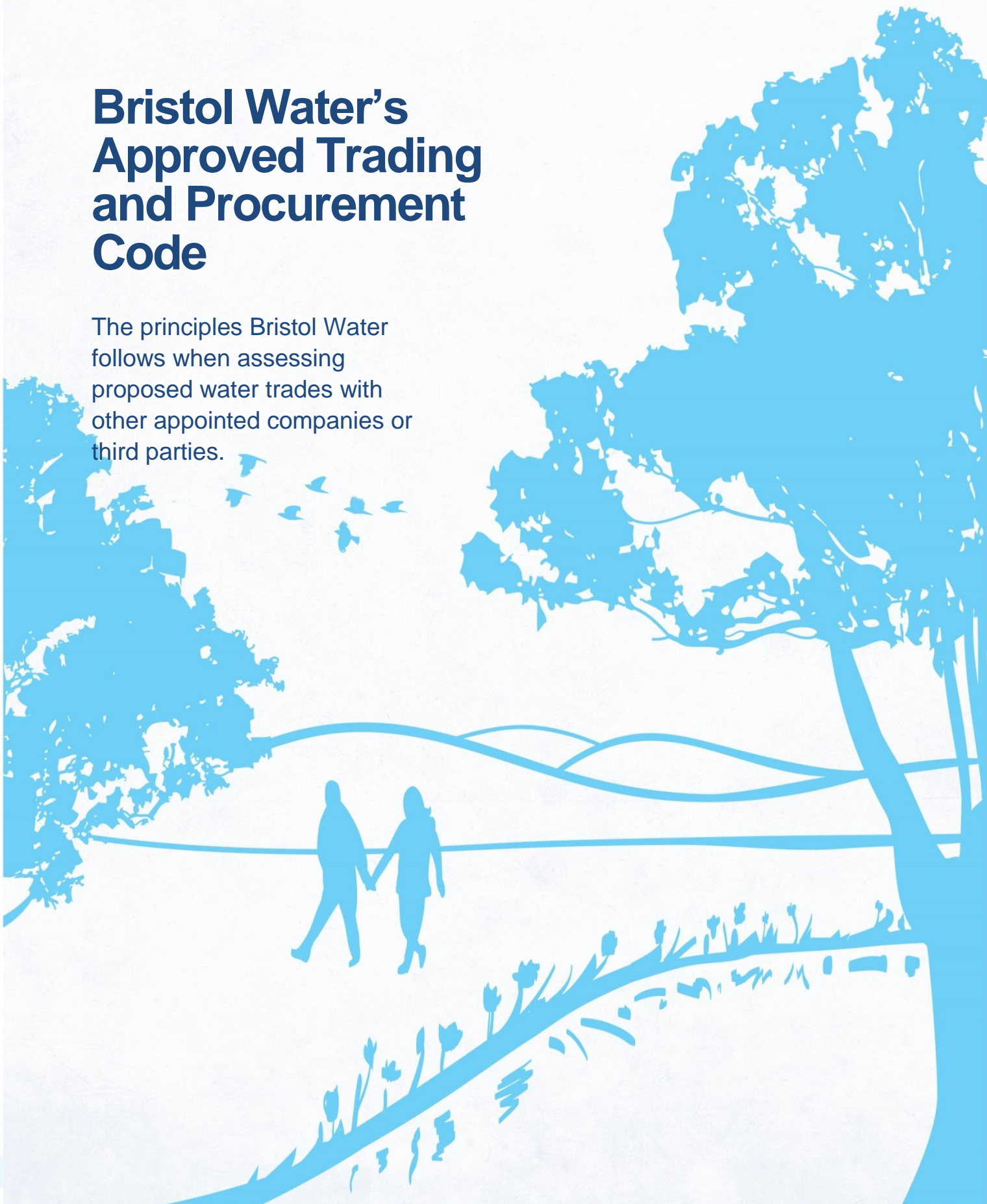


# Bristol Water's Approved Trading and Procurement Code

The principles Bristol Water follows when assessing proposed water trades with other appointed companies or third parties.



