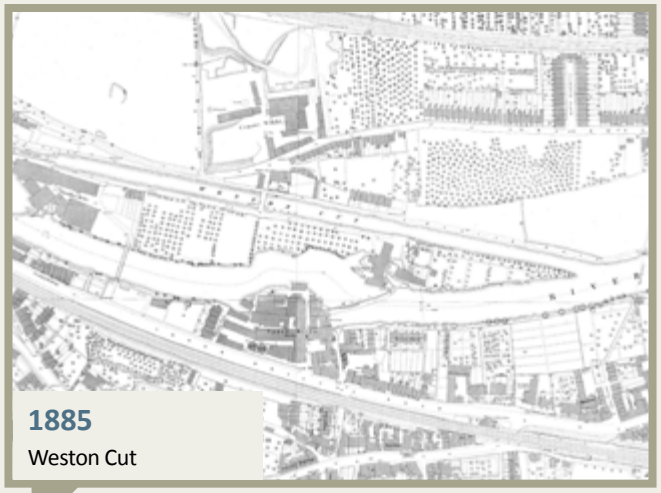
HISTORY

River Avon

Kennet & Avon Canal

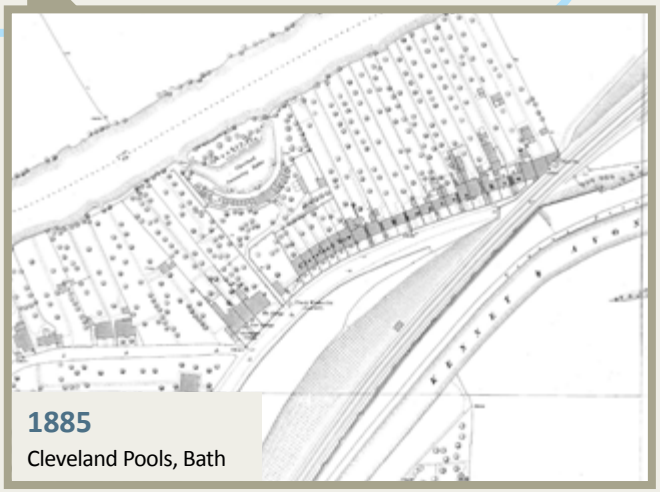


1920 – 1935
Broadmead Keynsham



1885
Weston Cut

1935 – 1939
Saltford



1885
Cleveland Pools, Bath

BRISTOL AVON CATCHMENT AND FLOOD MANAGEMENT

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FLOOD MANAGEMENT 48
ADAPTATION AND RESILIENCE FRAMEWORK 50

BRISTOL AVON CATCHMENT PARTNERSHIP

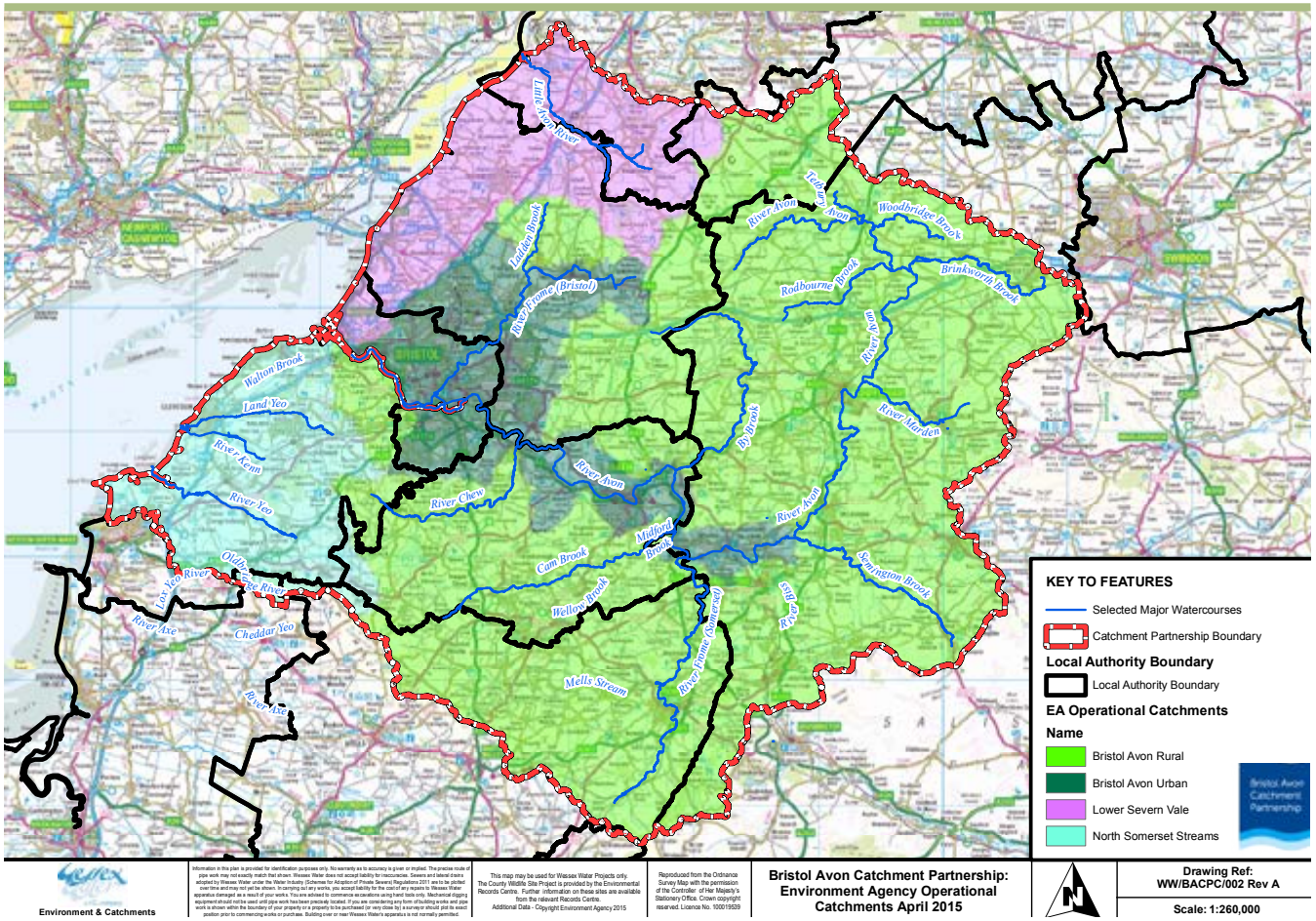
The WaterSpace Study is one of a number of active projects supported by the Bristol Avon Catchment Partnership.

The Bristol Avon Catchment comprises and area of 2810km^2 and drains parts of Gloucestershire, Wiltshire, Somerset and the West of England.

The upper reaches are rural, with significant arable agricultural activity on the higher ground and livestock on the lowland pasture. As the Avon flows towards the Severn Estuary, the river meets urbanised land (Bath and Bristol).

The Bristol Avon Catchment Partnership comprises a range of organisations, groups, authorities and individuals dedicated to working together to improve the water environment and provide wider benefits for people and nature at the catchment scale. The partnership's vision:

"The Bristol Avon Catchment is in good health, has Good Ecological Status and is recognised as a valuable asset to society and the local economy."



The six major issues at the Bristol Avon at a catchment scale are identified as:

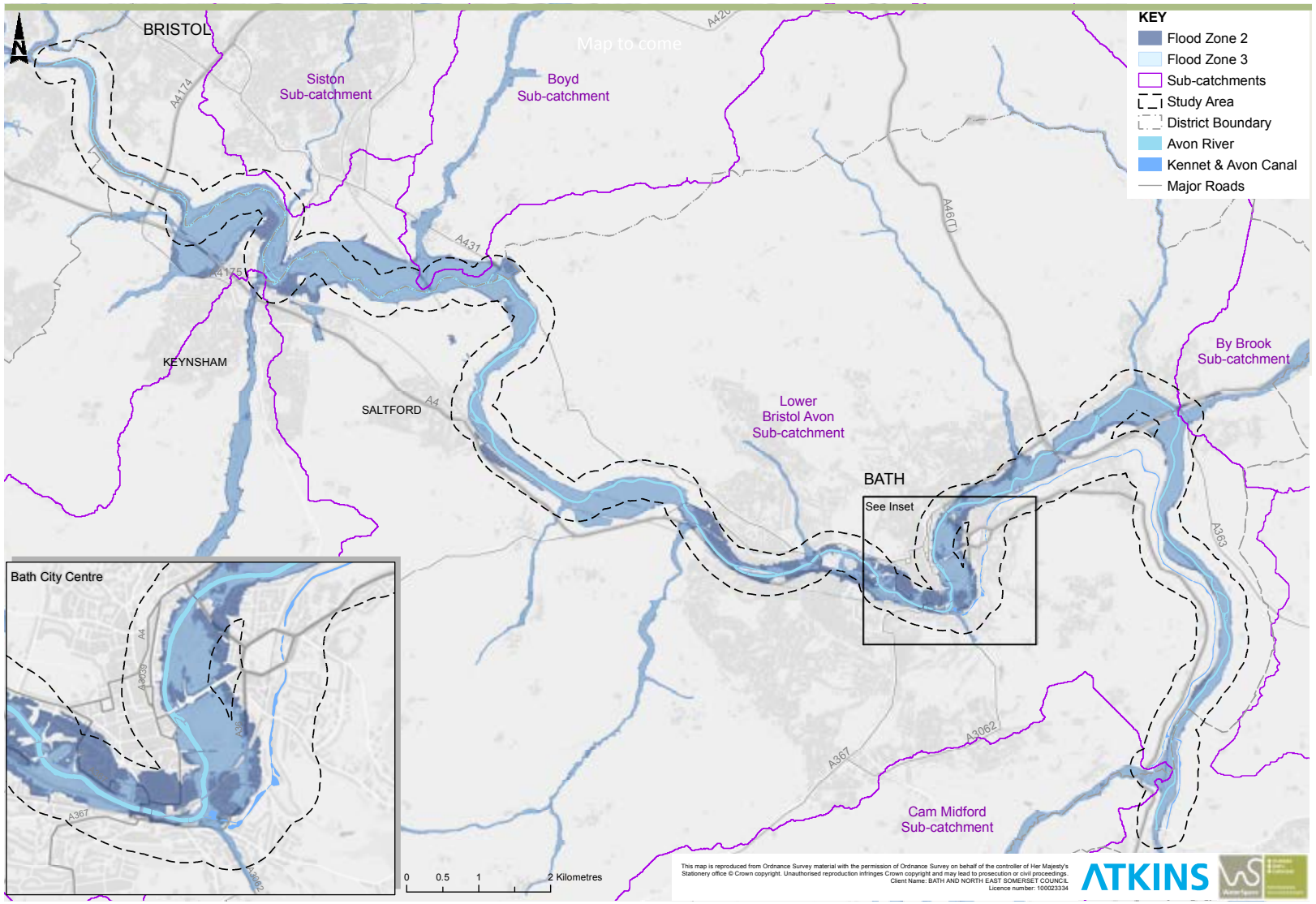
Issue	Problem associated with…
1. High Phosphate levels	• Treated sewage discharges and sewage overflows • Urban diffuse pollution including misconnections • Agricultural/sediment run-off
2. High sediment loading	• Rapid run off from agricultural land
3. Flooding	• Rapid run-off from compacted rural land • Rapid run-off from urban hard surfaces
4. Low river flows	• Abstraction for water supply • Poor upstream water retention and aquifer recharge
5. Reduced natural habitat	• Poor riparian habitat • Highly modified channels • In-stream barriers preventing fish migration • Increase of invasive non-native species
6. Climate change	• Overarching pressure – more extreme weather resulting in flooding and droughts within the catchment

FLOOD MANAGEMENT

The Environment Agency manage fluvial flood risk in Bath & North East Somerset and have a strategic overview of flooding from all sources. They work in partnership with Bath & North East Somerset Council to plan future work in the area. B&NES Council is the Lead Local Flood Authority for matters relating to surface water flooding and drainage.

Strategic flood management is outside of the scope of the WaterSpace Study, and there are separate projects looking at flood defences, flood risk management and upstream storage. The Strategic Flood Risk Assessment shows areas at risk of flood risk, and defines flood zones 1-3, with climate change flood risk will increase.

All WaterSpace Study projects need to consider the impact of flood risk, and should increase resilience to flood through their design.



