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Huntingdonshire Integrated Water Management Strategy: Stage 2 Water Cycle Study

Final Report

Prepared for
Huntingdonshire District Council

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This report describes work commissioned by Huntingdonshire District Council, by an instruction dated 18 October 2022. The Client's representative for the contract was Frances Schulz of Huntingdonshire District Council. Freya Nation, Richard Pardoe and James Fitton of JBA Consulting carried out this work.

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Abbreviations

1D	One Dimensional (modelling)
AMP	Asset Management Plan
AMP7	Seventh Asset Management Plan period (runs 2020-2025)
AONB	Area of Outstanding Natural Beauty
AW	Anglian Water
BKTNEEC	Best Known Technology Not Entailing Excessive Costs
BNG	Biodiversity Net Gain
BOD	Biological Oxygen Demand
BRE	The Building Research Establishment
CAMS	Catchment Abstraction Management Strategy
CAPEX	Capital Expenditure
CFMP	Catchment Flood Management Plan
CIL	Community Infrastructure Levy
CIRIA	Company providing research and training in the construction industry
CIWEM	The Chartered Institution of Water & Environmental Management
CSO	Combined Sewer Overflow
CW	Cambridge Water
DCG	Design and Construction Guidance
DEFRA	Department for Environment, Food and Rural Affairs (formerly MAFF)
DrWPA	Drinking Water Protected Areas
DS	Downstream
DWMP	Drainage and Wastewater Management Plan
DYAA	Dry Year Annual Average
EA	Environment Agency
EDM	Event Duration Monitoring
EC	European Community
FCT	Favourable Condition Targets
FRA	Flood Risk Assessment
FWMA	Flood and Water Management Act
GEP	Good Ecological Potential
GES	Good Ecological Status
GI	Ground Investigations
GIS	Geographical Information System
GWMU	Groundwater management unit

HDC	Huntingdonshire District Council
HMWB	Heavily Modified Water Body
HoF	Hands-off flow: river flow below which an abstractor may be required to stop or reduce abstraction
HoL	Hands-off-Level
ID	Identifier
IWM	Integrated Water Management
JNCC	Joint Nature Conservation Committee
LAA	Land Availability Assessment
LLFA	Lead Local Flood Authority
LNR	Local Nature Reserve
LNRS	Local Nature Recovery Strategies
LPA	Local Planning Authority
MODA	Multi-Objective Decision Analysis
NBS	Nature Based Solutions
NE	Natural England
NERC	Natural Environment Research Council
NFM	Natural Flood Management
NPPF	National Planning Policy Framework
OEP	Office for Environmental Protection
OfWAT	Water Services Regulation Authority
PE	Potential Evaporation
PM	Project Manager
PPG	Planning Practice Guidance
PR	Percentage Runoff
PTP	Package Treatment Plant
Ramsar	The intergovernmental Convention on Wetlands, signed in Ramsar, Iran, in 1971
RBD	River Basin District
RBMP	River Basin Management Plan
rdWRMP	Revised Draft Water Resource Management Plan
REUL	Retained EU Law
SABs	SuDS Approval Bodies
SAC	Special Area of Conservation, protected under the EU Habitats Directive
SEA	Strategic Environmental Assessment

SFRA	Strategic Flood Risk Assessment
SPA	Special Protection Area for birds, protected under the EU Habitats Directive
SPG	Strategic Planning Group
SPZ	Source Protection Zones
SSD	Small Sewage Discharge
SSSI	Site of Special Scientific Interest
STW	Sewage Treatment Works
SuDS	Sustainable Drainage Systems
SWMP	Surface Water Management Plan
TAL	Technically Achievable Limit
TraC	Transitional and Coastal waters
UKWIR	UK Water Industry Research Ltd
uPBT	Ubiquitous, Persistent, Bioaccumulative or Toxic
UWWTD	Urban Wastewater Treatment Directive
US	Upstream
WaSC	Water and Sewerage Company
WCS	Water Cycle Study
WFD	Water Framework Directive
WINEP	Water Industry National Environment Programme
WRC	Water Recycling Centre
WRE	Water Resources East
WRMP	Water Resource Management Plan
WRZ	Water Resource Zone
WwTW	Wastewater Treatment Works

Definitions

Term	Description
Abstraction Point	The location where water is either taken or extracted from either a surface or groundwater waterbody.
Agricultural Management	The farming techniques and practices used to produce food and manage livestock.
Abstraction Licencing Strategy	The Abstraction Licencing Strategy sets out the Environment Agency's approach to managing new and existing abstraction and impoundments within their river management catchments.
Asset Management Plan (AMP) Period	Price limit periods in the water sector are sometimes known as Asset Management Plan (AMP) periods. The current period (2025-30) is commonly known as AMP 8 because it is the eighth price review period since privatisation of the water industry in 1989. AMP periods are five years in duration and begin on 1 April in the years ending in 0 or 5. Every five years the industry submits a Business Plan to OfWAT for a Price Review (PR). These plans set out the companies' operational expenditure (OPEX) and capital expenditure (CAPEX) required to maintain service standards, enhance service (for example where sewer flooding occurs), to accommodate growth and to meet environmental objectives defined by the Environment Agency. OfWAT assesses and compares the plans with the objective of ensuring what are effectively supply monopolies and operating efficiently.
Aquifer	An aquifer is a rock and/or sediment body that holds groundwater.
Determinand	In a water quality assessment, a water sample may be tested to determine one or more properties of the sample or the environment it is taken from. The properties measured are called determinands. A determinand defines both the result that is measured (for example a concentration of ammonia), and the method for carrying out the measurement, including its unit.
Domestic purposes	As defined by Section 218 of the Water Industry Act 1991.
Dry Weather Flow	Dry weather flow is the average daily flow of wastewater to a wastewater treatment works during a period without rain.
Effluent	Effluent discharge is the liquid waste produced from residential, commercial and industrial processes.
Environmental Flow Indicator	The Environmental Flow Indicator (EFI) is the proportion of natural flows that are required to support the environment of a waterbody.
Environmental Permit	A legal authorisation issued by the EA allowing water companies to treat and / or discharge wastewater under controlled and monitored conditions. Environmental Permits are defined by the Environmental Permitting (England and Wales) Regulations 2016.

Term	Description
Final effluent	Final effluent from a wastewater treatment works (also known as water recycling centre / WRC) refers to the wastewater that has undergone treatment and is released back into the environment.
Groundwater Body	A Groundwater Body is the management unit under the Water Framework Directive which represents a distinct body of groundwater with its own hydrogeological characteristics.
Lead Local Flood Authority	A county council or unitary authority which leads in managing local flood risks (i.e., risks of flooding from surface water, ground water and ordinary (smaller) watercourses). Their duties are outlined in the Flood and Water Management Act.
Natural Flood Management	Natural flood management is the use of natural processes to reduce the risk of flooding and coastal erosion.
No deterioration	Where the final effluent from a WRC does not result in a deterioration of the water quality in the watercourse, this is known as "no deterioration" or "load standstill".
Per Capita Consumption	The per capita consumption is the average volume of water used by one person in a day. It is defined as the sum of the measured household consumption of clean water and unmeasured household consumption of clean water divided by the total household population. This is often expressed in litres per person per day (l/p/d).
Permitted Headroom	The difference between the volume of treated wastewater a treatment works is allowed to discharge under its environmental permit, and volume it currently discharges. It can be used to estimate the number of properties that could be connected to a WwTW catchment before a flow permit is exceeded.
Pollution load	The total amount of pollutants found in wastewater.
Storm Overflow 'rainfall target' (EA, 2023)	Storm overflows will not be permitted to discharge above an average of 10 rainfall events per year by 2050. "The EA will apply an industry standard measure to translate rainfall events to discharges from Storm Overflows. This means that any discharge from a Storm Overflow within a maximum of 12 hours will be counted as related to one rainfall event for the purposes of the target. For long duration discharges that occur beyond the initial 12-hour period, it will be counted as an additional rainfall event for the subsequent 24 hours and each 24 hours after that for the purposes of the target. When an overflow has ceased to discharge for a 24-hour period, the counting mechanism will reset."
Sustainable Drainage Systems (SuDS)	Sustainable drainage systems are drainage solutions that provide a natural alternative to the direct channelling of surface water through an artificial network of pipes and sewers to nearby watercourses.

Term	Description
Technically Achievable Limit (TAL)	The concentrations that effluent can be realistically treated to using the best available technology. For phosphates this is 0.25mg/l and nitrates 10mg/l (Nutrient Neutrality & Habitats Regulations Assessment Update letter, 2022).
Waterbodies	Water bodies constitute areas of water – both salt and fresh, large and small – which are distinct from one another in various ways. All surface waters (including rivers, lakes, estuaries and stretches of coastal water) and groundwaters have been divided up into discrete units called water bodies. Water bodies are the basic unit that are used to assess the quality of the water environment and to set targets for environmental improvements.
Water Framework Directive (WFD)	The Water Framework Directive is a river basin management planning system which was implemented to help protect and improve the ecological health of the UK's rivers, lakes, estuaries and coastal and groundwaters.
Water Framework Directive Classification Status	Rivers, lakes, estuaries and coastal waters can be awarded one of five WFD statuses: High, Good, Moderate, Poor or Bad Groundwater can be awarded one of two statuses: Good or Poor.
Water Framework Directive – Reasons for not achieving good (RNAG)	Where a WFD element is classified as being at less than good status, a reason for the failure to meet the good status is attributed, including the sector deemed responsible or a pressure affecting a biological element.
Water Framework Directive objectives	The Water Framework Directive objectives are set out in Regulation 12 and Regulation 8 of the Water Environment Regulations 2017.
Water Industry National Environment Programme	The Water Industry National Environment Programme is the programme of work in which water companies in England must meet their obligations from environmental legislation and UK government policy.
Water Resource Management Plan (WRMP)	Water Resource Management Plans are statutory documents that all water companies must produce at least every five years. They set out how the water company intends to achieve a secure water supply for their customers while protecting and enhancing the environment.
Water Resource Zone (WRZ)	A Water Resource Zone is an area in which the abstraction and distribution of water is self-contained and is used to meet demand within that area.
Water Recycling Centre (WRC)	A water recycling centre receives flows from the sewerage system and treats it so it can be discharged back into a river. They may also be called Sewage Treatment Works (STWs) or Wastewater Treatment Works (WwTWs).

Term	Description
Water Treatment Works (WTW)	A water treatment works is the place where raw water is treated to bring it up to a potable standard so it can be delivered in to the drinking water supply.

Executive Summary

Overview

JBA was commissioned by Huntingdonshire District Council (HDC) to undertake an Integrated Water Management Study (IWMS) for the administrative area of Huntingdonshire District.

This report forms part of the second stage in the IWMS. It sets out how Huntingdonshire is expected to grow up to 2046 and agrees a set of objectives that can be used in assessing future water management options. Following the IWMS guidance developed by CIRIA, Phase 1 presented a baseline showing Huntingdonshire in the context of the wider catchment and presenting information on the status of water resources, wastewater infrastructure and water quality. Phase 2 builds on this work and undertakes an assessment of the growth strategy. It also assesses various integrated water management options that could be applied as part of the Huntingdonshire Local Plan.

Water resources

Water resources in England are under considerable pressure. The Environment Agency (EA) has stated that "the scale of the challenge we face increases with time, and, by 2050, we are looking at a shortfall of nearly 5 billion litres of water per day between the sustainable water supplied available and the expected demand." (EA, 2024)

The new National Water Resources Framework identified the Ruthamford South Water Resource Zone (WRZ) which serves Huntingdonshire as having the second highest percentage growth of any WRZ in England.

A comparison of the growth accounted for in Anglian Water (AW)'s Water Resources Management Plan 24 (WRMP24) and the Local Plan projections show the combined growth forecast of Huntingdonshire, Peterborough and Bedford Borough exceeds current water company projections, suggesting planned combined demand from growth is likely ahead of supply. AW have been consulted through the preparation of the WCS for Huntingdonshire. They have started preparation on the WRMP29 and next Drainage and Wastewater Management Plan (DWMP) for the period 2030-2055. In line with WRMP guidelines, local plan projections including major strategic housing and growth locations such as the Oxford-Cambridge corridor, New Towns and Garden Communities, should be included when calculating the baseline and forecast future population growth. Further discussion with CW is required in order to understand if growth within AMP8 can be accommodated within existing plans, and if there is sufficient time to adapt WRMP29 plans to the LPA's plans.

Early engagement between HDC and the neighbouring authorities served by the same WRZs with AW and CW should continue in order to align their respective growth plans.

Part G of Building regulations currently states that new build housing should achieve a minimum of 125 l/p/d. A tighter target of 110l/p/d is allowed if the local authority can establish a clear need based on available evidence. Many LPAs are now going further than this. The Written Ministerial Statement (WMS) by the former Secretary of State for Levelling Up, Housing and Communities (DLUHC) states 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, I encourage local planning authorities 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." In 2025, the Government consulted on a review of Part G Building Regulations regarding water efficiency standards.

A Shared Standard for Water Efficiency has been published as part of a collaborative and collective approach by Anglian Water, Cambridge Water, Essex and Suffolk Water, Affinity Water, the Environment Agency and Natural England. It is designed to help support Local Planning Authorities (LPAs) to deliver sustainable growth by specifying a more stringent water efficiency policy than the contained in Building Regulations (110l/p/d). It recommends that new homes are built to a standard of up to 85l/p/d, where viable, supported by a non-household standard where development will aim to achieve full credits in the BREEAM water calculator (WAT 01) with a minimum of 3 credits. Where there is insufficient justification for 85l/p/d for residential development, there could still be a case for a design standard of 90 or 95l/p/d, which is more stringent than building regulations.

AW's current Non-Domestic Water Position Statement specifies restrictions on water supply for manufacturing, processing and other non-domestic uses. Where new and unplanned non-domestic requests are received, which exceed 20m3/d (or less in certain locations), AW will decline the request in order to protect existing supplies and the environment.

AW recommend businesses undertake water efficiency audits before new water supplies are requested. Water efficient devices such as low flush toilets and aerated taps / shower heads as well as water efficient white goods (dishwashers and washing machines) could be installed. AW recommend fitting smart meters to support and encourage reducing water usage and to help identify leaks. Rainwater and surface water harvesting, greywater recycling and wastewater recycling are also recommended as ways to reduce water demand.

CW's WRMP24 states that: "*requests for connections that will require less than 20 m^3 /day will be approved, as will requests where the primary use of the water required is for domestic purposes e.g. hospitals and schools. However, for connection requests above 20 m^3 /day and where the primary use is not for domestic purposes (e.g. sanitation, cooking etc), it is likely that we will be unable to facilitate connection and supply to these developments until 2032*."

Water supply

Anglian Water (AW) and Cambridge Water (CW) have a statutory duty to supply water for domestic purposes (as defined by Section 218 of the Water Industry Act 1991) to non-household development, but do not have to supply water for non-domestic purposes.

AW state that depending on type of business, development may be constrained by their non-domestic water supply position where any request for more than 20m^3/day will be declined. For office and storage and distribution developments, AW comment that water

requirements are mainly domestic. The impact of the non-domestic water supply required by research and development is uncertain.

Early engagement with developers and the water supplier is required. Developers should seek further advice where site boundaries overlap with Fens Reservoir infrastructure. Further modelling of the water supply network may be required at the planning application stage.

AW recommend Local Plan policy requiring offices and storage and distribution developments to have full credits in BREEAM water calculators (WAT 01).

Infrastructure assessment

A capacity assessment was undertaken by JBA comparing the future flow from each water recycling centre (WRC) (the current actual flow and the forecast additional flow from growth values), with the permit limit. Several WRCs are currently exceeding their permit limit, including Huntingdon (Godmanchester) where 8,912 dwellings are planned to discharge to, St Ives where 2,607 dwellings are planned to discharge to and Somersham (Cambs) where 1,006 dwellings are planned to discharge to by end the of the local plan period. AW should continue to engage with the local plan process to ensure that delivery of infrastructure upgrades is aligned with delivery of development sites.

Huntingdon (Godmanchester) WRC, Alconbury WRC, Wyton (RAF) WRC and St. Neots WRC serve the majority of the planned development in Huntingdonshire, with St. Neots also serving growth in neighbouring Bedford Borough. Modelling indicates that Huntingdon (Godmanchester), Alconbury and Wyton (RAF) WRCs do not have sufficient capacity to serve all of the growth planned in their catchments. They will exceed or continue exceeding their permit limits by 2050 if no action is taken.

AW state that their data indicates that Brampton, Elton, Huntingdon, Needingworth, Somersham and Tilbrook WRCs do not currently have capacity for future growth, beyond those existing sites that have already have planning consent and the right to connect. They also state that St Neots WRC and Peterborough (Flag Fen) WRC have dry weather flow (DWF) growth schemes planned for delivery in AMP8 (2025-2030). AW should plan for additional growth at the WRCs identified as having capacity constraints in this WCS. Funding for growth schemes at these WRCs will need to be included in the next Price Review process (PR29) covering the period 2030-2035 (AMP9), however funding cannot be guaranteed. If funding is not secured in AMP9, AW can re-present the need in subsequent price reviews.

Where new infrastructure or upgrades to existing infrastructure may be required, engagement between HDC and AW should continue to ensure that delivery of this infrastructure is aligned with delivery of development sites. Grampian conditions may be sought by the water company should development be in advance of the necessary infrastructure. AW state that where they request pre-occupation conditions there is certainty around the delivery of growth driven asset enhancement schemes; they are approved by the Water Services Regulation Authority (Ofwat) and in AW's business plan for AMP8 (2025-2030). A planning condition needs to meet the six planning tests and can only be

used where it is possible to be discharged by the developer. AW comment that where they choose to object to planning applications, they are unable to promote growth schemes as they do not have sufficient funding to deliver the required growth upgrades. AW will have to wait for AMP9 (2030-2035) before they can request further growth investment, however funding cannot be guaranteed. If funding is not secured in AMP9, AW can re-present the need in subsequent price reviews.

AW state:

"*Anglian Water is committed to enabling sustainable growth and is collaborating with external stakeholders to find solutions to capacity challenges. Anglian Water is working to secure policy and regulatory change that allows water companies to better support growth, for example by allowing us to invest strategically to create new capacity ahead of growth materialising, and by changing charging rules to allow for developer contributions to new infrastructure*."

There are a number of poorly performing storm overflows on both the sewer network and on storm tanks at WRCs in Huntingdonshire. Furthermore, this performance has got significantly worse in the last two years. Details of actions AW will undertake in relation to storm overflows can be found on their website. Growth within these catchments could result in an increase in the operations of these overflows contributing to a worsening of water quality in the area. Action should be taken by the water companies to address these overflows prior to an increase in wastewater demand being generated by new development.

Water quality and environmental impact

Modelling work suggests that 13 of the 30 WRCs serving growth areas during the plan period are predicted to experience a significant deterioration for Ammonia, 1 WRC for BOD, and 2 WRCs for Phosphate. A class change is predicted for 2 WRCs for ammonia (Moderate to Poor at Alconbury and Good to Bad at Old Weston Main Street), and at Old Weston Main Street for BOD and phosphate (Moderate to Bad and Poor to Bad respectively). Two WRCs are at Bad status for ammonia, one at Bad status for BOD, and four are at Bad status for phosphate, and are predicted to deteriorate by greater than 3%.

This is considered a significant deterioration; however this can be prevented by improvements in treatment to TAL, with the exception of Old Weston Main Street.

Growth alone will not prevent good ecological status being achieved in the future should improvements in upstream water quality be made.

An assessment was also made of the impact downstream on protected sites (such as SSSIs, SAC and Ramsar sites). Though there are no proposed local plan allocations which discharge to Old Weston Main Street WRC, development such as the commitment site at RAF Molesworth, which does discharge to said WRC, may lead to water quality deterioration at Brampton Racecourse SSSI, Portholme SSSI and Portholme SAC.

Where a WRC is shared with a neighbouring authority (such as Peterborough Flag Fen and St Neots WRCs), coordination of growth plans in collaboration with AW should continue to

ensure that infrastructure is in place prior to development to prevent a breach of the environmental permit.

AW state:

"*Anglian Water is working with the Environment Agency on alternative options to accommodate additional growth at WRCs that are already required to meet technically achievable limits (TAL) for phosphorus but will also need to accommodate additional growth through increasing dry weather flow capacity. Potential solutions being explored include catchment approaches such as investments in removing phosphorus from wastewater discharges at upstream WRCs. These solutions will need to be identified through the next DWMP and PR29 Business Plan to seek investment for what is needed to support growth without deterioration to water quality*."

Integrated water management recommendations

Integrated Water Management (IWM) is focussed on creating a water management strategy beyond water itself and observing the interdisciplinary actions between energy, carbon, waste, biodiversity, agriculture, and ecosystem services.

In the Stage 1 study, nine different IWM measures were identified and scored against the overall objectives for the study. This list was refined with options outside of HDC's control removed, and others combined to leave four main options:

- Diversification of water resources
- Efficient fixtures and fittings
- Green and blue infrastructure and Sustainable Drainage Systems (SuDS)
- Rainwater harvesting and greywater recycling

There is some overlap between the four options, for example rainwater harvesting can be considered as part of SuDS, and it could also be used to diversify a development's source of water.

Large-scale strategic resource options such as the new reservoirs in the Fens and South Lincolnshire will bring significant additional water resources into supply, rather than utilising other sources of water such as water reuse. Diversification of water resources at a local scale can take the form of small lakes, or an individual development obtaining its water from a non-potable source.

Efficient fixtures and fittings can include fitting low water use fittings in new build housing, retrofitting existing housing stock or using devices such as flow regulators to reduce the volume of water entering a property. These can be supported by household visits by the water company or specialist contractors to identify opportunities to save water, or water audits in businesses.

Green Infrastructure (GI), Blue Infrastructure (BI) and SuDS can include green walls and roofs, de-culverting or re-naturalising watercourses, Natural Flood Management (NFM) as well as SuDS such as swales and permeable paving.

Rainwater Harvesting (RwH) is the capture of water falling on buildings, roads or pathways which can then be used for tasks such as flushing toilets or garden irrigation. Greywater Recycling (GwR) is the treatment and re-use of water used in home appliances, showers and hand basins for uses such as toilet flushing.

The following recommendations were made:

- Efficient fixtures and fittings are the most universally applicable measure to development in Huntingdonshire. This could be driven in new development by an ambitious water efficiency target and supported in existing housing stock by a household visit scheme (however, the latter is not within the remit of the local plan). In line with the Shared Standard for Water Efficiency, and the new National SuDS Guidance, Rainwater Harvesting should be encouraged on all sites where it is practical.

- On all sites, SuDS, GI and BI should be considered as early in the design of the site as possible so a suitable layout that maximises their benefits can be established.
- The Enabling Water Smart Communities (an Ofwat Water Breakthrough Challenge Innovation Project) website includes reports on on-site water reuse, climate resilient gardens and community perspectives.
- The Cambridgeshire Surface Water Planning Guidance, the Cambridgeshire and Peterborough Local Nature Recovery Strategy and the Cambridgeshire Green Infrastructure Strategy should guide the design and implementation of SuDS, GI and BI in Huntingdonshire.
- When designing GI and SuDS, consideration should be given to plant species that require little or no water.
- For all major non-household development consideration should be given to the use of non-potable water where the type of water-use allows this to be viable.
- For data centres, water for cooling should come from a non-potable source. Applications for data centres using potable water should be resisted where alternative cooling methods are feasible.

1 Introduction

1.1 Terms of reference

JBA Consulting was commissioned by Huntingdonshire District Council (HDC) to undertake an Integrated Water Management Strategy (IWMS) which includes a Water Cycle Study and a Strategic Flood Risk Assessment (SFRA) for the administrative area of Huntingdonshire. The purpose of an IWMS is to form part of a comprehensive and robust evidence base for the preparation of the Huntingdonshire Local Plan to aid in coordinating development and management of water to help in the sustainable building of developments and inform current decision-making processes where appropriate.

Unmitigated future development and climate change can adversely affect the environment and water infrastructure capacity. An IWMS will provide the required evidence, together with an agreed strategy to ensure that planned growth occurs within environmental constraints, with the appropriate infrastructure in place in a timely manner so that planned allocations are deliverable.

This Stage 2 study builds on the Stage 1 study completed in 2024 and the Stage 2 interim study completed in December 2025.

"Huntingdonshire" in this report refers to the Local Planning Authority (LPA) area.

1.2 Structure of the Stage 2 IWMS: Stage 2 Water cycle Study

The report it divided into the following sections.

Section 2 - Legislative and policy framework

Changes that have occurred since Stage 1 to relevant national, regional, and local policies relating to the environmental and water management that should be considered by the LPA, water companies and developers are presented. This section should be read in conjunction with Section 3 of the Stage 1 WCS report.

Section 3 - Vision for growth

This section outlines how Huntingdonshire is expected to grow during the plan period. It updates the information provided in the Stage 1 report with the latest forecast from HDC and neighbouring authorities. It also summarises the objectives set in Stage 1 which should be born in mind when deciding on any Integrated Water Management (IWM) measures.

Section 4 - Water resources

Section four sets out the current water resources position and HDC's place within the wider region. It will provide the evidence to support the recommended water efficiency target for development.

Section 5 - Infrastructure assessments

An assessment is provided on the impact of the Huntingdonshire Local Plan on the water supply network, wastewater network, storm overflows and wastewater recycling centres (WRC). Where additional infrastructure or upgrades to existing infrastructure are required, this is identified.

Section 6 - Water quality and environmental impact

The impact of the Huntingdonshire Local Plan on water quality is presented in Section 6. This includes an assessment both at the point of discharge for each WRC, and in the river downstream where it is adjacent to protected sites. Where results suggest an upgrade to treatment processes may be required in order to accommodate growth, this will also be stated.

Surface water runoff from development sites can also impact water quality.

Section 7 - Options appraisal

The analysis of the IWM options identified in Stage 1 is developed, and guidance provided on their implementation.

Section 8 - Conclusions and recommendations

Conclusions and recommendations from each section of the report are collated into a single table.

2 Legislative and Policy Framework

2.1 Overview

Section 3 of the Stage 1 IWMS outlined the main policy and legislation relating to the water environment that LPAs should consider when setting Local Plan policy. Since Stage 1 was completed, there have been a number of changes to policies, and new documents to consider. These are presented below. Unless stated, the remaining text in Section 3 of the Stage 1 report remains correct at the time of writing. A summary of the key points in each document is presented, but it is always recommended that the full text is reviewed.

2.2 Changes since Stage 1

2.2.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was revised in December 2024. This is a significant update to the previous version, however as many of the changes relate to planning policy, and not to water, they are best discussed elsewhere.

Of note to the IWMS is the re-instatement of mandatory housing targets, and a change to the way housing need is calculated. In many LPA areas, including Huntingdonshire, this has resulted in a large change from the previous target. In the case of HDC this is a 38% increase in their housing need.

A new paragraph has been added (163) to emphasise that that climate change is an important consideration in decision making as well as plan making. The need to mitigate and adapt to climate change should also be considered in preparing and assessing planning applications, taking into account the full range of climate change impacts.

The relevant paragraphs from the NPPF referenced in the Phase 1 report have changed as follows:

- Paragraph 35 (previously paragraph 34): "Plans should set out the contributions expected from development. This should include setting out the levels and types of affordable housing provision required, along with other infrastructure (such as that needed for education, health, transport, flood and water management, green and digital infrastructure). Such policies should not undermine the deliverability of the plan".
- Paragraph 162 (previously paragraph 158): "Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply…"
- Paragraph 187e (previously paragraph 180e): preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local

environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans".

2.2.2 Water resources planning

A new National Water Resources Framework was published in 2025, replacing the first National Framework published in 2020. This is reviewed in Section 4.2.1.

Anglian Water have published their final Water Resources Management Plan (WRMP). Cambridge Water have also published their final Water Resources Management Plan (WRMP). These are reviewed in Section 4.2.3.

2.2.3 Storm Overflow Assessment Framework

The 2018 Storm Overflow Assessment Framework (SOAF) was replaced in 2025 by an updated framework. This guidance builds on the implementation of the SOAF during the PR19 period (2020 to 2025) to improve and make the process more effective. Changes since the first framework include:

- a reduction in the trigger threshold for high spill frequency overflows to reflect requirements to improve storm overflow performance;
- linking to the most up to date process for water quality modelling investigations; and
- updates to related documentation including that on the process of the cost benefit assessment.

The SOAF investigation process is expected to be conducted outside of the Water Industry National Environment Programme (WINEP) process, although SOAF may identify requirements for future investment. The Environment Agency (EA) expects that investigations will be carried out over a "period that is as soon as reasonably practicable".

Since the original framework all storm overflows are now monitored, increasing the amount of data that is available. A five-stage process is now in place:

Stage 1:

Storm overflows are identified for investigation based on the spill frequency triggers defined in Table 2-1 The threshold varies based on the number of years available data. The cause of the high spill frequency will also be identified.

Table 2-1: Storm overflow investigation trigger thresholds

Years of available data	Investigation trigger (average number of spills per year)
1	Greater than 30
2	Greater than 20
3+	Greater than 10

Stage 2: the level of environmental impact will be quantified.

Stage 3: improvement options are assessed, including analysis of the costs and benefits.

Stage 4: a decision is made based on the cost benefit results.

Stage 5: delivery of the identified "Best Known Technology Not Entailing Excessive Costs" (BKTNEEC) solution (subject to appropriate funding and prioritisation) to reduce environmental impact and reduce the frequency of discharges.

2.2.4 Shared Standard for Water Efficiency

This is discussed in section 4.3.4.

2.2.5 National SuDS Guidance

In December 2014 a written ministerial statement explained that existing planning policy (NPPF) would be strengthened to secure sustainable drainage systems. From April 2015, Local Planning Authorities (LPA) were given the responsibility for ensuring that sustainable drainage is implemented on all major developments, including developments of ten or more homes, or commercial developments creating 1,000m^2 of new floor space.

Previously sustainable drainage systems (SuDS) guidance was developed by the Department for Environment, Food & Rural Affairs (Defra) to sit alongside the NPPF Planning Practice Guidance (PPG) and provide non-statutory standards as to the expected design and performance for SuDS.

As of July 2025, the Defra National standards for sustainable drainage systems (SuDS) (gov.uk) were brought in to comply with the principles of surface water drainage design.

The national standards contain two sets of standards. The first type (Standard 1) is known as the hierarchy standard and sets the criteria for the prioritisation of final surface water runoff destinations. The other standards (Standards 2 to 7) detail the minimum design criteria that SuDS should satisfy alongside how they are to be appropriately built, maintained, and operated.

Whilst remaining as a non-statutory specification, these now form a material consideration for LPAs when assessing planning applications. These standards aim to reflect and reinforce good practice and use of SuDS, reflecting the four pillars of SuDS design. All appropriate planning applications should demonstrate how the national standards have been met in the site design (Principle 10).

Standard 1: runoff destinations

Runoff from development shall be discharged to the following final destinations, to the maximum extent practicable, in accordance with the below hierarchy:

Priority 1: collected for non-potable use (rainwater harvesting)

Priority 2: infiltrated to ground

Priority 3: discharged to an above ground surface water body

Priority 4: discharged to a surface water sewer, or another piped surface water drainage system

Priority 5: discharged to a combined sewer.

Non-potable use

There is potential for rainwater harvesting for non-potable uses to decrease the water demand from new developments and help improve water efficiency.

Rainwater harvesting shall be considered in all circumstances where any of the following apply:

- There is a demand for non-potable water and available contributing catchment area that will deliver safe and efficient water savings. Examples include industrial, commercial, horticultural, educational, public sector, residential and multiple-occupancy buildings.
- There is a need for landscape irrigation.
- The development is in an area identified as seriously water stressed - this includes Cambridge Water and Anglian Water areas.

2.2.6 The Independent Water Commission

The Independent Water Commission was set up in October 2024 to provide recommendations to Government on reforms to the water sector. The objectives are to ensure a sufficiently robust and stable regulatory framework in order to:

- attract the investment needed for the future
- speed up infrastructure delivery
- restore confidence in the sector

Chaired by Sir John Cunliffe, the resulting report which was published in June 2025 is often referred to as the "Cunliffe Report".

The full report can be found on the gov.uk website. It contains 88 recommendations centred around seven themes:

- Chapter 1: Strategic direction for the water system
- Chapter 2: Planning
- Chapter 3: Legislative framework
- Chapter 4: Regulator reform
- Chapter 5: Regulation reform
- Chapter 6: Company structures, ownership, governance, and management
- Chapter 7: Infrastructure and asset health

It should be noted that the recommendations in the Cunliffe report are not mandatory, and the Government will respond to the report in due course. In the meantime, these recommendations should be treated with the caution.

A simplification of the water planning system is recommended, with a comprehensive systems planning framework for England and Wales with responsibility for integrated and holistic water system planning. It goes on to recommend a review and update to the current legal framework, along with clearer targets to allow water companies to be held to account.

Chapter 4 of the Cunliffe report is designed to restore the confidence of both the public and regulated water companies in the regulatory framework. It recommends that the UK Government should establish a new integrated regulator in England. This should combine the functions of the Water Services Regulation Authority (Ofwat), Drinking Water Inspectorate (DWI), and water functions from the EA and Natural England (NE). Changes were also recommended to economic and environmental regulations, including strengthening abstraction permitting.

Following the recommendations set out in the Cunliffe Report, the Government announced that Ofwat would be abolished and replaced by "a new, single, powerful regulator" with the objective of cutting water pollution in England's rivers, lakes and seas, and protecting families from large increases in their water bills.

The new regulator will take responsibility for the water functions across Ofwat, EA, NE and DWI. During the transition to the new regulator, Ofwat will remain in place, and following its creation, the EA and NE will retain their non-water role.

The Secretary of State for Defra (The Rt Hon Steve Reed OBE MP) made a statement to the House of Commons in response to the Independent Water Commission's final report in July 2025. In his statement he announced commitments to:

- Confirm the creation of a consumer ombudsman.
- Reiterate that Ofwat will be abolished and replaced by a new integrated regulator.
- Moving to a catchment-based model for water system planning which will ensure water infrastructure investment plans align with spatial planning.
- Announce an end to operator self-monitoring, moving to an Open Monitoring system.

Until there is more information on the role of the new regulator and which other recommendations will be adopted by Government, the LPA should assume the current regulatory environment will continue.

2.2.7 A New Vision for Water: White Paper

On 20 January 2026 A New Vision for Water white paper was presented to Parliament by the Secretary of State for Environment, Food & Rural Affairs. The white paper responds to the 88 recommendations made in the Cunliffe Report and puts forward a "*once-in-a-generation plan to transform the water system for good*".

Changes proposed in the white paper include:

- Expanding the price review system to capture the 25-year planning horizon with further details provided in five-year periods.

- A Chief Engineer will sit inside the new single water regulator. Their job will be to bring back hands-on checks of water infrastructure.
- The regulator will introduce a new inspection approach for water companies, requiring health checks on pipes, pumps, and other assets. Self-monitoring will come to an end.
- Where companies fall short, a new Performance Improvement Regime will give the regulator the power to act fast and fix failures so that underperforming water companies recover faster, protecting customers and the environment and giving stability to investors.
- The price control process will reflect a focus on maintenance and resilience. Ringfenced budgets will ensure there's enough funding for maintenance and renewal alongside building new assets.
- Improve joined-up regional planning by requiring regional plans that will set out investment priorities to meet national objectives.
- Work with existing groups such as catchment partnerships to design a new regional planning framework with Defra, set to be implemented in 2027.
- Confirms the roll out of smart metering and mandatory efficiency labels on white goods.

Recommendations in the Cunliffe Report that the white paper does not pick up include:

- Updated legislation to provide a clear framework for approving nature based solutions.
- Mandatory SuDS for new developments in England.

It should be noted that white papers set out the Government's proposals for future legislation, providing a basis for further consultation and discussion to allow final changes to be made before a Bill is formally presented to Parliament. The white paper states that a 2026 Transition Plan will set out the path to this new system and a new water reform Bill will bring forward the legislation needed to enable the system to take effect.

2.2.8 Fens 2100+

Fens 2100+ is an Environment Agency project where around 80 flood risk management authorities across the whole of the Fens will be involved in developing a long-term plan for managing future flood risk in the Fens. There are approximately 17,000 flood risk and water level management assets in the Fens including pumping stations, tidal barriers, embankments and drainage channels. Catchment Baseline reports giving an overview of how flood risk management assets currently operate, as well as future flood risk in each catchment, are due to be published in Spring 2026.

3 Growth and future water demand

3.1 Introduction

A baseline growth scenario was developed for Stage 2 using the latest planning commitments, completions, windfall allowance and neighbouring authority growth. Preferred strategy allocations provided by HDC were then added to the growth scenario. This forecast covers growth between 2024 and 2046.

3.2 Growth within Huntingdonshire

Table 3-1 shows a summary of the growth expected in Huntingdonshire during the plan period (2024 to 2046). All figures are net unless otherwise stated.

Table 3-1: Summary of planned residential growth in Huntingdonshire

Type	Total housing units to be delivered in plan period as @ 31 March 2025*
Recent completions	2,134
Existing commitments	11,484
Preferred options allocations (preferred strategy as at January 2026)	16,905
Windfall	3,091
Total	33,636

* Note: In order to create a forecast of additional water demand from planned development, this housing forecast includes non-residential uses C1 and C2 (hotels and residential institutions). Hotel rooms / care home bed spaces have been represented as housing units.

Table 3-2: Summary of planned employment growth in Huntingdonshire

Type	Approximate floorspace (sqm)*
Recent completions	73,918
Existing commitments	356,412
Preferred options allocations (preferred strategy as at January 2026)	942,486
Total	1,372,816

* Note: In order to create a forecast of additional water demand from employment sites a number of assumptions are required. The floorspace included in the employment growth forecast includes other non-employment uses such as C1 (hotel). Where floorspace values were provided for potential mixed use allocations, these values have been included in the employment floor space total. Where floorspace does not create a new water demand, these sites were excluded from the analysis. For this reason, the floorspace figures quoted in the table above may not match estimates within the Local Plan.

An example of where employment floorspace does not create a new water demand is change of use sites from residential to residential care as, in general, no material changes (resulting in extra water demand) are made to dwellings.

To represent the supply and wastewater demand produced by care homes, where the number of care home bedspaces was provided, the number of bedspaces was added to the total number of dwellings at that site.

Some of the potential preferred strategy allocations have already been allocated in the adopted HDC local plan. These sites are therefore represented as commitments rather than potential allocations to avoid double counting.

Windfall sites are sites that have not been specifically identified in the Local Plan. They normally comprise sites that have unexpectedly become available. HDC provided an estimate of 120 dwellings per year for small sites (from year five to the plan end), 20 dwellings a year from prior approval conversions and change of uses (from year one to plan end) and 35 dwellings per year on rural exceptions sites (from year four to plan end), to account for windfall growth. By its nature, it is not known where windfall growth will occur, however in general, windfall growth will occur in built-up areas where other growth is planned. HDC provided information on where windfall development has occurred historically which was used to forecast the location of future windfall.

It should be noted that additional build out is anticipated to take place at Lodge Farm (North Huntingdon 3) and Wyton Airfield (North Huntingdon 4). However, this additional growth is forecast beyond 2046 and has therefore not been included in the growth forecast for this WCS which covers growth between 2024 and 2046.

3.3 Growth outside of Huntingdonshire

Where growth within a neighbouring LPA area may be served by infrastructure within or shared with Huntingdonshire, the neighbouring LPA was contacted as part of a duty to cooperate request to provide information on growth within the WRC catchment areas which serve HDC.

Peterborough City Council, Bedford Borough Council and Greater Cambridge (Cambridge City and South Cambridgeshire) provided sites information for use within the WCS.

Forecast housing growth for each WRC shared with HDC is summarised in Table 3-3. It should be noted that these figures are the total number of houses and employment land within each WRC catchment should all the sites identified there be delivered. It therefore represents a worse-case scenario for wastewater demand.

Table 3-3: Summary of neighbouring authority growth in shared WRC catchments

LPA	WRC	Residential growth (No. dwellings)	Employment growth
Peterborough	Peterborough Flag Fen	Allocations: 23,342	Allocations: 1,091,370sqm
Bedford Borough	St Neots, Little Staughton, Pertenhall	Allocations: 4,000	Allocations: 39,400sqm
South Cambridgeshire	Waresley, Papworth Everard, Over	N/A	N/A

3.4 Development of the demand forecast

The water demand for each residential site was estimated based on the number of houses, the per capita consumption (PCC) and average occupancy for the Water Resource Zone (WRZ) the site is in.

For employment sites, the water demand was estimated based on the number of new employees working on each site, derived from the floorspace and employment type. A standard PCC was then applied to the number of employees.

Sites are then assigned to the appropriate WRC most likely to serve them to allow a water and wastewater estimate to be made for each WRC catchment.

The water demand generated by residential development in each year of the plan period and beyond (to 2050) is shown in Figure 3-1.

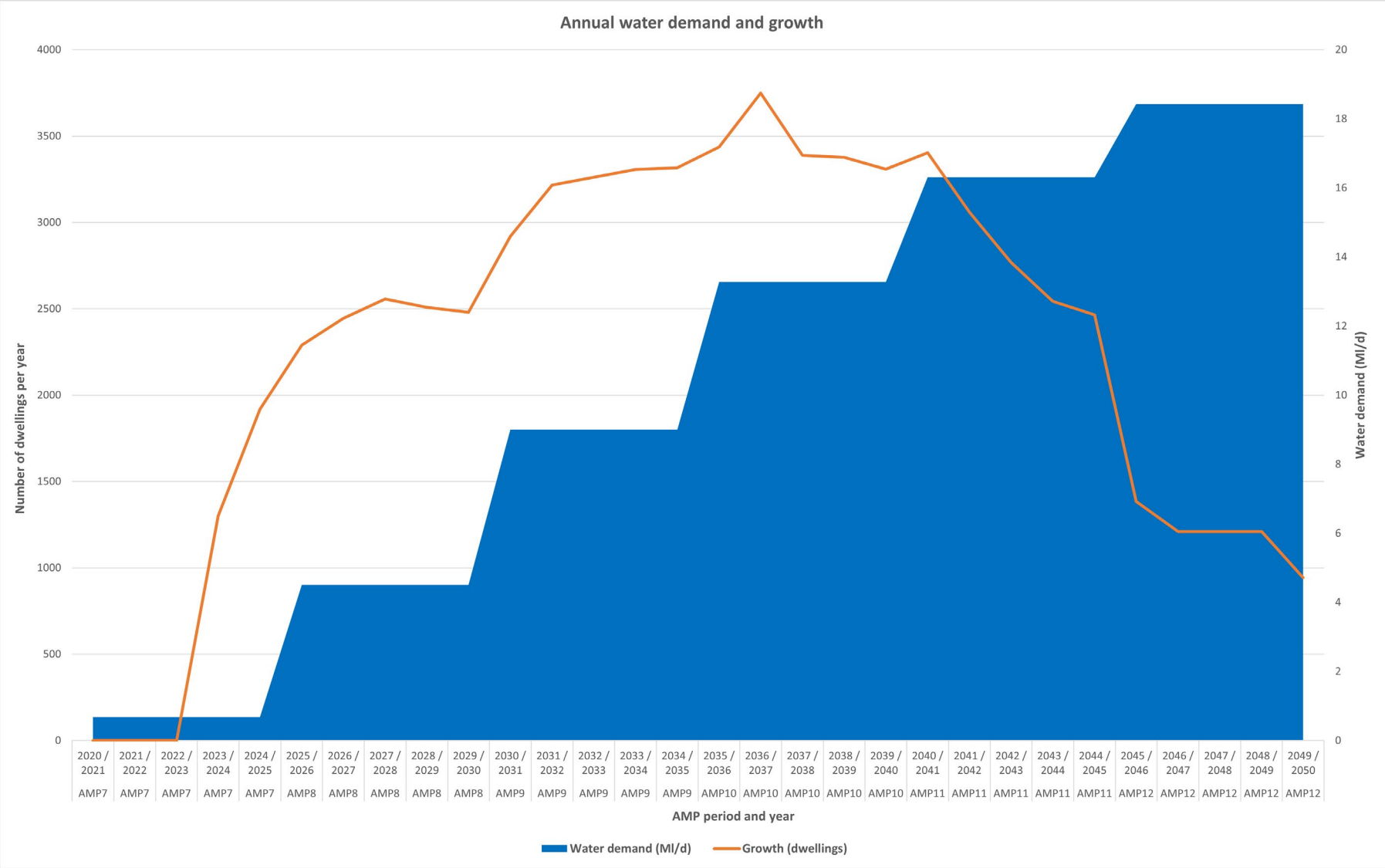

Figure 3-1: Indicative additional growth and water demand forecast to end of plan period and beyond (to 2050)

4 Water resources

4.1 Introduction

4.1.1 Objectives

The aim of the water resources assessment is to ensure that sufficient water is available in the region to serve the proposed level of growth, and that it can be abstracted without a detrimental impact on the environment, both during the plan period and into the future.