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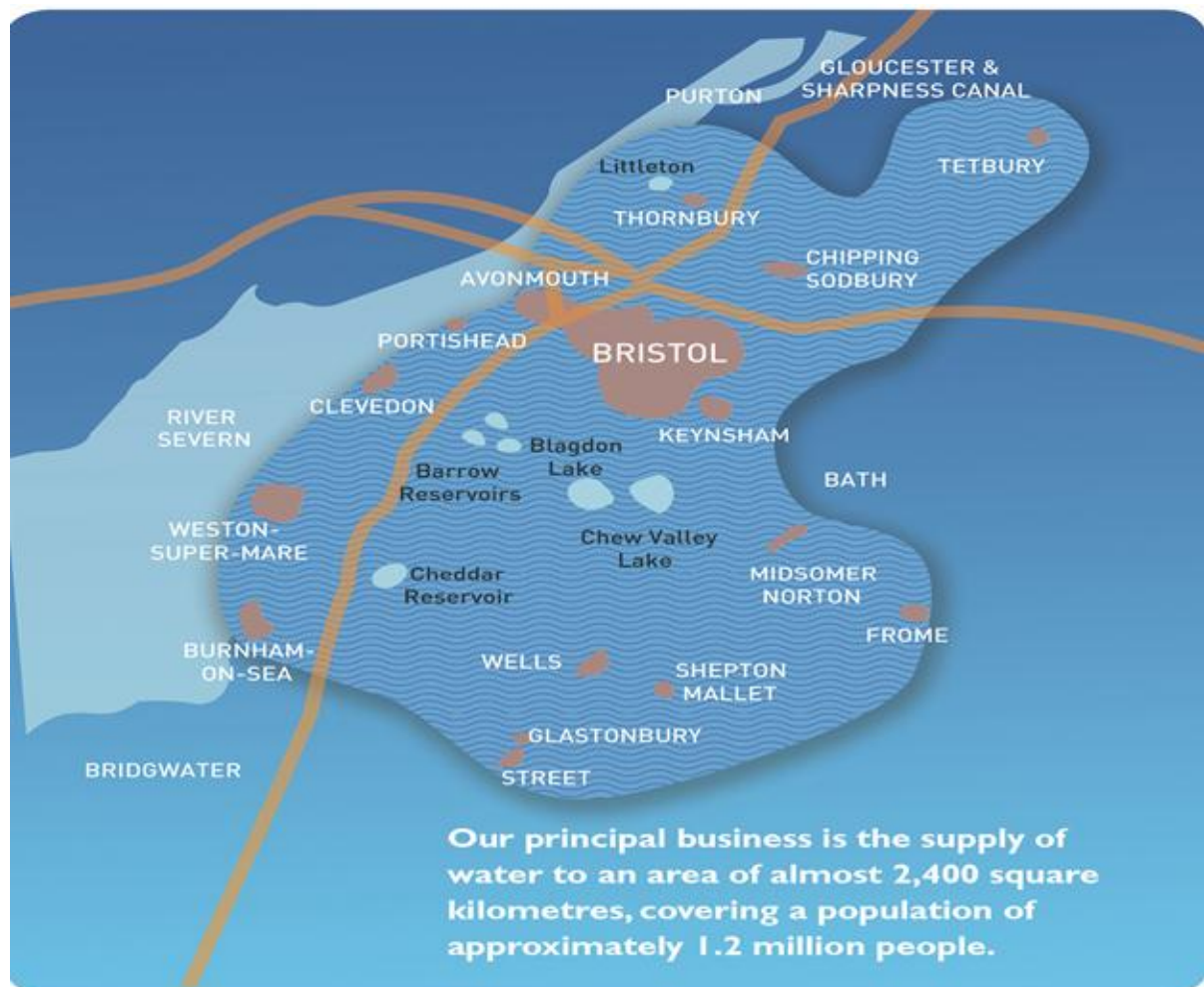
## Introduction

### About Bristol Water

The Bristol Water supply area, covers an area inhabited by 1.19 million people and all the associated businesses in an area of approximately 2,400 square kilometres centred on Bristol and the towns and villages within a 20-mile radius of the city. Water is distributed via 6,000 km of mains, 164 pumping stations and 139 storage reservoirs.

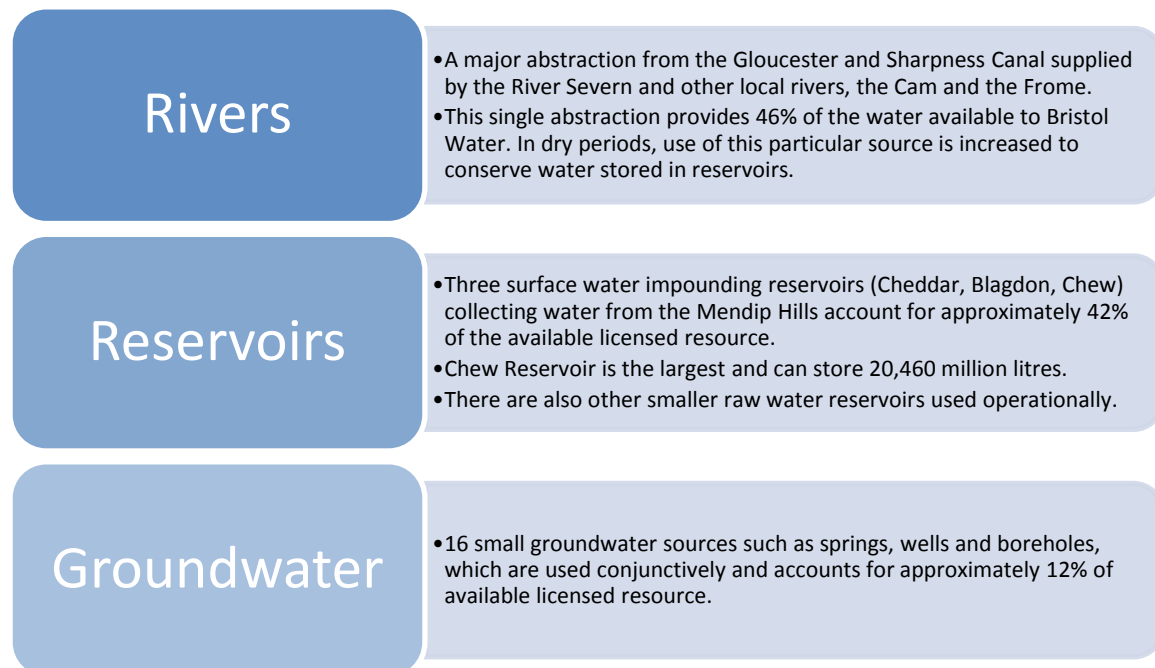
The supply area is broadly comparable to the West of England sub-region, which comprises the local authorities of Bath & North East Somerset Council, Bristol City Council, North Somerset Council and South Gloucestershire Council, with the notable exception that the City of Bath lies outside the Bristol Water supply area (the supply area also includes parts of Sedgemoor, Mendip, Wiltshire, Cotswolds and Stroud local authority areas).

