Trading and Procurement Code

Approved
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GLOSSARY

Abstraction	The licensed removal of water from the natural environment
Abstraction Licence	The licence required to remove water from the natural environment
Appointee	A statutory water or water and wastewater company, holding an instrument of appointment
Asset Management Plan or AMP	An AMP refers to the 5-year time period of a regulatory cycle, beginning in April 1990. AMP6 is April 2015 to March 2020, and AMP7 is April 2020 to March 2025.
Bid Assessment Framework or BAF	The approach Thames Water takes to support the bidding market for water resources, leakage and demand management services
Consumer Council for Water	A statutory consumer body for water and wastewater consumers in England and Wales
Defra	Department of Environment, Food and Rural Affairs, the UK Government department with responsibility for the water sector
Demand Management services or DM	DM describes the methods by which consumers can reduce their demand, by cutting waste or changing their behaviour
Deployable Output or DO	The output of a commissioned water source, group of sources or bulk supply as constrained by: • Hydrological yield; • Licensed quantities; • Environment (through licence constraints); • Pumping plant and/or well/aquifer properties; • Raw water mains and/or aquifers; • Transfer and/or output main; • Treatment; • Water quality.
DWI	Drinking Water Inspectorate, the regulator for water quality provided by appointees in England and Wales
EBSD or Economics of Balancing Supply and Demand	A modelling tool used by appointees to help optimise plans to balance supply and demand
Environment Agency	Regulator for the natural environment in England
Leakage services	Leakage services are the methods used to reduce the amount of water lost from a water network
Natural England	The UK Government's adviser for the natural environment in England
Ofwat	Economic regulator for the water sector in England and Wales
OJEU	Official Journal of the European Union, where all public sector tenders above a certain threshold must be published
Price Controls	The limits set by Ofwat on the charges that appointed companies can make for their services
Price Review or PR	Ofwat's process for setting price controls. Ofwat sets price controls every five years
PR14	Price Review 2014, for the AMP period 2015-2020

PR19	Price Review 2019, for the AMP period 2020-2025
River Basin Management Plan or RBMP	An RBMP is the Environment Agency's framework for how organisations, stakeholders and communities can protect and enhance the benefits provided by the water environment.
River Basin	The land area draining into a river
Service trade	An agreement between a third party and an incumbent appointee to provide leakage or demand management services to the incumbent appointee
Sustainability Reduction or SR	Reduction in licensed abstraction that is required by the Environment Agency to provide environmental improvements
SWA	The water resource zone covering Slough, Wycombe and Aylesbury
SWOX	The water resource zone covering Swindon and Oxfordshire
Thames Valley	The collective name we give to the water resource zones outside London
Thames Water	Thames Water Utilities Limited, the statutory water and wastewater company responsible for the public water supply and wastewater networks in Greater London and the Thames Valley
Third Party	A neighbouring appointee or other provider of water resources or leakage or demand management services to the incumbent appointee
Utilities Contracts Regulations 2016 or UCR16	The UCR16 are established in UK law and impose obligations on utilities in relation to how they award contracts for the execution of works, the supply of products or the provision of services
Water trade	An agreement between a third party and an incumbent appointee to transfer water between them
Water Resources Management Plan or WRMP	The WRMP is a water company's long-term plan for managing its supply demand balance
Water Resource Zone or WRZ	A WRZ describes an area within which the abstraction and distribution of water to meet demand is largely self-contained (i.e. no transfers between WRZs) and all customers experience the same risk of supply failure and the same level of service
Water Resources South East Group or WRSE	A collaboration of appointees and regulators developing a regional water resources strategy for South East England
Water Resources West Group or WRG	A collaboration of appointees and regulators focused mainly on developing sustainable transfers between Wales, West England and South East England
Water Supply Licensing or WSL	The competitive market provisions for water supplies introduced by the Water Act 2003
Water Supply and Sewerage Licensing or WSSL	The competitive market provisions for water and sewerage services, introduced by the Water Act 2003 and expanded by the Water Act 2014

1. INTRODUCTION

This is Thames Water's Trading and Procurement Code ("Code"). It sets out the policies, principles and requirements that will apply when Thames Water trades with appointed water companies and other service providers (collectively "third parties").

1.1 Why do we issue a Code?

Thames Water Utilities Limited ("Thames Water") is interested in exploring opportunities 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 (a "water trade") or services for managing demand or reducing leakage (a "service trade"). Trading offers significant opportunity to meet the long-term needs of our customers and those in the wider south east.

Thames Water (and many other companies) already trade water and procure services with third parties. But significant pressures from climate change and population growth mean we need to redouble our efforts to explore all potential ways to balance supply and demand.

The Water Services Regulation Authority ("Ofwat") wants to encourage greater water trading between appointed water companies ("appointees"), and between appointees and non-appointed providers of water resources, to benefit customers and promote better, more sustainable use of the natural environment. Its regulatory framework includes a financial incentive, which appointees can apply for, to encourage them to consider water trading.

We believe it is important to trade only where it is environmentally and economically sensible to do so, and where it is in the best interests of our customers. Ofwat agrees and has set out a series of principles that appointees must abide by if they are to qualify for the water trading incentive. This Code sets out how we will apply those principles. All appointees need to have and comply with a Trading and Procurement Code that has been approved by Ofwat, before they can apply for the trading incentive. Ofwat believes this is an appropriate level of ex-ante regulation, which is more proportionate and less intrusive than Ofwat needing to be involved in approving the individual water trades that a company will undertake.

1.2 Using the Code

Thames Water will keep its Ofwat-approved Code up to date and publicly available, via its website.

This Code can be used by third parties offering both water resources and services for managing demand or reducing leakage, recognising that many of the requirements and principles within this Code could apply to both types of trade. We believe operating a single Code that can apply to water trading and service trading is the best approach for third parties, in terms of transparency, accessibility and ease of use.

This Code should be read in conjunction with Thames Water's

- network Access Code;
- Water Resources Market Information;
- Bid Assessment Framework; and
- Water Resources Management Plan.

