Thames Water Strategic Resource Options (SRO)

Supplier guide

October 2025

This guide is to help suppliers find out more about the Thames Water SRO Programme.

It highlights why it's important, the opportunities it creates, and what our supply chain can deliver.

We'd love for you to be involved, add your expertise to ours and work with us to secure long-term water supplies for the South-East region.

Contents

Find what you're looking for by clicking on the section below

Introduction

Simon Adams

Programme Director of Strategic Resource

Mohit Farmah

Head of Procurement & Supply Chain

We forecast that in the next 50 years our customers will face a shortfall of over 1 billion litres of water every day.

So it's vital that we plan for future droughts now. This means managing our water use more wisely and, critically, increasing our storage capacity and developing new sources of water. Investment in new infrastructure is vital to ensure we keep everyone's taps running in the future.

Our Strategic Resource Options (SRO) portfolio of water resource projects represents long-term strategic thinking from Thames Water, from government, our regulators, and other water companies. We need to work together to ensure drought resilience solutions are in place when needed.

Developing and delivering the Thames Water's SRO portfolio will call upon the expertise of companies of all sizes and across a broad range of sectors.

And we'd love for you to add your knowledge to ours. Help us deliver this programme of innovative projects to protect the environment and secure our future water supply in the face of population growth and climate change.

About us

We serve 16 million customers across London and the Thames Valley every day - from that first cup of tea in the morning through to baths at bedtime. As well as supplying water to your taps, we take wastewater away, collecting and treating sewage before returning clean water to our rivers.

It's everyone's water and we're here to keep taps flowing for generations to come.

Delivering life's essential service, so our customers, communities and environment can thrive.

The operational area we serve

How we're investing between 2025 and 2030

Key themes for suppliers to help us meet our priorities

About us

We serve 16 million customers across London and the Thames Valley every day - from that first cup of tea in the morning through to baths at bedtime. As well as supplying water to your taps, we take wastewater away, collecting and treating sewage before returning clean water to our rivers.

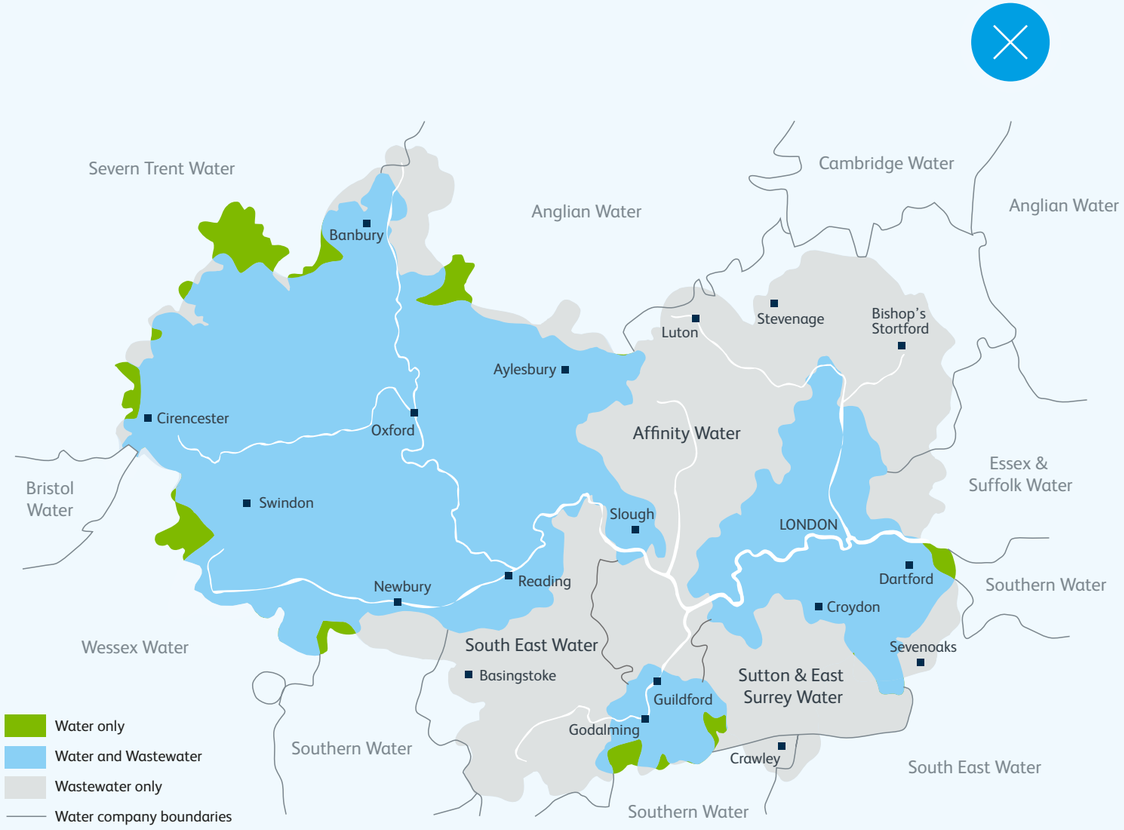
It's everyone's water and we're here to keep taps flowing for generations to come.