Figure 1 – Bristol Water's Supply Areas



Bristol Water relies on 68 water sources, including reservoirs, rivers, springs, wells and boreholes. About 88% of the water supply managed by Bristol Water comprises surface waters while 12% comes from groundwater. Around half of the water supplied within the

Bristol Water supply area is sourced from within it, with the rest being transferred into the zone from outside the area. The different source types comprise:



An estimated 46% of water is sourced from the Gloucester & Sharpness canal to supply the largest northern treatment works. The Gloucester & Sharpness canal is supplied by the River Severn and other local rivers, the Cam and the Frome.

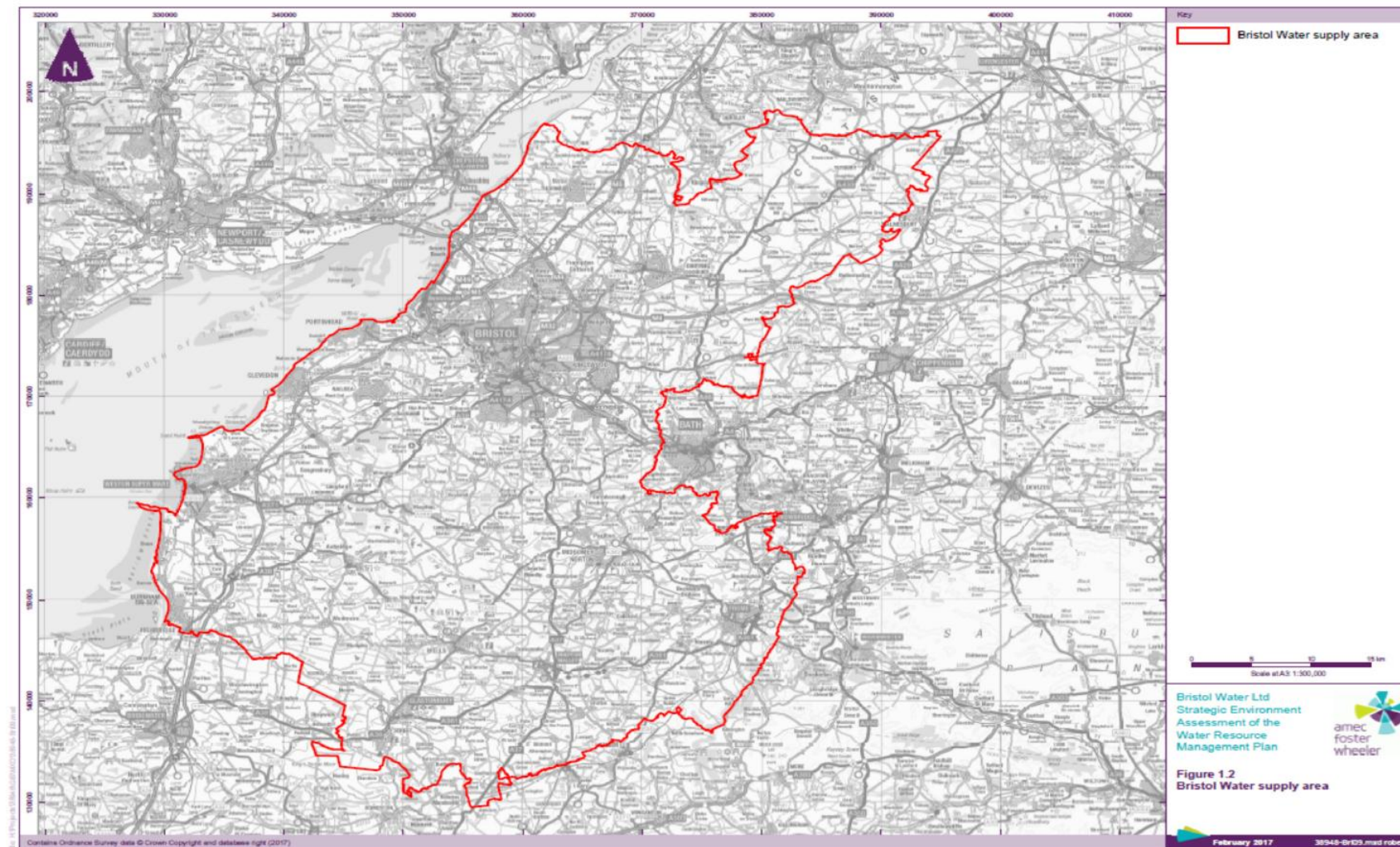
The Mendip Reservoirs and associated surface water abstractions account for approximately 42% of the available licensed resource. The largest is Chew Valley Reservoir which holds up to 20,460 million litres.

