



Cambridge Area Water Supply Evidence

Published as part of the Draft Local Plan - Regulation
18 consultation (December 2025 - January 2026)

Notice

This document and its contents have been prepared and are intended solely as information for Greater Cambridge Shared Planning and use in relation to Cambridge Area Water Supply Evidence project.

AtkinsRéalis (WS) Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 52 pages including the cover.

Document history

Document title: Water Supply

Document reference: 100118208 / 7.1 / DG / 010

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Early draft for client comment	JP	JT	SDS	JT	30/05/2025
2.0	Final report	JP	SDS	JT	JT	28/08/2025
3.0	Updated final report	JP	SDS	JT	JT	01/10/2025
3.1	Further updates based on version 2.0	JP	SDS	JT	JT	15/10/2025
3.11	Accessibility formatting	JP	SDS	JT	JT	17/10/2025

Client signoff

Client	Greater Cambridge Shared Planning
Project	Cambridge area water supply evidence
Job number	100118208



Client
signature/date



Contents

Executive summary	6
1. Introduction	10
2. Water supply context.....	11
2.1 The water resources planning process.....	12
2.2 Greater Cambridge and local geography	13
2.3 Current plans to manage water resources over the next 25 years	17
2.3.1 Cambridge Water’s Water Resources Management Plan.....	17
2.3.2 Water Resources East Regional Plan.....	21
2.3.3 Cambridge Water Scarcity Group.....	22
2.3.4 Stakeholders	22
3. Planning for future development	24
3.1 The local planning process	24
3.2 Draft Greater Cambridge Local Plan 2024 - 2045.....	25
3.3 Government growth aspirations.....	26
4. Considering water needs of the Draft Local Plan.....	27
4.1 Local Planning versus Water Resources Planning.....	28
4.2 Can the Draft Local Plan be supported?	30
4.2.1 Household growth	30
4.2.2 Non-household growth	33
4.2.3 Meeting total demand.....	34
4.3 Managing uncertainty.....	37
5. Future Greater Cambridge and opportunities to manage the demand for water	40
5.1 Water efficient Building Regulations.....	40
5.2 UK Government support	42
5.3 Development scale opportunities.....	42
5.4 Water re-use for non-potable purposes.....	44
5.5 Future non-household demand	44
5.6 Regional options	46
6. Conclusions.....	47
7. References.....	50



Tables

Table 3-1: Greater Cambridge Draft Local Plan (2025) house build forecast (Page 26)

Figures

Figure 2-1: Comparison of Greater Cambridge and Cambridge Water boundaries: (Page 13)

Figure 2-2: Map of the current regional groups for water resource planning (Page 14)

Figure 2-3: Environment Agency water availability summary (taken from Cam and Ely Ouse abstraction licensing strategy) (Page 16)

Figure 2-4: Forecast water available in Cambridge Water WRMP24 Preferred Programme (Page 19)

Figure 2-5: Cambridge Water WRMP24 Preferred Programme supply-demand balance (Page 19)

Figure 2-6: Supply-side options to 2050 outlined in the WRE Regional Plan (Page 21)

Figure 4-1: WRMP24 scenarios for total non-household demand for the Cambridge Water region: (Page 29)

Figure 4-2: Comparison of household growth forecast in the Cambridge Water WRMP24, the Greater Cambridge Draft Local Plan, 2025 and Greater Cambridge Draft Local Plan combined with Huntingdonshire District Council's draft forecast for the area supplied by Cambridge Water (Page 31)

Figure 4-3: Comparison of occupancy rate in the Cambridge Water WRMP24 and the Greater Cambridge Draft Local Plan, 2025 (Page 31)

Figure 4-4: Comparison of the water needs of household growth forecast in the Cambridge Water WRMP24, the Greater Cambridge Draft Local Plan and the Greater Cambridge Draft Local Plan combined with Huntingdonshire District Council's draft forecast for the area supplied by Cambridge Water (Page 32)

Figure 4-5: Graph showing total demand forecasts for water once needs for household growth are met. This is shown alongside the water availability forecast by Cambridge Water's WRMP24 Preferred Programme. The bottom graph provides a closer view to allow the reader to see more detail (Page 35)

Figure 4-6: Schematic of adaptative planning taken from Ofwat (2022) (Page 38)

Figure 6-1: Summary of key conclusion (Page 50)



Executive summary

Water bodies in the Greater Cambridge area are sensitive to abstraction and do not currently meet ecological targets, resulting in a constrained local water resource system. Concerns over environmental protection has led to restrictions on certain types of development in the area. At the same time, the UK Government has high aspirations for sustainable economic growth in Cambridge and is promoting its contribution to a successful national economy. Increasing housing stock and improving affordability are seen as key to boosting the supply of skilled labour to Cambridge and underpin economic growth.

The current plans to manage water resources in the area have considered a range of scenarios of future growth, climate change and environmental targets. Based on the scenarios modelled, Cambridge Water's recently published Water Resource Management Plan, WRMP24, provides sufficient water availability to meet the needs of growth with the following key stages:

- **Short-term pressure - pre-2032:** There is little excess water available for use beyond development already planned for and limited options to develop additional strategic supply schemes during this period. Existing strategic supply schemes are already being developed on challenging timescales meaning there is little scope to accelerate their delivery.
- **Mid-term surplus - 2032 to 2040:** The Grafham Transfer from Anglian Water and Fens Reservoir come online to provide more water availability and compensate abstraction reductions, providing environmental protection to the sensitive chalk water sources of the region.
- **Long-term pressure - post 2040:** Environmental Destination to restore and protect the region's freshwater environment reduces water available for use and results in little excess water availability beyond that currently planned for.

This aligns with the Regional Water Resources Plan produced by Water Resources East (WRE), which considers water needs for the East of England and outlines shared solutions across multiple water companies and stakeholders.

The Councils have worked closely with Cambridge Water, Water Resources East, and other stakeholders that form part of the Cambridge Water Scarcity Group that was set up by the Government to consider and address water issues facing the area, to consider water availability issues for the new Local Plan.

Due to differing timelines of water industry and local authority reporting, in practice, the detailed forecasting and modelling for new growth undertaken to feed into water company and regional water resources planning is often undertaken early in their five-



yearly planning cycle. Therefore, the current strategic plans to manage water resources in the region use the existing Local Plans for Cambridge and South Cambridge adopted in 2018 as their baseline. Therefore, this report was commissioned to review evidence to determine whether the growth proposed in the Draft Greater Cambridge Local Plan 2025, can be supported by the WRMP24 and WRE Regional Water Resources Plan for the Greater Cambridge area.

The project also included the development of a water supply and demand dashboard. This will support water companies and local planners as they continue to work closely together to track and monitor current and future water availability against the delivery strategy. The dashboard will also enable data and forecasts to be regularly updated, meaning there is less reliance on regulatory reporting timescales to review the water availability situation of the Greater Cambridge area.

The Draft Local Plan includes a development trajectory which sets out development anticipated each year during the plan period. The trajectory generally introduces new large development sites which have been identified to meet development needs from the medium-term period onwards, recognising the short-term water pressures. Planning policy is also proposed which would require high levels of water efficiency beyond current building regulation standards, to improve household and non-household water efficiency.

The evidence presented in this report demonstrates that, based on current forecasts, assumptions and understanding, Cambridge Water's WRMP24 forecast water availability can meet the needs of the current Draft Local Plan household growth forecast from 2025 to 2040. Moreover, the water needs of the Draft Local Plan non-household growth for this period sits within the forecasts used by the WRMP24. Therefore, between 2025 and 2040 there is enough water available to support both the Draft Local Plan household growth and non-household growth combined.

Beyond 2040, further solutions will need to be progressed and delivered by water companies to support future growth. Large reductions in abstractions for Environmental Destination to reduce reliance on the chalk aquifer and enhance water courses reduce water available for supply. As a consequence, the water needs of the Draft Local Plan in later years cannot be met yet, resulting in a 4.5 Ml/d deficit by 2050. The proposed higher water efficiency policies in the Draft Local Plan, aimed at reducing per-person water use within new build households, reduce this impact to just over 2 Ml/d.

Solutions for the 2040s should be progressed over the next two planning periods (WRMP29 and WRMP34) to ensure that growth during the mid-term phase is supported beyond 2040. We must be mindful that there can be a long lead-time for large infrastructure projects. Before the 2040s there are two updates to five-yearly plans to refine and develop more certainty in forecasts. The regional water resources planning approach enables regional and national stakeholders to work together to identify additional options, opening up opportunities from outside the region, such as



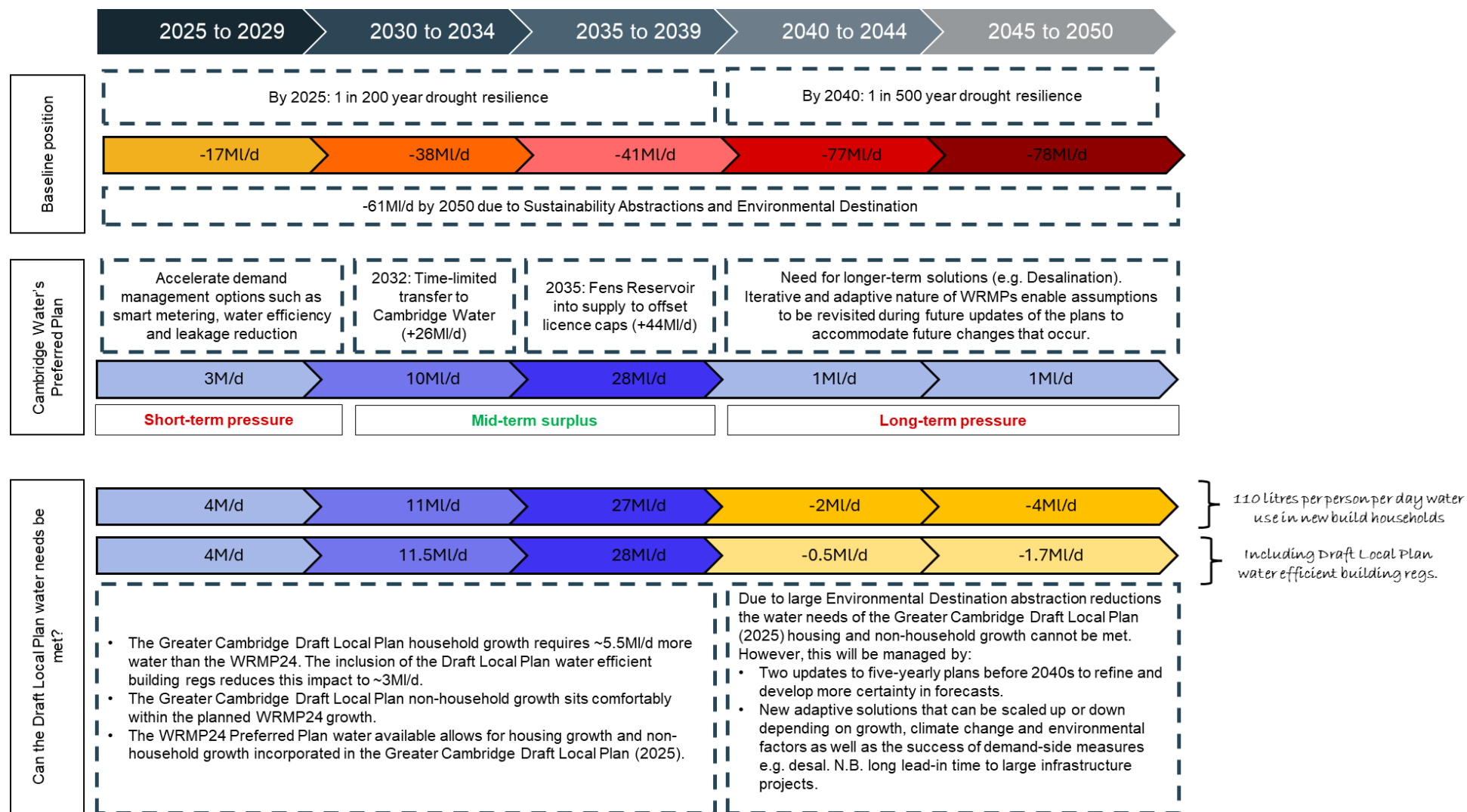
desalination. Both Cambridge Water and WRE's plans identify adaptive solutions, that can be delivered relatively rapidly and scaled up or down depending on growth, climate change and environmental factors over the 2025 to 2040 period. They also identify demand-side measures, including Government interventions. The Regional Water Plan also identifies a range of measures that can be implemented in the longer term to address future needs. There can be a long lead-in time for large-scale supply options, so decision-making must be made early enough to ensure they are delivered by the 2040s. It is important that the next rounds of water company planning periods begin planning to meet future needs now.

At the same time, there are ongoing efforts by Cambridge Water, WRE and the Cambridge Water Scarcity Group to support sustainable growth in the region with a twin-track approach focussed at reducing demand and increasing supply, for example, exploring water re-use for non-potable industrial use, development scale opportunities and delivering water efficiency programmes to drive down water demand, and developing a water credit system which could be used to offset new builds.

To support Government aspirations for growth beyond the Draft Local Plan, or, if more water hungry industries arrive in the area, then even more solutions will need to be sought to support this growth and manage the impact of environmental reductions post 2040. Given the stakeholder interest in the water supply situation for the region, Greater Cambridge provides a unique opportunity to find innovative and shared solutions to 'unlock' growth.

Reflecting on Cambridge's reputation for science and innovation, there is an opportunity to trial new, innovative approaches to managing water and use Greater Cambridge as a test bed for solving future water supply challenges that may one day be experienced in other parts of the UK.





Summary of key conclusions



1. Introduction

This report forms an evidence base for the Greater Cambridge Local Plan, which covers the Cambridge City Council and South Cambridgeshire District Council areas. It complements wider exploration of water issues in the Integrated Water Management Study. The aim of this report is to:

- Provide an understanding of current water supply availability in Greater Cambridge.
- Consider how water supply availability may change in the future due to challenges, such as climate change and environmental drivers.
- Provide an overview of the water planning process and how it functions in the Greater Cambridge area.
- Review evidence to determine whether the growth forecast in the Draft Greater Cambridge Local Plan 2025 can be supported by the water company plans for the Greater Cambridge area now and in the future.
- Identify potential approaches to help balance the future demand for water with available supplies, such as future policies, new technology and other initiatives.

It should be noted that the evidence presented in this report focusses on the Cambridge Water supply area which supplies the Greater Cambridge region, but the northern section of the supply area includes part of Huntingdonshire District Council. Therefore, it is important to closely manage and track the spatial allocation of growth across Greater Cambridge and Huntingdonshire District Council as they are both reliant on the same water and wastewater services providers.



2. Water supply context

Section Overview:

This section of the report presents a summary of the water resources planning process, the current water supply situation and the plans in place to sustainably manage water resources in the Greater Cambridge area.