The Stage 1 report characterised the study area, identifying the key surface water and groundwater bodies and local geology, highlighting the pressures on water resources in the region. The revised draft Water Resource Management Plans (WRMP) were summarised, and a water efficiency target for the study area proposed. The Stage 1 report stated there was a sufficient justification in Huntingdonshire for the tighter water efficiency target allowed for under building regulations currently set at 110l/p/d.

Since Stage 1 was completed, further evidence has been published including the final WRMPs and a shared standard for water efficiency for the region. The water resources assessment has therefore been updated to reflect this new evidence, and a new water efficiency target recommended.

4.1.2 Water resources in the UK

It is important to set water resources in HDC within the context of the overall national picture.

The Environment Agency (Environment Agency, 2024) published a summary of the revised draft regional and Water Resources Management Plans which includes their view on the overall state of water resources in the UK and the challenges the country faces. They state that:

"In England, our climate is changing, our population is growing, and as a nation we want an improved environment along with a thriving economy, enabled by resilient water supplies. Action is required now to meet these objectives".

"The scale of the challenge we face increases with time and, by 2050, we are looking at a shortfall of nearly 5 billion litres of water per day between the sustainable water supplied available and the expected demand."

"Demand reductions are crucial, particularly in the short term. The Environment Act 2021 sets a target to reduce the use of public water supply in England, per head of population, by 20% by 2037-38 from the 2019-20 baseline."

"Government will be looking to water companies to act quickly and take significant steps forward on installing smart meters and delivering on their wider water efficiency commitments and reducing leakage. This will happen alongside the introduction of a mandatory water label which will enable water efficient decisions across the country. The

government has also committed to review water efficiency requirements of building regulations which will be a key action to ensure new homes are water efficient."

There have been several important documents published in recent years, all highlighting the growing awareness and concern about this issue. The National Water Resources Framework led to the creation of the regional water resources planning groups and defined the objective to achieve an average household water efficiency of 110l/p/d by 2050 (including existing housing). This has since been updated, and the 2025 framework puts a greater focus in multisector planning and catchment partnerships (UK Government, 2025).

The Government's 2023 Environmental Improvement Plan contains a roadmap for improving water efficiency in new developments and retrofits and there is there is also now a Shared Standards in Water Efficiency for Local Plans that applies across the Water Resources East region recommending that LPAs adopt policy requirements in new Local Plans based on a water efficiency standard of 85l/p/d for new build housing, where viable. Where there is insufficient justification for 85l/p/d for residential development (for example on viability grounds), there could still be a case for a design standard of 90 or 95l/p/d, which is more stringent than building regulations.

These documents will be explored in more detail in the sections below, alongside the Water Company and Regional planning documents.

4.2 Water Resources Planning

4.2.1 National Water Resources Framework

An updated National Water Resources Framework was published in 2025 replacing the previous 2020 framework. The first framework described the scale of the challenge facing water resources in the UK and led to the creation of the five regional planning groups. It also set an objective for per capita consumption to be reduced to 110 l/p/d on average across the UK (including existing housing). The new National Framework:

- sets out the pressures and challenges for the water environment to 2055 and beyond;
- sets the ambition for a sustainable abstraction regime and a protected and improved water environment;
- explores potential new demands for water;
- sets greater ambition for integrated, joined-up planning between water using sectors and with drainage and wastewater planning;
- proposes actions and expectations for different sectors to rise to the challenge of planning for and improving the resilience of water supplies; and
- provides a steer for regional water resources groups to evolve and continue to innovate.

As well as the challenges of an increasing population, the 2025 Framework also outlines the challenge from non-household growth, and emerging sectors such as data centres which can require significant amounts of water for cooling servers, with large centres

consuming millions of litres daily. Concrete production accounts for 9% of global industrial water withdrawals. Agriculture is significant with spray irrigation expected to increase due to the changing climate.

Of relevance to the IWMS is the strengthening of local water resources planning which includes supporting farmers to establish Water Abstractor Groups (WAGs) and to "identify, screen and prioritise collaborative 'local resource option' solutions to improve water supply resilience".

4.2.2 Water Resources East Regional Plan

The Stage 1 IWMS presented a summary of the draft Water Resources East (WRE) Regional Plan. Since then, the final plan has been published and is available on the WRE website.

WRE is one of the five regional planning groups in England and Wales, consisting of a multisector board including Anglian Water, Cambridge Water, Essex and Suffolk Water, and Affinity Water, as well as representation from IDBs (including Middle Level Commissioners), major water users or umbrella groups representing sectors such National Farmers Union, representing the agricultural sector. There are 200 members in total. The role of WRE is "to prepare a single, integrated regional plan that ensures there are resilient water resources available to meet the needs of the environment, the growing population and regional economy through to 2050 and beyond, taking full account of climate change".

The scale of the water resources challenge facing the region in outlined at the start of the plan which has been reproduced in full below:

"The whole of Eastern England is classified as ‘seriously water stressed’ by the Environment Agency. Yet the demand for water is growing with one of the highest rates of new housing development in the country. At the same time the region is experiencing less dependable weather patterns as a result of climate change, adding further pressure to the region’s scarce water resources and the natural environment. This is compounded by significant environmental pressures, in the form of abstraction licence reductions and ambitious Environmental Destination outcomes, to ensure the environment is protected for future generations.

Unless urgent action is taken by all sectors, the region will face severe water shortages. This will constrain agricultural production and curtail economic growth, impacting the region’s prosperity and endangering the east’s iconic chalk rivers, peatlands and wetlands. Farmers and land managers, businesses, the power sector and water companies need to start planning for and investing in significant new sources of supply. All of us as individuals and across sectors will need to use water more efficiently.

Water companies will continue their drive to reduce leakage from their own networks and invest in smart metering and other demand management technologies. However, past investment in demand management and leakage control within the region means that there is less potential here than elsewhere in the country. Only with significant new investment in supply-side options can the projected shortages of water be met."

Figure 4-1 shows the baseline demand for water in the region with an illustrative breakdown of demand by sector. The average daily water consumption is 2,132 million litres of water per day. This is expected to increase to 2,538 million litres by 2050. This increase in driven by a combination of population growth (173Ml/d), an increase in irrigation for agriculture (83Ml/d), and energy production (143Ml/d) (although there is considerable uncertainty in the volume of the increase)

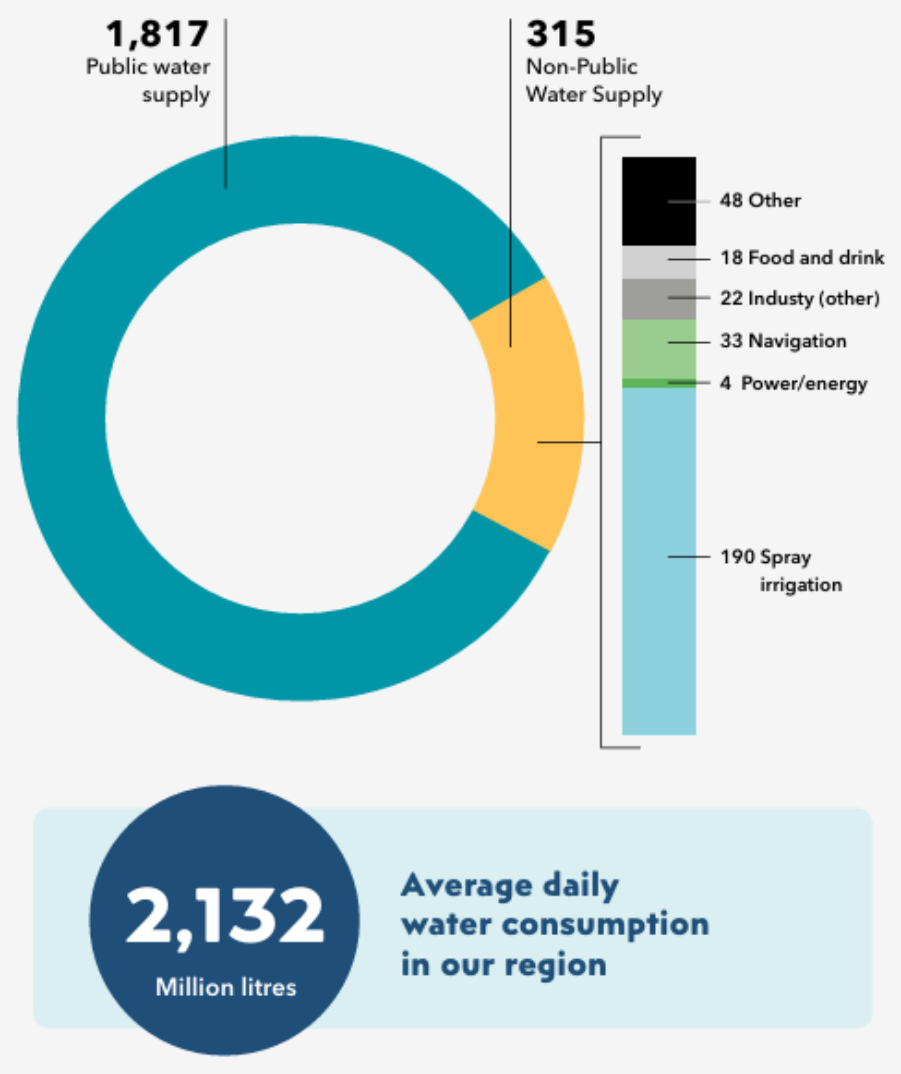

Figure 4-1: Baseline projection for water use in 2025

Source: WRE 2024, page 22

As well as there being a significant increase in water demand up to 2050, there is also predicted to be less water available in the region to meet that demand. The primary driver for the reduction in supply is meeting the environmental destination, capping licences to protect habitats and achieving flows that support good ecological status by 2050 (including further protections for European Protected Sites, riverine and Groundwater Dependent Terrestrial Ecosystems). There is also a reduction in the availability of water predicted due to climate change and the requirement to increase drought resilience.

The increase in demand and the reduction in supply leads to a supply demand deficit in the region by 2030 if no action is taken. The increase in demand could be offset by demand management measures, but the reduction in water availability due to sustainability reductions would need to be offset by new supply options.

The Regional Plan therefore contains a mix of demand management and new supply options:

Demand management:

- Government interventions (such as mandatory water labelling) - 114Ml/d
- Reduction in per capita consumption from 135 l/p/d to 110 l/p/d in 2050
- Reduction in regional distribution input per capita by 19.1% by 2038
- 39% leakage reduction
- Increase in metering penetration with full rollout of smart metering by 2030 in Anglian Water region, 2035 in Essex and Suffolk and Cambridge Water regions, and 2040 for the Affinity region
- Regional reduction in non-household demand by approximately13% (relative to growth) by 2050

Supply side options:

- Reservoir storage (Fens Reservoir by 2035-37 and Lincolnshire Reservoir by 2039-41 (280Ml/d)
- Desalination (110 Ml/d)
- Effluent water resource (23Ml/d)
- Smaller options and transfers (75Ml/d)

The Regional Plan is adaptive, with triggers in place that allow other measures to be considered. For example, should demand management measures not deliver as expected, the desalination supply option can be increased.

4.2.3 Water Resources Management Plans

Overview

Huntingdonshire is within the Anglian Water and Cambridge Water supply areas and is covered by three WRZs including Anglian Water's Ruthamford North and Ruthamford South WRZs and Cambridge Water's Company-Wide Zone. Figure 4-2, taken from the National Framework for Water Resources (2025) shows the predicted percentage increase in the household population between 2025 and 2055. Growth was taken from WRMP24 forecasts (which were based on Office for National Statistics population growth forecasts). The Ruthamford South WRZ has the second highest percentage growth of any WRZ in England, growing by over 31% with growth coming from Huntingdonshire District, Bedford Borough and Central Bedfordshire District.

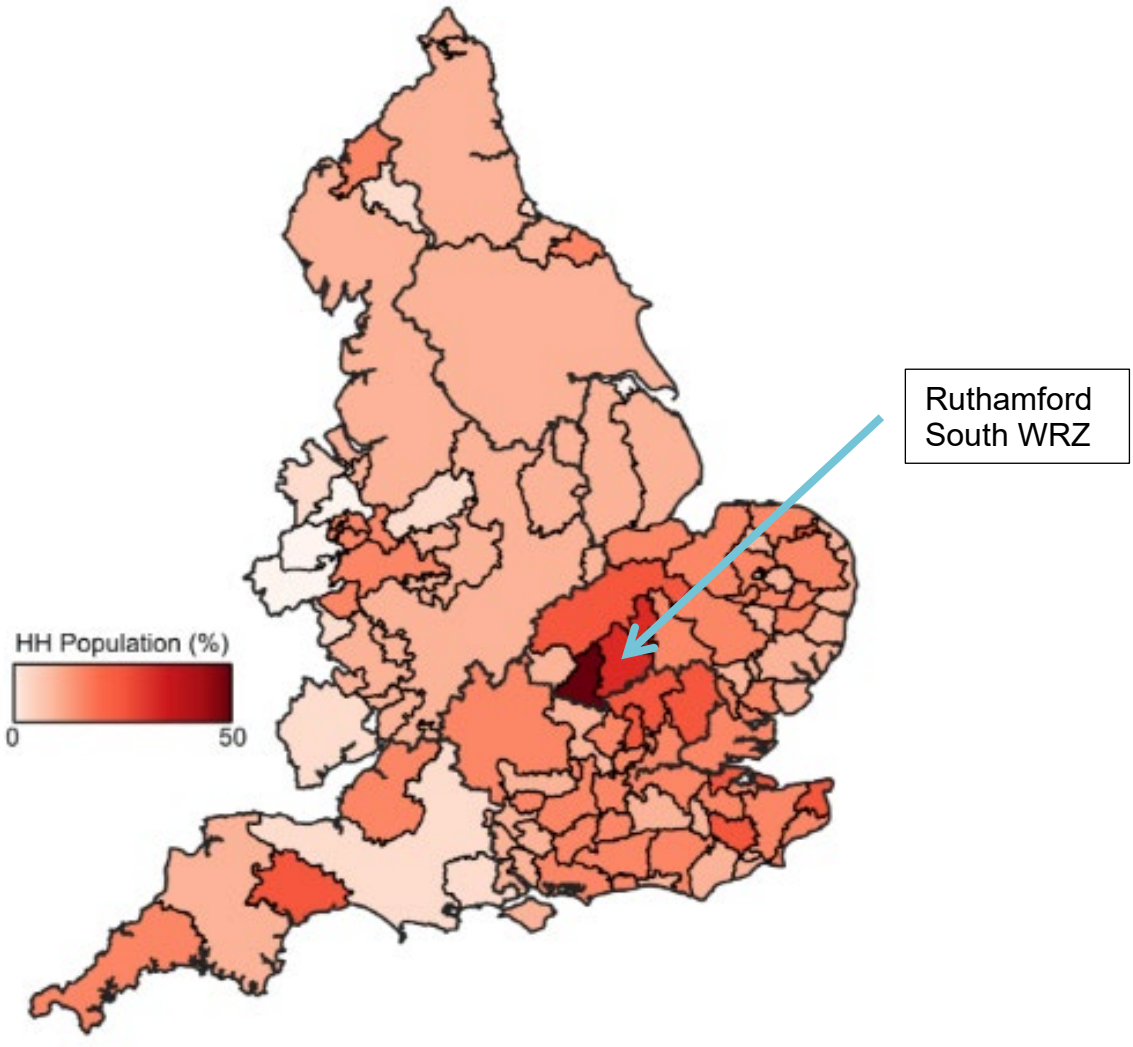

Figure 4-2: Household population percentage increase from 2025 to 2055 from WRMP24 forecasts (based on ONS data)

Source: National Framework for Water Resources, Section 2, Figure 1 (2025)

Anglian Water

Anglian Water's WRMP was first published in 2019, covering the period 2020-2045. It was revised in April 2025 to cover for the period 2025-2050. This study references this final WRMP24.

Within the WRMP attention was mainly focussed on:

- Demand management, including the installation of smart meters and leakage reduction.
- Increasing interconnecting pipes and investment in the supply of water to increase the amount of water availability.
- Increasing resilience of the public water supply against climate change especially drought.

Within Anglian Water's revised WRMP24 Water Resource Planning Tables (2023), an initial surplus of 11 Ml/d was reported for their Ruthamford South supply area and Ruthamford North supply area. In the future, factors such as population growth, climate change and drought will impact the future availability of water resources. The predicted supply and demand balance in 2050, with no intervention, shows that Ruthamford South will have a supply demand balance of -77 Ml/d and Ruthamford North of between -87 Ml/d using the Dry Year Annual Average (DYAA) measure. Both WRZs are expected to achieve a supply-demand balance in the final plan. This is explained further below.

Anglian Water's 'best value plan' (Final WRMP24 Section 10) is designed to address the full range of challenges across the plan period using a blend of demand management (37%), reservoirs (36%) and other supply options (27%). The core pathway of the preferred plan is:

- The transfers needed in AMP8 (2025 to 2030) to connect WRZs to the WRMP19 interconnectors
  - New transfer from Peterborough to Grafham
  - New transfer from Norfolk Norwich and the Broads Aylsham WRZ
- Options where upgrades are made to maximise output from existing resources
  - Backwash recovery options at Aylsham WRZ
- A water reuse scheme required in AMP9 (2030 to 2035) with development started in AMP8 as part of the Accelerated Infrastructure Development Programme
  - Colchester water reuse plant which treats discharge from the WRC before discharging it and storing it in a raw water storage reservoir where it will mix with river water
- The two Strategic Resource Options: Fens and Lincolnshire reservoirs
- The aspirational demand management strategy.

The other schemes within the preferred plan are the adaptive pathway. These schemes either have shorter delivery periods which can be delivered within an AMP or are required later in the plan.

Anglian Water's Strategic Resource Options (SROs) consist of the Fens Reservoir and the Lincolnshire Reservoir, which will be raw water storage reservoirs to contain surplus water from the environment.

The Fens Reservoir (a joint project between Anglian Water and Cambridge Water) will have an approximate capacity of 55 million cubic metres and a usable volume of 50 million cubic metres. Sources including the River Great Ouse and River Delph (Ouse Washes), River Nene and its Counter Drain (and Middle Level system) will supply the Fens reservoir. In the modelled 'high yield' option, the reservoir will provide a deployable output of 88.8 Ml/d, 50% of which will be transferred to Cambridge Water. Phase three consultation for the Fens Reservoir closed on 10 December 2025. Results of the consultation are yet to be released.

The Lincolnshire Reservoir SRO will abstract water from the River Trent which will be transferred to the River Witham via the Fossdyke. Water will then be abstracted from the

River Witham and transferred to the reservoir via the South Forty Foot Drain. Water from the reservoir will enter the Anglian Water supply network at Wilsthorpe (in Lincolnshire) and Chesterton (in Huntingdonshire).

According to Anglian Water, both SROs will supply 43% of the water needed to maintain a supply-demand balance. These reservoirs will require Development Consent Orders (DCOs). Applications are scheduled for submission in 2027 (Fens) and 2028 (Lincs) according to the Planning Inspectorate. Subsequently, the benefits of these reservoirs will not be felt until at least the mid-2030s.

Anglian Water have invested in leakage reduction and linking up reservoirs in the west region to improve resilience. The replacement of pipes linked to the above investments will ultimately improve water efficiency and therefore resilience as well.

In December 2024 Anglian Water published a Non-Domestic Water Requests Policy stating that where "new and unplanned non-domestic requests are received, which exceed 20,000 litres per day (0.02 Ml/d) (this may be less, dependent on the availability of water in that area) AW will need to decline the request for more water, in order to protect existing supplies and the environment." This is to ensure future demand availability for domestic water demand as well as domestic growth laid out in Local Plans. AW are not a statutory planning consultee; therefore, local authorities can approve development despite objections from AW.

AW - Ruthamford South

Figure 4-3 shows the dry year annual average (DYAA) scenario baseline water supply-demand balance for Ruthamford South WRZ. This shows a small initial surplus in 2025-26 before this drops and demand (plus target headroom) exceeds supply up until 2050. Figure 4-4 shows the DYAA final water supply demand balance which has the same small initial surplus but then maintains supply demand balance up to 2035. Between 2035 and 2040 there is a small surplus of supply. This then drops and supply demand balance is achieved through the local plan period and beyond (up to 2050). AW aim to achieve this by a combination of internal potable transfers, a water metering programme, leakage reduction and water efficiency measures. AW state Government-led interventions, such as the implementation of labelling of white goods, will be needed to help achieve AW's water efficiency targets.

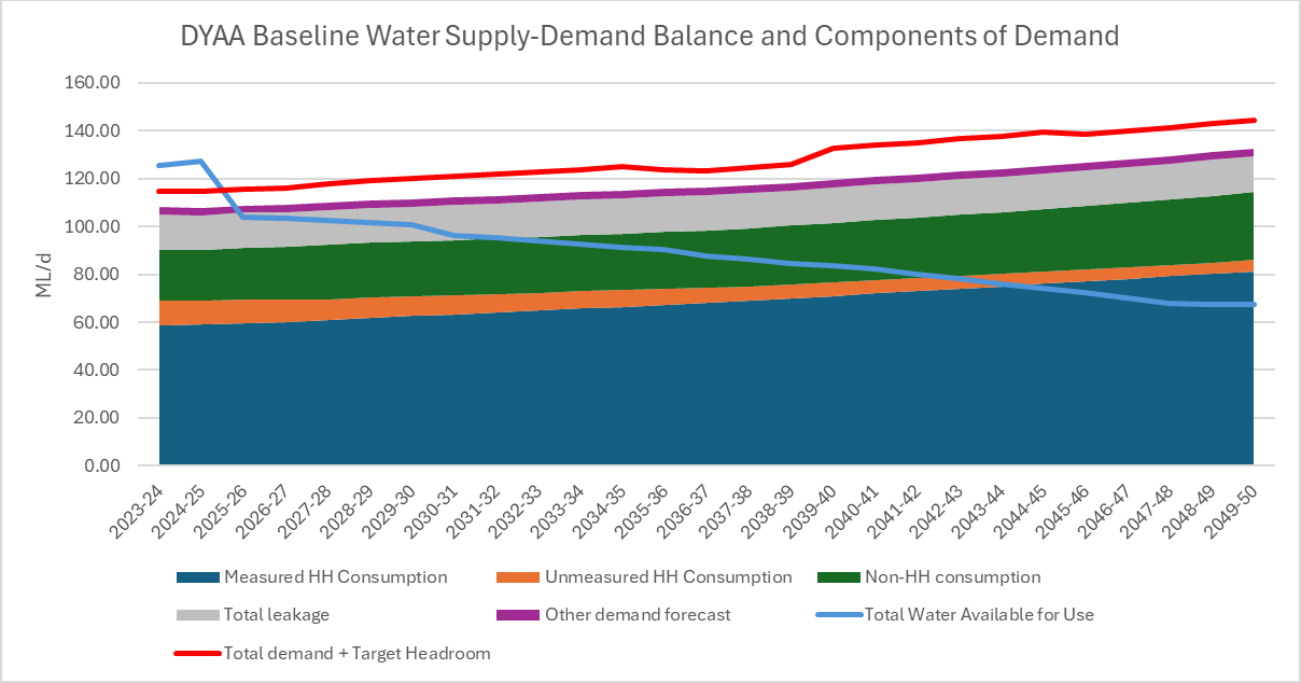

Figure 4-3: Baseline supply-demand balance for Ruthamford South (reproduced from AW WRMP24 Water Resource Planning Tables, published 2023)

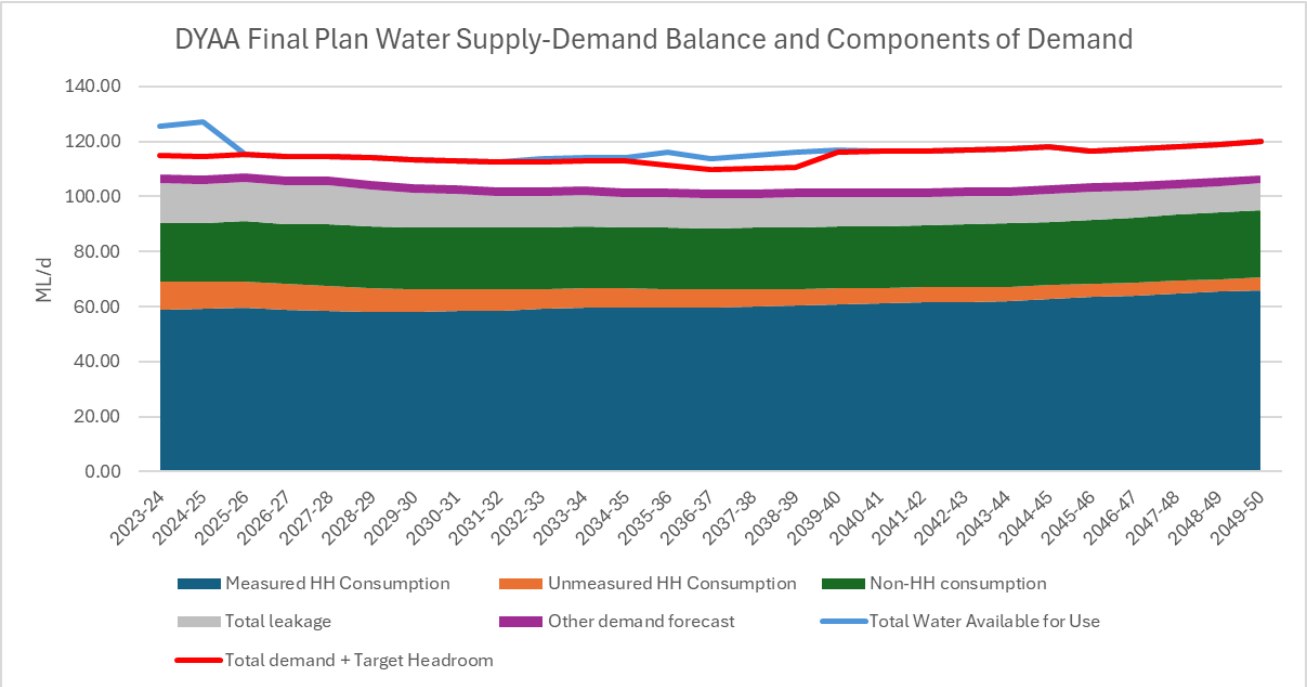

Figure 4-4: Final Plan supply-demand balance for Ruthamford South (reproduced from AW WRMP24 Water Resource Planning Tables, published 2023)

AW - Ruthamford North

Figure 4-5 shows the dry year annual average (DYAA) scenario baseline water supply-demand balance for Ruthamford North WRZ. This shows a small initial surplus in 2024-25 before this drops and demand (plus target headroom) exceeds supply to the end of the local plan period and beyond (up until 2050). Figure 4-6 shows the DYAA final water supply demand balance which has a small initial surplus up to 2031 but then maintains supply demand balance up to 2035. Between 2035 and 2040 there is a small surplus of supply. This then drops and other than a small period of surplus between 2045 and 2047, supply demand balance is achieved through the local plan period and beyond (up to 2050). AW aim to achieve this by a combination of new supply from Lincolnshire Reservoir, internal potable water transfers, a water metering programme, leakage reduction and water efficiency measures. AW state Government-led interventions, such as the implementation of labelling of white goods, will be needed to help achieve AW's water efficiency targets.

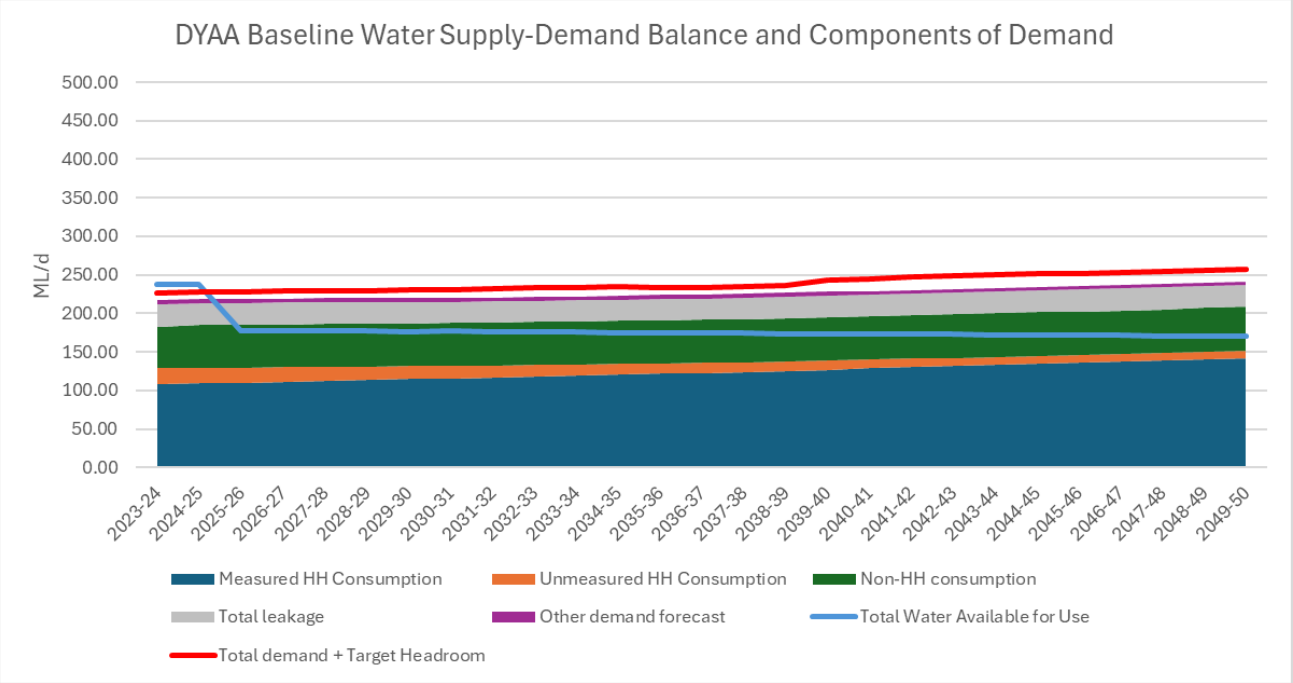

Figure 4-5: Baseline supply-demand balance for Ruthamford North (reproduced from AW WRMP24 Water Resource Planning Tables, published 2023)

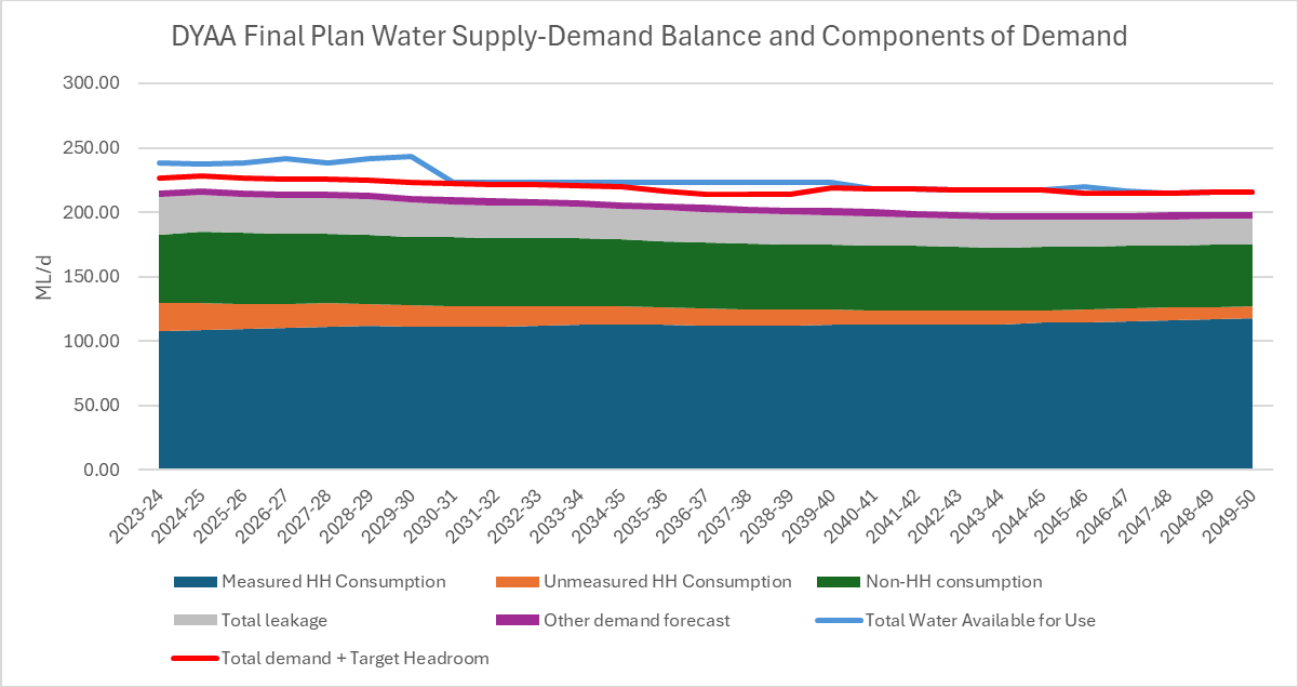

Figure 4-6: Final Plan supply-demand balance for Ruthamford North (reproduced from AW WRMP24 Water Resource Planning Tables, published 2023)

Cambridge Water Company-Wide Zone

When the Stage 1 IWMS was prepared, CW's WRMP was being questioned by the EA, who did not have confidence that CW could meet the demand for water in its area without increasing the risk of deterioration in the status of waterbodies. The EA had objected to planning applications for large developments in South Cambridgeshire based on the impact of CW's abstractions. Between 1 April 2024 and 31 March 2025 an application in Huntingdonshire was objected to by the EA on the basis of non-mains drainage being proposed in a sewered area.

Since then, CW have addressed the EA's concerns in their final WRMP24 published in March 2025.

Close to 100% of CW's water comes from chalk aquifers. The CW plan therefore has a significant challenge to meet demand for water from a rapidly growing area of the country and fulfil their environmental obligations to protect chalk streams. The WRMP notes that the Covid-19 pandemic caused an increase in household consumption of 20l/p/d due to increased hygiene practices and people working from home. This has not returned to pre-pandemic levels and has not been offset by a reduction in non-household usage. The demand forecast has therefore increased since WRMP19.

CW's supply-demand balance is achieved through a combination of demand management and supply options as outlined in Table 4-1 . The supply options identified in the plan will not be available until 2032 at the earliest, and so only demand management will contribute in the first part of the plan.

Demand management within the plan includes four main targets:

- 50% reduction in leakage from 2017/18 levels by 2040
- 110l/p/d household consumption by 2050
- 9% reduction in non-household consumption by 2030
- Universal metering by 2030

The reduction in household per capita consumption (PCC) includes a contribution from mandatory labelling of water products.

The main supply options include:

- A short-term transfer from Grafham Water - utilising 26Ml/d of time limited transfers
- Co-funding of a new regional Fens Reservoir (50% stakeholder with Anglian Water) - this is expected to produce a benefit of 44Ml/d once fully operational
- Effluent re-use - utilisation of 7Ml/d of effluent from Cambridge WRC to feed into CW's Cherry Hinton Reservoir

Table 4-1: Benefits and costs of CW's WRMP24

		Cumulative benefit by AMP Ml/d					
Activity	**Total benefit by 2050 Ml/d**	**AMP8**	**AMP9**	**AMP10**	**AMP11**	**AMP12**	**Total Cost £m**
Water labelling no minimum standards	**4.70**	0.13	0.85	2.42	4.07	4.70	**0**
Universal Metering	**1.11**	0.74	1.11	1.11	1.11	1.11	**5.95**
PCC 110 l/h/d by 2050 (excl WL & metering)	**2.51**	0.95	1.90	2.24	2.24	2.51	**6.25**
50% leakage reduction by 2040	**5.90**	2.6	4.11	5.9	5.9	5.9	**23.48**
Non-Household consumption reduction	**4.04**	2.35	4.04	4.04	4.04	4.04	**2.11**
Grafham Transfer	**0**	0	26	0	0	0	**89.14**
Fens Reservoir transfer	**44**	0	0	44	44	44	**61.84**
Milton reuse scheme	**7**	0	0	0	7	7	**244.79**
Totals	**69.26**						**433.52**

Figure 4-7 shows the dry year annual average (DYAA) scenario baseline water supply-demand balance for Cambridge Water Company-Wide WRZ. This shows that demand exceeds supply for the entire Water Resources Management Plan period to 2050. Figure 4-8 shows the DYAA final water supply demand balance which has a small initial surplus up to 2031. Between 2031 and 2041 there is a surplus of water supply. From 2041 up to 2050, the end of the WRMP period, there is little surplus water available beyond the demand already planned for in the WRMP. CW aim to achieve this by a combination of taking water from a source at Fenstanton, taking water from Grafham Water in AW's operating area (from 2032 onward), building a reservoir in partnership with AW in the Cambridgeshire Fens and water recycling using water from one of AW's WRCs to support flow in the River Cam allowing for abstraction from the river to continue at a reduced level.

In October 2025, Cambridge Area Water Supply Evidence was published as part of the Regulation 18 consultation for the Greater Cambridge Shared Planning Local Plan. This consultation period runs from December 2025 to January 2026. Figure 4-9 shows the water available in the Cambridge Water company-wide zone between 2024 and 2050, as forecast in the WRMP. The Cambridge Area Water Supply Evidence also indicates that post 2040, environmental destination to restore and protect freshwater sources will reduce the water available to use beyond what is currently planned for.

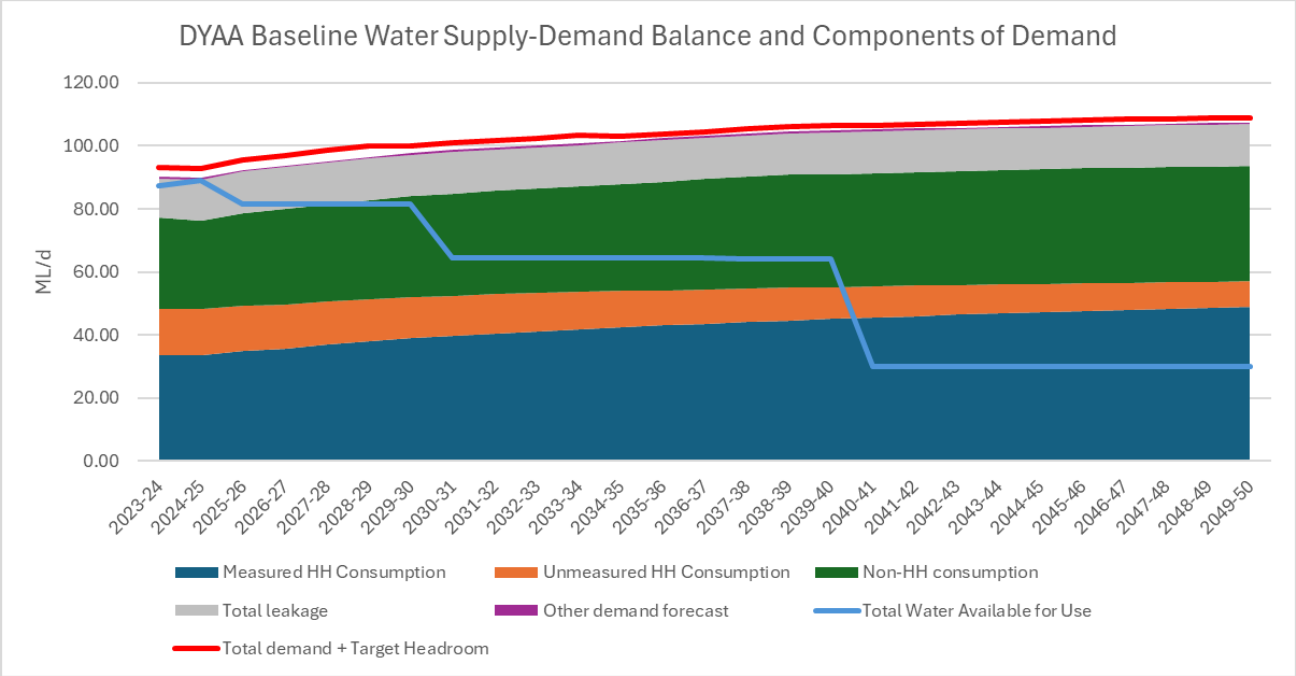

Figure 4-7: Baseline supply-demand balance for Cambridge Water Company Wide Zone (reproduced from CW WRMP24 Water Resource Planning Tables, published 2025)

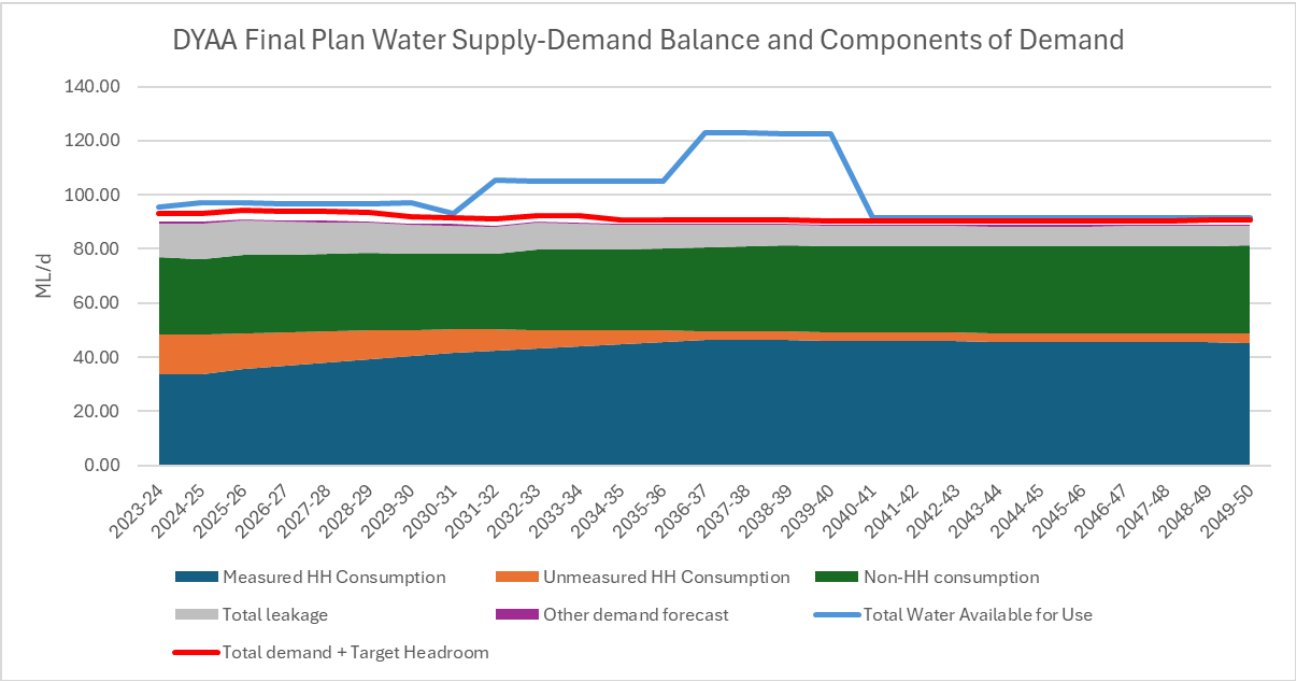

Figure 4-8: Final supply-demand balance for Cambridge Water Company Wide Zone (reproduced from CW WRMP24 Water Resource Planning Tables, published 2025)

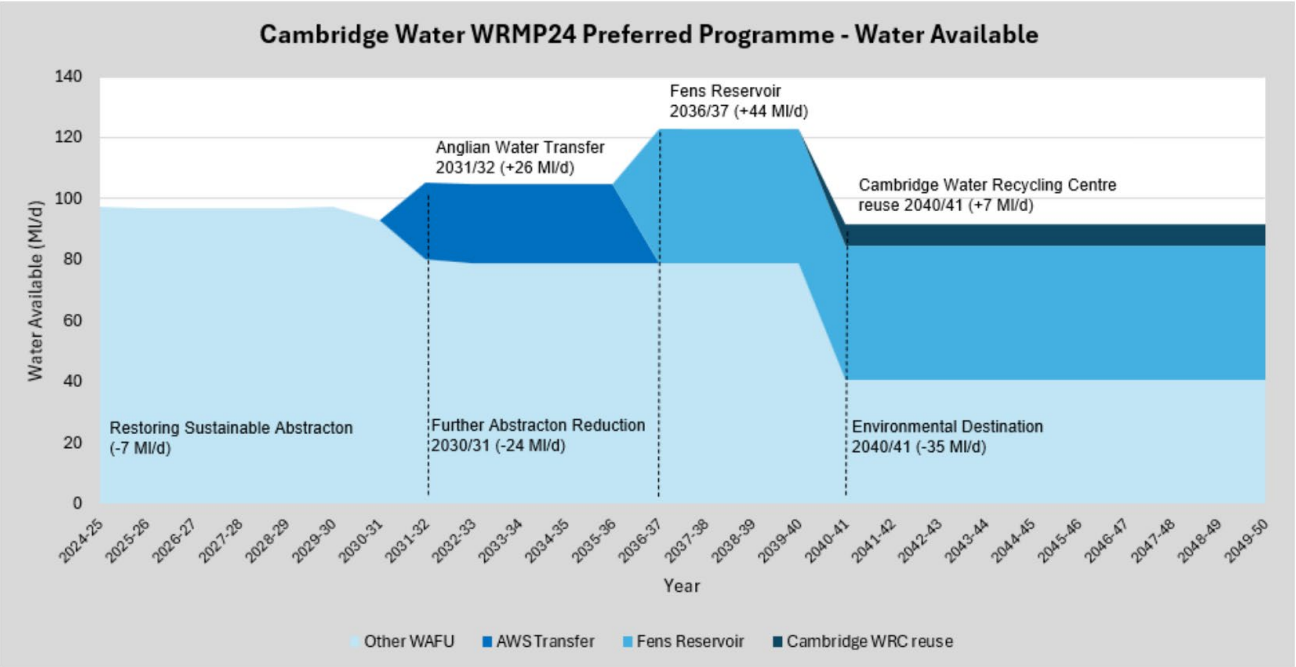

Figure 4-9: Forecast water available in Cambridge Water WRMP24 Preferred Programme (as taken from Cambridge Area Water Supply Evidence, 2025, p. 15)

Growth forecast

The AW WRMP has accounted for an increase in the number of properties of 69,013 during the period 2025 to 2050 in Ruthamford South and 109,106 in Ruthamford North. CW WRMP has accounted for an increase in the number of properties of 45,020 during the period 2025 to 2050 in the Cambridge Water Company-Wide zone. Ruthamford South and Ruthamford North WRZs serve the authority areas of Huntingdonshire District Council, Peterborough City Council, Bedford Borough Council, Central Bedfordshire Council, North Northamptonshire Council, Fenland District Council, and West Northamptonshire Council. CW Company-Wide WRZ serves the authority areas of Huntingdonshire District Council, Cambridge City Council and South Cambridgeshire District Council. The WRZs covering Huntingdonshire District are shown in Figure 4-10 (taken from the Stage 1 WCS).