The remaining water sourced from within the water resource zone is derived from ground water and accounts for approximately 12% of available licensed resource.

Bristol Water has one water resource zone (WRZ) for the Company's whole supply area, within which all available resources are shared and all customers experience the same risk from any shortage of water. This water supply area is shown in the figure below.

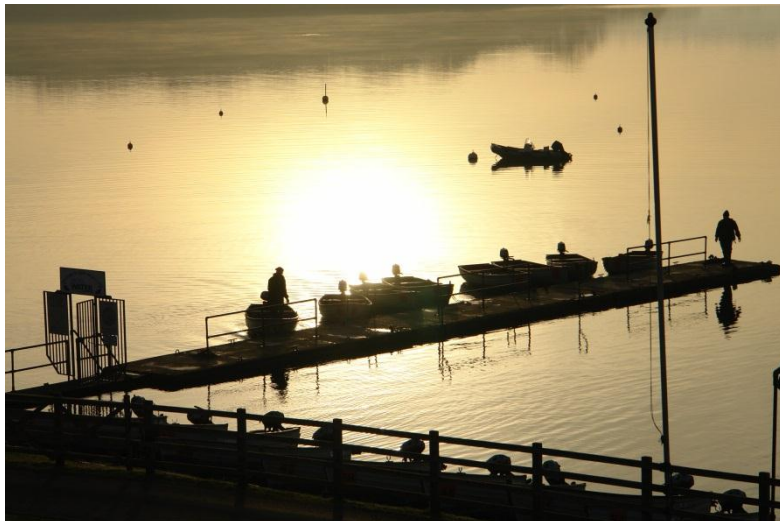


Figure 2 – Bristol Water's Water Resources Zone



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## Why do we need a Code?



This is Bristol Water's Trading and Procurement Code ("Code"), which sets out the principles and requirements which will apply when appointed water companies and third parties trade with Bristol Water. It also provides contact details if you have any queries or comments on our Code, our Water Resource Management Plan or water trading generally.

Many companies, including Bristol Water, already trade water. The water industry regulator, Ofwat, however, is seeking to promote greater water trading and has introduced financial incentives for water companies. Ofwat want to ensure that any trades which water companies conduct, and for which it seeks incentive rewards, are conducted in accordance with its code and will deliver net benefits efficiently.

Ofwat, in encouraging greater water trading between appointed water companies, is seeking to benefit customers and promote better, more sustainable use of the natural environment. Bristol Water want to ensure that by adherence to this Code, that any trades they are engaging in will deliver net benefits efficiently and that the trades are environmentally and economically beneficial.

It is important because of the concentration of market power that Bristol Water, and all companies in the market, are transparent about the trades that they are entering into. Full transparency will allow for appropriate external scrutiny by other market participants and potential entrants. The Code is also to make sure that Bristol Water assesses water trading options fairly and on an equal footing with its water resource management scheme.

In this Code we make clear our position that we are in principle willing to trade with any party that either wishes to take from us, or offer to us, a reasonable volume of reliable, sustainable and cost-effective water resources. This includes raw, part and fully treated water. Water trading must not however be at the expense of an unacceptable reduction in supply resilience for our customers.

Ofwat have to approve this Code, and in doing so is adopting a proportionate and less intrusive approach than would be involved if it were to approve individual trades.

This Code should be read in conjunction with Bristol Water's Network Access Code ("Access Code"), which sets out in detail the operational and commercial arrangements that govern applications for use of, and supply from, Bristol Water's supply system. The latest version of the Access Code is available on our [website](#).