Delivering life's essential service, so our customers, communities and environment can thrive.

The operational area we serve

How we're investing between 2025 and 2030

Key themes for suppliers to help us meet our priorities



About us

We serve 16 million customers across London and the Thames Valley every day - from that first cup of tea in the morning through to baths at bedtime. As well as supplying water to your taps, we take wastewater away, collecting and treating sewage before returning clean water to our rivers.

It's everyone's water and we're here to keep taps flowing for generations to come.

Delivering life's essential service, so our customers, communities and environment can thrive.

The operational area we serve

How we're investing between 2025 and 2030

Key themes for suppliers to help us meet our priorities

We're always looking for new and exciting solutions to address current and future business challenges.

The key themes for suppliers to help us meet our priorities include:

- Complying with our drinking water quality requirements
- Keeping our customers in continuous supply
- Reducing pollution and sewer flooding
- Reducing leakage on our network
- Taking care of customers that need extra help
- Improving our asset performance and resilience
- Reducing consumer demand
- Supporting our carbon management plans

Planning for water shortages

In the Thames Water region, water resources are under pressure from a growing population, changing climate and the need to protect and improve the environment.

Whilst winters are forecast to be warmer and wetter, summers are expected to be hotter and drier, and more frequent and intense weather extremes are predicted. Coupled with an increasing demand for water as our towns and cities grow, the future viability of our water supplies is fragile.

So it's vital that we plan for future droughts now.

Increasing our water storage capacity

We have plans to reduce water leakage from our network and customers' pipes, and the government has pledged policy measures to support water companies to encourage customers to use water wisely.

But on their own, these initiatives are not enough. We must increase our water storage capacity and develop new water sources.

Recognising the potential scale of the water shortage crisis, the government, our regulators and water companies are working together to plan new large-scale water storage and supply solutions.

Measures to address the shortfall

50% reduction in leakage by 2050

Reduce consumption from **141 to 110 ltrs** a day by 2050

New supply schemes

In Summer 2022, then the hottest on record and driest since 1995, river and reservoir levels became exceptionally low, impacting wildlife, habitats and farmland in the Thames Valley and other areas, so that some farmers were unable to water crops.

Strategic Resource Options (SRO)

Thinking strategically

The scale of the water resources we need for the future means we need to take a strategic approach to planning our future water supply. We've been working closely with other water companies to look at options that could provide a large volume of water (more than 50 million litres of water a day) for more than one water company to use. These options are called Strategic Resource Options (SROs).

As well as reducing leakage and our own personal consumption levels, investment in new infrastructure is vital to ensuring we keep everyone's taps running in the future.

We've worked collaboratively to explore various SRO options across the UK, such as water recycling, water transfers and a new reservoir for the South East.

The development of these nationally important schemes is being overseen by the Regulators' Alliance for Progressing Infrastructure Development (RAPID), an alliance of regulators formed to help accelerate the development of new water infrastructure.

Our Water Resource Management Plan

We've secured government approval of our Water Resources Management Plan (WRMP). This lays out our strategy to provide a secure and sustainable water supply for the next 50 years, including the need for a new reservoir. SROs approved in our WRMP will now go through the full planning process, which will include more detailed work on the scheme designs, assessments of the environmental impact and consultations.

Major water projects in the Final Determinations for the 2024 price review

Source: Ofwat, December 2024 © Crown copyright

Our SRO projects

Planning for the future

Thames Water's Strategic Resource Options (SRO) team is responsible for developing new infrastructure solutions to help tackle the future drought scenarios which threaten London and the wider South East region.