Key messages:

- Water bodies in the Greater Cambridge area are sensitive to abstraction and at risk of ecological deterioration under increased rates of abstraction, resulting in a constrained local water resource system. Concerns over environmental protection has led to restrictions on some types of development in the area.
- Cambridge Water published their latest Water Resource Management Plan, WRMP24, in March 2025. This is based on extensive modelling and forecasting to develop an adaptive strategic plan to sustainably manage water resources in the area. This aligns with the Regional Water Resources Plan produced by Water Resources East (WRE), which considers water needs for the East of England to 2050 and outlines shared solutions across multiple water companies and stakeholders.
- The current plans to manage water resources in the area have considered a range of scenarios of future growth, climate change and environmental targets. Due to timing of the water resource planning framework, the WRMP used the adopted 2018 Local Plans for Cambridge and South Cambridge as their baseline.
- Based on the scenarios modelled, Cambridge Water's WRMP24 provides sufficient water availability to meet the needs of growth with the following key stages:
 - **Short-term pressure - pre-2032:** There is little excess water available for development already planned for and limited options to develop additional strategic supply schemes during this period. Existing strategic supply schemes are already being developed on challenging timescales meaning there is little scope to accelerate their delivery.
 - **Mid-term surplus - 2032 to 2040:** The Grafham Transfer from Anglian Water and Fens Reservoir come online to provide more water availability and compensate abstraction reductions, providing environmental protection to the sensitive chalk water sources of the region.
 - **Long-term pressure - post 2040:** Environmental Destination to restore and protect the region's freshwater environment reduces water available for use and results in little excess water availability beyond that currently planned for.

The five-yearly and adaptive water resources planning framework enables assumptions to be revisited during future updates of the plans to accommodate future change. Before the 2040s, solutions will be sought to support emerging growth needs. The Regional Water Plan identifies a range of solutions that could be brought forward to meet the region's needs, for example desalination.



2.1 The water resources planning process

Water management in England and Wales is undertaken by water and sewerage companies which are regulated by governmental organisations such as the Environment Agency, the Department for Environment, Food and Rural Affairs (Defra) and Ofwat. Under the Water Industry Act 1991, water companies have a legal responsibility for the safe and secure supply of water to customers for domestic purposes. This is achieved by following statutory guidelines and guidance set by the regulators.

The statutory water resources planning process in England and Wales is regulated by the Environment Agency and Ofwat. Every 5 years water companies produce updates to their statutory Water Resources Management Plans (WRMP) outlining how they will balance supply and demand over the next 25 years, considering a range of risks and uncertainties, including climate change, population increase, economic growth and water use behaviour. The latest WRMP is WRMP24 which was published by Cambridge Water in March 2025: [Cambridge Water \(2025\) Final Water Resources Management Plan 2024](#).

Following the landmark National Framework for Water Resources report in 2020, Government tasked Regional Water Planning Groups to develop regional water resources plans that look ahead to 2050 and beyond. Regional Planning provides a longer-term adaptive plan that provides the overarching framework for water company WRMPs. The National Framework for Water Resources (2020) was superseded by the 2025 update: [National Framework for Water Resources 2025: water for growth, nature and a resilient future - GOV.UK](#)

Both the WRMP and Regional Plans are informed by complex and detailed modelling, extensive scientific analysis and thorough engineering and environmental assessments, delivered by sector specialists who work with national datasets and follow best practice guidance. At the same time, there is significant stakeholder engagement to understand local issues and to ensure consistency with a national framework. They both take a risk-based approach to modelling and understanding future water availability and water-use. They do this by testing multiple future scenarios of uncertain projections in drivers such as population and economic growth, climate change impacts, and the need to restore, protect and improve the natural environment. This informs the proposed portfolio of water efficiency and conservation measures alongside new supply options which will remain relevant to a range of future scenarios.

The WRMP planning framework provides an iterative reporting cycle which enables water companies to review and revise their plans every five years against any new evidence or forecasts. This enables them to accommodate any changes in, for example, forecasts of growth or how the climate is progressing. During the five-yearly cycles they also report annually to the regulators to track progress against their plan. To further accommodate uncertainties and changes in the forecasts, the WRMP includes a 'buffer' or 'safety margin' of water availability around the central forecast, which is called 'Target Headroom'.



2.2 Greater Cambridge and local geography

Public water supply in Greater Cambridge is provided by Cambridge Water, a water supply only company. Sewerage across Greater Cambridge is provided by Anglian Water. Figure 2-1 compares the Cambridge Water supply area with Greater Cambridge boundary. The northern section of the Cambridge Water supply area falls within Huntingdonshire District Council.

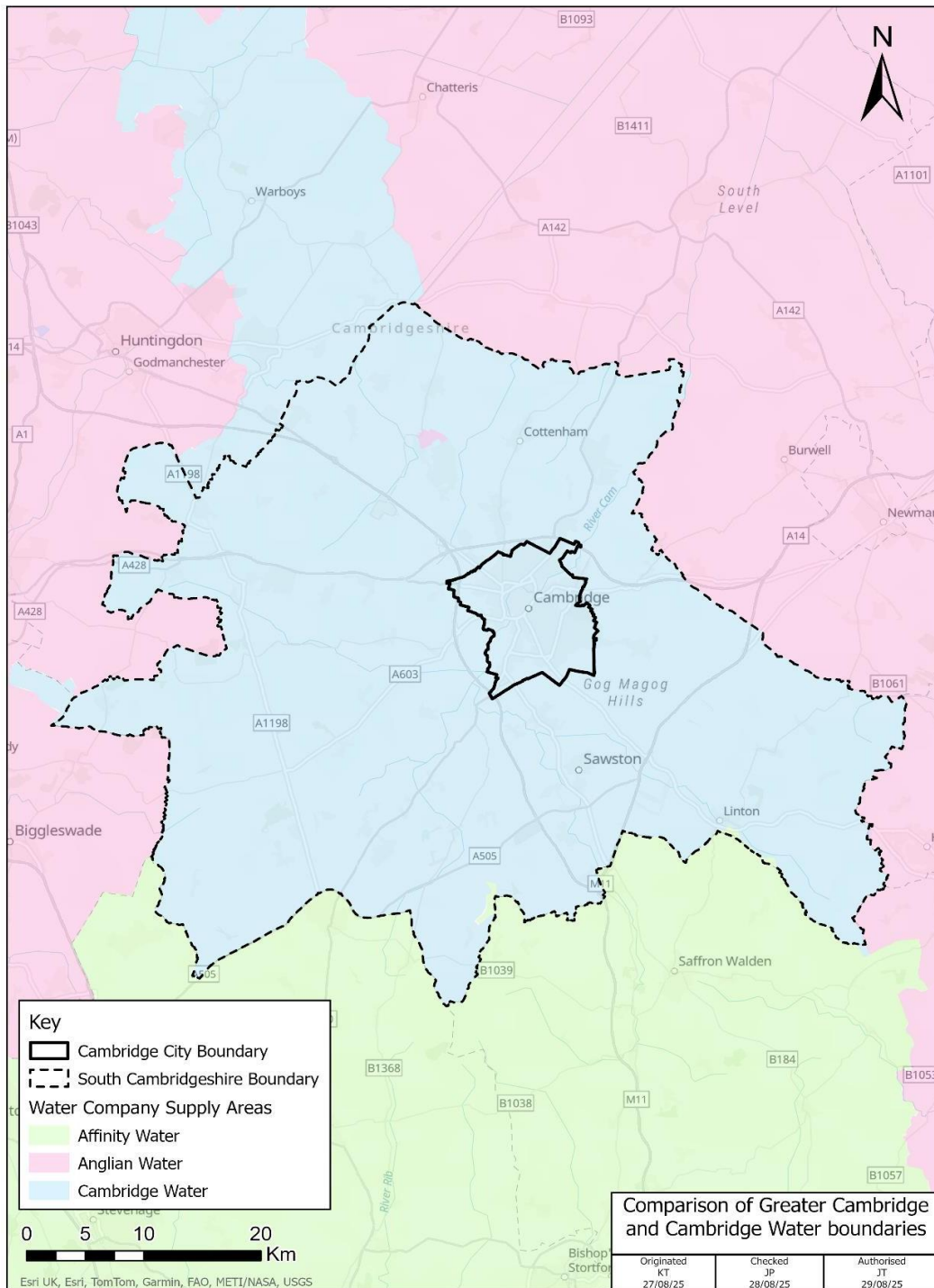


Figure 2-1: Comparison of Greater Cambridge and Cambridge Water boundaries.

The water supply in Huntingdonshire District Council is provided by both Cambridge Water and Anglian Water and wastewater services by Anglian Water. Therefore, it is important to closely manage and track the spatial allocation of growth across Greater Cambridge and Huntingdonshire District Council as they are both reliant on the same water and wastewater services providers.

Within the Cambridge Water supply area there are several inset appointments, known as New Appointments and Variations (NAVs). They provide water services to customers, often in new housing developments, and Cambridge Water provide a bulk supply of water. In addition, since 2017 non-household customers have had the option to switch water retailer. A water retailer is a company that provides customer service and is responsible for billing, but the water is supplied by Cambridge Water.

Greater Cambridge falls within Water Resources East (WRE) which is one of the five regional groups that span England and parts of Wales, as shown in Figure 2-2. WRE was set up in 2014 as a collaboration between water companies and key representatives of other water-using sectors and environmental interests across the East of England. WRE aims to take a multi-sector approach to water resources planning, due to the strategic importance of water to the regional economy, including agriculture and to the natural environment. The first WRE Regional Plan was published in December 2023: [WRE-Regional-Water-Resources-Plan-for-Eastern-England.pdf](#)



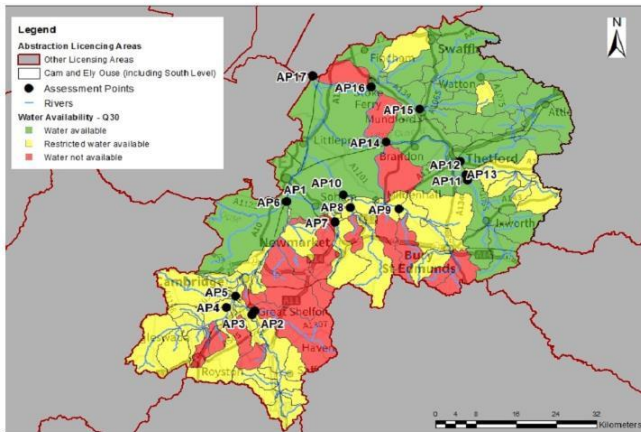
Figure 2-2: Map of the current regional groups for water resource planning has been the focus of the Environment Agency’s Water Abstraction Plan published in 2021.

Currently, all of the water taken from the environment by Cambridge Water to supply customers in Greater Cambridge is sourced from groundwater. This water is taken primarily from chalk aquifers that feed the chalk streams. These are precious environments and a key environmental feature of the region. To protect and restore them, large-scale reductions in water abstraction are needed, initially over the next five to ten years, and then again before 2050. This programme of abstraction reduction with all of Cambridge Water's supplies currently coming from groundwater, this programme impacts on the availability of supplies. Not only is the groundwater system constrained but the surface water system is also water stressed, meaning there are few local options to increase water supply within the region.

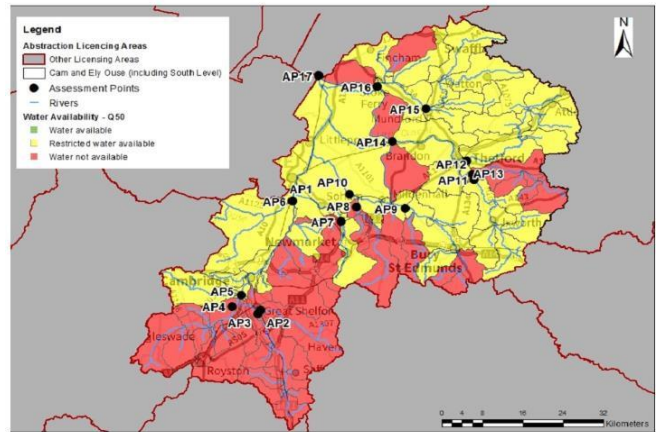
The Environment Agency's [Cam and Ely Ouse Abstraction Licensing Strategy](#) (ALS) sets out how the Environment Agency manages sustainable abstraction in the area, to ensure River Basin Management Plan objectives are met for water resources activities and to avoid deterioration in the catchment. It provides information on the potential water available for licensing, from both surface water and groundwater. Figure 2-3 presents a series of water resource availability maps, with Maps 1 to 4 representing surface water for high (Q30), mean (Q50), low (Q70) and very low (Q95) river flows, and Map 5 for groundwater. Red indicates that water is not available for licensing, yellow indicates that there are restrictions on licensing, and green that water is available for licensing.



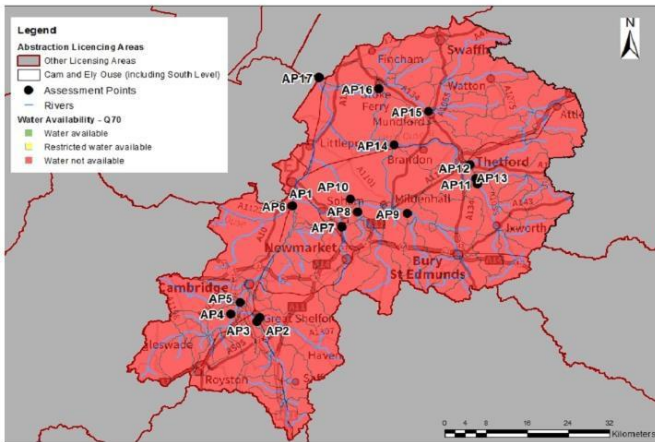
Map 1: Water resource availability colours at Q30 for Cam and Ely Ouse ALS



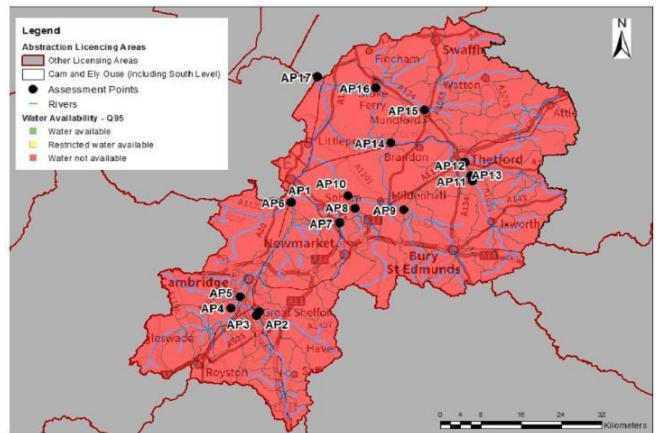
Map 2: Water resource availability colours at Q50 for Cam and Ely Ouse ALS



Map 3: Water resource availability colours at Q70 for Cam and Ely Ouse ALS



Map 4: Water resource availability colours at Q95 for Cam and Ely Ouse ALS



Map 5: Groundwater resource availability colours for the Cam and Ely Ouse ALS

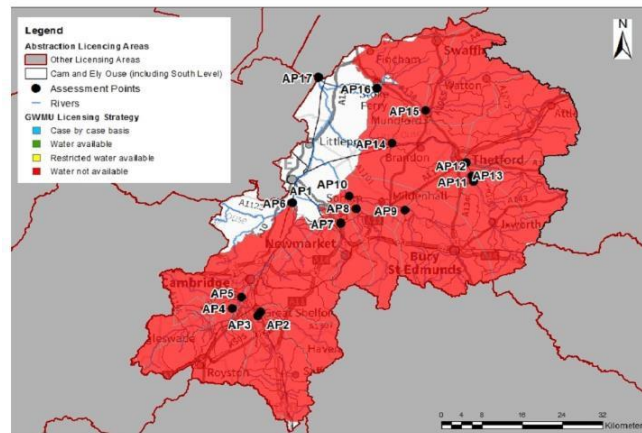


Figure 2-3: Environment Agency water availability summary (taken from [Cam and Ely Ouse abstraction licensing strategy](#))

2.3 Current plans to manage water resources over the next 25 years

Without any action to sustainably manage water resources in the East of England, WRE forecast that there will be a deficit of 640 million litres per day by 2050. As mentioned in Section 2.1, Cambridge Water and WRE undertake extensive modelling and forecasting to develop an adaptive strategic plan to sustainably manage water resources in the Greater Cambridge area. These are outlined in this section.