FLOOD MANAGEMENT

MANAGING FLOOD RISK

In addition to site specific flood remediation works, being undertaken on development sites, two strategic flood defence projects are currently underway in Bath:

TWERTON & PULTENEY WATER LEVEL CONTROL GATES

Following a full options appraisal looking at different flood management solutions and their feasibility and cost, the Environment Agency, together with B&NES Council are funding the development of a Business Case to take forward a project which will maintain and repair Bath's two flood gates at Pulteney and Twerton. This will enable the flood defences to maintain their current performance, the whole Bath flood defence scheme reduces flood risk to approximately 1100 properties. The detailed Business Case aims to unlock up to £5m funding from Flood Defence Grant in Aid, to deliver the capital works needed.

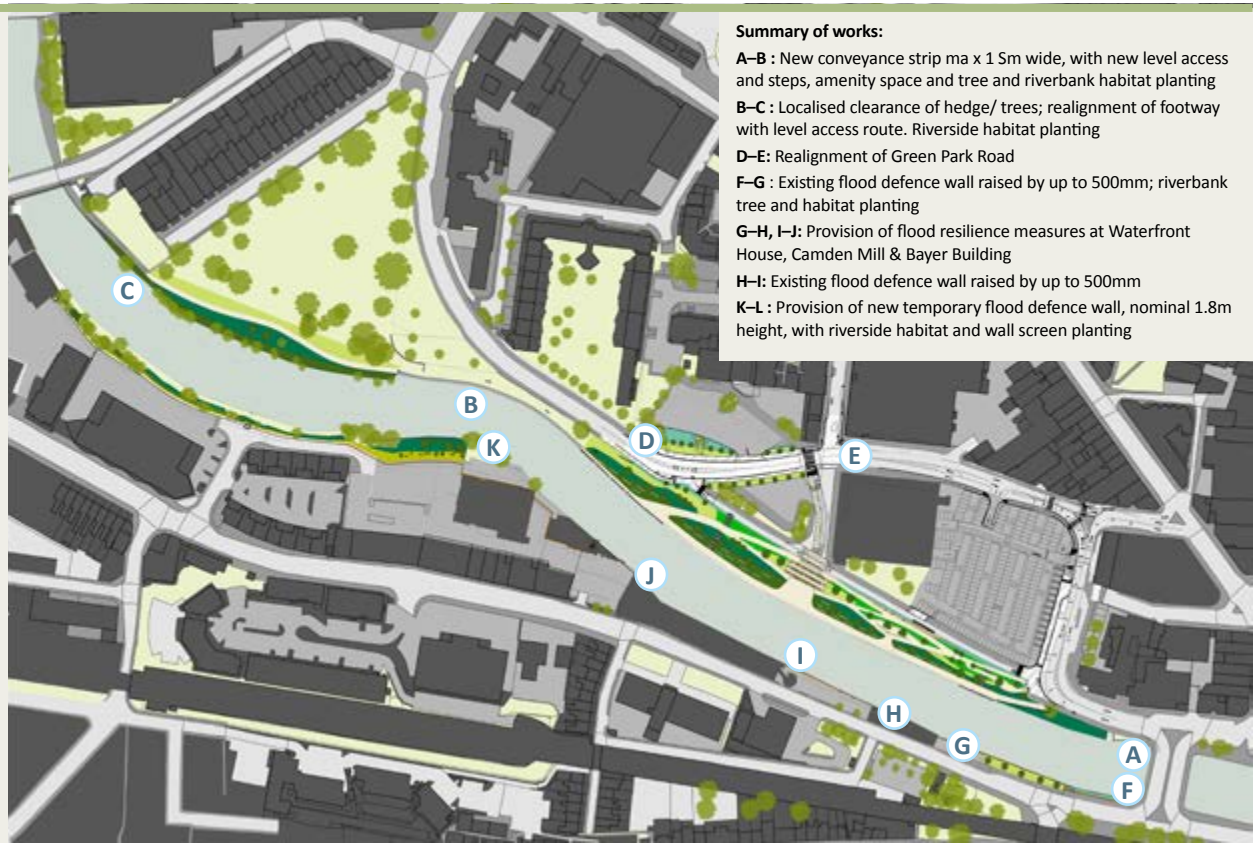
Pulteney Water Level Control Gate

Twerton Water Level Control Gate

BATH QUAYS WATERSIDE

Flood mitigation and defence works to the north and south banks of the River Avon between Churchill Bridge and Midland Bridge. These interventions will reduce flood risk to the Lower Bristol road and over 100 residential and commercial properties on the south side of the river. The scheme also provides the flood mitigation to enable the redevelopment of Bath Quays and Manvers Street sites in order to realise these key regeneration projects.

The scheme is being delivered by B&NES Council in partnership with the Environment Agency. The design includes upper and lower level promenades, natural landscaping and a large riverside public space.



Summary of works:

A–B : New conveyance strip ma x 1 Sm wide, with new level access and steps, amenity space and tree and riverbank habitat planting

B–C : Localised clearance of hedge/ trees; realignment of footway with level access route. Riverside habitat planting

D–E: Realignment of Green Park Road

F–G : Existing flood defence wall raised by up to 500mm; riverbank tree and habitat planting

G–H, I–J: Provision of flood resilience measures at Waterfront House, Camden Mill & Bayer Building

H–I: Existing flood defence wall raised by up to 500mm

K–L : Provision of new temporary flood defence wall, nominal 1.8m height, with riverside habitat and wall screen planting

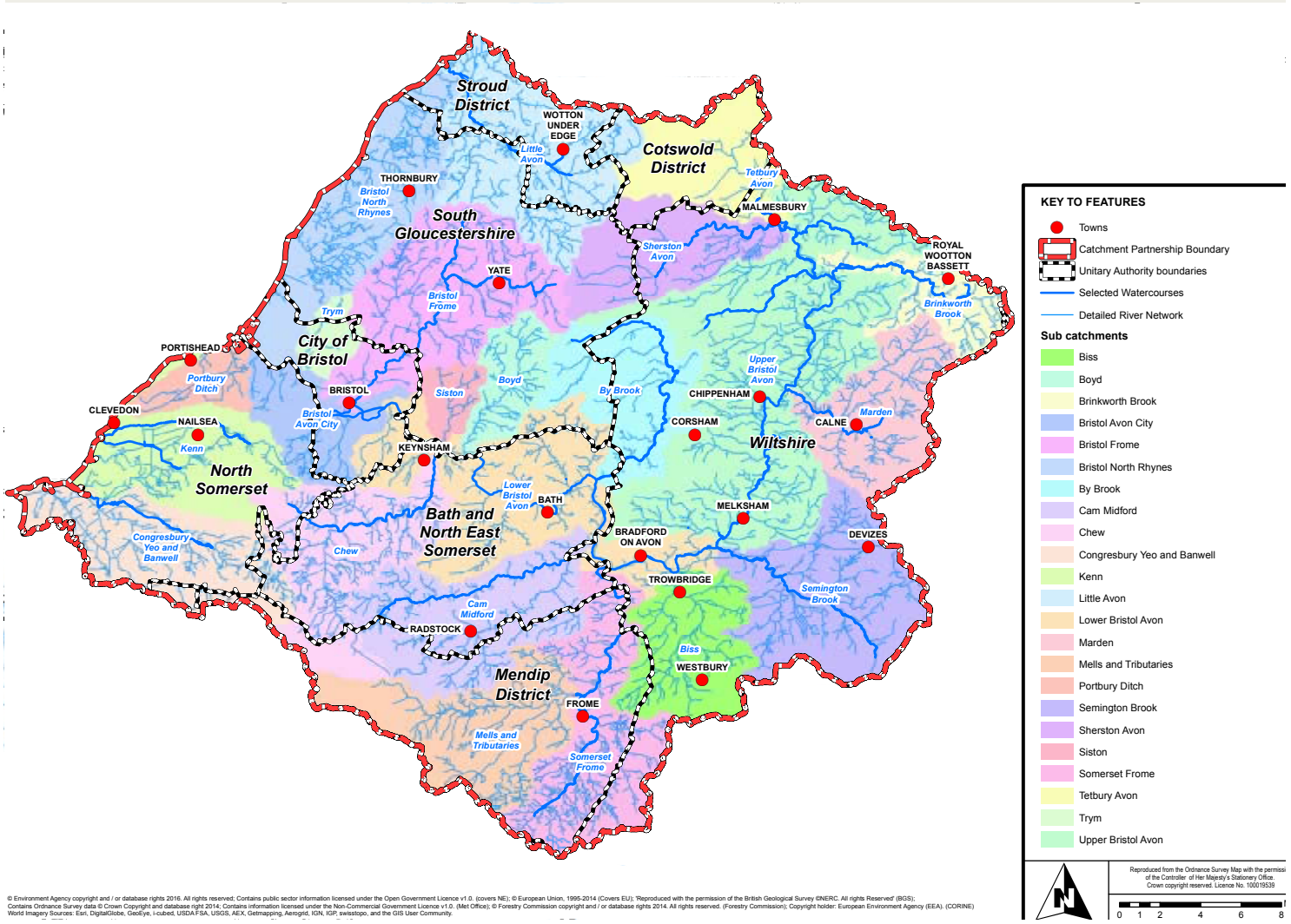
ADAPTATION AND RESILIENCE FRAMEWORK

The aim of the framework is to work collaboratively to develop a Catchment Adaptation & Resilience Plan for the Bristol Avon Hydrological Catchment.

The region must adapt to the increasing risks of climate change, including more severe and frequent storms, increased rainfall events and high temperatures. Through this framework investment and spatial planning actions will be identified to support opportunities for adaptation and resilience included reducing the impact of flood risk on infrastructure.

The approach is being piloted in South Gloucestershire and Bristol, with a view to enabling greater integration between sectors, and forward planning of adaptation measures at a sub-regional scale.

SUB CATCHMENT



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FIVE STUDY THEMES

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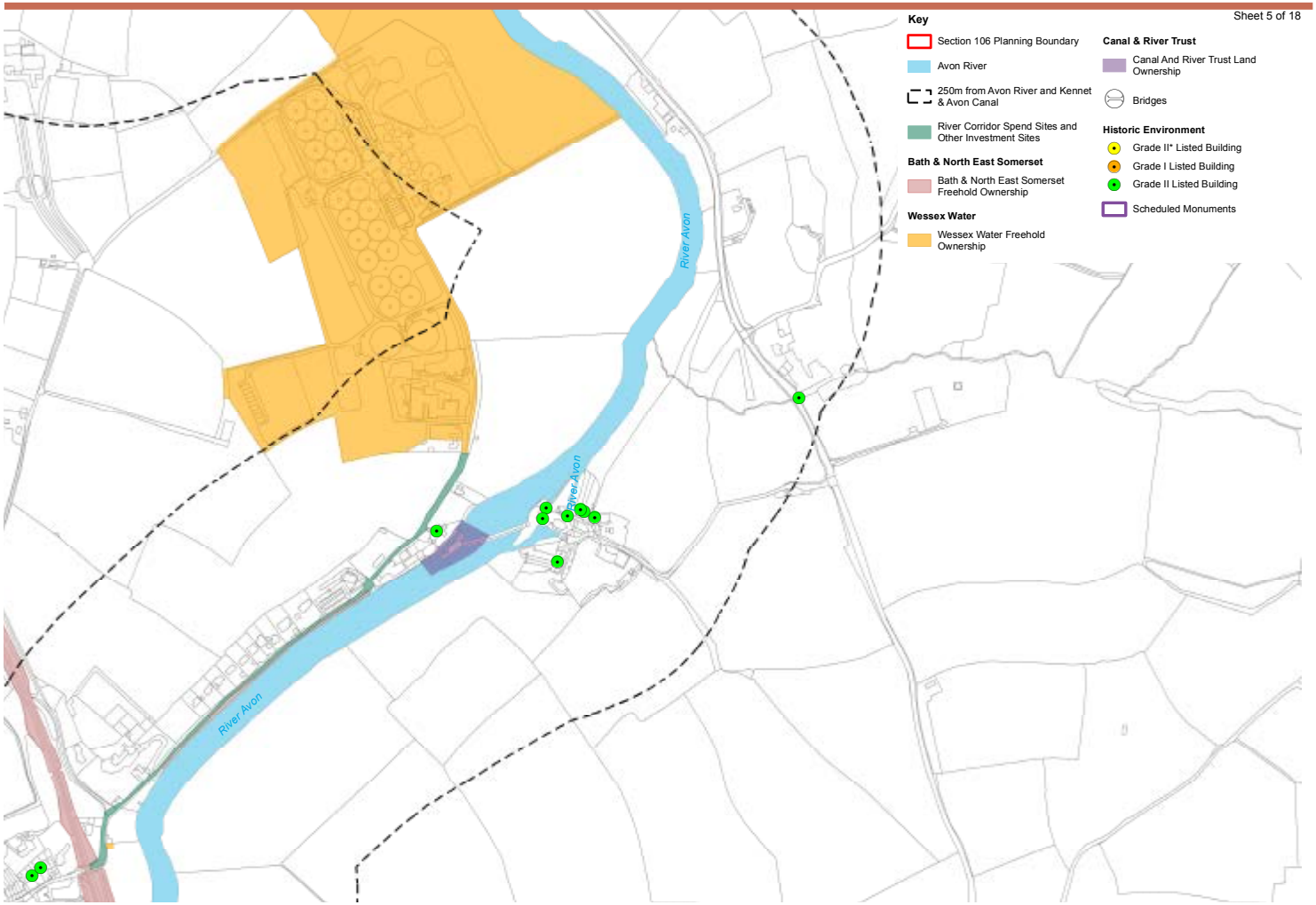
THEME 1: ASSETS & ASSET MANAGEMENT

The assets and land ownership of the study partners have been mapped, so that projects which have a direct influence on these could be identified.

