Shared Standards in Water Efficiency for Local Plans

June 2025

NATURAL ENGLAND

Environment Agency

WRE WATER RESOURCES EAST

Cambridge Water

ESSEX&SUFFOLK WATER living water

Affinity Water

love every drop anglianwater

In Brief

Clean and sustainable supply of water is essential for growth and nature recovery. However, the entire eastern England region is classified as seriously water stressed. These Shared Standards set out a collaborative and collective approach by Anglian Water, Cambridge Water, Essex & Suffolk Water, Affinity Water, the Environment Agency and Natural England, to support Local Planning Authorities (LPAs) to deliver sustainable growth in this area. It has the full endorsement of Water Resources East (WRE) as part of strengthening the Regional Water Resources Plan for Eastern England.

This guidance provides advice and evidence to support LPAs within the WRE area (Figure 1) to adopt policy requirements to achieve tighter water efficiency standards. We recommend that LPAs include Local Plan Policies that:

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. Annex C provides information on this.

Require new, extended or redeveloped non-domestic[1] 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.

These standards provide guidance and local evidence to help LPAs make a case that more stringent water efficiency policies are justified, feasible and viable as part of Water Cycle Studies and Integrated Water Management Plans that effectively manage a range of challenges across the water environment and aid nature recovery.

The signatory parties commit to updating the Shared Standards to reflect relevant material changes in policy, legislation, and/or evidence.

1 Note: 'non-domestic' excludes public buildings, such as schools and hospitals, and those where the primary use is for domestic purposes as well as residential dwellings.

1. Introduction

Water scarcity is where there is insufficient water for nature recovery, resilience and adaptation whilst also supporting sustainable climate-resilient growth. Greater water efficiency in new development is vital to deal with growing water scarcity.

The Environment Agency's Water Stressed Areas – 2021 Classification shows that much of England is affected by serious water stress, including the area covered by these standards.

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.

The Written Ministerial Statement (WMS) in 2023 'The Next Stage in Our Long Term Plan for Housing Update' encourages LPAs to set more stringent standards in Local Plans and in planning permissions 'in areas of serious water stress, where water scarcity is inhibiting the adoption of Local Plans or the granting of planning permission for homes'.

Local Plans have a significant role in helping to deliver the sustainable use of water resources and address shorter-term water scarcity issues. LPAs can help ensure the risk of harm to habitats and deterioration to water bodies due to water scarcity is minimised by setting more ambitious, tighter water efficiency standards for new residential and non-domestic developments in local planning policy. Policies can help make development more water efficient and allow growth, whilst longer term water supply solutions are being developed/implemented. As well as managing risks to the environment, water efficiency measures may also reduce the need for water companies to restrict supply for non-domestic growth, alongside other initiatives.

These Shared Standards represent a collaborative and collective approach by Anglian Water, Cambridge Water, Essex & Suffolk Water, Affinity Water, the Environment Agency and Natural England to support LPAs towards achieving plentiful water for sustainable growth and optimal use of water resources. The recommendations made in this guidance support planning for population growth, adaptation to climate change and nature recovery, in line with the Environmental Improvement Plan (EIP) 2023 and the Environment Act 2021.

Together, we endorse the need for an ambitious policy framework in Local Plans to improve water efficiency of applications for new developments and prioritise integrated water management. This helps to ensure we have sufficient water resources to meet future growth, whilst leaving enough water in the environment for nature recovery. It also responds to the climate and ecological emergency declared by most LPAs in the area covered by the Shared Standards.

2. Recommended approach

We recommend LPAs in the Shared Standards area (Figure 1) adopt policy requirements in new Local Plans based on the following principles:

- Water efficiency standards in new homes that aim to achieve a design standard of up to 85 litres/person/day (l/p/d) for residential developments. Where there is insufficient justification for 85 l/p/d, for example on viability grounds or local environmental risks, there could still be a case for a design standard that is more stringent than building regulations e.g. 90 or 95 l/p/d. See Annex C for further information.
- The tightest standards of water efficiency in new, extended or redeveloped non-household development[2] to aim to achieve full credits in the BREEAM water calculator, with a minimum of 3 credits in WAT01[3].
- All major non-household developments include water saving measures and water reuse in their designs.
- The Shared Standards provides a starting point for LPAs to build an evidence base to justify more stringent water efficiency and understand local viability to help LPAs identify appropriate thresholds and requirements for their water efficiency local plan policy based on the above requirements.

In support of these policies, we also recommend that:

- An up-to-date Water Cycle Study (WCS) is conducted to compile local evidence that demonstrates that water scarcity is having or is likely in the future to have an adverse impact on the environment and how water efficiency can protect the environment and support nature recovery, whilst not adversely affecting viability of development.
- The LPA monitoring reports are used to monitor the water efficiency policies to demonstrate the policies are being correctly followed and are effective.
- Significantly less ambitious water efficiency policies than set out in these standards should be supported by evidence that outweighs the evidence in these standards.

2 'Non-household' means all development except residential dwellings.
3 BREEAM sets requirements for sanitary aspects (e.g. toilets and sinks) of non-household development to be water efficient. It does not set water efficiency standards for commercial operations of non-household development.

3. How LPAs can justify strong water efficiency policies in Local Plans

This section provides justification for more stringent Local Plan Policies on water efficiency, to help inform the creation of a Local Plan evidence base. This could be stand alone or preferably part of an Water Cycle Study (WCS). WCS provides wider benefits including a more comprehensive understanding of the water environment and the identification of integrated solutions with multiple benefits. For example, it can help deliver nature recovery identified in Local Nature Recovery Strategies (LNRS).

In the Annexes to this guidance we provide the following evidence and information to support more stringent water efficiency policies in the area covered by the Shared Standards:

- Evidence that water scarcity presents significant environmental risks and thus could limit growth.

This is provided in:

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.

We will keep the information and evidence in these Annexes up to date to support more ambitious water efficiency policies in Local Plans in the future. Any changes in Government policy or legislation will also be reflected in the Shared Standards updates.

3.1 How to decide where in the range that local policies should set their water efficiency thresholds

Determining what water efficiency threshold to choose for residential development should be based on local evidence starting with the information in Annexes A to C. We recommend the environmental evidence (Annexes A and B) is brought together in a Water Cycle Study (WCS) to demonstrate that water supply is or has the potential to adversely affect the environment and prevent statutory objectives from being met, and that greater water efficiency is needed in order to supply growth and meet environmental objectives. Alongside this, a viability assessment using information in Annex C can demonstrate the affordability of water efficiency measures alongside environmental incentives provided by water companies.

4. Recommended Policy Wording

We recommend that LPAs consider the following template policy wording for inclusion in appropriate Local Plan Policies, taking account of local circumstances, viability, and based on the findings of an up to date (integrated) Water Cycle Study (WCS) using the information and evidence set out in the Annexes.

Note: It may be reasonable for LPAs to require more stringent standards for water efficiency in new developments than those set in their local plan (or in building regulations if no local plan policy) should local evidence (using the evidence in the Shared Standards as a starting point) justify it and if it its feasible and viable (again, using the evidence in the Shared Standards).

Draft policy: Water Resources and Sustainable Growth

In accordance with the following criteria, development proposals should demonstrate the following measures have been incorporated into their design and use to ensure sustainable use of water resources:

1. All development will demonstrate water efficient design. This is to be achieved by ensuring that:

a) New residential development is designed to utilise no more than [85]* litres per person per day of mains supplied water / potable water per person per day (l/p/d).

b) New, extended or redeveloped non-household** buildings aim to achieve full credits within the 4 water categories (WAT01, WAT02, WAT03, and WAT04) for BREAAM standard within a minimum score of 3 credits within WAT01 Water Consumption issue category, or an equivalent standard set out in any future update to BREAAM. The applicant will be required to justify and evidence why full credits is not possible/viable for the development.

