Catchment Strategic Plan

Part of our Drainage and Wastewater Management Plan (DWMP)

Co-creating resilient wastewater catchments

A long-term Strategic Plan for **West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead, Hampshire and West Sussex**

Thames Water

Contents

Foreword

Thames Water has been making considerable progress to bring to fruition their drainage and wastewater management plan (DWMP). The DWMP vision is to co-create a 25-year plan for drainage and wastewater that benefits communities and the natural environment in London and the Thames Valley. We can all agree that planning to adapt to the growing critical pressures facing the water industry, such as climate change, a growing population and urbanisation, is of paramount importance and it has been very good to see that these challenges have been faced head on in the development of this plan.

Thames Water's commitment to achieve the DWMP vision through a collaborative process is one of the most important and admirable themes of this plan. Working alongside stakeholders and customers, including the Thames Regional Flood and Coastal Committee, ensures that the plan is reflective of our combined views and optimises overall efficacy and acceptability.

I have thoroughly enjoyed being part of this process and have been impressed by the extent of engagement that Thames Water has managed to undertake despite the challenging conditions of the coronavirus pandemic. As a result, I believe that the DWMP offers a significant step forward in planning for drainage and wastewater in our region.

Of course, the real changes will only happen once the plan is implemented on the ground, but the joined-up work and co-creation of the DWMP plan so far promises significant improvements for customers, communities and the natural environment across London and the Thames Valley. Continued focus on maintaining a tight relationship with all stakeholders is essential in moving forward to ensure Thames Water reaches their ambitious goals.

Professor Robert Van de Noort
Chair, Thames Regional Flood and Coastal Committee

Preface

Our DWMP progress and enhancements since our draft plan

We're proud of our first DWMP, and encouraged by the level of positive feedback we've received. By engaging and working collaboratively with around 2,000 of our customers and stakeholders, we've been able to deepen our shared understanding as well as develop new ways to approach drainage and wastewater management across our region.

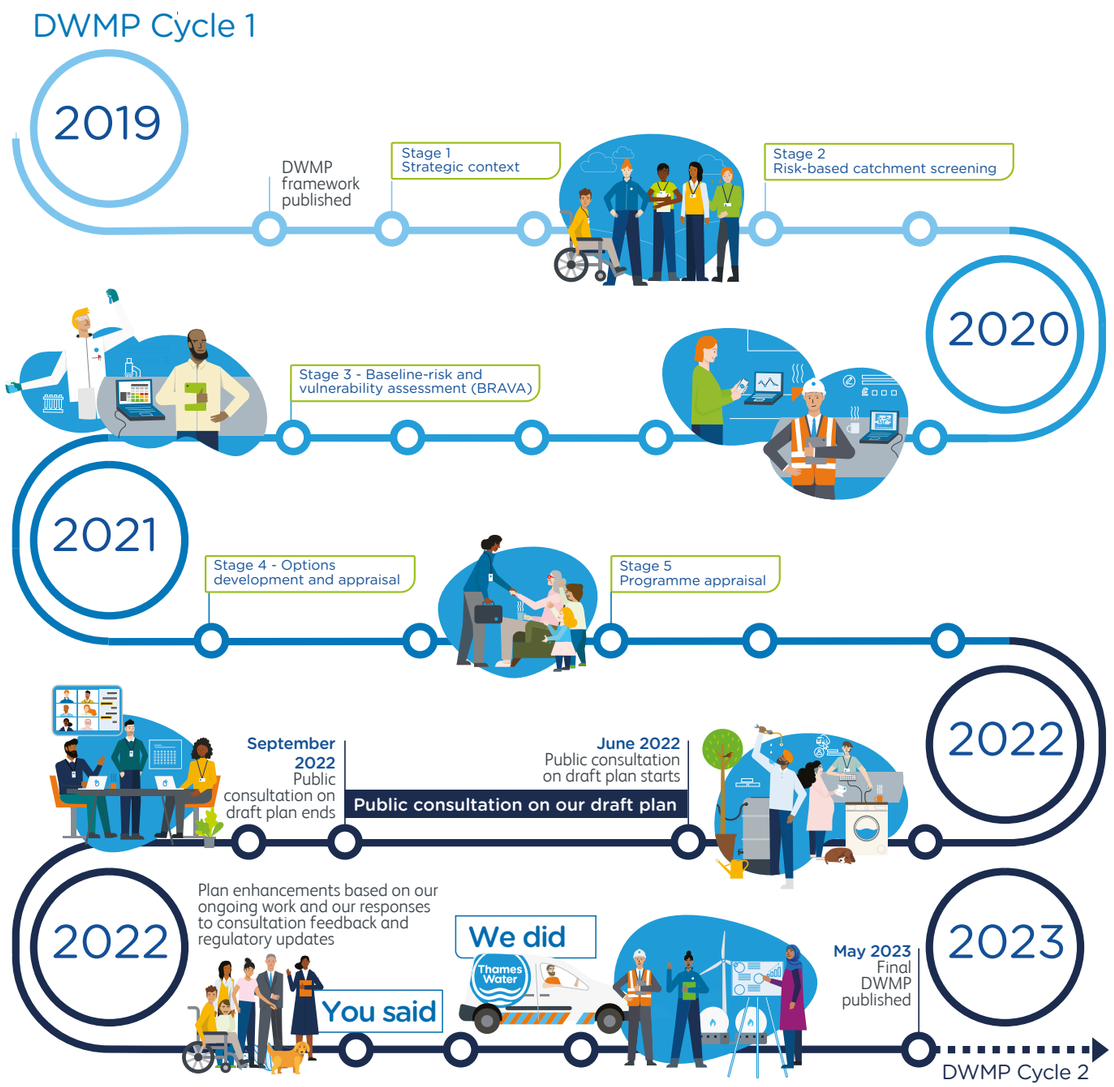
We'd like to say a big thank you to everyone who got involved and collaborated with us in the development of our shared plan. We're really happy it's having a positive impact already, and encouraged by the shared benefits we can deliver in the future as we continue to move forward together.

Our plan aligns with wider industry strategic plans and delivery programmes, such as the Water Industry National Environment Programme (WINEP) and the Long-Term Delivery Strategy (LTDS), and we'll make sure it continues to do so as we tackle current pressures and future challenges.

Over the past four years, we've developed, tested and enhanced our DWMP by engaging with customers and stakeholders and working with their valuable input and feedback to create a final plan we can all support. It's been almost a year since we first published our draft DWMP, and we've made some great progress since then. As customer and stakeholder requirements have evolved over time, our plan has evolved too.

We've enhanced our adaptive planning to increase the resilience of our final DWMP. We've also been testing its sensitivity against a range of alternative plans, risks and uncertainties to make sure our final plan is flexible to different potential futures. This approach will help us to make more proactive, adaptable and informed choices over time. It will also make sure that our interventions are set up for the future and can add the best value while providing ongoing opportunities for us to develop innovative solutions and ways of working.

The rest of this document summarises our final plan for this specific Catchment Strategic Plan (CSP) area, including the progress we've made from draft to final. We look forward to building on this progress and our collaborative approach as we implement our shared plan and evolve into DWMP Cycle 2.



Preface

What you told us about the draft DWMP for our region

We published our draft DWMP for public consultation in June 2022, and asked our customers and stakeholders for their feedback on it. We received around 1,400 responses from a wide range of local, regional and national stakeholder groups, including responses from every CSP area across our region.

We received lots of positive comments on the quality and ambition of our draft plan as well as useful ideas for making our final DWMP even stronger.

The consultation feedback had six main themes, as outlined below. We've listened carefully and responded wherever possible within our final plan*.

This valuable feedback has further enhanced our DWMP and will help our customers, communities and the natural environment in our region to thrive now and in the future.

You said

You supported

- Our preferred plan with the majority of our customers and stakeholders agreeing with this choice
- Our proposed solution types from nature-based solutions to using the latest technologies to increase capacity in our sewer system
- Our partnership-working approach with our 200+ local authorities, organisations, action groups, catchment partnerships and national stakeholders

You challenged

- Our targets – you wanted amendments or some new ones to be added
- Our programme – you wanted quicker delivery in certain areas and were concerned about such an ambitious SuDS plan
- The cost – you were worried about the impact on customer bills

You offered ideas for

- New or amended solutions that we could consider including in our preferred plan
- Maximising the benefits of our preferred plan's positive outcomes
- Further enhancements to our stakeholder engagement approach and ongoing activities

You wanted more details on

- The resilience of our assets to flooding and power outage
- How our preferred plan will be funded – by business-as-usual activities (base funding), or through enhancement funding
- Adaptive planning scenarios to evidence how our preferred plan could adapt to future influencing factors such as climate change

Feedback themes

- **Protecting the environment** – Level of ambition and pace of delivery
- **Evidencing best value** – Affordability and bill impact
- **Delivery** – Solutions and deliverability of the plan
- **Enhanced plan** – Technical clarifications and ease of navigation
- **Partnership working** – Collaboration to achieve multiple benefits
- **Valuing your input** – Stakeholder engagement

We did

We've used as much of your feedback as we could, together with the progress from our ongoing DWMP work and our responses to regulatory updates, to enhance our final plan including in the following ways:

- More ambitious storm overflow target delivery to help protect the environment
- Additional future scenario testing
- Increased evidencing around best value and justification for our preferred plan
- Increased balancing of risk, ambition and deliverability
- Increased alignment of DWMP to other strategies and delivery plans
- Earlier planned implementations
- Increased number of proposed solutions
- New dedicated technical appendices
- Rewritten and restructured parts of the documents to be clearer and more accessible
- More detailed content throughout, especially relating to strengthening partnership working and stakeholder engagement

* Some consultation feedback didn't require further action or wasn't relevant to the DWMP process. Other feedback was relevant to future DWMP planning cycles and will be used to inform this work.

This document focuses on the progress and updates we've made in our final DWMP for this specific CSP area.

Find out more about how we've addressed the wider consultation feedback in our You said, We did Technical appendix.