As part of this Study, the four partners have collated and combined their asset maps for the first time. Assets include freehold land ownership (buildings, green spaces and towpaths), features such as locks, weirs and fish passes, information on river edge treatment (e.g. natural bank, stone lined bank, steel sheet piling etc.) as well as river safety features and historic assets (the latter also includes private ownerships).

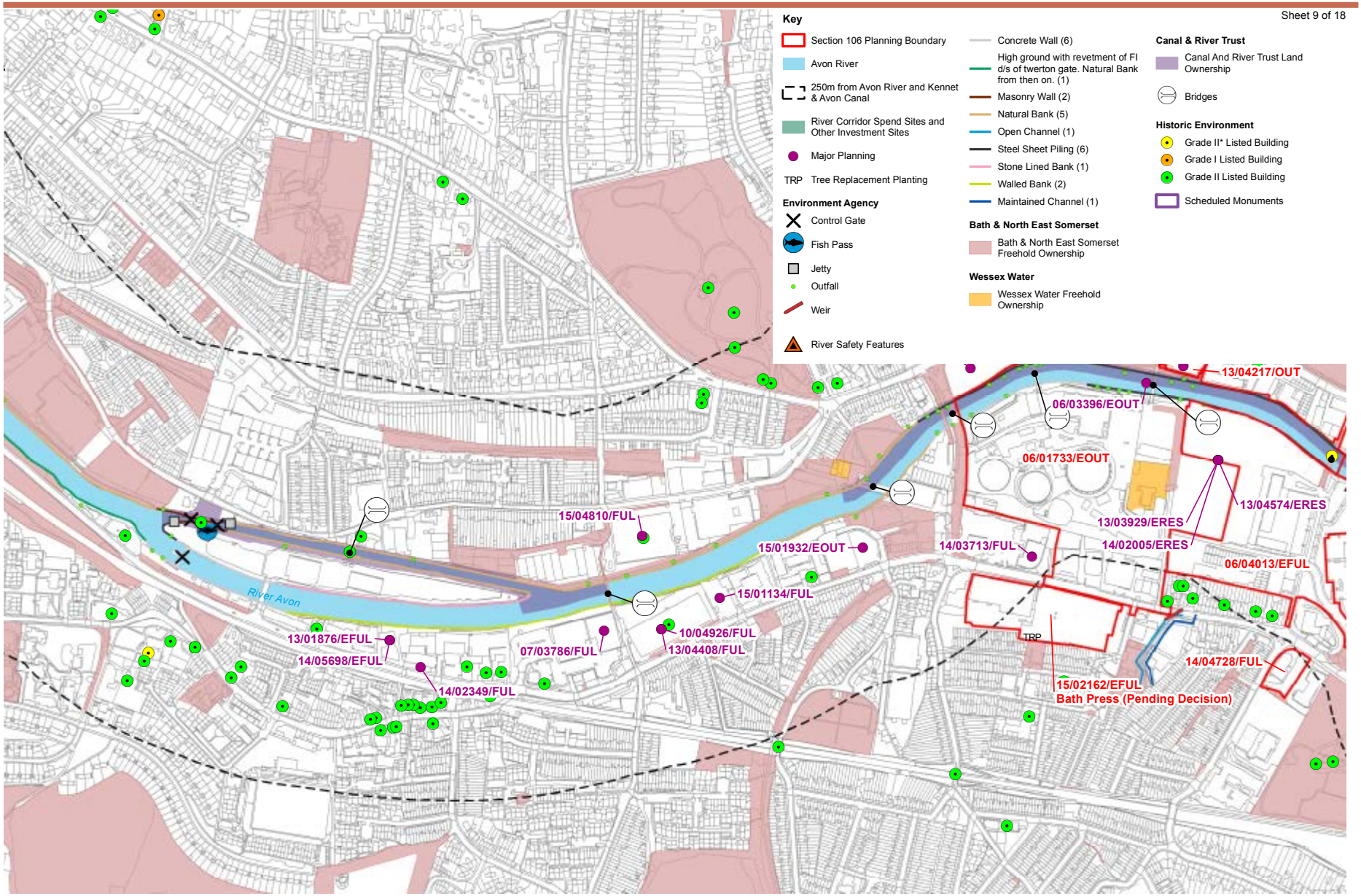
Where landownership is on the river edge the land is often owned to the centre of the River (known as riparian ownership). In many cases the partners are riparian owners. In some stretches of the river, for example between Bathampton Weir and Pulteney Bridge there is limited public ownership and there are a large number of private landowners. Private landownership has not been mapped, due to the number of landowners involved. In addition not all riparian land ownerships are declared on the land registry.

+ The full maps are included as **Appendix 1** to this report.



Example section of asset mapping for Saltford.

THEME 1: ASSETS & ASSET MANAGEMENT



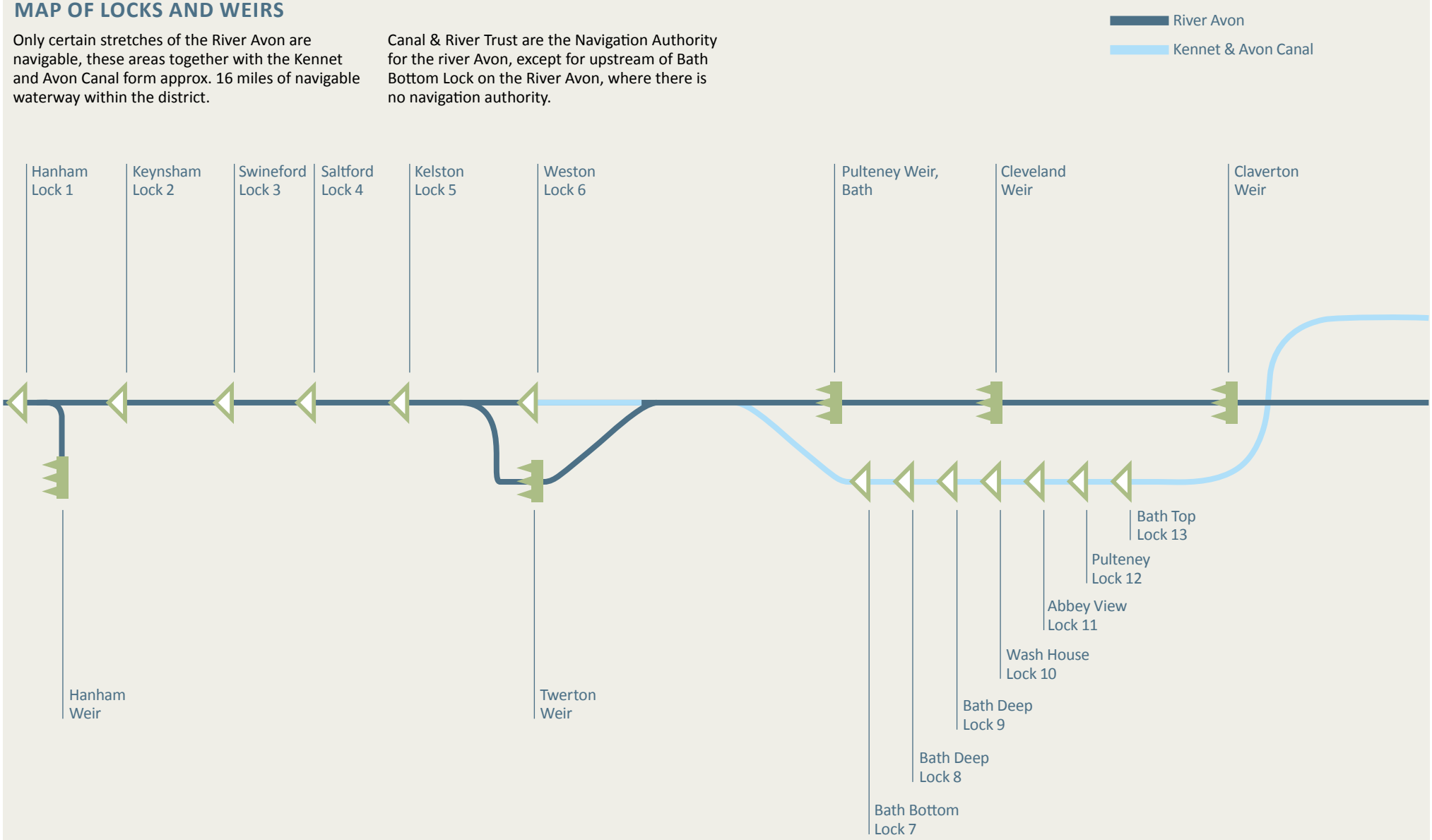
Extract of Assets Map for the River Avon in west Bath

THEME 2: MOORINGS & NAVIGATION

MAP OF LOCKS AND WEIRS

Only certain stretches of the River Avon are navigable, these areas together with the Kennet and Avon Canal form approx. 16 miles of navigable waterway within the district.

Canal & River Trust are the Navigation Authority for the river Avon, except for upstream of Bath Bottom Lock on the River Avon, where there is no navigation authority.



THEME 2: MOORINGS & NAVIGATION

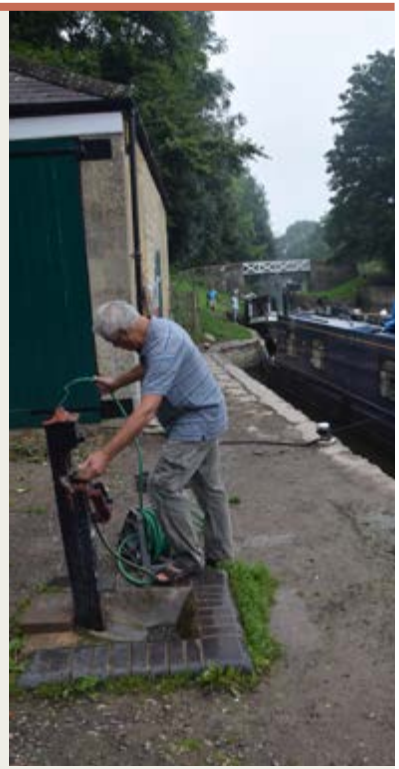
Data in relation to moorings and boat numbers has been collated to better understand the existing provision for moorings in the Bath & North East Somerset area.

Marinas within the district are relatively small in nature, all being under 100 berths. However, larger large marinas are located nearby at Caen Hill in Devises (250 berth) and at Bristol Marina (100 berth), which have an impact on the waterways in Bath & North East Somerset.