2. A Water Efficient Design Statement must be submitted with the application at the earliest stage to demonstrate how policy requirements have been met and will be maintained in relation to water efficient design. The statement shall provide, as a minimum, the following:

a) Baseline information relating to existing water use within a development site; and

b) Full calculations relating to expected water use within a proposed development (such as water efficient fixtures and fittings, rainwater/stormwater harvesting and reuse, or greywater recycling).

3. Prior to the first occupation of development a completion certificate shall be submitted to the Local Planning Authority confirming the design standard under part 1 a or b (as relevant) has been verified and fully implemented.

4. If Government policy or legislation relating to 1 to 3 is more stringent or at significant variance with above, after the adoption of this plan, the most stringent standard will be adopted.

5. Contact the relevant water company to find out if they require a water resources assessment for new non-domestic*** supplies and if they offer environmental incentive schemes to fund water efficiency measures in new developments.

* Note: LPA choose appropriate threshold based on local evidence. See Annex C for further information.

** Note: ‘non-household’ means all development except residential dwellings.

*** Note: ‘non-domestic’ excludes public buildings, such as schools and hospitals, and those where the primary use is for domestic purposes, as well as residential dwellings.

5. Monitoring

To ensure that the water efficiency policies can be accurately measured, we recommend that LPAs monitor the implementation of these policies, through Authority Monitoring Reports (AMRs). For example, to ensure compliance in delivering the water efficiency design standard, this could be through the submission of verification reports on major developments or commercial developments, or where environmental incentives for water efficiency measures and Water Resource Assessments for non-household developments have been approved by the water company.

5.1 Smart metering

Demand management of existing homes and non-households, such as the roll out of smart metering, is a critical part of the companies' plans and the measures set out will help to ensure there is time to assess, plan for and construct new supply options. Smart metering will allow more effective communication with customers to empower them to use less water and enables water companies to identify leaks on customers' properties more quickly. Where anonymised data from Smart Meters is in place this may support monitoring of water usage to monitor the success of Local Plan Policies in some larger developments. LPAs can speak to water companies about this.

6. Further support

All signatory parties commit to keeping the guidance in the Shared Standards up to date to reflect relevant material changes in policy, legislation, and/or evidence.

We recognise the need to work together with LPAs to help them implement the recommendations in the Shared Standards win their Local Plan Policies.

The **Environment Agency** encourages LPAs to contact them early in the plan preparation process, so they can supplement the environmental evidence Annexes A and B and ensure the environmental justification for more stringent water efficiency polices is as strong as possible. This information can be included within the Water Cycle Study (WCS). A detailed review of the draft WCS would fall under our Planning Advice Service that operates on a cost recovery basis.

Natural England will provide advice for local plans on the statutory nature protection and recovery obligations that are supported by these standards focussing on protected sites. Natural England will not normally comment on individual applications in relation to these standards.

The **water companies** aim to be proactive in supporting LPAs to secure water efficient policies in their local plans to achieve positive environmental outcomes. This covers a range of measures including advice, case studies, and emerging evidence. Water companies also provide environmental incentive schemes to promote water efficiency and reduce costs for developers that sign up to these.

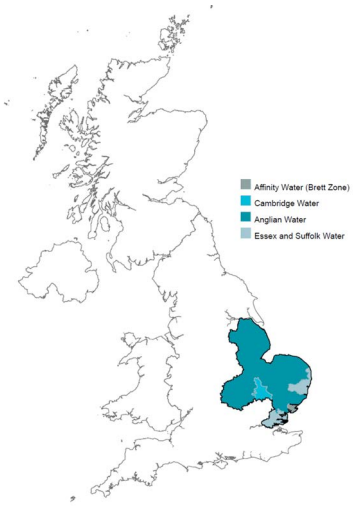
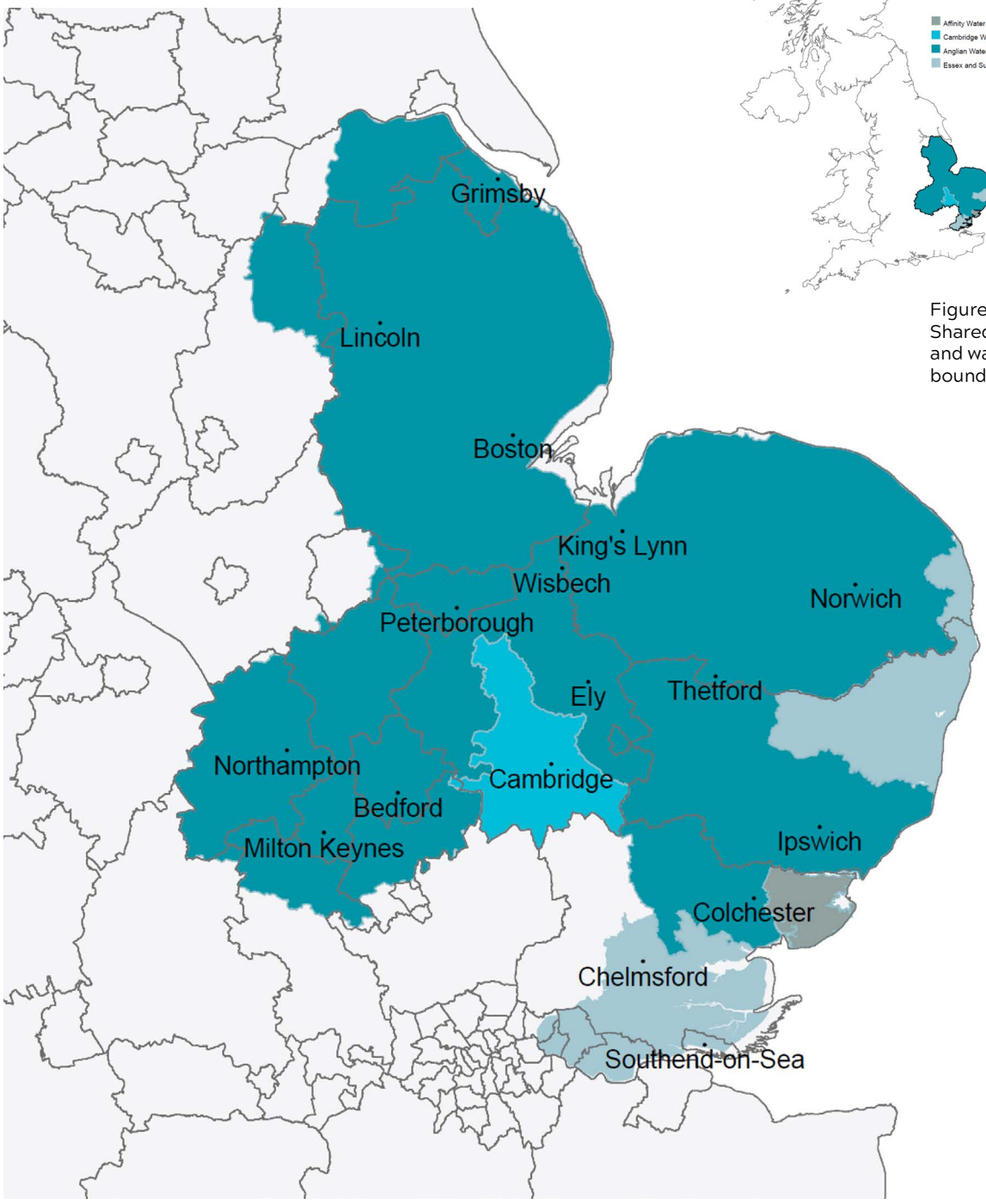


Figure 1. Map of Shared Standards area and water company boundaries



Affinity Water (Brett Zone)
Cambridge Water
Anglian Water
Essex and Suffolk Water
Counties and Unitary Authorities (December 2024)

Figure 2: Shared Standards area (Water Resources East region) showing unitary and county boundaries with water company supply areas.