The network Access Code sets out in detail the operational and commercial arrangements that govern applications for use of, and supply from, Thames Water's supply system for the purposes of competition under the WSL provisions. Where Thames Water seeks to export water, it will base these trades on its Access Code. The latest version of the Access Code is available on the Thames Water website, at https://wholesale.thameswater.co.uk/-/media/Site-Content/AllNew-Wholesale/About-us/Document-library/Access-Code-2019.pdf

The Water Resources Market Information ("WRMI") sets out in detail for each of our Water Resource Zones ("WRZ") information about our supply-demand balance, supply and demand forecasts, water treatment capacity and the costs of possible supply and demand options. The information is available to encourage third parties to seek opportunities to trade with Thames Water. The latest version of the WRMI is available on the Thames Water website at https://corporate.thameswater.co.uk/About-us/our-strategies-and-plans/water-resources/water-resources-market-information.

The Bid Assessment Framework ("BAF") sets out in detail how Thames Water supports the bidding market for water resources, leakage and demand management services. It ensures the process for evaluating third party bids is fair, transparent, non-discriminatory and proportionate. The BAF highlights the importance of the Utilities Contract Regulations 2016 ("UCR16") which govern the procurement of service trades. The BAF will be made available on the Thames Water website after Ofwat concludes PR19.

The Water Resources Management Plan ("WRMP") sets out in detail how Thames Water plans to provide a secure and sustainable supply of water for our customers over the next 80 years, from 2020 to 2100. Our revised draft WRMP is available on the Thames Water website at https://corporate.thameswater.co.uk/About-us/our-strategies-and-plans/water-resources.

1.3 Understanding this document

This document is structured as follows:

- Section 1 introduces the Code;
- Section 2 describes Thames Water, its regulatory framework, its water resources position, its approach to water trading (including current water trades) and service trading, and the challenges it faces in supplying its customers;
- Section 3 sets out the key requirements and principles for water trades; and
- Section 4 lists useful reference material.

1.4 Contact details

Any queries in relation to this Trading and Procurement Code or Thames Water's WRMP should be directed to:

Mr Chris Lambert
Supply Demand Senior Technical Adviser
Strategic Planning and Investment, Thames Water
Clearwater Court, Vastern Road, Reading, Berks RG1 8DB.

Phone: 0203 577 0213

Email: chris.x.lambert@thameswater.co.uk

Any queries in relation to water trading and service trading generally should be directed to:

Procurement Support Centre
Phone: 0203 577 9175
Email: procurement.support.centre@thameswater.co.uk

2. THE CONTEXT FOR WATER TRADING

This section describes the context for water trading and service trading. It provides details of Thames Water, the regulatory framework in which it operates and its water resources position. It also sets out current and future water trading arrangements and the challenges facing the company to keep serving its customers.

2.1 Thames Water

Thames Water is the largest statutory water and wastewater company in the UK. It is responsible for the public water supply and wastewater networks in Greater London and the Thames Valley. Every day it treats and supplies drinking water to around 10 million household and business customers and removes and treats wastewater from 15 million customers.

Thames Water's supply area covers 13,000 square km and extends from Cirencester in the west to Dartford in the east, and from Banbury in the north to Guildford in the south. It shares borders with 9 other appointed companies: Southern Water, Anglian Water, Bristol Water, Northumbrian Water (Essex and Suffolk), Wessex Water, South East Water, Severn Trent Water, Sutton and East Surrey Water and Affinity Water.

Water supplies are derived from a mixture of surface water sources (mostly from large storage reservoirs supplied from the River Thames and River Lee) and groundwater sources. We also have a desalination water treatment works on the River Thames (Tideway) that can supplement water supplies at times of high demand and/or during drought conditions.

2.2 Regulatory framework

Thames 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.

Thames Water is regulated principally by Ofwat, the Environment Agency and the Drinking Water Inspectorate ("DWI").

- Ofwat is the economic regulator for the appointed water and wastewater companies and water-only companies in England and Wales. It sets limits on the charges that these companies can make for their services ("price controls").[1] Ofwat sets price controls every five years in a process known as the Periodic Review (or "PR"). Controls were set in December 2014 ("PR14") for the period April 2015 to March 2020 and will be reset in December 2019 ("PR19") for the period April 2020 to March 2025.

[1] Excluding companies appointed under the New Appointments and Variations framework, which set their charges no higher than the neighbouring appointee's charges.

- The Environment Agency is a public body, sponsored by the Department of Environment, Food and Rural Affairs ("Defra"). It seeks to protect and improve the environment within England and is responsible for issuing water companies with abstraction licences and Environment Permits for discharges. The Environment Agency is concerned with the quality and quantity of river water and underground water, marine and estuarial waters and strives to protect and improve the environment.

- The DWI regulates all appointed water companies in England and Wales. It acts on behalf of the Secretary of State and the National Assembly for Wales. Its role is to assess the wholesomeness of water supplies. It also undertakes technical audits of water suppliers to examine all aspects of water quality, treatment and monitoring. In addition, the DWI requires each water supplier to submit quality data on a monthly basis for scrutiny. Where necessary, the DWI can require a company to implement schemes to improve water quality and will monitor their progress.