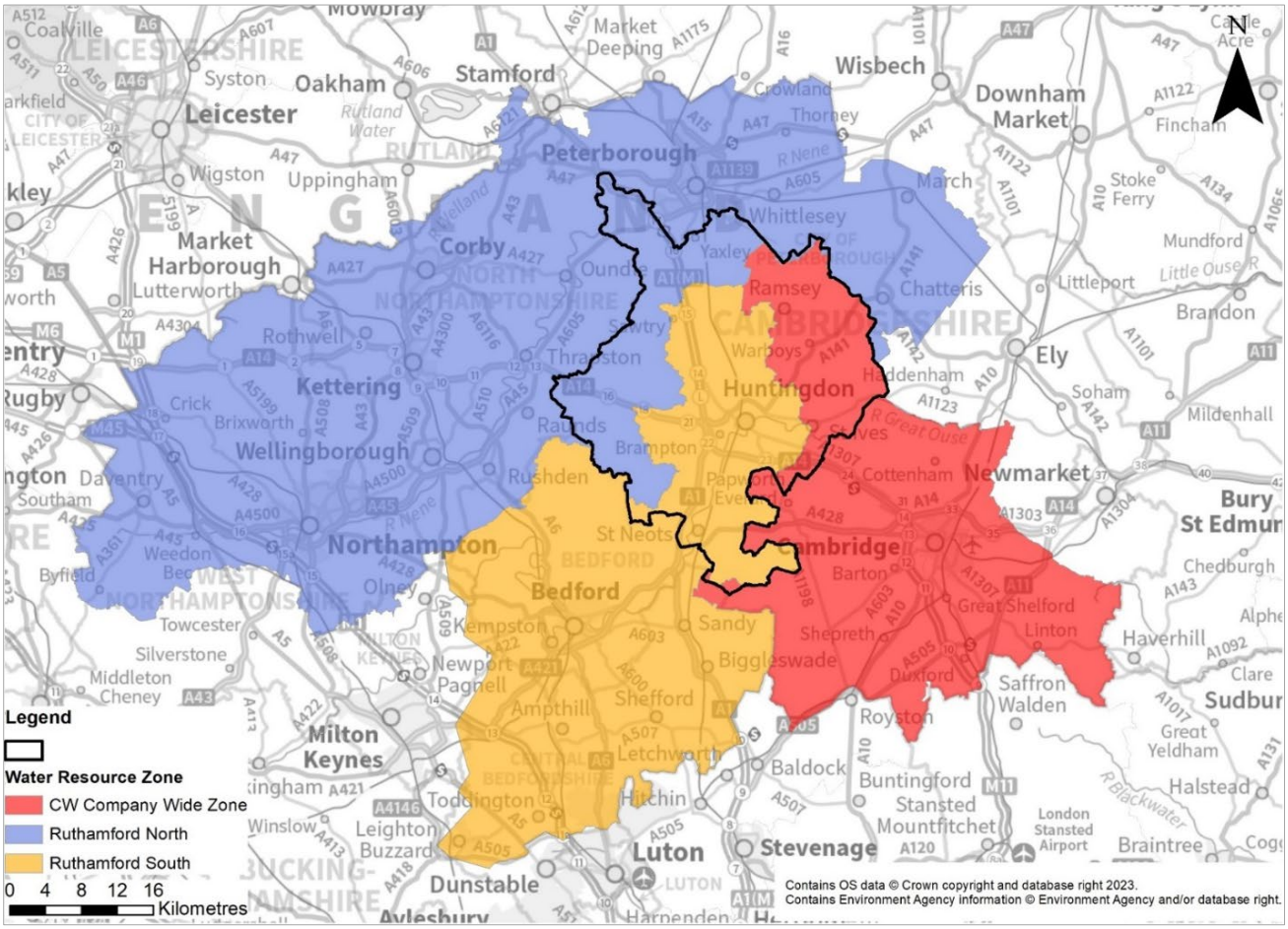

Figure 4-10: Water Resource Zones covering Huntingdonshire District

The update to the NPPF in December 2024 introduced a new standard method for calculating Local Housing Need (LHN) figures for each local authority. The new method aims to increase the number of houses required to meet housing targets. Using the new standard LHN method, growth in Huntingdonshire, Peterborough, Bedford, Central Bedfordshire, North Northamptonshire, Fenland, West Northamptonshire, Cambridge and South Cambridgeshire between 2025 and 2050 is shown in Table 4-2. Local Plan periods may differ between Local Authorities, though, for ease of comparison, the annual LHN has been applied in the same way for all authorities. LHN figures are indicative, based on the

standard method as referred to in paragraph 62 of the NPPF and calculated by the Land, Planning and Development Federation (May 2025).

It is worth noting that, based on the Preferred Options draft Local Plan growth scenario for Huntingdonshire, the total number of residential commitments, completions, potential allocations and windfall sites during the local plan period from 2024 onwards (though the local plan covers 2021 to 2046), indicate an increase in the number of properties by 33,636, equating to an average 1,462 properties per year, though numbers may fluctuate. This amount of growth goes beyond the new Local Housing Need (LHN) figure for Huntingdonshire, which is 1,213 residential properties per year.

The OS Open CodePoint dataset was used to provide an indication of the distribution of existing properties within Huntingdonshire, Bedford, Central Bedfordshire, West Northamptonshire, North Northamptonshire, Peterborough, Fenland, Cambridge and South Cambridgeshire (the local authority areas which make up the WRZs covering Huntingdonshire District). Table 4-2 shows an estimation of growth in each WRZ as based on the Local Housing Need of each local authority and the distribution of existing growth. If growth during the period up to 2050 (end of WRMP) follows the same distribution as existing properties, then there are estimated to be approximately 92,906 new properties in the Ruthamford South WRZ, 146,791 new houses in the Ruthamford North WRZ and 64,449 new houses in the Cambridgeshire Company-Wide WRZ. This exceeds the current growth forecast within AW's and CW's 2024 Water Resources Management Plans by significant margins, as shown in Table 4-2 and Figure 4-11.

Table 4-2: Expected growth in neighbouring authorities (based on indicative Local Housing Need) and distribution of existing properties within WRZs

Water Resource Zone	Local authority	Annual Local Housing Need (new method)	Expected LPA growth during the period 2025 to 2050	% of existing properties (distribution) in WRZ	Adjusted growth in WRZ up to 2050	WRMP24 Forecast growth
Ruthamford South	Huntingdonshire	1,213	31,538	60	18,923	
Ruthamford South	Bedford	1,202	31,252	99	30,940	
Ruthamford South	Central Bedfordshire	2,150	55,900	77	43,043	
Ruthamford South - Total	**All LPAs**	**N/A**	**118,690**	**N/A**	**92,906**	**69,013**
Ruthamford North	Huntingdonshire	1,213	31,538	26	8,200	
Ruthamford North	West Northamptonshire	2,515	65,390	80	52,312	
Ruthamford North	North Northamptonshire	1,978	51,428	100	51,428	
Ruthamford North	City of Peterborough	1,006	26,156	99.7	26,078	
Ruthamford North	Fenland District	592	15,392	57	8,773	
Ruthamford North - Total	**All LPAs**	**N/A**	**189,904**	**N/A**	**146,791**	**109,106**
Cambridge Water Company-	Huntingdonshire	1,213	31,538	14	4,415	

Water Resource Zone	Local authority	Annual Local Housing Need (new method)	Expected LPA growth during the period 2025 to 2050	% of existing properties (distribution) in WRZ	Adjusted growth in WRZ up to 2050	WRMP24 Forecast growth
Wide						
Cambridge Water Company-Wide	Cambridge District	1,135	29,510	100	29,510	
Cambridge Water Company-Wide	South Cambridgeshire District	1,174	30,524	100	30,524	
Cambridge Water Company-Wide - Total	**All LPAs**	**N/A**	**91,572**	**N/A**	**64,449**	**45,020**

Figure 4-11 shows a comparison of the forecast trajectories from AW and CW's 2024 Water Resources Management Plans and the estimated growth forecast in the local authority areas within each WRZ (based on the annual local housing need being delivered), as displayed in Table 4-2. It can be seen that the new growth forecast in each of the WRZ exceeds the forecast number of properties throughout the WRMP24 plan period, suggesting planned combined demand from growth is likely to be ahead of currently planned supply. Further discussion with AW and CW is required in order to understand if growth within AMP8 can be accommodated within existing plans, and if there is sufficient time to adapt WRMP29 plans to the LPAs plans. In line with WRMP guidelines, local plan projections including major strategic housing and growth locations such as the Oxford-Cambridge corridor, New Towns and Garden Communities, should be included when calculating the WRMP baseline and forecast future population growth.

Engagement between HDC (and the neighbouring authorities served by the same WRZs) with AW and CW is required in order to align their respective growth plans. Ongoing conversations are continuing with AW as part of the development of the local plan. Potential local plan allocations have been shared with AW and CW as part of the Huntingdonshire IWMS. Anglian Water, Cambridge Water, Central Bedfordshire Council, Greater Cambridge Shared Planning, Fenland District Council, North Northamptonshire Council, Peterborough City Council, East Cambridgeshire District Council, Middle Level Commissioners, Marine Management, Environment Agency and the Local Lead Flood Authority have been consulted during the preparation of the IWMS with consultation comments received from Anglian Water, Central Bedfordshire Council, Greater Cambridge Shared Planning and the Lead Local Flood Authority. Water supply and growth in Greater Cambridge is documented within the Cambridge Area Water Supply Evidence (2025).

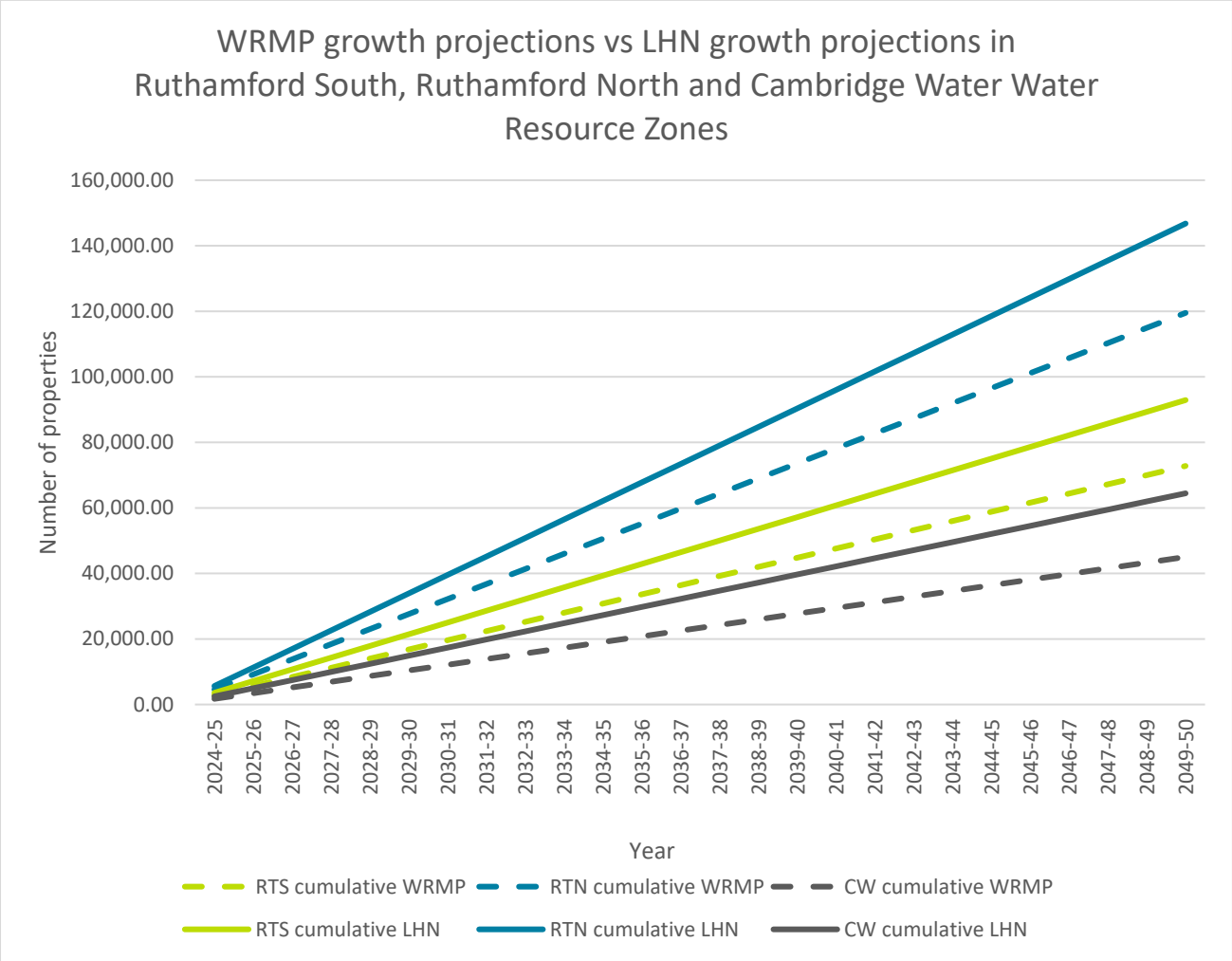

Figure 4-11: Growth trajectory of WRMP24 vs expected growth in WRZs (based LHN targets for local authorities within each WRZ and growth forecasts in WRMP24 for Ruthamford South, Ruthamford North and Cambridge Water WRZs)

4.3 Water efficiency in Huntingdonshire

4.3.1 Introduction

Part G of Building regulations (UK Government, 2016) (UK Government, 2016) currently state that new build housing should achieve a minimum water efficiency standard of 125 l/p/d. A tighter target of 110l/p/d is allowed if the local authority can establish a clear need based on available evidence. Water resources are under significant pressure in England and the direction of travel in water resources planning is to reduce per capita consumption in new build development below the current optional building regulations standard of 110 l/p/d. Huntingdonshire District Council's adopted Local Plan to 2036 requires the optional building regulations standard of 110l/p/d for all residential development.

Many LPAs are going further than the optional standard of 110l/p/d and recommending 100l/p/d or lower in their Local Plan evidence bases.

This section will outline the evidence supporting a more stringent target than the optional target in Huntingdonshire.

4.3.2 Environment Agency Classification of Water Stress

Water stress is a measure of the level of demand for water (from domestic, business and agricultural users) compared to the available freshwater resources, whether surface or groundwater. Water stress causes deterioration of the water environment in both the quality and quantity of water and consequently restricts the ability of a waterbody to achieve a “Good” status under the WFD.

The Environment Agency has undertaken an assessment of water stress across the UK. (Environment Agency, 2021). This defines a water stressed area as where:

- “The current household demand for water is a high proportion of the current effective rainfall which is available to meet that demand; or
- The future household demand for water is likely to be a high proportion of the effective rainfall available to meet that demand."

In the Environment Agency's assessment, all of the WRZs covering Huntingdonshire are classified as being at serious water stress.

It should be noted that this work was published in 2021 and used data from the WRMP19 - itself based on published growth data from several years prior to publication. Climate change is tending to increase the stress on the water environment as time progresses. The Environment Agency's assessment also precedes the current mandatory housing targets introduced nationally by the Government in December 2024 through the updated NPPF. As a result of these changes many local planning authorities must now plan for significantly increased levels of housing need. The greater requirement for housing could further exacerbate water stress across the UK.

4.3.3 Environmental Improvement Plan

Through their Plan for Water (2023) Defra has signalled its intention to review the water efficiency standards for new homes, including consideration of a new national 105l/p/d standard and 100l/p/d where there is a clear local need. In 2025 the government consulted on implementing these new water efficiency standards in Part G of the Building Regulations.

The Future Homes Hub was established to "facilitate the collaboration needed within and beyond the new homes sector to help meet the climate and environmental challenges ahead" (Future Homes Hub, 2024). It consists of representatives from the building industry, regulators, water companies, and environmental groups. Defra asked them to support the creation of the roadmap towards greater water efficiency. They have proposed a road map for water efficient homes in England and set out a framework for the homebuilding sector to work in partnership with other stakeholders such as the water sector, local authorities and regulators to deliver it. The proposed roadmap is shown in Figure 4-12 below and outlines a staged approach to reducing per capita consumption. It also proposes for a tighter figure of 90l/p/d by 2025 in seriously water stressed areas to enable sustainable growth. This recognises the Written Ministerial Statement of 19 December 2023 (given by the Secretary of the DLUHC) encouraging

"local planning authorities 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" in "areas of serious water stress, where water scarcity is inhibiting the adoption of Local Plans or the granting of planning permission for homes."

Figure 4-12: Future Homes Hub proposed water efficiency roadmap (April 2024)

The Environment Act 2021 (and Environmental Improvement Plan 2023 (EIP)) introduces a National Water Target that requires 20% reduction in public water supply in England per head of population by 2038, against a 2019 to 2020 baseline — with interim targets of 9% by 2027 and 14% by 2032. These targets cannot be achieved by new development alone. This guidance is aimed to complement other demand management measures, including leakage reduction, to support delivery of these targets alongside sustainable growth and nature recovery. The government has an ambition to tighten Building Regulations water efficiency standards.

4.3.4 Shared Standards for Water Efficiency for Local Plans

A Shared Standard for Water Efficiency has been published as part of a collaborative and collective approach by Anglian Water, Cambridge Water, Essex and Suffolk Water, Affinity Water, the Environment Agency and Natural England. It is designed to help support LPAs to deliver sustainable growth by specifying a more stringent water efficiency policy than that currently contained in Building Regulations (110l/p/d).

There are three key recommendations in the Shared Standard:

Require new homes to be built to more stringent standards for water efficiency than the optional Building Regulations (part G) standard of 110 litres per person per day (l/p/d). Evidence indicates that a design standard of up to 85 litres/person/day (l/p/d) for residential developments is feasible.

Require new, extended or redeveloped non-domestic development to aim to achieve full credits in the BREEAM water calculator.

Require new, for major non-domestic developments to include water saving measures and water reuse in their designs.

The Shared Standard contains four annexes:

Annex A - Evidence that the supply-demand balance requires demand management

Annex B - Evidence that environmental obligations could be compromised unless growth is water efficient

Annex C - Evidence and advice about the feasibility and viability of more stringent water efficiency standards

Annex D - the policy and legislative framework that supports more stringent water efficiency policies

These should be reviewed alongside this document.

4.3.5 Supply demand balance risks

In order to achieve a supply-demand balance, the WRMPs rely on a combination of demand management techniques and restrictions on non-domestic supply until new large strategic supply options come online (which is not until the 2030s). Demand management measures that rely on customer behaviour such as raising awareness of water scarcity can be uncertain. If the forecast benefit is not realised, water companies may not be able to move to more sustainable licences and may have to abstract more water to maintain their supply-demand balance. This may be above sustainable limits, risking damage to the environment.

Anglian Water (AW) and Cambridge Water (CW) have a statutory duty to supply water for domestic purposes (as defined by Section 218 of the Water Industry Act 1991) to non-household development, but do not have to supply water for non-domestic purposes.

In their policy on non-domestic water requests (2024), AW state that:

"…*where new and unplanned non-domestic requests are received, which exceed 20,000 litres per day (0.020 Ml/d) (this may be less, dependent on the availability of water in that area) AW will need to decline the request for more water, in order to protect existing supplies and the environment. Whilst this can contribute towards maintaining the supply-demand balance, it can also restrict non-household development impacting on economic growth.*"

AW recommend businesses undertake water efficiency audits before new water supplies are requested. Water efficient devices such as low flush toilets and aerated taps / shower heads as well as water efficient white goods (dishwashers and washing machines) could be installed. AW recommend fitting smart meters to support and encourage reducing water usage and to help identify leaks. Rainwater and surface water harvesting, greywater recycling and wastewater recycling are also recommended as ways to reduce water demand.

In their Final WRMP24 (March 2025) CW state that:

"… *we will be applying an enhanced assessment of new non-household connection requests from 2025. Requests for connections that will require less than 20 m^3 /day will be approved, as will requests where the primary use of the water required is for domestic purposes e.g. hospitals and schools. However, for connection requests above 20 m^3 /day and where the primary use is not for domestic purposes (e.g. sanitation, cooking etc), it is likely that we will be unable to facilitate connection and supply to these developments until 2032*."

It is important that new development, both household and non-household is as water efficient as possible to mitigate the risk that demand management is not successful, and to support non-household development.

4.3.6 Environmental obligations

The Stage 1 IWMS identified protected sites in the region that may be sensitive to changes in river flow or groundwater levels and therefore could be impacted by increases in abstraction (either from surface water or groundwater) to support growth in Huntingdonshire. In the WRE area, there are 239 Sites of Special Scientific Interest (SSSIs) which have water dependent features, some of which are also designated at Special Areas of Conservation (11), Special Protection Areas (11) or Ramsar sites (13). The Shared Standard states that 96 of these have water abstraction identified as an active pressure.

Natural England have a "plan-led" approach to water scarcity through which they are robustly responding to WRMPs and negotiating licence changes with the EA. The third element of their approach is to provide advice to LPAs on water efficiency, encouraging LPAs to adopt more stringent water efficiency targets.

4.3.7 Consideration of viability and feasibility

Any water efficiency target adopted has to be feasible: i.e., do the products exist that allow a particular standard to be met, and viable, i.e., can the standard be achieved without making the development financially unviable.

Annex C of the Shared Standard provides examples of products that are available on the market that can achieve an efficiency standard of 85l/p/d based on the capacity and flow rates they deliver.

The Future Homes Hub provides some indicative costs for achieving different water efficiency targets. It states that there is no additional cost to achieve 110l/p/d. The cost of achieving 100l/p/d is estimated to be £350 per unit. The cost of achieving 90l/p/d (using the proposed new water fittings approach) is estimated to be between £1000 and £3000 per unit. The cost of achieving 80l/p/d is estimated to be an additional £400 per unit (Future Homes Hub, 2024).

Research undertaken for the devolved Scottish and Welsh governments by the Energy Saving Trust indicated potential annual savings on water and energy bills for householders of approximately £31 per year as a result of water efficiency measures that would allow a target of 100l/p/d to be met (Energy Saving Trust, 2020). Water efficiency is therefore not only viable but of positive economic benefit to both private homeowners and tenants. In addition, financial incentives are available from the water companies to developers to encourage water-efficient design.

Research published by Building Research Establishment (BRE) on the delivery of sustainable buildings reports that the cost of achieving lower BREEAM ratings incurs little or no additional cost, and targeting higher BREEAM ratings incurs a typical cost of less than 2% above the baseline for that development. The same study reports that the cost of achieving 3 credits in WAT01 in the baseline building (a 40% reduction in water consumption for baseline) would be £13,361 (based on reducing annual water consumption from 9,567m^3 to 5,594m^3 in the baseline building) and payback could be achieved between 1 and 2.5 years depending on the price of water (BRE, 2018).

The baseline building referred to in BRE reports represents a standard, regulation-compliant version of an office (e.g. without sustainability measures applied). It is described as:

"*A town or city centre located speculative building comprising of five stories of office accommodation and a central atrium. It is a high-quality space, intended to attract tenants with an interest in sustainability. The gross floor area is 13,800m^2, with net office space floor area of 11,150m^2. It is of steel frame construction with concrete floors and glazed curtain walling. Services include air conditioning by fan-coil units served by gas boilers and water-cooled chillers, efficient lighting, and instantaneous electrically heated hot water to all toilet and kitchen areas.*"

4.3.8 Impact of water efficiency standards

Table 3-1 and Table 3-2 (based on the Preferred Options draft Local Plan growth scenario, January 2026) show that a significant proportion of the expected growth during the HDC plan period is from commitments (~34% of housing growth and ~26% of employment growth), i.e., sites that already have planning permission in some form or are allocated in Huntingdonshire's adopted Local Plan to 2036. It may not be possible for a new water efficiency policy to influence those sites if full planning permission has been granted. It is assumed in the analysis below that a tighter efficiency standard can only be applied to the preferred allocations and windfall sites. Opportunities may exist on sites with outline permission for a tighter standard to be required which may result in a higher demand saving.

Seven scenarios are presented in Table 4-3 with their resulting water demand saving by the end of the plan period. These scenarios are based on water efficiency calculations for residential and employment sites. The first is a "business as usual" scenario based on the Building Regulations Optional Standard of 110l/p/d and no target applied for employment sites. The second and third scenarios have residential water efficiency targets of 100l/p/d and 90l/p/d supported by employment sites achieving three credits in Wat01 of the BREEAM New Construction Standard (a 40% reduction from the baseline). The fourth and fifth scenarios have residential water efficiency targets of 85l/p/d supported by employment sites achieving four or the 'full' five credits in Wat01 of the BREEAM New Construction Standard (a 50% or 55% reduction from the baseline, respectively). The sixth and seventh scenarios have residential water efficiency targets of 80l/p/d supported by employment sites achieving four or the 'full' five credits in Wat01 of the BREEAM New Construction Standard (a 50% or 55% reduction from the baseline, respectively). If the water efficiency target of 90l/p/d is adopted, a **saving of 1.9Ml/d** could be achieved by the end of the plan period compared to a "business as usual" baseline. If the tighter water efficiency target of 85l/p/d is adopted a **saving of 2.38Ml/d** (with 4 BREAAM Wat01 credits) to **2.6Ml/d** (with 5 BREAAM WAT01 credits) could be achieved by the end of the plan period compared to a "business as usual" baseline. If an even tighter water efficiency target of 80l/p/d is adopted a **saving of 2.64Ml/d** (with 4 BREEAM Wat01 credits) to **2.85Ml/d** (with 5 BREAAM Wat01 credits). This provides additional resilience in the water resources system and potentially reduces the volume of water that would need to be abstracted in WRZs.

Once a house has been built to a water efficiency standard of 110l/p/d or even 125l/p/d, it is difficult and expensive to retrospectively reduce water demand and would rely on homeowners voluntarily making changes to their property. An approach which sets the 110l/p/d target in the Local Plan will lock in a large number of new homes which will not contribute to the national target. The most cost effective and simplest stage within the life cycle of a building to implement water efficiency is during construction.

Table 4-3: Water demand saving in different efficiency scenarios

Scenario	Residential demand (Ml/d)	Employment demand (Ml/d)	Total demand (Ml/d)	Demand saving by 2050 (Ml/d)	Percentage reduction (baseline to 2050)
Business as usual - 110/l/p/d	9.33	3.89	13.22	-	-
100l/p/d and BREEAM WAT01 (3 credits)	8.82	3.01	11.83	1.39	**10%**
90l/p/d and BREEAM WAT01 (3 credits)	8.30	3.01	11.31	1.90	**14%**
85l/p/d and BREEAM WAT01 (4 credits)	8.04	2.80	10.84	2.38	**18%**
85l/p/d and BREEAM WAT01 (5 credits)	8.04	2.58	10.62	2.60	**20%**
80l/p/d and BREEAM WAT01 (4 credits)	7.79	2.80	10.58	2.64	**20%**
80l/p/d and BREEAM WAT01 (5 credits)	7.79	2.58	10.36	2.85	**22%**

4.4 Conclusions and recommendations

Water resources in England are under considerable pressure. The Environment Agency has stated that "*the scale of the challenge we face increases with time and, by 2050, we are looking at a shortfall of nearly 5 billion litres of water per day between the sustainable water supplies available and the expected demand*." (EA, 2024)

Figure 4-9 shows a comparison of the forecast trajectories from WRMP24, and the growth forecast in the local authorities within each WRZ (based on the annual local housing need being delivered). It can be seen that the growth forecast in each of the WRZ exceeds the forecast number of properties throughout the WRMP24 plan period, suggesting planned combined demand from growth is likely to be ahead of supply. AW and CW have been consulted through the preparation of the WCS for Huntingdonshire (however no reply was received from CW). AW have started preparation on the WRMP29 and next Drainage and Wastewater Management Plan (DWMP) for the period 2030-2055. In line with WRMP guidelines, local plan projections including major strategic housing and growth locations such as the Oxford-Cambridge corridor, New Towns and Garden Communities, should be included when calculating the baseline and forecast future population growth. Further discussion with CW is required in order to understand if growth within AMP8 can be accommodated within existing plans, and if there is sufficient time to adapt WRMP29 plans to the LPA's plans.

Early engagement between HDC and the neighbouring authorities served by the same WRZs with AW and CW should continue in order to align their respective growth plans.

Part G of Building regulations currently states that new build housing should achieve a minimum of 125 l/p/d. A tighter target of 110l/p/d is allowed if the local authority can establish a clear need based on available evidence. Many LPAs are now going further than this. The Written Ministerial Statement (WMS) by the former Secretary of State for Levelling Up, Housing and Communities (DLUHC) states 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, I encourage local planning authorities 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."

A Shared Standard for Water Efficiency has been published as part of a collaborative and collective approach by Anglian Water, Cambridge Water, Essex and Suffolk Water, Affinity Water, the Environment Agency and Natural England. It is designed to help support LPAs to deliver sustainable growth by specifying a more stringent water efficiency policy than the contained in Building Regulations (110l/p/d). It recommends that new homes are built to a standard of 85l/p/d, supported by a non-household standard where development will, subject to viability, aim to achieve full credits in the BREEAM water calculator (WAT 01) with a minimum of 3 credits. Where there is insufficient justification for 85l/p/d for residential development, there could still be a case for a design standard of 90 or 95l/p/d, which is more stringent than building regulations.

AW recommend businesses undertake water efficiency audits before new water supplies are requested. Water efficient devices such as low flush toilets and aerated taps / shower heads as well as water efficient white goods (dishwashers and washing machines) could be installed. AW recommend fitting smart meters to support and encourage reducing water usage and to help identify leaks. Rainwater and surface water harvesting, greywater recycling and wastewater recycling are also recommended as ways to reduce water demand.

CW's WRMP24 states that: *"requests for connections that will require less than 20 m^3 /day will be approved, as will requests where the primary use of the water required is for domestic purposes e.g. hospitals and schools. However, for connection requests above 20 m^3 /day and where the primary use is not for domestic purposes (e.g. sanitation, cooking etc.), it is likely that we will be unable to facilitate connection and supply to these developments until 2032."*

Table 4-4: Recommendations for water resources

Recommendation	Responsibility	Timescale
Continue to regularly review forecast and actual household growth across the supply region through WRMP Annual Update reports, and where significant change is predicted, engage with Local Planning Authorities.	AW and CW	Ongoing
Provide yearly updates of projected housing growth to water companies to inform WRMP updates.	HDC	Ongoing
Use planning policy to require, where viable, a water efficiency standard of 85l/p/d to be achieved using the fittings-based approach. The policy should allow for a future reduction in the water efficiency target if required.	HDC	In Local Plan
Use planning policy to require, where viable, non-household development to achieve three credits in the assessment category WAT01 of the BREEAM UK New Construction Standard.	HDC	In Local Plan
Larger residential developments (200 residential units and above) and commercial developments should consider incorporating greywater recycling and/or rainwater harvesting into development at the master planning stage in order to reduce water demand.	HDC	Ongoing

5 Infrastructure assessment

5.1 Water supply network

5.1.1 Introduction

An increase in water demand due to growth can exceed the hydraulic capacity of the existing supply infrastructure. This is likely to manifest itself as low pressure at times of high demand. An assessment has been carried out as part of the WCS to identify whether the existing infrastructure is adequate or whether upgrades may be required. The time required to plan, obtain funding and construct major pipeline works can be considerable and therefore water companies and planners need to work closely together to ensure that the infrastructure is able to meet growing demand.

AW and CW were sent a list of the Huntingdonshire Local Plan potential site allocations in August 2025 **which was greater than the sites within the preferred options local plan allocations and will be reviewed**. AW gave the sites a red, amber, green (RAG) value based on the estimated water demand of the development. AW also made comments regarding water supply, largely for employment sites where constraints on the supply of non-domestic water may apply. Eleven sites within the Preferred Options Draft Local Plan growth forecast (updated in January 2026) were not included in the initial list of sites sent to AW to assess. These further sites were assessed by AW in February 2026. CW did not respond to request for comments.

5.1.2 Results

Anglian Water's assessment of the Preferred Options list of sites gave 13 sites an amber rating when considering water supply. Comments were provided for these 13 sites and for seven of the sites with a green rating. Sites for which AW provided comments on are shown in Table 5-1. The full list of sites which AW assessed are presented in Appendix D. Comments regarding water supply provided by AW in addition to RAG ratings mainly relate to employment sites where there may be constraints regarding the availability of non-domestic water for manufacturing and processing uses. AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options. Depending on the type of development proposed, employment sites may be constrained by AW's non-domestic water supply position where any request for more than 20m3/day will be declined.

AW also provided a list of sites whose boundaries overlap with the project boundaries of the infrastructure associated with the Fens Reservoir. Sites CfS:185 Land North of Bluntisham Road, Needingworth; as well as CfS23-24309 Land North West of Needingworth, South of Station Road are within proximity of the Fens Pipeline Corridor. HDC are in discussion with AW on the above locations.

Table 5-1: Anglian Water comments on list of Preferred Options site allocations

Site Reference / Policy No.	Location / site address	Water resources RAG	AW comments on water supply (mainly relate to employment sites where there may be non-domestic water supply constraints). AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options.
CfS:16	East of Loves Farm (Tithe Farm), St Neots		Offices - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators. B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:202	Land South of Caxton Road, Great Gransden		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:212	Land at A1 West (South) - South of Peterborough Motorway Services, Haddon		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined. Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators.
CfS:221	Land North of A141, between Huntingdon Racecourse and A1307		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined. Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators.
CfS:221	Land North of A141, between Huntingdon Racecourse and A1307		Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators.

Site Reference / Policy No.	Location / site address	Water resources RAG	AW comments on water supply (mainly relate to employment sites where there may be non-domestic water supply constraints). AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options.
CfS:23-24295	Former Motorway Compound Site, North of A1198 roundabout		Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators.
CfS:247	The Lattenburys (land to the South of the A1307 and North of A14, and West of A1198)		Offices - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators. Uncertain impact regarding non-domestic water supply for R&D
CfS:256	Lodge Farm, North of A141		Offices - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators.
CfS:259	Home Farm South		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:276	Huntingdon Racecourse		D2 - depending on type of leisure activities planned on this site, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:278	North of Wintringham Hall, Cambridge Road, St Neots		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators. Uncertain impact regarding non-domestic water supply for R&D. Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators.

Site Reference / Policy No.	Location / site address	Water resources RAG	AW comments on water supply (mainly relate to employment sites where there may be non-domestic water supply constraints). AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options.
CfS:302	Land North of Harley Industrial Park, Paxton Hill, Great Paxton		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:365	Land South East of Bicton Industrial Estate Kimbolton		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:380	Land at Little Common Farm, Sawtry		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:385	Land North of Black Horse Industrial Estate (smaller site), Sawtry		Offices - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators.
CfS:46	Galley Hill, Fenstanton		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:82	RAF Upwood - Phase 4		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators. B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.

Site Reference / Policy No.	Location / site address	Water resources RAG	AW comments on water supply (mainly relate to employment sites where there may be non-domestic water supply constraints). AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options.
CfS:95	Wyton Airfield		Offices - mainly domestic water requirements - e.g. welfare/sanitation. AW suggest that HDC should seek policy requirement for full credits in BREEAM water calculators. Uncertain impact regarding non-domestic water supply for R&D. B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS23-24188	Land off Old North Road, Sawtry		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS23-24291	Ruddles Lane, Wyton		Dependent on amount of water required for fire suppression and type of connection.

5.1.3 Conclusions and recommendations

Anglian Water (AW) and Cambridge Water (CW) have a statutory duty to supply water for domestic purposes (as defined by Section 218 of the Water Industry Act 1991) to non-household development, but do not have to supply water for non-domestic purposes.

AW state that depending on type of business, development may be constrained by their non-domestic water supply position where any request for more than 20m^3/day will be declined. For office and storage and distribution developments, AW comment that water requirements are mainly domestic. The impact of the non-domestic water supply required by research and development is uncertain. At present, there is no stated end date to this policy.

AW recommend businesses undertake water efficiency audits before new water supplies are requested. Water efficient devices such as low flush toilets and aerated taps / shower heads as well as water efficient white goods (dishwashers and washing machines) could be installed. AW recommend fitting smart meters to support and encourage reducing water usage and to help identify leaks. Rainwater and surface water harvesting, greywater recycling and wastewater recycling are also recommended as ways to reduce water demand.

CW's WRMP24 states that: "*requests for connections that will require less than 20 m^3 /day will be approved, as will requests where the primary use of the water required is for domestic purposes e.g. hospitals and schools. However, for connection requests above 20 m^3 /day and where the primary use is not for domestic purposes (e.g. sanitation, cooking etc.), it is likely that we will be unable to facilitate connection and supply to these developments until 2032*."

Early engagement between developers and the water supplier is required. Developers should seek further advice where site boundaries overlap with Fens Reservoir infrastructure. Further modelling of the water supply network may be required at the planning application stage.

AW recommend Local Plan policy requiring offices and storage and distribution developments to have full credits in BREEAM water calculators (WAT 01). A full list of recommendations is provided in Table 5-2.

Table 5-2: Recommendations for water supply

Recommendation	Responsibility	Timescale
Undertake network modelling where appropriate to ensure adequate provision of water supply to new sites without detriment to existing customers and feedback to HDC on implications for phasing of sites.	AW and CW	On a site-by-site basis when developers engage with water companies to secure a water connection.
Early engagement should continue with AW and CW to ensure infrastructure is in place prior to occupation.	Developers and HDC	Early in Local Plan period / at Pre-Planning stage
Developers should obtain infrastructure (water supply and drainage) maps from AW and CW to ensure existing water supply infrastructure is taken into account in site layout. Available via Digdat website or from individual utilities.	HDC and Developers	At master planning stage
Through Local Plan policy, where viable, require offices and storage and distribution developments to demonstrate full credits in BREEAM water calculators (WAT 01).	HDC	Within Local Plan

5.2 Wastewater network

5.2.1 Introduction

Anglian Water (AW) is the Sewerage Undertaker (SU) for the study area. The role of the SU includes the collection and treatment of wastewater from domestic and commercial premises, and in some areas, it also includes the drainage of surface water from building curtilages to combined or surface water sewers. It excludes, unless adopted by the SU, systems that do not drain building curtilages, including highway drainage and land drainage systems.

5.2.2 Wastewater network assessment

AW were sent a list of the Huntingdonshire Local Plan potential site allocations in August 2025 and asked to assess the impact of these sites on the wastewater network. Eleven sites within the Preferred Options Draft Local Plan growth forecast (updated in January 2026) were not included in the initial list of sites sent to AW to assess. These further sites were assessed by AW in February 2026.

The following red/amber/green definition was used by AW to score each site:

GREEN	AMBER	RED
Network improvements unlikely to be required	Network improvements may be required	Network improvements likely to be required

The assessment was divided into WRC flow capacity and foul sewerage network capacity assessments.

A red assessment does not mean that a site cannot or should not be developed (unless stated in the comments) and instead reflects the requirement for extensive new infrastructure to order to accommodate the site. It should be remembered that the water companies have a statutory duty to serve new development under the Water Industry Act 1991.

AW should plan for additional growth at the WRCs identified as having capacity constraints in this WCS. Funding for growth schemes at these WRCs will need to be included in the next Price Review process (PR29) covering the period 2030-2035 (AMP9), however there is no guarantee that funding will be secured. If funding is not secured in AMP9, AW can re-present the need in subsequent price reviews.

Anglian Water will undertake wastewater network capacity assessments of a proposed development when requested by a developer through the pre-planning advice service and will determine whether there are constraints in the network, risks of pollution and/ or flooding, to determine if a "sustainable point of connection" to their wastewater network is available. Anglian Water encourages developers to submit a Pre Planning Enquiry application to determine whether a sustainable point of connection is available. Where strategic network investment is required to accommodate wastewater flows from planned growth (and funding has not been allocated within the AMP price review process), AW state

that the combined costs of all network reinforcement works across the AW network will be funded through the 'Infrastructure Charge' paid by developers to facilitate all new connections to AW's networks. Developer contributions and connection charges are explained in Section 3.5.5 of the Stage 1 Water Cycle Study.

5.2.3 Results

AW assessed the list of Preferred Options allocations based on the impact they would have on flow capacity at the WRC they would discharge to. 22 of the Preferred Options allocations were assessed as red (network improvements likely to be required), 12 sites as amber (network improvements may be required) and 22 sites as green (network improvements unlikely to be required). Four sites were assessed as N/A; two due to not generating wastewater demand and two due to not being located in or adjacent to a WRC catchment. The results of AW's assessment of the impact of each Preferred Options allocation on **flow capacity at WRCs** are shown in **Figure 5-1** and the corresponding comments displayed in **Table 5-3**.

AW also assessed the impact of the Preferred Options allocations on the capacity within the foul sewerage network. None of the sites were assessed as green. 24 sites were assessed as red and 32 sites as amber. The same four sites were again assessed as N/A due to the reasons mentioned above. The results of AW's assessment of impact of each Preferred Options allocation on **capacity in the foul sewerage network** are shown in **Figure 5-2** and the corresponding comments displayed in **Table 5-4.** If funding for growth schemes at WRCs is not secured in AMP9, AW can re-present the need in the following price review.