As well as reducing leakage and our own personal consumption levels, investment in new infrastructure is vital to ensure we can keep everyone's taps running long into the future.

Thames Water's SRO team is working in partnership with other water companies to develop proposals for new, nationally-significant infrastructure projects (NSIPs), to ensure drought management solutions are in place when they are needed.

These projects combine new water storage solutions, water recycling and water transfers.

Reservoirs

- A new reservoir for the South East

Water Recycling

- A drought resilience project for London

Water Transfers

- Severn to Thames Transfer (STT)
- Lower Thames to West London Reservoirs (LTWLR)

Two water transfer projects included in our water resources management plan are being led by other water companies. Both projects would move water by underground pipeline from the River Thames when a new source of water (the proposed reservoir in Oxfordshire) has been developed.

- Thames to Affinity Transfer (T2AT)
- Thames to Southern Transfer (T2ST)

A new reservoir for the South East

Project details

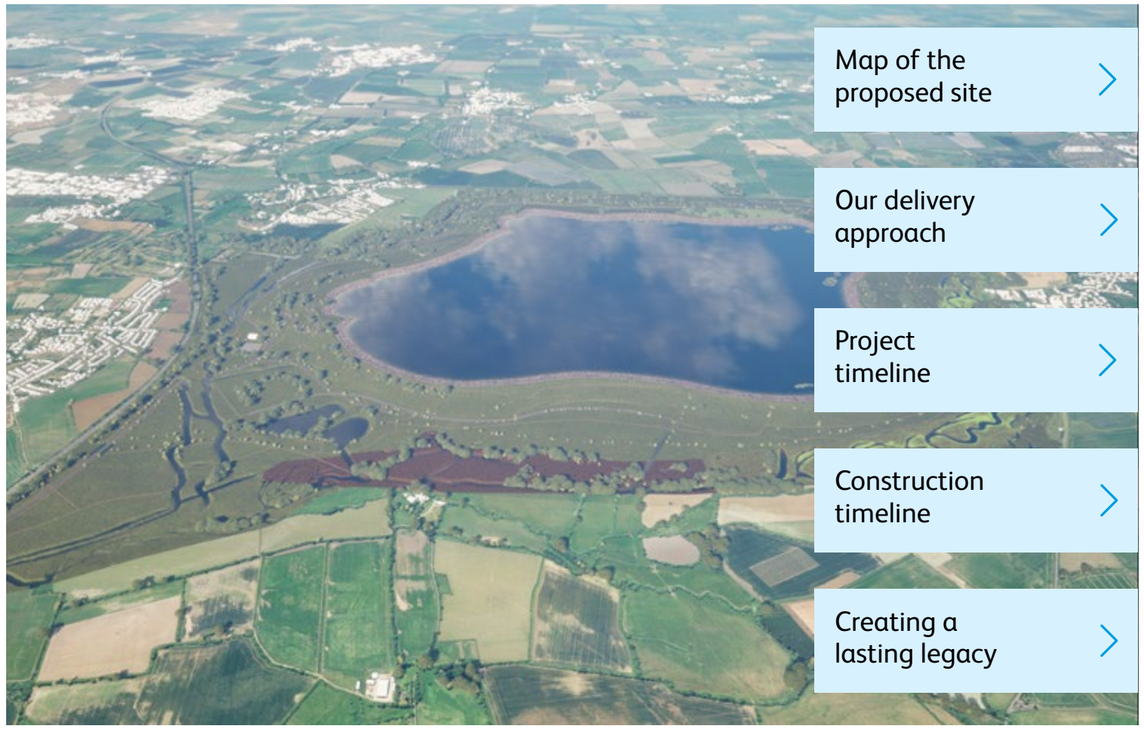
The SESRO project involves the construction of a new storage reservoir in the Upper Thames catchment, south-west of Abingdon in Oxfordshire. It will meet the long-term needs of 15 million people served by Thames Water, Affinity Water and Southern Water.

How it would work

The reservoir will be filled with water from the River Thames in the winter when there's plenty available. When river levels drop or demand for water increases, water would be released from the reservoir back into the river for re-abstraction downstream. This will help us protect supplies and manage future water quality issues created by climate change.