2.3 Water resources

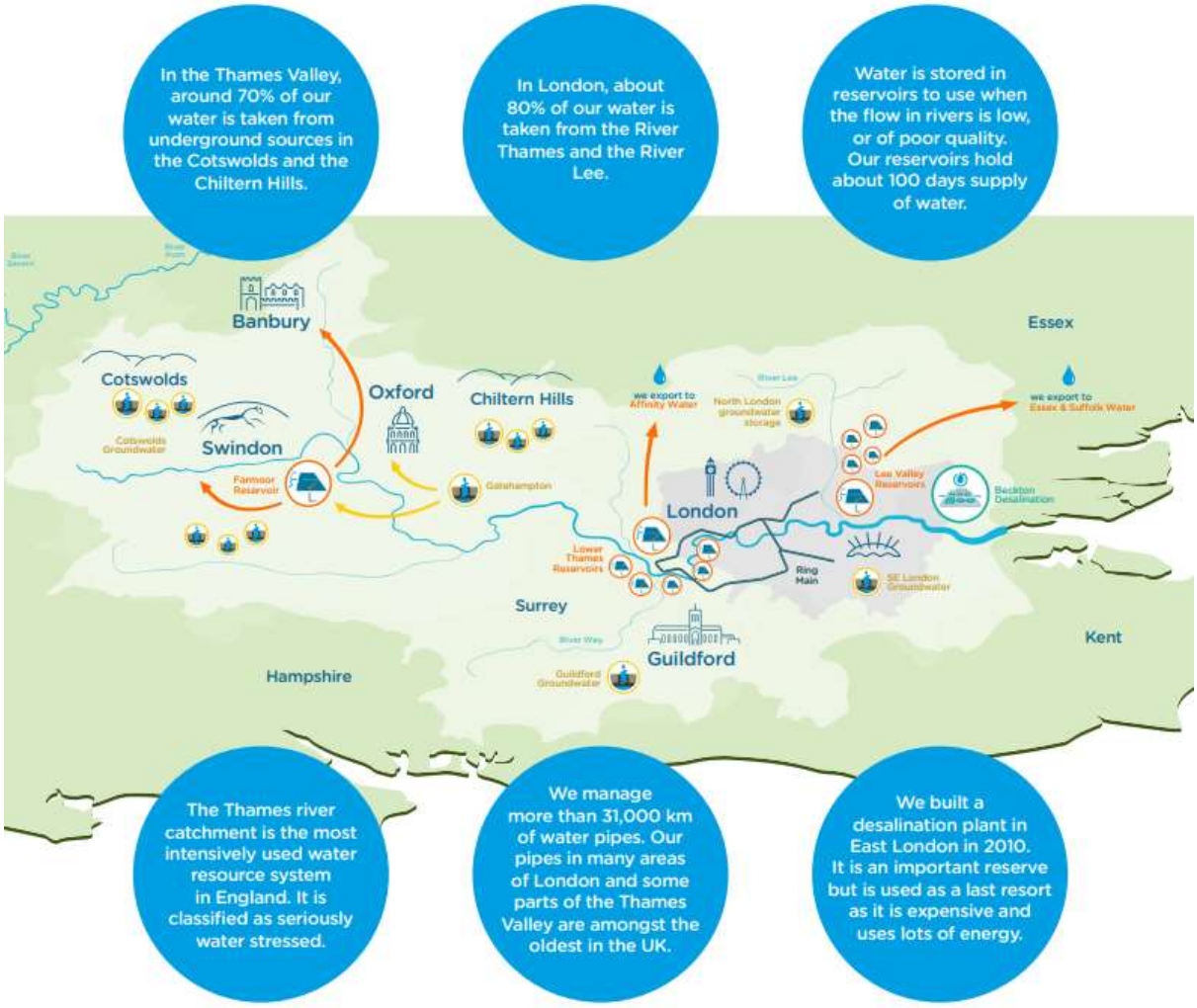
Thames Water's area of operation sits almost entirely within the Thames River Basin District, which comprises rivers and chalk streams, aquifers, salt marshes and estuarine and coastal waters. It is mainly rural in the west and urban in the east. Almost half of the water bodies have been artificially modified, which can lead to a loss of habitat and change natural flows.[2] Thames Water is committed to playing its part, along with a host of other organisations and interested stakeholders, in maintaining and improving the aquatic environment.

The average rainfall for the Thames catchment is 739mm in a year,[3] substantially less than the average for England and Wales, 919mm[4] (based on records from 1883 to 2011). Of the rain that falls, about two thirds is either lost to evaporation or transpired by growing vegetation. Of the remaining 'effective' rainfall, approximately 55% is abstracted for use, making the Thames catchment one of the most intensively used water resource systems in the UK.[5] Of all the water abstracted, 82% is for public supply. Below-average rainfall and high water demand means that a high proportion of effective rainfall is abstracted from the environment. Therefore, the catchment, as well as the wider South East region, is deemed to be under "serious water stress".[6]

Existing water resources in the Thames catchment are shown in Figure 1.

[2] Environment Agency and Defra, Thames River Basin Management Plan, December 2015, page 11.
[3] Thames "12 station average" data from the Environment Agency, averaged over 131 years.
[4] Alexander, L.V. and Jones, P.D. (2001) Updated precipitation series for the U.K. and discussion of recent extremes, Atmospheric Science Letters doi:10.1006/asle.2001.0025. Available at https://www.metoffice.gov.uk/hadobs/hadukp/data/monthly/HadEWP_monthly_qc.txt.
[5] Environment Agency, Thames Catchment Abstraction Licensing Strategy, May 2014, page 8.
[6] Environment Agency and Natural Resources Wales, Water stressed areas – final classification, July 2013, table 1, page 7.

Figure 1 Water Resources in the Thames catchment



Source: Thames Water

For planning purposes, Thames Water divides its supply area into six water resource zones ("WRZs"). A WRZ describes an area within which the abstraction and distribution of water to meet demand is largely self-contained and all customers experience the same risk of supply failure and the same level of service.