2.3.1 Cambridge Water's Water Resources Management Plan

On average, Cambridge Water currently supplies around 90 million litres of water per day (Ml/d) that is treated to drinking water standard (also known as potable water). The company currently has sufficient water to meet demand, with resources of around 100 Ml/d. However, there are several key challenges that the company is facing during the period 2025 to 2050, as summarised below.

- **Reducing abstraction to protect the environment**

As mentioned previously, water bodies in the Greater Cambridge area are at risk of environmental deterioration. In 2021, the new Environment Act came into force, later supported by the Government's Environmental Improvement Plan 2023. These led to new environmental targets for the water industry to reduce abstractions to prevent deterioration, with additional reductions to sustainable levels to deliver environmental improvement, called "Sustainability Reductions". Furthermore, it has led to longer-term targets to enhance water dependent habitats by achieving flows that support water bodies to achieve 'good' ecological status with added benefits for drought resilience called "Environmental Destination". In support of these, Cambridge Water's plan accommodates total reductions in water available of approximately 61 Ml/d by the end of the planning period (2050). This includes about 8 Ml/d of sustainability reductions already committed, 18 Ml/d of additional sustainability reductions by 2031 to prevent the risk of deterioration, and a further 35 Ml/d of reductions from 2040 to meet Environmental Destination.

- **Resilience to climate change and extreme drought**

The East of England is the driest region of the country, and the impacts of climate change are already being felt and are expected to increase into the future with climate change leading to more frequent dry periods, heatwaves and drought. The level of service to customers in the region must be balanced with the risk of having to introduce restrictions on the amount of water customers can use during drought periods. In the previous WRMP submitted in 2019, the water industry was required to plan for resilience to a 1 in 200 year drought event. Improved data sets and understanding of the impacts of extreme drought have led to a step change in resilience standards within the industry and new requirements in the recent WRMP24 to plan for a 1 in 500 year drought event. As such, there is currently 0.5% chance every year of extreme drought impacting water services (1 in 200 year drought resilience) but once all planned options are in



place and before 2040, this drought resilience will be increased to 0.2% (1 in 500 year drought resilience).

▪ **Accommodating growth**

The East of England is the fastest growing region in the country. Economic growth, an increasing population and more house building are placing further pressure on water availability. Non-household demand (i.e. the demand for water from non-domestic customers) has increased significantly since the Covid-19 pandemic, with growth largely seen in the biomedical research and development sector. Moreover, the UK Government has high aspirations for sustainable economic growth in Cambridge which could create further demand for water amongst non-household customers throughout the planning period. At the same time, the Government is seeking a national target of a 9% reduction in business and industrial (non-household) water consumption by 2038. With such a focus on economic growth for the region, it will be difficult to deliver a reduction in absolute non-household water use without a radical change in demand management options. Currently Cambridge Water incorporates planned water reduction activities for non-household users which are proposed to reduce the forecast growth in NHH consumption by 2038 by 9% and by 15% by 2050. Regardless of these planned water reduction activities, WRMP24 still forecasts a growth in absolute non-household demand of 55% by 2038 from the 2019/20 position. The current WRMP's central forecast is informed by detailed trend-based modelling and the adopted South Cambridgeshire District Council and Cambridge City Council local plans. It accommodates 46,000 new homes being built between 2025 and 2050 resulting in an increase of 32% in connected household properties. To allow for some uncertainty in growth forecasts the WRMP also accommodates a range of lower and higher growth scenarios around this central forecast within its allowance for Target Headroom (explained in Section 2.1).

To manage these challenges and meet the forecast needs of water users in the Greater Cambridge area, WRMP24 outlines a 'Preferred Programme' of supply and demand interventions which are designed to ensure the sustainable management of water resources. Figure 2-4 illustrates Cambridge Water's water availability forecast, based on the WRMP24 Preferred Programme, which includes:

▪ **Enhanced demand management**

Implementation of measures to achieve a reduction in demand of approximately 18 Ml/d by 2050.

▪ **New supply options**

Plans to provide 77 Ml/d of additional water. This includes a short-term transfer from Anglian Water's Grafham Water reservoir (26 Ml/d); Fens Reservoir, a new shared resource with Anglian Water (44 Ml/d); and the Cambridge Water Recycling Centre effluent re-use scheme (7 Ml/d).



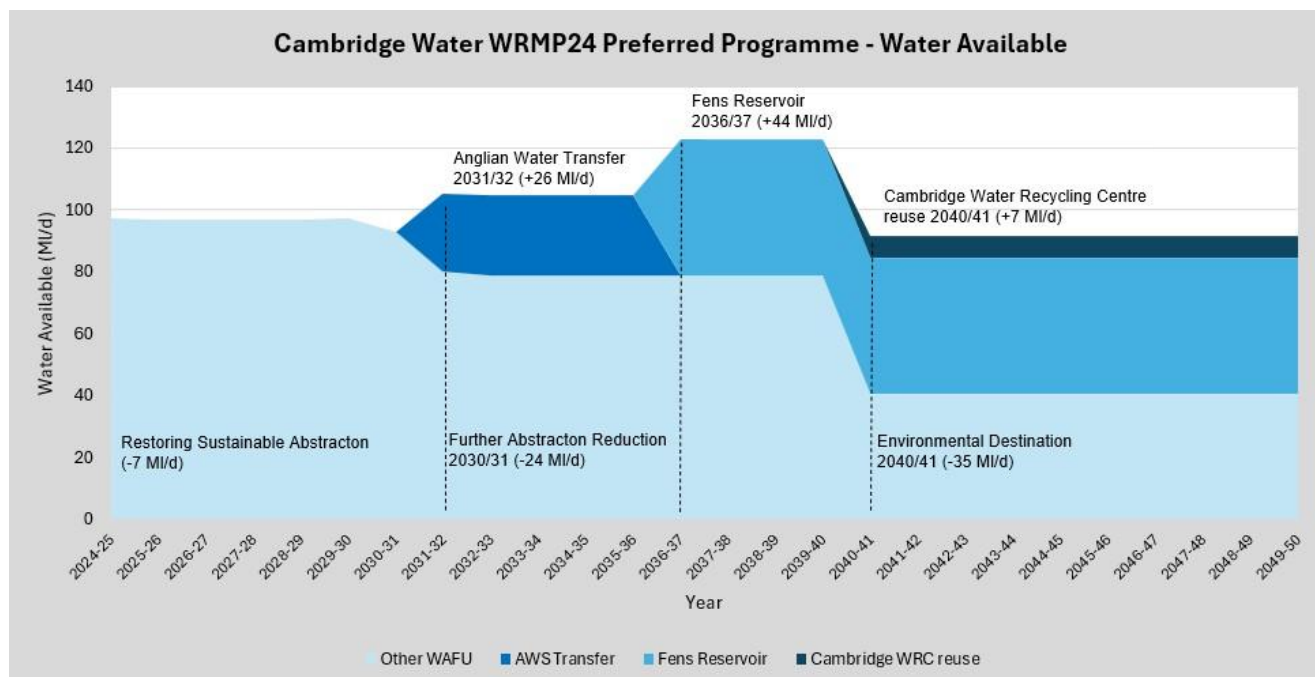


Figure 2-4: Forecast water available in Cambridge Water WRMP24 Preferred Programme

Figure 2-5 is based on forecasts for a 'dry year annual average' planning scenario. It demonstrates how the Preferred Plan is designed to meet future demand over the planning period (2025-2050). Key impacts on the water available are shown (i.e. major supply options and significant abstraction reductions) alongside future demand.

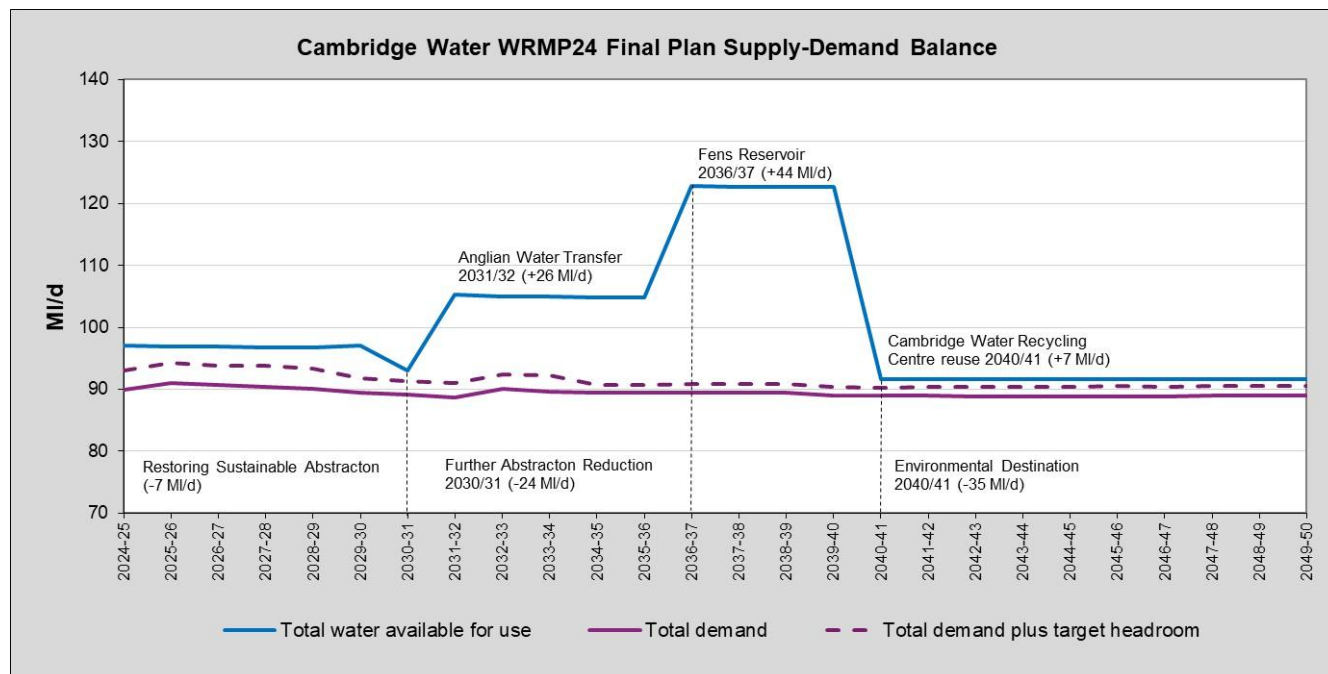


Figure 2-5: Cambridge Water WRMP24 Preferred Programme supply-demand balance

The future demand for water was informed by the growth plans outlined in the adopted South Cambridgeshire District Council and Cambridge City Council local plans, 2018. The



plan also considered a higher and lower growth scenario, which were used to inform the level of 'Target Headroom' applied to accommodate uncertainty and shown by the dashed line on the graph. Based on these scenarios the WRMP24 provides sufficient water availability to meet the needs of growth (see Section 4 for consideration of the Preferred Programme against the current Draft Local Plan). As shown in Figure 2-5 water availability, once current forecasts of demand are met, can be defined by three distinct time periods:

- **Short-term pressure - pre-2032:** There is little excess water available for use beyond that currently planned for.
- **Mid-term surplus - 2032 to 2040:** The Grafham Transfer from Anglian Water and Fens Reservoir come online to provide more water availability and compensate abstraction reductions to provide environmental protection to the sensitive chalk water sources of the region. Water reuse, associated with the Cambridge Water Recycling Centre, is also an important option supporting the Preferred Plan.
- **Long-term pressure - post 2040:** Environmental Destination to restore and protect the region's freshwater environment reduces water available for use and results in little excess water availability beyond that currently planned for.

It should be noted that by presenting the Preferred Programme, it is assumed that water availability follows a certain timetable (e.g. licence reduction occurs at specific dates or new resource options are built and become operational by a specific date) and that demand is in line with the current forecasts (taking account of factors such as property and population growth, housing occupancy rates and consumption figures). If the coming years follow what has been assumed in WRMP24 then demand for water will continue to be met as described. However, the management of water and wastewater in the region is continually evolving as new information, data and forecasts become available. This is particularly important for the Greater Cambridge region that has a range of stakeholders working at the national, regional and local level to find solutions to unlock water availability and support ambitious growth.

The iterative and adaptive nature of WRMPs enables assumptions to be revisited during future updates of the plans to accommodate future changes that occur, potentially moving from the Preferred Plan along an adaptive pathway. Cambridge Water is also starting work to update its WRMP for the next 25 years, which will be published in 2029. At the same time, WRE is also starting to work on the next Regional Plan (explained further in the following sub-section). These will draw on updated information from local plans (e.g. the emerging Greater Cambridge Local Plan) and stakeholders, capturing new forecasts for growth, water use and potential options to both reduce demand and increase supply.

In the interval between the formal publication of WRMP24 and WRMP29, annual reviews will be completed to ensure that Cambridge Water's delivery aligns with its plans and sources of significant deviations (e.g. the COVID pandemic drove significant changes in water usage which companies reported against the WRMP19).

The WRMP24 estimated abstraction reductions required to meet the 2040s Environmental



Destinations are based on coarse screening completed by the Environment Agency. Cambridge Water is currently undertaking comprehensive investigations to refine and confirm these abstraction reductions which will be incorporated into WRMP29.

2.3.2 Water Resources East Regional Plan

For Greater Cambridge, it is possible that not all the long-term solutions (post-2040) will be found locally because there is very limited new water available from local rivers and groundwater aquifers, as reflected by the Restoring Sustainable Abstraction and Environmental Destination programmes. Further, we already see new supplies that are being developed through the Grafham to Cambridge transfer and Fens Reservoir. Additional water may need to be imported from areas of greater availability, or new resource schemes may need to be developed that benefit a wider area. WRE's first Regional Plan, published in 2023, provides a longer-term adaptive plan that sets out a range of plausible demand and supply-side options that can be adopted depending on growth, climate change and environmental factors over the 2025 to 2050 period. This provides an overarching Regional Water Resources Plan that individual water company WRMPs work within. As shown in Figure 2-6, the Regional Plan brings in reuse and desalination supply options on the East Coast that are scalable to accommodate longer-term uncertainty and allow for the emergence of new challenges. These are an example of the type of option that may become more common in the future and could be part of the future solution for Greater Cambridge.