The new reservoir will help to protect millions of people for the next century and beyond from the risk of drought. It will also provide regional and local benefits, including environment and biodiversity improvements, public access and recreation, and mitigation of local flooding.

For more details, please visit our dedicated SESRO project page.



Map of the proposed site

Our delivery approach

Project timeline

Construction timeline

Creating a lasting legacy


N
A415
A415
Marcham
Abingdon
Oxford
River Ock
Garford
Caldecott
A338
Childrey Brook
Culham
River Thames
Sutton Wick
Drayton
East Hanney
Sutton Courtenay
A34
Milton
Letcombe Brook
1
2
Steventon
Great Western Main Line Railway
Didcot Parkway
Swindon
A4130

Our delivery approach

Thames Water is leading the development of the new reservoir project on behalf of the co-sponsors (Thames Water, Affinity Water, Southern Water) and is responsible for delivering the development phase (DCO reference design and consenting), and for running the procurement processes for the delivery phase.

We're proposing to use the Thames Tideway model (known as Specified Infrastructure Project Regulations, or SIPR) to deliver the new reservoir. This model involves procuring a new licensed Infrastructure Provider (IP), which will take on responsibility for financing and delivering the project. A separate procurement process will be run for the Main Works Contractor (MWC), whose future client will be the IP.

Infrastructure Provider

Under this approach, a new Infrastructure Provider (IP) independent of Thames Water would be appointed. The IP would be directly regulated by Ofwat under a project licence and responsible for design, construction, finance and elements of maintenance of the reservoir.

The licence would not be time limited, and the IP would be appointed following a competitive procurement process. Ahead of the appointment, the IP will be established in 'shadow' form (the 'Future IP'). This ensures the successful IP bidder acquires a fully-resourced delivery vehicle, and retention of knowledge and skills from the development phase through the delivery phase.

Main Works Contractor

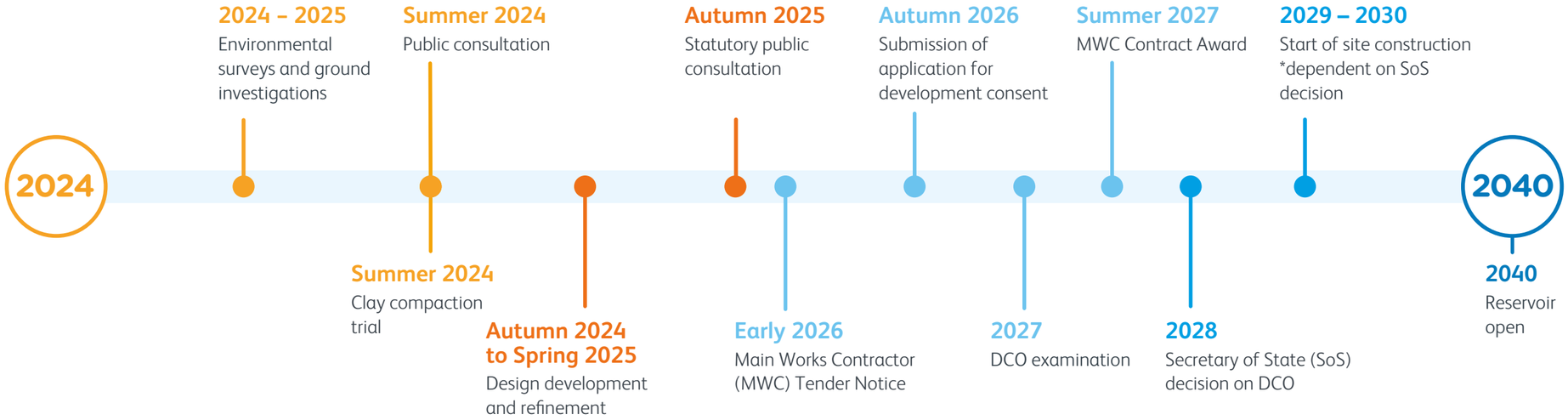
The MWC's scope comprises of preparatory works, large scale earthworks, civil engineering (dams and embankments), tunnelling, pumping, river connections and two-stage landscaping. Thames Water is considering a strategy for Early Contractor Involvement (ECI), in which an MWC would be awarded a two-stage (roughly two-year) contract ahead of the IP procurement. Having the intended MWC in place and providing support during the DCO process offers various advantages. A 'Notice to Proceed' for the commencement of the delivery stage would be issued following the granting of DCO and the appointment of the IP, which is expected in spring 2029.