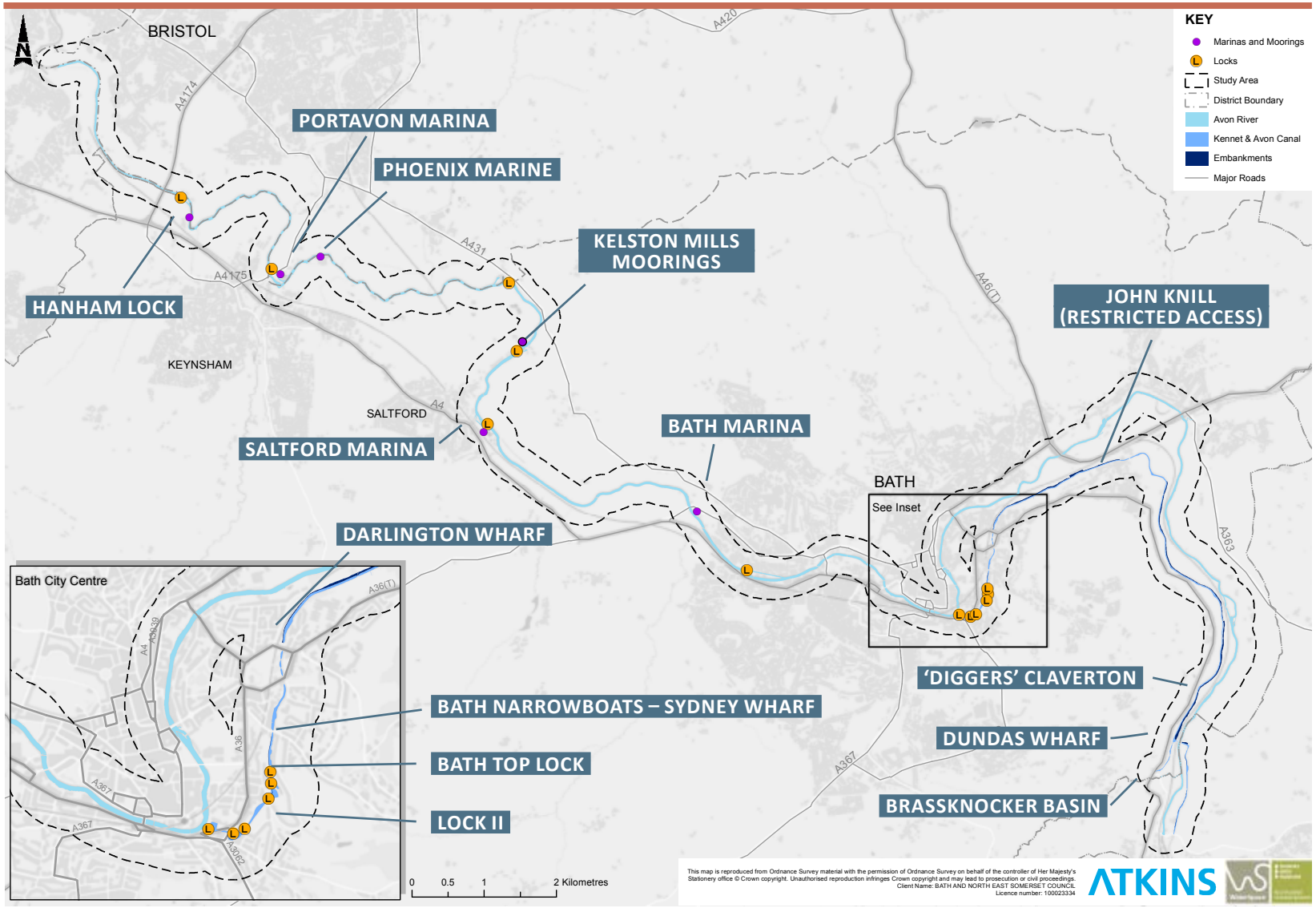
Whilst all of existing marina within the district have a leisure focus, they also provide some residential moorings. All Marina operators have reported that marina berths and associated online moorings are in demand and there is very little or no under-occupancy. However, this results in some boats rarely leaving the marinas and for some facilities such as slipways being blocked from active use. Limited availability of visitor moorings on the waterways is also contributing to inactivity on the waterways.

While online moorings predominate on the Kennet & Avon Canal lining the towpaths and in places the of-side, there are very few online moorings on the River. Furthermore, online moorings on the Canal are casual moorings where you can moor for up to 14 days. While there are online leisure moorings at Bathampton & Claverton, there are no online residential moorings on the Kennet & Avon Canal.

Evidence gathered from the boater survey and interviews suggests an increasing demand for moorings for larger vessels, which can only be readily accommodated on the River. The interviews with commercial operators also suggest there is unmet commercial demand for increased pontoon moorings on the River (which are safe when the river is in spate). The balance of 24/48 hours visitor moorings, 14 day moorings and commercial mooring spaces for business boating was an issue commonly raised by stakeholders throughout this study.



THEME 2: MOORINGS & NAVIGATION



Map to show Location of Marina and Long-term residential mooring capacity (Canal & River Trust, 2017).

MARINA & MOORING CAPACITY SUMMARY

Bristol Marina
100 pontoon moorings

Portavon Marina (South Glos/B&NES border)
78 berths

Chandos Marina
35 residential berths

Phoenix Marina
35 residential berths

Kelston Mills
A few online moorings

Saltford Marina
85 berths, some residential

Bath Marina
42 berths, some residential

West of Bath Circa
80 moorings in private ownership

Caen Hill Marina (Devises)
250 berths

Hilperton Marina
65 berths

4x Canal & River Trust online mooring sites – K&A Canal
35 berths

Canal & River Trust Estimated additional moorings (private ownership)
150 berths

THEME 2: MOORINGS & NAVIGATION

Annual boat count figures for Bath & North East Somerset show that the number of boats on the waterways has remained relatively static over the last 5 years. However, the influx of hire boats in the summer months is not captured in the annual boat count, which takes place each March. The hire boats typically remain on the canal or within Bath, due to both inexperience and lack of River moorings and facilities between Bath and Bristol.

The WaterSpace Study has not undertaken a separate summer boat count, Local Planning Authorities are awaiting the regulations associated with the new duties in the Housing & Planning Act 2016 in relation to houseboats, which it is thought will outline the requirement for future boat counts. The publication of the guidance has been delayed; however, discussions are ongoing with adjoining authorities in particular Wiltshire and Bristol on this matter.

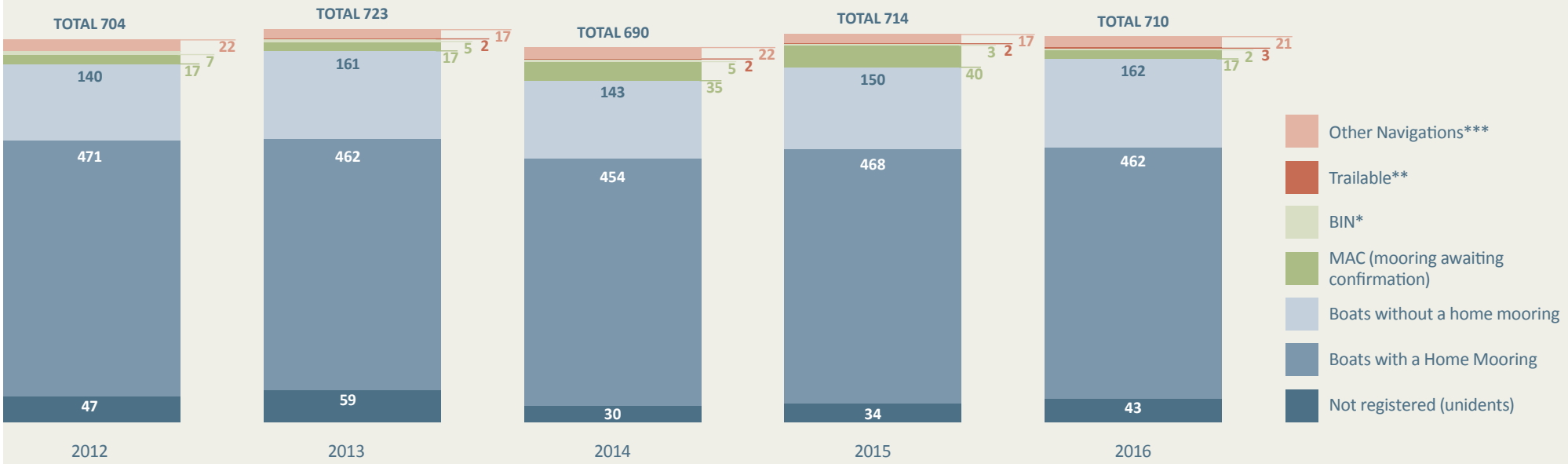
Data supplied by the Canal & River Trust (2016)

**BIN refers to boats we have been unable to identify – they are normally boats that are from other waterways.*

*** Trailable is boats that are taken out of the water after they have been used*

**** Other navigations means the boats have a home mooring on another navigation (not Canal and River Trust)*

BATH & NORTH EAST SOMERSET AREA NATIONAL BOAT COUNT FIGURES



THEME 2: MOORINGS & NAVIGATION

BOATER FACILITIES

This map identifies key facilities in Bath and North East Somerset area used by boaters, a length of approximately 16 miles of navigable waterway. It is noted that outside of the study area there are no more facilities heading east before Bradford Wharf, which is four miles outside the study area and above Bradford Lock. Heading west there are no further facilities until Bristol Floating Harbour which is six miles outside the study area, and requires a separate boat licence.

Estimates of the number of vessels on the waterway in B&NES/between Bradford Lock and Bath vary and are not readily comparable, however it is reasonable to assume that the facilities identified are the main services to between 300 and 500 boats, excluding marina based boats and hire boats, which may also need to use these services when away from their moorings

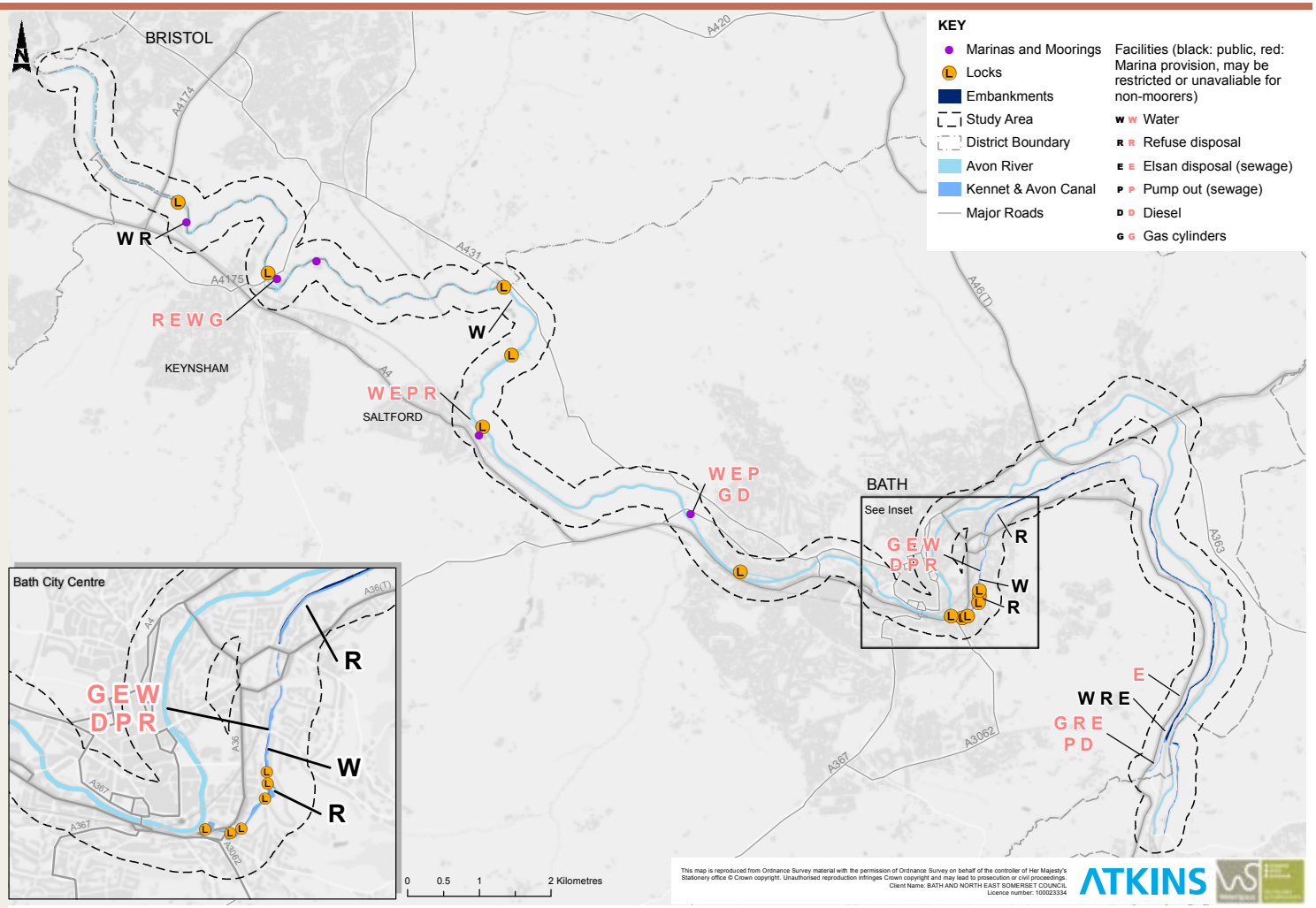
The following have been identified on the map

- 8 water points, of which 1 is seasonal and 5 are on business premises for business customers
- 8 refuse disposal points, of which five are on business premises
- 6 Elsan points, of which 5 are business related
- 5 pump out points, of which 4 are business related

With regards to year round availability of public facilities, there is 1 water point and 1 refuse disposal point on the river, even though this forms 11 miles of the 16 miles of waterways within Bath & North East Somerset.