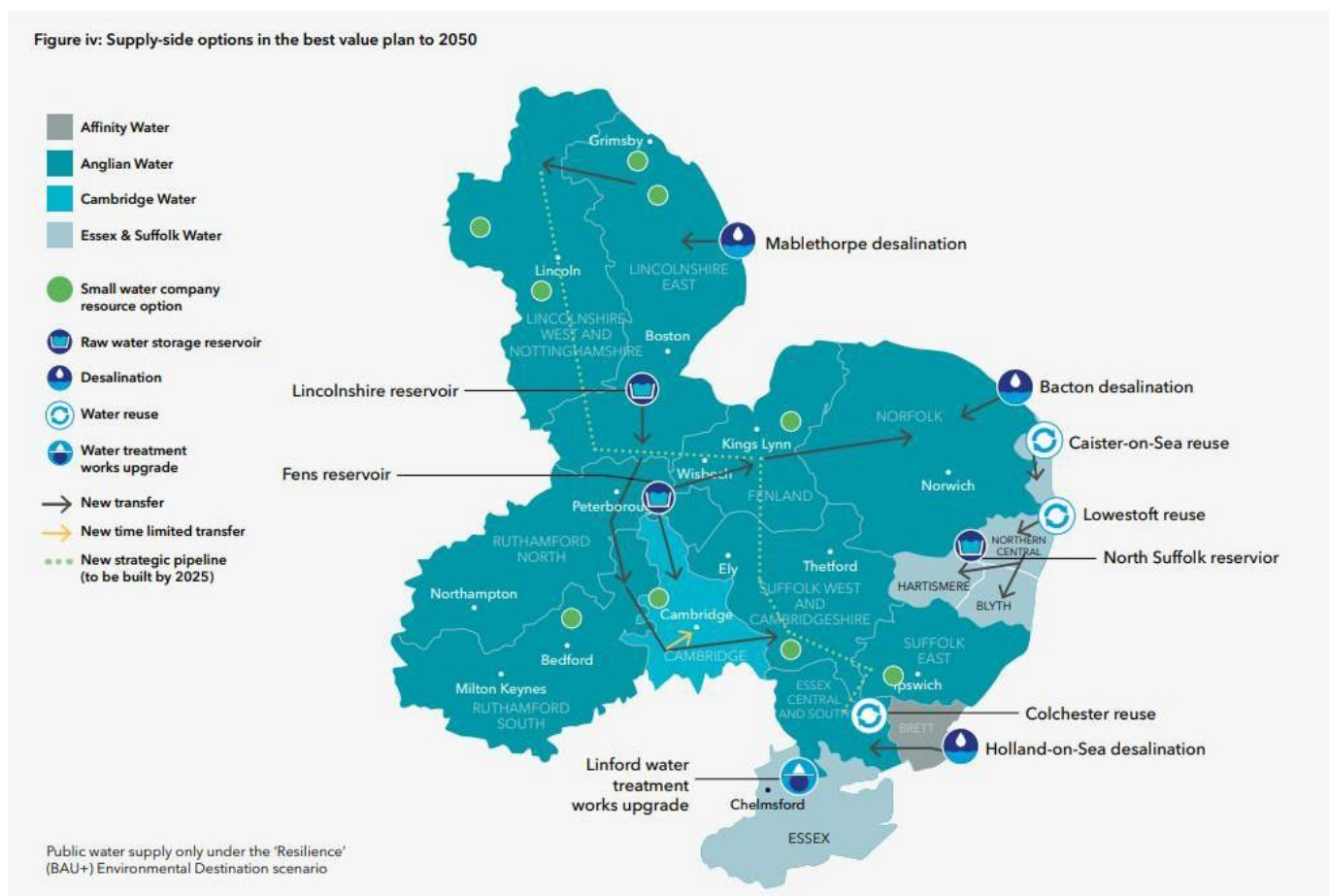


Figure 2-6: Supply-side options to 2050 outlined in the WRE Regional Plan

2.3.3 Cambridge Water Scarcity Group

Reflecting the potential constraint that the lack of available water may pose to growth in Greater Cambridge, a [Water Scarcity Group](#) was established in 2023 by the Ministry of Housing, Communities, and Local Government to provide strategic advice on the issue. The Group is comprised of representatives from across Government, local partners, water companies and water regulators. Its role is to ensure alignment across all key partners including Government, water companies and developers and to engage with key stakeholders and partners across Greater Cambridge.

The Water Scarcity Group has developed a two-part plan '[Addressing water scarcity in Greater Cambridge: update on government measures](#)' to support sustainable growth as follows:

1. Ensure long-term water supply so that the city can grow in a sustainable way.
 - Assuring the delivery of long-term major water supply infrastructure including the proposed Grafham transfer and Fens Reservoir.
 - Supporting the development of a plan for strategic water resources over the long-term.
 - Using Cambridge as an area for innovation in water management in agriculture and through nature-based solutions.
2. Support growth in the short-term so that development currently stalled can progress.
3. Supporting increased water efficiency, reuse and offsetting through a 'water credits system'.

2.3.4 Stakeholders

The focus on growth in Cambridge and the recognition of potential water supply challenges means that there are many different stakeholders with a particular interest in the water environment. Key stakeholders are as follows:

- **Cambridge Water:** Responsible for the management and supply of water supply services for the Greater Cambridge region (Figure 2.1 outlines the company's supply region)
- **Anglian Water:** Neighbouring water and sewerage company working with Cambridge Water to increase the delivery of water resources into the Cambridge Water region. For example, Anglian Water is working with Cambridge Water to progress the delivery of a new, shared reservoir to supply both regions (Fens Reservoir).
- **Environment Agency:** Public body that works to protect and improve the environment and support sustainable development. Provides strategic water resources management guidance for the long-term forecasting of water resources to develop water companies' investment plans to balance the supply of water and the demand from water users and the environment.
- **Natural England:** An executive non-departmental public body, sponsored by the Department for Environment, Food & Rural Affairs (Defra). It is the Government's adviser for the natural environment in England.
- **Water Resources East:** WRE is an independent, not-for-profit membership organisation



adopting a collaborative, cross-sector approach to water resources and integrated water management planning in Eastern England. This regional group comprises of Cambridge Water, Anglian Water, Affinity Water and Essex & Suffolk Water, and has combined the supply and demand needs from each of these companies, and non-public water supply sectors, to create a regional water resources plan.

- **Cambridge Growth Company:** A subsidiary of Homes England and team of policy professionals, surveyors, town planners, economists and development specialists. Draws on the expertise of Homes England and Ministry of Housing, Communities and Local Government. Working with local partners to inform and support the sustainable delivery of the Government's vision for Cambridge growth.
- **Department for Environment, Food and Rural Affairs:** Defra is responsible for setting policy and regulations related to the environment, food and rural affairs. Working with other stakeholders to share policies and initiative in Greater Cambridge particularly concerning water scarcity to protect the environment and climate change adaptation.
- **Water Scarcity Group:** Includes key actors across Government and the industry to provide strategic advice to help ensure that development in Cambridge is sustainable, engage with key stakeholders and ensure that there is alignment across all key partners including Government, water companies and developers.
- **Ministry of Housing, Communities and Local Government:** UK Government department responsible for promoting thriving communities, improving local services, and ensuring a good quality of life for all. Its focus areas include housing, urban regeneration, planning, and local government.
- **The Water Services Regulation Authority, known as Ofwat:** Non-ministerial Government department that works alongside the UK and Welsh Governments and other regulators to regulate the water industry and their investment plans.

With many stakeholders having an interest in the water supply situation for Greater Cambridge and the wider East of England region, there are opportunities for partnership working and sharing of data and expertise. Given the challenges facing the area and the levels of growth ambition, there is a risk that continuing with the business-as-usual approach is not enough. Reflecting on Cambridge's reputation for science and innovation, there is an opportunity to trial new, innovative approaches to managing water and use Greater Cambridge as a test bed for solving future water supply challenges that may one day be experienced in other parts of the UK.



3. Planning for future development

Section overview:

This section of the report presents a summary of the local planning process, the current Draft Greater Cambridge Local Plan and the Government's growth aspirations for Greater Cambridge.

Key messages:

- Cambridge is a key part of the regional and national economy, building on its global reputation as a centre of science and innovation, with the success of Cambridge being a national priority for Government.
- The Draft Greater Cambridge Draft Local Plan, a joint local plan being prepared by Cambridge City Council and South Cambridgeshire District Council, has been informed by evidence exploring the economic needs of the area, and the need for new homes.
- The emerging local plan anticipates 73,300 new jobs in the area between 2024 and 2045, and a need for a minimum of 48,195 new homes. Including an allowance for headroom, the plan's trajectory includes approximately 55,500 new houses to be built in the period 2024 to 2045.
- The Draft Local Plan delivery trajectory has been designed to phase growth of new larger developments in line with the WRMP24 Preferred Plan and stages of water availability (i.e. phased to increase delivery with the planned completion of the Grafham Transfer from Anglian Water in 2032 that will bring more water to the region). The Draft Plan also includes policy requirements that will improve household and non-household water efficiency in new buildings.

3.1 The local planning process

Local Planning Authorities are responsible for creating and implementing Local Plans, which guide development and land use within their areas, addressing housing, employment and infrastructure needs to achieve sustainable development. The Local Plans are legal documents forming part of the statutory development plan and are crucial for determining planning applications. The Local Plan is developed in line with national legislation and guidance. Plans are updated every 5 years, informed by consultation with the public and stakeholders, before being submitted to the Secretary of State. Upon submission the local plan is independently tested via a public examination process before it can be formally adopted.

In 2018 South Cambridgeshire District Council and Cambridge City Council adopted individual Local Plans covering the period 2011 to 2031 and beyond. They also determined that the next local plan would be a joint plan covering both districts, to be called the Greater Cambridge Local Plan. It is worth noting that Huntingdonshire District Council is also preparing an update to their Local Plan. Given a part of their area is in the Cambridge Water supply zone it could draw on the same water resources as the Greater Cambridge Local Plan, so the impact of their emerging plan will need to be monitored.



3.2 Draft Greater Cambridge Local Plan 2024 - 2045

The Greater Cambridge Local Plan needs to respond to national planning policy, which places significant weight on the need to support economic growth and meeting housing needs. Needs should be met unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits.

The Draft Greater Cambridge Local Plan is being published for consultation at the Regulation 18 stage of plan making. This will enable the public and stakeholders to provide feedback on the emerging Local Plan which can be considered before it prepares the Final Local Plan that it would like to submit for adoption. Consultation on the Draft Plan is planned to take place in late 2025.

The draft Local Plan has been informed by evidence exploring the economic needs of the area, and the need for new homes. The emerging Local Plan anticipates 73,300 new jobs in the area between 2024 and 2045, and a need for a minimum of 48,195 new homes.

The Local Plan identifies site allocations in order to respond to these needs. Existing planned sites such as Darwin Green and Northstowe, along with the expected flow of windfall sites over the plan period, account for around 37,000 homes. The Draft Plan identifies additional sites to meet the remainder of the need. Including an allowance for headroom, the plan includes approximately 55,500 new houses to be built in the period 2024 to 2045. As the Draft Plan explains, this figure includes development at North East Cambridge which is currently not deliverable due to funding not being available. If this site were excluded, the figure would be around 51,500 homes. However, we have used the higher figure for the purposes of this study.

The Local Plan is supported by a development trajectory, which sets out anticipated development each year over the plan period. In developing the trajectory for new development sites, the plan has considered when developments would be able to commence, and also the timing of developments relative to the water availability trajectory. For new strategic allocations, development is not anticipated prior 2032.

In terms of occupancy rates for the new houses, the WRMP uses an average occupancy rate applied to all homes which evolves over time. For this report we have used rates for new homes which have been provided by Greater Cambridge Planning, informed by similar new developments locally which are slightly higher than that rate. Table 3-1 collates house build forecasts for the planning period, the associated population and occupancy rates.

The Draft Local Plan has been informed by evidence exploring the economic needs of the area, and expectations of both economic and jobs growth. The Greater Cambridge Employment and Housing Evidence Update projects an increase of 73,300 jobs between 2024 and 2045. Around half of these would be in be the kind of jobs accommodated in office, R&D and industrial buildings. It is important to note that there is significant uncertainty regarding estimating the scale, timing and locations of future jobs in Greater Cambridge. The economic study referred to above identifies this as the most likely scenario, but growth will need to be monitored.



Table 3-1: Greater Cambridge Draft Local Plan (2025) house build forecast

	Time period in plan (years)			
	2024/25 to 2031/32	2032/33 to 2039/40	2040/41 to 2044/45	Total in plan period (2024-2045)
Total houses built (in period)	19,305	21,999	13,143	54,447
Total estimated population (in period)	50,364	55,754	34,501	140,619
Average houses built (per year)	2,413	2,750	2,629	2,593
Average estimated population (per year)	6,295	6,969	6,900	6,696
Average estimated occupancy rate	2.61	2.54	2.63	2.58

3.3 Government growth aspirations

Cambridge is a key part of the regional and national economy, building on its global reputation as a centre of science and innovation, with the success of Cambridge being a national priority for Government (Matthew Pennycook, Secretary of State for Housing, Communities and Local Government, August 2024). The Government has established the Cambridge Growth Company as a government supported, pro-growth company to work closely and collaboratively with local elected leaders to overcome obstacles to growth and to promote sustainable, infrastructure-led development and economic growth in Greater Cambridge.

The UK Government has high aspirations for sustainable economic growth in Cambridge and is promoting its importance for contributing to a successful national economy. Increasing housing stock and improving affordability are seen as key to boosting the supply of skilled labour to Cambridge and underpinning economic growth. In March 2024, the UK Government released the [Case for Cambridge](#) that sets out the ambition for the economic and housing growth of Cambridge. Plans for additional growth have not yet been defined, but any proposals will have to consider the issues identified in this report as they may put further pressure on water resources and require additional demand management measures and water supply options to ensure that there is adequate water availability.

4. Considering water needs of the Draft Local Plan

4 Section overview:

This section presents evidence to review whether the growth forecast in the Greater Cambridge Draft Local Plan can be supported by the current Water Resource Management Plan and Regional Water Resources Plan for the Greater Cambridge area.

4 Key messages:

- Due to differing timelines of water industry and local authority reporting, in practice, the detailed forecasting and modelling undertaken to feed into water company and regional water resources planning is often undertaken early in their five-yearly planning cycle. Therefore, the current strategic plans to manage water resources in the region use the previous Local Plans for Cambridge and South Cambridge, adopted in 2018, as their baseline.
- The Councils have been working closely with Cambridge Water, Water Resources East, the Water Scarcity Group and other key stakeholders in the region to understand the water scarcity challenges. In response, the Draft Local Plan has considered the timing of new strategic developments to align with water availability after 2032 when the Grafham Transfer from Anglian Water comes online. It also proposes changes to planning policies for Greater Cambridge that will improve water efficiency in households and non-households.
- Evidence presented shows that, based on current forecasts, assumptions and understanding, Cambridge Water's WRMP24 forecast water availability can meet the needs of the current Greater Cambridge Draft Local Plan anticipated household and non-household growth forecast from 2025 to 2040.
- **Beyond 2040 further solutions will need to be sought.** Large reductions in abstractions for Environmental Destination will reduce water available for supply. This means that the water needs of the Draft Local Plan would currently result in a 4.5 Ml/d deficit by 2050. The Draft Local Plan proposed planning policies aimed at reducing per person water use within new build households below current building regulations would reduce this impact to just over 2 Ml/d.
- However, the Regional Water Plan identifies further solution that could be used to address future needs. By 2040 there will have been two further five-yearly updates of the WRMP to allow for more certain revisions to Local Plans to be adopted within WRMPs. The adaptive water resources planning approach enables regional and national stakeholders to work together to identify additional solutions (e.g. desalination) that could be delivered rapidly and scaled up or down depending on how the water supply situation evolves, such as through the performance of demand management measures or how growth, climate change and environmental factors turn out.
- It is important to note that to support Government aspirations for growth beyond the Draft



Local Plan, or, if more water hungry industries arrive in the area, then even more solutions, like those discussed in this report, will need to be sought to manage the impact of environmental reductions post 2040.

4.1 Local Planning versus Water Resources Planning

As acknowledged in Section 2.3, Cambridge Water's WRMP24 presents how the company will meet the demand for water over the next 25 years, based on a range of forecasts and assumptions that represent 2025 to 2050. There are some key differences in the way housing and non-household (or employment) forecasts are developed between local authority plans and the water sector's WRMPs or Regional Plans, largely driven by differences in regulatory guidance. The key differences are summarised in the following paragraphs.

Water resource management plan

- **Planning period:** 25 years
- **Housing growth forecasts:** Housing need taken from Local Plan but incorporates this with ONS data and trend-based population forecasts in line with water industry guidance.
- **Assumed new build household water use:** Assumption of 110 litres per day per person.
- **Forecasting for non-household water use:** Public water demand trend forecasts based on factors including population, gross value-added metrics, employments rates etc. Forecasts produced for 4 industrial groupings (agriculture, non-service industries, service industries – population driven and service industries – economy driven).
- **Consideration of uncertainty:** Three scenarios modelled – upper and lower uncertainty incorporated within Target Headroom.

