
Case study

Anglian Water and Cambridge Water: Fens Reservoir

March 2024

The East of England is low-lying, and one of the driest in the UK. Water sources are under pressure from a changing climate meaning people, plants and animals are competing for the same precious resources.

Drought is set to become more common amid hotter, drier summers, and intense rainfall events more frequent. Chalk streams are under pressure, and we need a sustainable water supply that won't worsen the demands being asked of these precious habitats.

If no action is taken, there will be a shortfall of 593 megalitres a day (Ml/d) in the Anglian Water Region by 2050^{1,2}.

A best value plan – one that presents the best value to customers, society and the environment – has been developed to respond to this significant need for new water.

This proposes two new reservoirs, one in Cambridgeshire and another in Lincolnshire. The Water Resources East (WRE) regional plan identifies the need for these new reservoirs as key elements of the overall package to ensure the region can continue to thrive.

Anglian Water Services and Cambridge Water are therefore exploring the proposal for the development of a new reservoir in the Cambridgeshire Fens – a strategic resource option scheme that, once in service, would provide a 50:50 water consumption split between the companies' customer bases.

Both companies' Water Resources Management Plans identify the proposed new reservoir in the Fens as a much-needed large-scale investment that will play a critical role in securing water supply long into the future.

¹ One megalitre = one million litres.

² [Anglian Water, Water Resources Management Plan 2024 \(WRMP24\)](#)

The Fens Reservoir is needed to be in supply by 2036 due to the capping of abstraction licences, a statutory obligation driven by the Environment Agency. Cambridge Water has also identified a significant shortfall in their region and require 43.5Ml/d from a new water source to secure their future supply by 2036³.

More information about the need for the proposed reservoir can be found within Anglian Water's Revised Draft Water Resources Management Plan 2024 Main Report² and Cambridge Water's Revised Draft Water Resources Management Plan 2024³.

The proposed site

The proposed site for the 55 Mm³ (million cubic metres) storage reservoir (50 Mm³ useable volume) is located within the Anglian Water's supply area; 30 miles north of Cambridge, near Chatteris and the villages of Wimblington and Doddington.

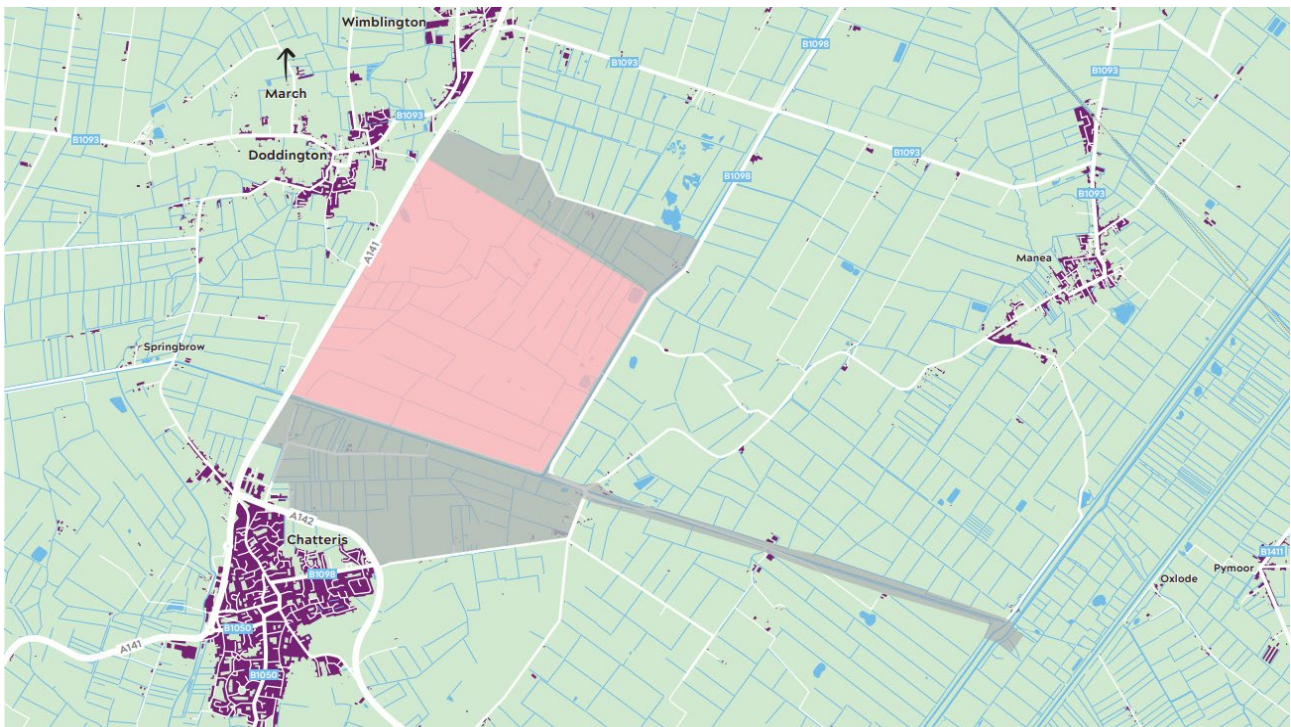
This location was identified following a robust multi-stage site selection process⁴, which aimed to make sure a location that would be suitable for hosting a reservoir would be identified. It also aimed to minimise impacts on nearby areas and communities and meet planning and regulatory frameworks. It was found to be the best-performing site – one which balances all the factors considered and provides significant opportunities to unlock wider benefits.