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### Contact Details

Any queries in relation to this Trading and Procurement Code, Bristol Water's Water Resources Management Plan ("WRMP") or in relation to water trading generally should be directed to Patric Bulmer, by email to [patric.bulmer@bristolwater.co.uk](mailto:patric.bulmer@bristolwater.co.uk), or by post to:



Patric Bulmer  
Trading and Procurement Code  
Bristol Water  
Bridgwater Road  
Bristol  
BS13 7AT

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## The Context for Water Trading

### Regulatory Requirements

Bristol Water operates under a comprehensive framework of statutory and regulatory obligations. These are set out in UK and EU legislation, including the Water Industry Act 1991 (as amended by the Water Act 2003 and Water Act 2014), the Competition Act 1998 and the European Habitats Directive and Water Framework Directive. These obligations set the boundaries for the way we serve our customers, specifying environmental and economic standards which we must meet.

Bristol Water is regulated by the Water Services Regulation Authority (“Ofwat”), the Environment Agency and the Drinking Water Inspectorate (“DWI”).





Ofwat is keen to encourage water trading within and beyond the public water supply sector, where it is efficient to do so. In the 2014 price review ([PR14](#)) Ofwat introduced water trading incentives to encourage water trading and to ensure such trading forms part of a company's water resource management plans (WRMPs).

Incumbent companies can only receive the PR14 water trading incentives if they produce, and are compliant with, an approved trading and procurement code. The requirements for the code are set out in [Appendix 3 of Ofwat's final PR14 methodology statement](#). The codes are voluntary and are only required if companies want to claim water trading incentives at the next price control (known as the [2019 price review](#)). In order to claim water trading incentives, Bristol Water's Code must be approved by August 2018.

### Water Resources Management Plan ("WRMP")

Along with all water companies in England and Wales, there is a statutory requirement for Bristol Water to prepare, maintain and publish a WRMP that sets out how the balance between water supply and demand, and security of supply will be maintained over the coming 25 years in a way that is economically, socially and environmentally sustainable. These are reviewed on a rolling 5 year basis and Bristol Water is currently preparing its WRMP for the period 2020 to 2045. Once published, WRMP19 will replace the current 2014 WRMP.

To understand if we have sufficient water to meet our customers' needs, we compare the demand for water with the available supply, taking account of the uncertainties in the forecasts. This assessment produces the "supply demand balances" for our water resource zone ('WRZ'), which demonstrates if there is sufficient water to meet customers' needs or if there is a deficit. The forecast supply demand balances is shown (as quoted in our WRMP14 and draft WRMP19) in the figure below.

**Figure 3 – WRZ Balance of Supply (Ml/d)**

	End of 2010-15 Period	End of 2015-20 Period	End of 2020-25 Period	End of 2025-30 Period	End of 2030-35 Period	End of 2035-40 Period	End of 2040-45 Period
WRMP14 Balance of Supply (Ml/d)	+19	+3	-8	-19	-31	-40	-48
WRMP19 Balance of Supply (Ml/d)	N/a	+4.41	-1.9	-4.9	-6.6	-9.07	-12.79

The WRMP includes information on Bristol Water's approach to promoting sustainable abstractions and water trading from neighbouring water companies where they have indicated they have resources available. This information can be found in our options appraisal and section on sustainable abstractions in the WRMP document.

Alongside the draft WRMP19 we have also published water resources market information. This allows potential alternative providers of water resources information to allow them to “bid” to reduce the cost of water resources. Our WRMP19 contains no new water resource schemes, instead relying on reducing leakage in the next few years as our main option for balancing water supply with water demand. In the future however, new suppliers will have the opportunity to provide demand management services such as leakage and water efficiency. WRMP19 does not anticipate any new water trades will be required, but water trades could also emerge as part of this emerging water resources market framework.

### Water Trading Challenges and Benefits

Bristol Water fully supports water trading between companies where it is environmentally and economically rational to do so. Water trading can be a means of ensuring that existing water resources are used more efficiently and effectively, when water is traded from areas of surplus to areas of deficit. Trading has the potential to protect customers’ water bills by helping to reduce the costs of developing new water resources.

Water trading is one tool within a suite of tools to manage supplies and protect the natural environment. Water trading is one way to use existing resources more efficiently, by allowing the transfer of water from areas with plenty of water, to areas of water scarcity, thus benefitting the environment. Trading also helps to reduce the costs and increase the resilience of water supplies. There are three main benefits that water trading can provide:

Water trading  
can be good for  
the environment

- Water trading both within and between existing companies will tend to move water from areas where it is more plentiful, to areas where it is scarce and the environment is under pressure.

Water trading  
can be good for  
customers

- Water trading can reduce the cost of water resources (e.g. by reducing the need for new resources) and reduce bills.
- Interconnection of separate water supply systems gives access to more sources. This makes the supply to the customer more resilient against shortages and technical problems.

Water trading  
can be good for  
the water sector

- If water companies can reduce their costs through water trades, they receive a share of the gains.
- There may be profitable opportunities for incumbent companies and other people to provide water in new innovative ways.

We believe therefore that opportunities for water trading can play an important part in resolving the following challenges that we will face in planning for the future. However, there are three main factors that, in combination, pose significant challenges to our ability to provide services to customers effectively.