Annex A I Evidence that the supply-demand balance requires demand management, restrictions on supply and strategic water transfers

In this Annex we set out that water companies in the Shared Standards area will rely demand management and restrictions on non-domestic supply to minimise abstractions and protect the environment until new large strategic supply options come online, which are not due until the 2030s. For example, the Grafham Transfer that will supply Cambridge is not due to be operational until 2032 and the Fens Reservoir and Lincolnshire Reservoir that will supply significant areas of East of England and Lincolnshire are not due to be operational until at least 2036.

Demand management measures can be uncertain where they rely significantly on customer behaviour. Should they be unsuccessful, it is likely that water companies will have to abstract above sustainable limits that protect the environment (See Annex B).

Restrictions on non-domestic supply limit abstractions and protect the environment but can limit non-domestic development.

It is important therefore that new development is as water efficient as possible to mitigate risk that demand management is not as successful as expected and maximise water available for the environment and future growth. More stringent water efficiency could also be used to offset supply for non-domestic uses that would normally be refused by water companies with non-domestic supply restrictions.

The Shared Standard area's reliance on strategic transfers shows that water resources will be increasingly redistributed across the region in the future. This, combined with increasing pressure of growth and climate change, means there is a strong case for high levels of water efficiency across the region.

A1 The overarching picture for demand management

The Government's 2024 consultation on planning policy noted there is a growing gap in our water supplies that will rise to circa five billion litres a day by 2050 if no further action is taken above existing measures (from 2025 onwards). A summary of England's revised draft regional and water resources management plans – GOV.UK by the Environment Agency identified that the gap between supply and demand is increasing with the challenges of climate change, population growth, drought resilience and increasing environmental protection requiring more water to be available. It also highlighted that Water Resource Management Plans (WRMP) rely on ambitious demand management, including water efficiency, is to address approximately half (48%) of this forecasted deficit.

A1.1 Demand management in WRMPs for Shared Standards region

Water companies have a regulatory requirement to produce WRMPs every five years. The most recent WRMPs plan for 2025-2060 and beyond. Aligned with the Regional Water Resources Plan, the WRMPs show the demand management measures that will be taken to ensure the supply and demand balance is met through reductions in consumption and leakage.

WRMPs include consideration of which abstraction licences are being reduced or removed to meet environmental obligations. They also include the companies' forecasts of demand increases from new homes and businesses.

The WRMPs in the Shared Standards area demonstrate that a there are significant challenges in meeting predicted domestic and non-domestic growth in water demand whilst also meeting statutory environmental obligations. New strategic water supplies are not expected

to be delivered in East of England until at least 2032, with the most significant new supply in the Fens Reservoir not due until at least 2036. In the interim, all companies are heavily reliant on managing demand for water, such as by reducing leaks and customer water usage, to reduce the environmental risks of increased abstraction needed to maintain supplies to existing customers and supply growth. The success of these measures can be uncertain where they rely on behaviour change.

A2 Non-Domestic restrictions

Whilst water companies work hard to support businesses in the region, with the help of the water retail market, the increase in new requests for non-domestic water demands (water used for manufacturing and processing) has increased due to several factors. These include the requirement to reduce or revoke some abstraction licences and tightened limitations on new abstractions to protect and enhance our rivers and wetlands. This has resulted in a higher number of requests received by water companies for non-domestic water connections as businesses simply cannot access any other source of water. At the same time there are new requests related to the 'onshoring' of production following EU-exit and other supply chain issues, as well as new demands relating to net zero ambitions. Under the Water Industry Act 1991, water companies have a statutory duty to supply water for domestic purposes, but there is no direct obligation to supply non-domestic purposes where water companies incur unreasonable expenditure, or they put at risk their ability to meet existing or probable future water supply obligations. In certain circumstances, requests to companies may need to be declined in the short to medium term, until new strategic water resources options are delivered (e.g. new reservoirs). This has led to water companies adopting the policy positions set out below.

A2.1 Water Company non-domestic restrictions in Shared Standards area

A2.1.1 Anglian Water

Anglian Water's policy position on non-domestic water requests states that where new and unplanned non-domestic water requests are received which exceed 20,000 litres per day (20m3/day); this may be less, dependent on the availability of water in that area. Anglian Water will need to decline the request for more water in order to protect existing supplies and the environment until strategic supply options come online.

A2.1.2 Essex & Suffolk Water

Essex & Suffolk Water has a non-domestic moratorium in its Hartismere water resource zone in Suffolk. This means that until new supply schemes are operational in 2032/33, Essex & Suffolk Water are unable to agree to new connections or increases in supply from existing connections where the water will be used for non-domestic purposes. Supply headroom is limited in the company's other water resource zones in Suffolk and so they may also need to decline an application while new supply schemes are developed in order to protect existing supplies and the environment.

A2.1.3 Cambridge Water

Cambridge Water is applying an enhanced assessment of new non-household connection requests from April 2025 to mitigate the risk whilst developing new water resource options. These new water resource options look to bring water into the region from Anglian Water's Grafham Reservoir and the development of the new Fens Reservoir near Chatteris, but they will take time to deliver, with the first portion of this water available from 2032.

From 2025, new non-household requests for connections that require less than 20m3/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 20m3/day and where the primary use is for non-domestic purposes (e.g. water for industrial or business use), it is unlikely that these connections would be facilitated or supplied until 2032.

Cambridge Water are encouraging all developers to contact them as early as possible in the process so that support and advice on the likely outcome of the request can be provided, as well as helping to identify opportunities to reduce water consumption and/or achieve water neutrality. Early engagement is key to ensure connection requests are enabled at the earliest opportunity, linking to build out rates and offsetting activities.

A3 Strategic issues

The Environment Agency's Water Stressed Area's – 2021 Classification shows that much of England is affected by serious water stress, including East of England. The following evidence demonstrates that the whole of East of England is affected by water scarcity. It provides justification for the need for water efficiency policies across the whole region, not just in these areas where water scarcity is at its most acute, because water companies need to transfer water across company areas / resource zones from parts of East of England (that are still considered classed as at 'serious' water stress), to other parts of East of England that are even more seriously affected.

A3.1 Regional water scarcity pressures

WRE's Regional Water Resources Plan for Eastern England identifies that the region is the driest in England, receiving only around 600 millimetres of rainfall per year which is around two-thirds of the average for England and Wales.

Eastern England is one of the fastest growing regions in England, experiencing 8.3% population growth in the past decade against a national average of 6.6%, with significant future growth identified in adopted and emerging Local Plans.

The current baseline position (if no action was taken) projects a supply-demand deficit for the Public Water Supply of around 730 million litres per day by 2050. Almost half of this deficit is to be met by demand management actions to reduce water consumption amongst household and non-household water users, reduce leakage, with the rest met by new supply options (see Figure 2).

The new supply options will take time to deliver and in the interim, growth is a challenge to supply sustainably. Making growth more water efficient helps reduce these risks as demand management measures can be delivered and be effective from point of occupation.

Average household consumption per capita is currently expected to reduce from 135 l/p/d at present to 110 l/p/d by 2050. Greater Cambridge (Cambridge City Council and South Cambridgeshire Council combined area) has been identified as particularly water scarce, and a Water Scarcity Group has been convened to address water scarcity limitations for future growth.

A3.2 Strategic water supply transfers

Regulators' Alliance for Progressing Infrastructure Development (RAPID) is progressing the delivery of several strategic water resource options which are shown in Figure 3, alongside other local resource options.

Figure 4 shows the Anglian Water strategic pipelines which is delivering hundreds of kilometres of underground, large-diameter, interconnecting pipeline stretching from North Lincolnshire to Essex. Together these options will result in a much more interconnected and resilient network of water supply infrastructure in the Shared Standards area.

Figure 5 below shows further strategic pipelines which will be delivered by Essex & Suffolk Water to connect all three of its Suffolk Water Resource Zones. This demonstrates how water companies are planning to move water across the region to address pressures in the most water scarce areas. Increased water efficiency across the whole region is important to ensure this is sustainable and effective, particularly in the context of regional water scarcity pressured outlined in A3.1.