Regional water resources plan

- **Planning period:** 25 years
- **Housing growth forecasts:** Includes WRMP scenarios but also strategic/high-growth scenarios such as those related to higher growth being considered in the Ox-Cam corridor.
- **Assumed new build household water use:** Assumption of 110 litres per day per person.
- **Forecasting for non-household water use:** Includes WRMP scenarios but also high-growth scenarios such as those related to higher growth accompanying the Ox-Cam corridor. Agricultural and energy sector non-potable (non-treated) water demands also forecast.
- **Consideration of uncertainty:** Many thousands of scenarios modelled to identify options that are resilient across a range of plausible futures.

Local plan

- **Planning period:** at least 15 years
- **Housing growth forecasts:** Based on housing needs including consideration of the Government's standard



method, including an assessment of planning applications.

- **Assumed new build household water use:** Based on Building Regulations or local planning policy requirements related to date when planning applications granted. Current consultation on revised values.
- **Forecasting for non-household water use:** Employment and associated floor space forecasts based on local needs assessment with reference to local and national targets and Government drivers. Includes a review of planning applications. Forecasts developed for industrial, office and laboratory buildings.
- **Consideration of uncertainty:** Generally one set of proposals in Local Plan providing flexibility to meet needs, with annual monitoring, evolves through 5-year planning cycle as next Local Plan is developed.

Importantly, despite the differences noted above, the household and employment growth forecasts in Cambridge Water's WRMP and WRE's Regional Water Resources Plan are informed by Local Plan forecasts. However, in practice the detailed forecasting and modelling undertaken to feed into the WRMPs is often undertaken early in their five-yearly planning cycle.

Although there are differences in the way that the WRMP and Local Plan forecasts are developed, the WRMPs and Regional Plans model a range of future scenarios for both supply and water demand, including for growth (both houses and non-household or employment). For example, Figure 4-1 shows the large range of non-household water use scenarios that were assessed as part of Cambridge Water's WRMP24. The central line on the range of scenarios informs the Target Headroom allowance in Cambridge Water's WRMP24 Preferred Plan and, as highlighted earlier, this provides a 'safety margin' or 'buffer' in water availability to accommodate risk and uncertainty in forecasts and slight variances from the central forecast.

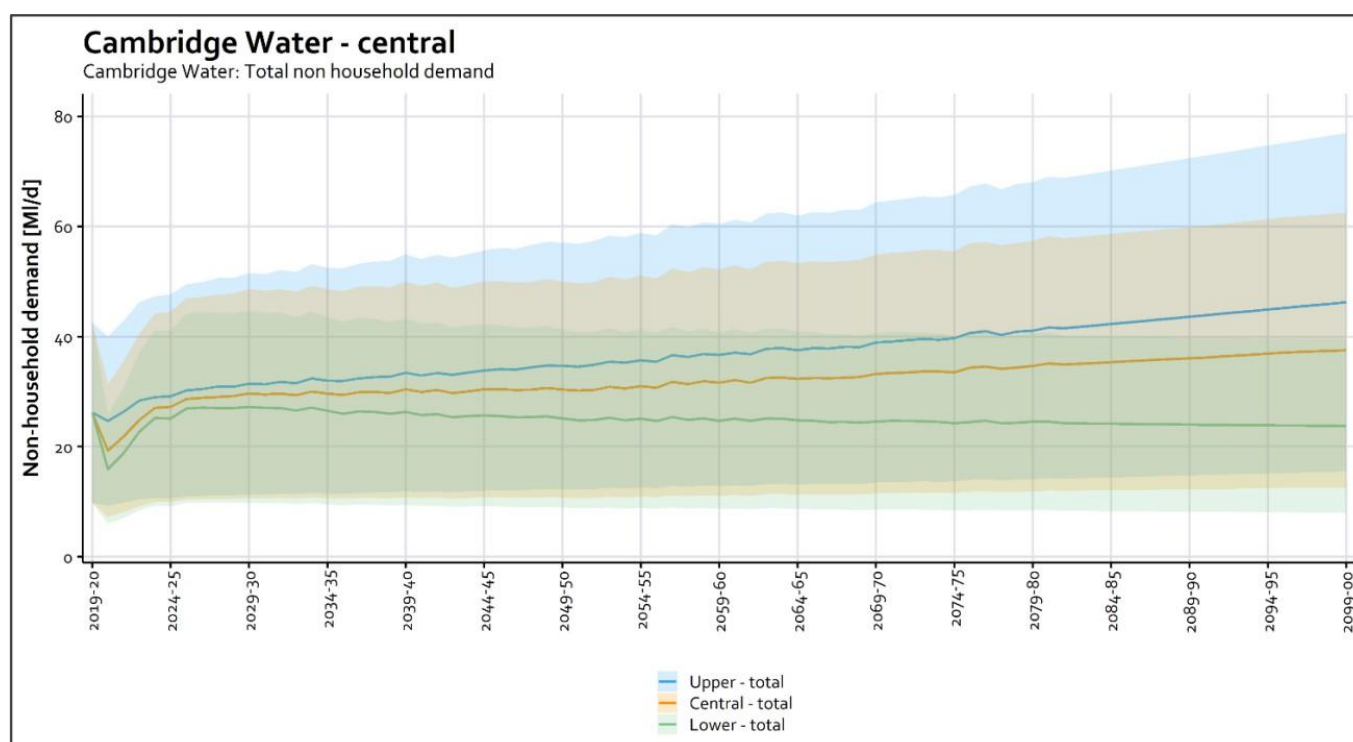


Figure 4-1: WRMP24 scenarios for total non-household demand for the Cambridge Water region



Although the WRMP24 was informed by the Adopted Local Plans from 2018, in the following section we review the evidence to assess whether the levels of growth planned for in Cambridge Water's current WRMP24 (including Target Headroom) are adequate to accommodate the current Draft Local Plan.

4.2 Can the Draft Local Plan be supported?

In this section of the report, we consider whether the water needs of the current Greater Cambridge Draft Local Plan can be accommodated by the water set to be available according to Cambridge Water's WRMP24 preferred programme. Firstly, we assess future household demand for water, using dwellings forecasts from the Draft Local Plan and applying standard water demand forecasting techniques. Secondly, we consider the future demand for water associated with non-household growth, i.e. employment growth. This growth is reported in job numbers or employment floorspace. We use the floorspace forecasts in a bottom-up approach to estimate the demand for non-household water use associated with the Draft Local Plan. This is then compared to the future non-household water use planned for by the WRMP24.

4.2.1 Household growth

Figure 4-2 compares the housing growth forecast by Cambridge Water's WRMP24 with the Greater Cambridge Draft Local Plan. As shown, there are 17,217 more households forecast by 2050 in the Greater Cambridge Draft Local Plan than in the Cambridge Water WRMP24. Information on household growth for Huntingdonshire District Council are also presented to 2040 for the area supplied by Cambridge Water. As this forecast is available until 2040 it is then extrapolated for the remainder of the Greater Cambridge planning period.

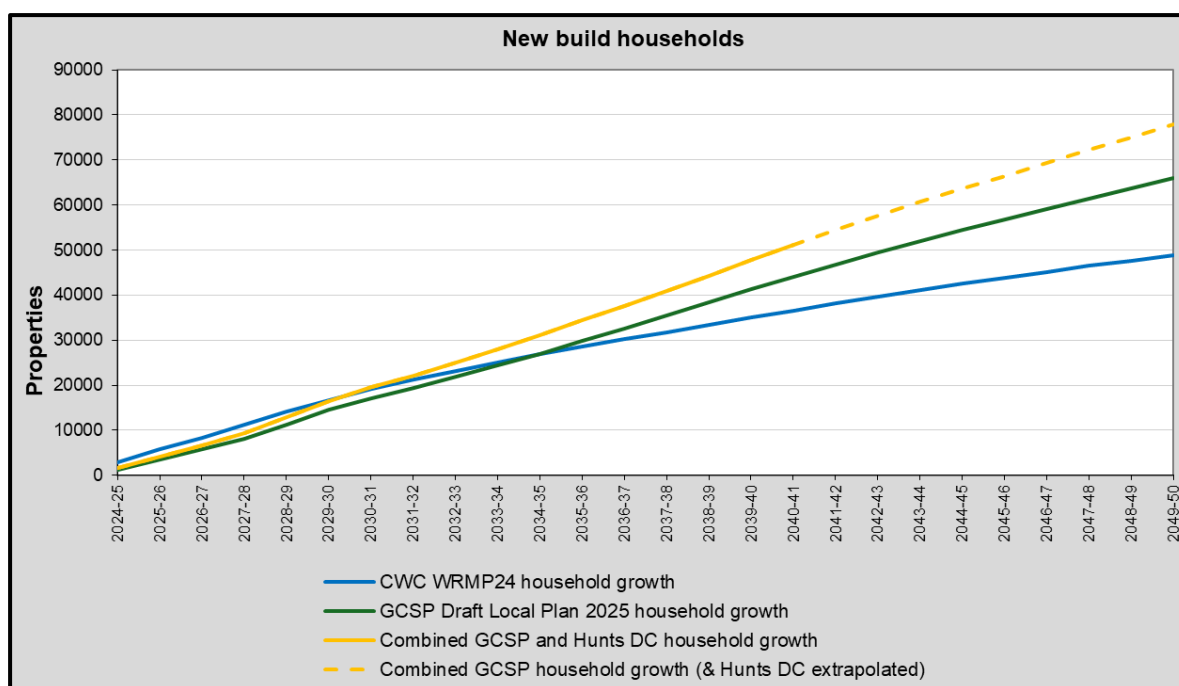


Figure 4-2: Comparison of household growth forecast in the Cambridge Water WRMP24, the Greater Cambridge Draft Local Plan, 2025 and Greater Cambridge Draft Local Plan combined with Huntingdonshire District Council's draft forecast for the area supplied by Cambridge Water



The Draft Local Plan water needs have been forecast using assumed occupancy rates based on analysis of the size of properties within planning applications (see Figure 4-3). Two differing assumptions related to how occupants will use water within the new households were adopted:

- In line with the WRMP24, all occupants in a new dwelling will use 110 litres per person per day (PCC).
- Annual profile of reducing per person water use based on analysis of the number of proposed dwellings on each planning application and the corresponding water efficiency Building Regulations. This includes more ambitious future water efficiency policies proposed by the Draft Local Plan. The average annual PCC profile of new housing in the housing trajectory reduces from 113 litres per person per day in 2024/25 to 91 litres per person per day by 2037/38. This is because in the earlier part to the plan period many homes being built will already have planning permission following older water efficiency standards. Over time, more dwellings will be covered by greater efficiency requirements from more recent efficiency standards and the proposed new policy approach.
- As explained earlier, in terms of occupancy rates for the new houses, the WRMP24 uses an average occupancy rate applied to all homes which evolves over time. For this report we have used rates for new homes which have been provided by Greater Cambridge Planning informed by similar new developments locally which are slightly higher than the rate adopted in the WRMP24.

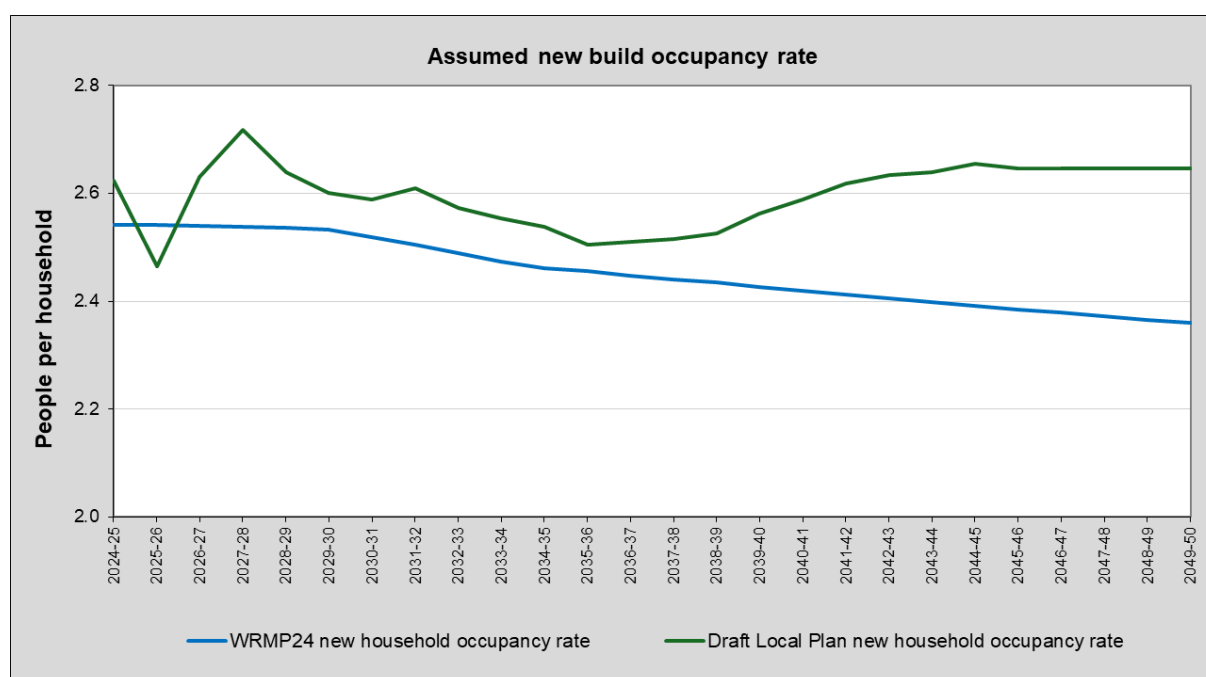


Figure 4-3: Comparison of occupancy rate in the Cambridge Water WRMP24 and the Greater Cambridge Draft Local Plan, 2025

Household growth forecasts have been provided for the area of Huntingdonshire District Council that is supplied by Cambridge Water. These are not directly comparable as the projections only extend to 2040, but in that period they include a further 7,114 properties. Neither assumed occupancy rates nor planned water efficiency standards have been provided by Huntingdonshire



District Council. To allow further interpretation, occupancy rates for Greater Cambridge have been applied and a standard 110 litres per person per day PCC is applied.

Figure 4-4 compares the associated total water use associated with the household (dwellings) growth forecasts from both the Cambridge Water WRMP24 and the Greater Cambridge Draft Local Plan. As shown, during the early years of the planning period (pre-2030) the **household** demand for water estimated using the Draft Local Plan household growth forecasts is less than that planned for by Cambridge Water.