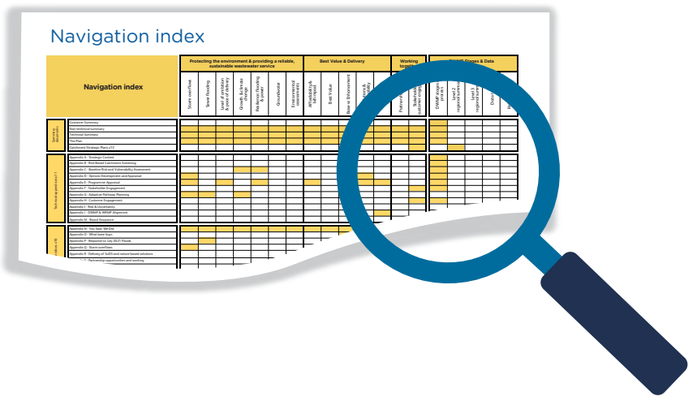
Preface

Navigating the final DWMP for our region

We've enhanced our final DWMP since we published it as a draft for public consultation in June 2022, and we want to make it easy for you to see what's changed.

You can spot all the places we've updated our draft plan with our 'progress signposts', which we've used across all our final DWMP documents. Here's where they'll be:

- Preface summaries - We've put a summary table in each document's preface, excluding Summary documents and the Catchment Strategic Plans (CSPs)
- Relevant chapters - We've placed the appropriate signposts next to each relevant chapter, including Summary documents and the CSPs

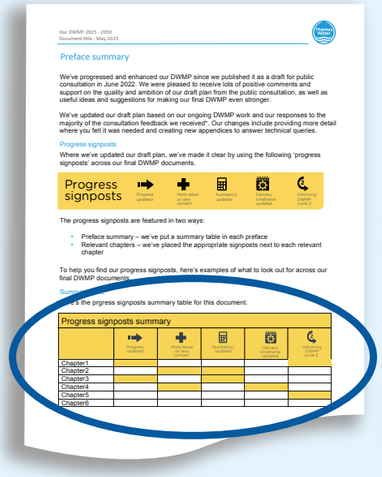


Progress signposts

- Progress updated
- More detail or new content
- Number(s) updated
- Delivery timeframe updated
- Informing DWMP cycle 2

To help you find our progress signposts, across our final DWMP documents, here are examples of what to look out for:

Preface summaries



Relevant chapters

If you need help navigating our final DWMP and locating key content, you can find a Navigation index at the back of this document.

Catchment strategic plan glossary

Term	Definition
1 in 30-year storm	A storm that has a 1 in 30 chance (3.33% probability) of being equalled or exceeded in any given year. This does not mean that a 30-year flood will happen regularly every 30 years, or only once in 30 years.
1 in 50-year storm	A storm that has a 1 in 50 chance (2% probability) of being equalled or exceeded in any given year. This does not mean that a 50-year flood will happen regularly every 50 years, or only once in 50 years.
Baseline Risk And Vulnerability Assessment (BRAVA)	Following Risk Based Catchment Screening (RBCS) detailed risk assessments on those catchments where we believed there was an adverse risk to performance over time, we modelled their performance for future epochs (2020, 2035 and 2050).
Combined Sewer	A combined sewer is a sewer designed to carry both wastewater and surface water from domestic and/or industrial sources to a treatment works in a single pipe.
Dry Weather Flow (DWF)	Dry Weather Flow (DWF) is the average daily flow to a Sewage Treatment Works (STW) during a period without rain.
EA Pollution Categories 1 to 3	Category 1 incidents have a serious, extensive or persistent impact on the environment, people or property. Category 2 incidents have a lesser, yet significant, impact. Category 3 incidents have a minor or minimal impact on the environment, people or property with only a limited or localised effect on water quality. Further guidance available here.
Event Duration Monitoring (EDM)	Event Duration Monitoring measures the frequency and duration of storm discharges to the environment from storm overflows.
Foul Sewer	A foul sewer is designed to carry domestic or commercial wastewater to a sewage works for treatment. Typically, it takes from sources including toilets, baths, showers, kitchen sinks, washing machines and dishwashers from residential and commercial premises.
Hydraulic Overload	When a sewer or system is unable to cope with a high flow.
L2 Area (Strategic Planning Area)	An aggregation of level 3 catchments (tactical planning units) into larger level 2 strategic planning areas. The level 2 strategic planning areas allow us to describe strategic drivers for change (relevant at the level 2 strategic planning area scale) as well as facilitating a more strategic level of planning above the detailed catchment assessments.
L3 Catchment (Tactical Planning Unit)	Geographical area in which a wastewater network drains to a single sewage treatment works. Stakeholders may be specifically associated with this area. Includes for surface water sewerage that may exist which serves the wastewater geographical area but drains to a watercourse.
Lead Local Flood Authorities (LLFAs)	LLFAs are Risk Management Authorities as defined by the Flood and Water Management Act. They have statutory duties with respect to flood risk management, investigating flooding and the compilation of surface water management plans.
Risk Based Catchment Screening (RBCS)	A first pass screening exercise of catchment vulnerability against 17 different risk indicators to understand which catchments are low risk catchments and those that are likely to be at risk in the future if not supported by our long-term plan.
Sewage Treatment Works (STW)	A Sewage Treatment Works is a site where wastewater is received and treated to a standard legally agreed with the Environment Agency before it is released back into the environment.
Storm Overflow Discharges	Storm overflows are used to manage excess flows, which typically occur as a result of heavy rainfall. Excess flow that may otherwise have caused flooding is released through a designated outfall to a waterbody, land area or alternative drainage system.
Surface Water Sewer	A surface water sewer collects rainwater from domestic and commercial roofs, driveways, patios, etc to a local watercourse or suitable surface water drainage system.
Sustainable Drainage Systems (SuDS)	Drainage solutions for surface runoff that mimic natural drainage regimes and provide an alternative to a network of pipes and sewers.
Thames Regional Flood and Coastal Committee (TRFCC) Area	Thames Regional Flood and Coastal Committee (TRFCC) area was established by the Environment Agency under the Flood and Water Management Act 2010 that brings together members representing the Constituent Authority. Featured TRFCCs are listed here on our DWMP portal.

Introduction

Since 2019, we've been working with you, our stakeholders, to develop our first long-term strategy for wastewater and drainage issues within the West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead, Hampshire and West Sussex Thames Regional Flood and Coastal Committee (TRFCC) area.

We're developing a strategy for the next 25 years to meet future challenges such as climate change, population growth and urban creep which could impact the sewerage and drainage systems in our region.

We want to make sure we increase the resilience of our sewerage and drainage assets and network so that we can protect our customers, communities, and the environment from the impacts of these challenges. This long-term strategic plan outlines our shared vision for the future and details how, through working together, we can improve and enhance our wastewater and surface water services in this TRFCC area to achieve the following ambitious goals:

In this document we will explain:

- How we've worked in partnership to develop our strategic plan
- Our predictions of the future challenges we face in this region
- How this plan is expected to address these challenges and who else needs to be involved
- Our shared strategy for maintaining the safe and reliable delivery of wastewater and surface water services in the long-term

This TRFCC area covers 80 wastewater catchments, each with networks draining to a single treatment works site and, where present, surface water sewerage. In this document we summarise our long-term plan for this TRFCC area (L2) and also provide links to allow readers to drill down into our catchment-level plans (L3). If you want to contact us or want to find out more about our DWMP and the set of documents it comprises, please use the following links:
DWMP@thameswater.co.uk
Drainage and wastewater management plan

Our Goals

Stop internal and external property sewer flooding up to a 1 in 50-year storm event (2% probability in any given year) where possible

Eliminate harm from storm overflows - no more than an average of 10 discharges per annum by 2045 at overflow locations

Enhancing resilience at our sewage treatment works to ensure 100% permit compliance and protect river water quality

Our DWMP components

DWMP Framework

Strategic Context

Our DWMP

Technical Summary

The Plan

Technical Appendices

DWMP portal

Non-Technical Summary

Theme		How we will measure performance			
	Environment	**Sewage treatment works quality compliance** The ability of Sewage Treatment Works (STW) to treat and release treated sewage in line with the consented discharge permit quality conditions.	**Sewage treatment works DWF compliance** The ability of STWs to treat and discharge treated sewage in compliance with the flow discharge permit Dry Weather Flow (DWF) conditions.	**Risk of pollution incidents** The risk of polluting the environment through uncontrolled escape of sewage (classed as Category 1 to 3 by the Environment Agency) arising from either network or treatment sites.	**Storm overflow performance** The number of storm overflow discharges to the environment, both in the network and at the STWs.
	Property hydraulic sewer flooding	**Internal hydraulic sewer flooding risk in a 1 in 30-year storm** The risk of properties flooding internally as a result of hydraulic sewer overload.	**External hydraulic sewer flooding risk in a 1 in 30-year storm** The risk of sewer flooding to gardens and other land within the property curtilage as a result of hydraulic sewer overload.	**Risk of hydraulic sewer flooding in a 1 in 50-year storm (resilience sewer flooding)** The risk of residential properties experiencing sewer flooding as a result of hydraulic sewer overload based on a modelled assessment of the performance of our sewers in a storm that statistically occurs once every 50 years on average.	
	Asset health	**Sewer collapses** The risk of sewers collapsing or rising mains bursting that leads to a loss of/interruption to continued service.			