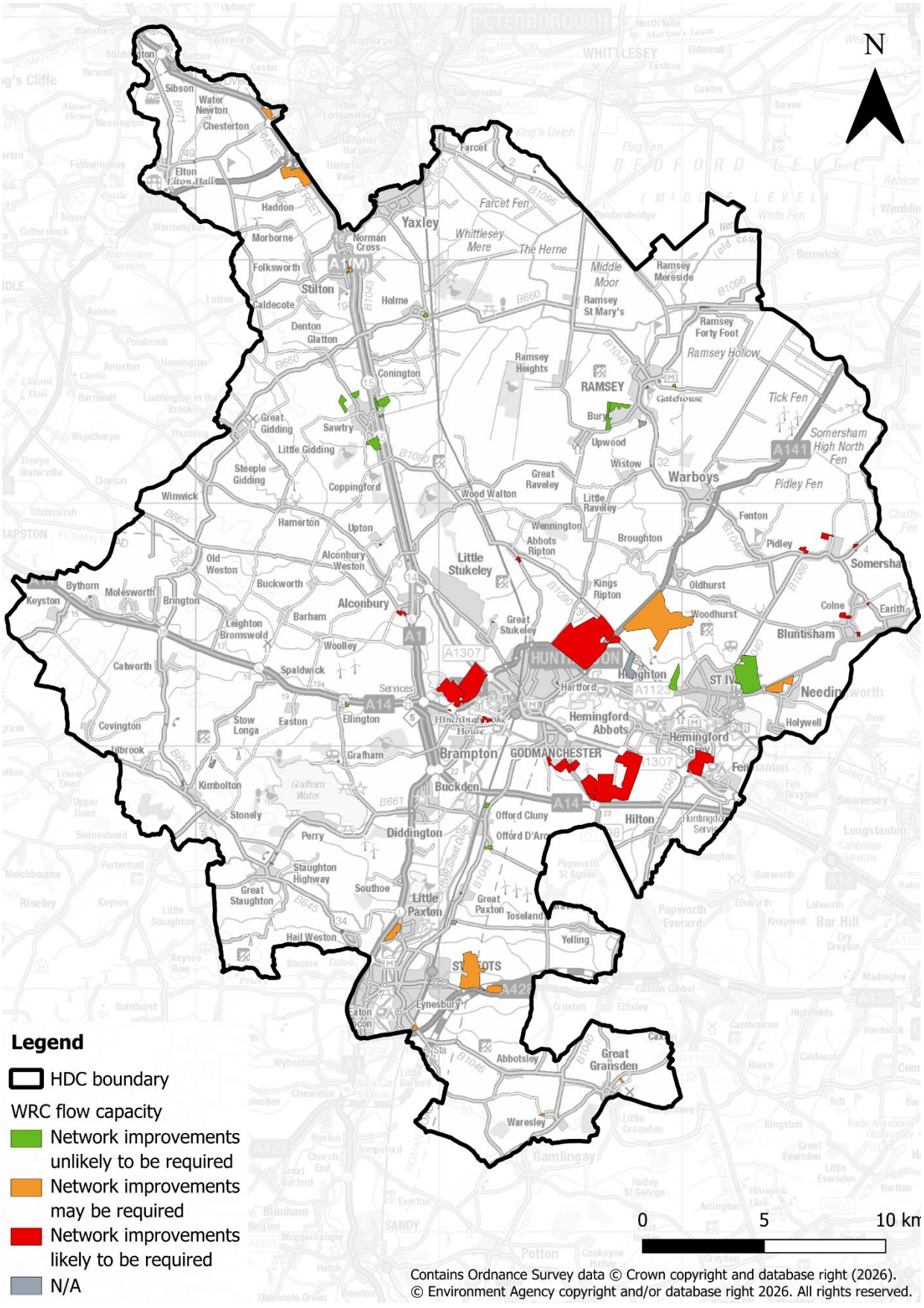

Figure 5-1: Anglian Water's assessment of impact of Preferred Options allocations on flow capacity at WRCs

Table 5-3: Anglian Water WRC flow capacity comments

WRC flow capacity RAG	Anglian Water comments
Red	Within **Huntingdon** / **Somersham** / **Brampton WRC** catchment which does not have sufficient capacity and no planned investment for AMP8. **Alconbury WRC** - Based on 5 yr average Q80 DWF - there is no capacity for growth. If considering the site coming forward imminently to inform 5 yr land supply - then based on 2024 Q90 and high confidence growth (commitments) there is potentially capacity for small scale growth. We use this approach to inform our planning application consultation responses.
Amber	Very limited capacity at **St Neots WRC**. Identified for an AMP8 growth scheme - AW will recommend that applications coming forward prior to delivery of the St Neots WRC growth scheme should have a pre-occupancy condition to prevent occupation before delivery of the WRC growth scheme to protect the environment. Within **Waresley WRC** catchment where there is capacity for future residential growth proposed, but this is dependent upon wastewater flows from proposed commercial allocations and whether sufficient headroom will be available without further investment. **Peterborough WRC** is amber for Local Plan Growth and five-year housing land supply, as there is a growth scheme to increase process capacity at the works, which will be delivered in AMP8. Once the process capacity scheme is delivered, we will continue to monitor DWF headroom and additional growth proposed in the emerging Local Plan, to determine whether future options need to be assessed to address wastewater treatment for the WRC catchment - such as future investment in DWF capacity in subsequent AMPs. **Needingworth WRC** - Based on 5 yr average Q80 DWF - there is some capacity for growth but not the full quantum of growth proposed for the catchment. WRC would require investment in subsequent AMPs. Further assessment would be required to consider whether DWF has been impacted by intervening growth/connections to the network over this period. If considering the site coming forward imminently to inform 5 yr land supply - then based on 2024 Q90 and high confidence growth (commitments) there is no capacity for small scale growth and no growth investment proposed - meaning we would object. We use this approach to inform our planning application consultation responses. This is updated annually based on the latest DWF returns and high confidence growth forecasts. Some capacity at **Wyton WRC** for potential phasing of development. Would need further investment and discussion with the EA on increasing the permit for the quantum of growth proposed. Possible alternative solution with Wyton on the Hill 3.

WRC flow capacity RAG	Anglian Water comments
Green	Within **Ramsey** / **Kimbolton** / **Easton** / **Buckden** / **Paxton** / **Hail Weston** / **Holme** / **St. Ives** / **Sawtry WRC** catchment which has DWF capacity for proposed growth in the catchment
N/A	N/A - unless developer pays for conveyance to a sustainable point of connection - not in or adjacent to catchment

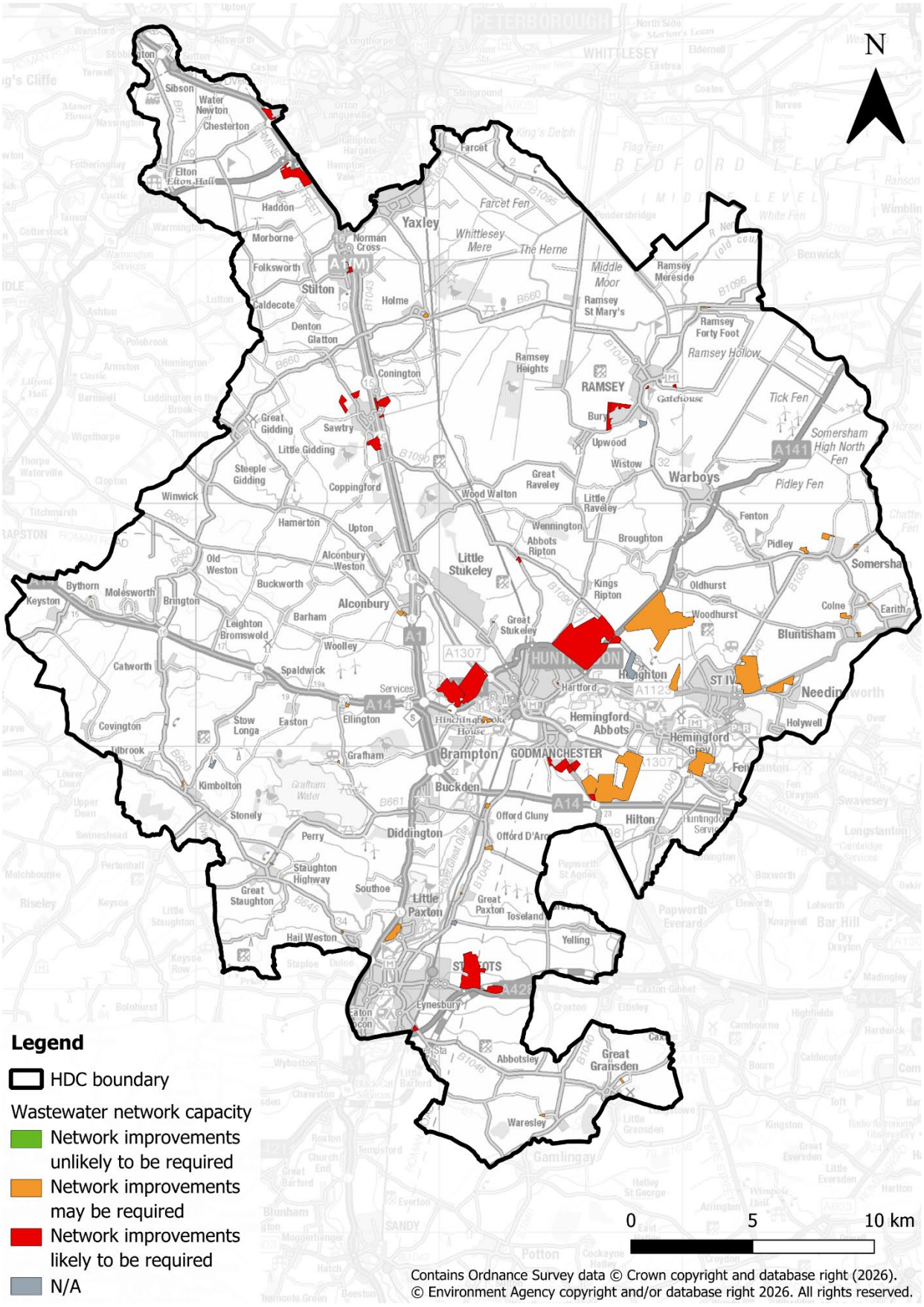

Figure 5-2: Anglian Water's assessment of impact of Preferred Options allocations on wastewater network capacity

Table 5-4: Anglian Water WRC foul sewerage network capacity comments

Foul sewerage network capacity RAG	Anglian Water comments
Red	**Huntingdon / St Neots WRC** - No current network capacity - no sustainable point of connection to the network without risk to the environment and existing communities. A network reinforcement scheme will need to be delivered before new connections to the network can be agreed. The cost of delivering reinforcements will be funded by the Infrastructure Charge developers pay for all new connections to the network. **Peterborough (Flan Fen) WRC** - Anglian Water is issuing a holding objection for all growth in Peterborough (Flag Fen) catchment due to network capacity issues and risk of hydraulic overloading/pollutions - a network reinforcement scheme is currently being investigated. **Ramsey / Sawtry WRC** - No current network capacity - no sustainable point of connection to the network without risk to the environment and existing communities. There is an AMP8 scheme to address CSO spills and upsize the terminal pumping station (TPS) which will allow for already consented growth in the catchment, but no allowance has been made for future growth.
Amber	**Alconbury** / **Somersham** / **Molesworth** / **Easton** / **Buckden** / **Waresley** / **Paxton** / **Kimbolton** / **Hail Weston** / **Holme** / **Needingworth** / **St Ives** / **Wyton WRC** - AW advise developers to submit a pre-planning enquiry to ensure proposed development has a sustainable point of connection to the network.

5.2.4 Conclusions and recommendations

Development in areas where there is limited wastewater network capacity will increase pressure on the network, increasing the risk of a detrimental impact on customers, and increasing the likelihood of storm overflow operation. Early engagement with developers and Anglian Water is required, and further modelling of the network may be required at the planning application stage.

Water recycling centres (WRC) which AW assessed as red for capacity for increases in flow from new development were Huntingdon (Godmanchester), Alconbury, Somersham (Cambs) and Brampton (Cambs).

AW should plan for additional growth at the WRCs identified as having capacity constraints in this WCS which are Huntingdon, Somersham, Brampton, Alconbury, St Neots, Waresley, Peterborough (Flag Fen), Needingworth and Wyton WCSs. Funding for growth schemes at these WRCs will need to be included in the next Price Review process (PR29) covering the period 2030-2035 (AMP9), however AMP cycle funding cannot be guaranteed. If funding is not secured in AMP9, AW can re-present the need in the subsequent price reviews.

Sewerage catchments where AW have commented that there is no current network capacity and no sustainable point of connection to the network without risk to the environment and existing communities (and where a network reinforcement scheme will be needed before new connections can be agreed) were Huntingdon (Godmanchester) WRC and St Neots WRC catchments.

Within Ramsey WRC and Sawtry WRC catchments, AW commented that there is no current network capacity and no sustainable point of connection to the network without risk to the environment and existing communities. However, there is an AMP8 scheme to address CSO spills and upsize the terminal pumping station which will allow for already consented growth in these catchments. However, no allowance has been made for future growth. Therefore, further investment (funded by the Infrastructure Charge) may be required to reinforce the network in Ramsey and Sawtry WRC catchments to facilitate growth beyond committed sites.

Anglian Water is issuing a holding objection for all growth in Peterborough (Flag Fen) catchment due to network capacity issues and risk of hydraulic overloading/pollutions - a network reinforcement scheme is currently being investigated.

Anglian Water will undertake wastewater network capacity assessments of a proposed development when requested by a developer through the pre-planning advice service and will determine whether there are constraints in the network, risks of pollution and/ or flooding, to determine if a "sustainable point of connection" to their wastewater network is available. Anglian Water encourages developers to submit a Pre Planning Enquiry application to determine whether a sustainable point of connection is available. Where strategic network investment is required to accommodate wastewater flows from planned growth (and has not been allocated within the AMP price review process), AW state that the combined costs of all network reinforcement works across the AW network will be funded through the 'Infrastructure Charge' paid by developers to facilitate all new connections to

AW's networks. If additional reinforcement / upgrades are required at the WRC or storm overflow, development may be delayed until these works are completed.

Table 5-5: Recommendations for wastewater network

Action	Responsibility	Timeframe
Engagement between HDC and AW should continue to ensure that where strategic infrastructure is required, it can be planned in by AW and will not lead to any increase in discharges from sewer overflows.	HDC, Developers, AW	Throughout the LP process / to be incorporated into next AMP cycle
Take into account wastewater infrastructure constraints in phasing development in partnership with the sewerage undertaker	HDC, AW	Ongoing
Developers will be expected to work with the sewerage undertaker closely and early in the planning permission process, through submitting a Pre-Planning Enquiry, to develop an Outline Drainage Strategy for sites. The Outline Drainage strategy should demonstrate the wastewater assets required, their locations including points of connection to the public foul sewerage, whether the site drainage will be adopted by the water company and if any sewer requisitions will be required.	AW and developers	Ongoing

5.3 Storm overflows

5.3.1 Introduction

Storm overflows are an essential component in the sewer network – however when they operate frequently, they can cause environmental damage. They occur on combined sewer systems where the sewer takes both foul flow (sewage from homes and offices) and rainwater runoff. In normal conditions, see Figure 5-3, all of this flow passed through the sewer network and is treated at a wastewater treatment works.

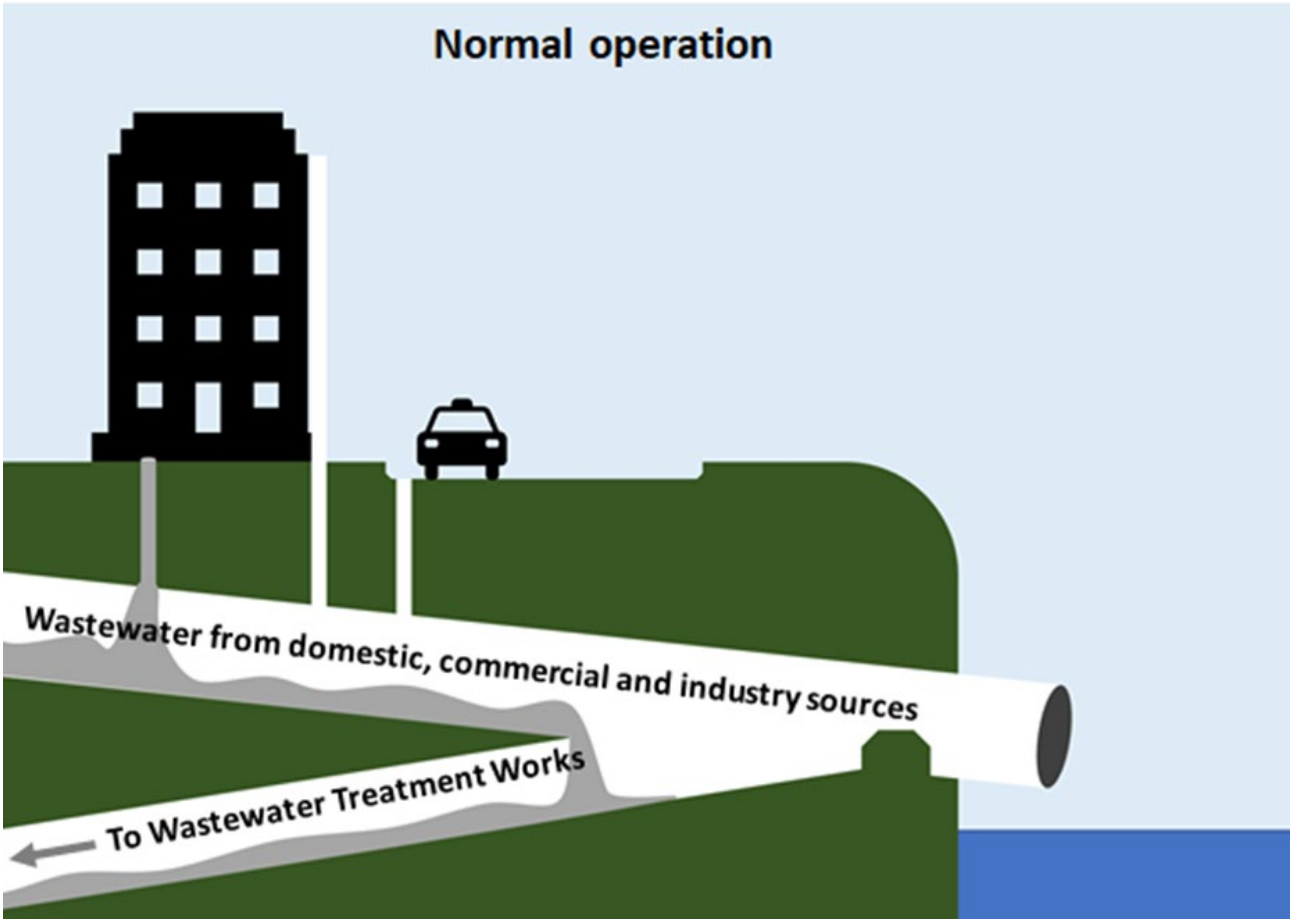

Figure 5-3 Storm overflow operation in normal conditions

In periods of exceptional rainfall, see Figure 5-4, the capacity in a combined sewer may be used up by the additional flow from rooftops and storm drains. Once the capacity is exceeded, wastewater would back up into homes, businesses and on to roads. A storm overflow acts as a relief valve, preventing this from happening.

Storm overflows become problematic when they operate frequently in moderate or light rainfall, or for long periods because of groundwater infiltration in the sewerage system – possibly in breach of their permit.

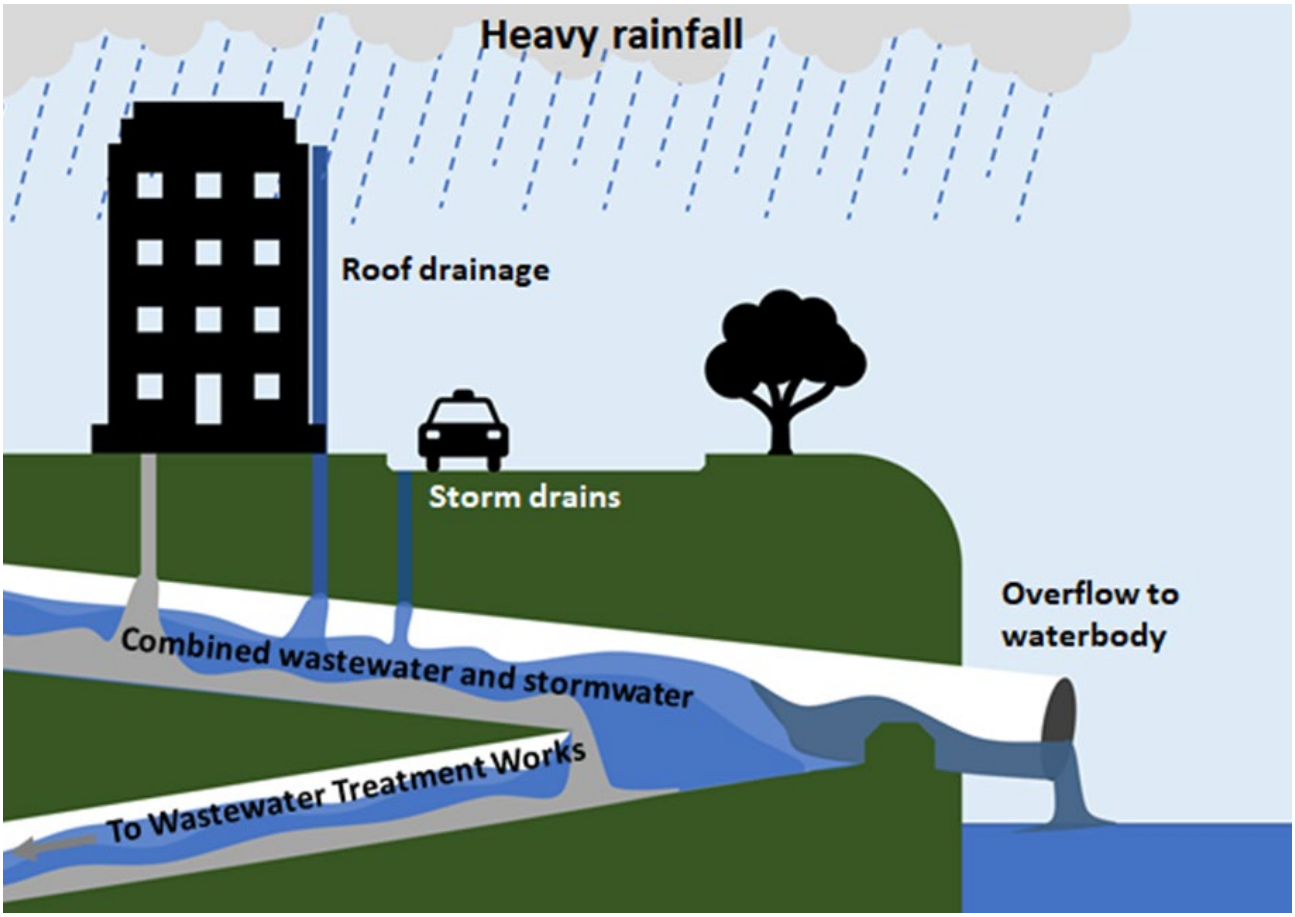

Figure 5-4 Storm overflow operation in exceptional rainfall

5.3.2 Storm overflow assessment

The Stage 1 IWMS presented the storm overflow performance of the 30 storm overflows and 18 storm tanks overflows that were monitored at the time of writing. Since then, all storm overflows within Huntingdonshire have had monitoring installed. As outlined in 2.2.3, an updated Storm Overflow Assessment Framework has been published. This has reduced the trigger points for an investigation.

The red/amber/green scoring as shown in Table 5-6 was applied to each overflow based on the new trigger points in Table 2-1.

The full set of results are displayed in Appendix E.

Table 5-6: Scoring criteria for storm overflows

Category	Investigation trigger (average number of spills per year)
Green	Less than 5 if based on 3 years' data Less than 10 if based on 2 years' data Less than 20 if based on 1 years' data
Amber	Greater than 5 and less than 10 if based on 3 years' data Greater than 10 and less than 20 if based on 2 years' data Greater than 10 and less than 30 if based on 1 years' data
Red	Greater than 10 if based on 3 years' data Greater than 20 if based on 2 years' data Greater than 30 if based on 1 years' data

There are 29 storm overflows and 18 storm tanks overflows located on the sewer network and at WRCs in Huntingdonshire (based on 2024 event duration monitoring (EDM) dataset). Since Stage 1 of the IWMS, it appears that three storm overflows have been decommissioned and two new overflows have been created, hence the change in number of storm overflows from Stage 1 to Stage 2. The location of these is shown in Figure 5-7. Data from storm overflows at WRCs, monitored in 2022, 2023 and 2024 is summarised in Table 5-7. The data for all storm overflows in Huntingdonshire is shown in Appendix E.

1 overflow exceeds the annual limit of 30 which would trigger an investigation:

- Great Gidding PS

1 overflow exceeds the two-year average limit of 20 which would trigger an investigation:

- Stonely - Oldford Lane TPS

28 overflows exceed the three-year average of 10 which would trigger an investigation:

- Brampton WRC
- Buckden WRC
- Catworth (Hostel) STW
- Elton WRC
- Great Gransden TPS
- Hartford Road CSO
- Huntingdon Godmanchester WRC
- Kimbolton STW
- Molesworth STW
- Needingworth STW
- Offord Cluny Station Lane TPS
- Oldhurst STW
- Paxton STW

- Ramsey WRC
- Sawtry Pumping Station CSO/EO
- Sawtry WRC
- Somersham WRC
- Spaldwick PS EO
- St Ives - Meadow Lane PS
- St Ives Priory Road PS
- St Ives The Waits PS
- St Ives WRC
- St Neots - Market Square CSO
- Stukeley-Low Road TPS
- The Highway PS
- Upwood STW
- Waresley WRC
- Wyton (Ex-Raf) WRC

The full list of CSOs in Appendix E shows that although 18 of the storm overflows / storm tanks do not currently exceed the spill-count limits, it is important that development does not increase this frequency. Only 14 overflows meet the new minimum requirement for all overflows, which is to meet a 'rainfall target' of 10 spills per year for the years 2022, 2023 and 2024, indicating that significant investment will be required within these catchments to achieve this target. The Local Plan can contribute to this by requiring the use of SuDS to divert storm water away from the sewer network, reducing the volume that reaches the WRC. AW's surface water guidance provides further details relating to surface water management in different scenarios.

There are opportunities through the planning system to ease pressure on the wastewater network by separating foul and storm flow, for example where a brownfield development site is currently connected to a combined sewer, the drainage can be separated and surface water drained to ground or a watercourse. Planning conditions can also be used to ensure developments connect to an identified sustainable point of connection to the network. Where a surface water connection to a combined sewer cannot be avoided, a greenfield runoff rate from the site can be specified which can result in a betterment on existing brownfield sites. Surface water can also be better managed by retrofitting SuDS in existing residential areas, and in new development, ensuring SuDS are incorporated into designs at the master planning stage to maximise the potential benefits. Redevelopment of brownfield sites with previously combined sewerage systems offer the potential to separate surface water from foul and reduce discharges from sewer overflows.

Anglian Water state that:

"*Under no circumstances will surface water be permitted to discharge into a separate foul sewer or to a combined sewerage system via a new connection. All surface water and foul water flows should be separated. Surface water runoff must follow the drainage hierarchy and where it cannot be discharged into the ground, or to a surface water body, then discharge must be to a surface water sewer or local highway drain subject to approval by the organisation responsible for these drainage networks.*

For changed surface area draining to a combined sewer (i.e. redevelopment of a brownfield site), via an existing connection, Anglian Water will use opportunities presented by new development to reduce exposure to pollution risk in the existing sewer network. As such, we expect new development to exploit all practicable opportunities to reduce surface water flow to the combined sewer network, in terms of volume and discharge flow rate. Our aim will be to obtain the maximum achievable benefit without introducing a need to pump flow."

According to Water UK, there are 46 storm overflows in Huntingdonshire (Water UK 2024). Analysis in this report shows 47, which may be because there are additional overflows now monitored since the Water UK data was published. 5 of these overflows have spill improvements planned according to the Water UK dataset.

In Huntingdonshire, the National Storm Overflow Plan for England (2024) is expected to prevent 2.86 spills a year by 2030 and prevent 23.51 spills a year by 2050, a 70% reduction, relative to a 2025 baseline (as shown in Figure 5-6). This reflects the data available when the National Storm Overflow Plan for England was compiled. The plan indicates that storm overflows are less of an issue in Huntingdonshire compared to other areas such as cities where there may be a greater number of overflows.

As explained in the Storm Overflows Discharge Reduction Plan (2023), new minimum requirement for all overflows is that they meet a 'rainfall target' of 10 rainfall event spills per year. The EA clarify:

"any discharge from a Storm Overflow within a maximum of 12 hours will be counted as related to one rainfall event for the purposes of the target. For long duration discharges that occur beyond the initial 12-hour period, it will be counted as an additional rainfall event for the subsequent 24 hours and each 24 hours after that for the purposes of the target. When a storm overflow has ceased to discharge for a 24-hour period, the counting mechanism will reset."

Anglian Water have produced a storm overflow action plan summary outlining how they will improve storm overflows ahead of the government's 2050 deadline. There are Water Industry National Environment Programme (WINEP) obligations which AW must meet in AMP8 to address high spilling storm overflows. Storm overflows within HDC which AW have named as requiring improvements are:

- Ramsey St Mary Rd SSO
- Huntingdon Hartford Rd SP
- St Ives Meadow Lane PS
- Brampton WRC

AW state that new screening requirements will be installed at the following storm overflows:

- Huntingdon Hartford Rd PS
- St Ives Meadow Lane PS
- Sawtry WRC

AW's Business Plan (PR24) refers to further measures to install EDM at emergency overflows and flow monitoring to measure passed forward flow at certain terminal pumping stations.

Figure 5-5 shows the percentage of storm overflows in Huntingdonshire meeting this target in 2023, and (forecast) in the period up to 2050 as improvements are made. Other improvements may occur at the same time, as necessary, to further reduce spills.

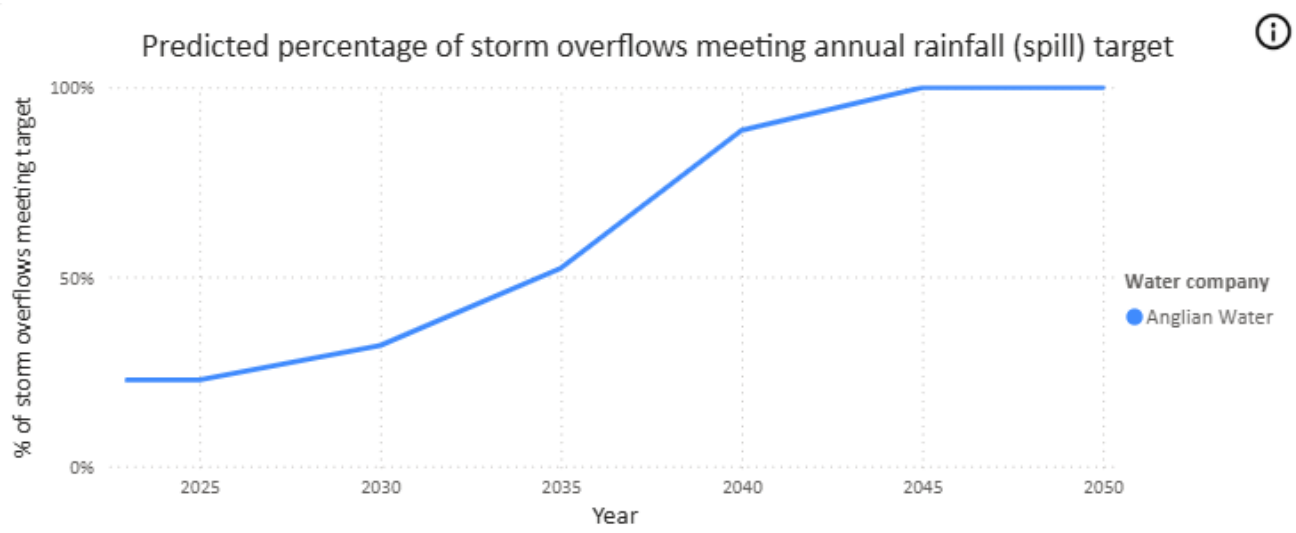

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Figure 5-5: Percentage of storm overflows within Huntingdonshire meeting annual spill targets (2022)

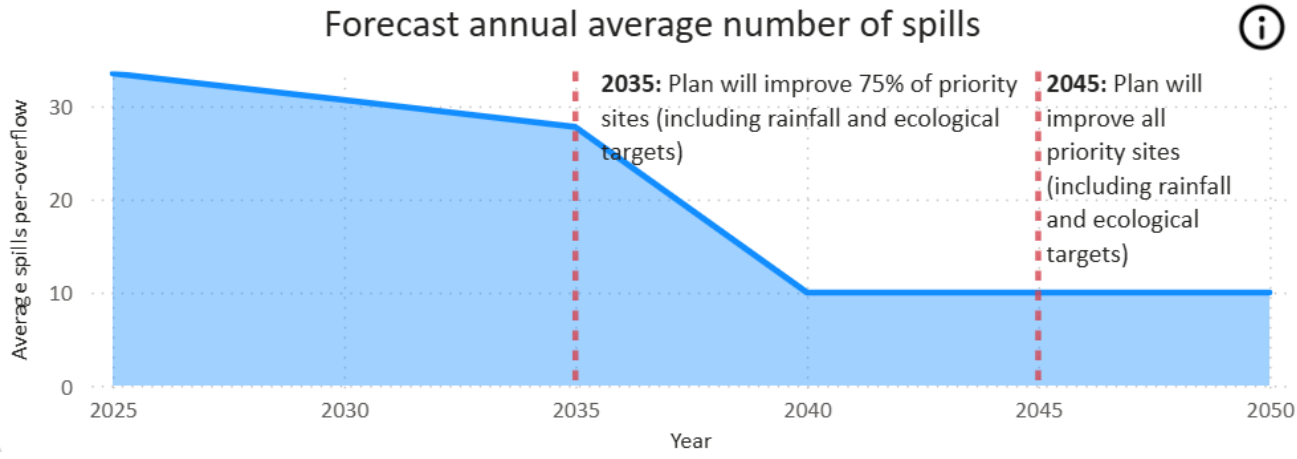

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Figure 5-6: Forecast number of spills

Table 5-7: WRC storm overflow frequency of operation and duration

Overflow name (as in AW database)	Permit reference	Number of operations in 2024	Duration of operation in 2024 (hours)	Number of operations in 2023	Duration of operation in 2023 (hours)	Number of operations in 2022	Duration of operation in 2022 (hours)	Average annual operations
Brampton WRC	AWCNF1025	60	1041.75	11	80	15	43.25	28.7
Buckden STW	AWCNF11413	162	3032.53	120	2054.38	27	333	103
Catworth Hostel STW	AWCNF10528	20	155.6	7	71.83	24	231.25	17
Elton STW	AWNNF13141	28	551.25	0	0	2	2.75	10
Huntingdon (Godmanchester) STW	AWCNF1106	66	1343.5	16	216.5	5	35.5	29
Kimbolton STW	AWCNF1293	116	1604.07	80	899.78	50	575.25	82
Molesworth STW	AWCNF11400	40	602.75	31	396.75	22	296.75	31
Needingworth STW	AWCNF1149	72	1291.97	18	274.35	8	28.5	32.7
Oldhurst STW	AWCNF1160	106	1768.5	104	1662.25	51	567.74	87
Paxton STW	AWCNF11407	31	462.27	17	252.93	26	309.25	24.7
Ramsey STW	AWCNF1171	236	3430.17	144	2052.08	38	530	139.3
Sawtry STW	AWCNF1187	67	1201.17	37	425.33	71	1068	58.3
Somersham STW (Cambs)	AW1NF875	67	1119.63	45	563.3	14	175.75	42
St Ives STW	AWCNF1203	38	337.17	29	284.63	27	420.5	31.3
St Neots STW	AW1NF909	8	25.73	2	1.93	1	0.25	3.7
Upwood STW	AW1NF/A171	49	185.93	30	91.97	54	239.25	44.3
Waresley STW	AW1NF2543	50	935.13	67	1107.92	13	150.75	43.3
Wyton (Ex-RAF) WRC	AWCNF11516	55	590.75	50	566	39	544.75	48

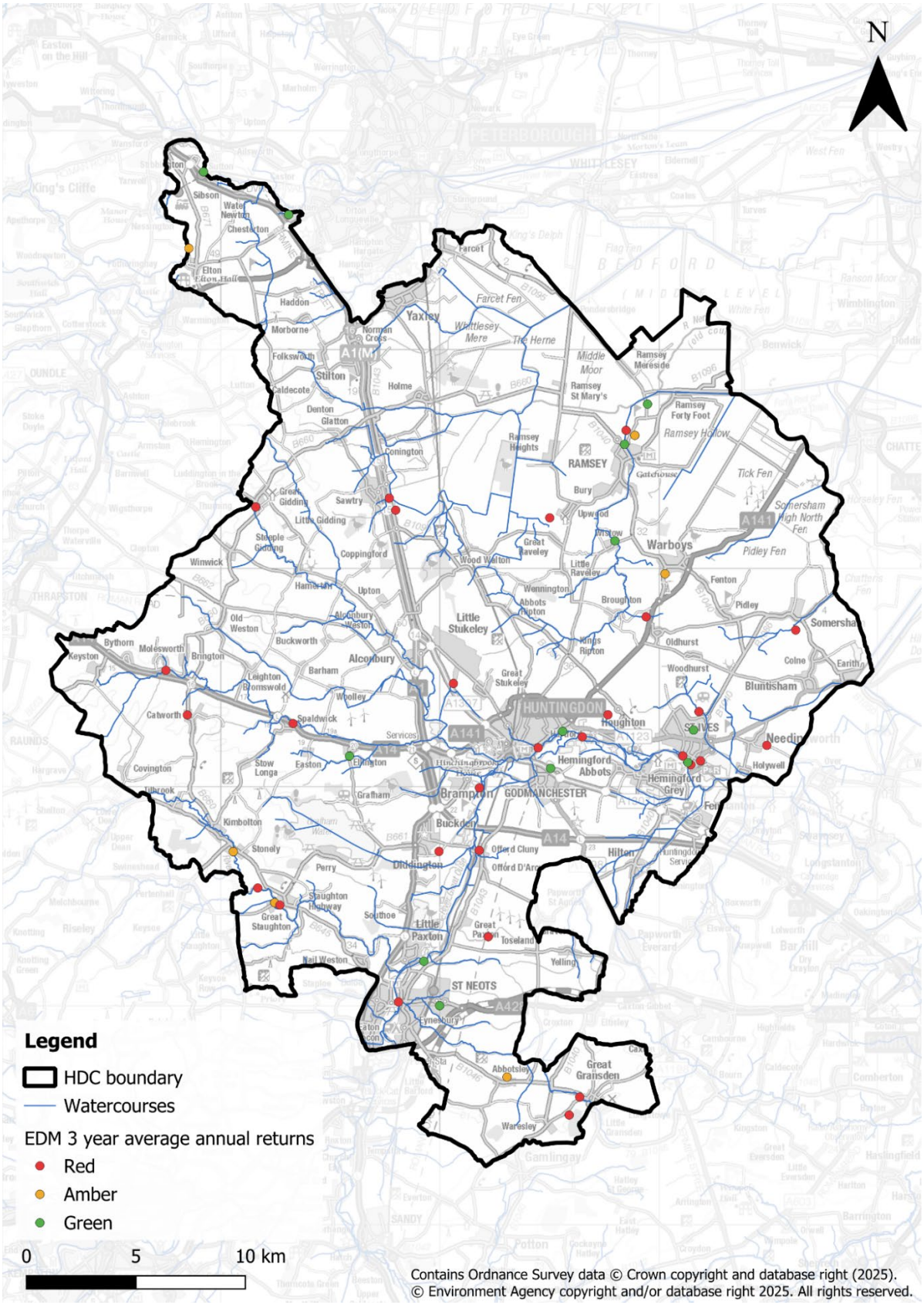


Figure 5-7: 3-year average storm overflow operations from Event Duration Modelling (EDM) information (based on data from 2022, 2023 and 2024)

5.4 Wastewater treatment

5.4.1 Water Recycling Centres in Huntingdonshire

AW provide wastewater services for development in Huntingdonshire. AW refer to their Wastewater Treatment Works (WwTWs) as Water Recycling Centres (WRCs). They may also be referred to as Sewage Treatment Works (STW) in some documents and data sources (for example, in the EDM storm overflow records). For this report, they will be referred to as WRCs. There are 34 WRCs that are within or currently serving communities in Huntingdonshire. 28 of these are expected to serve growth from commitments or adopted plans. The WRCs and catchments they serve are shown in Figure 5-8.

The Stage 1 IWMS investigated the remaining capacity at WRCs once all planned growth had been built. In Phase 2, the updated growth forecast containing Preferred Options allocations was used to update this assessment. Each development site was assigned to a WRC using the sewerage drainage area boundaries provided by AW (shown in Figure 5-8) to set a baseline for WRC capacity. Actual connection of a development site to a particular WRC may be different and will depend on the capacity of the receiving works, and the local sewer network.

Historically, wastewater from very small communities or isolated individual properties is managed by septic tanks. Discharge from septic tanks directly to surface waters is no longer permitted and both existing and new systems must either connect to the public sewer, use a small sewage treatment plant also known as a Package Treatment Plan (PTP), or install a drainage field (an array of pipes set in a permeable bedding material). Discharges to groundwater may use septic tanks or PTPs, but in either case the discharge should also be via a drainage field.

Very small developments in rural areas may be suitable for on-site treatment and discharge; however the Environment Agency will not usually permit this where there is a public sewerage system within a distance calculated as 30 metres per dwelling. Thus, for a single domestic property within 30 metres of a public sewer, or more than one property within 30 metres multiplied by the number of properties of a public sewer, the EA will not permit a private sewage treatment system. For example, for five properties less than 150 metres from a public sewer, private sewage treatment and discharge will not be permitted (EA and Defra, 2024). There is therefore a localised risk to water quality if all of these small developments were to be served by septic tanks, especially where there are clusters of small-scale new development.

A summary of Anglian Water's Drainage and Wastewater Management Plan (DWMP) was provided in Stage 1 (Section 4.7.2). This was based on the DWMP published in 2023 which is still the latest version, so this summary has not been updated in Stage 2.

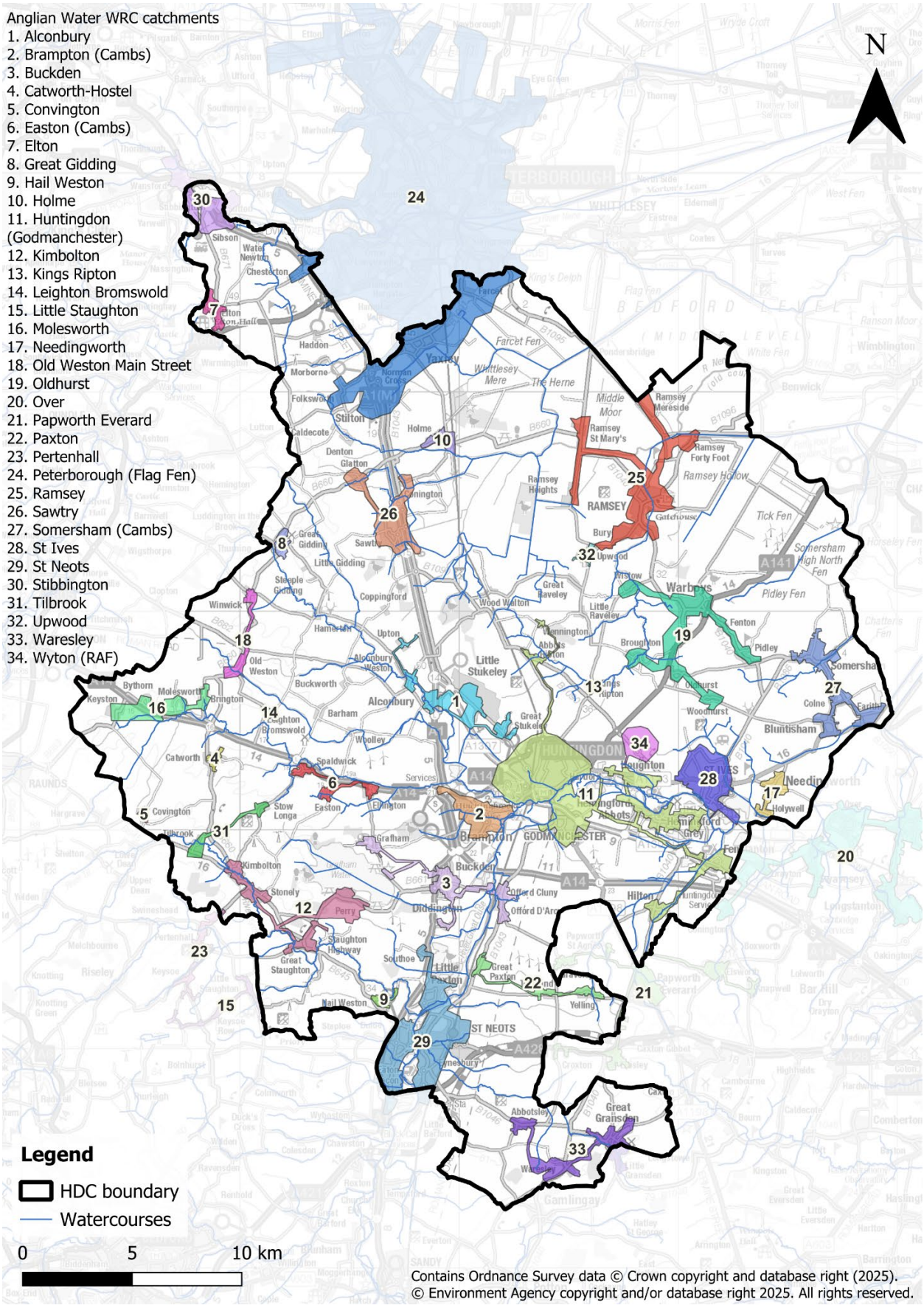


Figure 5-8 Water Recycling Centres in Huntingdonshire

5.4.2 Wastewater Treatment Works Flow Permit Assessment

Water companies currently monitor operational compliance, and the EA monitor Environmental Permit (EP) compliance by the water company and undertake enforcement and prosecution when this passes the EAs expediency rules. "The EA will prioritise and pursue investigations that involve serious environmental harm or harm to human health. The EA will act proportionately when they apply the law, taking account of and balance the:

- risk posed to people and the environment
- seriousness of the breach of the law
- impact on the environment, people and legitimate business
- cost of taking enforcement action against the benefit of taking it
- impact on economic growth"

(Environment Agency enforcement and sanctions policy, 2025)

This may change following the Independent Water Commission's review, which recommended a new regulator take responsibility for monitoring operational compliance. Figure 5-9 summarises the different types of wastewater releases that might take place, although precise details vary from works to works depending on the design.