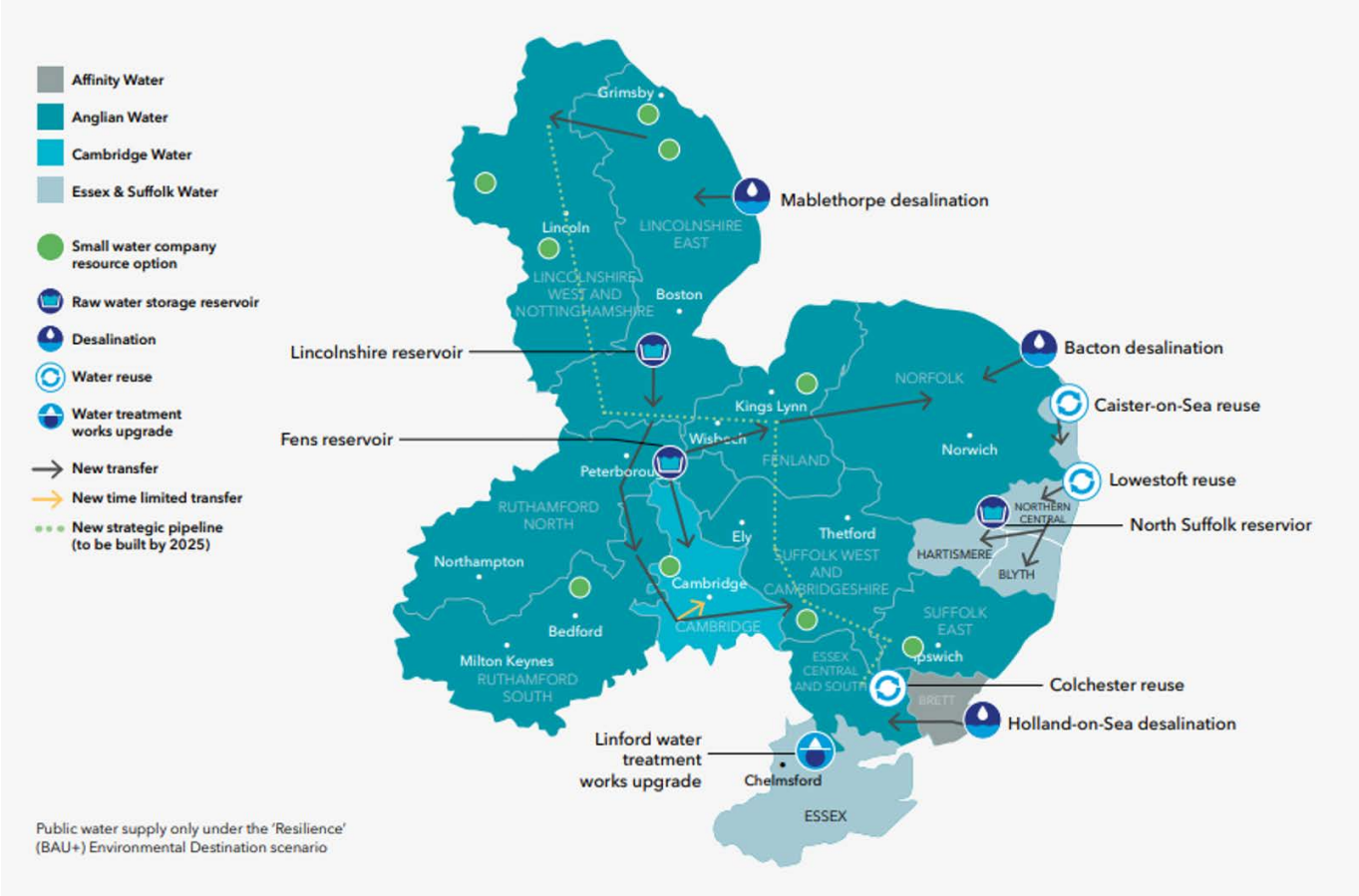


Figure 3. Location of best value supply side options, Regional Water Resources Plan for Eastern England – (WRE, December 2023). This includes RAPID Strategic Resource Options.

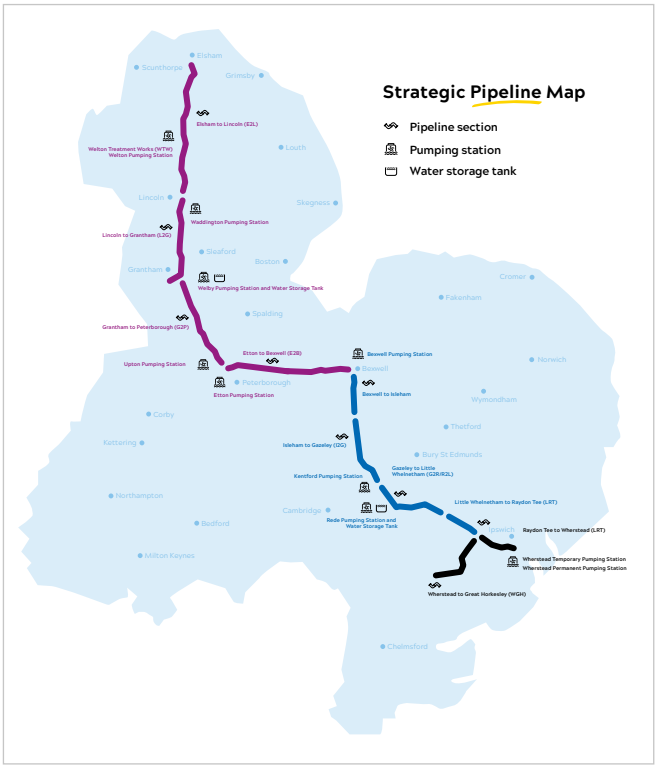


Figure 4: Anglian Water Strategic Pipeline map

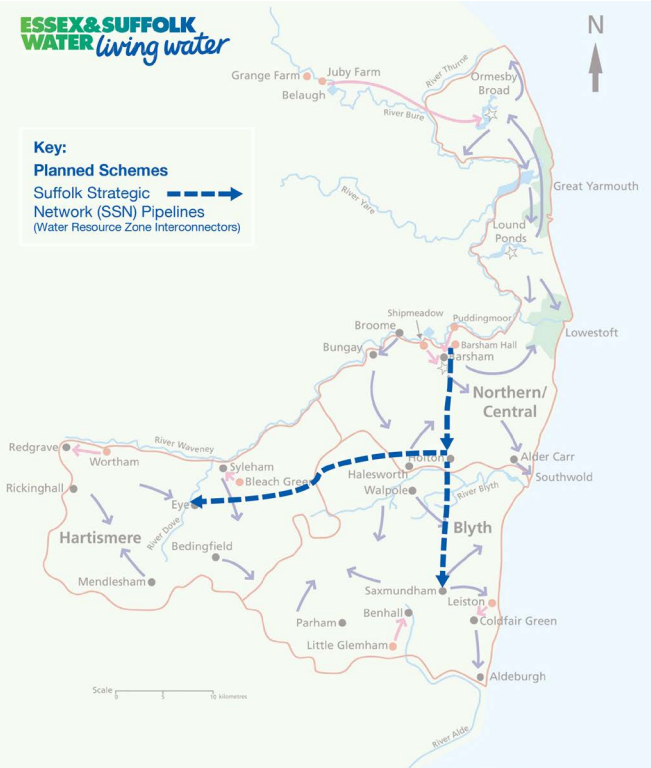


Figure 5: Essex and Suffolk Waters Strategic Pipeline map

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

B1 Water efficiency is needed for protected sites and wider nature recovery.

Natural England defines water scarcity as where there is insufficient water for nature recovery, resilience and adaptation, whilst also supporting sustainable climate-resilient growth. Water scarcity in the Shared Standards area is widespread.