## Protecting the environment

- As a water company we are intrinsically linked to our natural environment. Our area is particularly rich in biodiversity and Bristol Water is committed to protecting and improving our natural habitats. We work hard to minimise the environmental impacts of our operations and look for opportunities to manage catchments better and enhance the natural environment.
- All water sources have been and will continue to be monitored to ensure they are sustainable and comply with current and future legislation.

## Rainfall and climate change

- Weather patterns are becoming less predictable. The latest official predictions lead us to expect, on average, that summers will become hotter and drier, leading to increased demand for water
- By the 2040s, average summer rainfall could fall by 13% from today's levels. Winters are predicted to become generally wetter, with more intense storms.

## Population increase

- The Environment Agency has noted that by the 2050s, the total population of England and Wales is expected to grow by an extra 15 million people and population and housing within our area of supply is also expected to increase.

Bristol Water believes water trading can play an important role in tackling these challenges.

## Key Principles for The Code



We are prepared to trade with both appointed water companies and other third parties in a non-discriminatory, transparent and responsible manner. Such qualifying trades will only be agreed to when there is sufficient evidence to ensure that there will be no detrimental impacts to either our customers or the natural environment. We will also only agree to import trades where it is economically beneficial to do

so when taking into account quantity, quality, environmental and other relevant criteria.

Our Code is aligned to the guidance offered by Ofwat concerning water trading. Following the consultation period, we will keep our Ofwat-approved Code up to date with Ofwat's requirements and principles, and make information publically available on our website. For all qualifying trades, we will share with Ofwat the processes followed to demonstrate compliance with the Code when applying for water trading incentives. This should reassure both regulators and potential trade partners of the open and transparent processes.

In its PR14 methodology, Ofwat set out guidance to companies on the principles to be included in a Code. The following Trading and Procurement principles set out the way we will approach proposed water trades with companies and third parties, and are based on that

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guidance. This Code is divided into principles that apply to either imports, or exports, or both. The approach sets out the basis for commercial negotiations for a water trade agreement.

But our over-riding principle is that we will only claim incentives for water trading that are fair and maintain the trust of the benefits of water trading for customers. We have previously carried out small scale, mutual trades that allow us and our neighbouring companies to use our resources more efficiently or to address environmental concerns. We will not claim incentives for small operational two-way trades that are driven by existing environmental obligations or deliver benefits through other incentive mechanisms.

We will work collaboratively with Ofwat to ensure consistency between this Code and any new market developments. The principles on the following pages will apply as part of our Code for trading:



Principle	Applicability	Bristol Water's approach
Audit Transparency	Both Imports and Exports	<p>We are committed to following transparent processes for assessing and operating water trades, as evidenced by the methodologies set out in our WRMP, working collaboratively with any potential trading partner. We remain committed to working constructively with other stakeholders.</p> <p>For all successful qualifying trades we will prepare a report that will examine the processes followed during the trade negotiations, and demonstrate that we have complied with all aspects of this Code. This will be submitted to Ofwat as part of the process for applying for qualifying water trading incentives.</p> <p>Further information about the markets that Ofwat regulates can be found <a href="#">here</a> and to support the water resources market Ofwat also publishes market information, which can be found <a href="#">at water resources market information</a>.</p>
Assignment	Both Imports and Exports	The trading partner must not assign a qualifying trade agreement to any other party, without the prior consent of Bristol Water.
Compliance	Both Imports and Exports	We will comply with all relevant laws and regulation, including the Competition Act 1998, and expect the same from our trading partners. Trades will need to comply with the Bristol Water's Network Access Code, where applicable. Regulators will be kept informed (where necessary) when qualifying trade proposals are received.
Confidentiality	Both Imports and Exports	We may require the potential trade partner to sign a confidentiality agreement, at the outset of negotiations. This requirement will not be unfairly or unreasonably required or withheld, and will be aligned with the need and desirability for transparency.
Contract Durations and Commencement	Both Imports and Exports	<p>We will seek contract lengths that are fair and proportionate to both parties. Where large volumes of water are to be traded, we will take into account for the impact on the infrastructure which may be required to supply the water and the time required by both parties to make alternative arrangements where alternative sources of water are required to maintain resilient supplies.</p> <p>The volume offered will not cause a deficit or water resources supply demand balance within the contract duration, and if the supply relates to a specific source, the length of contract should not exceed the time period of the abstract licence.</p> <p>A qualifying trade must have been agreed no earlier than July 2013.</p>
Cooperation	Both Imports and Exports	Trading parties will co-operate with each other in the general interests of the continuous provision of wholesome water and the operation, maintenance and integrity of the public water supply system.
Economically Rational Trades	Both Imports and Exports	We will agree trades where it is economically sound and to the benefit of our customers, taking into consideration alternative supply and demand management schemes as part of the WRMP. A trade can only be economically rational if the whole-life cost is less than that of comparable alternatives, taking into consideration such factors as; water quality; sustainability; resilience; transport costs, etc.
Emergencies	Both Imports and Exports	The water supply system is an essential public utility and remains under the control of Bristol Water. We will retain primary responsibility for managing emergency procedures relating to our water supply network. We will expect