During dry weather, the final effluent from the WRC should be the only discharge (1). With rainfall, the storm tanks fill and eventually start discharging to the watercourse (2) and storm overflows (referred to on the diagram as Combined Sewer Overflows (CSOs)) upstream of the storm tanks start to operate (3). The discharge of storm sewage from treatment works is allowed only under conditions of heavy rain or snow melt, and therefore the flow capacity of treatment systems is required to be sufficient to treat all flows arising in dry weather and the increased flow from smaller rainfall events. After rainfall, storm tanks should be emptied back to full treatment, freeing their capacity for the next rainfall event.

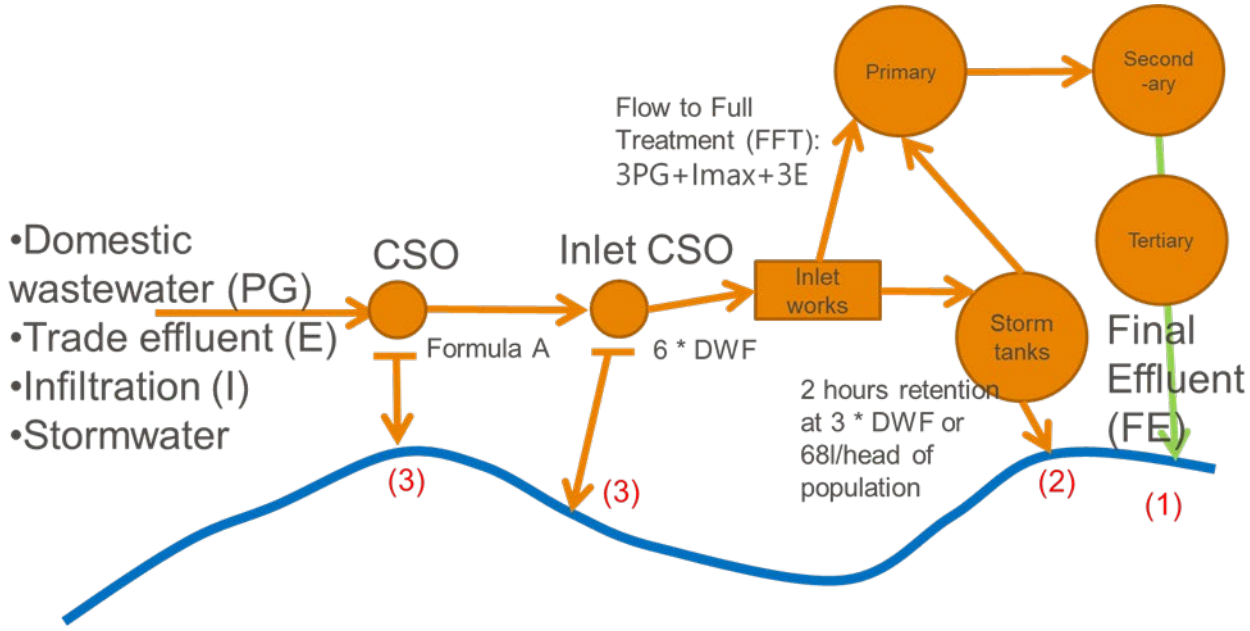


Figure 5-9 Overview of a typical combined sewerage system and WRC discharges

Environmental permits are used alongside water quality limits as a means of controlling the pollutant load discharged from a water recycling centre to a receiving watercourse. Sewage flow rates must be monitored for all WRCs where the permitted discharge rate is greater than 50 m^3/day in dry weather.

Permitted discharges are based on a statistic known as the Dry Weather Flow (DWF). As well as being used in the setting and enforcement of effluent discharge permits, the DWF is used for WRC design, as a means of estimating the 'base flow' in sewerage modelling and for determining the flow at which discharges to storm tanks will be permitted by the permit (Flow to Full Treatment, FFT).

Anglian Water has a position statement for Descriptive Works (WRCs with a descriptive permit), which serve small communities. These works were not designed to accommodate cumulative growth. AW considers these WRCs as red in the RAG rating, as discussed below.

WRC Environmental Permits also consent for maximum concentrations of pollutants, in most cases Suspended Solids (SS), Biochemical Oxygen Demand (BOD) and Ammonia (NH_4). Some works (usually the larger works) also have permits for Phosphorous (P). These are determined by the Environment Agency with the objective of ensuring that the receiving watercourse is not prevented from meeting its environmental objectives and that the water quality is improved over time. There is also specific regard to the Chemical Status element of the Water Framework Directive (WFD) classification.

Increased domestic population and/or employment activity can lead to increased wastewater flows arriving at a WRC. Where there is insufficient headroom at the works to treat these flows, this could lead to failures in flow consents.

AW provided data on the performance of their WRCs over the last five years (2020 to 2024). From this, the 80th percentile exceedance flow statistic was calculated. This is current flow at each WRC.

The commitments, completions, Preferred Options allocations and windfall for HDC as well as neighbouring LPA site allocations contained in the growth scenario were assigned to each WRC using the sewerage drainage area boundaries provided by AW. For each site, the future DWF was calculated using the occupancy rates and per-capita consumption values obtained from the WRMP, and the assumption that 95% of water used is returned to sewer. Permitted headroom was used as a substitute for actual designed hydraulic capacity for each WRC being assessed.

For employment sites, wastewater demand was estimated based on the predicted number of new employees. Floor space, employment use types, and employment densities were used to estimate the number of employees.

The predicted water demand from growth during the plan period was then added to the current observed flow at each WRC and then compared to the permitted flow. An estimated remaining capacity at the end of the plan period (before an increase in permit and/or upgrades are required) was then calculated. This is summarised in Table 5-8. A red-amber-green (RAG) assessment of headroom was then applied to each WRC.

WRCs with more than 10% of their flow permit remaining were given a "green" score. WRCs within 10% of their flow permit or exceeding their permit were given an amber score. Smaller WRCs with no flow monitoring or a descriptive permit were given a red score reflecting their limited capacity to accommodate growth. A WRC with an amber score may require an increase in its permit, and / or upgrades to treatment processes in order to accommodate further growth within the catchment. AW commented that at WRCs with an amber score "*no significant constraints have been identified*". Therefore, growth is likely to be acceptable. A red score would be applied where there were significant constraints to providing those upgrades. These scores are shown in Table 5-8 and Figure 5-10.

The majority of growth from Huntingdonshire is expected to be served by Huntingdon (Godmanchester) WRC, Alconbury WRC, Wyton (RAF) WRC and St Neots WRC. An assessment of each WRC's current flow against its permitted flow shows that there is not capacity for all the planned growth from Huntingdonshire during the plan period. Around half of the WRCs serving Huntingdonshire (including Huntingdon, Alconbury and Wyton WRCs) are likely to be exceeding their permit values by 2050 if no action is taken before then. AW state that Brampton, Elton, Huntingdon, Needingworth, Somersham and Tilbrook WRCs do not have capacity for future growth currently, beyond those existing sites that have planning consent and the right to connect. Within HDC's Local Plan Preferred Options allocations, there are no sites which will discharge to Elton or Tilbrook WRC and only one allocation (of 290 dwellings) to Needingworth WRC. AW also state that St Neots WRC and Peterborough (Flag Fen) WRC have DWF growth schemes planned for delivery in AMP8 (2025-2030) which will improve the capacity for flow and allow further development in the St Neots WRC and Peterborough (Flag Fen) WRC catchments. AW should plan for additional growth at the WRCs identified as having capacity constraints in this Water Cycle Study. Funding for growth schemes at these WRCs will need to be included in subsequent Price Review processes covering future AMP periods, depending on the phasing of development.

Flow data for Papworth Everard WRC and Peterborough (Flag Fen) WRC was not made available for this study, so an assessment of capacity at these WRCs has been based on the values from the Greater Cambridge Integrated Water Management Study Detailed WCS (October 2025) and Peterborough Detailed (Phase 2) WCS (April 2025).

Based on the information available, it is likely that Huntingdon (Godmanchester), Brampton (Cambs), Elton, Somersham (Cambs), Old Weston Main Street and St. Ives WRCs may currently be exceeding their permitted flow limits, when looking at the observed Q80 flow across three years (2022 to 2024).

The capacity assessment is based on the 80th exceedance percentile. Permit compliance is assessed by the Environment Agency using the 90th percentile statistic which results in a lower value than the 80th percentile - used in this assessment. Compliance at WRCs is not within the scope of the WCS and the assessment below should not be used to infer non-compliance.

Where a WRC is likely to exceed its permit, the permit would be reviewed by the EA and if a higher flow consent was agreed, a tighter permit limit for substance concentrations is very likely to be required. In some cases, this may not be technically feasibly possible if that

means concentrations tighter than the Technically Accepted Limit (TAL) which is 0.25 mg/l for phosphate for example.

AW state:

"*Anglian Water is working with the Environment Agency on alternative options to accommodate additional growth at WRCs that are already required to meet technically achievable limits (TAL) for phosphorus but will also need to accommodate additional growth through increasing dry weather flow capacity. Potential solutions being explored include catchment approaches such as investments in removing phosphorus from wastewater discharges at upstream WRCs. These solutions will need to be identified through the next DWMP and PR29 Business Plan to seek investment for what is needed to support growth without deterioration to water quality*."

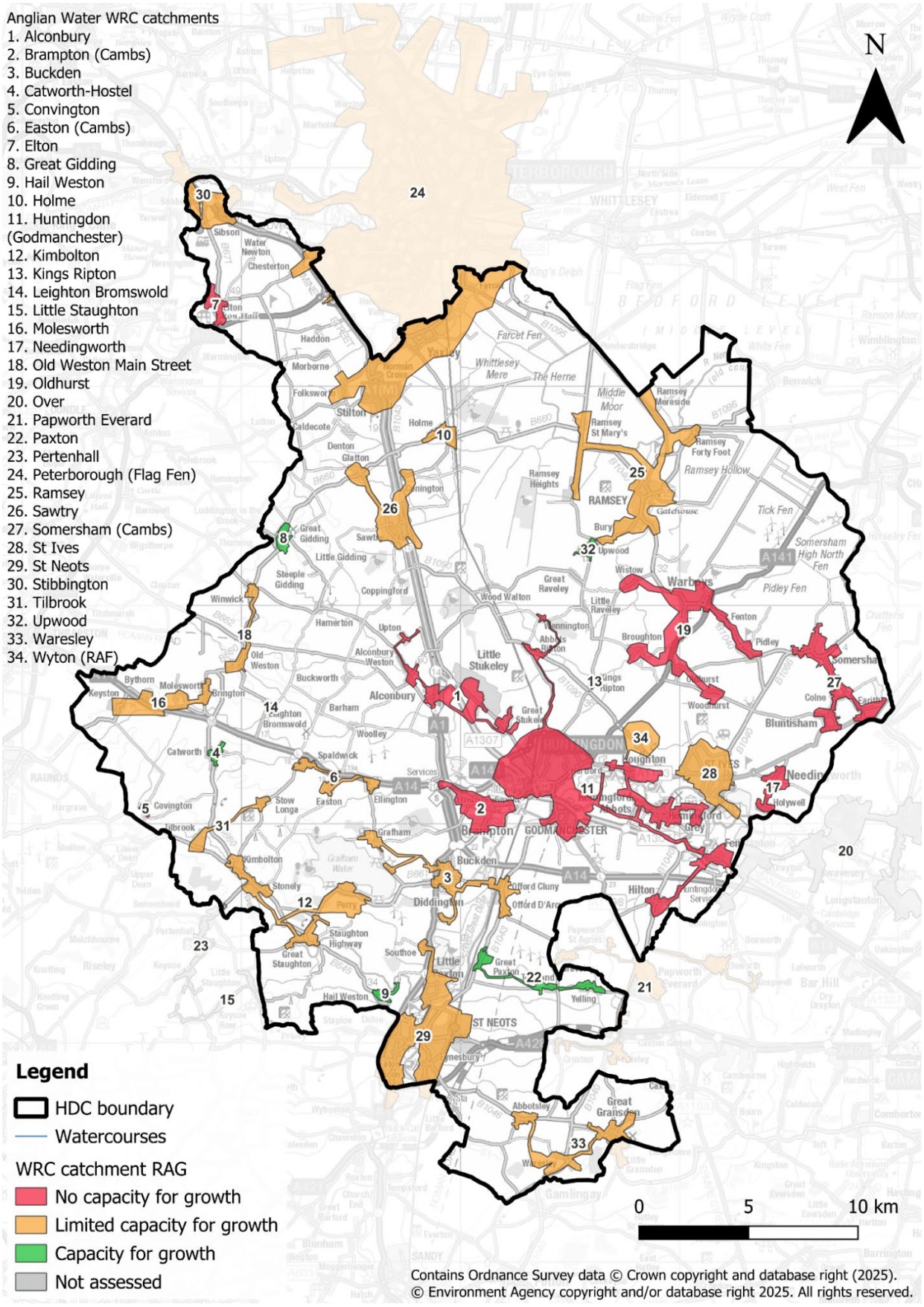


Figure 5-10: WRC flow capacity assessment results (WCS assessment using growth forecast and permitted flow)

Table 5-8: WRC flow capacity assessment results (WCS assessment using growth forecast and permitted flow)

WRC name	Current permitted flow limit (Ml/d)	Observed 80%ile DWF (Ml/d) 2022-2024	Predicted growth during plan period (no. of dwellings)	Predicted growth during plan period (m^2 of employment)	Total flow to 2050 / end of AMP12 (Ml/d)	JBA Capacity Assessment and AW comments
Alconbury	0.62	0.611	6,297	182,305	3.385	RED - Likely to exceed permit during plan period. No capacity for growth and no named WRC growth scheme in AMP8.
Brampton (Cambs)	1.5	1.607	138	2,519	1.653	RED - Exceeding permit. No capacity for growth and no named WRC growth scheme in AMP8.
Buckden	2.165	1.771	520	10,974	1.946	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Catworth-Hostel	0.072	0.044	69	-150	0.064	GREEN - Sufficient capacity to accommodate growth
Convington	Unknown	Unknown	19	0	Unknown	RED - Descriptive Works (WRCs with a descriptive permit), which serve small communities. These works were not designed to accommodate cumulative growth. AW considers these WRCs as red in the RAG rating

WRC name	Current permitted flow limit (Ml/d)	Observed 80%ile DWF (Ml/d) 2022-2024	Predicted growth during plan period (no. of dwellings)	Predicted growth during plan period (m^2 of employment)	Total flow to 2050 / end of AMP12 (Ml/d)	JBA Capacity Assessment and AW comments
Easton (Cambs)	0.25	0.206	150	0	0.250	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Elton	0.155	0.162	57	0	0.178	RED - Exceeding permit. No capacity for growth and no named WRC growth scheme in AMP8.
Great Gidding	0.08	0.050	70	0	0.069	GREEN - Sufficient capacity to accommodate growth
Hail Weston	0.12	0.079	73	0	0.100	GREEN - Sufficient capacity to accommodate growth
Holme	0.16	0.094	158	0	0.139	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Huntingdon (Godmanchester)	10.7	11.40	8,912	477,042	15.855	RED - Exceeding permit. No capacity for growth and no named WRC growth scheme in AMP8.

WRC name	Current permitted flow limit (Ml/d)	Observed 80%ile DWF (Ml/d) 2022-2024	Predicted growth during plan period (no. of dwellings)	Predicted growth during plan period (m^2 of employment)	Total flow to 2050 / end of AMP12 (Ml/d)	JBA Capacity Assessment and AW comments
Kimbolton	0.75	0.669	199	15,140	0.758	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Kings Ripton	Unknown	Unknown	46	0	Unknown	RED - Descriptive Works (WRCs with a descriptive permit), which serve small communities. These works were not designed to accommodate cumulative growth. AW considers these WRCs as red in the RAG rating
Leighton Bromswold	0.045	Unknown	36	0	Unknown	N/A
Little Staughton	0.225	Unknown	0	0	Unknown	N/A
Molesworth	0.106	0.081	83	302	0.108	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Needingworth	0.55	0.518	369	693	0.620	RED - Likely to exceed permit during plan period. No capacity for

WRC name	Current permitted flow limit (Ml/d)	Observed 80%ile DWF (Ml/d) 2022-2024	Predicted growth during plan period (no. of dwellings)	Predicted growth during plan period (m^2 of employment)	Total flow to 2050 / end of AMP12 (Ml/d)	JBA Capacity Assessment and AW comments
						growth and no named WRC growth scheme in AMP8.
Old Weston Main Street	0.059	0.540	71	28,065	0.910	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Oldhurst	1.015	0.520	334	-208	0.520	RED - Likely to exceed permit during plan period. No capacity for growth and no named WRC growth scheme in AMP8.
Papworth Everard †	1.607	1,161	0	0	1.253	AMBER - Exceeding permit. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Paxton	0.346	0.254	68	11,500	0.299	GREEN - Sufficient capacity to accommodate growth
Pertenhall	0.129	Unknown	0	0	Unknown	N/A
Peterborough (Flag Fen) †	66.192	52.227	22,889	1,249,849	55.400	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No

WRC name	Current permitted flow limit (Ml/d)	Observed 80%ile DWF (Ml/d) 2022-2024	Predicted growth during plan period (no. of dwellings)	Predicted growth during plan period (m^2 of employment)	Total flow to 2050 / end of AMP12 (Ml/d)	JBA Capacity Assessment and AW comments
						significant constraints have been identified.
Ramsey	2.576	1.931	1,092	41,792	2.361	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Sawtry	1.5	0.992	1,483	43,645	1.455	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Somersham (Cambs)	1.45	2.735	1,006	8,341	3.051	RED - Exceeding permit. No capacity for growth and no named WRC growth scheme in AMP8.
St Ives	4.2	6.237	2,607	12,990	6.936	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified. AW comment that based on the

WRC name	Current permitted flow limit (Ml/d)	Observed 80%ile DWF (Ml/d) 2022-2024	Predicted growth during plan period (no. of dwellings)	Predicted growth during plan period (m^2 of employment)	Total flow to 2050 / end of AMP12 (Ml/d)	JBA Capacity Assessment and AW comments
						Q80 flow across a 5 year average (rather than 3 years) does not exceed the permitted flow limit.
St Neots	9.2	5.686	9,760	160,582	9.097	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Stibbington	0.29	0.253	40	6,999	0.352	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Tilbrook	0.084	0.068	71	1,178	0.092	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Upwood	0.223	0.083	80	0	0.107	GREEN - Sufficient capacity to accommodate growth

WRC name	Current permitted flow limit (Ml/d)	Observed 80%ile DWF (Ml/d) 2022-2024	Predicted growth during plan period (no. of dwellings)	Predicted growth during plan period (m^2 of employment)	Total flow to 2050 / end of AMP12 (Ml/d)	JBA Capacity Assessment and AW comments
Waresley	0.426	0.361	177	559	0.326	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.
Wyton (RAF)	0.8	0.500	3,102	249,469	1.946	AMBER - Likely to be close to or exceed permit during plan period. Upgrades and / or a change to permit limit may be required. No significant constraints have been identified.

† Papworth Everard and Peterborough (Flag Fen) WRC assessments use the values from the Greater Cambridge IWMS Detailed Water Cycle Study (October 2025) and Peterborough Detailed (Phase 2) Water Cycle Study (April 2025) as flow data was not made available to JBA for these WRCs at Stage 2.

5.4.3 AW planning response

Anglian Water have circulated a "Planning Response List" to all LPAs in their area showing how they will respond to planning applications in each catchment going forward. AW planning responses are based on Q90 2024 data and high confidence growth build out rates. This data will be updated annually based on updated DWF data and consented development information. Updated planning responses will be shared with LPAs. The possible responses are outlined in Table 5-9. Planning responses do not impact sites which already have planning consent and a right to connect.

Table 5-9: Anglian Water possible planning responses

Planning Response	Explanation
Approve	There is capacity for growth and a planning application within this catchment is unlikely to be objected to by AW.
Pre-Occupation Condition	An upgrade is planned in this catchment within this AMP period (2025-2030) but has not yet been built. Development can proceed, but a condition should be applied to ensure upgrade is complete prior to occupation.
Object - Descriptive	"Descriptive" refers to where the WRC has a descriptive permit, i.e., the permit isn't a numeric flow or concentration, rather it is a visual check of the effluent being discharged. These are usually very small works and likely to be unsuitable for a significant development to connect into. It is possible that a developer could pay for a period of flow monitoring to persuade the EA that the WRC has capacity for a limited number of homes.
Object - SSD	There are constraints on the local wastewater network rather than the WRC itself (for example a pumping station requires an upgrade). AW are likely to object to this planning application.
Object	There is no capacity within this catchment for further growth and AW are likely to object to this planning application.

For allocations planned within a catchment with an "object" response. The lack of capacity and the need for upgrades would be noted within the IWMS and in AW's representations on the Local Plan. Once it is within a published plan, it would be taken into account for funding within the next AMP9 period (2030-35). The planning response would then change to "Approve" or "Pre-occupation condition".

Table 5-10: Anglian Water planning response by catchment

WRC	Planning Response
Alconbury	Approve
Brampton (Cambs)	Object
Buckden	Approve
Catworth-Hostel	Approve
Convington	Object - Descriptive
Easton (Cambs)	Approve
Elton	Object
Great Gidding	Approve
Hail Weston	Approve
Holme	Approve
Huntingdon (Godmanchester)	Object
Kimbolton	Approve
Kings Ripton	Object - Descriptive
Leighton Bromswold	Object - Descriptive
Little Staughton	Approve
Molesworth	Approve
Needingworth	Object
Old Weston Main Street	Approve
Oldhurst	Approve
Papworth Everard	Approve
Paxton	Approve
Pertenhall	Approve
Peterborough (Flag Fen)	Pre-Occupation Condition
Ramsey	Approve
Sawtry	Approve
Somersham (Cambs)	Object
St Ives	Approve
St Neots	Pre-Occupation Condition
Stibbington	Approve

WRC	Planning Response
Tilbrook	Approve
Upwood	Approve
Waresley	Approve
Wyton (Raf)	Approve

5.4.4 Conclusions and recommendations

A capacity assessment was undertaken by JBA comparing the future flow from each WRC (the current actual flow and the forecast additional flow from growth), with the permit limit. Several WRCs are currently exceeding their permit limit, including Huntingdon (Godmanchester), St Ives and Somersham (Cambs), where development is planned during the plan period.

Huntingdon (Godmanchester) WRC, Alconbury WRC, Wyton (RAF) WRC and St Neots WRC serve the majority of the planned development in Huntingdonshire, with St. Neots also serving growth in neighbouring Bedford Borough.

Modelling work indicates that 13 WRCs, including Huntingdon (Godmanchester), Alconbury and Wyton WRCs, do not have capacity to serve all of the growth planned in their catchments. They will exceed or continue exceeding their permit limits by 2050 if no action is taken. AW state that their data indicates that Brampton (Cambs), Elton, Huntingdon (Godmanchester), Needingworth, Somersham (Cambs) and Tilbrook WRCs do not have capacity for future growth currently, beyond those existing sites that have planning consent and the right to connect. Within HDC's Local Plan Preferred Options allocations, there are no sites which will discharge to Elton or Tilbrook WRC and only one allocation (of 290 dwellings) to Needingworth WRC. AW also state that St Neots WRC and Peterborough (Flag Fen) WRC have DWF growth schemes planned for delivery in AMP8 which will improve the capacity for flow and allow further development in the St Neots WRC and Peterborough (Flag Fen) WRC catchments. AW should plan for additional growth at the WRCs identified as having capacity constraints in this Water Cycle Study. Funding for growth schemes at these WRCs will need to be included in subsequent Price Review processes covering future AMP periods up, depending on phasing of development.

Where new infrastructure or upgrades to existing infrastructure may be required, engagement between HDC and AW should continue to ensure that delivery of this infrastructure is aligned with delivery of development sites. Grampian conditions may be sought by the water company should development be in advance of the necessary infrastructure. Where AW is asking for pre-occupation conditions, there is certainty around the delivery of these growth driven asset enhancement schemes; they are approved by Ofwat and in AW's business plan for AMP8 (2025-2030). A planning condition needs to meet the six planning tests and can only be used where it is possible to be discharged by the developer. AW comment that where they object to planning applications, they are unable to promote growth schemes as they do not have sufficient funding to deliver the

required growth upgrades. AW will have to wait for AMP9 (2030-2035) before they can request further growth investment, however AMP cycle funding cannot be guaranteed. If funding is not secured in AMP9, AW can re-present the need in the subsequent price reviews.

AW state:

"*Anglian Water is committed to enabling sustainable growth and is collaborating with external stakeholders to find solutions to capacity challenges. Anglian Water is working to secure policy and regulatory change that allows water companies to better support growth, for example by allowing us to invest strategically to create new capacity ahead of growth materialising, and by changing charging rules to allow for developer contributions to new infrastructure*."

There are a number of poorly performing storm overflows within the sewer networks and/or storm tanks at WRCs in Huntingdonshire. Furthermore, this performance has got significantly worse in the last two years. Details of actions AW will undertake in relation to storm overflows can be found on their website. Growth within these catchments could result in an increase in the operations of these overflows contributing to a worsening of water quality in the area. Action should be taken by the water companies to address these overflows prior to an increase in wastewater demand being generated by new development.

Table 5-11: Recommendations for wastewater infrastructure

Recommendation	Responsibility	Timescale
Undertake network modelling where appropriate to ensure adequate provision of water supply to new sites without detriment to existing customers and feedback to HDC on implications for phasing of sites. AW will undertake desktop modelling for any pre-planning enquiry that needs a water supply assessment.	AW	Early in Local Plan period / through pre-planning enquiry process
Early engagement is required with AW to ensure infrastructure is in place prior to occupation.	Developers	Early in Local Plan period
Developers should obtain infrastructure maps from AW to ensure existing water supply infrastructure is taken into account in site layout. Available via Digdat website.	Developers	At master planning stage
Take into account wastewater infrastructure constraints in phasing development in partnership with the sewerage undertaker	HDC and AW	During Local Plan process
Developers will be expected to work with the sewerage undertaker closely and early in the	HDC, AW and developers	Ongoing

Recommendation	Responsibility	Timescale
planning promotion process to develop an Outline Drainage Strategy for sites. The Outline Drainage strategy should demonstrate the wastewater assets required, their locations including points of connection to the public foul sewerage, whether the site drainage will be adopted by the water company and if any sewer requisitions will be required.		
HDC could require (through planning policy) that developers must demonstrate there is capacity available in the sewerage network and receiving WRC to accommodate wastewater flows from the site.	HDC and developers	Within Local Plan
Developers will be expected to demonstrate to the Lead Local Flood Authority (LLFA) that surface water from a site will be disposed using a sustainable drainage system (SuDS) with connection to surface water sewers seen as the last option. AW surface water guidance should be consulted. New connections for surface water to foul sewers will be resisted by the LLFA and AW.	LLFA and developers	Ongoing
Engagement between HDC and AW should continue to ensure that where strategic infrastructure is required, it can be planned in by AW and will not lead to any increase in discharges from sewer overflows.	HDC, developers, AW	During Local plan process
Engagement with AW should continue to ensure that provision of WRC capacity at Huntingdon (Godmanchester), Alconbury, Wyton (RAF) and St Neots is aligned with delivery of development. AW will consider known planned development in the preparation of the next DWMP which will inform investment required for these WRCs.	HDC & AW	Ongoing
Provide Annual Monitoring Reports to Anglian Water detailing projected housing growth.	HDC	Ongoing
AW should ensure that the growth forecasts used for planning upgrades at WRCs take into account the appropriate level of growth.	AW	Ongoing / to be incorporated into next and

Recommendation	Responsibility	Timescale
		subsequent AMP cycles
AW to assess growth demands as part of their wastewater asset planning activities and feedback to the Council if concerns arise.	AW	Ongoing

6 Water quality and environmental impact

6.1 Introduction

An increase in the discharge of effluent from Water Recycling Centres (WRC) as a result of development and growth in the area in which they serve can lead to a negative impact on the quality of the receiving watercourse. Under the Water Framework Directive (WFD), a watercourse is not allowed to deteriorate from its current WFD classification (either as an overall watercourse or for individual elements assessed).

It is Environment Agency (EA) policy to model the impact of increasing effluent volumes on the receiving watercourses. Where the scale of development is such that a deterioration is predicted, a variation to the Environmental Permit (EP) may be required for the WRC to improve the quality of the final effluent, so that the increased pollution load will not result in a deterioration in the water quality of the watercourse. This is known as "no deterioration" or "load standstill". The need to meet river quality targets is also taken into consideration when setting or varying a permit.

The Environment Agency operational instructions on water quality planning and no-deterioration are currently being reviewed. Previous operational instructions (Environment Agency (2012) Water Quality Planning: no deterioration and the Water Framework Directive (now withdrawn) set out a hierarchy for how the no-deterioration requirements of the WFD should be implemented on inland waters. The potential impact of development should be assessed in relation to the following objectives:

- Could the development cause a greater than 10% deterioration in water quality? This objective ensures that all the environmental capacity is not taken up by one stage of development and there is sufficient capacity for future growth.
- Could the development cause a deterioration in WFD class of any element assessed? This is a requirement of the Water Framework Directive to prevent a deterioration in class of individual contaminants. The "Weser Ruling" (European Court of Justice, 2015) by the European Court of Justice in 2015 specified that individual projects should not be permitted where they may cause a deterioration of the status of a water body. If a water body is already at the lowest status ("bad"), any impairment of a quality element was considered to be a deterioration. Emerging practice is that a 3% limit of deterioration is applied.
- Could the development alone prevent the receiving watercourse from reaching Good Ecological Status (GES) or Potential? Is GES possible with current technology or is GES technically possible after development with any potential WRC upgrades.

The overall WFD classification of a water body is based on a wide range of ecological and chemical classifications. This assessment focuses on three physico-chemical quality elements; Biochemical Oxygen Demand (BOD), Ammonia, and Phosphate as set out in the EA guidance.

BOD – Biochemical Oxygen Demand

BOD is a measure of how much organic material – sewage, sewage effluent or industrial effluent – is present in a river. It is defined as the amount of oxygen taken up by micro-organisms (principally bacteria) in decomposing the organic material in a water sample stored in darkness for 5 days at 20°C. Water with a high BOD has a low level of dissolved oxygen. A low oxygen content can have an adverse impact on aquatic life.

Ammonia

Nitrogen is an essential nutrient required by all plants and animals for the formation of amino acids. In its molecular form nitrogen cannot be used by most aquatic plants, and so it is converted into other forms. One such form is ammonia. This may then be oxidized by bacteria into nitrate (NO_3) or nitrite (NO_2). Ammonia may be present in water in either the unionized form NH_3 or the ionized form NH_4. Taken together these forms are called Total Ammonia Nitrogen.

Although ammonia is a nutrient, in high concentrations it can be toxic to aquatic life, in particular fish, affecting hatching and growth rates.

The main sources in rivers include agricultural sources, (fertiliser and livestock waste), residential sources (ammonia containing cleaning products and septic tank leakages), industrial processes and WRCs.

Phosphate

Phosphorus is a plant nutrient and elevated concentrations in rivers can lead to accelerated plant growth of algae and other plants. Its impact on the composition and abundance of plant species can have adverse implications for other aspects of water quality, such as oxygen levels. These changes can cause undesirable disturbances to other aquatic life such as invertebrates and fish.

Phosphorus (P) occurs in rivers mainly as Phosphate (PO_4), which are divided into Orthophosphates (reactive phosphates), and organic Phosphates.

Orthophosphates are the main constituent in fertilizers used in agriculture and domestic gardens and provide a good estimation of the amount of phosphorus available for algae and plant growth and is the form of phosphorus that is most readily utilized by plants.

Organic phosphates are formed primarily by biological processes and enter sewage via human waste and food residues. Organic phosphates can be formed from orthophosphates in biological treatment processes or by receiving water biota (animal and plant life).

Although it is phosphorus in the form of phosphates that is measured as a pollutant, the term phosphorus is often used in water quality work to represent the total phosphorus containing pollutants.

6.2 Water quality modelling

6.2.1 General approach

SIMCAT is used by the Environment Agency to model water bodies and identify where permit changes are needed to prevent deterioration or improve water quality as well as supporting decision making to guide development to locations where environmental deterioration will be reduced. SIMCAT is a 1D model which represents inputs from both point-source effluent discharges and diffuse sources, and the behaviour of solutes in the river.

SIMCAT can simulate inputs of discharge and water quality data and statistically distribute them from multiple effluent sources along the river reach. It uses the Monte Carlo method for distribution that randomly models up to 2,500 boundary conditions. The simulation calculates the resultant water quality as the calculations cascade further downstream.

Once the distribution results have been produced, an assessment can be undertaken on the predicted mean and ninetieth percentile concentrations or loads compared to the Environmental Quality Standards.

The study area is covered by the Wash SIMCAT model.

Within SIMCAT, the determinands modelled were Biochemical Oxygen Demand (BOD), Ammonia (NH_4) and Phosphorus (P). In fresh waterbodies, phosphate is usually the limiting nutrient for algal growth (the nutrient which disrupts the growth or abundance of an organism). However, in marine environments, nitrogen is considered to be the limiting nutrient.

The methodology followed is summarised in Figure 6-1 below. In this flow chart, all of the questions in the top row must be answered.

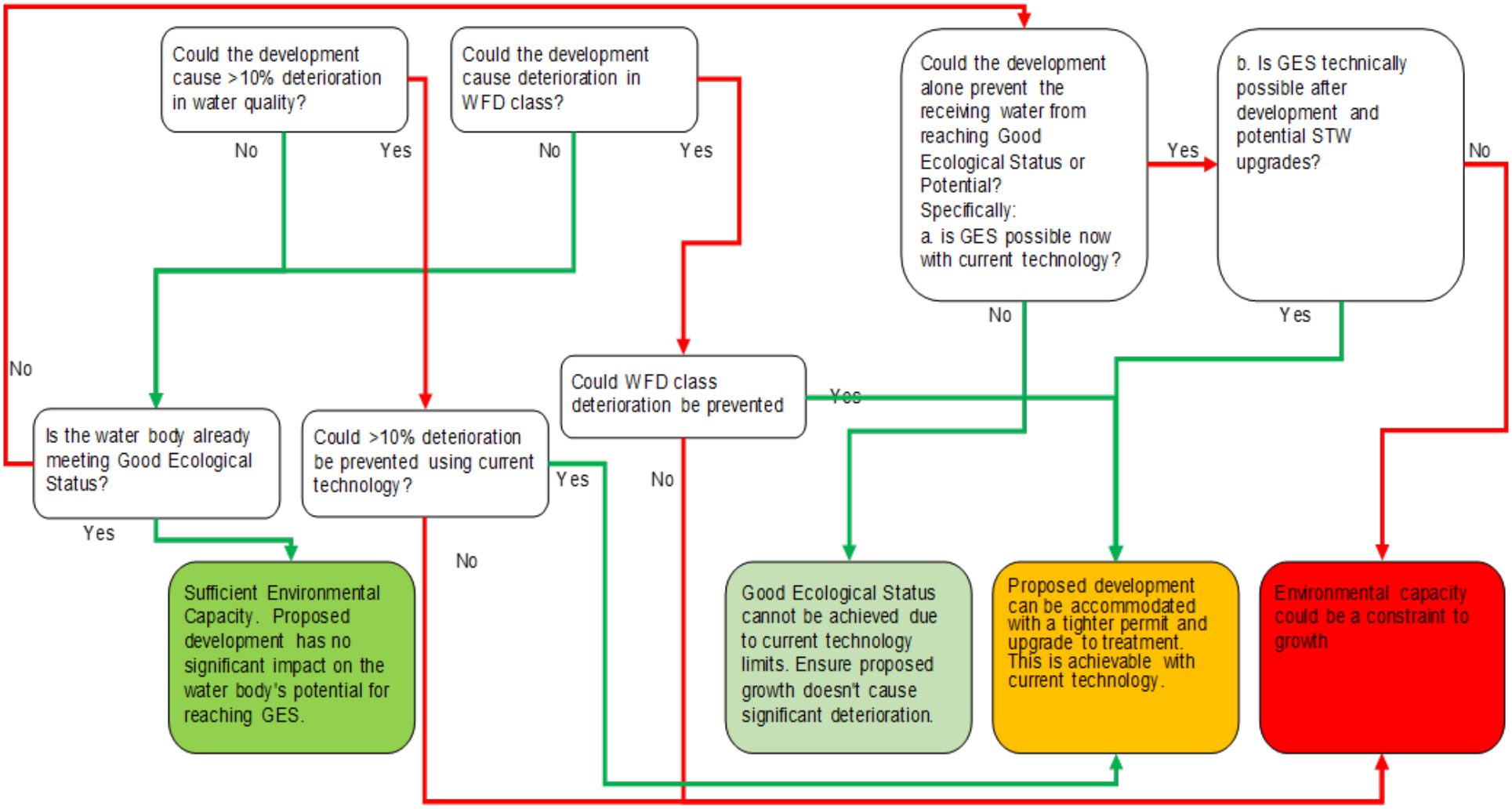


Figure 6-1: Water quality impact assessment following EA guidance

Where modelling indicated that forecast growth may lead to a deterioration in the watercourse, or where the watercourse is not currently meeting at least a 'Good' class for each determinant, the models were used to test whether this could be addressed by applying stricter discharge limits. In such cases, a Technically Achievable Limit (TAL) was considered. Technically Achievable Limit refers to the concentrations that effluent can be realistically treated to using the best available technology.

The EA advised that the following permit values are achievable using treatment at TAL, and that these values should be used for modelling all WRC potential capacity irrespective of the existing treatment technology and size of the works:

- Ammonia (90%ile): 1 mg/l
- BOD (90%ile): 5 mg/l
- Phosphorus (mean): 0.25 mg/l

This assessment did not take into consideration whether it is feasible to upgrade each existing WRC to TAL due to constraints of costs, timing, space, carbon costs etc.

6.2.2 Methodology

The study area is covered by the Wash SIMCAT model developed by the Environment Agency. The models have been largely based on observed flow and quality data for the period 2014-2020. A widespread update of the models, and the resultant recalibration were not within scope of this project. It was therefore agreed with the EA to update just the effluent flow at WRCs receiving growth in the study area. Consequently, the modelling work presented should be used to identify areas at risk of water quality deterioration, but not for permit setting.

Flow data from the last three years for each WRC in the study area was supplied by Anglian Water (AW) and used to update the model. Several of the WRCs in the study area already had upgrades completed in AMP7 or planned in AMP8, which would be expected to improve water quality at those locations, as shown in the PR24 WINEP documents. St Neots WRC is one example where investment to reduce phosphate is planned during AMP8, and therefore the phosphate permit will be tightened. These completed and planned upgrades were therefore factored into the model by applying the updated permit limit where it was less than the current discharge in the model. The model was then run in its updated form to set a 2024 baseline. It is expected that further upgrades to WRCs will be planned in AMP9 (2030-35) which will be defined in the AMP9 WINEP and the business plans for AW (PR29). As these documents have not yet been published, AMP9 schemes have not been factored into the modelling.

Additional effluent flow from growth during the new Local Plan period was added to current flow at WRCs receiving growth and the model re-run as a future scenario.

Some smaller WRCs within the model have "descriptive permits" which do not set specific numerical limits for DWF and effluent quality, and these WRC do not have flow monitoring in place. The models are calibrated to observed water quality measurements and represent the overall water quality in the catchment well, however at a local scale some of these

smaller WRCs are not well represented and do not have discharge data or have pollutant discharges modelled as a load in kilograms rather than an effluent flow and concentration.

No deterioration test

The results from the baseline and future versions of the model were compared to assess the predicted percentage deterioration for each of the modelled determinands. WFD targets for each river reach were provided by the EA and used to determine if there was a risk of a class deterioration.

Where a deterioration of 10% or greater was predicted or a change in class (considered to be a significant deterioration under WFD) a further test was conducted to see if this deterioration could be prevented by upgrades to treatment processes. This used another version of the model with each WRC set to operate at their Technically Achievable Limit (TAL).

Good Ecological Status assessment

Where treatment at TAL and reductions in diffuse sources in the present day could improve water quality to achieve Good Ecological Status (GES), it is important to understand whether this could be compromised as a result of future growth within the catchment.

Guidance from the EA suggests breaking this down into two questions:

a) Is GES possible now with current technology?

b) Is GES technically possible after development and any potential WwTW upgrades?

If the answer to questions a) and b) are both ‘Yes’ or both ‘No’ then the development can be assessed as having no significant impact on the water bodies potential for reaching GES, i.e., the development alone is not preventing GES from being achieved. An "amber" score is given where GES could be achieved with improvements in treatment technology reflecting the need for an intervention at that WRC, but growth is not preventing this. It is given a "yellow" score where a WRC would need to be upgraded beyond the current technically achievable limit in order to achieve GES, but as for the amber rating it is not growth that is preventing this.

If the answer to a) is ‘Yes’ and the answer for b) is ‘No’ then development is having a significant impact, i.e., before development GES could be achieved with upstream improvements, and after growth the additional effluent from growth prevents GES being achieved - so it is growth that is preventing GES from being achieved leading to a "red" score.

The possible answers are summarised in Table 6-1.

Run type 9 within SIMCAT was used which assumes that upstream flow at each treatment works is at good ecological status. This simulates improvements being made in upstream water quality. The water quality of the discharge from each WRC in order to maintain GES is then calculated by the model.

Table 6-1: Possible GES assessment results

Predicted to achieve GES after growth	Could achieve GES today with improvements in upstream water quality? (a)	Could achieve GES in the future with improvements in upstream water quality? (b)	Assessment Result
YES	N/A	N/A	GREEN - Sufficient environmental capacity. Proposed development has no significant impact on the water body's potential for meeting GES.
NO	YES	YES	AMBER - Proposed development can be accommodated with a tighter permit and upgrade to treatment. This is achievable with current technology.
NO	NO	NO	YELLOW - Good ecological status cannot be achieved due to current technology limits. Ensure proposed growth doesn't cause significant deterioration.
NO	YES	NO	RED - Environmental capacity could be a constraint to growth.

6.2.3 Results

The first test applied compares the future scenario (based on planned growth) to the baseline and assesses whether a significant deterioration in water quality occurs – either a 10% deterioration in water quality or a deterioration in WFD class. Where, a significant deterioration is predicted, the TAL scenario then assesses whether this deterioration could be prevented by improvements in treatment processes.

Table 6-2 below summarises the results of the WFD water quality assessments. Where a "green" score is given, deterioration was less than 10% for each determinand, and no change in WFD class is predicted. Where an "amber assessment is given, a 10% deterioration or change in WFD class is predicted, but this could be prevented by improvements in treatment technology. In these cases, upgrades may therefore be required at that WRC or at WRCs upstream, which would be undertaken by AW.

A "red" assessment would be given where a significant deterioration in water quality is predicted, and it cannot be prevented by improvements in treatment processes.

The growth scenario for the plan period does not show any growth within the Little Staughton, Pertenhall and Papworth Everard WRC catchments. Results show 13 of the 30 WRCs serving growth areas during the plan period are predicted to experience a significant deterioration for Ammonia, one WRC for BOD, and two WRCs for Phosphate. A class change is predicted for two WRCs for ammonia (Moderate to Poor at Alconbury and Good to Bad at Old Weston Main Street), and at Old Weston Main Street for BOD and phosphate (Moderate to Bad and Poor to Bad respectively). Old Weston Main Street and Waresley WRC are at Bad status for ammonia, Old Weston Main Street WRC is also at Bad status for BOD, and Holme, Molesworth, Old Weston Main Street and Waresley WRCs are at Bad status for phosphate and are predicted to deteriorate by greater than 3%. This is considered a significant deterioration; however this can be prevented by improvements in treatment to TAL, with the exception of at Old Weston Main Street WRC.

At Old Weston Main Street WRC, modelling predicts a significant deterioration of over 600% for ammonia, 80% for BOD and 300% for phosphate. It should be noted that this WRC is represented in the SIMCAT model as a SAGIS feature, typically represented as loads rather than concentrations. As such it hasn't been possible to update the baseline model using the flow data provided by AW and as such the deterioration is likely to be exaggerated in the future scenario. Similarly, TAL hasn't been applied to these load type WRCs and as such there is no improvement shown in the TAL scenario. There are no proposed local plan allocations which discharge to Old Weston Main Street. However, whilst the number of additional houses planned in the catchment of said WRC is low, combined with the flow from the employment commitment site at RAF Molesworth, this WRC is predicted to serve, this is a large increase in flow at the WRC and would likely need improvements in treatment to accommodate growth. Anglian Water should be consulted on the feasibility and level of upgrade required to accommodate growth at this WRC.

It should be noted that the discharge locations of Catworth-Hostel and Molesworth WRCs in the SIMCAT model are not located at the discharge locations specified in the EAs consents database. The locations have been left unchanged in the model as the model has been

previously calibrated for this configuration and recalibration is outside the scope of this assessment. Whilst modelling shows there are no significant deteriorations after TAL is applied at these WRCs, this should be considered as a limitation when assessing the deterioration downstream of these WRCs.

Modelling predicts that deterioration is reduced to 0% at 28 of the 30 WRCs serving growth with TAL. The exceptions to this are at Old Weston Street where TAL was not applied and at Leighton Bromswold WRC where ammonia deterioration is predicted to be 5%. Whilst the predicted growth in the catchment of Leighton Bromswold WRC is small (1 commitment and windfall allowance), deterioration may be exacerbated by the additional growth upstream at Catworth.