The Shared Standards area covers two main Natural England Area Teams; Norfolk, Suffolk, and West Anglia. Within these teams, inside the Shared Standards area, there are 239 Sites of Special Scientific Interest (SSSIs) which have water dependent features. This includes 20 National Nature Reserves, 11 Special Areas of Conservation, 11 Special Protection Areas and 13 Ramsar sites.

The freshwater dependent notified (legally protected) features are made up of:

- Open water habitats (lakes, ponds, rivers and ditches)
- Wetland habitats (fen, mire, bog, reedbed, wet grassland, grazing marsh, dune slacks, wet heath and wet woodland)
- Breeding and wintering wetland birds and assemblages
- Wetland plant species and assemblages
- Wetland invertebrates and assemblages
- Amphibian species and assemblages
- Fish species

All these sites and features will be potentially vulnerable to water scarcity related pressures.

Of the 239 SSSIs, 96 at time of writing, have water abstraction identified as an active pressure. Many have measures in place to address these pressures linked in many cases to the plan-led approach (see section B2). The Shared Standards complement or support the delivery of those measures. Further information on protected sites features, condition and pressures can be found on Natural England's Designated Sites Database Site Search.

B2 Plan-led approach to water scarcity.

Natural England have adopted a plan-led approach to water scarcity whereby they attempt to secure protected sites recovery from abstraction impacts by robust responses to Water Resource Management Plans (WRMPs). To provide LPAs with the certainty they need to rely on WRMPs for growth and their Local Plans, Natural England are negotiating licence changes/ capping or other securing measures with the Environment Agency in parallel. The third phase is to provide advice to local authorities on the need for water efficiency measures where these support mitigation of known or likely impacts on nature recovery identified by the plan-led approach.

The Shared Standards area is covered by the plan-led approach to water scarcity where commitments for investigations into sustainability of abstraction licences and commitments to abstraction interim and/or long-term licence amendments have been made. These commitments include those that were the made by the Environment Agency after the Harris Vs Environment Agency Judicial Review. The Shared Standards form the evidence to support our advice to local authorities on water scarcity and are therefore a part of the plan-led approach.

The policy and legislative provisions protecting these sites are set out in Annex D.

B3 Water levels and flows: challenges for the wider water environment

Following the publication of the River Basin Management Plans 2022 (RBMP), the Environment Agency published supporting research papers. The Water levels and flows report provides details of the pressures on water flows, a review of actions to address the challenges, plus future challenges and actions. It provides the following evidence:

- Preventing deterioration in ecological and groundwater status is essential to retain the value of the environment and the ecosystem services we all rely on now and in the future.
- Water companies are completing investigations where growth in abstraction is likely to cause deterioration in ecology or groundwater resources and will take action to prevent the deterioration from occurring.
- The Environment Agency has also set out its approach to capping licences to prevent increasing abstraction causing deterioration (see B4 and B5 for further details of specific pressures for the Shared Standards area).

This demonstrates there is a need to limit abstractions in some locations to avoid harm to the environment. Combined with the pressures outlined in Annex A – population growth, economic development, climate change and the reliance on demand management and strategic transfers, there is a strong case for water efficiency of new development to ease pressure on the environment and to support economic growth.

B4 Abstraction Licence Reductions

The Environment Agency has identified abstraction licence reductions (sustainability changes) that are required to some water company abstraction licences to either deliver an improvement in ecology and/or to prevent its deterioration.

Anglian Water and Essex and Suffolk Water have identified that they need to defer some required abstraction reductions until sustainable new supplies of water can be developed. Cambridge Water has identified a potential need to defer some required abstraction licence reductions.

This means there will be a risk that groundwater abstractions to supply short-term growth will cause deterioration of the environment.

Sustainability changes are delivered either through the water companies' Water Industry National Environment Programme (WINEP) as part of the cyclical rounds of WRMPs and Business Plans, or alternatively, can be delivered at the point of application to vary or renew a time limited abstraction licence.

B5 Regulation 19 (Water Environment (WFD) Regulations 2017) exemptions

In some cases, required sustainability changes (under the licence caps detailed above) may not be possible for the water company to accommodate without compromising supplies to existing customers and/or growth in customers. Water companies can make an overriding public interest case to defer the licence changes under Regulation 19 of the Water Environment (Water Framework Directive) Regulations 2017.

A water company's need to defer licence changes is an indicator that abstraction could cause environmental deterioration, and this is a relevant planning consideration under Regulation 33 of the Water Environment (Water Framework Directive) Regulations 2017 (see Annex D). Local Planning Authorities (LPAs) should check whether this is the case with the relevant water company. The Environment Agency recommends this in the following water resource zones: (see Figure 6).

Anglian Water

- North Norfolk Coast
- Norwich and the Broads
- Central Essex
- South Essex
- Bury Haverhill
- Bury Haverhill
- Newmarket
- Ely
- South Norfolk Rural
- North Norfolk Rural

Essex & Suffolk Water:

- Hartismere

Water Resource zones with deterioration risk

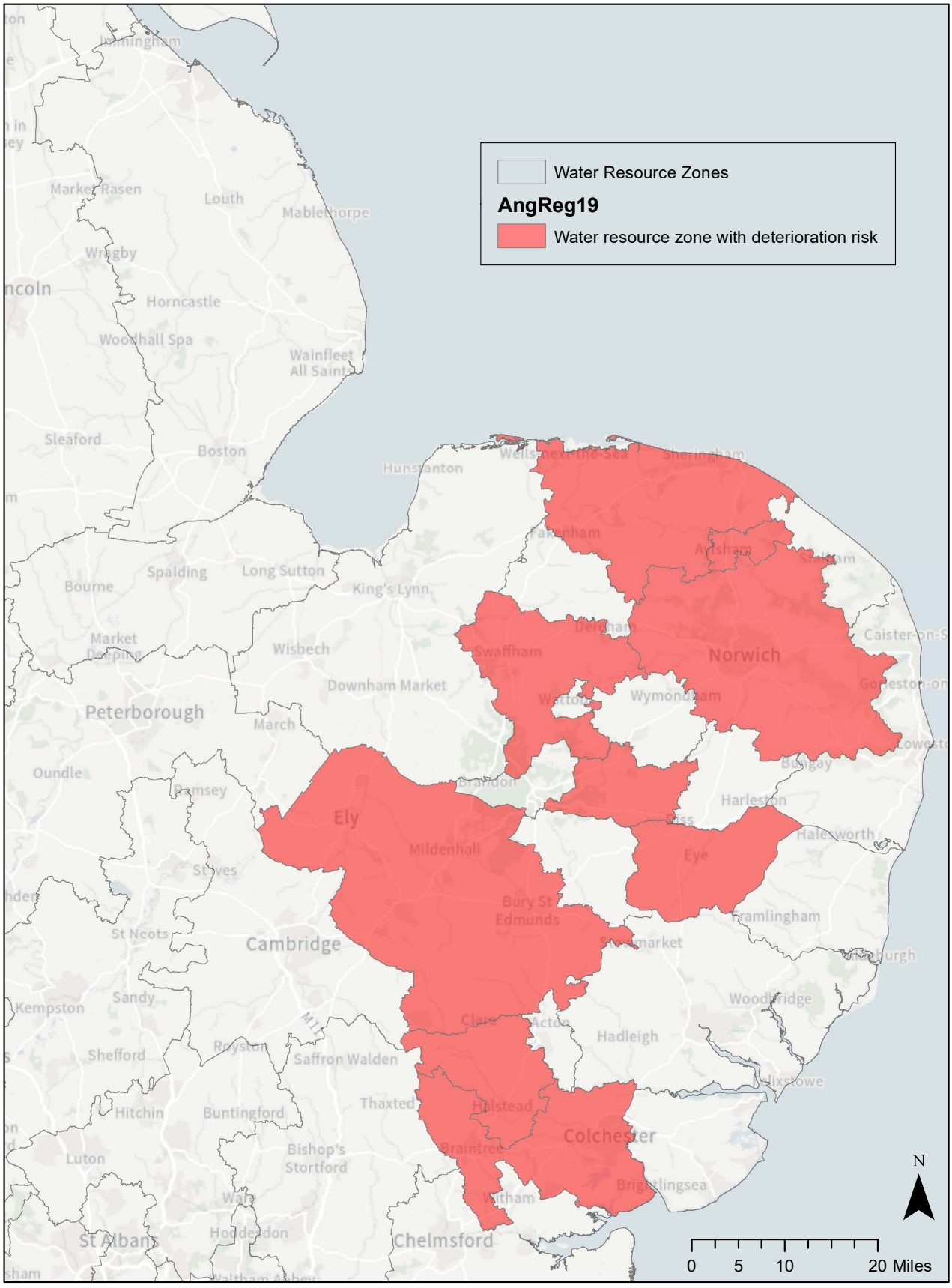


Figure 6. Water Resource Zones With Deterioration Risk

Annex C I Case for feasibility and viability

The information in this section provides evidence to support a case for the feasibility and viability of the recommendations in this guidance. This should be used alongside evidence of serious local water pressure and the impact it is having on the environment and growth (using information in Annexes A and B).

Section C1 provides information on the economic case supporting the promotion of greater water efficiency to enable sustainable growth.

In Section C2 we provide guidance and evidence on costs for achieving levels of water efficiency using as fixtures and fittings approach (not including water reuse). It split this into achieving the lowest level recommended by this guidance, 85 l/p/d and achieving 90 l/p/d to 100 l/p/d.

Section C3 sets the context for the current challenges to greywater and rainwater reuse and why this guidance is not advocating policy approaches that require routine use of rainwater harvesting for residential developments. It does, however, demonstrate that greywater and rainwater reuse has been used in some developments and this could be used to help achieve higher levels of water efficiency in some developments now, on a case-by-case basis, and more routinely in the future once barriers have been overcome.

In section C4, we outline how environmental incentives from water companies can provide additional support to meet costs and support the viability case for water efficiency policies.

Lastly, in section C5 we provide an example where a policy requiring 85 l/p/d has been achieved in Crawley Borough Council's Local Plan and case study of a development that has achieved high levels of water efficiency.

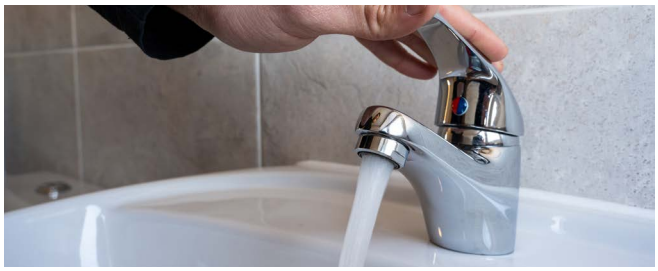
C1 General case for economic benefits of water efficiency

Economic analysis by Public First for the Enabling Water Smart Communities (EWSC) innovation project has found that water scarcity could cost the UK economy £25 billion over the next five years due to undelivered housing developments - a critical obstacle to meeting the government's housing targets. The research suggests that approximately 61,600 homes could go unbuilt in the east and southeast of England over this parliamentary term due to water scarcity.

This shortfall represents almost 40 per cent of the additional housing required annually in these regions under the government's revised housing targets and overall economic growth agenda, including unlocking the potential of the Oxford-Cambridge Growth Corridor.

Addressing water scarcity through building 'water smart' homes is essential to mitigating these economic losses, and environmental resilience to enable sustainable growth in the UK's most economically significant regions. The analysis found that building 'water smart' homes - those that use <80 l/p/d for new homes - would unlock 49,000 of the 61,600 'lost' homes in areas facing water scarcity.

C2 Guidance/evidence on costs for water efficiency fixtures and fittings



C2.1 Feasibility case for 85 l/p/d

Water efficient appliances that are widely available on the market can achieve 85 l/p/d are provided in Table 1.

Category	Unit	Litres	Basis	Product examples
Toilet	litres/person/day	15.45	Short flush 3, Long flush 4.5	EcoDelux Metro Water Saving Close Coupled Modern Toilet + Soft Close Seat | Victorian Plumbing UK
Basin tap	litres/person/day	7.90	4 litres / min	Deva Profile Basin Taps (Pair) | DCM101/FR101-4 | Deck Mounted | Chrome
Kitchen tap	litres/person/day	13.00	6 litres / min	Class line eco swan neck kitchen tap - NotJustTaps.co.uk
Bath	litres/person/day	0.00	n/a	
Dishwasher	litres/person/day	2.02	0.56 litres / place setting	Buy KENWOOD KID16X23 Full-size Fully Integrated Dishwasher | Currys
Washing machine	litres/person/day	10.29	4.9 litres / kg	Buy SAMSUNG Series 5 SpaceMax WW11DG5B25ABEU WiFi-enabled 11 kg 1400 Spin Washing Machine - Black | Currys
Shower	litres/person/day	39.20	7 litres / min	Flowpoint Dark Grey Shower Head
Normalisation factor	factor	0.91	n/a	n/a
External use	litres/person/day	5	n/a	n/a
Total (PCC[4])	**litres/person/day**	**85.0**		

Table 1: Table illustrating total consumption of water efficient household appliances available to achieve 85 l/p/d.

At present, it is feasible to achieve a total consumption of 85 l/p/d by taking a fittings-based approach, using product types with the following water efficiency / performance: toilet 3-4.5 l/p/d; basin tap 4 l/min; kitchen tap 6 l/min; dishwasher 0.56 l/place setting; washing machine: 4.9 l/kg; and shower 7 l/min.

This approach to water efficiency in new developments will be formalised by the Mandatory Water Efficiency Labelling Scheme (MWELS). The Government has committed to implement MWELS by the end of 2025[5].

Provisions for the MWELS are made in the Environment Act 2021 and it will help deliver the government's 10 actions set out in the Roadmap to Water Efficiency in new developments, which is detailed in the Environmental Improvement Plan 2023.

MWELS applies to plumbing and water consuming appliances to ensure that water efficiency ratings are clearly identifiable to developers and consumers. This will provide a simple and highly cost-effective way for developers to improve water efficiency in homes and other buildings.[6]

It will also help consumers make informed decisions and to promote the use of more water-efficient products when they replace appliances.

4 Per capita consumption (PCC) is a measure of how much water household customers use at home everyday. It is usually measured in litres per person per day (l/p/d).
5 See: Summary of responses and government response - GOV.UK
6 See: (Waterwise Briefing, Jan 2021)

The Waterwise Briefing - Water Labelling (January 2021) indicates that introducing the MWELS, linked to minimum standards for fittings, is the single most cost effective intervention that government could make to help reduce personal water use.

This is supported by Energy Savings Trust reports (commissioned by Water Efficiency Collaborative Fund and Waterwise, with support of Defra) which assess and evaluate the costs and benefits of a MWELS could have on domestic water and energy consumption:

- Independent review of the costs and benefits of water labelling options in the UK: Summary Report (EST, 2018)
- Independent review of the costs and benefits of water labelling options in the UK: Extension Project. Technical Report - FINAL (EST, 2019) (EST, 2019)

This indicates that the imminent introduction of the MWELS will further strengthen the case for the feasibility of high levels of water efficiency using a fittings approach to 85 l/p/d. When the MWELS has been adopted, the Shared Standards will be updated.

C2.2 Feasibility case for 90 to 100 l/p/d

The Future Homes Hub's (FHH) Water Ready report was commissioned by Defra to support the creation of the roadmap for greater water efficiency in new homes and development. The report presents the FHH working group's results of assessments using potential means of reducing water use, taking account of fittings and technology that are and will be available, consumer acceptability and cost considerations, and policy and regulatory frameworks.

The FHH reviewed a number of water calculations illustrative of what could be achieved using known or foreseeable fittings and technology ('contender specifications') for meeting those levels.