Principle	Applicability	Bristol Water's approach
		our trading partner to cooperate if an emergency or security issue arises which could affect the water supply network and the trade agreement.
Ending Trades	Both Imports and Exports	We currently have several import and export trades with other appointed water companies, and report to Ofwat on these trades on an annual basis. In order to qualify for trade incentives, the qualifying trade must have been agreed no earlier than July 2013 and be operating between April 2015 and March 2025. We assure Ofwat and other interested parties that we will not manipulate any of our existing trades in order to falsely obtain trading incentives. We expect the same of our current trading partners. If we agree to any new water trades, a report prepared for Ofwat would evidence that the trades are new and not an existing trade that had been artificially ended and restarted.
Environmentally Rational Trades	Both Imports and Exports	We are committed to protect the natural environment and this is underpinned by legislation. Therefore all potential qualifying trades must not compromise our commitments to the environment. Our WRMP is aligned with these requirements, and we are proactively working with our environmental regulators to manage both water flow and water quality arising from our abstractions.
Equal and fair treatment	Both Imports and Exports	We will treat all current and prospective trading partners fairly. Trading options will be considered with the same level of scrutiny and rigour as our own internal supply / demand solution options as part of our WRMP.
Qualifying Trade	Both Imports and Exports	A qualifying trade is a new agreement with a third party including appointed water companies for the import of water and a new agreement with appointed water companies in the case of water exports. In order to qualify for trade incentives, the qualifying trade must have been agreed no earlier than July 2013 and be operating between April 2015 and March 2025.
Relationship with the WRMP	Both Imports and Exports	<p>Water trading will be considered in the context of a number of options that will make up our WRMP to maintain supply/demand balance across our supply area.</p> <p>We will assess the costs of any potential water trade in the same manner to which options are considered in our WRMP. The environmental and economic characteristics of all potential trades will be tested against the same Strategic Environmental Assessment (SEA) criteria as our internal schemes. We will ensure costs are correctly allocated and fully recovered, and that trades are delivered at the least overall economic cost.</p>
Trade agreements	Both Imports and Exports	A trade agreement will need to be signed by both parties before a qualifying trade can commence. Such agreements will contain the terms and conditions of the trade.
Trade effects	Both Imports and Exports	All qualifying trades will have no detrimental impact to our customers in terms of service provision and/or water quality. In addition, qualifying trades should have no detrimental impact on the natural environment.
Trade partners	Both Imports and Exports	A qualifying trade must be between wholly-unrelated companies.

Water Quality	Both Imports and Exports	Water trades can be for potable, raw and part-treated water. Traders must abide by the Water Quality Protocols as specified by the DWI.
Allocation of incentives between relevant price controls	Both Imports and Exports	<p>In order to qualify for trade incentives, the qualifying payment will be allocated appropriately between the relevant price controls, the water resources and network plus water controls. This is because trades will utilise assets across both controls.</p> <p>Further information on the considerations that should be given in allocating the incentives between the controls can be found in <a href="#">appendix five</a> of the PR19 final methodology. In summary, Ofwat has identified three high-level types of water transfer options:</p> <ol style="list-style-type: none"> <li>1. Type 1: Source to source</li> <li>2. Type 2: Source to raw water distribution/ storage</li> <li>3. Type 3: Treated to distribution network</li> </ol> <p>Across these three types of trades Ofwat expects to see the export incentive allocated based on the costs of making a trade. Ofwat expect to see the import incentive allocated based on the charges paid for the trade:</p> <ul style="list-style-type: none"> <li>• for a type 1 trade, both sets of incentives would be attributed entirely to the water resources control for the importer and exporter, as the trade begins in the water resources assets of the exporter and ends within the water resources assets of the importer. There are no network plus water costs.</li> <li>• for a type 2 trade, the incentives would be attributed between the two controls for the importer and exporter. Typically, it would be expected that the majority of the incentives would be attributed to the water resources control. However, this would depend on the extent to which raw water transport and storage assets in network plus water are utilised and who develops them.</li> <li>• for a type 3 trade, the incentives would be attributed between the water resources and network plus water controls of the importer and exporter. Typically, it would be expected that the majority of the incentives would be attributed to the network plus water control, as the exporter's water treatment and distribution costs, and the related importer charges, would be greater than those attributed to the raw water abstraction activities</li> </ul>
Consistency with the Company's bid assessment framework	Both Imports and Exports	<p>A trade agreement will be aligned to the Company's bid assessment framework and will have no detrimental impact on the assessment process.</p> <p>Further information about the bid assessment framework can be found in Appendix 8 of Ofwat's PR19 final methodology <a href="#">here</a>.</p>
Evidence of assurance processes	Both Imports and Exports	<p>A trade agreement will demonstrate clear assurance processes.</p> <p>For all qualifying trade proposals that are successfully completed we will carry out an internal audit of the</p>