In this assessment, improvements in treatment processes have been modelled by assuming the WRC could be upgraded to operate at TAL. It has not investigated the feasibility of upgrading individual WRCs. This should be performed by AW who have the detailed knowledge of their assets, and the Environment Agency who are responsible for setting permit limits at WRCs.

It should be noted that AW state:

"*St Neots WRC is already identified for investment to reduce phosphorus to TAL by 31st March 2030. Any additional growth (i.e. dry weather flow increase) will need to be assessed through pre-application advice to the EA and may need to go beyond these standards, which could be technically challenging.*"

Development is forecast throughout the plan period in the St Neots WRC catchment. Modelling shows that deterioration in WFD status for Ammonia, BOD and Phosphate in water at St Neots WRC is prevented during the TAL scenario. Investment planned by AW at St Neots WRC, including a new phosphate permit by March 2030 should enable phosphate levels to be reduced to TAL in 2030. Therefore, given the growth forecast in this catchment, further investment may be required to reduce Ammonia and BOD levels to TAL.

Appendix A maps the predicted deterioration in water quality visually for Ammonia, BOD and Phosphate in the future, and the predicted deterioration if WRCs were performing at the technically achievable limit.

The first set of maps in Appendix A.2 show the modelled results if wastewater discharges were increased by the volume predicted during the Local Plan period. They show the result at the point of mixing (i.e., where the WRC discharges) and the results downstream in the river. These are colour coded based on whether deterioration is greater (red) or less than (amber) 10%. Areas where no deterioration is predicted are coloured green.

The second set of maps in Appendix A.2 shows the modelled results in the TAL scenario, where each WRC has been upgraded to the technically achievable limit. This shows areas where deterioration could not be prevented. In each case this is less than 10%.

The growth stated in Table 6-2 includes recent completions, commitments, local plan Preferred Options allocations and windfall for HDC as well as neighbouring LPA site allocations.

Table 6-2: Water quality modelling results (WFD)

WRC	Housing growth over plan period (dwellings)	Employment growth over plan period (m^2)	Could the development cause a greater than 10% deterioration in water quality for one or more of Ammonia, BOD, or Phosphate?	Could the development cause a deterioration in WFD class of any element?	Can a deterioration of >10% or in class be prevented by treatment at TAL?
Alconbury	6,297	182,305	Yes	Yes	Yes
Brampton (Cambs)	138	2,519	Yes	No	Yes
Buckden	520	10,974	No	No	Yes
Catworth-Hostel	69	-150	No	No	Yes
Convington	19	0	No	No	Yes
Easton (Cambs)	150	0	Yes	No	Yes
Elton	57	0	No	No	Yes
Great Gidding	70	0	No	No	Yes
Hail Weston	73	0	No	No	Yes
Holme	158	0	No	No	Yes
Huntingdon (Godmanchester)	8,912	477,042	Yes	No	Yes
Kimbolton	199	15,140	No	No	Yes
Kings Ripton	46	0	Yes	No	Yes
Leighton Bromswold	36	0	Yes	No	Yes
Molesworth	83	302	No	No	Yes
Needingworth	369	693	Yes	No	Yes

WRC	Housing growth over plan period (dwellings)	Employment growth over plan period (m^2)	Could the development cause a greater than 10% deterioration in water quality for one or more of Ammonia, BOD, or Phosphate?	Could the development cause a deterioration in WFD class of any element?	Can a deterioration of >10% or in class be prevented by treatment at TAL?
Old Weston Main Street	71	28,065	Yes	Yes	No
Oldhurst	334	-208	Yes	No	Yes
Paxton	68	11,500	Yes	No	Yes
Peterborough (Flag Fen)	22,889	1,249,849	No	No	Yes
Ramsey	1,092	41,792	Yes	No	Yes
Sawtry	1,483	43,645	No	No	Yes
Somersham (Cambs)	1,006	8,341	No	No	Yes
St Ives	2,607	12,990	No	No	Yes
St Neots	9,760	160,582	Yes	No	Yes
Stibbington	40	6,999	No	No	Yes
Tilbrook	71	1,178	No	No	Yes
Upwood	80	0	No	No	Yes
Waresley	177	559	No	No	Yes
Wyton (RAF)	3,102	249,469	Yes	No	Yes

Table 6-3 summarises the results of the GES assessment. Four different assessments are possible which are shown in Table 6-1 above.

- If good ecological status is predicted to be achieved within the receiving waterbody following growth during the plan period, a green assessment is given. In this case, it can be said that there is environmental capacity to accommodate growth.
- Where GES is not currently being achieved but could be achieved if upstream water quality were improved, then an amber score is given – growth could be accommodated without preventing a waterbody achieving GES in the future.
- Where GES cannot be achieved either today or in the future, despite upgrades in treatment processes, and improvements in upstream water quality, then a yellow assessment is given – and it can be said that GES cannot be achieved due to the limits of current technology. Growth alone is not predicted to prevent GES being achieved in the future.
- Should GES be achievable today, but not in the future due to growth, a red assessment would be given, and it can be said that environmental capacity could be a constraint to growth, i.e., growth alone could prevent good ecological status being achieved in the future.

Table 6-3: Good Ecological Assessment (GES) results

WRC	Ammonia assessment	Biochemical Oxygen Demand (BOD) assessment	Phosphate assessment
Alconbury	Amber	Green	Amber
Brampton (Cambs)	Green	Green	Amber
Buckden	Yellow	Amber	Yellow
Catworth-Hostel	Green	Amber	Amber
Convington	Green	Amber	Amber
Easton (Cambs)	Green	Amber	Amber
Elton	Green	Green	Amber
Great Gidding	Green	Amber	Amber
Hail Weston	Green	Amber	Amber
Holme	Amber	Amber	Amber
Huntingdon (Godmanchester)	Green	Green	Amber
Kimbolton	Green	Amber	Amber
Kings Ripton	Green	Amber	Amber
Leighton Bromswold	N/A - GES Assessment cannot be undertaken as the effluent concentration is expressed as a load rather than a concentration	N/A - GES Assessment cannot be undertaken as the effluent concentration is expressed as a load rather than a concentration	N/A - GES Assessment cannot be undertaken as the effluent concentration is expressed as a load rather than a concentration
Molesworth	Amber	Green	Amber
Needingworth	Green	Green	Amber
Old Weston Main Street	N/A- GES Assessment cannot be undertaken as the effluent	N/A - GES Assessment cannot be undertaken as the effluent	N/A - GES Assessment cannot be undertaken as the effluent

WRC	Ammonia assessment	Biochemical Oxygen Demand (BOD) assessment	Phosphate assessment
	concentration is expressed as a load rather than a concentration	concentration is expressed as a load rather than a concentration	concentration is expressed as a load rather than a concentration
Oldhurst	Green	Amber	Amber
Paxton	Green	Green	Amber
Peterborough (Flag Fen)	Green	Green	Amber
Ramsey	Amber	Amber	Amber
Sawtry	Green	Amber	Amber
Somersham (Cambs)	Yellow	Yellow	Yellow
St Ives	Yellow	Amber	Yellow
St Neots	Green	Green	Amber
Stibbington	Green	Green	Amber
Tilbrook	Green	Amber	Amber
Upwood	Green	Amber	Amber
Waresley	Amber	Amber	Amber
Wyton (RAF)	Green	Green	Amber

Results of the GES assessment show that proposed development will not prevent good ecological status being achieved. For the majority of treatment works, there is sufficient environmental capacity for ammonia. However, for BOD and phosphate, a tighter permit or upgrade would be required at most WRCs. It is not possible to assess GES at Leighton Bromswold and Old Weston Main Street WRCs as the effluent concentrations are represented as loads rather than concentrations and this is not supported within the SIMCAT software.

6.2.4 Priority substances

As well as the physico-chemical water quality elements (BOD, Ammonia, Phosphate etc.) addressed above, a watercourse can fail to achieve Good Ecological Status due to exceeding permissible concentrations of hazardous substances. Currently 33 substances are defined as hazardous or priority hazardous substances, with others under review. Such substances may pose risks both to humans (when contained in drinking water) and to aquatic life and animals feeding in aquatic life. These substances are managed by a range of different approaches, including EU and international bans on manufacturing and use, targeted bans, selection of safer alternatives and end-of-pipe treatment solutions. There is considerable concern within the UK water industry that regulation of these substances by setting permit values which require their removal at wastewater treatment works will place a huge cost burden upon the industry and its customers, and that this approach would be out of keeping with the "polluter pays" principle.

We also consider how the planning system might be used to manage priority substances:

- Industrial sources – whilst this report covers potential employment sites, it doesn't consider the type of industry and therefore likely sources of priority substances are unknown. It is recommended that developers should discuss potential uses which may be sources of priority substances from planned industrial facilities at an early stage with the EA and, where they are seeking a trade effluent consent, with the sewerage undertaker.
- Agricultural sources - There is limited scope for the planning system to change or regulate agricultural practices. UK water companies are involved in a range of “Catchment-based Approach” schemes aimed at reducing diffuse sources of pollutants, including agricultural pesticides.
- Surface water runoff sources - some priority substances e.g., heavy metals, are present in urban surface water runoff. It is recommended that future developments would manage these sources by using SuDS that provide water quality treatment, designed following the CIRIA SuDS Manual.
- Domestic wastewater sources - some priority substances are found in domestic wastewater as a result of domestic cleaning chemicals, detergents, pharmaceuticals, pesticides or materials used within the home. Whilst an increase in the population due to housing growth could increase the total volumes of such substances being discharged to the environment, it would be more

appropriate to manage these substances through regulation at source, rather than through restricting housing growth through the planning system.

No further analysis of priority substances will be undertaken as part of this study.

6.3 Environmental impact assessment

6.3.1 Screening

To identify which of the protected sites may be at risk, Flood Zone 2 from the Risk of Flooding from Rivers and the Sea mapping was used to define an area that was either beside a river or could be reasonably expected to receive surface water from a river during times of flood. Where a WRC serving growth in the plan period was present in the catchment upstream of the protected site, this site was taken forward for further assessment.

Where there was no WRC serving growth upstream, these protected sites were discounted as no deterioration would be predicted in a water quality model, and the impact would be expected to be minimal. However, in these cases the overall catchment water quality should be considered where for example they are designated for migratory fish species that may spend part of their lifecycle elsewhere in the catchment.

Whilst deterioration in water quality may not always lead to a significant impact at a protected site such as a SSSI, modelled deterioration can be used to highlight areas of risk for further analysis in the Habitat Regulations Assessment.

Appendix A of the Stage 1 IWMS contained a list of protected sites (SSSIs, SACs, SPAs and Ramsar sites) that are within or downstream of Huntingdonshire, and adjacent to a watercourse, and have a WRC serving growth during the plan period upstream. Three Ramsar sites (Woodwalton Fen, Nene Washes and Ouse Washes) were identified that had the potential to be impacted by growth in Huntingdonshire. Two of these are also designated as a Special Protection Area (SPA), Nene Washes and Ouse Washes. Five Special Areas of Conservation (SAC) were identified downstream of WRCs that serve growth within Huntingdonshire, three of these are within the Huntingdonshire study area.

6.3.2 Impact assessment

The predicted deterioration in water quality in the river adjacent to each of the protected sites screened into the assessment is shown in Appendix C of this report.

The results of the assessment show that there were no significant deteriorations in water quality in rivers adjacent to protected sites that could not be prevented with the exception of three sites; Brampton Racecourse SSSI, Portholme SSSI and Portholme SAC. These three sites are located downstream of Old Weston Main Street WRC which, as explained in Section 6.2.3, it is likely deterioration may be exaggerated in the future scenario due to the way the WRC has been modelled. Note that Ouse Washes (SAC, SPA and Ramsar) is also downstream of Old Weston Main Street WRC, but is not predicted to be subject to deterioration if treatment to TAL is applied.

There are no proposed local plan allocations which discharge to Old Weston Main Street. However, whilst the number of additional houses planned in the catchment of said WRC is low, combined with the flow from the employment commitment site at RAF Molesworth, this WRC is predicted to serve, this is a large increase in flow at the WRC and would likely need improvements in treatment to accommodate growth. Therefore, it should be noted that there is potential for water quality deterioration associated with these developments. It may be possible for the wastewater from the RAF Molesworth site to treated at Molesworth WRC. This scenario has not been modelled as part of the WCS. Further discussions with AW may be required regarding the feasibility of Molesworth WRC serving the site.

Natural England reviewed an interim version of this study, as part of their review of the Preferred Options Draft Local Plan and Sustainability Appraisal. Thie response included requests for additional detailed assessment of water quality impacts at protected sites:

- *"As the Ouse Washes is a wetland the modelling should also be required to determine impacts on the wetland in relation to the features' SACO targets (max of 0.1TP/l in both summer and winter)."*
- *"for the Ouse Washes, Portholme, Woodwalton Fen, Nene Washes and other protected sites that are flooded by river water, often for months at a time, an assessment is required of the impact of this flooding and delivery of nutrients into/onto the habitats themselves. Flood duration, volume, and sediment content and TP is a vital part of these assessments in order to accurately understand the impacts and reduce uncertainty and risks."*

The existing SIMCAT model does not simulate water quality impacts within wetlands connected to modelled watercourses. It is recommended that any further assessments are co-ordinated as part of the Local Plan Habitat's Regulations Assessment and reported therein.

Furthermore, NE stated that *"this assessment did not take into consideration whether it is feasible to upgrade each existing WRC to TAL due to constraints of costs, timing, space, carbon costs etc.' This level of uncertainty is not compatible with the Habitat Regulations, which requires certainty that mitigations are in place before effects of the project occur to avoid harm to protected features."* Only Anglian Water has the necessary data and understanding of their existing WRC assets and what would be required to upgrade them to TAL in order to assess whether this is feasible. In these circumstances, a Statement of Common Ground between HDC and Anglian Water may be appropriate to set out how this issue will be addressed, to the satisfaction of Natural England, through Anglian Water's planning processes.

6.4 Conclusions and recommendations

Modelling work suggests that 13 of the 30 WRCs serving growth areas during the plan period are predicted to experience a significant deterioration for Ammonia, 1 WRC for BOD, and 2 WRCs for Phosphate. A class change is predicted for 2 WRCs for ammonia (Moderate to Poor at Alconbury and Good to Bad at Old Weston Main Street), and at Old Weston Main Street for BOD and phosphate (Moderate to Bad and Poor to Bad respectively). Two WRCs are at Bad status for ammonia, one at Bad status for BOD, and four are at Bad status for phosphate, and are predicted to deteriorate by greater than 3%.

This is considered a significant deterioration; however this can be prevented by improvements in treatment to TAL, with the exception of Old Weston Main Street. There are no proposed local plan allocations which discharge to Old Weston Main Street WRC. However, whilst the number of additional houses planned in the catchment of said WRC is low, combined with the flow from the employment commitment site at RAF Molesworth, this WRC is predicted to serve, this is a large increase in flow at the WRC and would likely need improvements in treatment to accommodate growth. It may be possible for the wastewater from the RAF Molesworth site to treated at Molesworth WRC. This scenario has not been modelled as part of the WCS. Further discussions with AW may be required regarding the feasibility of Molesworth WRC serving the site.

Growth alone will not prevent good ecological status being achieved in the future should improvements in upstream water quality be made.

An assessment was also made of the impact downstream on protected sites (such as SSSIs, SAC and Ramsar sites). Development which discharges to Old Weston Main Street WRC, such as the employment commitment site at RAF Molesworth, may lead to water quality deterioration at Brampton Racecourse SSSI, Portholme SSSI and Portholme SAC. Should additional modelling be required to further assess the impact of growth on water quality at protected sites, this could be undertaken as part of a Habitats Regulations Assessment.

Where a WRC is shared with a neighbouring authority, coordination of growth plans in collaboration with AW should continue to ensure that infrastructure is in place prior to development to prevent a breach of the environmental permit.

AW state:

"*Anglian Water is working with the Environment Agency on alternative options to accommodate additional growth at WRCs that are already required to meet technically achievable limits (TAL) for phosphorus but will also need to accommodate additional growth through increasing dry weather flow capacity. Potential solutions being explored include catchment approaches such as investments in removing phosphorus from wastewater discharges at upstream WRCs. These solutions will need to be identified through the next DWMP and PR29 Business Plan to seek investment for what is needed to support growth without deterioration to water quality*."

Table 6-4: Recommendations for water quality

Recommendations	Responsibility	Timescale
Provide annual monitoring reports to AW detailing projected housing growth in the Local Authority.	HDC	Ongoing
Take into account the full volume of growth (from HDC and neighbouring authorities) within the catchment.	AW	Ongoing / to be incorporated into next AMP cycle
Consider the environmental impact of development on protected sites downstream of receiving wastewater treatment works in the Habitats Regulations Assessment	HDC	Local Plan development
The Local Plan should include policies that require all development proposals with the potential to impact on areas with environmental designations to be considered in line with the relevant legislation and where stated, in consultation with Natural England (for national and international designations and priority habitats).	HDC	Local Plan development
The Local Plan should include policies that require development sites to adopt SuDS to manage water quality of surface runoff.	HDC	Local Plan development
In partnership, identify opportunities for incorporating SuDS into open spaces and green infrastructure, to deliver strategic flood risk management, meet WFD water quality targets and meet Protected Sites water quality and quantity targets.	HDC, Developers, AW, EA	Ongoing
Developers should include the design of SuDS at an early stage to maximise the benefits of the scheme.	Developers	Ongoing
Opportunities for Natural Flood Management that include schemes aimed at reducing / managing runoff should be considered to reduce nutrient and sediment pollution within Huntingdonshire.	HDC, EA, Natural England.	Ongoing
The Local Plan HRA should identify and co-ordinate any further assessments of water quality impacts at and within protected sites.	HDC, HRA Consultant, Natural England	Ongoing

Recommendations	Responsibility	Timescale
Develop a Statement of Common Ground between HDC and Anglian Water which demonstrates how Anglian Water will plan for the upgrade of WRCs to accommodate planned growth and which demonstrates that "no deterioration" and "no adverse impacts" can be achieved to the satisfaction of EA and NE.	HDC, AW, EA, NE	Ongoing

7 Options appraisal

7.1 Introduction

Stage 1 presented a range of potential water management options for consideration and scored them against the objectives of the IWMS, demonstrating the potential benefit of each option. It was decided to give the objectives equal weighting at Stage 1 of the IWMS. The results of the Multi-Objective Decision Analysis (MODA) are shown below in Table 7-2.

For each IWM approach the question should be asked - to what extent can the approach contribute towards the objectives?

Table 7-1: Scoring system for the MODA

Rank	Description
2	Significant potential to contribute to this objective.
1	Some potential to contribute to this objective.
0	Neutral
-1	Some potential to cause detriment to this objective.
-2	Significant potential to cause detriment to this objective.

Table 7-2: Potential benefit of water management options

Objectives	Diversify water resources	Efficient fixtures & fittings	Green Infrastructure	Blue Infrastructure	Rainwater harvesting	Greywater recycling	SuDS	Education	Leakage reduction	Average
Achieve net zero by 2040	-2	**1**	0	0	0	0	**1**	**1**	-1	0.1
Healthy water environment	**2**	1	1	**2**	1	1	**2**	1	1	1.3
Increase biodiversity and natural capital	0	0	**2**	**2**	0	0	**1**	**1**	0	0.7
Resilience to climate change	**2**	**2**	**2**	**2**	1	**2**	**2**	1	**2**	1.8
Enabling healthy places	0	0	**2**	**2**	0	0	**2**	0	0	0.7
Using natural resources wisely	**2**	**2**	1	**2**	**2**	**2**	**2**	1	**2**	1.8
Promote sufficient water and wastewater capacity to serve new development	**2**	0	**2**	**2**	0	0	0	**1**	0	0.8
Reduced risk of flooding	**2**	0	**2**	**2**	**2**	1	**2**	1	0	1.3
Delivery of viable housing	**1**	**2**	0	0	**1**	**1**	**1**	0	0	0.7
Opportunities for local skills and employment	1	1	1	1	1	1	1	1	1	1.0
Total	10	9	**13**	**15**	8	8	**14**	**8**	6	**10.1**

*Values above the average for each objective or for the total score are in bold

In Stage 2, the focus was on how these options might be delivered through Local Plan policy to maximise the potential benefit. A short list was created, removing options that are outside of the control of Huntingdonshire District Council and combining others. Leakage reduction is best delivered through AW and CW and education (which includes advice on water saving) could be partly incorporated into "efficient fixtures and fittings". These options, whilst important components of the wider water management strategy will not be considered further within the IWMS.

Below, the most beneficial options: (1) green and blue infrastructure and SuDS and (2) diversifying water resources are discussed, with recommendations for implementation provided.

7.2 Green and blue infrastructure and SuDS

7.2.1 Overview

In Stage 1 Green infrastructure, Blue infrastructure and SuDS were considered separately. It was recognised that there is considerable overlap between the three themes and so these have been combined into one section for Stage 2. The original separate scoring has been retained to show the differences and similarities between the three themes.

Green Infrastructure (GI) can include street trees, parks, gardens, SuDS, and nature reserves. GI are often accessible by the public and benefit the environment at the same time. This can include carbon sequestration from trees, buffer systems for road runoff from planted roadside verges, and reduction of urban heat islands. Incorporating GI into Healthy Places can help approach socio-economic and environmental issues.

Blue Infrastructure (BI) is more water focussed, with Natural Flood Management (NFM), de-culverting watercourses and stormwater management. BI also encompasses WRCs and how they are managed - although this will not be considered within this report. Like GI, BI can be incorporated into healthy public places.

SuDS can incorporate most of the measures in GI and BI but have the primary purpose of managing runoff which may or not be the case with GI and BI. There is also some overlap with rainwater harvesting (RwH).

The radar plots in Figure 7-1, Figure 7-2 and Figure 7-3 demonstrate similar benefits with GI, BI and SuDS offering multiple opportunities to meet the objectives of the IWMS.

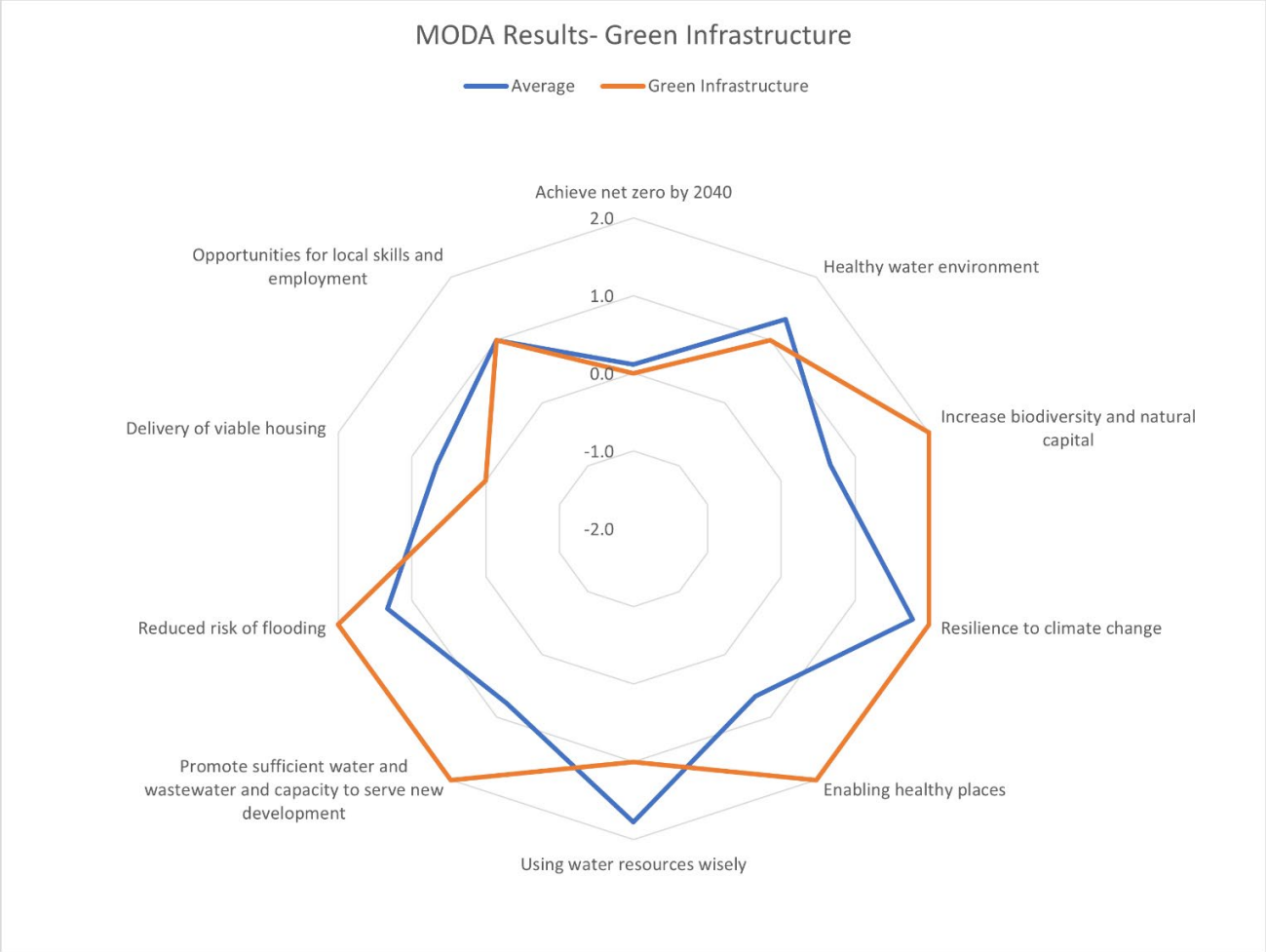


Figure 7-1: Radar plot showing the MODA for Green Infrastructure

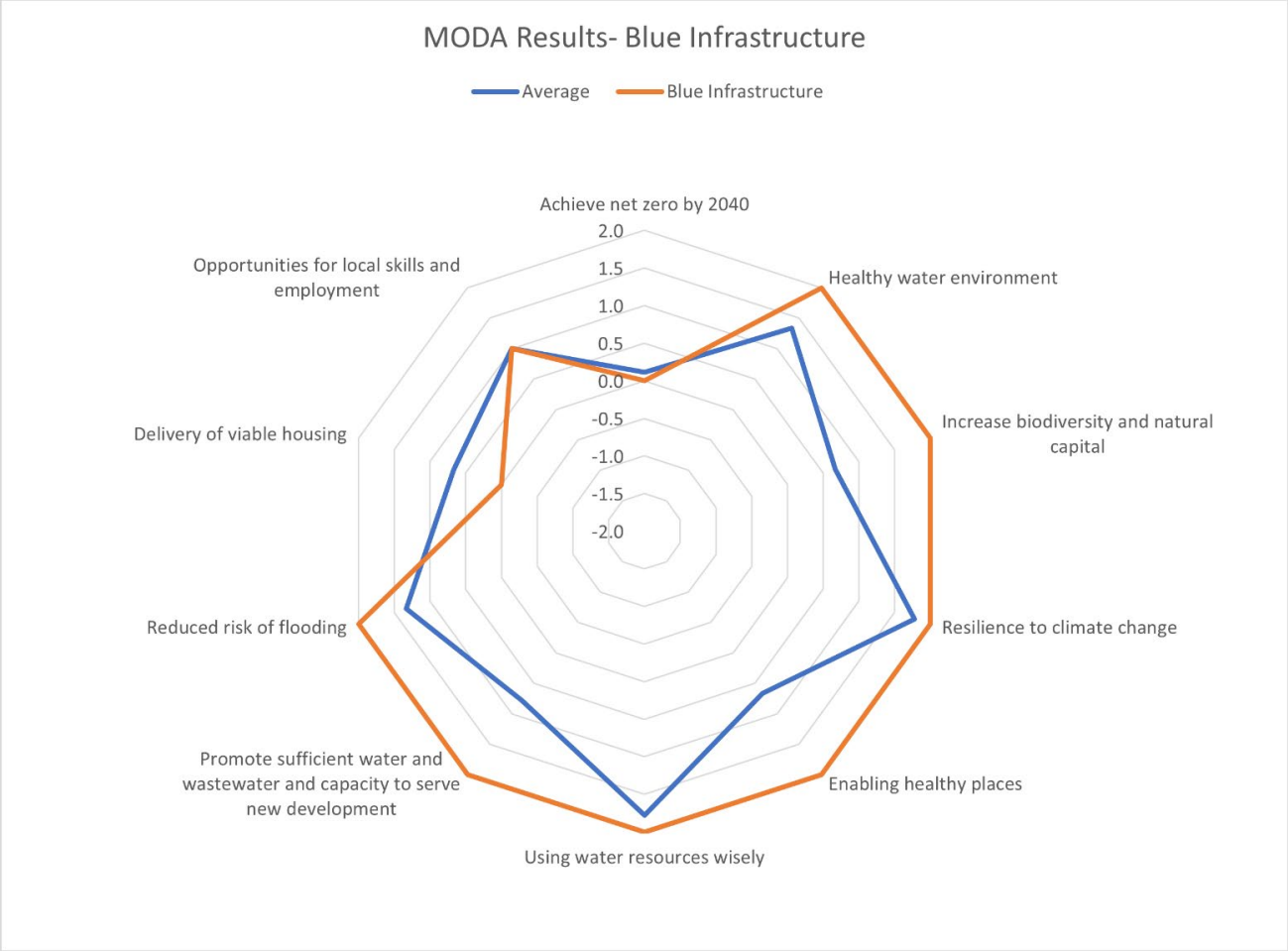


Figure 7-2: Radar plot showing MODA for Blue Infrastructure

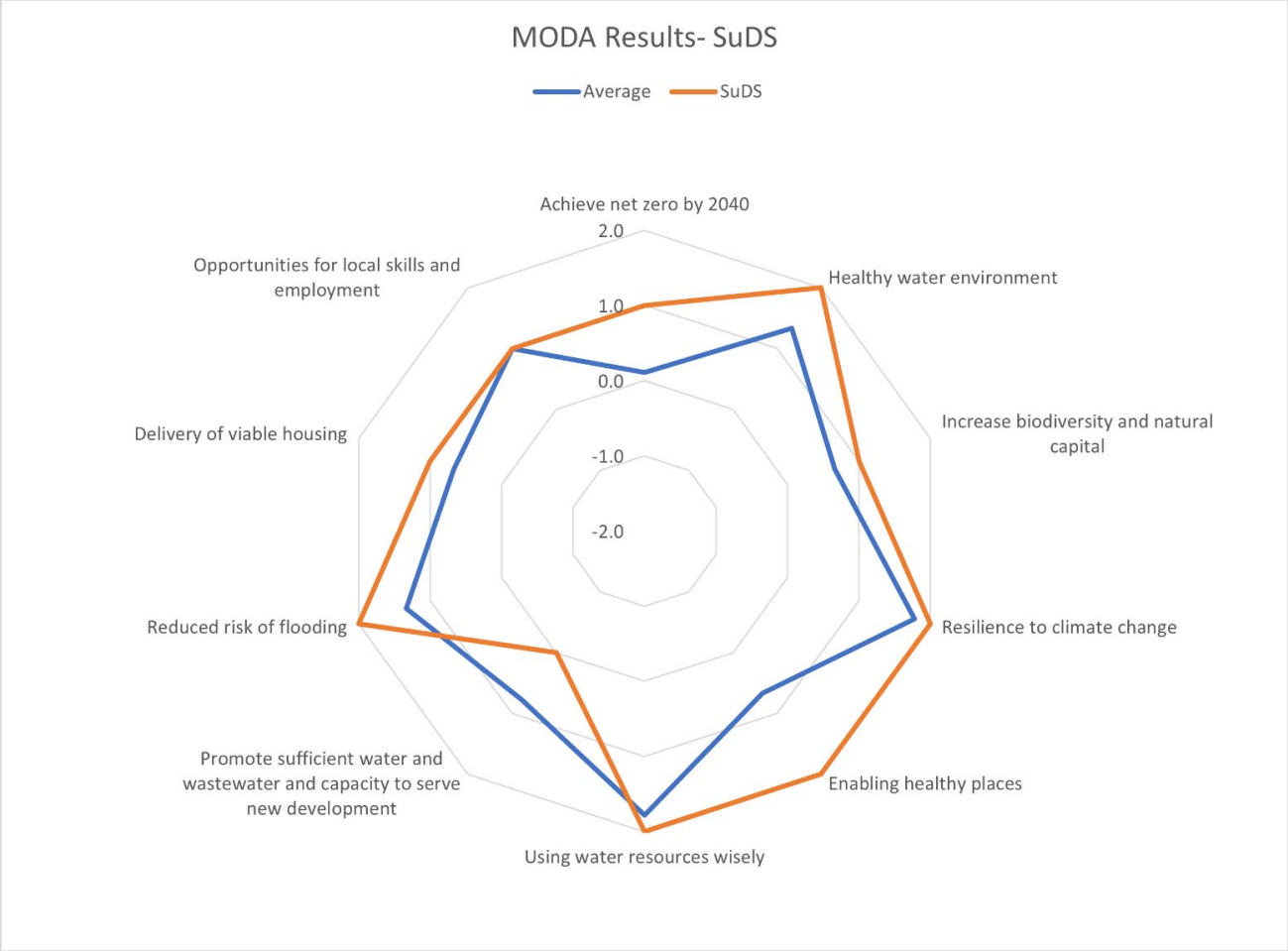


Figure 7-3: Radar plot showing the MODA for SuDS

7.2.2 Application

Defra's SuDS guidance, the National standards for sustainable drainage systems (SuDS) have recently been updated. Whilst remaining as a non-statutory specification, these now form a material consideration for LPAs when assessing planning applications. All appropriate planning applications should demonstrate how the national standards have been met in the site design

Cambridgeshire and Peterborough Local Nature Recovery Strategy (LNRS) was published at the end of 2025. These strategies are a requirement of the Environment Act 2021 and agree the priorities and measures for nature's recovery and wider environment. They are intended to create an understanding of the locations important for conserving and enhancing biodiversity, encourage stakeholders to work together to deliver the wider visions for nature's recovery, and guide mandatory biodiversity net gain investments. They are updated every five years.

The biodiversity benefits of GI and BI can be maximised by aligning with the LNRS, the LNRS should be referred to. The LNRS can be found on the Cambridgeshire and Peterborough Local Nature Recovery Strategy website.

Cambridgeshire also has a Flood and Water Supplementary Planning Document (2017) that discusses how to implement GI and SuDS and presents the local planning policies that the SPD supports.

Cambridgeshire as LLFA provide guidance on the use of Green Infrastructure and SuDS. HDC seeks all development proposals to incorporate SuDS, including provisions for maintenance of SuDS (LP 15).

For GI, consideration should also be given to selecting species that require little or no additional water demand for irrigation / watering to meet the objective of using resources wisely. The long-term benefits of GI, BI and SuDs are more certain where the feature is adopted by AW, CW or the LPA.

7.3 Diversify water resources

7.3.1 Overview

Diversifying water resources can take the form of large-scale strategic resources options (SROs), such the new Lincolnshire and Fens Reservoirs, local scale sources of water such as small lakes, or it can be an individual development obtaining all or part of its water from non-potable supply. The development of alternative sources of water, can increase resilience in a water resources plan. It can also reduce the demand for potable water where local sources are found.

The Enabling Water Smart Communities (an Ofwat Water Breakthrough Challenge Innovation Project) website includes reports on on-site water reuse, climate resilient gardens and community perspectives.

The Stage 1 report outlined a number of options for diversification of water resources, most of which were the responsibility of AW, such as a new reservoir in Lincolnshire and the joint AW and CW Fens Reservoir. In Stage 2 further options are identified at a smaller, more local scale than the SROs.

The radar plot (Figure 7-4) below indicates that this option has the largest benefit against the objectives of promoting sufficient water and wastewater capacity to serve new development, reducing the risk of flooding, using water resources wisely, creating a healthy water environment and increasing resilience to climate change. It has a negative impact on the objective of being carbon neutral by 2040 as many of these options require something to be built, and often energy / chemicals once in operation.

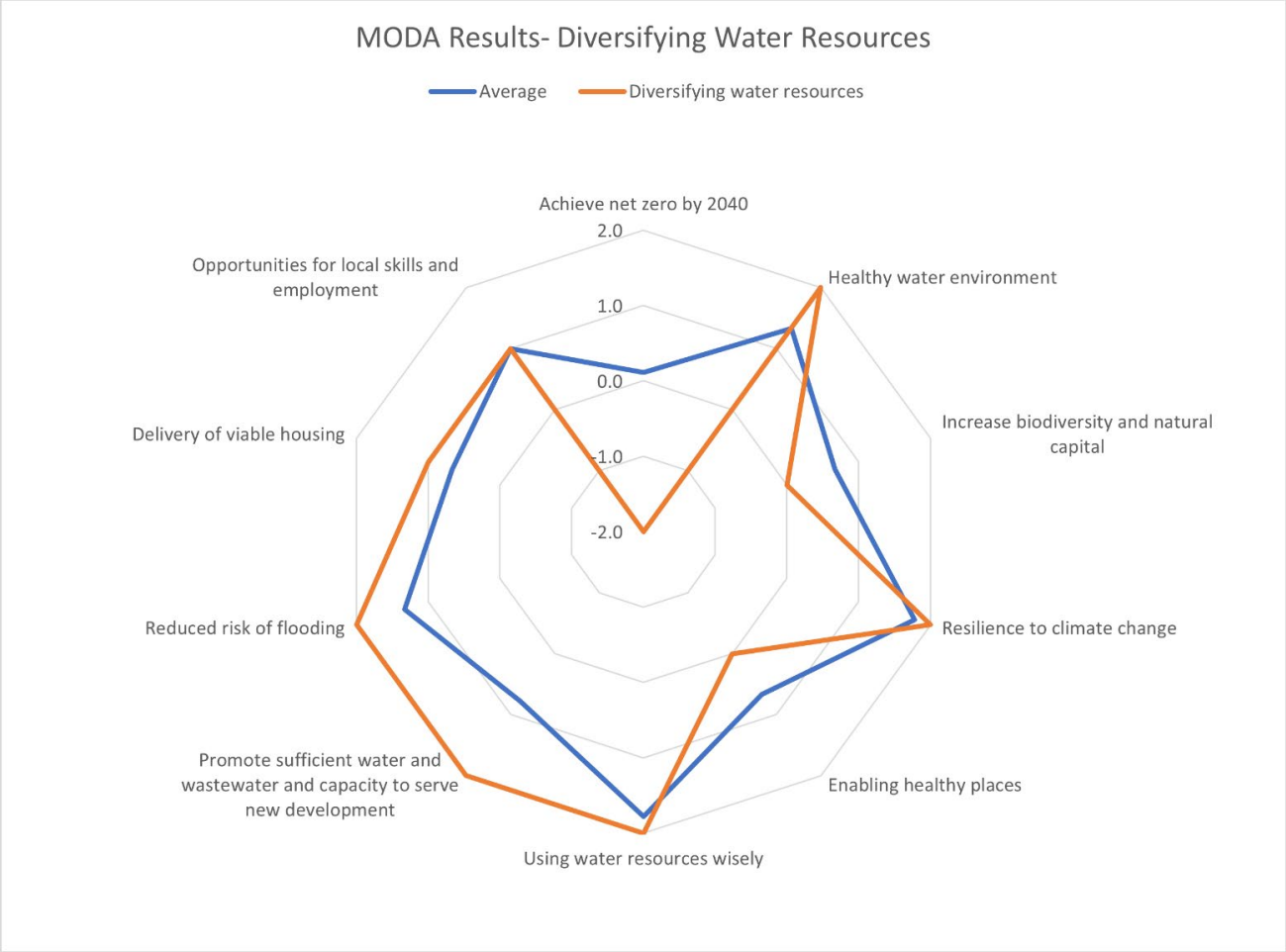


Figure 7-4: Radar plot showing the MODA for Diversifying water resources

7.3.2 Large scale strategic resources

Anglian Water's WRMP24 contains a new reservoir in Lincolnshire which is a component of the future supply-demand balance for the Ruthamford North WRZ. There are no SROs within the study area itself. The Fens Reservoir is a joint project between AW and CW. It will bring water into supply for both water companies (which supply Huntingdonshire).

SROs are largely the responsibility of the water company and there is little opportunity for HDC to influence their creation and design via Local Plan policy, however there may be opportunities to support larger schemes at the consultation stage. The SRO will benefit HDC in terms of resilience to climate change and a reduced consumption of resources.

7.3.3 Residential sites

The water demand from a residential development site will typically be served by the water company via the water supply network. A small component of demand (for example water for gardening) may be met from a rainwater collected in water butts. There is little opportunity to diversify sources of water at this scale as much of the demand is for potable water. However, toilet flushing and washing machine use does not require potable water, and this could be met from Rainwater Harvesting (RwH) or Greywater Recycling (GwR).

An alternative to mains water provided by the water company is for a development (either an individual property or multiple properties) to have its own borehole. An abstraction licence would be required if more than 20,000 litres per day is taken, however this would be sufficient for several properties (the Ruthamford South, Ruthamford North and Cambridge Company-Wide WRZs have an average per capita consumption of 125l/p/d and occupancy of 2.27 persons per dwelling - up to 70 dwellings could be served before a licence is required). The feasibility of small boreholes would depend on the local geology and may be subject to further investigation by the EA, especially if several were clustered together. Maintenance also needs to be considered. Water abstracted from the borehole would still require treatment and testing, and should equipment break down, then a mains supply would then be required. If the borehole is shared between several properties, then costs may be shared, but an agreement on long term maintenance and operation would be required.

7.3.4 Non-household development

Water companies have a statutory duty to provide water for domestic purposes to both household and non-household development. However, this duty does not extend to non-domestic purposes, and AW / CW may object to non-household development that requires a significant non-domestic water demand (more than 20,000 litres per day).

There may be more opportunities to diversify water resources for non-household sites. Business premises often have large roof areas which lend themselves well to RwH and car parks provide opportunities for storage tanks. A large proportion of the non-potable demand for water such as toilet flushing could be met from a RwH system. This can also assist a new buildings rating under the BREEAM New construction Standard.

A borehole could also be employed to provide water for a non-household site, either for domestic or non-domestic purposes. Issues of maintenance may be easier to resolve for a business.

Water Recycling Centres (WRCs) discharge large volumes of treated effluent, which is treated to the standard defined on their environmental permit. This water would not be suitable as a source of potable water without further treatment; however, it could be a valuable source of non-potable water for use in industrial processes, or data centres (see 7.3.5 below). If using this source, consideration would have to be given to the impact on the river system if a large volume of water that was previously discharged to the river is now diverted elsewhere. For example, there is a risk that if the volume is significant, it may cause a "Hands Off Flow" condition to be met more often reducing the water available for abstraction downstream. The temperature of the water would also need to be considered if it was used for cooling and then discharged.

AW published a report in April 2025 reviewing the opportunities for re-using water for non-potable uses.

7.3.5 Data centres

Data centres have now been classified as Critical National Infrastructure by the Government (UK Parliament, 2024) and are a significant emerging user of water. There are an estimated 477 currently in the UK, with a further 100 planned with the majority to be built within the next five years (Barbour ABI, 2024). Within a data centre, water is used for cooling, and the requirement for cooling is increasing in line with the need for processing power to support Artificial Intelligence (AI). A number of different cooling methods are available, but one of the more common types is for water to be sprayed into the air flowing past the servers or evaporated to reduce the temperature of the air. The Thames Water PR24 Business Plan states that a large data centre may use between four and 19 million litres of water per day. The plan makes the comparison to the water use for housing, with 19 million litres being sufficient for over 50,000 homes (Thames Water, 2024).

To accommodate data centres, without placing a strain on water resources, cooling technologies such as closed loop systems should be considered or as Anglian Water have suggested, treated effluent from WRCs could be used as cooling water with data centres built next to WRCs.

7.4 Efficient fixtures and fittings

7.4.1 Overview

Water demand from domestic uses for both household and non-household properties can be reduced by the use of more efficient fixtures and fittings. The Stage 1 report contained a list of consumer water efficiency measures which is reproduced in Table 7-3.

Table 7-3: Consumer water efficiency measures

Measure	Examples
Water-efficient measures for toilets	• Cistern displacement devices to reduce volume of water in cistern • Retro-fit or replacement dual flush devices • Retro-fit interruptible flush devices • Replacement with low-flush toilets
Water-efficient measures for taps	• Tap inserts, such as aerators • Low flow restrictors • Push taps • Infrared taps
Water-efficient measures for showers and baths	• Low-flow shower heads • Aerated shower heads • Low-flow restrictors • Shower timers • Reduced volume baths (e.g., 60 litres) • Bath measures

Measure	Examples
Rainwater harvesting and water reuse	• Large-scale rainwater harvesting • Small-scale rainwater harvesting with water butt • Grey water recycling
Water-efficient measures addressing outdoor use	• Hosepipe flow restrictors • Hosepipe siphons • Hose guns (trigger hoses) • Drip irrigation systems • Mulches and composting

The radar plot (Figure 7-5) below shows these measures meet the objectives of using water resources wisely, resilience to climate change as well as the deliverability of viable housing.