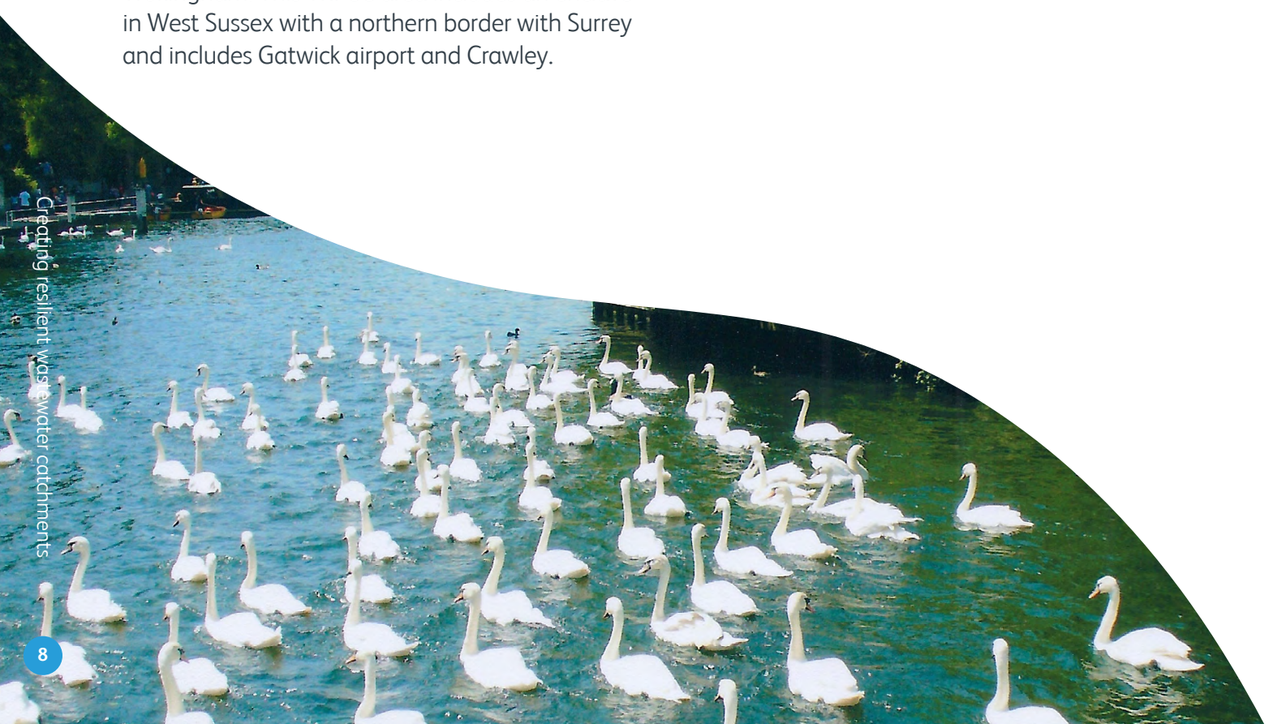
The West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead, Hampshire and West Sussex TRFCC area

This TRFCC area encompasses the mid reaches of the River Thames and its tributaries, including the Kennet and Loddon. The west of the TRFCC area follows the border of Berkshire and Wiltshire and includes the towns of Newbury and Hungerford. To the south it extends across the North Hampshire Downs as far as Four Marks and Liphook. To the east the TRFCC area shares a border with Surrey and includes Fleet, Aldershot and Windsor.

The perimeter of the TRFCC area then follows the River Thames east to Henley-on-Thames where it continues east along the border between Oxfordshire and Berkshire. Other key conurbations within this area include Reading, Bracknell and Wokingham. This TRFCC area includes an enclave in West Sussex with a northern border with Surrey and includes Gatwick airport and Crawley.

This area has sensitive chalk stream habitats. The River Kennet from Marlborough to Woolhampton and the River Lambourne are classified as Sites of Special Scientific Interest (SSSIs). The River Lambourne is also classified as a Special Area of Conservation (SAC) which is the highest designation of river status in England and the only one in the Thames Water area.

The Kennet and Pang area of this TRFCC area is highly groundwater responsive which causes groundwater infiltration issues. This basin is impacted (in terms of wastewater impact) more than any other in the Thames Valley region by groundwater.

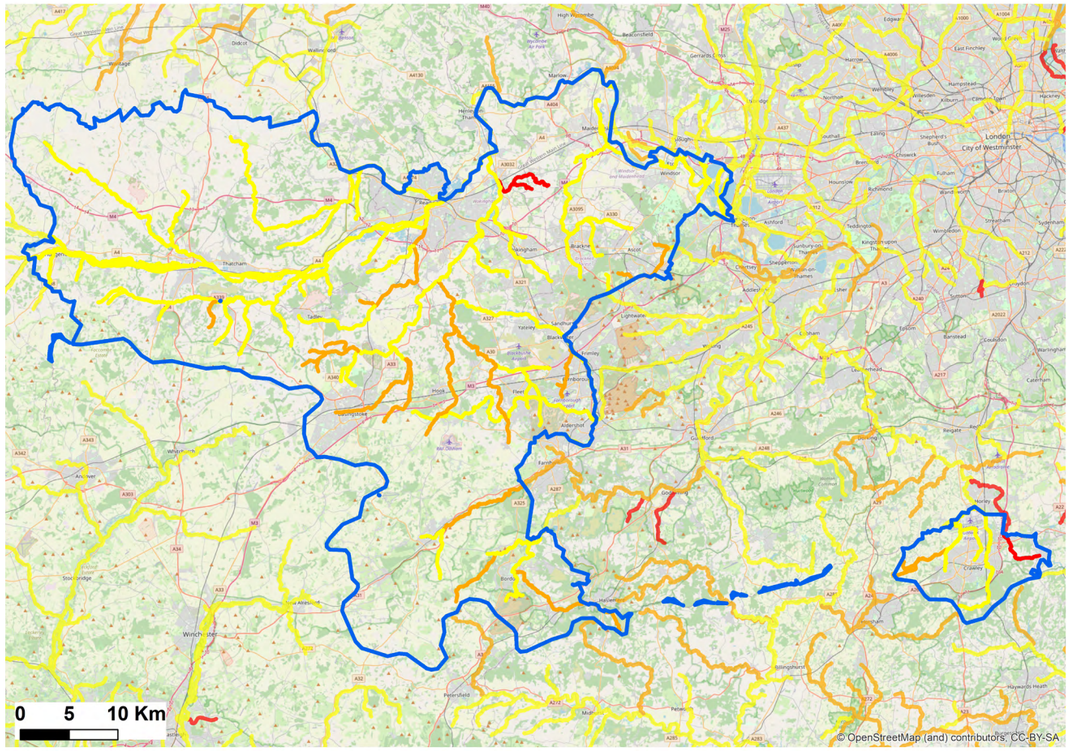


Every day, our sewerage network in this TRFCC area manages the needs of 1.25 million customers. Our sewerage network consists of:

- 80 STWs and their associated networks (4 non-Thames Water STWs)
- An area covering 2,273 km^2
- 11,990 km of sewers
- 986 pumping stations

The region mostly has separate sewer systems that convey wastewater and surface water from homes and businesses. Rainfall runoff is often collected by surface water sewers, highway drainage, or privately owned assets and directly discharged to nearby watercourses.

The river water quality status in this region is generally moderate as shown in the figure below.



Our co-creators

Who our stakeholders are

It's not possible for all the benefits identified in the DWMPs to be developed by water companies alone. They are led by water companies but created collaboratively with other organisations and groups that, with Thames Water, have a shared responsibility and/or interest in drainage, flooding and environmental protection. Active engagement with these stakeholders is vital for the consultation, planning and refinement of our DWMP.

Since 2019, we've been working with a wide variety of stakeholders from across this region to understand the local issues and opportunities so that we could create a long-term plan that provides the best outcome for everyone. In this region we've engaged and worked with stakeholders from the following organisations and groups:

Environment Agency, Water Services Regulation Authority (Ofwat), Natural England, Reading Borough Council, West Berkshire Council, Wokingham Borough Council, Hampshire County Council, Bracknell Forest Council, Royal Borough of Windsor and Maidenhead, West Sussex County Council, Consumer Council for Water, Thames Water Customer Challenge Group (CCG), Thames21, Rivers Trust, Thames Rivers Trust, South East Rivers Trust, Maidenhead to Teddington Catchment Partnership (CP), Loddon CP, South Chilterns CP, Kennet CP (Action for the River Kennet) and Wey CP (Wey Landscape Partnership).

Royal Borough of Windsor and Maidenhead

Thames Water Customer Challenge Group (CCG)

Maidenhead to Teddington CP

Loddon CP

South Chilterns CP

Kennet CP

Wey CP

The stakeholder feedback we've received

To ensure our stakeholders' views have been considered and are a fundamental part of our final DWMP, we've carried out a variety of stakeholder engagement activities. During 2020 to 2022 much of the interaction was online due to coronavirus restrictions, but over the years they've included workshops, drop-in sessions, 1-2-1 calls, recorded webinar updates, newsletters, surveys, feedback forms as well as online discussions. From our engagement throughout each of the DWMP framework stages we know what our stakeholders want our strategic plan to deliver in this region (see quotes on the right).

We've spoken to our stakeholders to identify their strategic management plans and policies that could interact with our DWMP. The strategic themes are displayed below and following the table records all of the plans and policies and how they align with the DWMP.

> "Ensure that climate change resilience is considered in all improvements/timescales."

> "This takes time - the sooner this is started the sooner joint opportunities and strategic solutions can be unlocked."

Partners' policies

Management Plan (Hyperlink)	Key aspects that align with the DWMP
Local Flood Risk Management Strategies	
West Berkshire Council, Local Flood Risk Management Strategy	• A duty to investigate flooding • A duty to produce and maintain a Local Flood Risk Management Strategy • A duty to maintain a register of significant flood defence structures and features powers to regulate ordinary watercourses • A role to promote sustainable drainage
Reading Borough Council, Local Flood Risk Management Strategy	• Identifies the existing areas of flood risk in Reading • Establishes priorities for managing local flood risk • Identifies how Reading Borough Council will work with other neighbouring authorities, stakeholders, and local communities to manage flood risk
Wokingham Borough Council, Local Flood Risk Management Strategy	• The strategy explains how Wokingham Borough Council will manage flood risk from surface water, groundwater and ordinary watercourses, now and in the future. • It will provide details of other organisations that are responsible for managing flood risk and what those responsibilities are.
Royal Borough of Windsor and Maidenhead, Local Flood Risk Management Strategy	• This strategy brings together recommendations for drainage, emergency planning and development control and sets out recommendations for the development of policy within the Borough Local Plan.
Bracknell Forest Council, Local Flood Risk Management Strategy	• This strategy is a statement of intent as to what the council as a whole is working towards to manage flood risk within the borough, and its implementation is intended to be of tangible benefit to local residents and businesses and to those passing through our borough.
West Sussex County Council, Local Flood Risk Management Strategy	• The council's overall aim is to ensure the risk from flooding and erosion is properly managed by using the full range of options in a coordinated way.