In effect, the length from Bradford to Hanham is served by three permanent public water points, three public refuse disposal points and one permanent public elsan point – there are between 300 and 500 boats seeking to use the facilities.

Pump out facilities are also very limited, however, but those with pump-outs are more likely to be willing to use marinas and can go much longer between disposal opportunities – typically weeks rather than days.



Map to show Boater Facilities within Bath & North East Somerset Area by type (Primary Data Collected by Moss, Naylor Young, 2016).

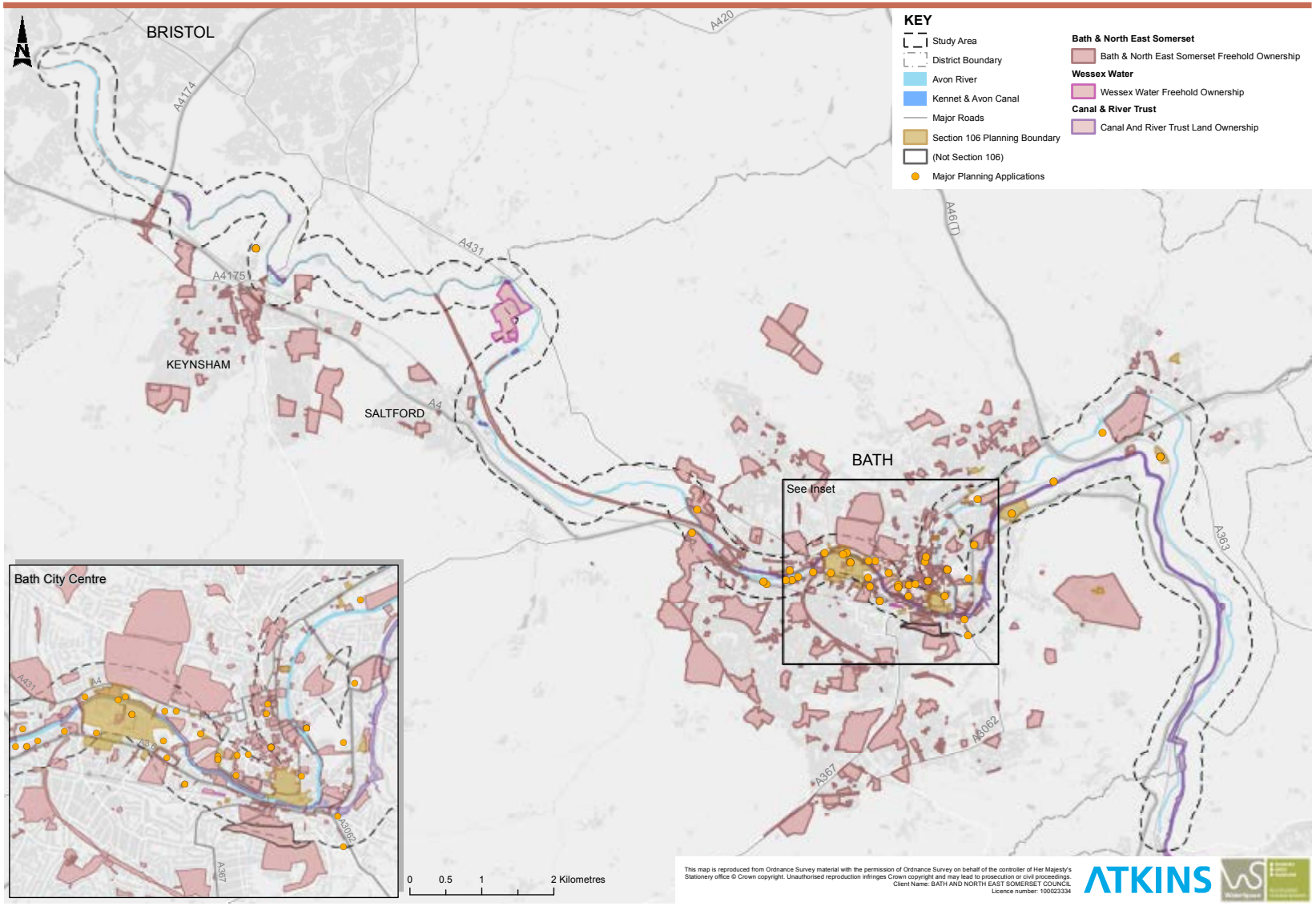
THEME 3: REGENERATION & DEVELOPMENT

The River Avon corridor within Bath is the focus for significant regeneration and development.

The current levels of major development within the River Avon corridor are significant, as illustrated (right) which illustrates both the location of major planning applications made in the last three years, and the sites which have facilitated planning obligations (also known as s106) where contributions have been made towards waterways related items.

Developer funding includes monies towards new bridges, towpath improvements, green space contributions (capital and maintenance) and sustainable transport contributions.

Appendix 1 & 10 include more detail on developer contributions and development sites.



Major Planning Applications that have been made in River and Canal Corridors 2013- 2017 (B&NES Council, 2017).

THEME 3: REGENERATION & DEVELOPMENT

The Bath Enterprise Zone follows the river corridor, where former derelict land and land in industrial use is being transformed with mixed use development, new flood defences and the creation of riverside public spaces and parks.

The Bath Enterprise Zone includes 98 hectares of land that follows the line of the River Avon through the city. It has been recognised as a key zone for growth in the city by the West of England Local Enterprise Partnership, and the area will provide accommodation for high value business sectors as well as providing significant levels of housing development and associated public open spaces and mixed use development.

An Enterprise Zone Masterplan Vision was produced in 2014, which sets out the aspirations for the Enterprise zone and outlines the key development sites.

One of the overarching aims of the regeneration and development strategy is to reveal the river and improve public spaces, as well as retaining a dark corridor to support the significant wildlife functions of the River Avon.

The Council has set out standards and parameters for public realm design, within central Bath both Bath Public Realm and Movement Strategy and the Bath Pattern Book (parts 1 and 2). The associated Lighting Strategy also has an influence bearing on future plans for public realm design in the river corridor. In respect of the River Corridor, the public realm design parameters:

- City centre river railings should be painted black
- River Safety Cabinets should follow the bespoke design and siting guidelines

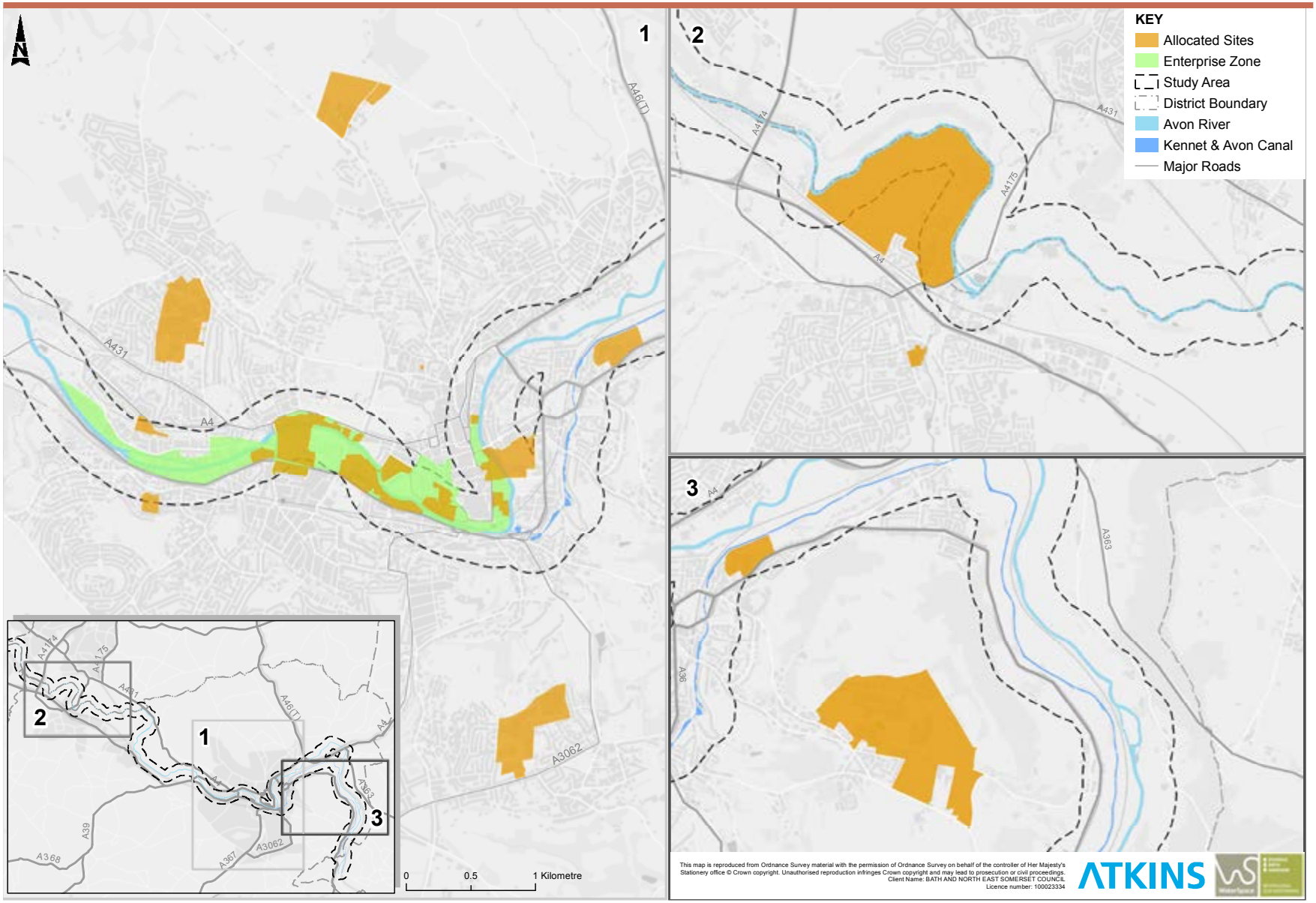
Many of the WaterSpace Study projects relate to development and public realm improvements and investment presented through development and regeneration projects.

The Bath Pattern Book includes outline designs for Riverside areas in Bath including Pulteney Bridge area (see Projects section of this Study for more information).

In addition, B&NES Placemaking Plan (2016) has incorporated the public realm and design aspirations from the Bath Public Realm and Movement Strategy and the Bath Pattern Book into the Planning Policy for key site allocations.

Recent waterside development in Bath has included development at Bath Riverside which has included new visitor moorings, flood attenuation, pocket parks and towpath upgrades.

THEME 3: REGENERATION & DEVELOPMENT



The Bath Enterprise Zone, together with Allocated Development Sites from the B&NES Local Plan (B&NES, 2017).