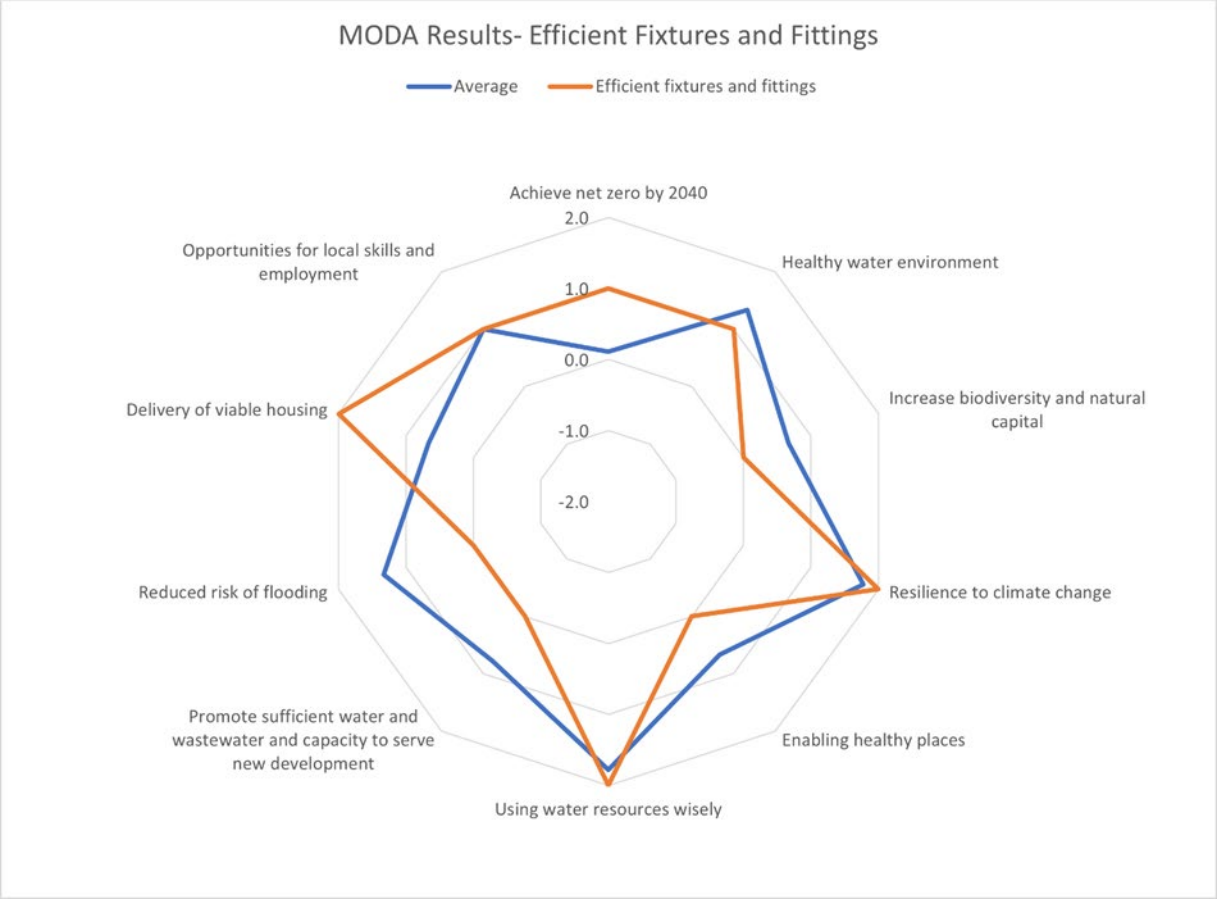


Figure 7-5: Radar plot showing the MODA for efficient fixtures and fittings

7.4.2 Application

The use of efficient fixtures and fittings can be encouraged in the Local Plan by applying a tight water efficiency target for residential sites (a suitable target is discussed in Section 4.3) coupled with the requirement for it to be met using a fittings-based approach. For non-household development meeting an Excellent Standard under BREEAM would require the use of efficient fixtures and fittings.

Efficient fixtures can also be applied to existing properties, although this may be harder to achieve through the Local Plan process. On non-household properties, where there is a change of use, or retrofit of an existing building, tighter standards could be required at that point, for example, through a requirement to meet BREEAM.

For existing residential properties on the private market, there is no opportunity to enforce more efficient fittings, however, residents could be encouraged via an education campaign. This could be more effective when coupled with a household water efficiency visit in partnership with Anglian Water or Cambridge Water. Household water efficiency visits have been shown to deliver savings of 36 litres per property on average in the Southern Water area (Greater Brighton). These savings come through a combination of behaviour modification, identification of minor leaks and fitting devices such as tap aerators. Non-household visits also have significant opportunities to reduce water demand, with the size of the demand saving being variable based on the nature of the business.

For residential properties owned by the Council there may be opportunities to upgrade fixtures and fittings and set rules around their removal.

Flow restrictors are devices that can be retrofitted to existing properties to reduce the volume of water used in the property. These have been used in a trial by Crawley Homes in 2022, and in trials by Affinity Water elsewhere in the country. Affinity Water installed over 11,000 of these devices in the properties of high consumption users in the period 2023-24 and recorded an average saving of 100 litres per property (Affinity Water, 2024). Their delivery partner for the project state an average saving of 64 litres per property and a saving of up to £360 per year in energy costs and 0.6 tonnes of CO_2e per year (Cenergist, 2025). This demonstrates the potential to save not just water, but carbon as well.

Anglian Water have installed over 1 million smart meters and aim to achieve maximum feasible smart meter penetration by the end of AMP8. Smart meters can speed up the identification of supply pipe leaks and have been shown to reduce potable water use. Flow restrictors trials have also been conducted.

7.5 Rainwater harvesting and greywater recycling

7.5.1 Overview

In Stage 1 Rainwater Harvesting (RwH) and Greywater Recycling (GwR) were considered separately. Like with Gi and BI, there is considerable overlap between the two themes and so these have been combined into one section in Stage 2. The original separate scoring has been retained to show the differences between the two themes.

RwH is the capture of water falling on buildings, roads or pathways that would normally be drained via a surface water sewer, infiltrate into the ground or evaporate. In the UK this water cannot currently be used as a drinking water supply as there are strict guidelines on potable water, but it can be used in other systems within domestic or commercial premises, principally for toilet flushing, garden watering and for clothes washing machines.

Systems for collection of rainwater can be simple water butts attached to a drainpipe on a house, or it could be a complex underground storage system, with pumps to supply water for use in toilet flushing and washing machines. By utilising rainwater in this way there is a reduced dependence on mains water supply for a large proportion of the water use in a domestic property.

Greywater refers to water that has been “used” in the home in appliances such as washing machines, showers, and hand basins. Greywater recycling (GwR) is the treatment and re-use of this water in other systems such as for toilet flushing. By their nature, GwR systems require more treatment and are more complex than RwH systems, and there are limited examples of their use in the UK.

Greywater re-use refers to systems where wastewater is taken from source and used without further treatment. An example of this would be water from a bath or shower being used on plants in the garden. This sort of system is easy to install and maintain, however, as mentioned above the lack of treatment to remove organic matter means the water cannot be stored for extended periods.

Greywater recycling refers to systems where wastewater undergoes some treatment before it is used again. These systems are complex and require a much higher level of maintenance than RwH or greywater re-use systems.

Domestic water demand can be significantly reduced by using GwR, and unlike with a RwH system where the availability of water is dependent on the weather, the source of water is usually constant when the building is occupied (for instance if it is from bathing and showering). However, the payback period for a GwR system is usually long, as the initial outlay is large, and the cost of mains water relatively low. Viability of greywater systems for domestic applications is therefore currently limited. Communal systems may offer more opportunities where the cost can be shared between multiple households.

Figure 7-6 and Figure 7-7 show the radar plots for RwH and GwR. Both options score highly for using water resources wisely and resilience to climate change. The differences between the two techniques are evident on reducing flood risk where RwH has a higher contribution due to the storage potential of surface runoff, but GwR scores more highly for climate resilience as it is not impacted by drought (RwH may not be available during dry periods when demand for water is highest).

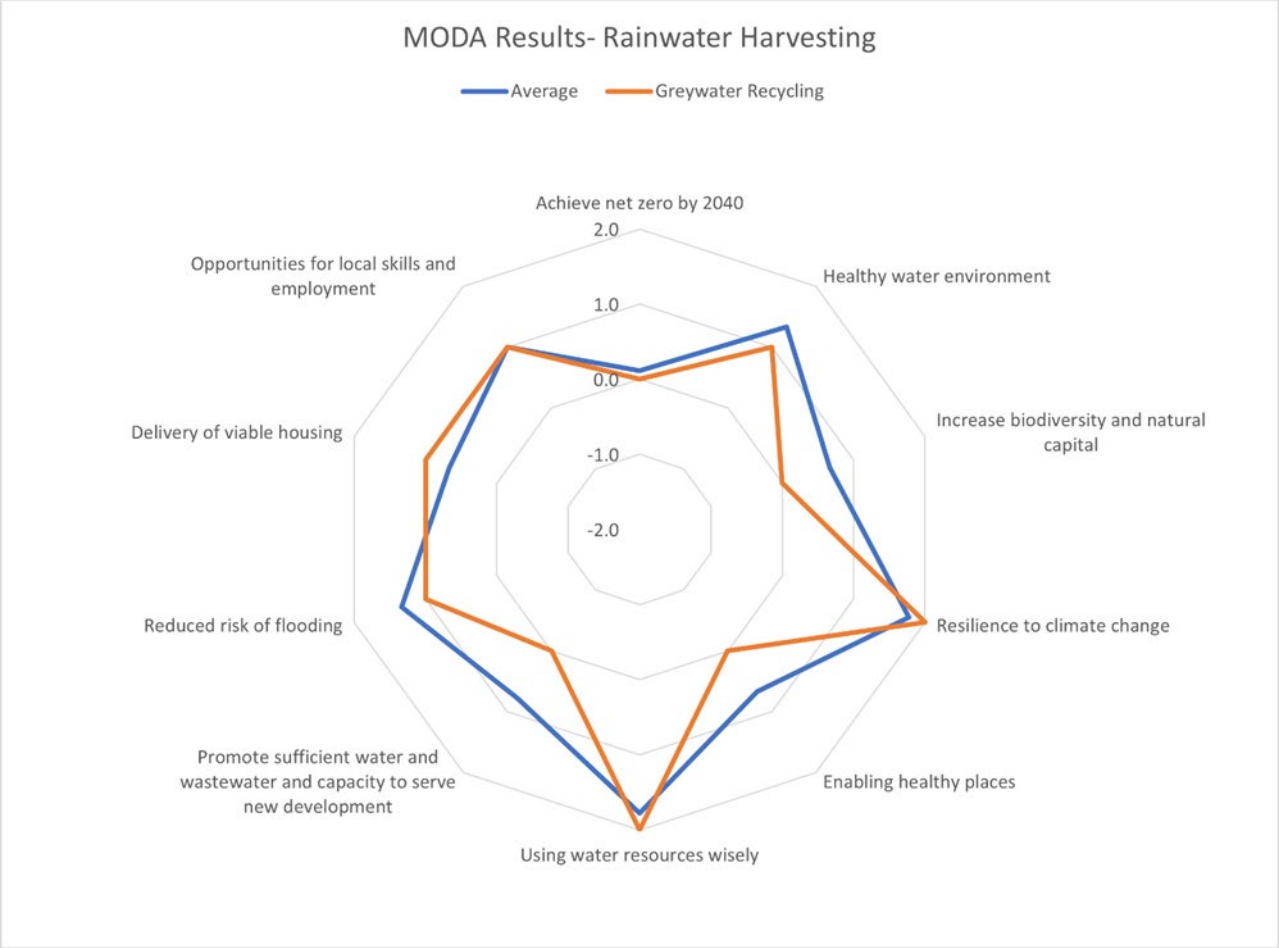


Figure 7-6: Radar plot showing MODA for Rainwater Harvesting

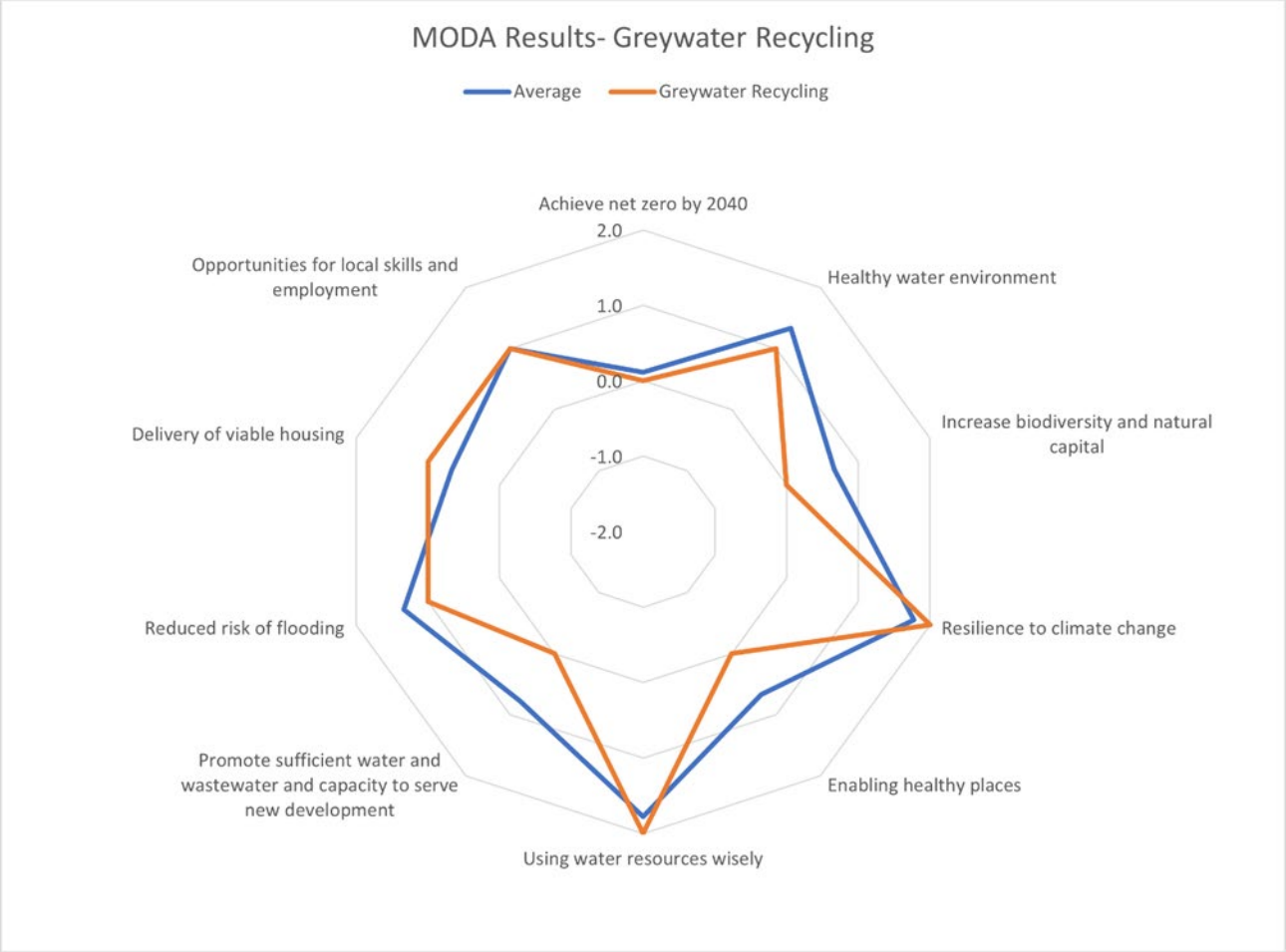


Figure 7-7: Radar plot showing MODA for Greywater Recycling

7.5.2 Application

The new National SuDS guidance makes the collection of rainwater for non-potable use as the top priority in the runoff destination hierarchy. It requires development sites (including both residential and non-household sites) to consider RwH where there is a demand for non-potable water and an available contributing catchment area that will deliver safe and efficient water savings, or there is a need for landscape irrigation, or the development is in an area identified as seriously water stressed (which includes the Anglian Water area).

Opportunities to incorporate RwH into residential and suitable employment development sites in HDC should therefore be encouraged.

Both RwH and GwR require separate pipework to distribute non-potable water around the building and avoiding the risk of contaminating the potable supply. This can be difficult to retrofit to existing buildings, so is much better applied as part of a new build design. The Future Homes Hub proposed a road map to greater water efficiency. This includes recommendations for a new British Standard for dual supply pipework and for new build housing to contain the necessary pipework in order to facilitate future application of RwH.

The is also an opportunity to upskill local plumbers to support the green economy.

In general, communal systems are preferred over RwH or GwR at an individual plot scale. This is because they are more cost effective to maintain and long-term maintenance is more likely to be carried out.

The Enabling Water Smart Communities website publishes reports on greywater recycling and rainwater harvesting/reuse which developers should refer to.

7.6 Application to different development types

7.6.1 Overview

Some IWM measures are better suited than others to different types of development. For example, diversification of water resources may have the large impact on the water demand at a data centre but may be difficult to apply to a council property. Table 7-4 provides an indication of how suitable each technique may be to different types of development. This is a generalisation, and measures may be more or less suitable in specific cases.

Table 7-4: Suitability of each measure to different types of development

Type	Diversification of water resources	Efficient fittings and fixtures	Green and blue infrastructure and SuDS	RwH and GwR
Strategic residential developments	++	+++	+++	+++
Major residential developments	++	+++	+++	+++
Non-major residential developments	+	+++	++	++
Flats	+	+++	++	++
Council properties (existing)	+	+++	++	++
Large non-household	+++	+++	+++	+++
Small non-household	+	+++	++	++
Data centres	+++	+	+++	+

Efficient fixtures and fittings are applicable to all development types; however, they have been scored down for data centres based on the potential volume of water saved by the measure (likely to be a low number of employees) compared with the overall water use on the site.

7.6.2 Strategic development

In Huntingdonshire district, strategic developments are generally sites larger than 200 dwellings, or large employment sites with regional employment impact. The size of the site opens many opportunities to maximise the benefits of each IWM measure. For example, there may be sufficient space for large areas of greenspace to be created, and for high quality habitat to be provided. If there are watercourses present within the site, there may be sufficient space to re-naturalise them. SuDS can be incorporated into the design of the site at the master planning stage, allowing the design to be optimised, reduce flood risk, provide water quality treatment and a biodiversity benefit. On a large site, a communal RwH system may be possible which is managed and maintained centrally. Diversification of water resources may be possible on this size of site: however, water demand may be too high for it to be served by an individual borehole.

7.6.3 Major development

A major development is one with between 10 and 199 dwellings. The suitability of IWM measures is similar to strategic sites. Space may be more limited making it harder to optimise GI, BI and SuDS features.

7.6.4 Non-major development

Non-major developments are those with less than 10 dwellings. There may be limited opportunities to implement GI and BI, but a suitably designed SuDs can still provide some benefit to reducing flood risk, treating runoff and supporting biodiversity.

7.6.5 Flats

GI, BI or SuDS for a block of flats will look significantly different to a development of houses. Space may be limited around the block, but there may be opportunities for green roofs or green walls. These could provide biodiversity benefits while also helping the building maintain a stable temperature, helping climate resilience.

7.6.6 Council properties

Efficient fixtures and fittings are particularly suitable for council properties. The Council have some element of control of the fixtures and fittings applied, reducing the risk of them being removed by the tenant. They can also provide a large benefit to tenants in the form of reduced water and energy bills. A RwH system could also be maintained by the Council.

7.6.7 Large non-household

Large non-household developments may have a large roof area providing a catchment to support a RwH system. They may also have sufficient space for a large storage tank to store rainwater. As with larger residential sites, a large site area provides greater opportunities for planning GI, BI and SuDS in a way that can maximise their impact. An assessment should be made where water is required for non-domestic uses as to whether this can be from non-potable sources.

7.6.8 Small non-household

Smaller non-household sites may not have the space to provide a storage space for collected rainwater. The focus may have to be on efficient fixtures and fittings to reduce water demand. Smaller sites can still have a contribution to reducing flood risk through a suitably designed SuDS.

7.6.9 Data centres

As with other large sites, there are opportunities to plan the site in a way to accommodate well designed GI, BI and SuDS. The biggest impact IWM measure could be reducing the large water demand on the site through diversification of water resources. RwH or a small borehole is unlikely to meet the typical water demand of a large data centre, a larger source may be required, such as effluent reuse.

Regulations that will see applications for data centres submitted to the Planning Inspectorate and considered under the Nationally Significant Infrastructure Project (NSIPs) regime, rather than by local authorities, have been laid before Parliament (National Infrastructure Planning: Data Centres - Hansard - UK Parliament). This means data centres will be prescribed projects capable of being directed to the NSIP consenting regime.

7.7 Recommendations for Integrated Water Management

- Water efficient fixtures and fittings could benefit most types of development site. A water efficiency policy requiring 85l/p/d (subject to viability assessment) and the equivalent BREEAM standard for non-household development would drive adoption of this measure.
- Rainwater Harvesting should be encouraged on all sites where it is practical.
- On all sites, SuDS, GI and BI should be considered as early in the design of the site as possible so a suitable layout that maximises their benefits can be established.
- The Local Nature Recovery Strategy and the Blue Green Infrastructure Strategy should guide the design and implementation of SuDS, GI and BI in HDC
- When designing GI and SuDS, consideration should be given to plant species that require little or no water.
- For all major non-household development consideration should be given to the use of non-potable water where the type of water-use allows this to be viable.

- For data centres, water for cooling should come from a non-potable source. Applications for data centres using potable water should be resisted where alternative cooling methods are feasible.

8 Conclusions and recommendations

8.1 Conclusions

Topic	Conclusion
Water resources	Water resources in England are under considerable pressure. The Environment Agency (EA) has stated that "*the scale of the challenge we face increases with time and, by 2050, we are looking at a shortfall of nearly 5 billion litres of water per day between the sustainable water supplied available and the expected demand*." The new National Water Resources Framework identified the Ruthamford South Water Resource Zone (WRZ) which serves Huntingdonshire as having the second highest percentage growth of any WRZ in England. A comparison of the growth accounted for in Anglian Water (AW)'s and Cambridge Water (CW)'s Water Resources Management Plans 24 (WRMP24) and growth forecast in the local authorities within each WRZ (based on the annual local housing need being delivered) shows that the growth forecast in each of the WRZ exceeds the forecast number of properties throughout the WRMP24 plan period, suggesting planned combined water demand from growth is likely to be ahead of water supply. It is worth noting that, throughout the plan period (based on the Preferred Options growth scenario) growth in Huntingdonshire goes beyond the standard method local housing need value. AW and CW have been consulted through the preparation of the WCS for Huntingdonshire. No response was received from CW. AW has started preparation on the WRMP29 and next Drainage and Wastewater Management Plan (DWMP) for the period 2030-2055. In line with WRMP guidelines, local plan projections including major strategic housing and growth locations such as the Oxford-Cambridge corridor, New Towns and Garden Communities, should be included when calculating the baseline and forecast future population growth. Part G of Building regulations currently states that new build housing should achieve a minimum of 125 l/p/d. A tighter target of 110l/p/d is allowed if the local authority can establish a clear need based on available evidence and viability. Many LPAs are now going further than this. The Written Ministerial Statement (WMS) by the former Secretary of State for Levelling Up, Housing and Communities (DLUHC) states 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, I encourage local planning authorities 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*." In 2025 the government consulted on implementing these new water

	efficiency standards in Part G of the Building Regulations. A Shared Standard for Water Efficiency has been published as part of a collaborative and collective approach by Anglian Water, Cambridge Water, Essex and Suffolk Water, Affinity Water, the Environment Agency and Natural England. It is designed to help support Local Planning Authorities (LPAs) to deliver sustainable growth by specifying a more stringent water efficiency policy than the contained in Building Regulations (110l/p/d). It recommends that new homes are built to a standard of up to 85l/p/d, where viable, supported by a non-household standard where development will aim to achieve full credits in the BREEAM water calculator (WAT 01) with a minimum of 3 credits. Where there is insufficient justification for 85l/p/d for residential development, there could still be a case for a design standard of 90 or 95l/p/d, which is more stringent than building regulations. AW's current Non-Domestic Water Position Statement specifies restrictions on water supply for manufacturing, processing and other non-domestic uses. Where new and unplanned non-domestic requests are received, which exceed 20m3/d (or less in certain locations), AW will decline the request in order to protect existing supplies and the environment. Developers could use water consumption reducing measures to demonstrate the request for water will not exceed 20m3/d. AW recommend businesses undertake water efficiency audits before new water supplies are requested. Water efficient devices such as low flush toilets and aerated taps / shower heads as well as water efficient white goods (dishwashers and washing machines) could be installed. AW recommend fitting smart meters to support and encourage reducing water usage and to help identify leaks. Rainwater and surface water harvesting, greywater recycling and wastewater recycling are also recommended as ways to reduce water demand. CW's WRMP24 states that: "*requests for connections that will require less than 20 m^3 /day will be approved, as will requests where the primary use of the water required is for domestic purposes e.g. hospitals and schools. However, for connection requests above 20 m^3 /day and where the primary use is not for domestic purposes (e.g. sanitation, cooking etc), it is likely that we will be unable to facilitate connection and supply to these developments until 2032*."

Water supply	Anglian Water (AW) and Cambridge Water (CW) have a statutory duty to supply water for domestic purposes (as defined by Section 218 of the Water Industry Act 1991) to non-household development, but do not have to supply water for non-domestic purposes. AW state that depending on type of business, development may be constrained by their non-domestic water supply position where any request for more than 20m^3/day will be declined. For office and storage and distribution developments, AW comment that water requirements are mainly domestic. The impact of the non-domestic water supply required by research and development is uncertain. At present, there is no stated end date to this policy. AW recommend businesses undertake water efficiency audits before new water supplies are requested. Water efficient devices such as low flush toilets and aerated taps / shower heads as well as water efficient white goods (dishwashers and washing machines) could be installed. AW recommend fitting smart meters to support and encourage reducing water usage and to help identify leaks. Rainwater and surface water harvesting, greywater recycling and wastewater recycling are also recommended as ways to reduce water demand. CW's WRMP24 states that: "*requests for connections that will require less than 20 m^3 /day will be approved, as will requests where the primary use of the water required is for domestic purposes e.g. hospitals and schools. However, for connection requests above 20 m^3 /day and where the primary use is not for domestic purposes (e.g. sanitation, cooking etc.), it is likely that we will be unable to facilitate connection and supply to these developments until 2032*." Early engagement between developers and the water supplier is required. Developers should seek further advice where site boundaries overlap with Fens Reservoir infrastructure. Further modelling of the water supply network may be required at the planning application stage. AW recommend Local Plan policy requiring offices and storage and distribution developments to have full credits in BREEAM water calculators (WAT 01).
Infrastructure assessment	A capacity assessment was undertaken by JBA comparing the future flow from each WRC (the current actual flow and the forecast additional flow from growth), with the permit limit. Several WRCs are likely currently exceeding their permit limit, including Huntingdon (Godmanchester) and Somersham (Cambs) and St Ives where development is planned during the plan period. Huntingdon (Godmanchester), Alconbury, Wyton (RAF) and St Neots WRCs serve the majority of the planned development in Huntingdonshire, with St. Neots also serving growth in neighbouring Bedford Borough. Modelling work indicates that around half of the WRCs serving Huntingdonshire (including Huntingdon, Alconbury and Wyton WRCs) are likely to be exceeding their permit values by 2050 if no

	action is taken before then. AW state that their data indicates that Brampton, Elton, Huntingdon, Needingworth, Somersham and Tilbrook WRCs do not currently have capacity for future growth, beyond those existing sites that have planning consent and the right to connect. Within HDC's Local Plan Preferred Options allocations, there are no sites which will discharge to Elton or Tilbrook WRC and only one allocation (of 290 dwellings) to Needingworth. AW also state that St Neots WRC and Peterborough (Flag Fen) WRC have DWF growth schemes planned for delivery in AMP8 which will improve the capacity for flow and allow further development in the St Neots WRC and Peterborough (Flag Fen) WRC catchments. AW should plan for additional growth at the WRCs identified as having capacity constraints in this Water Cycle Study. Funding for growth schemes at these WRCs will need to be included in subsequent Price Review processes covering future AMP periods up, depending on phasing of development. Where new infrastructure or upgrades to existing infrastructure may be required, engagement between HDC and AW should continue to ensure that delivery of this infrastructure is aligned with delivery of development sites. Grampian conditions may be sought by the water company should development be in advance of the necessary infrastructure.. Where AW is asking for pre-occupation conditions there is certainty around the delivery of these growth driven asset enhancement schemes; they are approved by Ofwat and in AW's business plan for AMP8 (2025-2030). A planning condition needs to meet the six planning tests and can only be used where it is possible to be discharged by the developer. AW comment that where they object to planning applications, they are unable to promote growth schemes as they do not have sufficient funding to deliver the required growth upgrades. AW will have to wait for AMP9 (2030-2035) before they can request further growth investment, however AMP cycle funding cannot be guaranteed. If funding is not secured in AMP9, AW can re-present the need in the subsequent price reviews. AW state: "*Anglian Water is committed to enabling sustainable growth and is collaborating with external stakeholders to find solutions to capacity challenges. Anglian Water is working to secure policy and regulatory change that allows water companies to better support growth, for example by allowing us to invest strategically to create new capacity ahead of growth materialising, and by changing charging rules to allow for developer contributions to new infrastructure*." There are a number of poorly performing storm overflows within the sewer networks and/or storm tanks at WRCs in Huntingdonshire.. Furthermore, this performance has got significantly worse in the last two years. Details of actions AW will undertake in relation to storm overflows can be found on their website. Growth within these catchments could result in an increase in the operations of these overflows contributing to a worsening of water quality in the area.

	Action should be taken by the water companies to address these overflows prior to an increase in wastewater demand being generated by new development.
Water quality and environmental impact	Modelling work suggests that 13 of the 30 WRCs serving growth areas during the plan period are predicted to experience a significant deterioration for Ammonia, 1 WRC for BOD, and 2 WRCs for Phosphate. A class change is predicted for 2 WRCs for ammonia (Moderate to Poor at Alconbury and Good to Bad at Old Weston Main Street), and at Old Weston Main Street for BOD and phosphate (Moderate to Bad and Poor to Bad respectively). Two WRCs are at Bad status for ammonia, one at Bad status for BOD, and four are at Bad status for phosphate, and are predicted to deteriorate by greater than 3%. This is considered a significant deterioration; however this can be prevented by improvements in treatment to TAL, with the exception of Old Weston Main Street. There are no proposed local plan allocations which discharge to Old Weston Main Street WRC. However, whilst the number of additional houses planned in the catchment of said WRC is low, combined with the flow from the employment commitment site at RAF Molesworth, this WRC is predicted to serve, this is a large increase in flow at the WRC and would likely need improvements in treatment to accommodate growth. It may be possible for the wastewater from the RAF Molesworth site to treated at Molesworth WRC. This scenario has not been modelled as part of the WCS. Further discussions with AW may be required regarding the feasibility of Molesworth WRC serving the site. Growth alone will not prevent good ecological status being achieved in the future should improvements in upstream water quality be made. An assessment was also made of the impact downstream on protected sites (such as SSSIs, SAC and Ramsar sites). Development which discharges to Old Weston Main Street WRC, such as the employment commitment site at RAF Molesworth, may lead to water quality deterioration at Brampton Racecourse SSSI, Portholme SSSI and Portholme SAC. Should additional modelling be required to further assess the impact of growth on water quality at protected sites, this could be undertaken as part of a Habitats Regulations Assessment. Where a WRC is shared with a neighbouring authority (such as Peterborough Flag Fen and St Neots WRCs), coordination of growth plans in collaboration with AW should continue to ensure that infrastructure is in place prior to development to prevent a breach of the environmental permit. AW state: "Anglian Water is working with the Environment Agency on alternative options to accommodate additional growth at WRCs that

	are already required to meet technically achievable limits (TAL) for phosphorus but will also need to accommodate additional growth through increasing dry weather flow capacity. Potential solutions being explored include catchment approaches such as investments in removing phosphorus from wastewater discharges at upstream WRCs. These solutions will need to be identified through the next DWMP and PR29 Business Plan to seek investment for what is needed to support growth without deterioration to water quality."

8.2 Recommendations

Topic	Recommendation	Responsibility	Timeframe
Water resources	Continue to regularly review forecast and actual household growth across the supply region through WRMP Annual Update reports, and where significant change is predicted, engage with Local Planning Authorities.	AW and CW	Ongoing
Water resources	Provide yearly updates of projected housing growth to water companies to inform WRMP updates.	HDC	Ongoing
Water resources	Use planning policy to require, where viable, a water efficiency standard of 85l/p/d to be achieved using the fittings-based approach. The policy should allow for a future reduction in the water efficiency target if required.	HDC	In Local Plan
Water resources	Use planning policy to require, where viable, non-household development to achieve three credits in the assessment category WAT01 of the BREEAM UK New Construction Standard.	HDC	In Local Plan
Water resources	Larger residential developments (200 residential units and above) and commercial developments should consider incorporating greywater recycling and/or rainwater harvesting into development at the master planning stage in order to reduce water demand.	HDC	Ongoing
Water supply	Undertake network modelling where appropriate to ensure adequate provision of water supply to new sites without detriment to existing customers and feedback to HDC on implications for phasing of sites.	AW and CW	On a site-by-site basis when developers engage with water companies to secure a water connection.
Water supply	Early engagement should continue with AW and CW to ensure infrastructure is in place prior to occupation.	Developers and HDC	Early in Local Plan period / at Pre-Planning stage

Topic	Recommendation	Responsibility	Timeframe
Water supply	Developers should obtain infrastructure (water supply and drainage) maps from AW and CW to ensure existing water supply infrastructure is taken into account in site layout. Available via Digdat website or from individual utilities.	HDC and Developers	At master planning stage
Water supply	Through Local Plan policy, where viable, require offices and storage and distribution developments to demonstrate full credits in BREEAM water calculators (WAT 01).	HDC	Within Local Plan
Wastewater network	Engagement between HDC and AW should continue to ensure that where strategic infrastructure is required, it can be planned in by AW and will not lead to any increase in discharges from sewer overflows.	HDC, Developers, AW	Throughout the LP process / to be incorporated into next AMP cycle
Wastewater network	Take into account wastewater infrastructure constraints in phasing development in partnership with the sewerage undertaker	HDC, AW	Ongoing
Wastewater network	Developers will be expected to work with the sewerage undertaker closely and early in the planning permission process, through submitting a Pre-Planning Enquiry, to develop an Outline Drainage Strategy for sites. The Outline Drainage strategy should demonstrate the wastewater assets required, their locations including points of connection to the public foul sewerage, whether the site drainage will be adopted by the water company and if any sewer requisitions will be required.	AW and developers	Ongoing
Wastewater treatment	Undertake network modelling where appropriate to ensure adequate provision of water supply to new sites without	AW	Early in Local Plan period / through pre-planning enquiry

Topic	Recommendation	Responsibility	Timeframe
	detriment to existing customers and feedback to HDC on implications for phasing of sites. AW will undertake desktop modelling for any pre-planning enquiry that needs a water supply assessment.		process
Wastewater treatment	Early engagement is required with AW to ensure infrastructure is in place prior to occupation.	Developers	Early in Local Plan period
Wastewater treatment	Developers should obtain infrastructure maps from AW to ensure existing water supply infrastructure is taken into account in site layout. Available via Digdat website.	Developers	At master planning stage
Wastewater treatment	Take into account wastewater infrastructure constraints in phasing development in partnership with the sewerage undertaker	HDC and AW	During Local Plan process
Wastewater treatment	Developers will be expected to work with the sewerage undertaker closely and early in the planning promotion process to develop an Outline Drainage Strategy for sites. The Outline Drainage strategy should demonstrate the wastewater assets required, their locations including points of connection to the public foul sewerage, whether the site drainage will be adopted by the water company and if any sewer requisitions will be required.	HDC, AW and developers	Ongoing
Wastewater treatment	HDC could require (through planning policy) that developers must demonstrate there is capacity available in the sewerage network and receiving WRC to accommodate wastewater flows from the site.	HDC and developers	Within Local Plan
Wastewater treatment	Developers will be expected to demonstrate to the Lead Local Flood Authority (LLFA) that	LLFA and developers	Ongoing

Topic	Recommendation	Responsibility	Timeframe
	surface water from a site will be disposed using a sustainable drainage system (SuDS) with connection to surface water sewers seen as the last option. AW surface water guidance should be consulted. New connections for surface water to foul sewers will be resisted by the LLFA and AW.		
Wastewater treatment	Engagement between HDC and AW should continue to ensure that where strategic infrastructure is required, it can be planned in by AW and will not lead to any increase in discharges from sewer overflows.	HDC, developers, AW	During Local plan process
Wastewater treatment	Engagement with AW should continue to ensure that provision of WRC capacity at Huntingdon (Godmanchester), Alconbury, Wyton (RAF) and St Neots is aligned with delivery of development. AW will consider known planned development in the preparation of the next DWMP which will inform investment required for these WRCs.	HDC & AW	Ongoing
Wastewater treatment	Provide Annual Monitoring Reports to Anglian Water detailing projected housing growth.	HDC	Ongoing
Wastewater treatment	AW should ensure that the growth forecasts used for planning upgrades at WRCs take into account the appropriate level of growth.	AW	Ongoing / to be incorporated into next and subsequent AMP cycles
Wastewater treatment	AW to assess growth demands as part of their wastewater asset planning activities and feedback to the Council if concerns arise.	AW	Ongoing
Water quality and environmenta	Provide annual monitoring reports to AW detailing projected housing growth in the Local	HDC	Ongoing

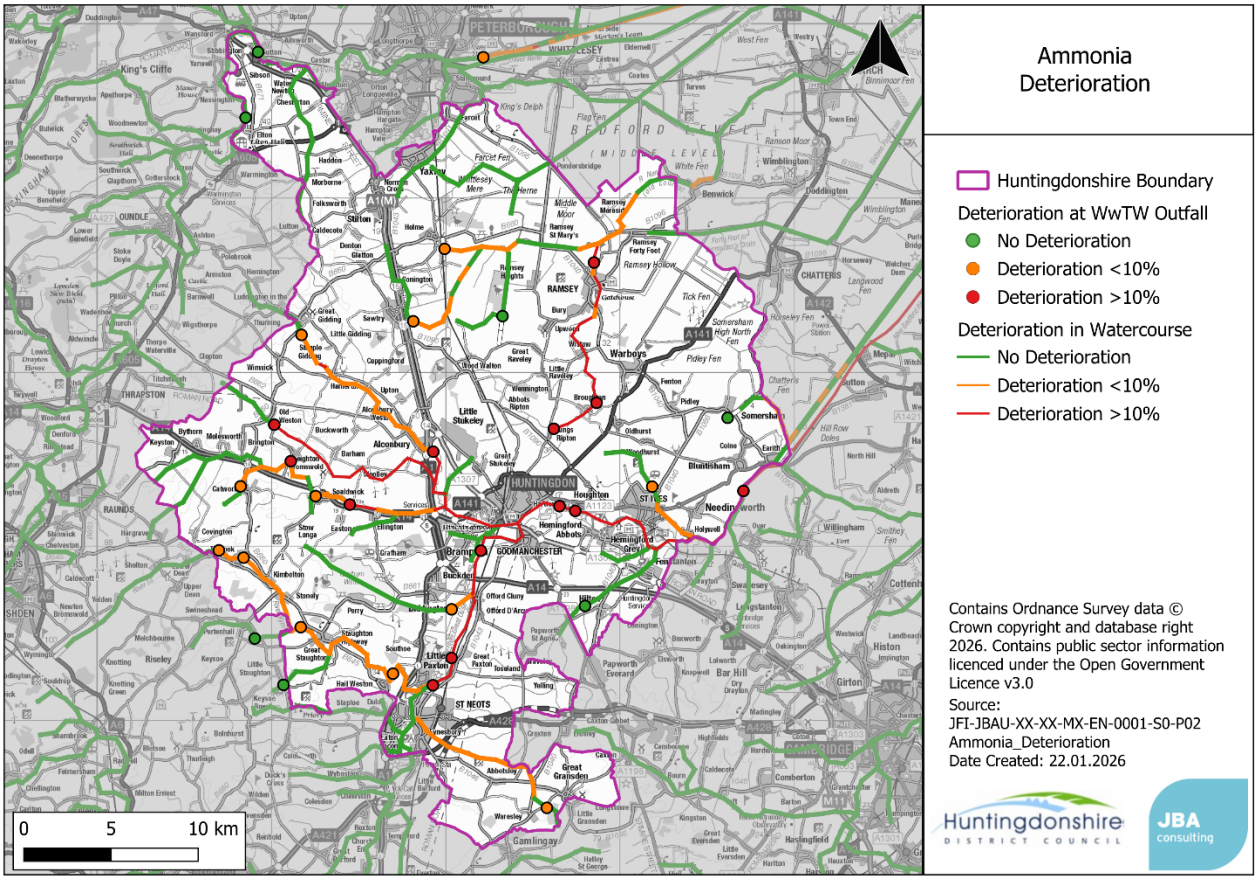
Topic	Recommendation	Responsibility	Timeframe
l impact	Authority.		
Water quality and environmenta l impact	Take into account the full volume of growth (from HDC and neighbouring authorities) within the catchment.	AW	Ongoing / to be incorporated into next AMP cycle
Water quality and environmenta l impact	Consider the environmental impact of development on protected sites downstream of receiving wastewater treatment works in the Habitats Regulations Assessment	HDC	Local Plan development
Water quality and environmenta l impact	The Local Plan should include policies that require all development proposals with the potential to impact on areas with environmental designations to be considered in line with the relevant legislation and where stated, in consultation with Natural England (for national and international designations and priority habitats).	HDC	Local Plan development
Water quality and environmenta l impact	The Local Plan should include policies that require development sites to adopt SuDS to manage water quality of surface runoff.	HDC	Local Plan development
Integrated Water Management	Water efficient fixtures and fittings could benefit most types of development site. A water efficiency policy requiring 85l/p/d and the equivalent BREEAM standard for non-household development would drive adoption of this measure.	HDC	In Local Plan
Integrated Water Management	Rainwater Harvesting should be encouraged on all sites where it is practical	HDC	In Local Plan
Integrated Water Management	On all sites, SuDS, Green and Blue Infrastructure should be considered as early in the design of the site as possible so a suitable layout that maximises their benefits can be established.	HDC, developers	At master plan stage
Integrated Water Management	The Local Nature Recovery Strategy and the Blue Green Infrastructure Strategy should	HDC, LLFA, developers	In Local Plan

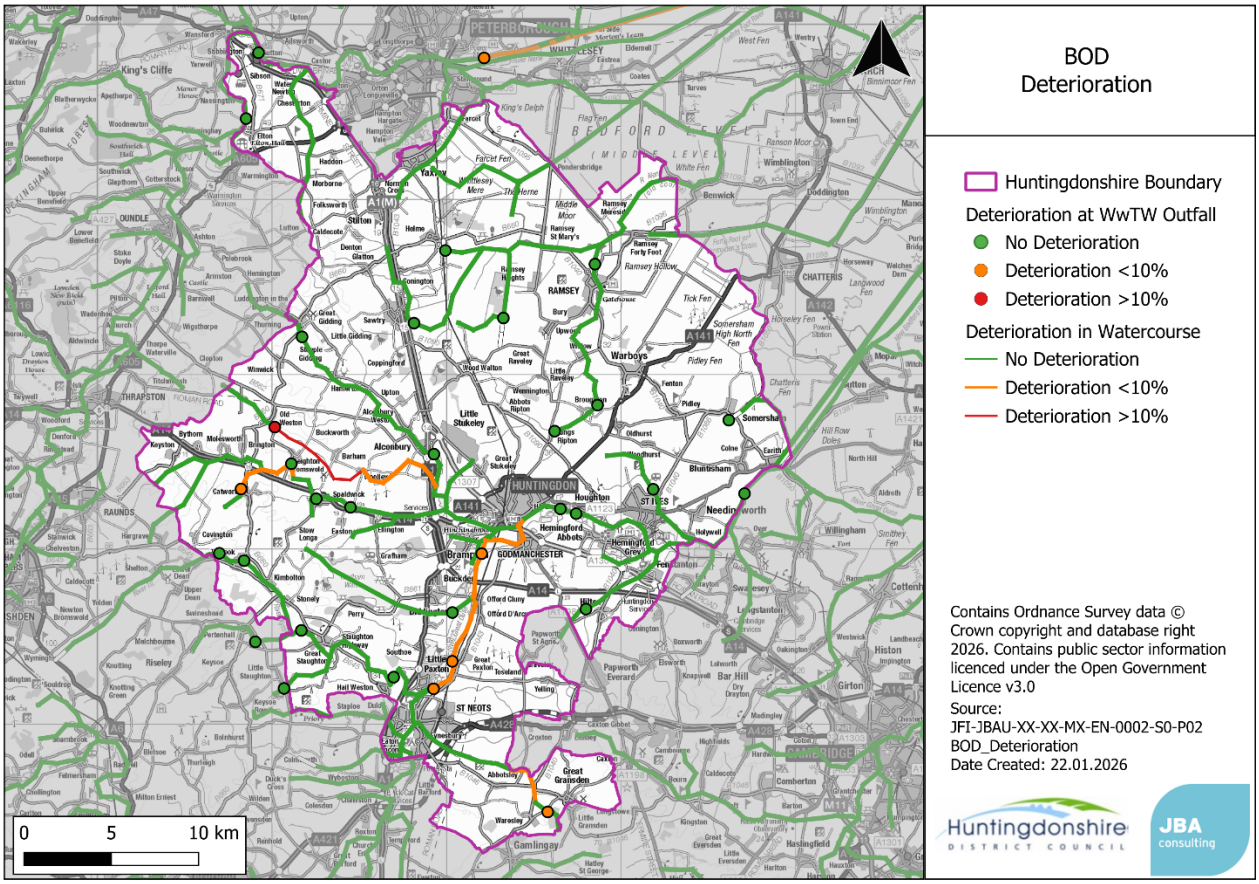
Topic	Recommendation	Responsibility	Timeframe
	guide the design and implementation of SuDS, GI and BI in HDC		
Integrated Water Management	When designing GI and SuDS, consideration should be given to plant species that require little or no water	HDC	In Local Plan
Integrated Water Management	For all major non-household development consideration should be given to the use of non-potable water where the type of water-use allows this to be viable	HDC, developers	In Local Plan
Integrated Water Management	For data centres, water for cooling should come from a non-potable source. Applications for data centres using potable water should be resisted where alternative cooling methods are feasible.	HDC, developers	In Local Plan

A Water Quality Mapping

A.1 Future scenario

The set of maps below show the modelled results if wastewater discharges increased by the volume predicted during the Local Plan period. They show a result at the point of mixing (i.e., where the WwTW discharges) and the results downstream in the river. These are colour coded based on whether deterioration is greater (red) or less than (amber) 10%. Areas where no deterioration is predicted are coloured green.