Management Plan (Hyperlink)	Key aspects that align with the DWMP
Hampshire County Council, Local Flood and Water Management Strategy	• Partnership working • Catchment approach • Understand risks and prioritise • Sustainable and resilient development • Record, prioritise investigate flood events • Work with multi-agency groups to develop schemes • Empower and support community resilience
River Catchment Partnership Plans	
Loddon Catchment Plan	• The vision for a 'healthy, functioning and wildlife rich aquatic environment within the River Loddon Catchment, valued and cared for by everyone now and in the future.'
The Kennet Catchment Management Plan	• Key aims of this plan are: – interact with the Kennet and Avon canal – improved practices in relation to nutrients, sedimentation and algal growth – channel modifications and degradation of habitats – over-abstraction – groundwater – invasive non-native species
South Chilterns Catchment Partnership	• The vision statement, is a healthy and sustainable water environment throughout the South Chilterns catchment area in which all significant water bodies achieve and maintain Good Ecological Status.
Maidenhead to Teddington Catchment Plan	• The sustainable management of land and water in the Lower Thames catchment and to balance the environmental, economic and social demands.
AONB Management Plans	
High Weald AONB Management Plan	• Sets out long-term objectives for conserving this nationally important landscape and the local authorities' ambitions for how the High Weald will be looked after for the next 5 years.
North Wessex Downs AONB Management Plan	• This plan presents an agreed agenda for the North Wessex Downs AONB for the current five-year period, 2019-2024. It sets out strategic objectives for AONB partners that are judged to be realistic and achievable during the plan period, and policies which support the long-term goals set out in the Vision Statement.

Management Plan (Hyperlink)	Key aspects that align with the DWMP
Surface Water Management Plans	
West Sussex County Council, Surface Water Management Plans	• This plan has been undertaken as part of a commission to develop Surface Water Management Plans for five areas of West Sussex which have a history of significant flooding from surface water, groundwater and drainage systems.
Hampshire County Council, Surface Water Management Plans. In particular Rushmoor Surface Water Management Plan.	• This plan is to ensure that all flood risk partners work together to understand the locations, causes and effects of flooding within the borough of Rushmoor and to identify measures to mitigate against flooding in the form of an Action Plan.
Sustainability and Planning	
Chalk Stream Restoration Strategy	• Enhanced status for all chalk streams
Green/Blue Infrastructure Plans	
Green Infrastructure Strategy for Basingstoke and Deane (2018-2029)	The strategy aims to: • manage, protect and restore existing Green Infrastructure (GI) • achieve measurable net gain for biodiversity with all new major development schemes • expand and reconnect green infrastructure where there is an identified deficit or where housing growth is planned
Hart Green Infrastructure Strategy	• The overall aim of the strategy is to guide future investment in Hart's GI.
East Hampshire Green Infrastructure Strategy	• The overall aim of the strategy is to guide future investment in East Hampshire's GI.
Green Infrastructure Supplementary Planning Document, Supporting the Crawley Borough Local Plan 2015-2030	• Provides information on how to meet the requirements of Local Plan policies in relation to Crawley's GI assets

Management Plan (Hyperlink)	Key aspects that align with the DWMP
Chichester District Council, Delivering Green Infrastructure in the Local Plan Area	• The aim of this plan is to help deliver new development which is expected to contribute towards the provision of additional GI and protect and enhance existing GI.
Green Infrastructure Strategy, Horsham District Planning Framework	• The purpose of this document is to ensure that future strategic development delivers, protects, improves and enhances the GI network. • It seeks to contribute to the creation of sustainable communities through the provision of a wide range of ecosystem services and quality of life and health benefits for both future and existing residents.
A Green Infrastructure Strategy for Rushmoor	• Working with others to research and identify new ways of identifying and/or enhancing GI
Wokingham SuDS Strategy	• Sets out the long-term vision for the use of sustainable drainage systems (SuDS) in the Wokingham borough with a focus on managing flood risk and improving the water environment

Issues today

The initial risk-based screening in this TRFCC area, published in December 2019, found that 75% of catchments (99% of population served) were vulnerable to the risks of growth and climate change and warranted long-term planning.

The results from our hydraulic sewer flood risk modelling indicate that this TRFCC area is at risk. However, our experience suggests that flooding is many more times likely to occur as a result of blockages, rather than hydraulic overload as a result of storm flows.

We'll tackle the potential risk of hydraulic sewer flooding in accordance with our goals, where flows entering the sewer exceed the predicted capacity of the sewer, through a medium to long term plan that will afford us time to implement sustainable solutions. This will help us to improve the resilience of our systems, further protect our customers and communities and enhance our existing performance.

In addition to them being uncommon, sewer collapses do not materially affect our performance in relation to hydraulic sewer flooding, pollution and storm discharges. However, as a company we're committed to maintaining and improving our sewers in this TRFCC area to address this risk.

The DWMP process is iterative and will be repeated every 5 years, next version due in 2028. This will capture any changes in demands for this TRFCC area and will look to incorporate future technologies and engineering solutions.

L3 Internal Sewer flooding Flooding - Baseline (2020) Risk

0 - Not Significant (performance is at/below industry thresholds)

1 - Moderately Significant

2 - Very Significant

BRAVA link regarding classification

Our predictions for the future

We've modelled those sewerage catchments identified as vulnerable in the RBCS against future challenges, assessed targets and carried out discussions with local stakeholders and forecast that, if we do nothing and do not implement the DWMP, over the next 25 years there will be an increased risk of hydraulic sewer flooding and pollution from our sewerage systems in this TRFCC area. Our forecast performance metrics are summarised opposite. By 2050 we forecast that, across the region, over 4% of properties will be at risk of hydraulic sewer flooding internally from the sewerage system for up to a 1 in 50-year storm, for example in areas such as Aldershot, Wokingham and Windsor.

In terms of protecting our rivers, if we don't act, our modelling predicts that growth and climate change would impact on our storm overflow performance with 46% of L3 catchments having an average storm discharge rate >10 storm discharges per annum per overflow to rivers including the Kennet, Pang, Thames, Mole, Wey and Lambourn.

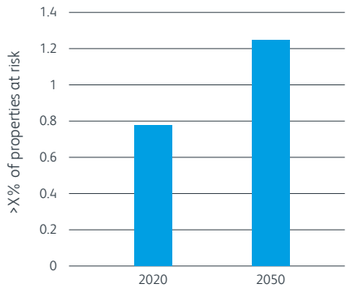
The River Lambourn is the only Special Area of Conservation (SAC) river in the whole Thames Water area.

Therefore, there is an evident need for long-term planning and the implementation of the DWMP, to protect this TRFCC area and support its future growth. In addition, the permit compliance of our treatment works for 36 catchments could be at risk leading to a detriment in river water quality. If you are a DWMP practitioner, further details can be found on our Practitioner portal.

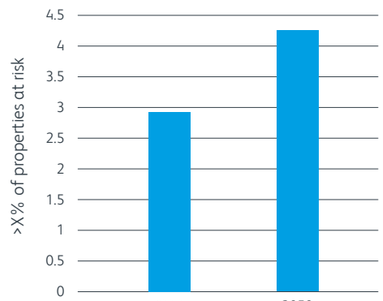
Practitioner portal (thameswater.co.uk)

Change in risk if we do nothing and do not implement the DWMP

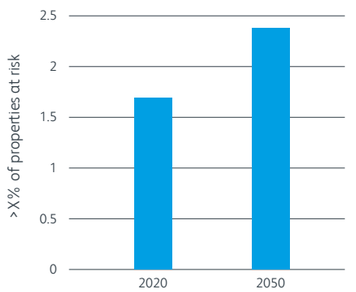
Internal Sewer Flooding (1 in 30-yr storm) - i.e. > 3.3% chance of happening each year



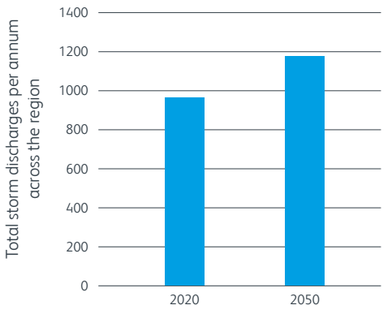
Internal Sewer Flooding (1 in 50-yr storm) - i.e. > 2% chance of happening each year



External Sewer Flooding (1 in 30-yr storm) - i.e. > 3.3% chance of happening each year

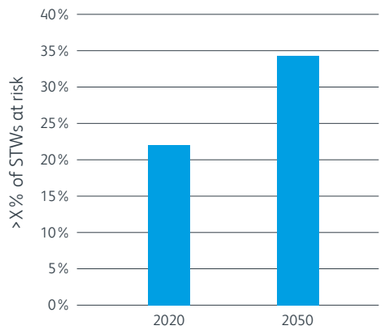


Annual storm overflow performance



2020 and 2050 modelled overflow data in DWMP catchments due to hydraulic incapacity

STWs at risk of water quality compliance failure



Sustainable solutions

We've combined our knowledge of the catchments with the stakeholder feedback we've received to help us identify the solutions required to meet the future needs of this area.

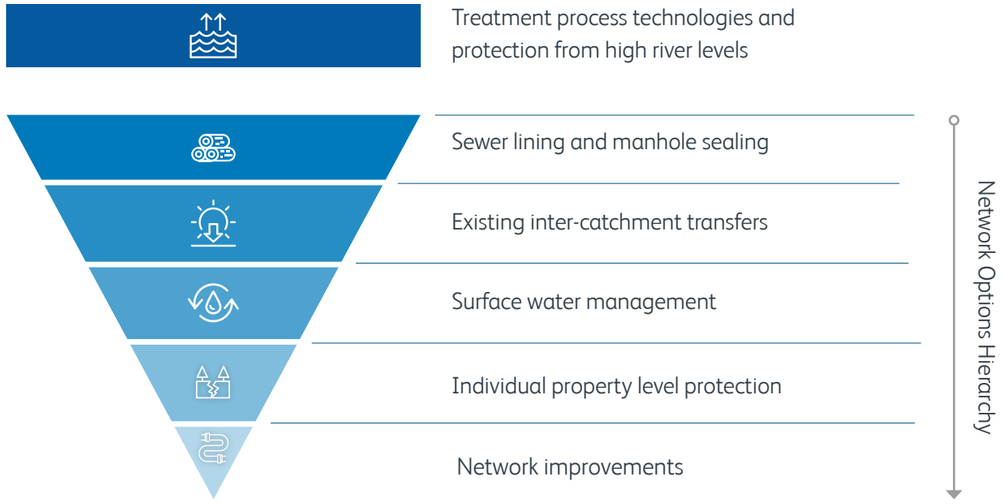
We've used a structured approach that started with over 40 generic solutions to ensure broad thinking and identified and assessed the feasibility of a wide range of potential interventions and the extent to which they resolve the area's future needs.

Our approach has followed the same method that has been developed and implemented successfully over many years for our Water Resources Management Plans (WRMP).

Our stakeholders, like us, want this DWMP to work in balance with the natural environment and make the best use of land availability.

Our hierarchy of options follows this principle - it focuses first on maximising the efficient use of existing assets, then prioritising natural surface water management solutions over network improvements.