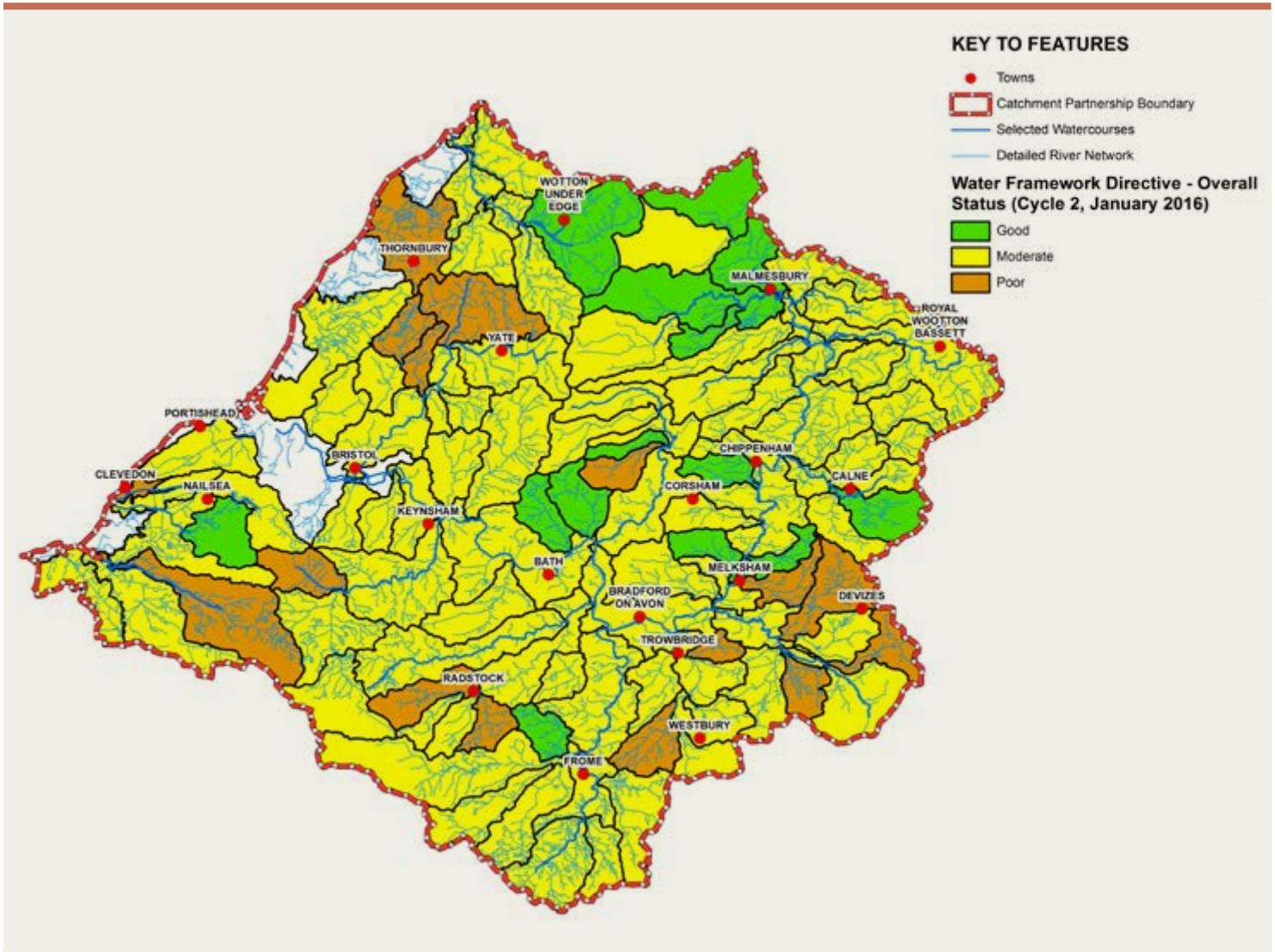
THEME 4: ENVIRONMENTAL ENHANCEMENT & WATER QUALITY

WATER FRAMEWORK DIRECTIVE

The government aims to ensure all waterbodies in England meet Good Ecological Status by 2027. Any waterbody that does not meet good ecological status is classified as failing under the European Union's Water Framework Directive.

In the Bristol Avon Catchment:

- only 24% of the catchment is classified as having 'good ecological status'. Although this is typical of other catchments in the UK, it demonstrates the scale of the challenge to meet the Water Framework Directive targets
- 76% fail to meet the targets due to factors including physical modification, phosphate levels, sediment load and low fish populations
- some landowners are losing valuable topsoil, nutrients and pesticides due to erosion, run-off or leaching; sometimes linked to poor soil structure and compaction
- heavy rainfall running off rural and urban areas causes surface water and river flooding in specific locations. Tidal flooding continues to be a threat in the lower reaches of the catchment.

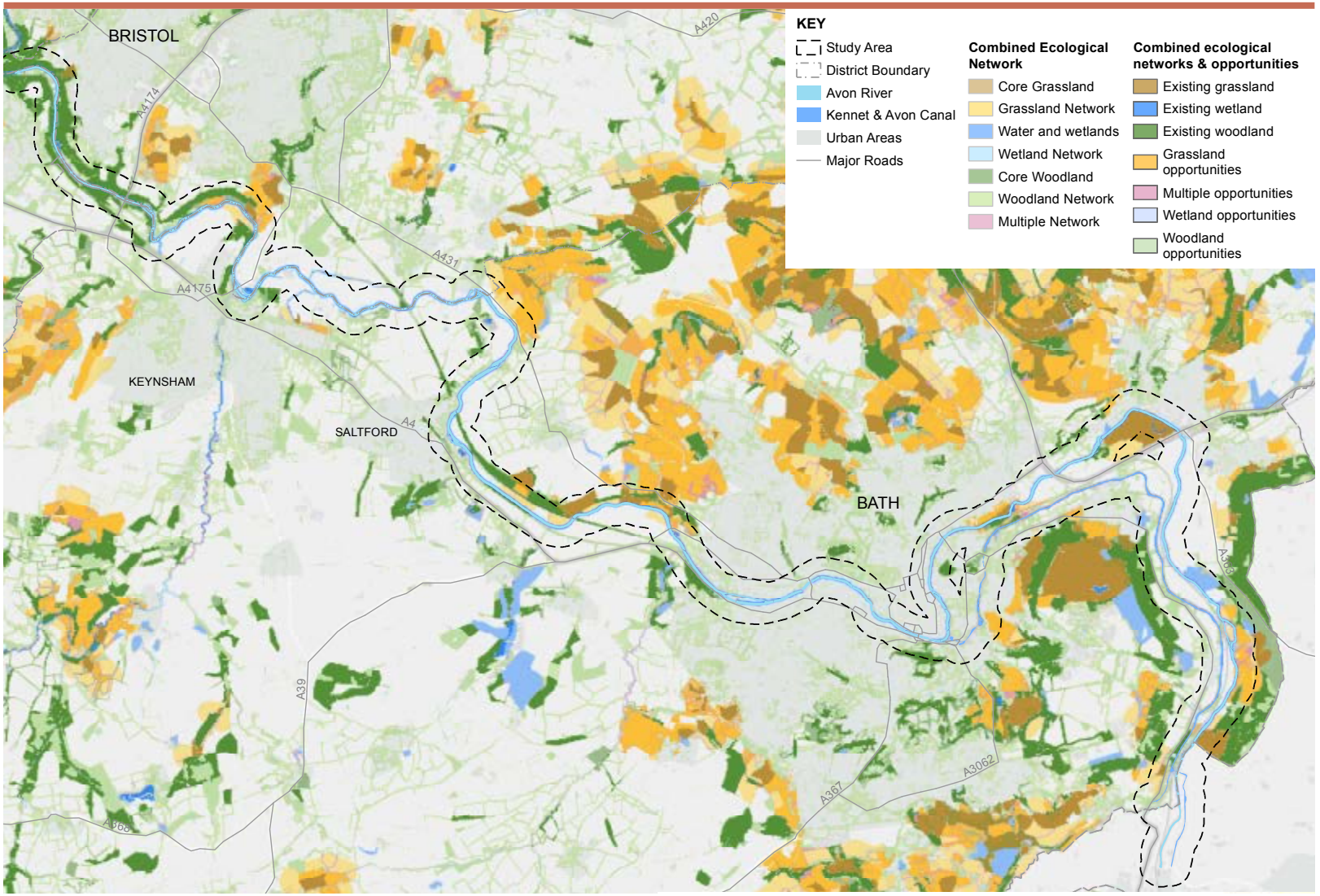


Map of the overall water framework directive status of the waterbodies within the Bristol Avon Catchment (Environment Agency/Wessex Water, 2017).

THEME 4: ENVIRONMENTAL ENHANCEMENT & WATER QUALITY

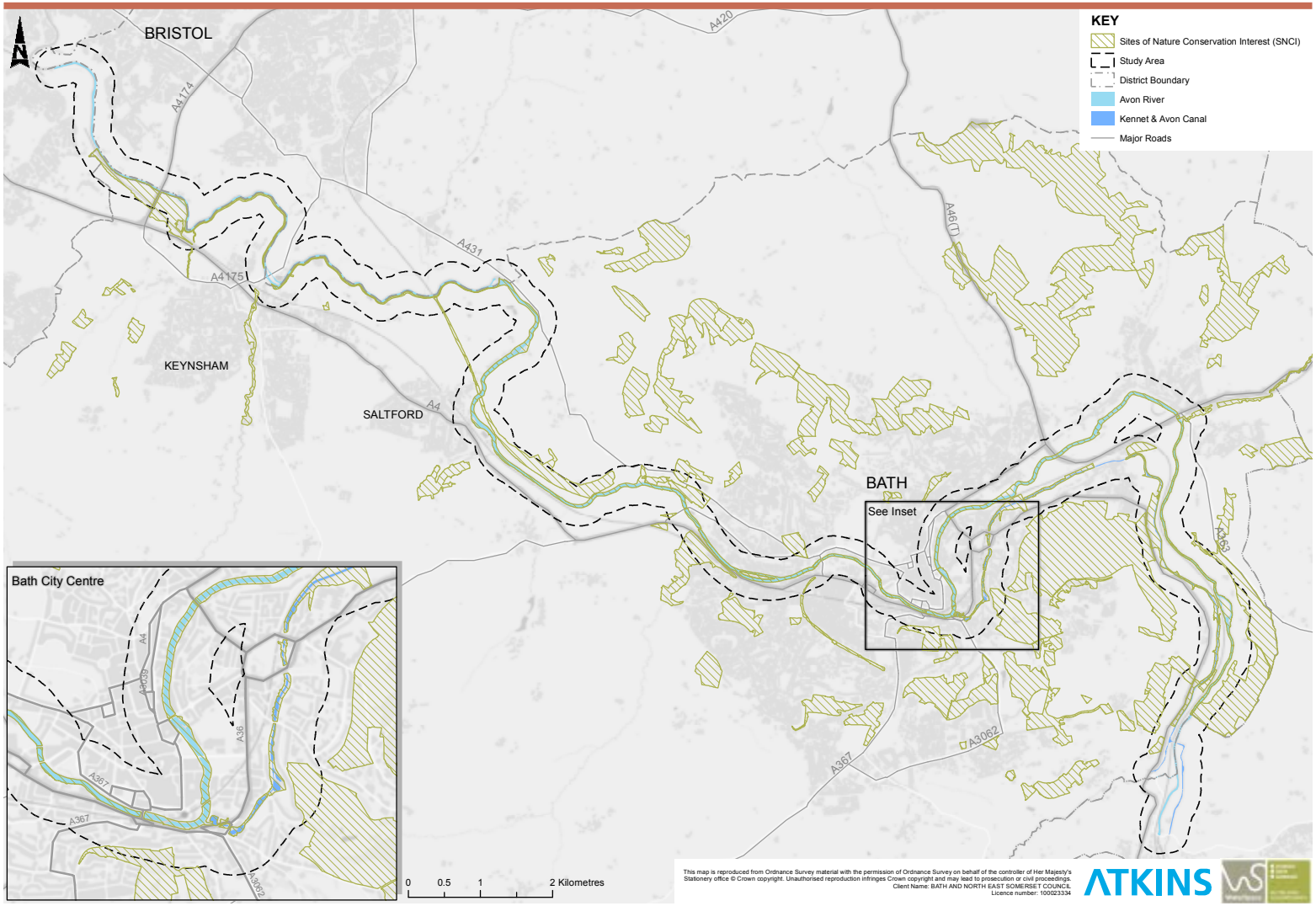
Ecosystems Services mapping produced by the West of England Nature Partnership to inform strategic decision making highlights the importance of the River and Canal corridors in providing valuable ecosystems including woodlands, grasslands and wetlands.

Significantly both the River Avon and Canal provide natural linkages between ecosystems enabling them to function as an interconnected network. Opportunities for ecosystem enhancement and protection can be realised by a natural capital approach, which should be embedded in decision making at a strategic level. At a local scale there are a number of ecosystems enhancements that can be made, project ideas to deliver this outcome are explored in this Study.



Ecosystems Services Map (Provided by West of England Nature Partnership, 2017).

THEME 4: ENVIRONMENTAL ENHANCEMENT & WATER QUALITY



Map of Sites of Nature Conservation Interest (Designated in the B&NES Local Plan, 2017).