Project timeline

Because the reservoir is classified a Nationally Significant Infrastructure Project, we're preparing an application for a Development Consent Order (DCO), which we plan to submit to the Planning Inspectorate in 2026, seeking a range of planning, land and environmental approvals.

If granted, the DCO would provide many of the necessary consents and powers to enable the project to proceed, including consent to build, operate and maintain the new reservoir, the ability to acquire temporary and permanent rights over land, and the right to undertake works that affect roads, streets and utilities.

The DCO process provides opportunities for people to have their say on the proposals before a final decision is made by the Secretary of State. Before formally applying for a DCO, Thames Water must carry out public consultation and consider feedback.



Indicative construction timeline

Construction of the new reservoir is expected to start in 2029 after the IP is appointed. It will take around ten years to build.

As well as the new embankments, which will be created over a five-year period, we'll need to build:

- Water pumping equipment and a pipeline tunnel
- Other equipment for operating and maintaining the reservoir
- Reservoir inlet and outlet facilities
- Facilities for the local community to use and enjoy

YEAR 1

Enabling work

Non-intrusive works, including ecology and archaeology, utility diversions.

YEAR 2

Site mobilisation

Site clearance and compound construction completed. Waterway diversions, floodplain diversions, rail sidings, access roads constructed.

YEAR 3

Main work starts

Waterway diversions, floodplain diversions, rail sidings, access roads completed. Road realignment, river outfall and intake works, tunnel works, earthworks begin.

YEAR 8

Main work complete

Reservoir embankments complete. Construction of public and recreational facilities begins.

YEAR 9

Commissioning

Supporting infrastructure (such as pumping station) commissioned. Reservoir filling begins.

YEAR 10

Filling and demobilisation

Reservoir filling continues. Main construction compound removed from site and land reinstated. Landscaping and public facilities completed.

YEAR 11

Reservoir open and operational

Reservoir will be full. Facilities open to the public.

Creating a lasting legacy

The investment in new water infrastructure can deliver more than just a secure water supply. We have a unique opportunity to create a wonderful asset for local communities and provide a space for people to enjoy. As well as providing the vital water resources we need, the new reservoir could bring environmental benefits, support the local economy and provide value to local communities.

Constructing the reservoir will be a significant undertaking that will provide opportunities for a wide range of business to grow and invest in their capabilities. We're ambitious in our vision to secure a sustainable water supply while also creating a legacy for communities and the environment.

Our partners, contractors and suppliers have a vital role to play at all levels of the supply chain to deliver our vision for a new reservoir.

The proposed new reservoir will:

- Feature new wetlands and habitats, providing a home for wildlife and helping to protect and enhance nature
- Promote health and wellbeing by providing access to new green spaces for everyone to enjoy, as well as opportunities for a range of water sports and other recreational activities
- Create new jobs and apprenticeships for local people and opportunities for local businesses – we estimate more than 1,000 jobs directly associated with the construction
- Give local small and medium-sized businesses opportunities to join the supply chain, awarding substantial contracts across the country for materials and services

A vital drought resilience project for London

Teddington Direct River Abstraction (TDRA)

Project details

One of the vital new projects we're proposing for London is a new river abstraction, supported by water recycling on the River Thames. This will ensure a reliable water supply during drought periods for residents, businesses, schools, hospitals and other essential services.

How it would work

The Teddington Direct River Abstraction (TDRA) project would combine existing infrastructure and new tunnels deep underground with new infrastructure in the boroughs of Hounslow, Richmond and Kingston.

During periods of prolonged dry weather, water would be taken (abstracted) from the River Thames close to Teddington Weir and conveyed via a short new section of tunnel to an existing tunnel, called the Thames Lee Tunnel. It connects part of South West London with our reservoirs in the Lee Valley (North East London).

The water that's drawn from the river would need to be replaced, and we're proposing to do this using highly-treated recycled water from a new water recycling facility at Mogden Sewage Treatment Works, Isleworth. This way, we'd be able to draw additional water supplies from the river during droughts, whilst ensuring river levels are maintained and the river environment and ecology protected.

For more details, please visit our dedicated TDRA project page.

Our delivery approach

Project timeline

The project could provide up to...