The common sustainable solution options we've identified for this area are outlined below. To view our spatial analysis of the potential solutions that have been reviewed, scoped out or selected visit our DWMP portal.



Solution options considered in optioneering

Sewer lining and manhole sealing

Undertaking a programme of sewer lining and manhole sealing. We will target as a priority the areas of high infiltration risk that leads to unwanted flows in our sewerage systems and that currently take up valuable capacity.

Existing inter-catchment transfers

Optimise existing connections between catchments and STWs to transfer flows in stressed areas to catchments with available capacity.

Surface water management

Surface water separation and the installation of features to collect, store and/or infiltrate surface water from buildings and impermeable areas, such as driveways and car parks as part of enhancing our surface water sewerage system. This option also looks to reinforce the fundamental basis of our sewerage systems being separate by addressing property misconnections of surface water into the foul sewer network or foul to surface water.

Individual property level protection

Providing vulnerable homes with active and passive sewer flood protection measures such as flood proof doors, self-sealing bath/shower systems (non-return valves) and installation of household pumping stations.

Network improvements

Managing the impact of surface water on the sewerage system through the identification of network improvements to address deficiencies in the sewerage network capacity, specifically in areas with deliverability constraints and a high risk of sewer flooding now or in the future. This includes the construction of large attenuation sewers, new surface water and foul water sewers.

Treatment process technologies and protection from high river levels

Implementation of a range of different technologies identified to enhance the performance of the STW, through either retrofitting or new-build options. This will include the use of more intensive wastewater treatment processes which have the capacity to meet future demands and the construction of flood bunds to protect our assets from high river levels.

Partnership working – case studies

Working in partnership with our stakeholders is a fundamental component of our plan. It can provide significant potential to support delivery of mutually beneficial outcomes, address multiple drivers and deliver multiple benefits. In this section we present a few examples of partnership working opportunities in this region.

Kingsway Rainwater Gardens, Blackwater

Working with Hart District Council (DC) and Loddon Catchment Partnership, this would be a community focused Property Flood Resilience Scheme (PFRS). Recent modelling has concluded that flooding cannot not be addressed by a central surface water scheme on its own.

There is a history of flooding in the Kingsway area of Blackwater in Hampshire. Recent modelling has found that properties in the area are at risk from a 1 in 20-year flood event (i.e. an annual probability of 5%).

A partnership, including Thames Water, provided joint funding for a property asset survey, integrated catchment modelling and cost benefit analysis.

Thames Water is currently investigating the performance of foul system to make it resilient to flood risk from river and surface water inundation.

Hart DC have received Environment Agency funding to start installing individual property level protection, with 42 properties initially identified. However, they would like to install rainwater gardens in the future to further reduce the risk to communities in partnership with Hampshire County Council (CC).

Central and South Aldershot

Central and South Aldershot has been identified as an area that would benefit from the implementation of SuDS schemes, including the consideration of water butts. In partnership with Hampshire CC and Loddon Catchment Partnership. The area has been subject to flooding due to surface water inundation and restrictions in the network. A range of flood schemes were identified as part of the Aldershot Flood Alleviation Scheme Modelling (2019) including proposals to increase the size of the pond in Manor Park for SuDS. Hampshire CC are to be engaged in the design which would also have wider environmental and amenity benefits. Rushmoor Borough Council (BC) own half of the park and have been consulted.

Opportunity	Partners
Manor Park Flood Alleviation Scheme (FAS)	Rushmoor BC, Thames Water and Hampshire CC
Newbury Town Centre	West Berkshire Council and Kennet Catchment Partnership
Kennet Meadows	Reading BC and Kennet Catchment Partnership
Fleet Flood Alleviation Scheme (FAS)	Hampshire CC and Hart DC

These opportunities have been identified following a detailed screening and prioritisation exercise with our partners. This approach is explained in the Appendix S Partnership Opportunities and Working report.

Our shared plan

Our shared long-term plan for the West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead, Hampshire and West Sussex TRFCC area has been selected formulated on a balance of how deliverable and sustainable the proposed interventions are, and also how cost-efficiently they can deliver multiple benefits across our stakeholder groups.

The challenges this area has presented to us in delivering that balance have included:

- Population growth uncertainties
- Incomplete mapping of surface water systems e.g. sewer, highway or land drainage and the extent of our hydraulic surface water sewerage network model coverage
- Location of property level misconnections
- Pipe materials e.g. pitch fibre sewers impacting asset health
- Ownership and maintenance of SuDS

We propose an asset strategy that fundamentally addresses the inputs to our system i.e. unwanted flow removal in our foul or surface water sewers and bringing our sewerage systems back to their original intent of taking foul or surface water flows only. This will necessitate us ensuring our surface water sewers are fit for purpose.

By 2050 our foul sewerage systems in the West Berkshire TRFCC area will no longer be reliant on storm overflows to manage the risk of flooding due to rainfall in storms with a greater than 2% probability of occurring in any one year. The catchments we serve with positive surface water systems will function as greenfield systems.

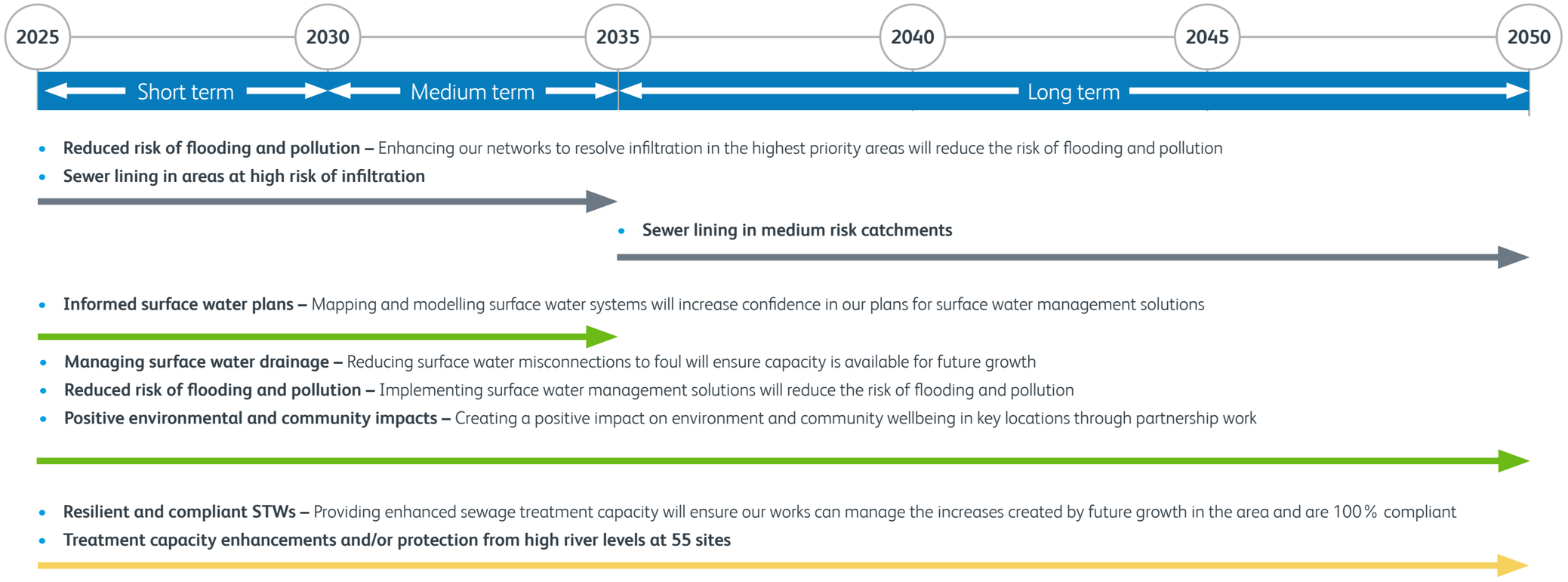
We will achieve this through an adaptive approach whereby we will aggressively target unwanted flows to create capacity in our foul only network incrementally at system level over the next 25 years. This will include sewer and manhole sealing to reduce groundwater infiltration and fluvial/pluvial inundation of flows, and disconnecting surface water misconnections from foul and combined sewers and redirecting it to surface water drainage

Our approach is to address systems holistically, to provide wide-ranging benefit to the catchments we service in the most resilient and sustainable way for both foul and surface water systems.

We will work in partnership, where possible, to understand and evolve integrated surface water management systems, championing green infrastructure, where possible.

We will focus on our smaller catchments in the short to medium term to deliver the maximum benefit of reducing sewage escapes to the environment in the shortest time possible for our customers. Those assets linked to the most sensitive watercourses will be prioritised.

The diagram below outlines the sequencing of our proposed interventions for this area:



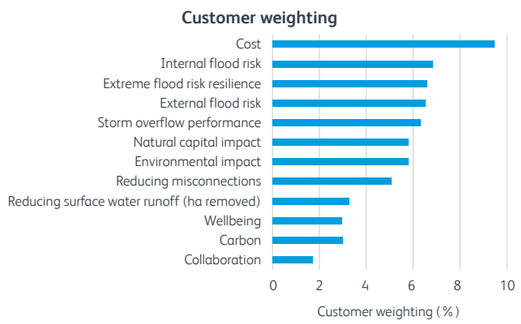
Developing our preferred plan

Defining a best value Framework

A best value framework is one that considers broader criteria than just economic factors. Our DWMP will maximise outcomes for the communities it serves. Our criteria are based on the 12 planning objectives of the DWMP with additional criteria to capture broader environmental impact.

Defining what our customers and stakeholders value

We have used quantitative customer research to determine the relative priorities of the different criteria.



Agreeing scenarios with stakeholders

For our catchments outside London, over fifty possible alternative plans were identified to achieve various combinations of our planning objective targets. These were further refined and agreed through discussions with our regional stakeholders and the public consultation on our draft DWMP.

Alternative plans and outcomes
Maintain flooding resilience - delivers the statutory storm discharge reduction requirements and maintains property flooding at 2025 levels
Maximum community benefit - meets our DWMP sewer flooding objectives and delivers our storm discharge reduction plan for high priority sites by 2035 and all sites by 2045 whilst also creating the most benefit to communities and the environment
Resilient - constrained - meets our sewer flooding planning objectives and delivers our storm discharge reduction plan for high priority sites by 2035 and all sites by 2045. Provides time to improve our understanding of surface water interactions with our networks and develop innovation in partnership schemes
Accelerated / deliver sooner - accelerates investment to deliver our performance outcome targets sooner, including our storm discharge reduction at all sites by 2035, reflecting views expressed by stakeholders in the public consultation

To avoid customer bill volatility, we also explored alternative investment profiles that consider how quickly options are implemented. We also considered a better information plan that considers factors such as improvements in overflow and river monitoring data, and refinement in our hydraulic modelling to predict flood risk.