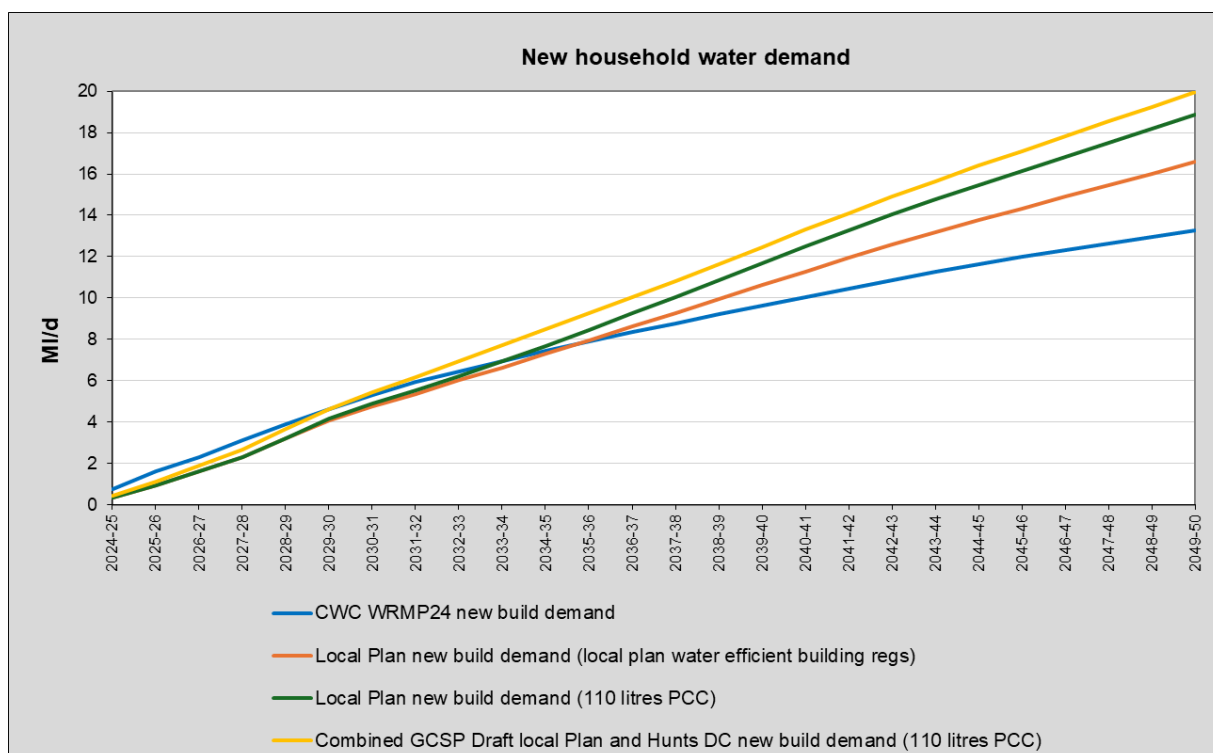


Figure 4-4: Comparison of the water needs of household growth forecast in the Cambridge Water WRMP24, the Greater Cambridge Draft Local Plan and the Greater Cambridge Draft Local Plan combined with Huntingdonshire District Council’s draft forecast for the area supplied by Cambridge Water

During the period after 2032 the Draft Local Plan household growth results in higher demand for water than the levels planned for by the Cambridge Water WRMP24 with approximately 5.5 MI/d more water needed by 2050 than forecast in the WRMP24. The Draft Local Plan proposed changes to Building Regulations to improve water efficiency in new housing reduce the impact to approximately 3 MI/d by 2050. Consultation on changes to the water efficiency standards in the Building Regulations commenced in September 2025. It is clear that any changes will have implications for new building stock towards the end of the planning period.

The effect of Huntingdonshire District Council’s Draft Local Plan household growth can only be estimated as neither assumed occupancy rates nor proposed water efficiency standards are known. Whilst it clearly presents a further challenge on water resources, the location of these developments potential offers solutions. Many potential sites are located on the edge of the

supply areas for Cambridge Water and Anglian Water giving flexibility in the source of supply.

4.2.2 Non-household growth

Cambridge Water's WRMP24 utilises trend-based population and economic forecasts to produce scenarios of future non-household water demand for non-public buildings. These are produced through detailed and specialist modelling, delivered by sector specialists, following industry best practice guidance. By 2050, Cambridge Water is planning for 4.8 MI/d total non-household growth across the following industrial categories:

- Agriculture, with a strong relationship with weather. This local plan does not consider this sector
- Non-service industries (excl. agriculture), for example manufacturing, utilities, construction which are likely to show trends related to the economy. This best aligns to the Industrial category included in the Local Plan
- Service industries which are population driven, for example education and health which will be driven by population size and demography rather than measures of economic output. This part of the economy is not explicitly considered in the Local Plan
- Service industries that are economically driven, for example retail, hospitality and entertainment. These are related to the size of the economy or employment and include professional, scientific and technical activities and administrative and support service activities. The Local Plan categorises these as offices and laboratories
- Unclassified, for non-household uses that may not readily be assigned to any of the other categories. There is no equivalent

The Draft Greater Cambridge Local Plan 2025 presents estimates of future numbers of jobs and associated floorspace (m²) for industrial, office and lab space. This has been informed by evidence including the Greater Cambridge Employment and Housing Needs study prepared by consultants Iceni.

To consider whether the non-household water needs of the Greater Cambridge Local Plan can be met we have adopted a bottom-up approach using the Draft Local Plan floorspace estimates and the [COCOA project](#) which classifies industry groupings and floor area with water consumption. We acknowledge that it is difficult to directly map the categories of the WRMP24 non-household forecast to the industrial, office and laboratory industry job types forecast by the Draft Local Plan. As noted in the bullets, whilst some categories map across and are presented in our analysis, the Local Plan categories do not cover all types of industry within the corresponding WRMP24 category.

The non-service industries and economy service industries accounts for approximately 3 MI/d of the 4.8 MI/d by 2050 equating to 56% of total non-household demand. Our analysis of the corresponding industry categories in the Draft Local Plan, using the floorspace forecasts and the COCOA benchmarking database, estimates that by 2050 less than 2 MI/d of water is needed to support the non-household growth levels identified in the draft local plan. This sits within the 3



MI/d that Cambridge Water are currently forecasting in their WRMP24. The remaining non-household demand that is forecast in WRMP24 is expected to provide an adequate allowance for increases in other non-domestic water consumption, e.g. schools and public buildings. However, it is important to note that if growth is higher, if new more water-hungry industries come to the region, or more ambitious growth is progressed to support Government ambitions, then the water need could be significantly higher. Furthermore, although several studies and benchmarking exercises, such as COCOA, have tried to improve estimates of non-household water use, accurately estimating and forecasting non-household demand remains complex. For example, the water footprint of a building with planning permission to be occupied for industrial or science use is highly dependent on the end use and the processes that will be undertaken there. In addition, often national benchmarking exercises are not representative of local non-household water use or emerging industries and technologies which, given the aspirations for expansion in science and innovation in the region, presents a particular challenge for forecasting non-household development and water management in the Greater Cambridge area. Section 5.5 discusses these non-household demand uncertainties further. This highlights the importance of on-going adaptive planning, and the regular updating of both development plans and the water industry planning process.

4.2.3 Meeting total demand

Figure 4-5, shows total water demand once the additional Draft Local Plan household growth has been accommodated within Cambridge Water's WRMP24 Preferred Plan. This assumes the levels of existing and future non-household demand, stated leakage volumes and the assumed allowance for uncertainties captured by Target Headroom that has been planned for by Cambridge Water. It shows that:

- In the early years of the Draft Local Plan the total water available for use is sensitive to the choice of deterioration scenario selected. The WRMP24 preferred plan is shown, as is an alternative scenario which would prevent deterioration.
- By 2033/34 the Draft Local Plan forecasts begin to exceed the WRMP24 demand forecast but are within the target headroom allowance for delivery risk and forecasting uncertainty.
- By 2038/39 the Draft Local Plan forecasts exceed the target headroom allowance currently planned for by the WRMP24 but are within the Preferred Plan Water Available for Use forecast. The inclusion of increased water efficiency standards in Building Regulations within the Draft Local Plan delays this impact from 2038/39 to 2040/41.
- By 2041/42 the Draft Local Plan forecast exceeds the WRMP24 Preferred Plan Water Available for Use. The inclusion of increased water efficiency standards in Building Regulations within the Draft Local Plan delays this impact from 2041/42 to 2047/48.
- By 2050 approximately 3 MI/d additional water is needed to support the Draft Local Plan (4 MI/d if also accounting for Huntingdonshire District Council's growth). If the proposed water efficient Building Regulations are adopted this impact is reduced to just under 1 MI/d. When we consider the inclusion of a target headroom allowance to account for uncertainty then approximately an additional 4.5 MI/d or just over 2 MI/d is needed, based on WRMP24 and Draft Local Plan per person water use assumptions respectively.



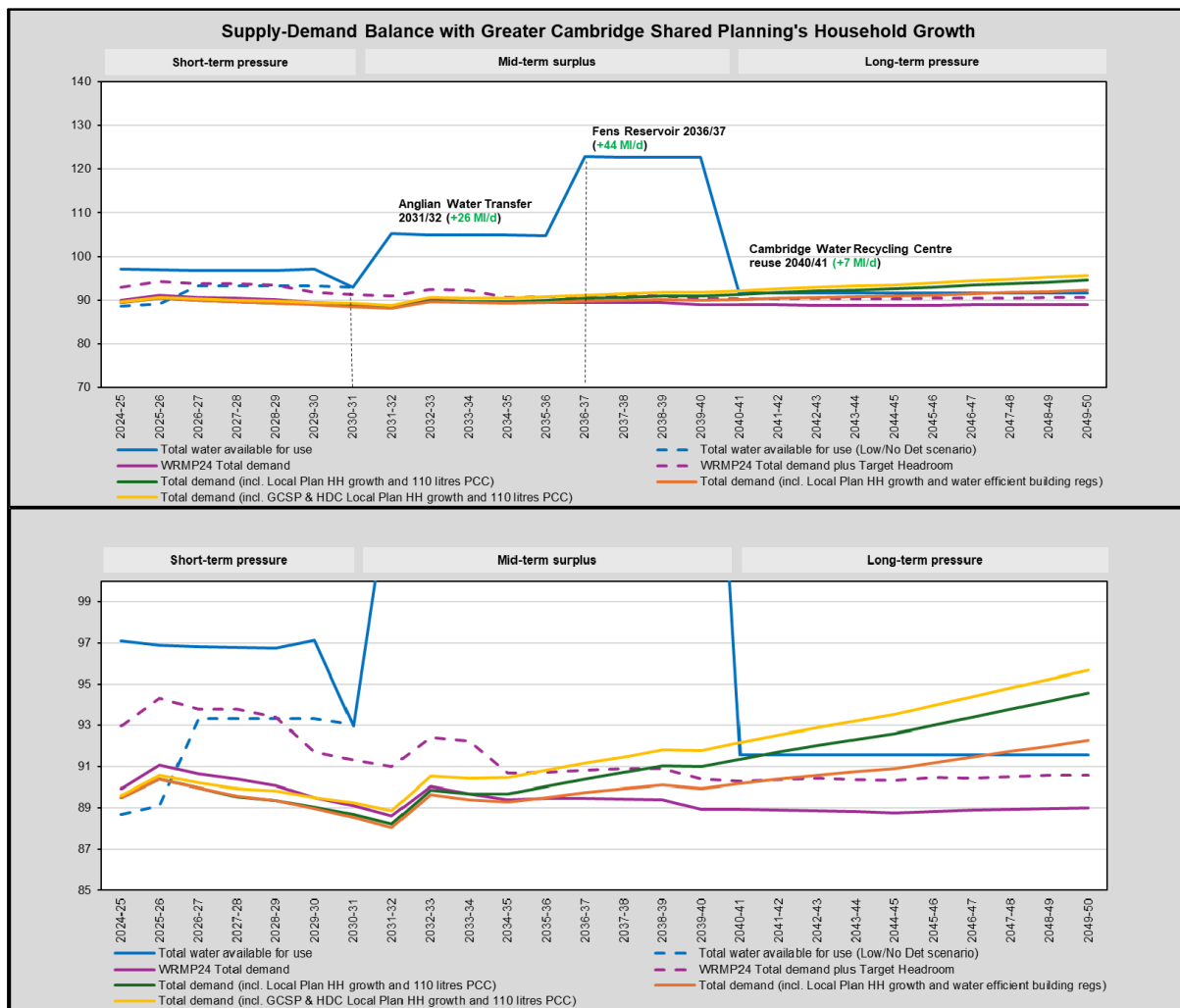


Figure 4-5: Graph showing total demand forecasts for water once needs for household growth are met. This is shown alongside the water availability forecast by Cambridge Water's WRMP24 Preferred Programme. The bottom graph provides a closer view to allow the reader to see more detail.

This evidence shows that, based on current forecasts, assumptions and understanding, Cambridge Water's WRMP24 forecast water availability can meet the needs of the current Draft Local Plan household growth forecast from 2025 to 2040. However, beyond 2040 solutions will need to be sought due to large reductions in abstractions for Environmental Destination reducing water available for supply. Solutions for the 2040s should be progressed over the next two planning periods (WRMP29 and WRMP34) to ensure that growth during the mid-term phase is supported beyond 2040. We must be mindful that there is a long lead-time for large infrastructure projects.

However, before the 2040s there are two updates to five-yearly plans to refine and develop more certainty in forecasts. Also, the WRMP and Regional Water Resources Plan outline new adaptive solutions for this period that can be scaled up or down depending on growth, climate change and environmental factors as well as the success of demand-side measures such as desalination. Any additional growth, beyond that planned in the WRMP24 or Draft Local Plan such as the Government's growth ambitions, or more water hungry industries arriving in the



region, will require even larger solutions.

In recognition of the stages of water availability outlined above and the large uncertainty in forecasting non-household growth and water use the Greater Cambridge Draft Local Plan has included the following:

Phased delivery strategy: In practice the constraints on water availability in the short-term have already led to water companies in the region needing to assess each request on a case-by-case basis. In the WRMP24 Cambridge Water outlined that they will be completing an enhanced assessment for new non-household connection requests prior to 2032 (when the Grafham transfer from Anglian Water comes online). Before 2032 Cambridge Water may decline connection depending on the volume required and the use of the connection, in particular for non-domestic requests above 20m³ a day.

Water efficiency standards for NHH uses: The Government is seeking a national target of a 9% reduction in business and industrial (non-household) water consumption by 2038. With such a focus on economic growth for the region, it will be difficult to deliver a reduction in absolute non-household water use without a radical change in demand management options. Effort in this area is important to ensure that water supply availability does not become a blocker to new businesses investing in Greater Cambridge. In support of this, the Draft Greater Cambridge Local Plan 2025 also includes water efficiency standards for non-domestic buildings with similar aims to those being applied to housing. These use BREEAM, an industry standard certification scheme, to assess the environmental performance of buildings:

- For non-residential development, 5 credits for category Wat 01 (water consumption) of BREEAM, unless demonstrated not practicable, to reduce potable water consumption in newly constructed buildings through water-efficient components and recycling systems
- Also, full credits for category Wat 02 (designing a new building with the capability to monitor its water consumption) and Wat 03 (requiring a system to detect major water leaks) of BREEAM.
- For non-residential developments that use water as part of a commercial process(es), full credits for category Wat 04 (implementing strategies to conserve water for unregulated uses in buildings) of BREEAM.

Similarly, the Environment Agency, Natural England, WRE and the associated water companies published 'shared standards in water efficiency for local plans in June 2025). This provides advice and evidence on the adoption of policies to achieve tighter water efficiency standards than those given in the Building Regulations.

The plan would also require proposals involving the refurbishment or change of use of existing buildings to undertake retrofitting to increase water efficiency.



4.3 Managing uncertainty

It is important to note that there are several sources of future uncertainty in water availability and development modelling. There are uncertainties in the assumptions used to estimate, model and forecast water availability as well as the growth and development projections. In addition, there is uncertainty in how the future evolves. Below we summarise some of the key relevant uncertainties and then discuss how the Water Resources Planning and Local Planning frameworks manage the associated risks.