75 million litres of water a day (75Ml/d)

...that's equivalent to

30 Olympic-sized swimming pools

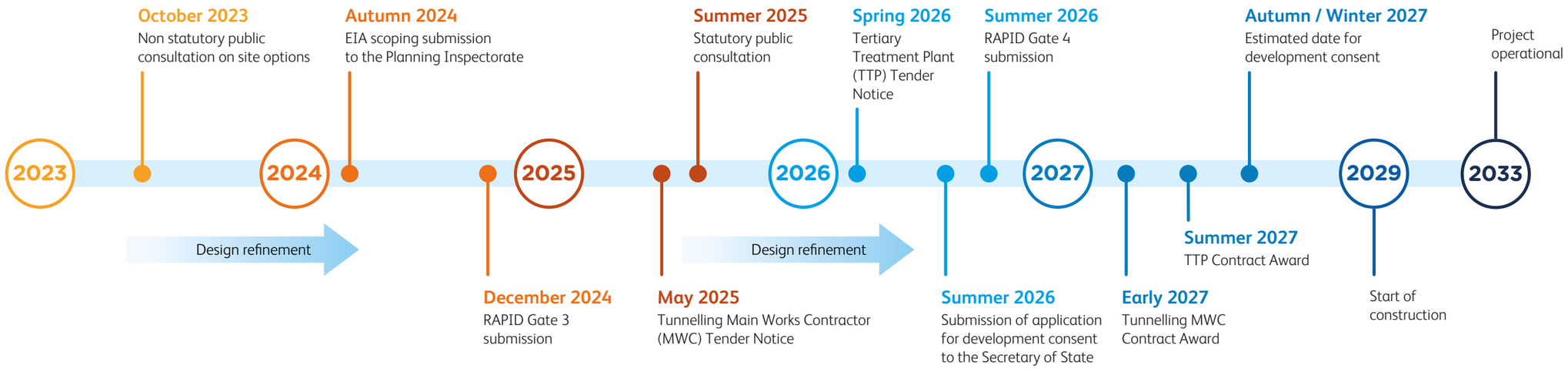
...or enough water for approx 500,000 people

Project timeline

Because the TDRA project is classified a Nationally Significant Infrastructure Project, we're preparing an application for a Development Consent Order (DCO), which we plan to submit to the Planning Inspectorate in 2026, seeking a range of planning, land and environmental approvals.

If granted, the DCO would provide many of the necessary consents and powers to enable the project to proceed, including consent to build, operate and maintain the project, the ability to acquire temporary and permanent rights over land, and the right to undertake works that affect roads, streets and utilities.

The DCO process provides opportunities for people to have their say on the proposals before a final decision is made by the Secretary of State. Before formally applying for a DCO, Thames Water must carry out public consultation and consider feedback.



Our delivery approach

The TDRA project consists of two packages of works:

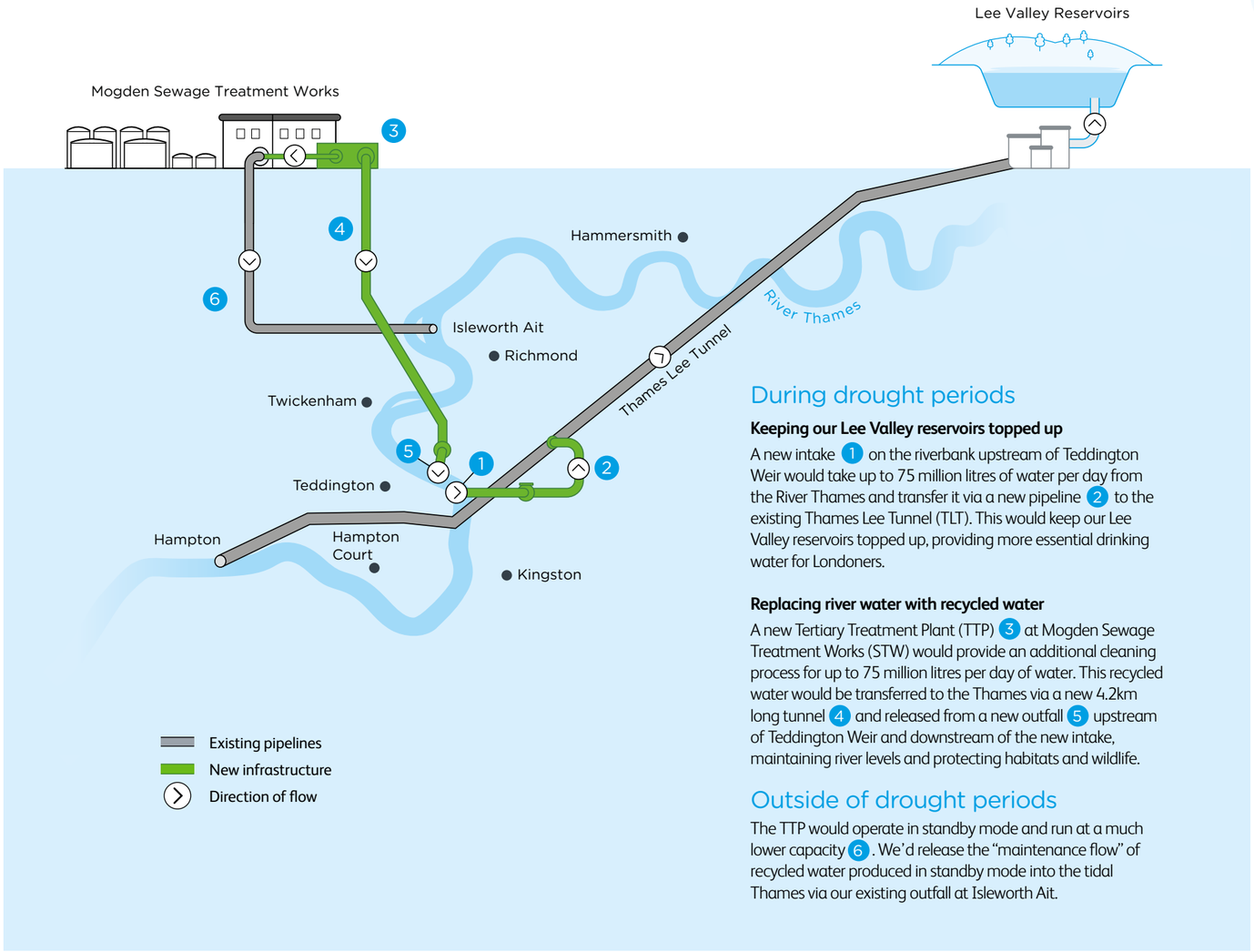
Tunnels

Conveyance, discharge and outfall works, plus the abstraction pipework and connection to the Thames Lee Tunnel and associated civil engineering.

Tertiary Treatment Plant (TTP)

Located at Mogden Sewage Treatment Works, consisting of multiple process units and buildings, serviced by ancillary plant and equipment such as chemical stores, compressor units and power supplies.

The current proposed delivery approach will involve two separate procurements with the tunnelling package to be procured first to capitalise on the opportunity for ECI to positively influence the construction design.



During drought periods

Keeping our Lee Valley reservoirs topped up

A new intake 1 on the riverbank upstream of Teddington Weir would take up to 75 million litres of water per day from the River Thames and transfer it via a new pipeline 2 to the existing Thames Lee Tunnel (TLT). This would keep our Lee Valley reservoirs topped up, providing more essential drinking water for Londoners.

Replacing river water with recycled water

A new Tertiary Treatment Plant (TTP) 3 at Mogden Sewage Treatment Works (STW) would provide an additional cleaning process for up to 75 million litres per day of water. This recycled water would be transferred to the Thames via a new 4.2km long tunnel 4 and released from a new outfall 5 upstream of Teddington Weir and downstream of the new intake, maintaining river levels and protecting habitats and wildlife.

Outside of drought periods

The TTP would operate in standby mode and run at a much lower capacity 6. We'd release the "maintenance flow" of recycled water produced in standby mode into the tidal Thames via our existing outfall at Isleworth Ait.

The Severn to Thames Transfer

The Severn to Thames Transfer (STT) is part of the adaptive plan set out in our WRMP24 and could be developed if we need additional water in the future.

STT would transfer water from the North West and Midlands to the South East for use during a drought. This water would come from the River Severn itself, with Severn Trent Water and United Utilities providing additional sources of water if needed. The water would then be moved from the River Severn to the River Thames either by a new pipeline or by a combination of new pipeline and restoring the Cotswold canals.

The diversity of sources provides resilience and means the scheme can be developed in a phased manner.