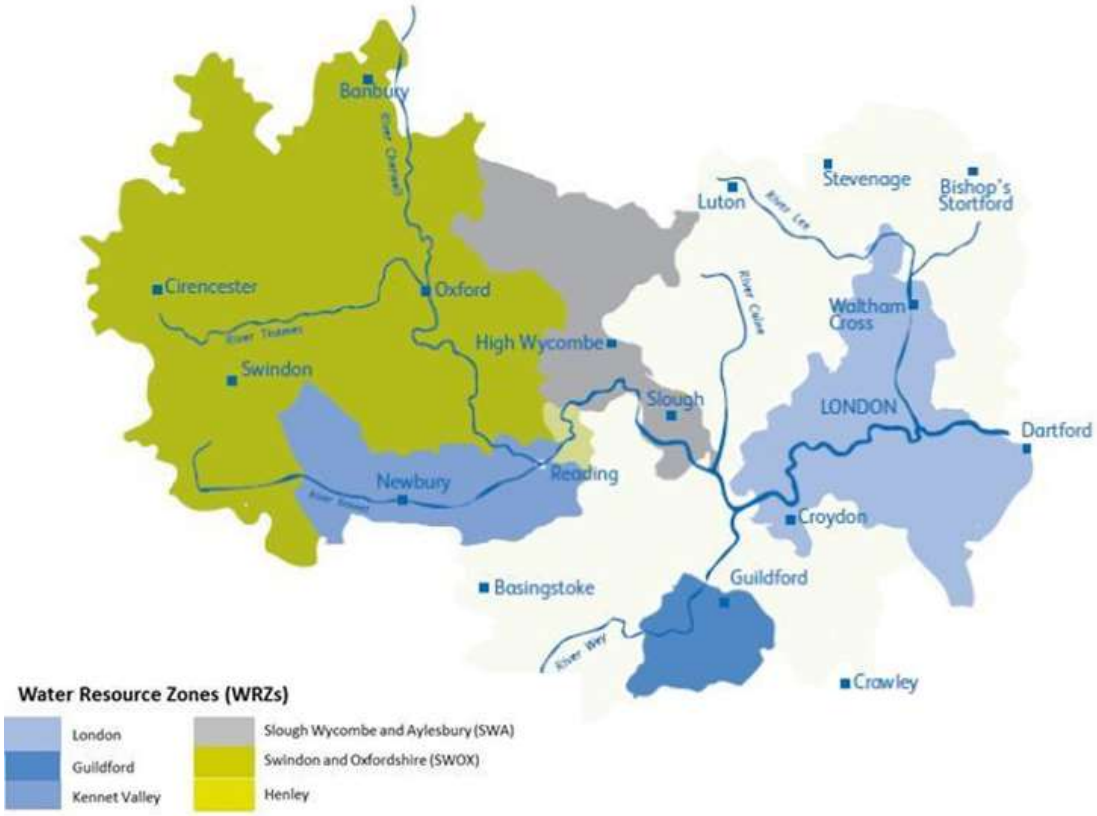
London WRZ is the largest of the six zones and covers much of the Greater London area. The water resources for London are largely based on water abstracted from the River Thames and stored in reservoirs, and the remainder comes from underground sources (aquifers) via boreholes and a desalination plant in East London.

The next largest zone is the Swindon and Oxfordshire ("SWOX") WRZ. This zone is supplied mainly from groundwater (60%), supported by river abstraction and a reservoir near Oxford. The other four zones to the west of London are Kennet Valley (includes the towns of Reading and Newbury); Henley; Slough, Wycombe and Aylesbury ("SWA") and Guildford.

These zones are largely reliant on groundwater abstraction, but with some abstractions directly from local rivers, notably the River Kennet in Reading and the River Wey near Guildford.

Our WRZs are shown in Figure 2. We refer to the WRZs outside London collectively as the "Thames Valley".

Figure 2 Water Resource Zones (WRZ) in the Thames Water Supply Area



Source: Thames Water

Thames Water takes its supplies from rivers and from groundwater (aquifers), some of which support reservoirs. At times of drought it can also use its desalination plant at Beckton to treat brackish water from the Thames estuary and turn it into drinking water.

To understand if we have sufficient water to meet our customers' needs, we compare the demand for water with the water available for supply, taking account of the uncertainties in the forecasts. This assessment produces the "supply demand balance" for each WRZ which shows if there is sufficient water to meet customers' needs or if there is a deficit. The supply demand balances across our supply area are shown in Table 1.

Table 1 Forecast baseline supply demand balance (Ml/d) for Thames Water WRZs

WRZ	2019/20	2024/25	2029/30	2039/40	2074/75	2099/00
London	-24	-143	-195	-306	-531	-623
Swindon and Oxfordshire (SWOX)	9	-2	-7	-12	-18	-31
Slough, Wycombe, Aylesbury (SWA)	14	4	1	-3	-12	-21
Kennet Valley	23	18	16	13	8	1
Guildford	3	0	-2	-8	-10	-13
Henley	6	5	5	5	5	5

Source: Thames Water updated rdWRMP19, Executive Summary (section 6)

2.4 Challenges

There are three main factors that, in combination, pose significant challenges to our ability to provide services to customers effectively.

The first challenge facing Thames Water, along with many other water companies in England and Wales, is population growth. We estimate that the number of customers in our area will grow to nearly 12 million by 2045, and to nearly 14 million by 2100. They will all need water. We estimate there will be a shortfall between the amount of water available and the amount we need, unless we act. This shortfall will start in the next five years, and is forecast to grow to around 350 million litres of water per day by 2045.

The Environment Agency has noted[7] that

> "Changing lifestyles and an increase in population could have a substantial impact on demand for water. By the 2050s, the total population of England and Wales is expected to grow by an extra 15 million people, so despite forecasts of reductions in per capita consumption as a result of recent demand management initiatives by water companies, overall use is likely to grow."

The second challenge is climate change and the potential effects on water availability. The latest official predictions lead us to expect, on average, that summers will become hotter and drier, leading to increased demand for water. Winters are also expected to become generally wetter, with more intense storms. The UK Climate Projections, produced in 2009, suggest that by the 2050s "The biggest changes in precipitation in summer, down to about –40% …, are seen in parts of the far south of England".[8]

Echoing this, the National Infrastructure Commission said[9]

> "Climate change, an increasing population (especially in the drier south and east) and the need to protect the environment bring further challenges. The water supply system is already strained and the pressure will only rise over the coming decades."

[7] Environment Agency, "Current and future water availability – addendum. A refresh of the Case for Change analysis", December 2013, page 7.
[8] UK Climate Projections Briefing Report, version 2 December 2010, page 7.
[9] National Infrastructure Commission, "Preparing for a drier future", April 2018, page 3.

The effect of a likely reduction in raw water availability is compounded by the third challenge, the need to reduce abstraction to provide more protection for the natural environment. Thames Water, along with other appointed water companies, is required to comply with Environment Agency requirements on sustainability reductions. These lower the amount of water we are allowed to abstract to provide environmental improvements, typically through increased flows in rivers which are identified as suffering from low flows due to the effects of abstraction.