Both the River Avon and the Kennet and Avon Canal corridors are designated as Sites of Nature Conservation Interest (SNCI), in the B&NES Local Plan and have protection for their ecological value.

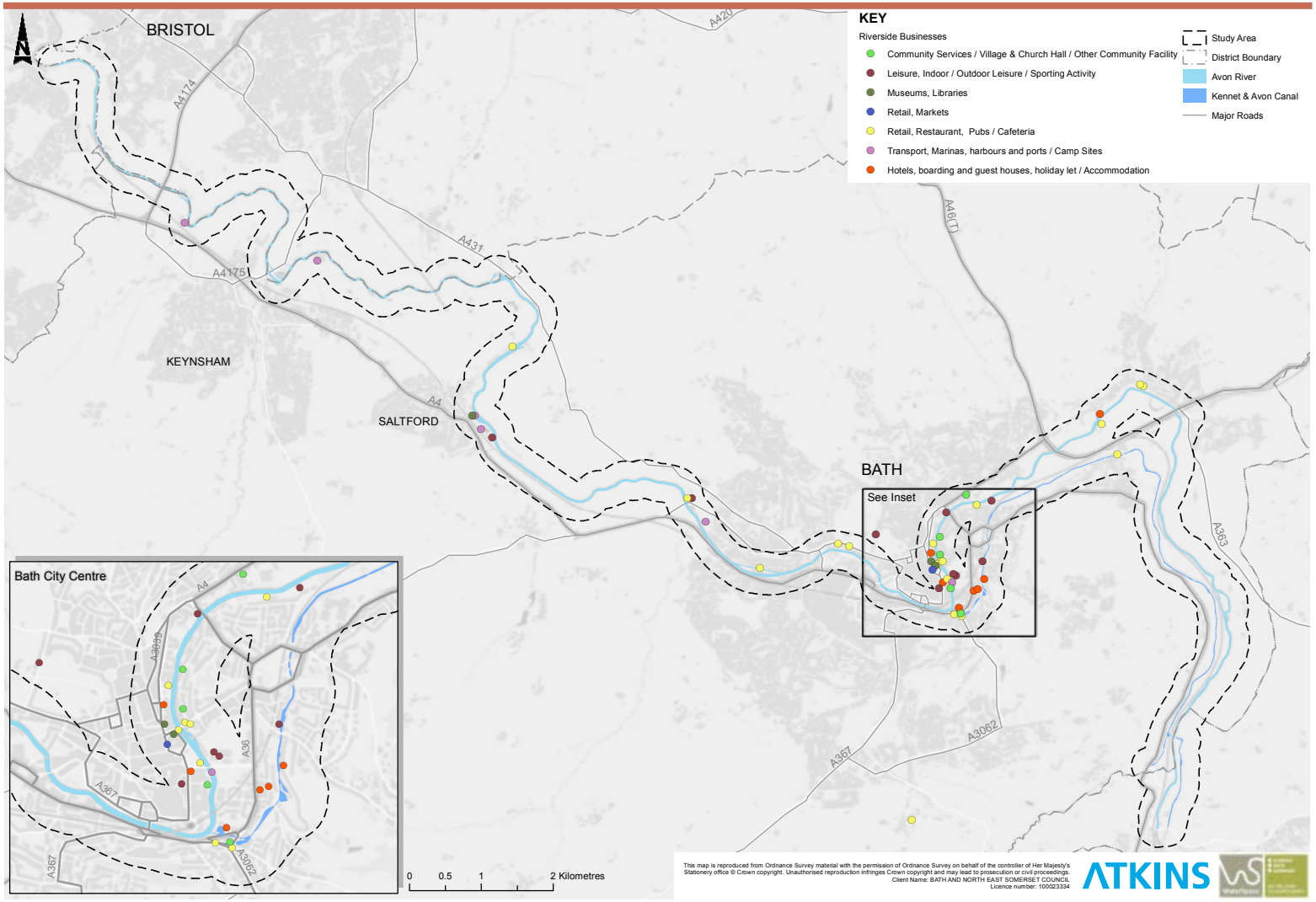
The Kennet & Avon Canal SNCI (area 29 hectares) is designated on the basis of its standing water and associated marginal habitats, semi-natural broadleaved woodland, semi-improved neutral grassland and tall ruderal communities (water vole population.

The River Avon SNCI (area 127 hectares) is designated on the basis of its running water and associated marginal habitats. Species include otters, greater dodder, loddon pondweed, common clubrush, arrowhead, small teasel, eels, re-eyed damselfly and brown hawker.

Both waterways have a critical role for bat species, including the rare Horseshoe bats (greater and lesser). The dark and well vegetated and natural banksides and green tunnelling on towpaths in particular provide good foraging habitats and movement corridors from roosts out to the wider countryside and key foraging habitats.

The River Avon corridor through Bath is identified as a Strategic Green Infrastructure Corridor through the urban area in both the Green Infrastructure Strategy and the Local Plan. A number of other SNCI link into the linear River corridor spine.

THEME 5: RECREATION & LEISURE



Map of Waterside Businesses within the Study Area by type (B&NES Economic Development, 2016).

Both waterways host a variety of recreation and leisure activities, including angling, sports such as rowing, canoeing and kayaking. In addition, the towpaths are popular car free running, cycling and walking routes. A series of public parks and green spaces adjoin the River Avon.

While the canal towpath and parts of the River Avon path are well used, other sections of the River path are less attractive or are poorly connected, have limited natural surveillance and are under-utilised. Management of vegetation is a common issue for the River Avon, for both waterways and towpath users.

Green spaces adjoin the River are not always well linked to the River path and there is often limited visual connection to the water.

There are opportunities to further develop and support the use of the River Avon for angling, rowing and other water based sports, including events.

A wide range of businesses are located on the River and Canal, both business boating and land based commercial enterprises, including pubs and restaurants, sports clubs, marina as well as shops and industrial units. Many of the industrial premises in the River corridor are being replaced by mixed use residential led development; however, there are still significant industrial land uses particularly in western Bath and Keynsham.

THEME 5: RECREATION AND LEISURE

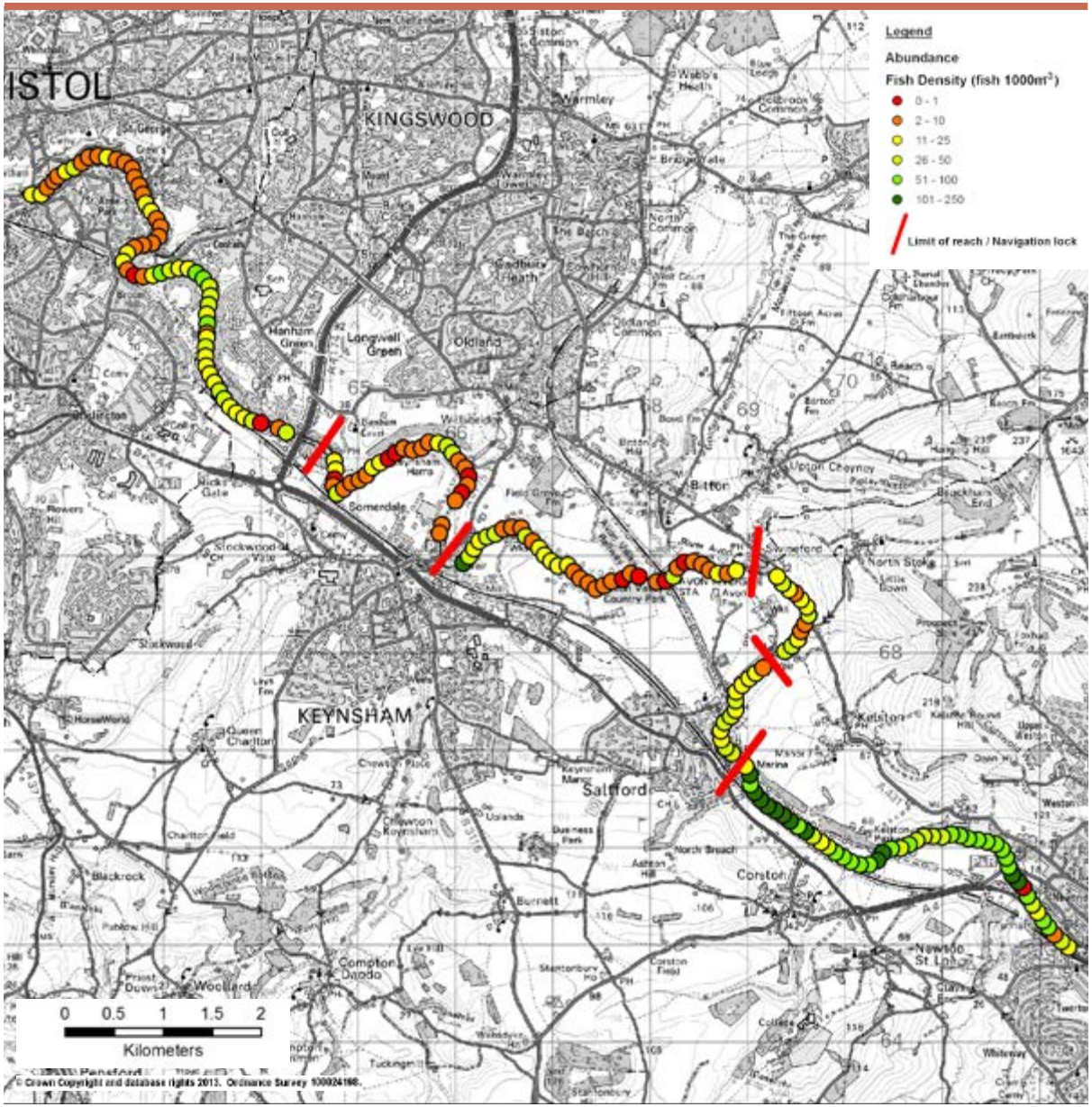
ANGLING

Within the district there are a number of Angling Clubs operating on the River Avon and Kennet & Avon canal, there are also areas of free fishing. Angling is a popular local recreation activity and the Environment Agency is keen to ensure that fish stocks are good and that opportunities for people to enjoy Angling are promoted.

The maps included here indicate the areas where angling clubs have fishing rights and also areas where free fishing is allowed (where known).

The Angling Trust and the Environment Agency have developed the National Angling Strategy (2013-18). The purpose of this strategy is to get more people fishing and to keep people interested in the sport. To support this, better angling facilities (such as safe and easy access, and accessible angling platforms) need to be provided, along with access to coaching and angling events to get more people having a go fishing. Encouraging young people into the sport is also a key objective.