Table 3 of the report (p.18) illustrates how increased levels of water efficiency could be achieved using a fittings-based approach, including a variety of technology options across various water use bands (125 - 75 l/p/d). This includes known and foreseeable fittings and technologies, some of which are available now, although some are not expected to be available, at scale, until 2030.

Table 4 (p.25) of the report further details water efficiency measures and their costs are provided. It shows a variety of performance standards for different fittings and when they could be available in volume; ranging from available now, through to 6 years and what the extra costs would be.

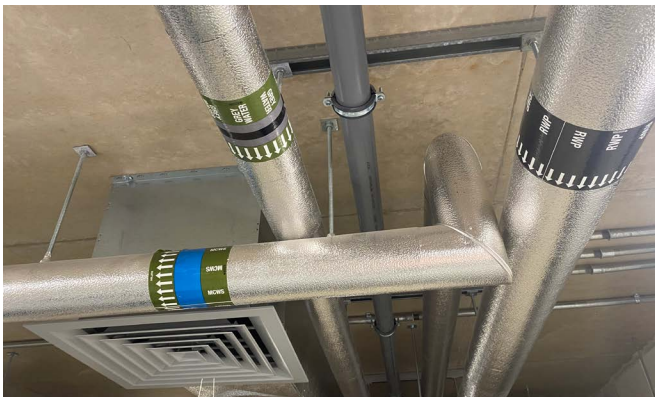
C3 Costs of water reuse installations for greywater and rainwater reuse in residential developments

At present, there are challenges for residential developments to utilise greywater and rainwater reuse. Section 4 of the Water Supply (Water Quality) Regulations 2016 requires water supplied by companies, such as the Shared Standards partners, to be "wholesome" if supplied for "domestic purposes". The Water Industry Act 1991 includes WC flushing under "sanitary" and then subsequently "domestic" purposes. This is usually interpreted as meaning that water recycling cannot be supplied by water companies for domestic purposes. Private suppliers can use reclaimed or recycled water for sanitation (toilet flushing) provided human health is not jeopardised and notification is provided and approved. Further information on barriers to water reuse is provided in EWSC report single source of truth on water recycling.

On this basis, the Shared Standards does not promote that Local Plan Policies rely on or require water reuse for household development purposes at the moment. We are aware that the government is working with key partners to resolve these issues. Where these challenges can be overcome, there is evidence and guidance to support the case for feasibility and viability of water reuse systems for residential developments.

The Enabling Water Smart Communities (EWSC) project published a report authored by CIWEM that investigates the costs of water reuse installations for greywater and rainwater reuse in residential developments, at community scale and for individual plots.

The report presents the capital costs for delivering water reuse schemes on site, which includes external pipework, storage and treatment equipment, and internal pipework. These costs were sought from appropriate providers including treatment equipment suppliers, water companies, self-lay pipework providers, and plumbing contractors.



Additional cost per	Rainwater harvesting	Greywater recycling
Community recycling	£1,100-£3,700	£1,900-£9,900
On-plot reuse	£1,900-£6,400	£3,800-£4,600

Table 2: Summary of the total per plot cost range for various components of water reuse installations at the community and on-plot scale (modified from Table 1 in the EWSC Report).

Despite a small sample size of different development typologies, the range of costs analysed (see table 2 above) demonstrates that water reuse is a credible approach to significantly reducing average household potable water consumption and increasing environmental resilience - particularly where councils are challenged by water stress. This preliminary evidence indicates that:

- Community-scale rainwater reuse is the most cost-effective, even for smaller sized developments of 40-50 homes.
- By comparison, greywater reuse is more expensive, but more data is needed to reduce uncertainties in the costing.
- There is a significant fall in costs for water reuse approaches in developments of at least 100 units.
- Higher density development sites yield lower costs due to factors such as less pipework needed between properties.

The report states that water reuse can help achieve average per capita household water consumption levels of 80 l/p/d when supported by standard water efficient appliances.

C4 Incentives and viability

Section C2 demonstrates that greater levels of water efficiency can be achieved at relatively low cost. In addition, water companies offer incentives to developers to build water efficient homes. These are tied into water company Business Plans that are published every five years, with the latest being published in 2025 alongside WRMPs.

Water companies' environmental incentives provide charging discounts to developers where they introduce measures to encourage better environmental outcomes. More information about the environmental incentive schemes offered by water companies in the Shared Standard area is provided through these links:

- Anglian Water
- Affinity Water
- Essex and Suffolk Water
- Cambridge Water

Ofwat's Environmental Incentive Common Framework requires water companies to offer at least one incentive for water efficiency which goes beyond the Building Regulations 2010 mandatory level. For example, in case of Anglian Water's incentive, developer's projects must meet at least 90 l/p/d.

These incentives can support the viability of delivering water efficiency measures. LPAs are encouraged to speak to water companies about how these incentives can be used to support viability cases for water efficiency policies in their local plans.

C5 Case studies

C 5.1 Crawley Borough Local Plan 2024 - 2040

Crawley Borough Council is part of the Sussex North Water Resource Zone (WRZ) in West Sussex, supplied by Southern Water. Due to significant concerns regarding the impacts of current and planned abstraction levels on habitats at several designated sites[7], Natural England advised LPAs that water neutrality[8] is needed to ensure development within the WRZ does not have adverse effects on these sites, and to fulfil responsibilities under the Habitat Regulations.

To do this in their Local Plan, Crawley BC calculated a water budget to demonstrate it is water neutral, which ensures no net increase in water consumption by a combination of tight water efficiency policies for all new builds and offsetting the water consumption by reduction of existing uses.

Part C - Mitigation Strategy of the Sussex North Water Neutrality Study was used to evidence the Crawley Borough Local Plan, adopted in October 2024, includes a requirement for new homes within the WRZ to achieve 85 l/p/d. In the strategy, non-household development should achieve a score of three credits within the water (Wat 01 Water Consumption) issue category for the BREEAM New Construction Standard, achieving 40% reduction compared to baseline standards. This is recommended to be achieved by a fittings-based approach that, based on data from Crawley's research, would cost between £349 and £431 per dwelling. Where appliances are not part of the standard fit-out this cost range would increase to £1,049 to £1,531.

C.5.2 Clay Farm, Cambridge

Project description: 208 dwelling development, comprising one to three bedroom apartments and family houses. This includes site scale integrated water management scheme (Former Code for Sustainable Homes level 5) including SuDS, community rainwater harvesting and low water use fixtures/fittings to reduce potable water consumption to below 80 l/p/d.

7 Including Amberley Wild Brooks Site of Special Scientific Interest (SSSI), Pulborough Brook (SSSI), Arun Valley Special Protection Area (SPA), Arun Valley Special Area of Conservation (SAC) and Arun Valley Ramsar site.

8 Water Neutrality was defined: 'for every new development, total water use in the region after the development must be equal to or less than the total water-use in the region before the new development'.

Water saving features

The development includes water saving features such as dual flush toilets, reduced flow showers and reduced volume baths, saves on both water and energy consumption without compromising on the flow rates expected from high quality sanitary ware.

Rainwater reuse

Each 23-home quad includes a moat that can store, and attenuate rainwater captured from roofs, hardstanding and roads. Rainwater is pre-treated in a reed bed before it enters a 240m3 in-situ concrete tank. From there water is pumped into a small holding tank in a central plant room. The water is polished, then added to a break tank including emergency mains top up. A triple booster pump sends water to all WCs in the development through its own dedicated pipe network. The rainwater harvesting is fully remote-controlled including pressure monitoring, water quality monitoring and fault reporting.

Further information about this site is available online here.

Annex D I Policy and legislative drivers that allow for and require water efficiency

Government expectations set out in policy and legislation provide a sound basis for supporting Local Plans preparing more stringent water efficiency policies. The main drivers are set out in the sections below.