Defra, Ofwat, the Environment Agency and DWI, in a joint letter[10] to water companies, emphasised the importance of responding to the challenges we face.

> "Customers' water needs must be met in a safe, resilient and efficient way, while protecting the environment and respecting good supply practice and the needs of other water users. This is becoming ever more challenging as water resources face increasing pressures from climate change, population growth, societal expectations and increasing environmental aspirations."

The challenges are likely to have the most severe impact in London, but we also forecast a significant shortfall in the Swindon and Oxfordshire region, and other parts of the Thames Valley. Given these challenges and the additional pressures they put on us, Thames Water believes water trading and service trading can play an even more prominent role in the future than they have to date. We are already working with other water companies and regulators on proposals to understand how trades might improve long-term outcomes for customers, and we welcome further interest from any third party.

2.5 Trading

Thames Water supports the use of twin track approach to how we manage supplies and help protect the natural environment. This means we carefully consider the right balance of options to influence demand and available supplies. Demand management options reduce the need for new supplies by encouraging customers to change their behaviour to use water more efficiently and reduce waste. Supply options increase the amount of water available to use, and include both investing in new sources and reducing leakage and waste.

Water trading and service trading can help us use a twin track approach efficiently, where beneficial to do so. The next two sub-sections describe water trading and service trading in more detail.

It is important to note that, through our Code, we will apply the key principles of transparency, equal treatment, non-discrimination, and proportionality to trades for water resources as well as trades for demand management and leakage services. However, water resources are not currently covered by UCR16, but services for leakage and demand management are. This means service trades will continue to be assessed through the well-established UCR16 procurement process, and these requirements will supersede our Code if and where there are inconsistencies. However, we do not believe there are inconsistencies, as our Code is aligned with UCR16 principles.

[10] Defra, Ofwat, EA and DWI, "Building resilient water supplies – a joint letter", August 2018, available at https://www.ofwat.gov.uk/wp-content/uploads/2018/08/Building-resilient-water-supplies-letter.pdf.

2.5.1 Water trading

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 helping to protect the environment from over-abstraction. Trading can also help to reduce the cost and increase the resilience of water supplies, compared with other options.

Water transfers are not a new phenomenon. Thames Water and many other appointees use trades (exports and imports) as part of the overall management of their supply demand balance. Some of the earliest transfers date back to the 19th century and were used to support rapid growth in industrial cities including Birmingham and Liverpool. Sometimes companies collaborate to build resources that benefit them both. For example, Thames Water is working with Severn Trent Water, United Utilities and Welsh Water to explore the opportunities to bring raw water from Wales to South East England. These companies are part of the Water Resources West Group ("WRG"), along with Bristol Water, Wessex Water, Affinity Water and South Staffs Water, and Natural Resources Wales, Environment Agency, Defra, Ofwat and Welsh Government.

We have 20 bulk supply agreements with neighbouring water companies, both for the export and import of raw and treated water. These can be for temporary support in an emergency situation, or as a permanently available supply. Volumes under existing water import agreements vary from 0.1 Ml/d to 25Ml/d and exports vary from 0.2 Ml/d to 118 Ml/d – Thames Water is a net exporter of water, by volume. We also have 19 bulk export agreements with new appointees, to supply specific sites.

Thames Water also works closely with its neighbouring appointed water companies as part of the Water Resources in the South East Group ("WRSE"). The WRSE is a collaboration between six appointed water companies in the south east of England, the Environment Agency, Ofwat, Consumer Council for Water, Natural England, DWI and Defra. Its focus is to develop a flexible and robust water resources strategy for the south east of England. By taking a region-wide approach that works across company boundaries, options that might not otherwise be available can be developed. Given the shared challenge of balancing supply and demand in the south east, it is important that we do everything possible to work collaboratively with neighbouring water companies, and others in the sector. The appointees are Thames Water, South East Water, Southern Water, Portsmouth Water, Sutton and East Surrey Water and Affinity Water (Central and Southeast). Other water companies and interested parties are invited to participate, and Northumbrian Water (Essex and Suffolk), Anglian Water and Severn Trent Water have already done so.

Thames Water also believes that water trading could be supported by the more flexible management of abstraction licences. For example, some companies (and other, private abstractors) currently abstract directly from the same water body or several water bodies that are hydrologically linked. A framework that allowed these abstractors to share or 'pool' their abstraction entitlements such that a cooperative trading arrangement was possible, would enable them to alter their actual abstraction on a mutually-agreed basis. This could improve water availability and the effective management of resources in both the short term and long term.

Thames Water is keen to explore how the concept of system operators can facilitate trading. As part of our development of how we use markets, we sponsored new thinking on potential

system operator options, with United Utilities and Severn Trent Water.[11] We will take this work forward in AMP7.

2.5.2 Service trading

Providing new water resources through water trading is important, but Thames Water is also keen to work with third parties and customers to improve the way we all use water. We have a strong commitment to reduce our leakage levels and want to encourage and support our customers to use water wisely. Thames Water has an extensive smart metering programme as well as offering smarter home visits where we provide household and business customers with advice and retrofit water-saving devices in order to encourage more efficient water use.

Third parties who believe they could provide us with or benefit from our leakage or demand management services should contact us to discuss potential opportunities to work together. We call this “service trading” for two reasons:

- to be clear that it is different from “water trading”, which would likely require a different set of skills and technical knowledge; and
- to emphasise that many of the principles that we set out in this Code apply to service trading as well as to water trading.

We believe each approach to trading can complement the other, and both approaches can be supported by this Code. We believe operating a single Code that can apply to water trading and service trading is the best approach for third parties, in terms of transparency, accessibility and ease of use.

[11] Severn Trent Water, Thames Water and United Utilities, “What role for System Operators in the water sector?”, November 2017.

3. KEY REQUIREMENTS AND PRINCIPLES

Thames Water is committed to negotiating and trading with third parties on a fair, reasonable, sustainable, proportionate and transparent basis. Water trades and service trades will only be agreed where, compared with other available options, they are more beneficial to Thames Water's customers and minimise harm to the natural environment.