Delivery of solutions

Water companies have a programme of solutions to provide sufficient water to meet future demand for water, including demand management measures as well as developing new supplies. Cambridge Water's programme of measures to manage demand underpins its planned major solutions, such as the new Grafham transfer pipeline to import supplies from Anglian Water, or the new Fens Reservoir, are significant construction schemes. These come with delivery risks that could cause delays, affecting when the additional water will become available and potentially meaning water availability does not keep up with growing demand. These schemes are important, not just for Cambridge but for the whole of the East of England, so they must be progressed in a timely manner. This is reflected in them being one of the key drivers for establishing the Water Scarcity Group.

Non-Household water use

As mentioned in the previous section, there are a range of uncertainties related to the estimation and forecasting of non-household growth and water use. Not only is there uncertainty around the types of industry that will be part of Greater Cambridge's expansion, but the water usage of specific sectors which could potentially be the focus of growth (e.g. data centres or biomedical research) can vary considerably.

Water efficiency

Incorporating water efficient design into new homes or businesses and setting new expectations through planning policy, and through anticipated national changes in Building Regulations, will be vital to control future demand.

However, even with the implementation of challenging expectations on water demand there is no guarantee that individual households use the volumes of water that are forecast. Potentially fixtures and fittings or white goods are not as efficient as advertised, or occupants replace them with less efficient products. Also, there is a significant behavioural aspect to water use, regardless of design, technology or regulations.

Boundary conditions

Cambridge Water also supply an area within Huntingdonshire. Huntingdonshire District Council are in the process of reviewing their plans. The councils will need to continue to cooperate to consider growth impacts.

Assumptions in forecasts not being true

Although property numbers and population can be planned relatively accurately using detailed



modelling, population real world variance could result in under- or over-estimating.

Mitigation measures

Within the WRMP, water resource planners use target headroom to account for this uncertainty and reflect the level of risk in their forecasts. Target Headroom provides a safety buffer between the current plan and the reality that may unfold over the coming years. In some instances, a robust target headroom allowance will mean that the water company can accommodate extra growth and continue to supply water to customers if forecasts prove to be an underestimate.

The five-year cycle for the preparation of the WRMP, supported by annual reporting of performance, provides a means of managing these uncertainties in water resources planning. This iterative and cyclical reporting enables an adaptive planning approach where uncertainties can be tracked and monitored, to enable assumptions to be revised as the future unfolds.

The nature of the water company adaptive framework for managing water resources acknowledges and responds to uncertainties and changing conditions. Multiple scenarios are modelled and assessed to develop flexible plans that can be adjusted over time based on monitoring and new information, rather than relying on a single, static plan. The Preferred Plan represents the 'best' estimate of the future and how water will be managed. 'Low regrets' options are favoured that provide adaptive capacity and flexibility to allow for changes to these options and an alternative adaptive pathway to be selected depending on how future uncertainties develop, as shown in Figure 4-6 which was published by [Ofwat](#). In this way we prevent being 'locked' into delivery of a particular programme of solutions.

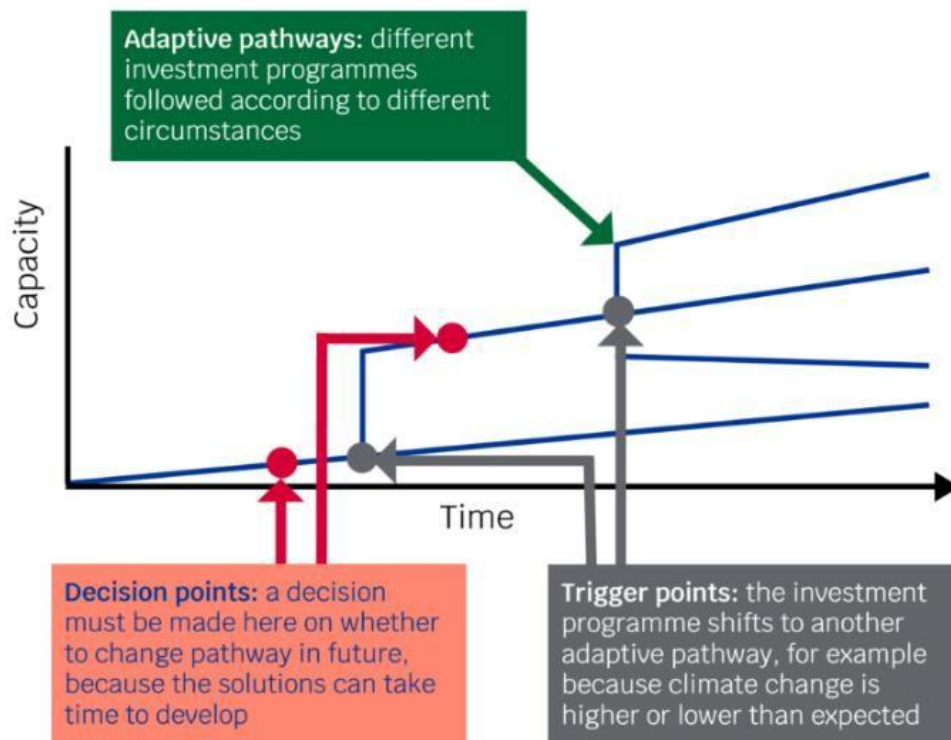


Figure 4-6: Schematic of adaptive planning taken from Ofwat (2022)

As mentioned previously, Greater Cambridge Shared Planning and the Water Scarcity Group have commissioned the development of a water supply and demand dashboard. This will aid local planners and water resource managers to continue to work closely together to track and monitor development against current and future water availability. The dashboard will allow data and forecasts to be regularly updated meaning there is less reliance on regulatory reporting timescales to review the water availability situation of the Greater Cambridge area. For example the following tasks could be undertaken:

- the impact of any delays in the delivery of the large infrastructure supply schemes can be quickly tested within the dashboard allowing Greater Cambridge shared planning to revise and phase their development programmes accordingly.
- stress testing of new growth scenarios to support government's work to identify growth targets for Cambridge and plan necessary infrastructure requirements
- support discussions between Greater Cambridge Shared Planning and Cambridge Water regarding water availability through the planning period.



5. Future Greater Cambridge and opportunities to manage the demand for water

Section overview:

Here we discuss the ongoing initiatives, beyond those currently captured in Cambridge Water's WRMP24 preferred plan. These have been largely driven by the Greater Cambridge water scarcity challenges to help understanding, reduce uncertainty, and ultimately offer a solution to support further growth in Greater Cambridge.

Key messages:

- To support growth in the region beyond 2040 and meet Environmental Destination there is a need to explore a wider range of solutions, at scale, to both reduce demand for water (from households and businesses) and provide new sources of supply beyond the 'traditional' approaches that have been taken in the UK to date.
- Given the stakeholder interest in the water supply situation for the region, Greater Cambridge is providing a unique opportunity to trial new, innovative approaches to managing water and ongoing initiatives are using Greater Cambridge as a test bed for solving future water supply challenges that may one day be experienced in other parts of the UK.
- The UK Government is supporting work to deliver measures which will support further sustainable growth in Greater Cambridge. These include a water efficiency programme, innovative nature-based solutions and agricultural trials. The aim is that these measures will generate water savings to prime a water credits scheme that will extend demand management efforts to existing housing stock as well as new builds.
- Cambridge City Council and South Cambridgeshire District Council are developing higher water efficiency building standards through the Greater Cambridge Local Plan. These are based on learnings from projects such as the Future Homes Hub, and the Enabling Water Smart Communities project. A review of national Building Regulations standards is also anticipated.
- Water Companies and Regional Planning Groups are exploring and planning more innovative solutions such as water and wastewater re-use for non-potable purposes and desalination.

5.1 Water efficient Building Regulations

Current UK Building Regulations stipulate that houses should be built to a 125 litres per person per day water efficiency standard or 110 litres per person per day in areas of serious water stress, where water scarcity is inhibiting housing development. Cambridge City Council and South Cambridgeshire District Council used the 110 litre per person per day standard within their Adopted Local Plans published in 2018.



There are different ways to lower the amount of water people use. For new build houses, Cambridge Water outlines a series of demand reduction measures within WRMP24 that aim to achieve these savings, such as metering and water efficient fixtures and fittings. Other ways include water efficient white goods (e.g. washing machines), water efficient toilets and showers, and landscaping design features, such as drought resilient gardens. Cambridge Water's WRMP24 assumes that for new build homes each person uses 110 litres per day of water in line with current Building Regulations. This reduces the average water use of each person living in a household (across the existing and new housing stock) from approximately 133 litres of water per day, to 125 by 2050.

One way to facilitate more housing growth without the same overall increase in water consumption is to implement measures which bring down the per capita consumption of residents living in the new homes. The Government are currently reviewing Building Regulations and other related water supply regulations to consider how more efficient use of water resources can be supported. In December 2023 a Written Ministerial Statement confirmed that, in areas of serious water stress, where water scarcity is inhibiting the adoption of Local Plans or the granting of planning permission for homes, Local Planning Authorities would be encouraged to work with the Environment Agency and delivery partners to agree standards tighter than the 110 litres per day that is set out in current guidance.

Cambridge City Council and South Cambridgeshire District Council are developing higher water efficiency standards which would form policy requirements in the new Greater Cambridge Local Plan. They have drawn on a range of evidence and good practice, enabling them to evolve their policy proposals. This includes work of the Future Homes Hub, and the Enabling Water Smart Communities project. These policies would be implemented when the new plan is adopted, likely in 2028. Changes in standards could have a quicker impact if requirements were introduced through national Building Regulations. Publication of new regulations is expected in the coming months.

Fundamentally, the ability to achieve and sustain any targeted level of consumption relies upon public acceptance of efficiency measures and a willingness to adopt associated behavioural changes. Water efficient technology needs to be used as it is intended, or the potential savings may not be achieved. Therefore, it is important that water savings over time are monitored to ensure they are maintained, and it is sensible to incorporate an allowance for loss of savings over time in forecasts.

New build properties offer the easiest opportunity to design from scratch with water efficiency in mind, through installation of water efficient fixtures and fittings, selection of efficient white goods, or other best practice design features. Water recycling technologies are also becoming more practical.

Even where significant growth is planned as is the case in Greater Cambridge, the largest element of residential water use will be from existing dwellings. Although not as straightforward, retrofitting water efficient measures to existing homes is a potential option to help lower overall household water consumption. Retrofitting presents a range of challenges, but by tackling water



use across many more properties, small per property water savings can add up to having a significant cumulative effect. Whilst per person consumption in existing homes may not fall to the expected low levels of highly efficient new builds, this will be an important part of an overall strategy.

5.2 UK Government support

The Government is committed to ensuring there is adequate water availability and wastewater capacity to support growth in Greater Cambridge. The Government published [a policy paper](#) at the Spring Budget in 2024 which set out measures the Government are taking to deliver water savings in Cambridge. These measures are designed to free up water and support sustainable growth, including before the delivery of the Grafham transfer from Anglian Water in 2032. At the Autumn Budget 2024 the Government announced £10 million of funding to support these measures and enable the Cambridge Growth Company to develop an ambitious plan for housing, transport and wider infrastructure to achieve sustainable growth in the region.

Work is ongoing to deliver these measures and deliver water savings, including a water efficiency programme, innovative nature-based solutions and agricultural pilots. Work is also ongoing to develop a water credits scheme, which could enable developers to offset new developments through the purchase of water credits, underpinned by water savings generated through the Government's package.

The Government is continuing to work closely with local partners through our expert advisory Water Scarcity Group, which includes representation from water companies and the Environment Agency, to deliver measures and to ensure that water companies provide the necessary water supply and wastewater infrastructure to support long-term growth.

5.3 Development scale opportunities

Although all new build homes can incorporate water efficient fixtures and fittings and be designed to meet specific standards, the ability to fully incorporate sustainability and especially water efficiency best practice really comes when building at scale. Considering measures that can be designed, constructed and operated across an entire development overcomes many of the usual practical obstacles and introduces economies of scale to make technology more cost effective.

In line with the ambition for Cambridge to remain a focus for science and innovation, there is a real opportunity for harness those sectors so that developments in Greater Cambridge can showcase new technologies and new ways of designing homes. Potential features of such eco developments could include the following:

- **Rainwater harvesting:** capturing rainwater at an individual property level can often be inefficient and impractical. However, working across a group of properties at the earliest stages of planning and design means that integrated water management can be a central consideration. Opportunities to design sustainable drainage systems (SuDS) that store rainwater and runoff for later use, can be a core feature of blue-green landscaping across



the development.

- **Grey water reuse:** for a single property, installing the equipment to collect and recycle the relatively clean waste water from baths, sinks, washing machines and other kitchen appliances is typically challenging and not cost effective. However, planning such a system at concept stage that can be installed and operated across many properties is more appealing.
- **Non-potable water supply:** incorporating large-scale rainwater harvesting or greywater reuse systems opens up the possibility of providing a non-potable water supply across the development, for external uses such as garden watering. Concerns about possible cross contamination have traditionally prevented the uptake of such systems, although twin supplies like this are more common overseas, such as in Australia.
- **Emerging technology:** innovative water efficient devices can take time to progress from research and development to more widespread use. However, an eco development could present the ideal testing ground for new technology. For example, the [Beddington Zero Energy Development \(BedZED\)](#) in South London is an eco-friendly community including 100 homes and a school that was completed in 2002 and has been used to showcase sustainable living. Although the aims of BedZED extend beyond simply water efficiency, average household water use there is almost 40% less than average metered households nearby, thanks to the incorporation of technology such as dual-flush toilets, aerated flow taps and shower heads and water-efficient washing machines.

Anglian Water, in partnership with organisations including Chartered Institution of Water and Environmental Management (CIWEM), University of East Anglia and Arup, has developed the [Enabling Smart Water Communities Project](#). This initiative aims to bring together water management and sustainable housing focussing on delivering water neutrality through SuDS and water reuse schemes.

[Eddington](#) in North-West Cambridge is a development in which residential properties were built to meet Level 5 of the Code for Sustainable Homes (noting that the code was withdrawn in 2015). This committed the development to reduce residential demand for water to 80 litres per person per day, which University of Cambridge (the developer) recognised could not be met solely through demand management and water efficiency, but required development-scale water recycling to supply non-potable water.

The surface water drainage system has been designed to attenuate runoff, reducing discharge to adjacent land to avoid increases in off-site flood risk. Water is then abstracted from these attenuation features and treated for on-site non-potable use. The delivery model adopted at Eddington provides valuable insight in both the challenges faced when attempting to significantly reduce demand for water, the solutions that have been delivered and obstacles that other developers may face.

In its WRMP, Cambridge Water identifies water reuse and recycling for large new development sites as potential options. It cites the Eddington scheme as a delivery model for low consumption developments, however it notes that the Drinking Water Inspectorate (DWI) requires non-potable supplies to be treated to potable standards which is currently preventing Eddington from



operating as desired. The results so far suggest that the Eddington homes have managed to sustain 85 litres per person per day household water use. Cambridge Water is working with Defra and the DWI to progress legislative changes that will enable other similar future schemes to meet exacting levels of residential demand.

5.4 Water re-use for non-potable purposes

Identifying sources and non-potable uses for water re-use could relieve pressure on the public water supply and 'free up' water within the constrained Cambridge water system. [The National Framework for Water Resources \(2025\)](#) was recently published and sets the foundation for the next set of regional and company water resource plans. To support this a working group led by Anglian Water was formed to explore the opportunities for greater uptake of recycled non-potable water.