D1 The Water Environment (Water Framework Directive) Regulations 2017 and Anglian River Basin Management Plan (RBMP)

Local Planning Authorities (LPAs) must have regard to the River Basin Management Plan (RBMP) and any supplementary plans, when exercising their statutory functions under Regulation 33 of the Water Environment (Water Framework Directive) Regulations 2017. To comply with Regulation 33, it is expected that the LPAs should be confident it has exercised its planning powers to ensure that any approved developments have taken reasonable steps to assess and mitigate any deterioration risk of water bodies in the RBMP. This includes maximising water efficiency, as far as feasible and viable, to reduce the impact of new development on water bodies that supply water.

D2 Part G of Building Regulations 2010

Part G of the Building Regulations 2010 includes a requirement that the water efficiency of all new dwellings, must not exceed 125 litres per person per day (l/p/d). In addition, there is an optional requirement of 110 /l/p/d which should be implemented through Local Plan policy (justified by strong evidence) so it is automatically applicable to all new developments in the local authority area.

The government is committed to reviewing the Building Regulations 2010 to allow LPAs to introduce tighter water efficiency standards in new homes. In the meantime, LPAs in areas of serious water stress, where water scarcity is inhibiting the adoption of Local Plans or the granting of planning permission for homes, are encouraged to agree tighter standards than the optional 110 l/p/d following advice in the Written Ministerial Statement 'The Next Stage in Our Long Term Plan for Housing Update' from 2023.

It is important that LPAs do not rely solely on anticipated changes to the Building Regulations 2010 to meet their local water efficiency ambitions nor to meet their environmental obligations in relation to water.

D3 Planning Policy and Local Plans

Local Plans have a crucial role in setting more ambitious water efficiency standards for new residential and non-domestic development. The National Planning Policy Framework (NPPF) requires a proactive approach to mitigating and adapting to climate change including water supply.

The Written Ministerial Statement (WMS) in 2023 encourages LPAs to set more stringent standards in Local Plans and in planning permissions 'in areas of serious water stress, where water scarcity is inhibiting the adoption of Local Plans or the granting of planning permission for homes'. This follows the 2015 Planning Update (Written Ministerial Statement) which instructed that planning permissions should not require, or be subject to conditions requiring, tighter water efficiency standards than those stipulated by the Building Regulations 2010.

The Environmental Improvement Plan also has a 10-point Action Plan which sets out the ambition to tighten the Building Regulations 2010 water efficiency standards. All new residential development must contribute to water efficiency if we are to achieve ambitious demand reduction targets in the EIP. The Environmental Improvement Plan is currently under review, and a revised publication is expected in Summer 2025.

The Shared Standards parties consider that

the policy expectations in the NPPF, together with the reference to tighter water efficiency standards referred to in the 2023 WMS, provide a sound policy basis for LPAs to adopt the approach in these Shared Standards where evidence justifies it.

Further support for these Shared Standards can be found in:

- The Defra sponsored EA Integrated Water Management Framework for the Oxford-Cambridge corridor identifies the options for rainwater harvesting, grey water reuse including final effluent reuse from water recycling centres for non-potable supplies, alongside mandating higher efficiency fittings. These measures are alongside water companies continued reduction of leakage and customer information to support reduced use and water bills.

D4 Habitats Regulations Assessment and Duties to Habitats Sites

Regulation 9 of the Conservation of Habitats and Species Regulations 2017 (S.I. 2017/1012) as amended (referred to as the Habitats Regulations) requires every competent authority, including LPAs, to have regard to the requirements of the Habitats Directive in the exercise of any of its functions. This requirement includes restoring favourable conservation status. Regulation 10 places a duty on a competent authority, in exercising any function, to use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds.

In addition, Regulation 63 places obligations on competent authorities in respect of plans or projects likely to have a significant effect on a protected site. Guidance now refers to sites covered by the provisions of the Habitats Regulations as 'Habitats sites' in line with the wording in the National Planning Policy Framework and this terminology is adopted in this document. In England, as a matter of policy, sites listed or proposed under the "Ramsar Convention on Wetlands of International Importance" receive the same level of protection as Habitats sites.

Planning Authorities have a statutory duty to prepare Local Plans, so they are the Competent Authority for Habitats Regulations Assessment (HRA). In their HRA planning authorities should satisfy itself that the water supply for the growth within the Local Plan meets the tests and so should include:

- A list and/or map of all relevant Habitats sites.
- An appropriate assessment of the plan, unless based on objective information, a likely significant effect can be excluded by the screening of relevant Habitats sites. The appropriate assessment must identify all relevant adverse effects on integrity and uncertainties.
- All mitigation aimed at addressing likely significant effects or/and removing adverse effects must be covered within the appropriate assessment.
- Any proposals with residual adverse effects identified or where adverse effects are uncertain must have assessments under Regulation 64 (to determine that there are no alternatives with less or no adverse effects and demonstrate Imperative Reasons of Overriding Public Interest).
- All options with adverse effects must have secured compensatory habitat such that the coherence of the Habitats sites series is maintained.
- The HRA of the plan should include an assessment of the 'in combination' and cumulative impacts of the plan with other plans and projects. The HRA should have regards to relevant caselaw and should take account of whether the site is meeting its conservation objectives for relevant features and attributes to the draft Local Plan.

D5 Other Nature Recovery Obligations

D5.1 Wildlife and Countryside Act 1981 as Amended

Section 28G of the Wildlife and Countryside Act 1981, as inserted by section 75 of and Schedule 9 to the Countryside and Rights of Way Act 2000, places a duty on public authorities, including LPAs, to take reasonable steps consistent with the proper exercise of their functions to further the conservation and enhancement of Sites of Special Scientific Interest (SSSIs).

These duties not only apply to planning authorities to remove their impacts but also to contribute to maintaining or achieving SSSI favourable condition. The rate of improvement going forwards is set out in the Defra 25 Year Environment Plan which aims to restore by 2042 "75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition, alongside improving the water quality of the coastal environment and securing their wildlife value for the long term".

D5.2 Natural Environment and Rural Communities Act

The Natural Environmental and Rural Communities Act 2006 places a duty on public bodies, including water companies and LPAs, to "have regard, so far as is consistent with the proper exercise of their functions, to conserve biodiversity." Conserving biodiversity in this context includes restoring or enhancing a population or habitat. The guidance Biodiversity duty: public authority duty to have regard to conserving biodiversity sets out information for public authorities to understand what the biodiversity duty is and how to meet it when carrying out all activities.

However, the Environment Act 2021 (see D5.3) amends and strengthens this duty, requiring public authorities, including LPAs, to "further, so far as is consistent with the proper exercise of their functions, the conservation and enhancement of biodiversity", reflecting the aim of restoring or enhancing a species population or habitat. The Shared Standards area contains a significant number of priority habitats, including chalk streams and wetlands, which have water supply challenges. These challenges are being exacerbated by climate change. The water efficiency proposals in the Shared Standards helps to leave more water in the environment.

D5.3 Environment Act 2021, and the Environmental Improvement Plan 2023

The Environment Act 2021 makes provision for legally binding targets, plans and policies for improving the natural environment. This includes air quality, biodiversity, water, waste reduction and resource efficiency. The Act requires 5 yearly review of the Government's 25 Year Environment Plan, which becomes the first Environment Improvement Plan under the Act. The first review was published on 31st January as the Environmental Improvement Plan 2023.

The Shared Standards are supported by the Environment Improvement Plan (EIP) which sets ten actions in the Roadmap to Water Efficiency in new developments including consideration of a new standard for new homes in England where there is a clear local need, such as in areas of serious water stress. The Environment Act 2021 (and supporting EIP) introduces a National Water Target that requires a 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. The Shared Standards parties recognise these targets cannot be achieved by new development alone, however the Shared Standards is aimed to complement other demand management measures including leakage reduction, to support delivery of these targets alongside sustainable growth and nature recovery.

For more information please visit

- Anglian Water
- Affinity Water
- Essex and Suffolk Water
- Cambridge Water