In June 2018, Ofwat set out revised guidance to companies on the relevant issues to be included in a Code. This guidance sets out three mandatory requirements that all trades must comply with plus twelve principles that apply to either imports, or exports, or both. Ofwat also invites appointees to consider further, relevant principles or issues.

Tables 2, 3 and 4 set out these requirements, principles and issues, how Thames Water addresses them, and Thames Water's general approach to trading. These form the basis for more detailed commercial negotiations for a trade. Note that service trades fall under the UCR16.

For ease of reference, as far as possible, we follow the format set out by Ofwat – numbered requirements and principles are those from Ofwat's guidance; unnumbered principles are those further issues we consider relevant to our approach to trading.

Thames Water's current and potential resource position makes it likely that an import agreement could be a valid option for us to pursue. Our revised draft WRMP19 includes consideration of potential imports (as well as DM options), although opportunities to import large volumes of water of sufficient reliability and security are rare.

We are also open to agreeing exports with other companies, and are working closely with other companies, including in the WRSE Group, to explore opportunities to do so. Any import or export with a qualifying trading partner would comply fully with the following principles. For ease, we separate our approach to the Ofwat principles from the further issues we consider relevant.

Table 2 Requirements supporting Thames Water's approach to trading incentives

Requirement	Thames Water's approach
1. Commencement	
A qualifying trade must have been agreed no earlier than July 2013.	Thames Water will not claim incentives for any agreement signed before July 2013.
2. Qualifying period	
A qualifying trade must be operating during the period April 2015 to March 2025.	Thames Water will not claim incentives for any agreement operating outside the relevant price control period (i.e. new trades within 2015-20 at PR19, and new trades within 2020-25 at PR24).

3. Trading partner	
Trades must be between unrelated parties.	Thames Water will not claim incentives for any trade unless that trade is with an unrelated party (and complies with the other requirements and principles within this Code).

Table 3 Principles supporting Thames Water's approach to trading

Principle	Thames Water's approach
1. Non-discriminatory procurement	Thames Water is willing to trade with any third party, as shown by our involvement in the WRSE Group and use of Notices within the Official Journal of the European Union ("OJEU Notice") which invited third parties to submit potential schemes for consideration as part of Thames Water's ongoing programme of investigation to improve security of supply. We will not discriminate between potential suppliers when considering options for water imports. Our revised draft WRMP19, Appendix S: Stakeholder Engagement sets out the wide-ranging programme of engagement that Thames Water followed in producing its draft and revised draft WRMP19 to ensure all stakeholders had ample opportunity to input to the process.
2. Economic purchasing	We are aware of the need to operate as an efficient company, act in our customers' best interests and provide services to them as efficiently as possible. Where we consider options to import water, or for demand management and leakage reduction services, we assure Ofwat and others that we will buy from the most economical sources available, having regard to the quality and quantity of water available, the skills and experience of service providers, the impact on customers in the donor area and the effect on the natural environment and the operation of our network.
3. Using competitive processes	Thames Water is aware of its obligations under UK and EU competition law and wholeheartedly supports the use of open and effective competitive processes. Our involvement in the WRSE Group, the publication of WRMI and our use of OJEU Notices show that we are committed to an open, transparent and genuine process for considering potential supplies to us. Evidence of our commitment is set out in our revised draft WRMP19, which includes consideration of potential imports alongside potential DM options. If options for more than one import occur such that a competition between suppliers to Thames Water is necessary, we will assess those options on the basis of a suitable competitive process. Thames Water is currently investigating in detail the potential for large raw water imports into the Thames catchment for supplying London and the Thames Valley in the long-term.

	Were a large import option to proceed, Thames Water would aim to use the Direct Procurement for Customers process, if applicable, to drive best value for customers.
4. Contract duration	Thames Water will seek to agree contract lengths that are reasonable and fair to both parties. We will consider short-term and long-term trades, and the contract duration will depend on the circumstances of the specific trade being discussed (and will likely be longer for water trades than for service trades). As a general rule, where we seek to import water, we need to ensure water is available over a long-enough period to represent a meaningful and secure contribution to deployable output. Taking account of the cycle of water resources management plans and associated planning regimes, in most cases we would prefer a contract term of at least 20 years with long duration notice periods linked to the time we would need to find alternative sources of water. Service trades would not require such a long contract duration or notice period.
5. Transparency	Thames Water already follows a transparent process of option selection and appraisal in its WRMP and WRMI, and will maintain or enhance this in the BAF. Both the WRMP and the WRMI include detailed information about our supply demand balance and likely future needs for water, as well as potential schemes and their costs. Thames Water also publishes a rejection register, which lists the generic option types and the specific resource elements on the unconstrained list of options that have been rejected, with reasons for rejection[12]. The WRMP process comprised significant stakeholder engagement, including • a Water Resources Forum every quarter to give stakeholders and third parties opportunity to hear about our proposals for investment first hand and to provide an opportunity for their input to the programme of work we are undertaking; • technical stakeholder meetings to enable topics of particular interest to be followed up in more detail; • significant and wide-ranging public consultation. All the information presented at the forums, together with notes of the meetings, is published on Thames Water's website at: https://corporate.thameswater.co.uk/About-us/Our-strategies-and-plans/Water-resources/Document-library/Past-meetings-minutes-and-presentations.

[12] Thames Water, rdWRMP19, Technical Appendix Q.