		process and provide that report to Ofwat. The report will include an overview of the trade itself, which explains the assets used across the water resources and network plus water control, as well as a justification for the proposed split between the water resources and network plus water controls. The audit report will also examine the processes followed during the trade negotiations, and demonstrate that we have complied with all aspects of this Code, by following a three-tier “lines of defence” approach of operational, internal and independent assurance. The process will be the responsibility of the Director of Strategy & Regulation and the assurance process will be monitored by our Competition Compliance Officer.
Competitive purchasing	Imports only	Our future position for balancing water supply and demand makes it possible that an import from a third party may be feasible. We support the use of competitive tendering processes where more than one supplier is bidding to supply water. In such instance, a structured and competitive process would be applied to select the successful supplier. The details of such trade would be shared with Ofwat when applying for any water trading incentives.
Economic purchasing	Imports only	We will only agree to trades where it is economically efficient to do so. Such decisions to enter into water trading will be based on the principles set out in our WRMP. This means that customers and regulators can be assured that we would only purchase the most economically sound water resources available, taking into consideration factors such as water quality and volume.
Managing imports	Imports only	We will work with the exporting trade partner to ensure imports of water by Bristol Water are efficient and as economically beneficial as possible. We will look to minimise the costs of imports, for example by using existing infrastructure, where possible.
Non-discriminatory procurement	Imports only	All appointed water companies are obliged to consider water trades during the WRMP planning process. We welcome discussions with any third party, and will ensure these are carried out in a way that does not exhibit undue discrimination or show undue preference
Cost assessment	Exports only	All qualifying potential trades will have their costs assessed with the same rigour as other options considered by Bristol Water in its WRMP and such assessments will be based on whole-life costings. Economic, environmental and social characteristics will be analysed to ensure that the trade is beneficial and least cost overall. We will seek to allocate costs correctly and ensure that costs are fully recovered from any trade agreement.
Managing exports	Exports only	We will work with our trade partners to ensure our water exports are as efficient as possible, utilising existing assets and infrastructure to ensure costs are minimised where possible. We will look to minimise the costs of exports, for example by using existing infrastructure, where possible.



## Appendix – Glossary

Term	Definition
Abstraction	The licensed removal of water from the natural environment
Abstraction Licence	The licence required to remove water from the natural environment
Access Code	The Access Code describes the general principles under which access by a third party will be granted to Bristol Water's treatment and infrastructure assets and how such access will be managed. It details the general conditions by which a licensee may purchase water from Bristol Water
Asset Management Plan (AMP)	The 5 year planning period linked to periodic reviews
Consumer Council for Water (CCW)	A statutory consumer body for water and wastewater consumers in England and Wales
Department of Environment, Food and Rural Affairs (DEFRA)	The UK Government department with responsibility for the water sector
Drinking Water Inspectorate (DWI)	The independent regulator of drinking water in England and Wales, ensuring that water companies supply safe drinking water that is acceptable to consumers and meets the standards set down in law
Deployable Output (DO)	The output of a commissioned water source, group of sources or bulk supply as constrained by: <ul style="list-style-type: none"> <li>• abstraction licence, if applicable;</li> <li>• environment;</li> <li>• treatment;</li> <li>• raw water mains and/or aquifers;</li> <li>• pumping plant and/or well/aquifer properties;</li> <li>• transfer and/or output main; and</li> <li>• water quality</li> </ul>
Drought	A prolonged period of abnormally low rainfall, leading to a shortage of water. In the United Kingdom this is defined as 15 consecutive days with daily precipitation totals of less than 0.2mm
Environment Agency (EA)	Regulator for the natural environment in England
Natural England	UK Government's adviser for the natural environment in England
PR14 (PR19)	Periodic Review - every five years Ofwat, the economic regulator for the water and sewerage industry, sets price controls that enable water and sewerage companies to finance the delivery of services to customers, in line with relevant standards and requirements. The most recent was made in 2014 (PR14) and the next one is due in 2019 (PR19)
Price controls	The limits set by Ofwat on the revenues that appointed companies can recover through charges for their services
Water trade	An agreement between two companies to transfer water between them
Water Resources Management Plan (WRMP)	The Water Resource Management Plan is an appointed water undertaker's strategic plan for managing water supply / demand balance over a 25 year period
Water Resources Planning Guideline (WRPG)	The water resources planning guideline provides a framework for water companies to follow when developing and presenting their water resources plans
Water Resources Zone (WRZ)	Water Resource Zone, the largest possible zone in which all resources, including external transfers, can be shared and, hence, the zone in which all customers will experience the same risk of supply failure from a resource shortfall. The whole of the Bristol Water supply area forms one Water Resource Zone.
Water Services Regulation Authority (Ofwat)	Economic regulator for the water sector in England and Wales