Scoring our options against our planning objectives

Scores have been generated for every option for each of our planning objectives and weighted based on our customer priorities. For example, DWMP with additional criteria to capture broader environmental impact.

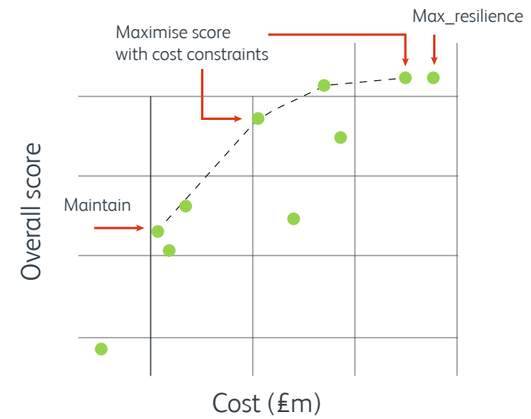
Natural capital (NC) impact
We used data from Natural England on the existing NC in the catchment and assessed whether the option would improve or reduce this baseline based on additional green space generated. Surface water management schemes scored highly whilst new sewers and tanks scored lower.

Wellbeing impact
We used data on environmental factors in the catchment that influence population and human health, including improved access to recreation and the environment, and assessed whether the option would improve or reduce this baseline.

Reducing misconnections
We assessed the area to be disconnected from our foul and connected into our surface water systems as part of our options

Assessing different scenarios

We used a decision support tool to optimise our plan based on the 'value criteria'. We tested multiple alternative options to allow us to assess different scenarios and compare their outcomes.



Determining our preferred plan

Our preferred plan has been developed by considering a range of factors including:

- affordability
- deliverability
- performance outcomes
- strategic environmental appraisal
- stakeholder feedback

This has allowed us to develop an adaptive plan that recognises areas of risk and uncertainty, where improved understanding will be used to prioritise interventions at key decision points over those that can be deferred.
Our preferred plan balances our ambitions, our stakeholder and customer desires, our planning objectives and affordability.

Our preferred plan for

West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead, Hampshire and West Sussex

We believe we will need to invest £2bn in this area to achieve our long-term ambitious targets by 2050 to mitigate growth and climate change.

	£bn
Best cost estimate	2
Embodied carbon 275,459 tonnes	

Over the next 25 years this budget will be prioritised to invest in both surface water management and network improvements.

- £1.2bn on managing the impact of surface water on the sewerage system including construction of new sewers,sewer upsizing and attenuation storage to provide additional capacity
- £258m on improvements to surface water management, with a particular focus on removing surface water from impacting on the networks
- £47m on individual property level protection
- £172m upgrading 55 STWs
- £265m on sewer lining

Storm overflow performance

Reduce the number of average annual storm discharges by 1,403. By 2050, none of the 74 storm discharge locations in this catchment will discharge more than ten times per annum on average

Property flooding

Protect 1,186 properties from internal sewer flooding up to a 1 in 30-year storm event

Protect 3,162 properties from external sewer flooding up to a 1 in 30-year storm event

Protect 5,747 properties from sewer flooding up to a 1 in 50-year storm event

If we don't invest, over 1.1 % of properties would be at risk in a storm up to 1 in 50-year in 2050. As a result of implementing our plan, this would reduce to zero

Treatment capacity enhancements and/or protection from high river levels at 55 sites

Upgrade 55 STWs by 2050

Asset improvements

Reline 337km of sewers

Reduce misconnections / Reduce surface water runoff

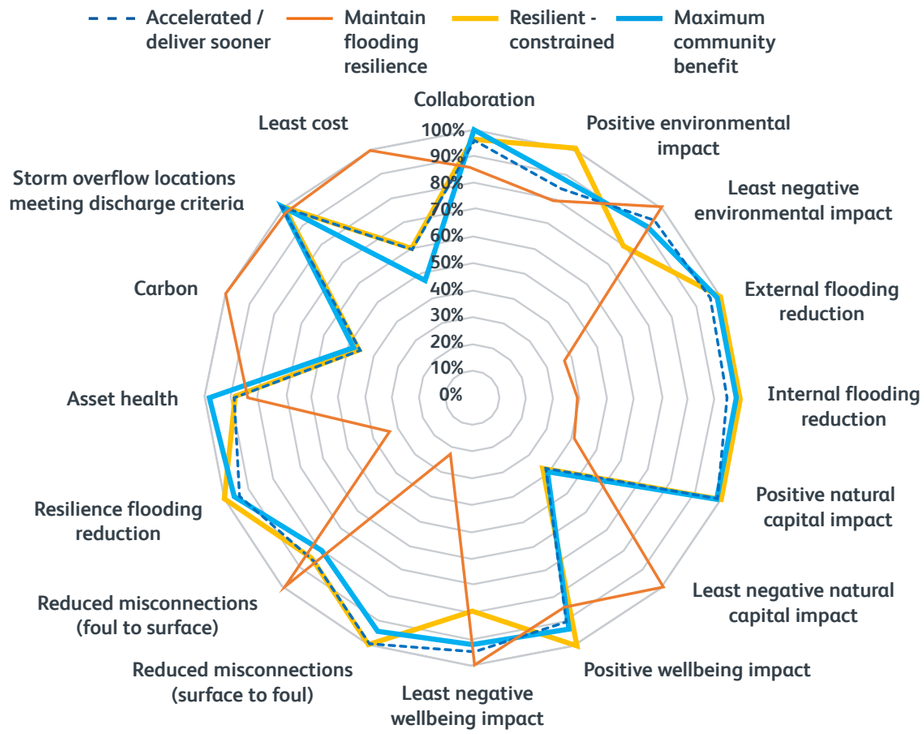
81 ha (equivalent to 5,400 properties) disconnected from our sewers and reconnected into a surface water sewer with attenuation or to a soakway

Carbon

275,459 tonnes of carbon embodied in delivering the plan, with 93 tonnes of carbon sequestered in delivering the plan

Our preferred plan (resilient - constrained) has been optimised to offer the best value solution to reduce sewer flooding, protect the environment, and enhance natural capital as shown in the relative performance of our preferred plan figure.

Relative performance of our preferred plan

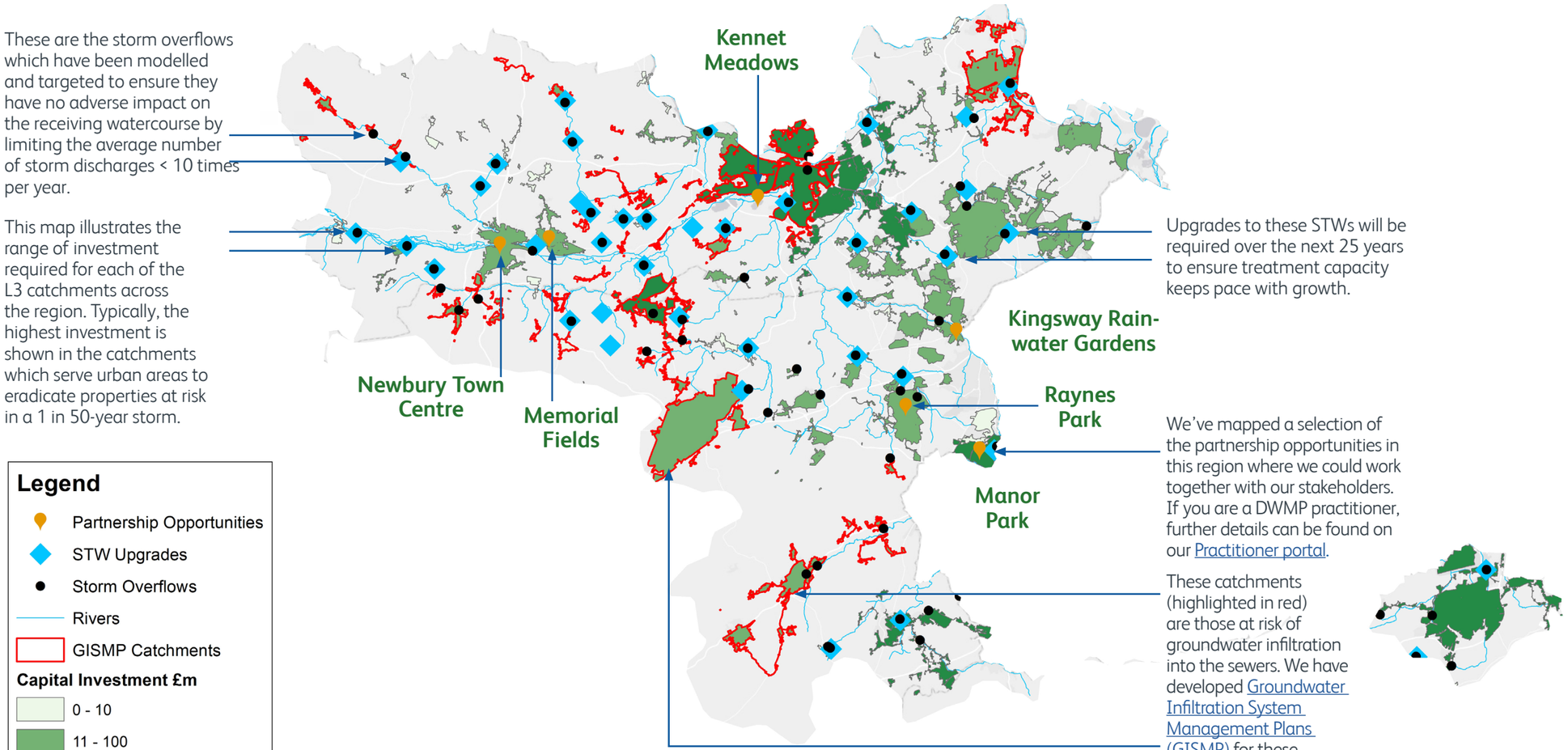


Our preferred 25 year plan for

West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead, Hampshire and West Sussex

These are the storm overflows which have been modelled and targeted to ensure they have no adverse impact on the receiving watercourse by limiting the average number of storm discharges < 10 times per year.