	Furthermore, we share information with other companies about water availability and potential trading opportunities as part of our work with the WRSE Group and Water Resources East Group. Thames Water remains committed to following a transparent process when agreeing new trades, within the bounds of normal commercial confidentiality.
6. Links to WRMP	Thames Water already includes the consideration of water trades in its assessment of supply demand balance options in its WRMP. Water trades are considered in the same way as all other options, both to determine option feasibility and as part of our subsequent process of programme appraisal. Sections 4 and 7 of our revised draft WRMP19 set out the work we have undertaken as part of WRSE to investigate trades with neighbouring water companies, and those which have been taken forward into our preferred programme of investment. Section 7 also gives details of the OJEU Notices that we have published since 2012 to invite third party organisations to register interest in providing a bulk supply of raw or treated water.
7. Rationality (Economic)	Thames Water is committed to agreeing trades where it is most economically advantageous to its customers to do so. We look at a wide range of options to manage our supply demand balance. We will only agree a water trade where it is better than other options available to us. Our commitment to economically-rational trades is underpinned by our approach to best value investment as detailed in section 10 and Appendix W of our revised draft WRMP19, and aligns with our general procurement strategy of choosing the “most economically advantageous tender”. Our detailed method is based on consideration of the Whole Life Costs of available options, optimised to give the best value to customers, the environment and society. For example, we consider the quality of water on offer, operational characteristics to ensure consistency with our network management, treatment and transport costs, sustainability, environmental benefits and disbenefits, duration, resilience and availability. We use an enhanced EBSD process (“EBSD+”) to ensure the economic rationality of each proposed trade or service. This process optimises the following metrics: cost, environmental performance, resilience, intergenerational equity, deliverability and customer preference. This optimisation process comprises three stages: Stage 1 - least cost optimisation, Stage 2 - dual objective search to find the best solution for each metric within a maximum 120% threshold increase of cost from the least cost solution, and Stage 3 - finding near-optimal solutions for each parameter in relation to the least cost solution; selected reasonable alternative programmes are then stress-tested to determine their adaptability to a wide variety of different futures.

7. Rationality (Environmental)	Thames Water is committed to protecting the natural environment for the benefit of its current and future customers. We will ensure that any water trade we agree will not compromise our obligations under UK and EU legislation, including the need to achieve good ecological status or potential under the Water Framework Directive ("WFD"). Our commitment to environmentally-rational trades is underpinned by our approach to best value investment as detailed in Section 10 of our revised draft WRMP19. We ask third party suppliers to identify any material positive or negative aspects associated with the supply option identified through Strategic Environmental Assessment, Habitats Regulation Assessment ("HRA") and Water Framework Directive ("WFD") impact assessment. In order to evaluate the environmental impact of proposed trades, potential options are first screened to see whether they meet WFD and HRA requirements. Options are then subject to a Strategic Environmental Assessment (SEA) to qualify the socio-economic impact of construction and operation. Options are graded between 0 (no impact) and 10 (major impact to several receptors) based on the effect the option has on each SEA objective. These scores are then used to optimise environmental performance as part of the enhanced EBSD process.
8. No artificial ending of trades	Thames Water currently has several import and export agreements with other water companies. We report on these to Ofwat every year. Thames Water also has trading agreements with non-water companies. We are aware that to qualify for a water trading incentive, a water trade needs to have been agreed no earlier than April 2013 and operating between April 2020 and April 2025 (to qualify for an incentive claim at PR24). We assure Ofwat and others that we will not artificially end and restart any of our current trades in order to exploit the financial incentives for trading. We would look to our current trading partners to do the same. If we agreed a new trade, we would prepare a report of the process, to demonstrate compliance with our Code. This report would include evidence to show that the trade was genuinely new, not a current trade that had been artificially ended and restarted. Such evidence would include details of the contracts and a clear summary of the negotiation process. We would provide this report as part of our Business Plan submission, as we did for PR19 in respect of our two trades in AMP6.
9. Correct assessment of costs	Thames Water will assess the costs of a potential trade with the same rigour and attention to detail as any of the other options in our WRMP. We will look at the potential economic and environmental impacts to ensure the trade is beneficial and made at least overall cost. We will always seek to allocate costs correctly and recover the full costs from any trade agreement. Where export charges are not based on our standard tariffs, the

	charges are likely to be calculated initially based on the costs of supplying the trade, including the actual maintenance and operation costs of specific infrastructure in place to supply the export and an apportionment of the cost of abstraction, storage and transmission pumping costs to the supply. Charges might then change over time in relation to the change in wholesale tariffs, or some other appropriate method of indexation. Where possible we will use existing infrastructure to minimise the costs of a trade.
10. Appropriate allocation of incentives	Where we apply for incentives for qualifying water trades, we will calculate incentives and allocate to the appropriate price control in accordance with Appendix 5 of Ofwat's final methodology for PR19,[13] where appropriate. Note that both of our trades in AMP6 have been achieved by substitution, in other words a capacity trade. Although this type of trade is not covered specifically in Ofwat's guidance, it seemed appropriate to allocate these incentive payments wholly to the water resources price control. Where trades might cover more than one control unit, we will ensure the appropriate allocation occurs and provide full justification for our approach.
11. Consistency with Bid Assessment Framework ('BAF')	We have developed our BAF in accordance with Appendix 8 of Ofwat's final methodology for PR19[14] and submitted it to Ofwat as part of our PR19 Business Plan process. The BAF sets out in detail how Thames Water supports the bidding market for water resources, leakage and demand management services. The bid assessment framework ensures the process for evaluating third party bids is fair, transparent, non-discriminatory and proportionate. It also aims to increase third parties' awareness of our needs and help them to identify new opportunities to bid. Thames Water is developing its BAF and will make it available on its website after Ofwat concludes PR19. We have updated this Code to recognise there are similarities between water trades and service trades, and to emphasise that many of the requirements and principles within this Code could apply to both. We assure Ofwat and all third parties that this Code will be consistent with the BAF.

[13] Ofwat, December 2017, "Delivering Water 2020: Our final methodology for the 2019 price review. Appendix 5: Water resources control", section 4.3.1.
[14] Ofwat, December 2017, "Delivering Water 2020: Our final methodology for the 2019 price review. Appendix 8: Company bid assessment frameworks – the principles".

12. Evidence of assurance processes	All water trades are assessed through the same rigorous programme of investigation as applies to other resource options available to Thames Water through the WRMP process. We publish details of the options appraisal and selection process as part of our rdWRMP19. We will adopt a rigorous assurance and governance process for the agreement of trades to ensure that our decisions to trade take account of the long-term nature of water trading and supply-demand balances, in the context of our water resources strategy. Further details of our robust assurance processes are contained in our draft BAF and a summary will be included in each water trading report provided to Ofwat.