Although new supply-side options include some examples of water re-use, specifically to increase reservoir levels (e.g. Havant Thicket; Colchester re-use), there has been much less consideration of how non-potable water could be used to meet a variety of demands. This could range from the network scale (e.g. South Humber Bank; Port of Rotterdam) to agriculture (supplementing or replacing existing supplies) or leisure facilities (e.g. golf courses and sports pitches). Anglian Water's WRMP24 also includes other options that are being explored such as treated sewage effluent reuse at Milton. This could support new requests for large water users in the region, such as data centres, where non-potable water can be used for cooling avoiding large impacts on the treated water available for use. The first phase of work has produced a rapid analysis of opportunities and constraints developing recommendations for further work. [Anglian Water's consideration of non-potable water re-use](#) has identified sources of water re-use and their potential uses, water quality requirements and produced a hierarchy for water re-use. The work also reviewed current and potential standards and guidance. This work is complemented by other ongoing initiatives including:

- Government is reviewing issues associated with providing non-potable water to households, including potential changes to legislation to allow water companies to provide a second, non-potable supply.
- Enabling Water Smart Communities is an Ofwat Innovation fund project led by Anglian Water exploring the relationship between integrated water management, community engagement and practices, and housing development to unlock new opportunities for cross-sector delivery and stewardship.
- The All Company working group, re-use sub-group, is focussed on large-scale, indirect re-use for ultimate potable treatment.

5.5 Future non-household demand

The aspiration for Cambridge to build upon its reputation for science and innovation means that there is an expectation that the growth in non-household water use in the area will include these sectors. Proposals in recent years have included electronics research and development facilities, computing data centres and biomedical research laboratories. In the absence of more detail



being confirmed, it is difficult to predict what this means for future water demand. However, based on experience elsewhere, these sectors have the potential to be relatively water intensive.

There is a good deal of uncertainty surrounding the water consumption of some of these emerging sectors, which is understandable given they are new and innovative. Historically, data centres have been developed in locations where water use is not a constraining factor, so they have been designed for once-through cooling (i.e. consumptive use of water in large quantities). The size and requirements of data centres can also differ considerably. Hyperscale data centres typically have power capacities between 10 and 100 megawatts and have high water consumption. As an example, Google's hyperscale data centres use an average usage of 2.1 MI/d ([Data Centre Water Usage: A Comprehensive Guide](#)). In contrast, smaller data centres use a lot less water and a relatively small 1 Megawatt data centre might typically use less than 0.01 MI/d ([Oxford University](#), undated). However, in the UK and specifically in an area like Eastern England where there is more scrutiny on water usage, it is likely that different technology would be employed to limit the amount of water used. As plans are developed, caution should be applied and efforts taken to better understand requirements.

It is difficult for planners to assess the future growth of businesses and for water companies to forecast the potential water needs for several reasons including:

- There are known data quality issues with measured water-use which the market operator is working to improve. In 2019 it was reported by Ofwat that the proportion of water meters that have gone unread for more than a year has doubled from 7% to 15% since the market opened in 2017. 5% of meters have not been read for over two years. Further information is presented in the [State of Market Report 2018-19 \(Ofwat, 2019\)](#)
- Local authorities have difficulty in forecasting future water demand for inclusion in development plans. For example, it is difficult to the expected water demand from a building that has been approved for industrial or science use as it would depend on the end use of that building and what processes are being undertaken.
- Businesses could seek to increase their use of public water supplies in response to their own abstraction licences being capped or reduced or developers may seek access to the public water supply given the difficulty in securing new abstraction licences of their own.
- There are potentially very significant new water requirements from emergent technologies and sectors, for example for data centres, green hydrogen production and carbon capture, usage and storage. There is high uncertainty over how much water each of these industries typically use, indicating a need for better data sharing.
- It is highly influenced by changes in external drivers of growth such as changes to policies and market factors. Therefore, it is difficult to forecast into the future.

Work is ongoing to improve demand forecasting from non-household growth. Initial work and research are underway to better understand and quantify non-household demand for businesses and industries based on typical and emerging water use.



5.6 Regional options

As noted earlier, regional water resource planning as promoted by WRE gives the opportunity to manage the supply-demand balance across a wider area. The constraints of looking for water resource solutions locally to address increasing demand for water are removed, opening up the opportunity to find water further afield, where there is a surplus or there are fewer environmental sensitivities.

For Greater Cambridge, this regional approach could mean the following types of option are considered in the future:

- **Construction of a new shared, regional reservoir:** just as Fens Reservoir is being planned, to jointly benefit Cambridge Water and Anglian Water, other reservoirs could perform a similar function. It is likely this would be outside the Cambridge Water area and, to ensure value for money, it is likely it would be meet the needs of just one water company.
- **Import from outside the region:** new pipelines could be constructed to transfer water from areas of surplus elsewhere in the UK. Either a pipeline could be constructed directly to the Cambridge Water area, or a new pipeline could bring water so far for it to be then moved in a 'daisy chain' approach to where it is needed.
- **Desalination:** although desalination (treating sea water to drinking standard) is seen as a relatively innovative technology in the UK, it is more common overseas. Despite Cambridge being landlocked, the North Sea is potentially an untapped resource and water could be treated in a new plant and either conveyed to the area via pipeline or form part of a wider regional solution to meet future water resources requirements.
- **Final effluent recycling:** the forecast housing and population growth and associated increase in water consumption in Greater Cambridge means more wastewater will be collected and treated at Anglian Water's water recycling centres. Wastewater is typically cleaned to an appropriate standard and returned to the environment. With improved treatment technologies, there is a growing opportunity to treat to a higher standard, such that the final effluent can be reused for public water supply. Options like this are becoming more attractive and will potentially continue to do so in the future, with opportunities for joined-up thinking between the WRMP and the corresponding strategic plan for wastewater, known as the Drainage and Wastewater Management Plan (DWMP).



6. Conclusions

Greater Cambridge Shared Planning has worked closely with Cambridge Water, Water Resources East, the Water Scarcity Group and other key stakeholders in the region to understand the water scarcity challenges. To manage these challenges and meet the forecast needs of water users in the Greater Cambridge area, WRMP24 outlines a 'Preferred Programme' of supply and demand interventions which are designed to ensure the sustainable management of water resources. The WRMP24 preferred plan results in three key phases of water availability:

- **Short-term pressure - pre-2032:** There is little excess water available for use beyond that currently planned for.
- **Mid-term surplus - 2032 to 2040:** The Grafham Transfer from Anglian Water and Fens Reservoir come online to provide more water availability and compensate abstraction reductions to provide environmental protection to the sensitive chalk water sources of the region.
- **Long-term pressure - post 2040:** Environmental Destination to restore and protect the region's freshwater environment dramatically reduces water available for use and results in little excess water availability beyond that currently planned for.

The Draft Local Plan has been phased to align with water availability not relying on new large-scale development proposals delivering homes until after 2032 when the Grafham Transfer from Anglian Water comes online. It also proposes changes to planning policies to improve water efficiency in both households and non-households. Alongside this, there are ongoing efforts by Cambridge Water, WRE, the Water Scarcity group to support sustainable growth in the region, such as regional options to increase water supply, water re-use for non-potable industry use, development scale opportunities and water credit market trials that extend demand management efforts to existing housing stock as well as new builds.

The evidence presented in this report has shown that, based on current forecasts, assumptions and understanding, Cambridge Water's WRMP24 forecast water availability can meet the needs of the current Draft Local Plan household growth forecast from 2025 to 2040. The water needs of the Draft Local Plan non-household growth for this period sits comfortably within the forecasts used by the WRMP24. Therefore, between 2025 and 2040 there is enough water available to support both the Draft Local Plan household growth and non-household growth combined.

Greater Cambridge Shared Planning and the Water Scarcity Group have commissioned the development of a water supply and demand dashboard. This will aid local planners and water resource managers to continue to work closely together to track and monitor their delivery strategy against current and future water availability, allowing development to continue to be phased as necessary. The dashboard will also enable data and forecasts to be regularly updated meaning there is less reliance on regulatory reporting timescales to review the water availability situation of the Greater Cambridge area.

Beyond 2040 solutions will need to be sought. Large reductions in abstractions for



Environmental Destination reduce water available for supply. Therefore, the water needs of the Draft Local Plan cannot be met resulting in a 4.5 MI/d deficit by 2050. The proposed increased water efficiency of Building Regulations in the Draft Local Plan, aimed at reducing per person water use within new build households, reduce this impact to just over 2 MI/d.

Before 2040 there will be two further five-yearly updates of the WRMP to allow for more certain revisions to Local Plans to be adopted within WRMPs. Both Cambridge Water and WRE's plans are identifying adaptive solutions, that can be delivered relatively rapidly and scaled up or down depending on growth, climate change and environmental factors over the 2025 to 2040 period but also the success of demand-side measures, including Government interventions. The regional water resources planning approach enables regional and national stakeholders to work together to identify additional options opening up opportunities from outside the region, such as desalination. However, there is a long lead-in time for large-scale supply options so decision-making must be made early enough to ensure they are delivered by the 2040s. There are only two more rounds of water company planning periods until we reach this period of 'long-term pressure'.

It is important to note that to support Government aspirations for growth beyond this, or, if more water hungry industries arrive in the area, then more solutions, like those discussed this report, will need to be sought to manage the impact of environmental reductions post 2040.

Given the stakeholder interest in the water supply situation for the region, Greater Cambridge provides a unique opportunity to find innovative and shared solutions to 'unlock' growth. There are opportunities for partnership working and sharing of data and expertise as well as changes to national legislation and regulation to support new ways of managing water. Reflecting on Cambridge's reputation for science and innovation, there is an opportunity to trial new, innovative approaches to managing water and to use Greater Cambridge as a test bed for solving future water supply challenges that may one day be experienced in other parts of the UK. Certain growth industries and sectors (e.g. biotech) within Greater Cambridge may play an important role in developing new technologies that can be part of the solution. Figure 6-1 provides a summary of the findings of this report.



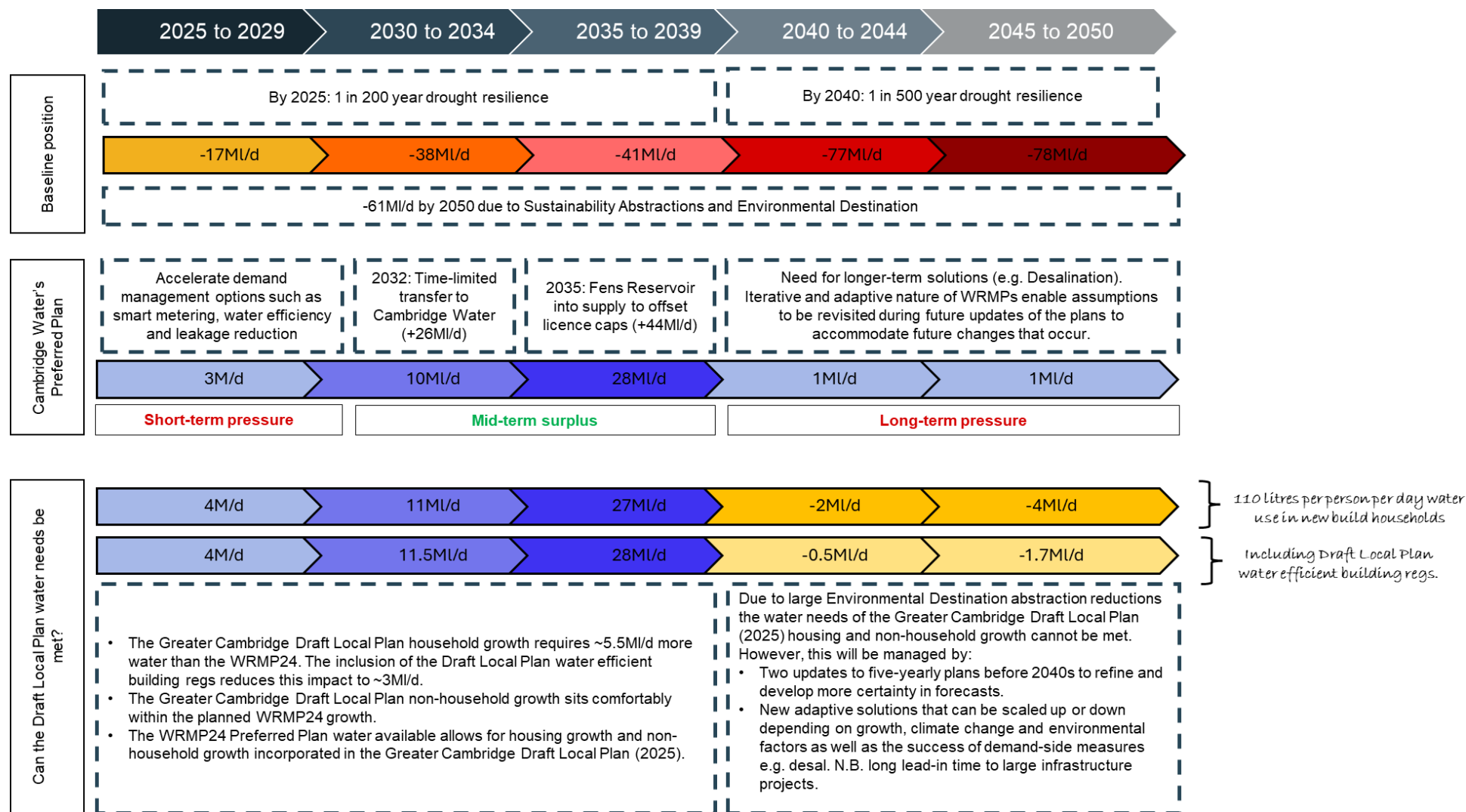


Figure 6-1: Summary of key conclusion

7. References

Anglian Water (2024) [Project Discovery – Final Report, segmentation and benchmarking of non-household properties. Report number: AR1560](#)

Anglian Water (2025) Non-potable water reuse: a review of opportunities: [Non-potable water reuse: a review of opportunities](#)

[BedZED - the UK's first major zero-carbon community](#)

Cambridge Water (2024) Final Water Resources Management Plan. March 2025: <https://www.cambridge-water.co.uk/environment/managing-water-resources/water-resources-management-plan>

Department for Levelling Up, Housing & Communities (2024). The Case for Cambridge: <https://www.gov.uk/government/publications/the-case-for-cambridge/the-case-for-cambridge>

Dgtl Infra Real Estate 2.0 (Undated). Data Center (sic) Water Usage: a comprehensive guide. [Data Center Water Usage: A Comprehensive Guide](#)

University of Cambridge (undated). [Eddington Cambridge](#)

Environment Agency (2020) [Cam and Ely Ouse abstraction licensing strategy](#)

Gov. UK (2024) Addressing water scarcity in Greater Cambridge: update on government measures: [Addressing water scarcity in Greater Cambridge: update on government measures - GOV.UK](#)

Gov. UK (2020). [National Framework for Water Resources 2020: meeting our future water needs](#)

Gov. UK (2025) [National Framework for Water Resources 2025: water for growth, nature and a resilient future - GOV.UK](#)

Ofwat (2019) State of the market 2018-2019: reviewing the second year of the business retail water market. [State-of-Market-Report-2018-19-Final.pdf \(ofwat.gov.uk\)](#)

Ofwat (2022) Looking to the long term: [Looking to the long term - Ofwat](#)

Ofwat and Anglian Water (undated). [Enabling Water Smart Communities \(EWSC\)](#)



University of Oxford (undated) [Case Study: Water-guzzling data centres](#)

Water Resources East (2023) Regional Water Resources Plan for Eastern England: [WRE-Regional-Water-Resources-Plan-for-Eastern-England.pdf](#)



AtkinsRéalis



Jo Parker
AtkinsRéalis (WS) Limited
Western House (Block C)
Peterborough Business Park
Lynch Wood
Peterborough
PE2 6FZ

Tel: +44 (0)1733 366900
Joanne.Parker@Atkinsrealis.com

© AtkinsRéalis (WS) Limited except where stated
otherwise