Sources of water:

1. Temporary use of existing United Utilities abstraction from Lake Vyrnwy
2. Water resource redeployment at Shrewsbury
3. Treated water from Minworth STW
4. River abstraction reduction at Mythe
5. Treated water from Netheridge STW

New water transfer infrastructure:

6. Pipeline to bypass the River Vyrnwy.
7. Pipeline from Gloucestershire to Oxfordshire (preferred option).
8. Pipeline and restoration of the Cotswold canals (alternative option).
9. Water is abstracted from the River Severn near Deerhurst for transfer via the preferred pipeline option to Culham.
10. Water is released into the River Thames at Culham for re-abstraction further downstream.

- New pipeline
- Interconnector canal (restored)

For more details, please visit our dedicated page

Lower Thames to West London Reservoirs

This project would allow water to flow from a new abstraction point on the lower River Thames to the Queen Mary Reservoir.

During the 2022 drought, we experienced constraints on our water abstraction. These constraints imply that there may be less water available to supply during a drought than we anticipate, which could result in a supply deficit. These issues would potentially be exacerbated by the River Thames Scheme, a flood alleviation scheme being developed by the Environment Agency and Surrey County Council.

At present, however, we do not have a full understanding of the issues, and we note that in previous severe drought events, these constraints did not appear to exist.

If these constraints are confirmed, then we will need to invest in our raw water transfer network to ensure the security of supply.

Between 2025 and 2030 (the AMP8 period), we will continue to investigate these issues and develop solutions.

For more details, please visit our dedicated page.

Our current Partners

SRO Programme Partner

In partnership with Laing O'Rourke Delivery Limited and Nichols Group, Turner & Townsend has been appointed to provide professional programme management services to Thames Water in support of the development and delivery of its SRO Programme.

Turner & Townsend's proven experience in managing large-scale infrastructure projects, such as Crossrail and HS2, makes them an ideal partner to help deliver the nationally significant SRO programme projects.

This partnership will provide Thames Water with access to world-class industry experts, ensuring that we can meet the growing water demands and safeguard water supplies for future generations.

Turner & Townsend

New Reservoir Technical Partner

Thames Water has selected the Arup and Binnies joint venture as its Technical Partner to lead the development of the new reservoir.

The partnership will provide Thames Water's SRO team with access to a wide range of technical expertise, including engineering design, environmental assessment, planning and land acquisition. They will play a critical role in preparing the Development Consent Order (DCO) for SESRO. Arup Binnies brings world-class infrastructure experience, having contributed to major projects such as the Thames Tideway Tunnel and the design of the Fens and Lincs Reservoirs.

binnies

ARUP

STT Technical Partner

Thames Water has appointed a joint venture between AtkinsRéalis and Stantec to act as a technical partner on the Severn to Thames Transfer project. The proposed transfer project is designed to increase the water available during times of drought and is being developed in partnership with Severn Trent Water and United Utilities. The project is part of an adaptive plan which the company is progressing in case it needs additional water in the future.

The AtkinsRéalis Stantec joint venture has been appointed to support its development, including work on conceptual design studies. The joint venture partners bring together a breadth of leading expertise in environmental, design, planning, and engineering to support this water resilience project.

Stantec

AtkinsRéalis

TDRA Technical Partner

Thames Water has appointed a joint venture between Jacobs and Mott MacDonald as its Technical Partner to lead development proposals for Teddington Direct River Abstraction (TDRA); vital new infrastructure to tackle the risk of drought in London.

The two companies integrate their global experience across the full water and project lifecycle, from major complex water infrastructure programs to provide innovative support across planning and consulting, to design and technical capabilities.

Jacobs

MOTT MACDONALD

How we will engage

Briefings and industry engagement events

Market briefing documents and events that we hold in person and online, and open to all appropriate supply chain organisations, will help inform potential suppliers about the progress of our SRO projects, our requirements and potential opportunities their delivery will create.

Market Soundings

As our approach develops, relevant suppliers may be asked to provide feedback on our strategies and help us achieve maximum market appetite and efficiency in delivery.

What can you do now

Register your interest with us today by filling in our Smart Survey, which can be found **here** or by scanning the QR code.

Email the SRO Supply Chain Management Team at sro.supplychain@thameswater.co.uk

Follow Thames Water on LinkedIn


Thames
Water