The scheme is estimated to have a capital cost of £2.2 billion, with a whole life total expenditure cost of nearly £6 billion (2022–23 prices).

³ [Cambridge Water, Water Resources Management Plan 2024 \(WRMP24\)](#)

⁴ [Fens Reservoir Consultation](#)

Proposed site



Pink area: Proposed site area for reservoir and its embankment

Grey area: Initial area identified for supporting infrastructure, construction and additional measures

The Fens Reservoir will store water from local waterways, securing a resilient supply to meet the needs of future generations across Cambridgeshire and East Anglia. With connections to nearby communities, the reservoir will be a place for people to enjoy nature, water and the surrounding countryside. Anglian Water and Cambridge Water are exploring how the proposed reservoir could unlock wider benefits for the region, by creating an attractive destination with recreational activities and diverse opportunities for local businesses.

The reservoir could support healthy lifestyles with access to outdoor space and nature, support economic growth and strengthen placemaking opportunities for local areas, and support large-scale nature restoration, helping to protect and enhance the environment.

Further details can be found in Anglian Water's 'Delivering our shared ambition'⁵ document.

⁵ [Delivering our shared ambition document](#)

Mark Malcolm, Anglian Water’s Major Infrastructure Projects Director, said:



Our vision goes beyond building a reservoir. This project represents a significant investment in England’s water infrastructure, and an opportunity to deliver lasting benefits. We want to create an amazing new place where water, people and nature can come together. The reservoir will celebrate the Cambridgeshire Fens for the local people who know this landscape so well. As a new focus for economic growth, it will help improve lifestyles and social prosperity, with exciting new opportunities for recreation and engagement with nature.”

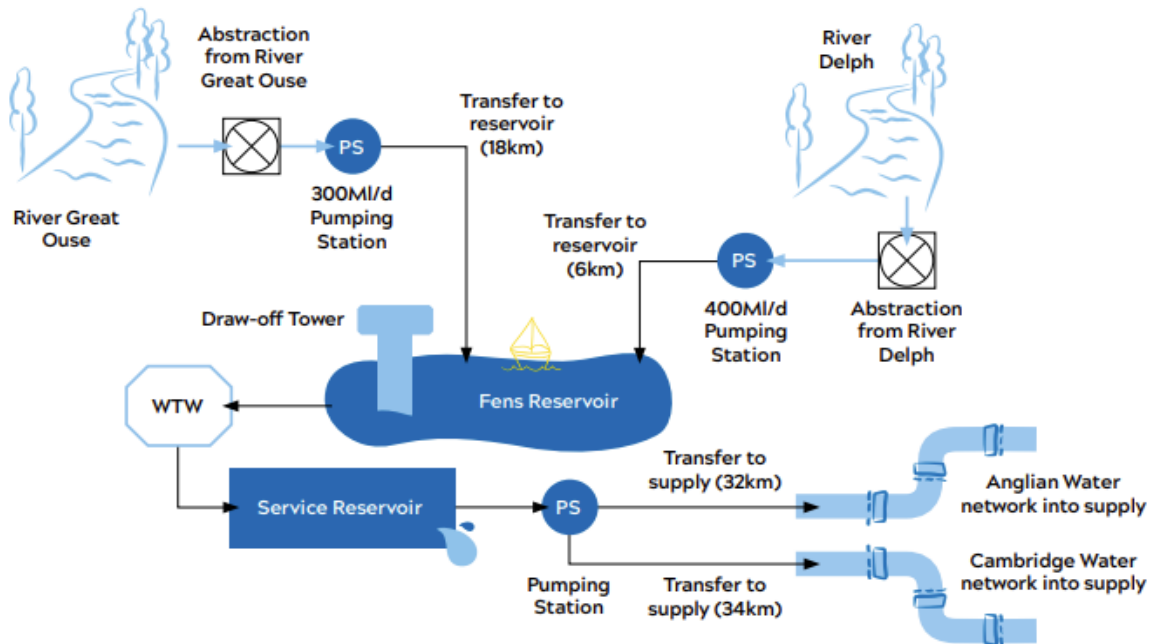
Scheme components

During times of high rainfall, water that would otherwise be lost to sea will be abstracted from local sources and pumped to the reservoir via pipes, and open channels. This water would then be treated and distributed into Anglian Water and Cambridge Water supply via new underground pipes and service reservoirs. The scheme will provide a total output of circa 88.8Ml/d.