This map illustrates the range of investment required for each of the L3 catchments across the region. Typically, the highest investment is shown in the catchments which serve urban areas to eradicate properties at risk in a 1 in 50-year storm.



Upgrades to these STWs will be required over the next 25 years to ensure treatment capacity keeps pace with growth.

We've mapped a selection of the partnership opportunities in this region where we could work together with our stakeholders. If you are a DWMP practitioner, further details can be found on our Practitioner portal.

These catchments (highlighted in red) are those at risk of groundwater infiltration into the sewers. We have developed Groundwater Infiltration System Management Plans (GISMP) for these catchments which contain our short, medium and long term plans to reduce infiltration through activities such as sewer lining and manhole sealing.

Esri UK, Esri, HERE, Garmin, METI/NASA, USGS

Next steps

Final version of the plan

We've progressed and enhanced our DWMP since we published it for public consultation in June 2022. We've updated our draft plan based on our ongoing DWMP work and our responses to regulatory updates and the majority of the feedback received during the 12-week consultation period.

Our preferred plan balances our ambitions, our stakeholder and customer desires, our planning objectives and affordability.

Further stakeholder input

This is our first DWMP and it will be the launch pad for future DWMP cycles that will occur every five years where growth, risks and system performance will be re-assessed and reviewed and the DWMP process repeated. We hope that we will receive a similar level of engagement and co-creation from our stakeholders in the next iteration as it has been a valuable contribution to this first iteration.

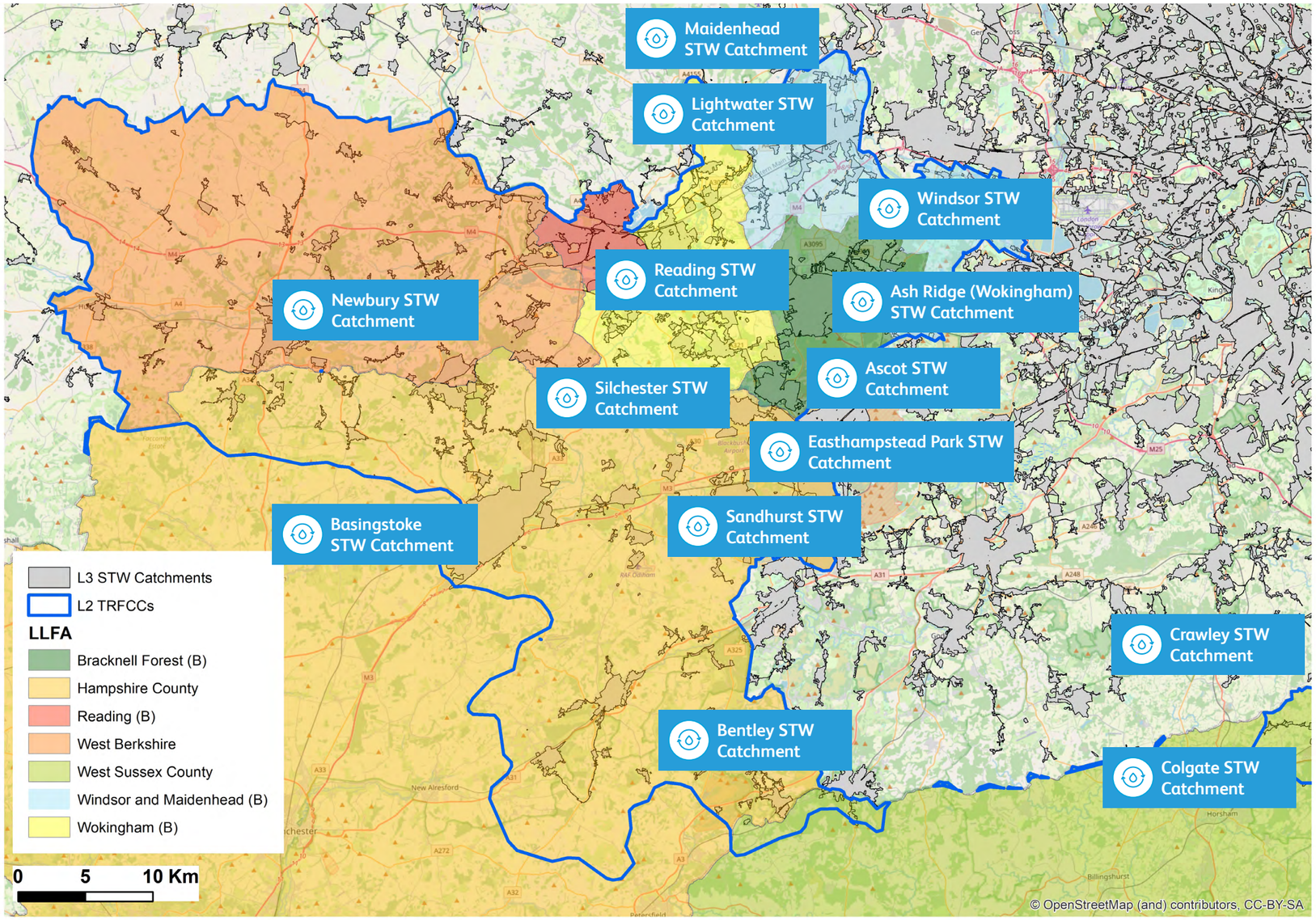
Funding and delivery

This DWMP is a 25-year rolling strategic plan. The first 5-years of the plan will be assessed through the price review process to confirm the funding to deliver the initial phase between 2025 and 2030.

Future iterations on the plan will address elements that can't be progressed due to funding restrictions, as well as changes in customer priority or technical issues.

Our shared plan at catchment level

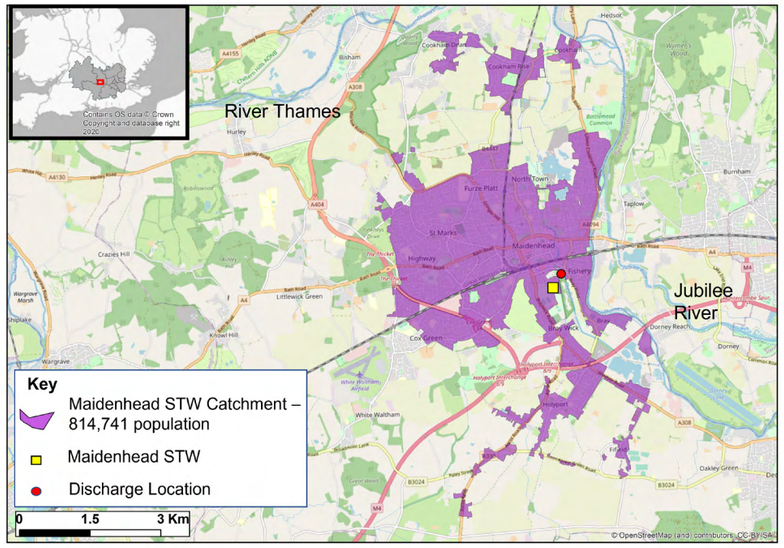
Use this interactive map by clicking on the blue boxes to find out more about our plans for a selection of large and small catchments.



*(B) - Borough

Maidenhead STW Catchment

What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.1 % to 0.2 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (38) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (50) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.2 % to 0.3 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.2 % of properties (68) at risk up to a 1 in 30-year storm in 2025 to 0.3 % of properties (87) at risk by 2050 • Increased hydraulic sewer flooding - from 0.5 % to 0.6 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.5 % of properties (147) at risk up to a 1 in 50-year storm in 2025 to 0.6 % of properties (199) at risk by 2050 • The only overflow in this area, at the STW, discharged 2 times in 2021
Which of our solutions are best suited?	• Sewer lining to target infiltration hotspots • Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance

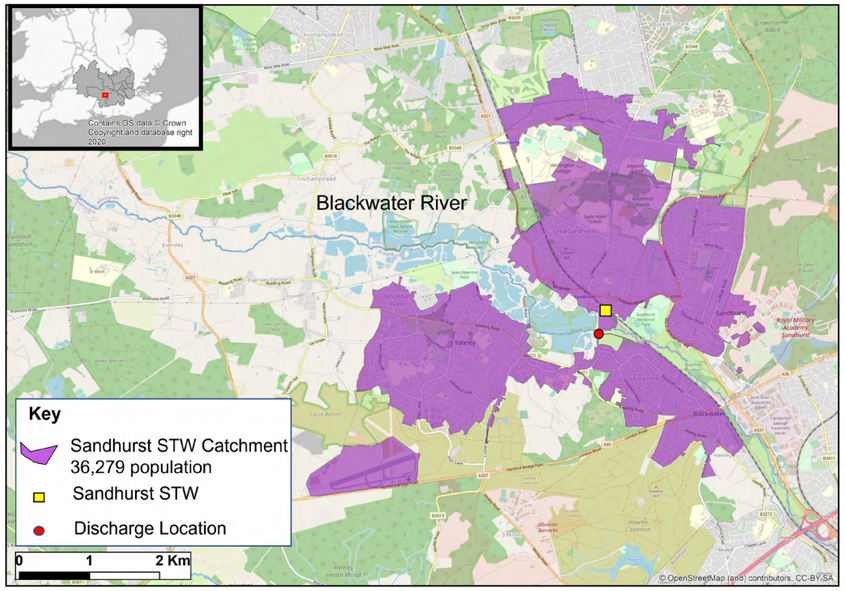


Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term (2050)
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance		
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Provide sewer network improvements to meet growth and climate change drivers	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing rainfall runoff that is entering our foul sewer system and enhance our surface water sewerage systems • Continue to provide sewer network improvements to meet growth and climate change drivers • Invest in our sewage treatment works to ensure compliance	We will: • Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures • Continue to provide sewer network improvements

Maidenhead STW catchment spans two L2 strategic planning boundaries and the costs and benefits of the proposed solutions are allocated solely to the Central Bedfordshire, Buckinghamshire, Slough, Luton catchment strategic plan.