Table 4 Further issues relevant to Thames Water's approach to trading

Issue	Thames Water's approach
Audit	For all new qualifying trades, Thames Water will prepare a report of the process we followed, to demonstrate compliance with our Code. We will submit this information to Ofwat, as part of the process for applying for qualifying water trade incentives.
Assignment	A trading partner is prohibited from assigning a qualifying trade agreement to any other party without consent from Thames Water.
Compliance	Thames Water will take all reasonable and appropriate steps to ensure that it complies with such relevant laws and regulations as shall apply from time to time, including the Competition Act 1998. Thames Water expects its trading partner to do the same. Trades will also need to comply with Thames Water's Network Access Code, where appropriate. Thames Water is committed to rigorous compliance with all of its obligations, including its Trading and Procurement Code. For all successful qualifying water trades, we will report on the processes we followed during the trade negotiations and our approach to cost allocation. The report will demonstrate that we have complied with all aspects of this Code. We have provided reports to Ofwat as part of our PR19 Business Plan submission covering the qualifying trades in AMP6.
Confidentiality	Thames Water 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.
Cooperation	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.
Emergencies	The water supply system is an essential public facility and remains under the control of Thames Water. We will retain primary responsibility for managing emergency procedures relating to our water supply network. We will expect our trading partner to cooperate if an emergency or security issue arises which could affect the water supply network and the trade agreement.
Environmentally-sensitive abstraction	Thames Water is committed to serving its customers in an environmentally-responsible way. We support the greater use of water trades to help allocate scarce resources more effectively and the provision of financial incentives is welcome. We already work closely with the Environment Agency and other interested stakeholders to manage our abstractions carefully, including reducing the volumes licensed for abstraction under the Environment Agency's Restoring Sustainable Abstractions programme. We have implemented Ofwat's Abstraction Incentive Mechanism ("AIM") framework. The AIM can help to protect sources where there is a perceived adverse environmental impact by switching abstraction to an alternative water source that will not cause detrimental environmental impacts. We assure Ofwat, the Environment Agency and others that we will only agree water trades where we are satisfied there is no undue adverse effect on the natural environment. We expect offers of water to us to include similar evidence of regard to environmental protection.
Equity	Thames Water will treat all trading partners and potential partners fairly and equitably, including in the provision of information. We have a very proactive, open and wide ranging stakeholder engagement process to ensure other water companies and third parties can input to the ongoing work to develop our WRMP. Potential third party supply options that are submitted to us for consideration are subject to the same rigorous programme of investigation as options we are investigating internally. The results of the analysis of all potential supply options are shared with stakeholders to give them an opportunity to review and challenge the analysis undertaken. The information is subsequently shared with all stakeholders on Thames Water's website.
Managing imports and exports	Thames Water operates its water supply network over a number of distinct and separate water resource zones. We will work with the importing trade partner to ensure exports of water by Thames Water are as efficient as possible. We will look to

	minimise the costs of exports, for example by using existing infrastructure, where possible.
Qualifying trade	A qualifying trade for the purposes of water trading incentives is a water trade agreement that complies with the principles set out in this Code and applies to all water trades, including trades with non-water companies.
Trade agreement	A water trade agreement will need to be completed by the trading parties before a qualifying trade can begin.
Trade effects	A qualifying trade must not lead to any material deterioration in water quality or service to any customer, or to the supply system or to the natural environment.
Water quality	Water trades can be for raw or treated water. Traders must abide by Water Quality Protocols as stipulated by the DWI.

4. USEFUL REFERENCE MATERIAL

This section lists relevant documents, with internet hyperlinks.

	Primary and Secondary Legislation
1	**Water Act 2014**
	http://www.legislation.gov.uk/ukpga/2014/21/contents
2	**Water Industry Act 1991 (as amended by the Water Act 2003)**
	http://www.legislation.gov.uk/ukpga/1991/56/contents
3	**Competition Act 1998**
	http://www.legislation.gov.uk/ukpga/1998/41/contents
	Guidance
4	**Ofwat's 2013 guidance on Trading and Procurement Codes**
	http://webarchive.nationalarchives.gov.uk/20150624091829/http:/www.ofwat.gov.uk/pricereview/pr14/pap_pos201307finalapproachapp3.pdf
5	**Ofwat's 2018 guidance on Trading and Procurement Codes**
	https://www.ofwat.gov.uk/wp-content/uploads/2018/05/Trading-and-procurement-codes-guidance-on-requirements-and-principles-final2.pdf
	Other relevant material
6	**Thames Water's Instrument of Appointment**
	http://www.ofwat.gov.uk/wp-content/uploads/2015/10/lic_lic_tms.pdf
7	**Thames Water's Network Access Code**
	https://wholesale.thameswater.co.uk/-/media/Site-Content/AllNew-Wholesale/About-us/Document-library/Access-Code-2019.pdf
8	**Thames Water's 2014 WRMP**
	https://corporate.thameswater.co.uk/About-us/our-strategies-and-plans/water-resources/our-current-plan-wrmp14
9	**Thames Water's 2019 rdWRMP**
	https://www.thameswater.co.uk/sitecore/content/Corporate/Corporate/About-us/our-strategies-and-plans/water-resources
10	**Thames Water's Water Resources Market Information**
	https://www.thameswater.co.uk/sitecore/content/Corporate/Corporate/About-us/our-strategies-and-plans/water-resources/water-resources-market-information
11	**Thames Water's 2015 OJEU Notice**
	http://ted.europa.eu/udl?uri=TED:NOTICE:57035-2015:TEXT:EN:HTML&tabId=1
12	**Thames Water's 2016 OJEU Notice**
	http://ted.europa.eu/udl?uri=TED:NOTICE:64261-2016:TEXT:EN:HTML&tabId=1
13	**Thames Water's 2017 OJEU Notice**
	https://ted.europa.eu/udl?uri=TED:NOTICE:64450-2017:TEXT:EN:HTML&src=0