Anglian Water and Cambridge Water have been progressing through a multi-stage site selection process to identify the best locations for the components needed to operate the reservoir. This includes the associated infrastructure needed to:

- **Transport raw water from rivers to the reservoir** – including river intake structures, pumping stations and, where needed, invasive non-native species (INNS) treatment works. It also includes underground pipelines to transfer water to the reservoir, and possible routes to transfer water into the reservoir using existing open channel waterways.
- **Supply treated water from the reservoir to homes and businesses** – a water treatment works, underground pipelines to transfer the treated water to connection points in the local supply network and new service reservoirs at these connection points to make sure the water is supplied when it’s needed.
- **Lower the reservoir’s water level quickly in the unlikely event of an emergency (emergency drawdown)** – this is a very rare scenario, but a clear plan for discharging extra water to the sea as quickly as possible is required by reservoir safety legislation.

The interaction between these various components, including the Fens Reservoir and how it reaches Anglian Water and Cambridge Water's customers is illustrated in the diagram below and more detail can be found in the projects RAPID Gate 2 Report⁶.



Proposals for the associated infrastructure, as well as a more detailed design for the proposed reservoir site itself, will be the subject of a public consultation expected to launch in late spring 2024.

Project delivery

Anglian Water and Cambridge Water are proposing to deliver the Fens Reservoir scheme via an Infrastructure Provider (IP) who would be appointed following **competitive tender under the Specified Infrastructure Projects Regulations (SIPR) 2013**⁷. This could see the IP finance, construct, own, operate and maintain the reservoir. Anglian Water and South Staffordshire Cambridge Water are currently developing and assessing options in respect of the delivery arrangements for the project.

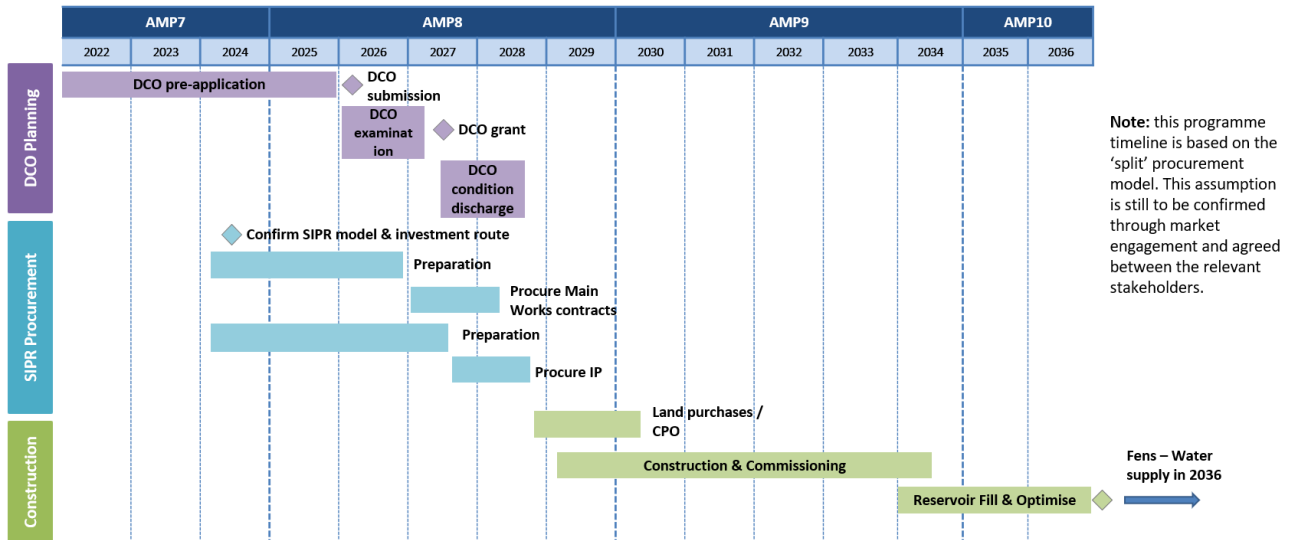
With the Fens reservoir due to be in supply by 2036, it is currently estimated that construction work will begin between 2029 and 2031. This allows for consenting process for

⁶ [Fens Reservoir RAPID Gate 2 Report Submission](#)

⁷ [The Water Industry \(Specified Infrastructure Projects\) \(English Undertakers\) Regulations 2013](#)

Nationally Significant Infrastructure Projects prior to construction starting, as well as a three-year filling period once work is complete.

Current proposed timeline for Fens Reservoir



Any changes to the programme timeline will be communicated through Anglian Water and Cambridge Water's RAPID gated submissions, with the planned submission date for Gate 3 set for September 2024. Additionally, updates will be shared during market engagement.

On 13 November 2023, Anglian Water launched a Request for Information (RFI) as part of the initial round of market engagement. The RFI concluded on 27 November. Anglian Water is in the process of organising bilateral discussions with the market on the initial delivery model proposals **and welcomes expressions of interest and feedback from potential investors, as well as Tier 1 and Tier 2 contractors with experience in delivering major earthworks, treatment works and transfers.**

The second round of market engagement is planned for spring 2024. During this phase, Anglian Water will seek to outline the proposed commercial and tender arrangements for the delivery of the Fens Reservoir.

Anglian Water can be contacted at: SROReservoirsmarketengagement@anglianwater.co.uk if you are interested in engaging with them further on the scheme.

Further information on the Fens Reservoir can also be found [here](#).