Ammonia
Deterioration
Huntingdonshire Boundary
Deterioration at WwTW Outfall
No Deterioration
Deterioration <10%
Deterioration >10%
Deterioration in Watercourse
No Deterioration
Deterioration <10%
Deterioration >10%
Contains Ordnance Survey data © Crown copyright and database right 2026. Contains public sector information licenced under the Open Government Licence v3.0
Source:
JFI-JBAU-XX-XX-MX-EN-0001-S0-P02 Ammonia_Deterioration
Date Created: 22.01.2026
0
5
10 km


BOD
Deterioration
Huntingdonshire Boundary
Deterioration at WwTW Outfall
No Deterioration
Deterioration <10%
Deterioration >10%
Deterioration in Watercourse
No Deterioration
Deterioration <10%
Deterioration >10%
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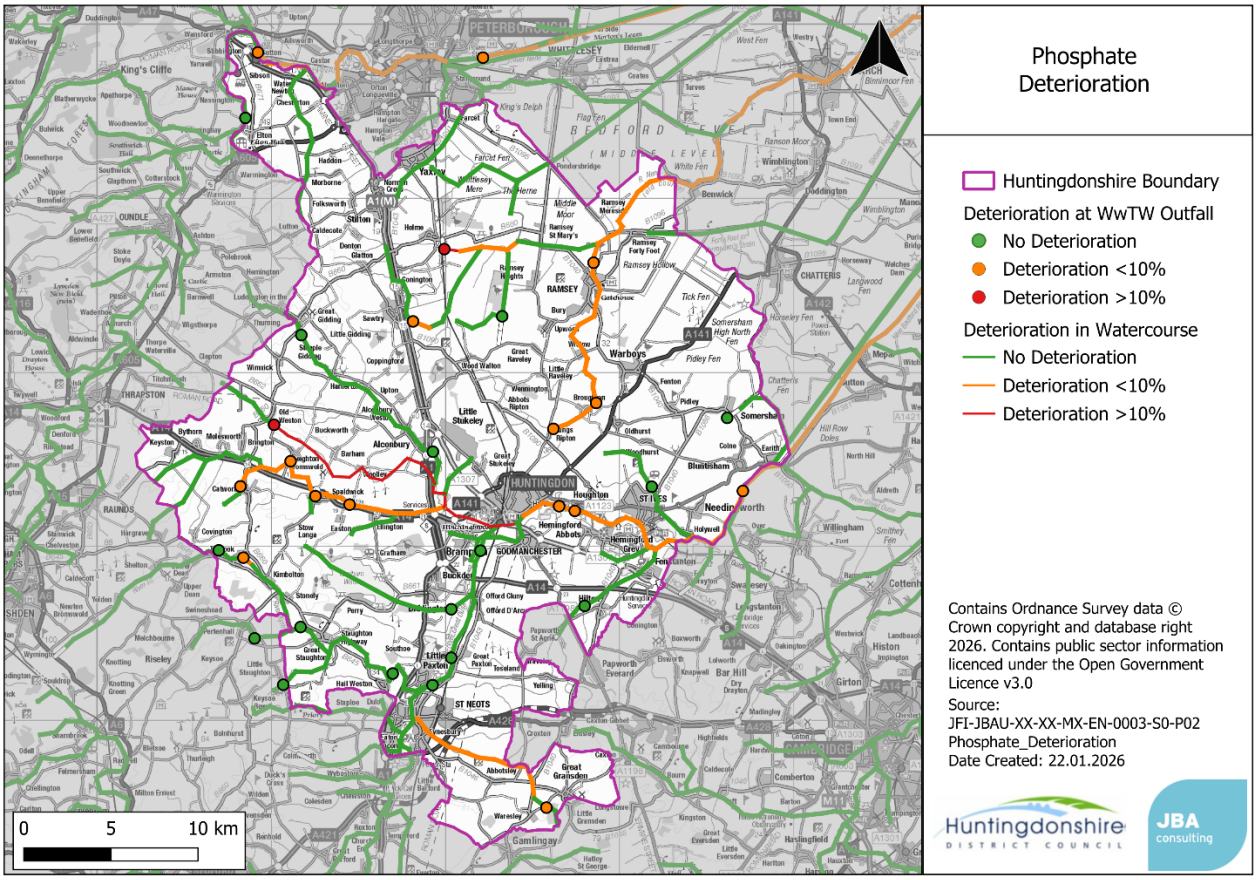
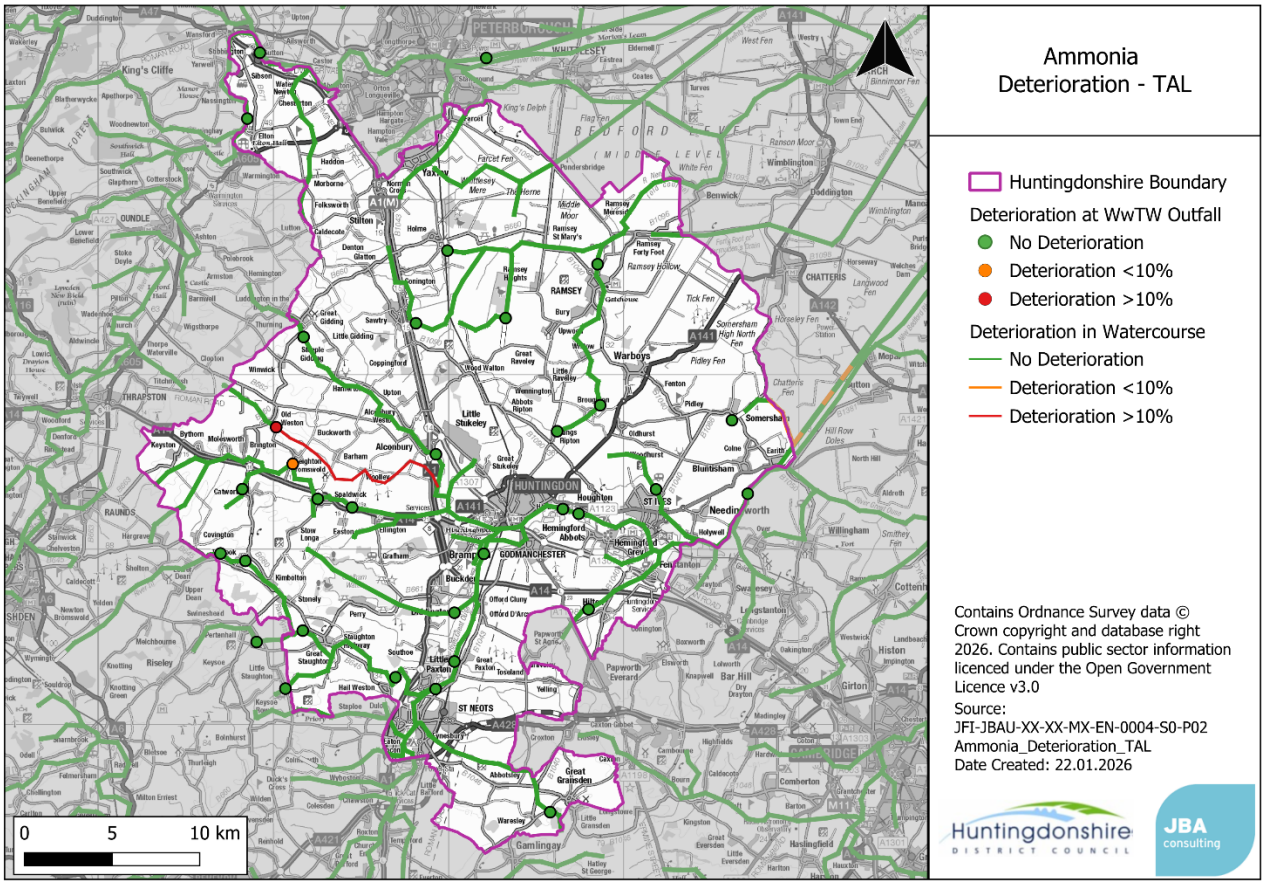
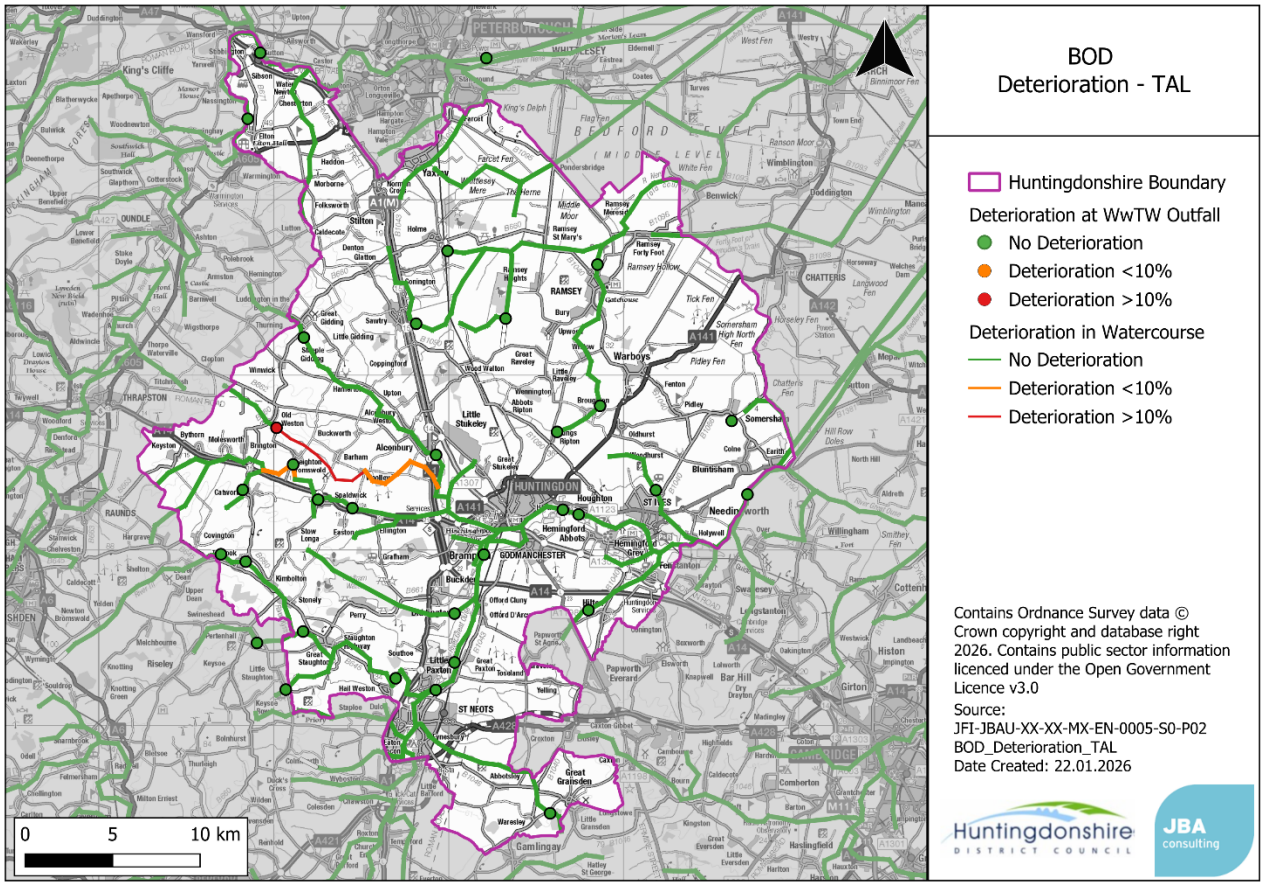
Source:
JFI-JBAU-XX-XX-MX-EN-0002-S0-P02 BOD_Deterioration
Date Created: 22.01.2026
0
5
10 km

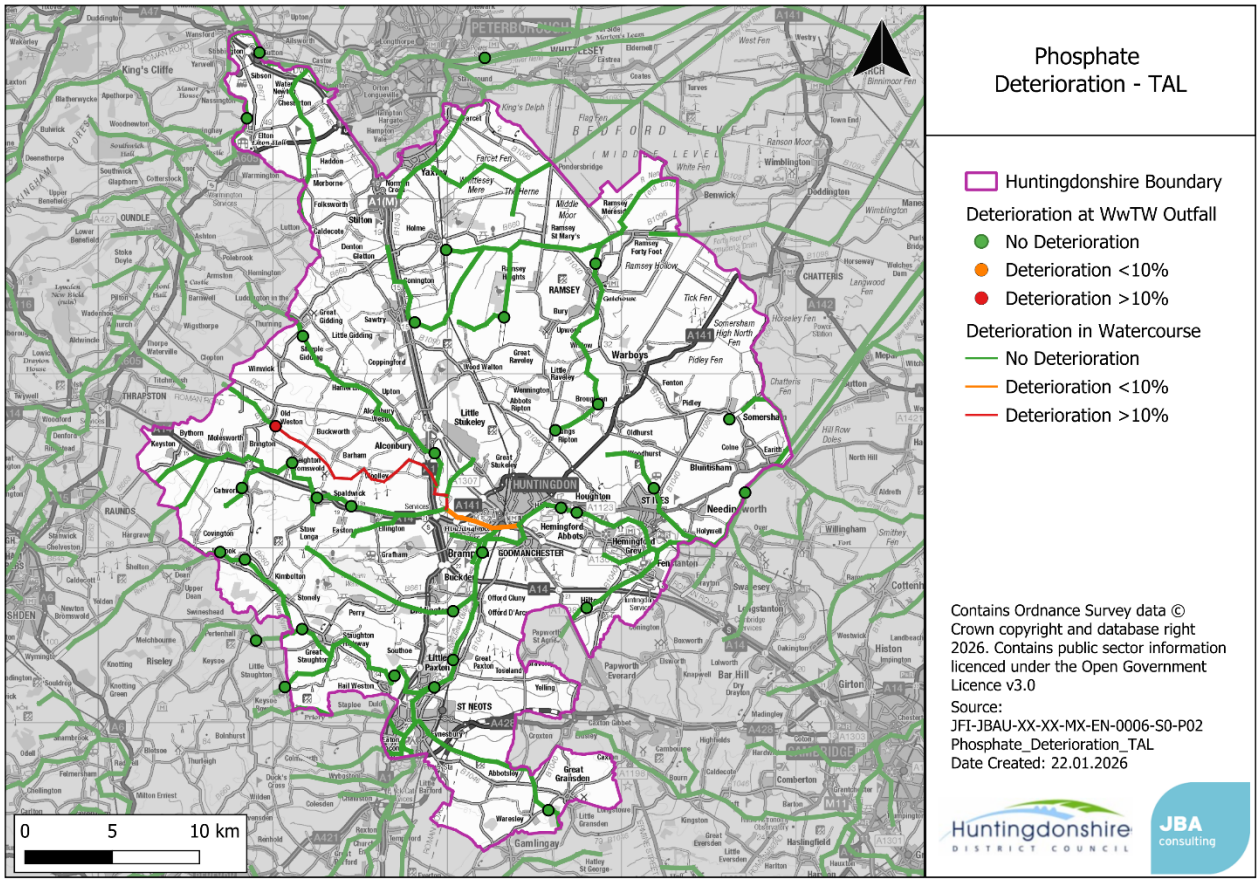


A.2 TAL scenario

This second set of maps show the modelled results in the TAL scenario, where each WRC has been upgraded to the technically achievable limit (TAL). This shows areas where deterioration could not be prevented. In each case this is less than 10%.


Ammonia
Deterioration - TAL
Huntingdonshire Boundary
Deterioration at WwTW Outfall
No Deterioration
Deterioration <10%
Deterioration >10%
Deterioration in Watercourse
No Deterioration
Deterioration <10%
Deterioration >10%
Contains Ordnance Survey data © Crown copyright and database right 2026. Contains public sector information licenced under the Open Government Licence v3.0
Source:
JFI-JBAU-XX-XX-MX-EN-0004-S0-P02
Ammonia_Deterioration_TAL
Date Created: 22.01.2026
0
5
10 km
Huntingdonshire
DISTRICT COUNCIL
JBA consulting


BOD
Deterioration - TAL
Huntingdonshire Boundary
Deterioration at WwTW Outfall
No Deterioration
Deterioration <10%
Deterioration >10%
Deterioration in Watercourse
No Deterioration
Deterioration <10%
Deterioration >10%
Contains Ordnance Survey data © Crown copyright and database right 2026. Contains public sector information licenced under the Open Government Licence v3.0
Source:
JFI-JBAU-XX-XX-MX-EN-0005-S0-P02
BOD_Deterioration_TAL
Date Created: 22.01.2026
0
5
10 km
Huntingdonshire
DISTRICT COUNCIL
JBA consulting


Phosphate
Deterioration - TAL
Huntingdonshire Boundary
Deterioration at WwTW Outfall
No Deterioration
Deterioration <10%
Deterioration >10%
Deterioration in Watercourse
No Deterioration
Deterioration <10%
Deterioration >10%
0
5
10 km
Contains Ordnance Survey data © Crown copyright and database right 2026. Contains public sector information licenced under the Open Government Licence v3.0
Source:
JFI-JBAU-XX-XX-MX-EN-0006-S0-P02
Phosphate_Deterioration_TAL
Date Created: 22.01.2026
Huntingdonshire
DISTRICT COUNCIL
JBA consulting

B Water Quality Results

B.1 Ammonia

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
Alconbury	0.6327	1.7722	180%	0.2493	-61%	MODERATE	POOR	HIGH
Brampton (Cambs)	0.1854	0.223	20%	0.0642	-65%	HIGH	HIGH	HIGH
Buckden	1.3124	1.3433	2%	0.798	-39%	POOR	POOR	MODERATE
Catworth-Hostel	0.0629	0.0681	8%	0.0466	-26%	HIGH	HIGH	HIGH
Convington	0.3615	0.3728	3%	0.1287	-64%	GOOD	GOOD	HIGH
Easton (Cambs)	0.178	0.1968	11%	0.07	-61%	HIGH	HIGH	HIGH
Elton	0.1054	0.1054	0%	0.0674	-36%	HIGH	HIGH	HIGH
Great Gidding	0.3271	0.3486	7%	0.1506	-54%	GOOD	GOOD	HIGH
Hail Weston	0.1276	0.1332	4%	0.0846	-34%	HIGH	HIGH	HIGH
Holme	1.8193	1.9212	6%	1.1347	-38%	POOR	POOR	POOR
Huntingdon (Godmanchester)	0.1686	0.2034	21%	0.0729	-57%	HIGH	HIGH	HIGH
Kimbolton	0.2598	0.272	5%	0.1383	-47%	HIGH	HIGH	HIGH

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
Kings Ripton	0.1089	0.1469	35%	0.0134	-88%	HIGH	HIGH	HIGH
Leighton Bromswold	0.0934	0.1055	13%	0.1016	9%	HIGH	HIGH	HIGH
Little Staughton	1.3383	1.3383	0%	0.3271	-76%	POOR	POOR	GOOD
Molesworth	1.1488	1.1984	4%	0.9008	-22%	POOR	POOR	MODERATE
Needingworth	0.1272	0.1516	19%	0.0621	-51%	HIGH	HIGH	HIGH
Old Weston Main Street	0.4426	3.4861	688%	3.4861	688%	GOOD	BAD	BAD
Oldhurst	0.1142	0.1309	15%	0.1028	-10%	HIGH	HIGH	HIGH
Papworth Everard	0.4897	0.4897	0%	0.3056	-38%	GOOD	GOOD	GOOD
Paxton	0.2145	0.2648	23%	0.0672	-69%	HIGH	HIGH	HIGH
Pertenhall	0.193	0.193	0%	0.1397	-28%	HIGH	HIGH	HIGH
Peterborough (Flag Fen)	0.1925	0.2092	9%	0.1488	-23%	HIGH	HIGH	HIGH
Ramsey	0.6316	0.7061	12%	0.2436	-61%	MODERATE	MODERATE	HIGH
Sawtry	0.4375	0.4675	7%	0.3995	-9%	GOOD	GOOD	GOOD
Somersham (Cambs)	1.9233	1.9234	0%	1.9234	0%	POOR	POOR	POOR
St Ives	1.1794	1.2389	5%	0.7832	-34%	POOR	POOR	MODER

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
								ATE
St Neots	0.2331	0.2852	22%	0.0681	-71%	HIGH	HIGH	HIGH
Stibbington	0.0919	0.092	0%	0.0586	-36%	HIGH	HIGH	HIGH
Tilbrook	0.2446	0.2566	5%	0.117	-52%	HIGH	HIGH	HIGH
Upwood	0.3313	0.3305	0%	0.3131	-5%	GOOD	GOOD	GOOD
Waresley	3.2767	3.4329	5%	0.4188	-87%	BAD	BAD	GOOD
Wyton (RAF)	0.1663	0.2014	21%	0.072	-57%	HIGH	HIGH	HIGH

B.2 BOD

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
Alconbury	4.3818	4.054	-7%	4.045	-8%	GOOD	GOOD	GOOD
Brampton (Cambs)	2.6848	2.699	1%	2.4229	-10%	HIGH	HIGH	HIGH
Buckden	8.7569	8.5411	-2%	8.5411	-2%	POOR	POOR	POOR
Catworth-Hostel	10.741	10.721	0%	10.694	0%	BAD	BAD	BAD
Convington	5.9863	5.9922	0%	5.726	-4%	MODERATE	MODERATE	MODERATE
Easton (Cambs)	6.8842	6.8704	0%	6.8136	-1%	POOR	POOR	POOR
Elton	2.7579	2.758	0%	2.5597	-7%	HIGH	HIGH	HIGH
Great Gidding	5.6276	5.6295	0%	5.5144	-2%	MODERATE	MODERATE	MODERATE
Hail Weston	5.6786	5.6761	0%	5.578	-2%	MODERATE	MODERATE	MODERATE
Holme	8.7733	8.5926	-2%	8.52	-3%	POOR	POOR	POOR
Huntingdon (Godmanchester)	2.8378	2.8459	0%	2.6365	-7%	HIGH	HIGH	HIGH
Kimbolton	5.6486	5.6481	0%	5.5863	-1%	MODERATE	MODERATE	MODERATE
Kings Ripton	16.367	16.365	0%	16.348	0%	BAD	BAD	BAD

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
Leighton Bromswold	126.39	125.64	-1%	125.64	-1%	BAD	BAD	BAD
Little Staughton	13.41	13.41	0%	12.392	-8%	BAD	BAD	BAD
Molesworth	2.3184	2.3745	2%	2.3098	0%	HIGH	HIGH	HIGH
Needingworth	2.8472	2.8539	0%	2.6974	-5%	HIGH	HIGH	HIGH
Old Weston Main Street	5.4429	10.256	88%	10.256	88%	MODERATE	BAD	BAD
Oldhurst	13.024	12.999	0%	12.853	-1%	BAD	BAD	BAD
Papworth Everard	6.3928	6.3928	0%	6.3928	0%	MODERATE	MODERATE	MODERATE
Paxton	2.6555	2.6702	1%	2.4173	-9%	HIGH	HIGH	HIGH
Pertenhall	7.0996	7.0996	0%	7.0866	0%	POOR	POOR	POOR
Peterborough (Flag Fen)	3.0924	3.14	2%	2.9129	-6%	HIGH	HIGH	HIGH
Ramsey	7.8863	7.8429	-1%	7.6166	-3%	POOR	POOR	POOR
Sawtry	6.4248	6.3507	-1%	6.3507	-1%	MODERATE	MODERATE	MODERATE
Somersham (Cambs)	5.1037	5.104	0%	5.0122	-2%	MODERATE	MODERATE	MODERATE
St Ives	10.54	10.328	-2%	9.4548	-10%	BAD	BAD	BAD
St Neots	2.5795	2.6121	1%	2.3405	-9%	HIGH	HIGH	HIGH
Stibbington	2.9062	2.9074	0%	2.7461	-6%	HIGH	HIGH	HIGH

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
Tilbrook	5.677	5.6799	0%	5.5793	-2%	MODERATE	MODERATE	MODERATE
Upwood	5.2939	5.2866	0%	5.2646	-1%	MODERATE	MODERATE	MODERATE
Waresley	10.492	10.69	2%	7.6489	-27%	BAD	BAD	POOR
Wyton (RAF)	2.8495	2.8629	0%	2.6422	-7%	HIGH	HIGH	HIGH

B.3 Phosphate

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
Alconbury	0.4469	0.3982	-11%	0.3948	-12%	POOR	POOR	POOR
Brampton (Cambs)	0.2946	0.2949	0%	0.1491	-49%	POOR	POOR	MODERATE
Buckden	0.2027	0.2037	0%	0.2037	0%	MODERATE	MODERATE	MODERATE
Catworth-Hostel	0.4486	0.4648	4%	0.4173	-7%	POOR	POOR	POOR
Convington	1.6758	1.6767	0%	1.5539	-7%	BAD	BAD	BAD
Easton (Cambs)	0.4218	0.4344	3%	0.3949	-6%	POOR	POOR	POOR
Elton	0.1783	0.1784	0%	0.0841	-53%	MODERATE	MODERATE	GOOD
Great Gidding	0.8022	0.8006	0%	0.7682	-4%	POOR	POOR	POOR
Hail Weston	0.6926	0.6933	0%	0.6047	-13%	POOR	POOR	POOR
Holme	2.5552	2.7986	10%	1.0823	-58%	BAD	BAD	BAD
Huntingdon (Godmanchester)	0.2863	0.289	1%	0.1558	-46%	POOR	POOR	MODERATE
Kimbolton	0.9919	0.9891	0%	0.8643	-13%	POOR	POOR	POOR
Kings Ripton	0.4014	0.4083	2%	0.3791	-6%	POOR	POOR	POOR
Leighton Bromswold	0.5302	0.5553	5%	0.4864	-8%	POOR	POOR	POOR

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
Little Staughton	0.4424	0.4424	0%	0.4424	0%	POOR	POOR	POOR
Molesworth	1.8888	1.9687	4%	1.1812	-37%	BAD	BAD	BAD
Needingworth	0.2562	0.2583	1%	0.144	-44%	POOR	POOR	MODERATE
Old Weston Main Street	0.7048	3.3257	372%	3.3257	372%	POOR	BAD	BAD
Oldhurst	0.5559	0.5806	4%	0.3602	-35%	POOR	POOR	POOR
Papworth Everard	0.2421	0.2421	0%	0.2421	0%	MODERATE	MODERATE	MODERATE
Paxton	0.3031	0.3033	0%	0.1513	-50%	POOR	POOR	MODERATE
Pertenhall	0.6609	0.6609	0%	0.3855	-42%	POOR	POOR	POOR
Peterborough (Flag Fen)	0.4028	0.4376	9%	0.0893	-78%	POOR	POOR	GOOD
Ramsey	0.4856	0.4981	3%	0.3332	-31%	POOR	POOR	POOR
Sawtry	0.2718	0.2733	1%	0.262	-4%	POOR	POOR	POOR
Somersham (Cambs)	0.4429	0.4429	0%	0.2497	-44%	POOR	POOR	MODERATE
St Ives	0.2699	0.2681	-1%	0.2681	-1%	POOR	POOR	POOR
St Neots	0.301	0.301	0%	0.1458	-52%	POOR	POOR	MODERATE
Stibbington	0.1729	0.1739	1%	0.0798	-54%	MODER	MODER	GOOD

WwTW (SIMCAT name)	Baseline concentration (mg/l)	Future concentration (mg/l)	Percentage deterioration (%)	TAL concentration (mg/l)	TAL Percentage deterioration (%)	Baseline Class	Future Class	TAL Class
						ATE	ATE	
Tilbrook	1.6466	1.6551	1%	1.4934	-9%	BAD	BAD	BAD
Upwood	0.2105	0.211	0%	0.1832	-13%	MODERATE	MODERATE	MODERATE
Waresley	2.0627	2.1357	4%	0.4598	-78%	BAD	BAD	POOR
Wyton (RAF)	0.2849	0.2874	1%	0.1553	-45%	POOR	POOR	MODERATE

C Environmental sites water quality impact results

The tables within this appendix detail the predicted deterioration in water quality in the river adjacent to each SSSI, SAC, SPA and Ramsar downstream of WRCs serving growth in the Local Plan period. It includes the protected site name, reference and the point in the SIMCAT model used to obtain the result. The first three results show the predicted deterioration at the end of the plan period if all planned growth were delivered. The final three columns show the result of the TAL scenario where all WRCs are upgraded to their technically achievable limit. A negative number indicates an improvement in water quality compared to the future scenario, i.e. deterioration can be prevented.

C.1 SSSIs

SSSI name	Reference ID	SIMCAT Model Point	Ammonia Deterioration %	BOD Deterioration %	Phosphate Deterioration %	Ammonia Deterioration TAL %	BOD Deterioration TAL %	Phosphate Deterioration TAL %
Bassenhally Pit	1000060	WQ NENE640D	8.00%	2.00%	9.00%	-25.00%	-6.00%	-78.00%
Brampton Meadow	1002302	Extra Plot Point - Reach 174 No 2	6.00%	0.00%	3.00%	-49.00%	-1.00%	-6.00%
Brampton Racecourse	1001306	Extra Plot Point - Reach 165 No1	147.00%	-3.00%	14.00%	-40.00%	-3.00%	14.00%
Ely Pits and Meadows	2000642	STORM_Ely STW	0.00%	0.00%	0.00%	-10.00%	-7.00%	-55.00%
Godmanchester Eastside Common	1004017	STORM_Huntingdon STW	21.00%	0.00%	1.00%	-57.00%	-7.00%	-46.00%

SSSI name	Reference ID	SIMCAT Model Point	Ammonia Deterioration %	BOD Deterioration %	Phosphate Deterioration %	Ammonia Deterioration TAL %	BOD Deterioration TAL %	Phosphate Deterioration TAL %
Grafham Water	1002330	Extra Plot Point - Reach 154 No 1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Holme Fen	1001640	CSO 493	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Houghton Meadows	1002288	Extra Plot Point - Reach 177 No 2	21.00%	0.00%	1.00%	-56.00%	-7.00%	-45.00%
Little Paxton Pits	1002350	ST NEOTS STW	22.00%	1.00%	0.00%	-71.00%	-9.00%	-52.00%
Nene Washes	1002071	CSO 516	0.00%	0.00%	1.00%	-35.00%	-5.00%	-53.00%
Ouse Washes	1000503	GB105033047921 Boundary	22.00%	0.00%	1.00%	-52.00%	-5.00%	-44.00%
Portholme	1002185	WQ 25M04	134.00%	-1.00%	12.00%	-36.00%	-1.00%	9.00%
St. Neot's Common	1002239	CSO 481	0.00%	0.00%	0.00%	-45.00%	-7.00%	-52.00%
Woodwalton Fen	1001698	STORM_Upwood STW	0.00%	0.00%	0.00%	-27.00%	-3.00%	-33.00%

C.2 SAC

SAC name	Reference ID	SIMCAT Model Point	Ammonia Deterioration %	BOD Deterioration %	Phosphate Deterioration %	Ammonia Deterioration TAL %	BOD Deterioration TAL %	Phosphate Deterioration TAL %
Nene Washes	UK0030222	CSO 516	0.00%	0.00%	1.00%	-35.00%	-5.00%	-53.00%
Ouse Washes	UK0013011	GB105033047921 Boundary	22.00%	0.00%	1.00%	-52.00%	-5.00%	-44.00%
Portholme	UK0030054	WQ 25M04	134.00%	-1.00%	12.00%	-36.00%	-1.00%	9.00%

C.3 SPA

SPA name	Reference ID	SIMCAT Model Point	Ammonia Deterioration %	BOD Deterioration %	Phosphate Deterioration %	Ammonia Deterioration TAL %	BOD Deterioration TAL %	Phosphate Deterioration TAL %
Nene Washes	UK9008031	CSO 516	0.00%	0.00%	1.00%	-35.00%	-5.00%	-53.00%
Ouse Washes	UK9008041	GB105033047921 Boundary	22.00%	0.00%	1.00%	-52.00%	-5.00%	-44.00%

C.4 Ramsar

Ramsar name	Reference ID	SIMCAT Model Point	Ammonia Deterioration %	BOD Deterioration %	Phosphate Deterioration %	Ammonia Deterioration TAL %	BOD Deterioration TAL %	Phosphate Deterioration TAL %
Nene Washes	UK11046	CSO 516	0.00%	0.00%	1.00%	-35.00%	-5.00%	-53.00%
Ouse Washes	UK11051	GB105033047921 Boundary	22.00%	0.00%	1.00%	-52.00%	-5.00%	-44.00%
The Wash	UK11072	Extra Plot Point - Reach 421 No 3	5.00%	0.00%	0.00%	-20.00%	-3.00%	-42.00%
Woodwalton Fen	UK11078	STORM_ Upwood STW	0.00%	0.00%	0.00%	-27.00%	-3.00%	-33.00%

D Anglian Water assessment of Preferred Options allocations and water supply

D.1 Assessment results

Site Reference / Policy No.	Location / site address	Water resources RAG	AW comments on water supply (mainly relate to employment sites where there may be non-domestic water supply constraints). AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options.
CfS:125	Land East of B661, The Green, Great Staughton		
CfS:139, CfS:372, CfS:87, CfS:371	Land West of London Road and South of Stokes Drive, Godmanchester		
CfS:14	West of High Street, Great Paxton		
CfS:141	Bury Industrial Estate, Old Station Road, Bury		
CfS:155	West of Toll Bar Way and Green End Road		
CfS:156	Land West of High Street and North of Dunstall Close (smaller site), Offord Cluny		
CfS:16	East of Loves Farm (Tithe Farm), St Neots		

Site Reference / Policy No.	Location / site address	Water resources RAG	AW comments on water supply (mainly relate to employment sites where there may be non-domestic water supply constraints). AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options.
CfS:16	East of Loves Farm (Tithe Farm), St Neots		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators. B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:163	Dews Bus and Coach Depot, Chatteris Road, Somersham		
CfS:164	Land South of Great North Road, Alconbury		
CfS:165	Land to the rear of The Stilton Cheese Inn		
CfS:174	Land to the West of Graveley Road, Offord D'Arcy		
CfS:185 and CfS:23-24288	South of A1123		
CfS:186	Land rear of 16 to 58 North Street, Stilton		
CfS:188	Off Cheveril Lane, Bury		
CfS:198	Land to the North of Houghton Road (larger site), St Ives		

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CfS:202	Land South of Caxton Road, Great Gransden		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:212	Land at A1 West (South) - South of Peterborough Motorway Services, Haddon		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined. Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators.
CfS:213 / Somersham 2	Land to South-West of College Farm (larger site), Somersham		
CfS:203	Land West of Little Paxton		
CfS:221	Land North of A141, between Huntingdon Racecourse and A1307		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined. Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators.
CfS:221	Land North of A141, between Huntingdon Racecourse and A1307		Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators.
CfS:23-24295	Former Motorway Compound Site, North of		Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in

Site Reference / Policy No.	Location / site address	Water resources RAG	AW comments on water supply (mainly relate to employment sites where there may be non-domestic water supply constraints). AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options.
	A1198 roundabout		BREEAM water calculators.
CfS:240	Giffords Park, East of B1040, St Ives, (Needingworth)		
CfS:242	Land off Huntingdon Road, Brampton		
CfS:247	The Lattenburys (land to the South of the A1307 and North of A14, and West of A1198)		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators. Uncertain impact regarding non-domestic water supply for R&D
CfS:248	Land West of Colne Road, Bluntisham		
CfS:256	Lodge Farm, North of A141		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators.
CfS:259	Home Farm South		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:268	Land North of Hollow Lane, Ramsey		
CfS:276	Huntingdon Racecourse		D2 - depending on type of leisure activities planned on this site, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.

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CfS:278	North of Wintringham Hall, Cambridge Road, St Neots		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators. Uncertain impact regarding non-domestic water supply for R&D. Storage and distribution - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators.
CfS:28	Land between 76 and 86 Owl End, Great Stukeley		
CfS:302	Land North of Harley Industrial Park, Paxton Hill, Great Paxton		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:303	Land adjacent to 24 Cedar Close, Grafham		
CfS:317	Land South West of Potton Road, Eynesbury, St Neots		
CfS:339	Land to the west of Parkhall Road, College Farm, Somersham		
CfS:34	Land to South West of South Farm, Upton		
CfS:341	Wallis Land, Thrapston Road, Brampton		

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CfS:347	Amber Centre, 36 Mayfield Road, Huntingdon		
CfS:359	Land to the East of Globe Lane (smaller site), Alconbury		
CfS:365	Land South East of Bicton Industrial Estate Kimbolton		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:380	Land at Little Common Farm, Sawtry		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:385	Land North of Black Horse Industrial Estate (smaller site), Sawtry		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators.
CfS:39	Land West of 5 High Street, Hail Weston		
CfS:46	Galley Hill, Fenstanton		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:52	Land East of Glatton Road and North of Brookside Industrial Estate, Sawtry		

Site Reference / Policy No.	Location / site address	Water resources RAG	AW comments on water supply (mainly relate to employment sites where there may be non-domestic water supply constraints). AW are obligated to supply existing and planned domestic water supplies, and their WRMP will indicate how this will be met through demand management and strategic supply options.
CfS:53	Ramsey Forty Foot Village rural mooring, Ramsey Forty Foot		
CfS:7	Brittens Farm, Station Road, Kimbolton		
CfS:75	Land at Ramadie, Earith Road, Colne		
CfS:82	RAF Upwood - Phase 4		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators. B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:84	RAF Upwood - Phase 3		
CfS:88	Land to the West of Glatton Road, Sawtry		
CfS:95	Wyton Airfield		Offices - mainly domestic water requirements - e.g. welfare/sanitation. Seek policy requirement for full credits in BREEAM water calculators. Uncertain impact regarding non-domestic water supply for R&D. B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS:98	West of Warren Lane,		

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	Bythorn		
CfS23-24128	Land off 18 Holliday's Road, Bluntisham		
CfS23-24188	Land off Old North Road, Sawtry		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.
CfS23-2421	Old Sheds at Manor Farm		
CfS23-24239	Land between the West Lodge and Home Farm, Waresley		
CfS23-24291	Ruddles Lane, Wyton		Dependent on amount of water required for fire suppression and type of connection.
CfS23-24298	Land North Of 23 To 33 Oundle Road, Alwalton (larger site)		
CfS23-243	Land to North of Station Road, Holme		
Huntingdon 1	Hinchingbrooke Hospital		
Godmanchester 1	Former RGE Engineering site and HDC Car Park, The Avenue		
Little Paxton 1	North of St James Road		

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Yaxley 1	Eagle Business Park, phase 3, Broadway.		B2 - depending on type of business, it may be constrained by our non-domestic water supply position where any request for more than 20m3/day will be declined.

E Event duration monitoring (EDM) for storm overflows in Huntingdonshire

E.1 EDM records for 2022, 2023 and 2024

EA name	2022	2023	2024	Years of data	Annual average	RAG score	Investigation triggered?
ABBOTSLEY - HARBINS LANE SPS	No data	No data	14	1	14.0	Green	No
ALWALTON MILL LANE PUMPING STATION	1	1	5	3	2.3	Green	No
BRAMPTON PS	No data	No data	1	1	1.0	Green	No
BRAMPTON WATER RECYCLING CENTRE	15	11	60	3	28.7	Red	Yes
BUCKDEN WATER RECYCLING CENTRE	27	120	162	3	103.0	Red	Yes
CATWORTH (HOSTEL) STW	24	7	20	3	17.0	Red	Yes
ELLINGTON - GRAFHAM ROAD SP	No data	No data	4	1	4.0	Green	No
ELTON WRC	2	0	28	3	10.0	Red	Yes
GREAT GIDDING PS	No data	No data	73	1	73.0	Red	Yes
GREAT GRANSDEN TPS	10	20	44	3	24.7	Red	Yes
HARTFORD ROAD CSO	30	44	66	3	46.7	Red	Yes
HUNTINGDON GODMANCHESTER WRC	5	16	66	3	29.0	Red	Yes
HUNTINGDON SAPLEY RD COMBINED SEWAGE OVERFLOW	No data	No data	5	1	5.0	Green	No
ILEX RD PS	0	0	0	3	0.0	Green	No

EA name	2022	2023	2024	Years of data	Annual average	RAG score	Investigation triggered?
KIMBOLTON STW	50	80	116	3	82.0	Red	Yes
MOLESWORTH STW	22	31	40	3	31.0	Red	Yes
NEEDINGWORTH STW	8	18	72	3	32.7	Red	Yes
OFFORD CLUNNY STATION LANE TPS	1	4	55	3	20.0	Red	Yes
OLDHURST STW	51	104	106	3	87.0	Red	Yes
PAXTON STW	26	17	31	3	24.7	Red	Yes
RAMSEY - BODSEY TPS	1	4	8	3	4.3	Green	No
RAMSEY WATER RECYCLING CENTRE	38	144	236	3	139.3	Red	Yes
SAWTRY PUMPING STATION CSO/EO	9	9	32	3	16.7	Red	Yes
SAWTRY WATER RECYCLING CENTRE	71	37	67	3	58.3	Red	Yes
SO RAMSEY	No data	6	20	2	13.0	Amber	No
SOMERSHAM WATER RECYCLING CENTRE	14	45	67	3	42.0	Red	Yes
SPALDWICK PS EO	28	18	19	3	21.7	Red	Yes
ST IVES PRIORY ROAD PUMPING STATION	21	25	46	3	30.7	Red	Yes
ST IVES THE QUAY PUMPING STATION	3	0	4	3	2.3	Green	No
ST IVES THE WAITS PUMPING STATION	25	35	27	3	29.0	Red	Yes
ST IVES WATER RECYCLING CENTRE	27	29	38	3	31.3	Red	Yes
ST MARY'S RD	No data	No data	0	1	0.0	Green	No
ST NEOTS - MARKET SQUARE CSO	60	16	32	3	36.0	Red	Yes
ST NEOTS STW	1	2	8	3	3.7	Green	No
ST. IVES - MEADOW LANE PS	17	23	54	3	31.3	Red	No

EA name	2022	2023	2024	Years of data	Annual average	RAG score	Investigation triggered?
STIBBINGTON STW SSO	No data	No data	0	1	0.0	Green	No
STONELY - OLDFORD LANE TPS	No data	40	62	2	51.0	Red	Yes
STONELY SEWAGE PUMPING STATION	No data	1	31	2	16.0	Amber	No
STONELY SEWAGE PUMPING STATION	No data	1	31	2	16.0	Amber	No
STUKELEY-LOW ROAD TPS	34	61	47	3	47.3	Red	Yes
THE HIGHWAY PS	28	60	73	3	53.7	Red	Yes
UPWOOD STW	54	30	49	3	44.3	Red	Yes
WARBOYS CHURCH STREET TERM PUMP STA	0	11	12	3	7.7	Amber	No
WARESLEY WATER RECYCLING CENTRE	13	67	50	3	43.3	Red	Yes
WHITE HART TPS	1	2	10	3	4.3	Green	No
WISTOW SPS	No data	No data	0	1	0.0	Green	No
WYTON (EX-RAF) WATER RECYCLING CNTR	39	50	55	3	48.0	Red	Yes