Stocking Juvenile Barbel into the Bristol Avon to boost fish stocks



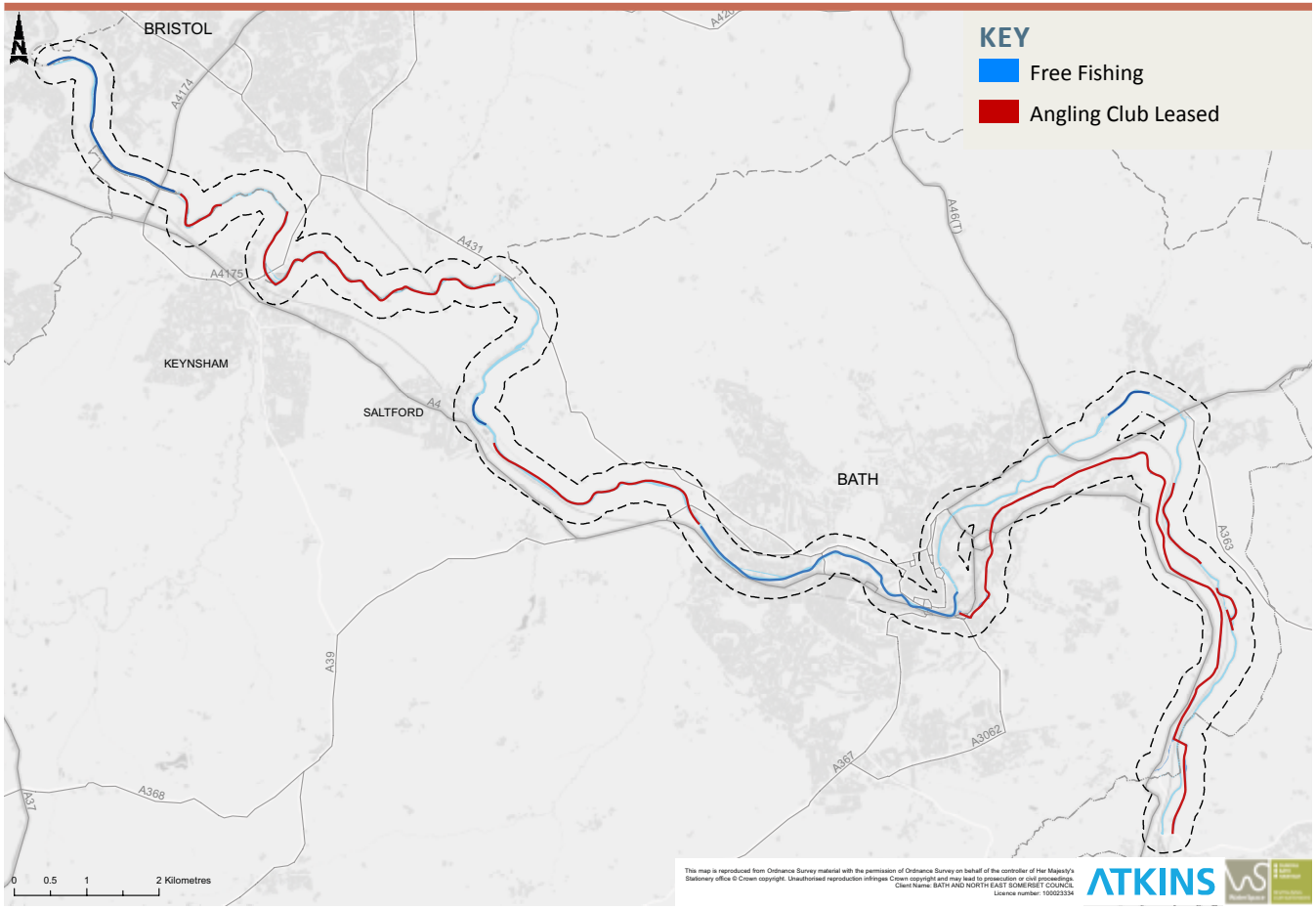
Fish Stocks

Hydroacoustic surveys of the Bristol Avon undertaken by the Environment Agency (2013) between Netham and Pulteney weirs provide an indication of the fish densities present.

The survey results indicate that lower fish densities were found between Swineford and Netham. Therefore opportunities to enhance fish stocks through improved habitat and passage (in England, 405km of watercourses were opened up for fish (improved fish passage at 57 sites) during 2015-16) should be taken.

Environment Agency Hydroacoustic Fish Density Data (2013)

THEME 5: RECREATION AND LEISURE



Angling Rod Licensing

The Annual Fisheries Report 2015-16 highlights that 1,210,201 rod licences were sold in England in 2015-16, with 65,229 sold in Wessex (1,595 Salmon and sea trout licences & 63,634 coarse fish licences).

A fishing rod licence is needed from the Environment Agency to fish with a rod and line for salmon, trout, freshwater fish, smelt or eel within the study area. A rod licence must be carried at all times by the angler. There are two types of licences: trout, coarse fish and eel licences that let you fish for non-migratory trout, char, coarse fish, eel and smelt; or salmon and sea trout licences that let you fish for salmon, sea trout and all of the fish in the licence above.

Children under 12 don't need a licence and it is now free for children under the age of 16 to fish, however children between the age of 12 and 16 do still need to apply for a free licence. If you take a child under 12 fishing and hold the rod, or help hold it, you must buy a licence for yourself. More information on rod licences can be found at the following website: https://www.gov.uk/fishing-licences/when-you-need-a-licence.

Free fishing

Free fishing locations on Bath & North East Somerset Council owned land (where anglers can fish for free providing they have a valid Environment Agency Rod Licence) on the River Avon within the study area currently includes land owned by Bath & North East Somerset Council at the following locations:

- B&NES River Avon towpath
- Bathampton Weir from footpath
- Saltford, the Shallows (left bank)

THEME 5: RECREATION AND LEISURE

AVON VALLEY ADVENTURE & WILDLIFE PARK

Avon Valley Adventure & Wildlife Park is a popular family attraction located on the banks of the River Avon, just off the A4 in Keynsham. From opening in 1987 the park's owners state that they now welcome around 170,000 visitors per annum. Originally established as a farm attraction, the park has developed to offer a variety of experiences, which include animal handling, indoor & outdoor play, park rides, crazy golf, natural habitats, cafe & gift shop, and rooms for hire. Additionally, the site organises and hosts specific one-off events throughout the year, particularly at Halloween & Christmas.

The Park are keen to expand their offer and to link better to the riverside, with improved access opportunities, to improve their sustainability credentials and link directly to the Bristol to Bath cycle track.

River access and wildlife opportunities

Aerial View of Avon Valley Adventure & Wildlife Park

Recreational Access for non-motorised boats

Canoeing, Kayaking, Rowing, Dragonboat racing, sailing and paddleboarding are all popular local water leisure activities and sports. Facilities are relatively limed, with the exception of the rowing clubs at Newbridge and Saltford, and the Saltford Sailing Club which have excellent facilities. Upstream of Pulteney weir there are private and club canoe and kayak access, as well as Bath Boating Station. Private boat hire has also re-opened in Batheaston upstream of the weir.

There are over 740 British Canoeing canoe club members in the South West, including seven clubs on the river Avon in the local area, in addition to schools and youth groups such as the Scouts Association who access the river locally to canoe (British Canoe Association SW Branch, 2017). Furthermore, the Sport England Active People Survey has shown that kayaking and canoeing is the second most participated in water leisure and sporting activity.

Canoe and Kayak clubs in Bath have informed us that the accessibility of the river is poor, in particular within central Bath where the engineered river walls make access and egress difficult. There are significant opportunities for incremental physical improvements to access, in many areas of the local waterways network. Existing routes could also be better promoted and advertised, signage can promote the river as friendly to all users, and blockages and hazards can be addressed.

Stakeholders have identified opportunities for waterbased spectacles, at Bath Riverside and Saltford. In addition, opportunities for improved physical access have been noted by local canoe groups on the K&A Canal, at Kensington Meadows, Newbridge, Warleigh Weir and Dundas Wharf/Brassknocker Basin. Additional opportunities have also been identified by Batheaston, Bathampton and Bathford Parish Councils.

PROJECTS AND PROJECT IDEAS

PROJECTS & PROJECT IDEAS – WHOLE STUDY AREA 68
PROJECTS & PROJECT IDEAS – LOCATION SPECIFIC 91

QUICK GUIDE TO THE PROJECT PAGES

Some of the items are existing projects, at various stages of development, while others are at concept stage.

The following pages include a summary of 35 project ideas that have been derived to revitalise the waterways of the River Avon and the Kennet & Avon Canal in Bath & North East Somerset. The ideas have been identified and derived through:

1. Consultation and dialogue with the 4 project partners, key stakeholders and the general public during 2016-17;

2. Consideration of studies and technical evidence gathered by the WaterSpace partners over recent years;

3. Analysis of the results of Boater Surveys, Focus Groups and 1:1 interviews with commercial enterprises and volunteer bodies undertaken during 2016.

The projects listed include low cost projects that can be delivered by volunteers or on a small budget, as well as big ticket infrastructure items, commercial projects and ideas that can be encouraged through regeneration and development. The WaterSpace Partnership has focused on the project ideas that the partners can directly support or champion, or which involve their assets or relate to their fields of influence.

The material submitted by third parties, as part of the "call for ideas" process has also been included and developed within many of the project pages. Many, but not all, of these ideas have found their way into the Study itself. We have sought to prioritise ideas which best matched with the Study aims and aspirations, and all projects were agreed by all four partners for inclusion.

The summary matrix list all of the projects and project ideas and summarise how they meet a number of factors.

OWNERSHIP

Projects which relate to land owned by the project Partners (Environment Agency, B&NES Council, Canal & River Trust and Wessex Water) is flagged. Additionally where there is third party land involved this is noted. In many cases projects involved more than one landownership. Most projects relate to assets in the control of the partners, at least in part.

+ Detailed asset maps are included in **Appendix 1**.
+ The full "call for ideas" responses from stakeholders are included in full in **Appendix 6**.
+ Key references to background evidence and further technical information is summarised in **Appendix 10**.

STUDY THEME

The WaterSpace Study theme which the project idea relates to is summarised here – multi-beneficial projects are sought wherever possible.

Project Idea pages each have a similar layout and style to make them easy to read and accessible.

NEXT STEPS

The WaterSpace Partnership has developed an action and funding plan for 2017-22 (Appendix 12) which identifies which of these projects will be given priority.

Other organisations, will be seeking to champion and take forward some of the other projects, and we will work to support this. While delivery and funding for some of the project ideas is already secured and underway, other projects are at a more conceptual stage.

QUICK GUIDE TO PROJECT PAGES

PROJECT FACTORS

Project Development Status

This section summarises how far proposals have progressed in terms of design and development. Some are early stage concept project ideas, whereas others are projects being implemented and/or are on-site. The following broad categorises have been devised and it is noted that there may be more than one stage of design to achieve within each category, many projects have changed status over the last year, this summary is correct as of March 2017:

One Dot = Concept/ Design idea – requiring a feasibility report or further development to be taken forward.

Two Dots = Detailed Design (pre-planning) allowing for a review of options and in need of further development.

Three Dots = Full design, ready to implement.

Funding Status

This section summarises the funding status of each project idea, is some cases the costs are well defined and the project has full or part funding. In other cases, particularly where the project is more conceptual there may be no funding or cost scoping undertaken. The following broad categories are identified:

Fully funded;

Part funded (with for example a proportion funding secured via contribution from new development);

No funding

+ More detail on the current funding and delivery status of various projects can be found in the FUNDING AND DELIVERY section of the WaterSpace Study.

Cost Score

The capital cost of projects has been estimated for a number of the scheme for which a design can be clearly determined, however there will be assumption relating aspects of the scheme which cannot be defined at the time of design such as services, professional fees and exclusions such as VAT. These have categorised as follows:

Low – Projects less than £100,000

Medium – £100,000 to £500,000

High – £500,000 +

Environmental Score

The benefit to wildlife and biodiversity can be captured to some degree, however in most instance a desk study can reveal potential constraint and opportunities for each project. In some instances there will be requirements for Habitat Stage 1 Survey work which will in turn highlight the need for species specific survey to inform the assessment or planning processes.

Low – Site has little or no biodiversity and/ or few opportunities to provide environmental enhancement.

Medium – Some environmental value to be protected and/or moderate opportunities to provide environmental enhancement

High – High environmental value to the site or asset requiring specialist advice and/or major opportunities for environmental enhancement.

Community Score

This determines the degree to which the project has current support or awareness.

Low – Limited consultation to date or stakeholders unknown.

Medium – Stakeholders are known and a programme of consultation.

High – Project is actively promoted has community support.

APPROVALS AND CONSENTS

There are a series of approvals or factors that may affect a given project, these are as follows:

Planning Permission – outline and detailed consents/reserved matters submissions and discharge of conditions.

Listed Buildings – a site factor that may require Listed building consent.

Environment Agency – approval or consents, often for works within 8 metres of a main river.

Canal and River Trust consents, for example in relation to moorings and riverside uses.[1]

Wessex Water – Approvals for abstraction or licensing.

A dot denotes that the above approvals and consents are required.

[1]In the case of Canal & River Trust Approval. In all cases the following consents would be needed:
- Canal & River Trust consent as landowner, which will only be granted where consistent with the requirements of the Charities Act 2011. It should not be assumed that inclusion of a scheme in this strategy will guarantee that the Trust's consent as landowner will be granted.
- Marinas wishing to connect to the Trust's canal system will require a connection agreement.
- 3rd parties will need to follow the Trust's Code of Practice for Works Affecting the Canal & River Trust, and obtain the Trust's consent, in order to ensure that our assets are protected.
- Agreement through the network access agreement process that new moorings, marinas or restoration schemes would not adversely impact on the Trust's ability to maintain our levels of service or adversely affect navigational safety, amongst other things. See: https://canalrivertrust.org.uk/media/original/24335-water-resources-strategy.pdf and https://canalrivertrust.org.uk/media/original/27629-environmental-framework-document.pdf.
- An agreement with the Trust will be needed for moorings on its waterspace. Applications will be assessed against the policies for mooring along the banks of our canals and rivers in place at the time.
- The Trust is a statutory consultee in the planning process and will consider how applications affect its assets and waterway users.