Sandhurst STW Catchment

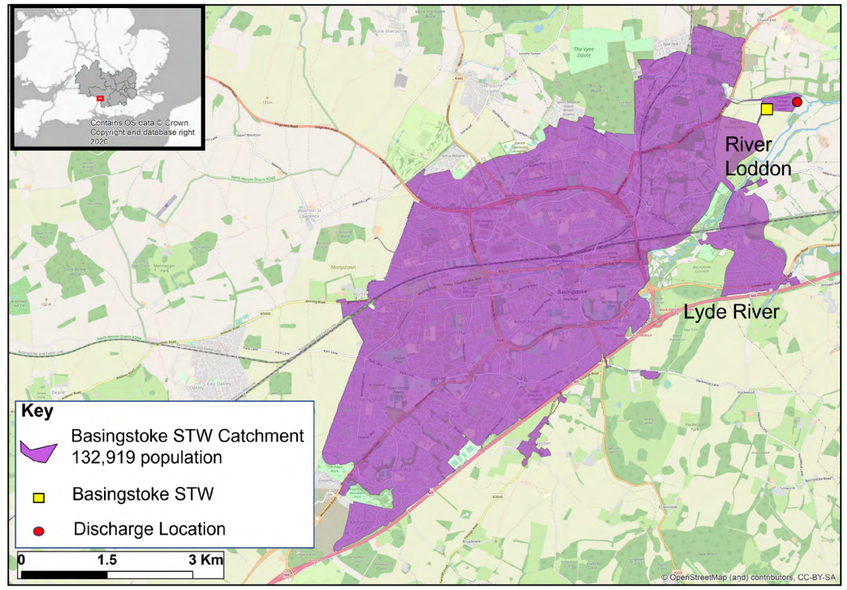
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.1 % to 0.2 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (15) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (37) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.5 % to 0.9 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.5 % of properties (113) at risk up to a 1 in 30-year storm in 2025 to 0.9 % of properties (190) at risk by 2050 • Increased hydraulic sewer flooding – from 0.9 % to 1.5 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.9 % of properties (184) at risk up to a 1 in 50-year storm in 2025 to 1.5 % of properties (321) at risk by 2050 • The only overflow in this area, at the STW, discharged 35 times in 2021
Which of our solutions are best suited?	• Surface water management • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term (2050)
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance		
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Provide sewer network improvements to meet growth and climate change drivers	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems • Invest in our sewage treatment works to ensure compliance	We will: • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Continue to provide sewer network improvements to meet growth and climate change drivers

Basingstoke STW Catchment

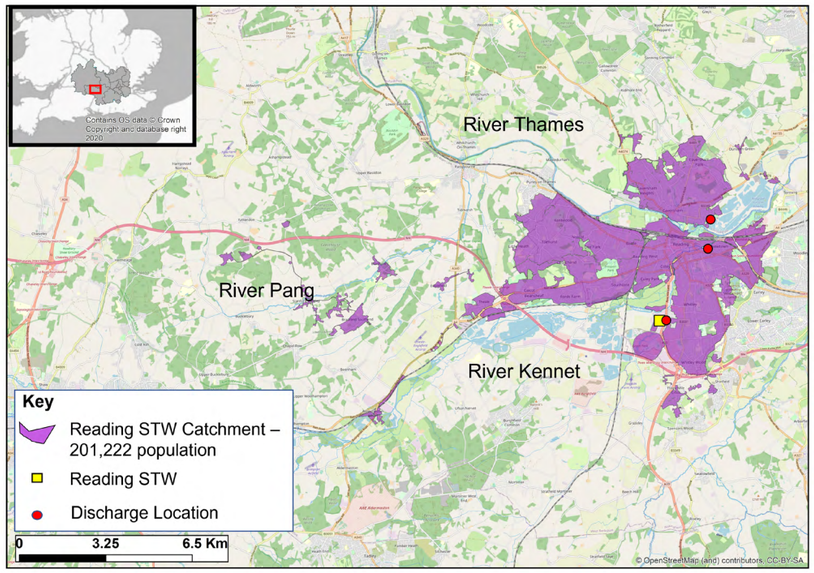
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.0 % to 0.0 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.0 % of properties (9) at risk up to a 1 in 30-year storm in 2025 to 0.0 % of properties (21) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.0 % to 0.1 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.0 % of properties (22) at risk up to a 1 in 30-year storm in 2025 to 0.1 % of properties (35) at risk by 2050 • Increased hydraulic sewer flooding – from 0.1 % to 0.1 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (42) at risk up to a 1 in 50-year storm in 2025 to 0.1 % of properties (74) at risk by 2050 • The only overflow in this area, at the STW, discharged once in 2021
Which of our solutions are best suited?	• Sewer lining to target infiltration hotspots • Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term	2050
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Invest in our sewage treatment works to ensure compliance	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing rainfall runoff that is entering our foul sewer system and enhance our surface water sewerage systems	We will: • Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures • Provide sewer network improvements • Continue to invest in our sewage treatment works to ensure compliance	

Reading STW Catchment

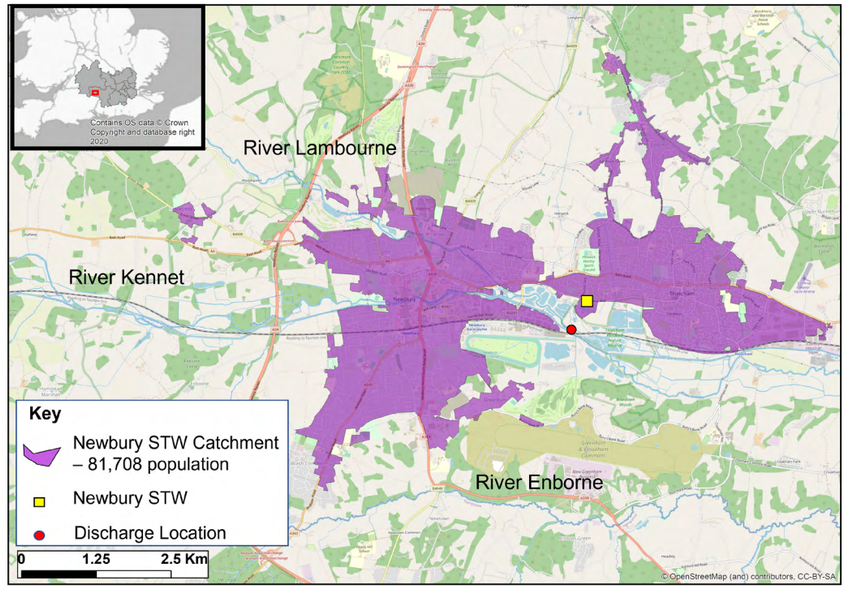
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.1 % to 0.2 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (125) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (187) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.3 % to 0.6 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.3 % of properties (272) at risk up to a 1 in 30-year storm in 2025 to 0.6 % of properties (523) at risk by 2050 • Increased hydraulic sewer flooding – from 0.7 % to 1.0 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.7 % of properties (635) at risk up to a 1 in 50-year storm in 2025 to 1.0 % of properties (913) at risk by 2050 • The three overflows in this area discharged 6 times in 2021
Which of our solutions are best suited?	• Sewer lining to target infiltration hotspots • Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term	2050
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Provide sewer network improvements to meet growth and climate change drivers	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing rainfall runoff that is entering our foul sewer system and enhance our surface water sewerage systems • Invest in our sewage treatment works to ensure compliance	We will: • Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures • Continue to provide sewer network improvements • Continue to invest in our sewage treatment works to ensure compliance	

Newbury STW Catchment

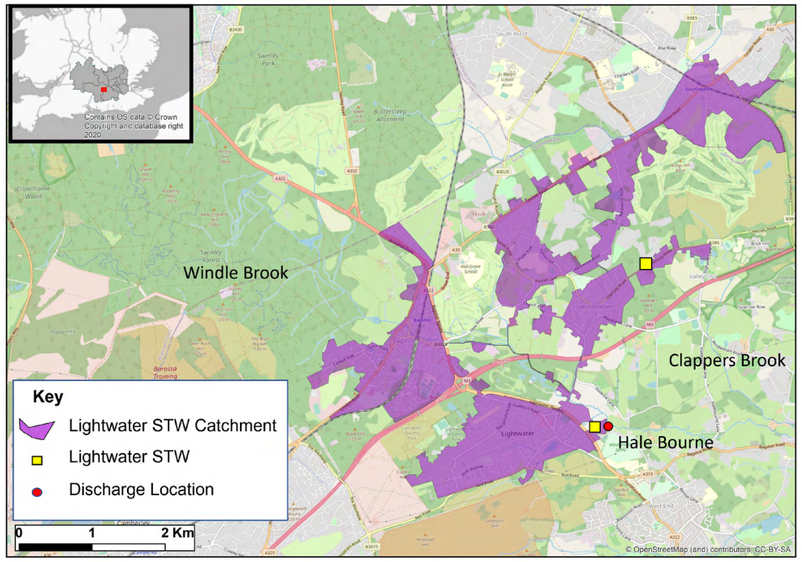
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.1 % to 0.3 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (33) at risk up to a 1 in 30-year storm in 2025 to 0.3 % of properties (91) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.5 % to 0.9 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.5 % of properties (147) at risk up to a 1 in 30-year storm in 2025 to 0.9 % of properties (297) at risk by 2050 • Increased hydraulic sewer flooding – from 0.8 % to 1.8 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.8 % of properties (260) at risk up to a 1 in 50-year storm in 2025 to 1.8 % of properties (561) at risk by 2050 • The only overflow in this area, at the STW, discharged 25 times in 2021
Which of our solutions are best suited?	• Sewer lining to target infiltration hotspots • Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance



	2025	2030	2035	2050
Timescale	← Short term →	← Medium Term →	← Long Term →	
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Provide sewer network improvements to meet growth and climate change drivers • Invest in our sewage treatment works to ensure compliance	We will: • Further develop our catchment-level planning and implement local surface water management solutions to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems • Continue to provide sewer network improvements to meet growth and climate change drivers	We will: • Continue to reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures • Continue to provide sewer network improvements • Continue to invest in our sewage treatment works to ensure compliance	

Lightwater STW Catchment

What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.5 % to 0.7 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.5 % of properties (49) at risk up to a 1 in 30-year storm in 2025 to 0.7 % of properties (64) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.6 % to 0.7 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.6 % of properties (55) at risk up to a 1 in 30-year storm in 2025 to 0.7 % of properties (67) at risk by 2050 • Increased hydraulic sewer flooding – from 1.6 % to 2.0 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 1.6 % of properties (146) at risk up to a 1 in 50-year storm in 2025 to 2.0 % of properties (178) at risk by 2050 • The only overflow in this area , at the STW, discharged 23 times in 2021
Which of our solutions are best suited?	• Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance

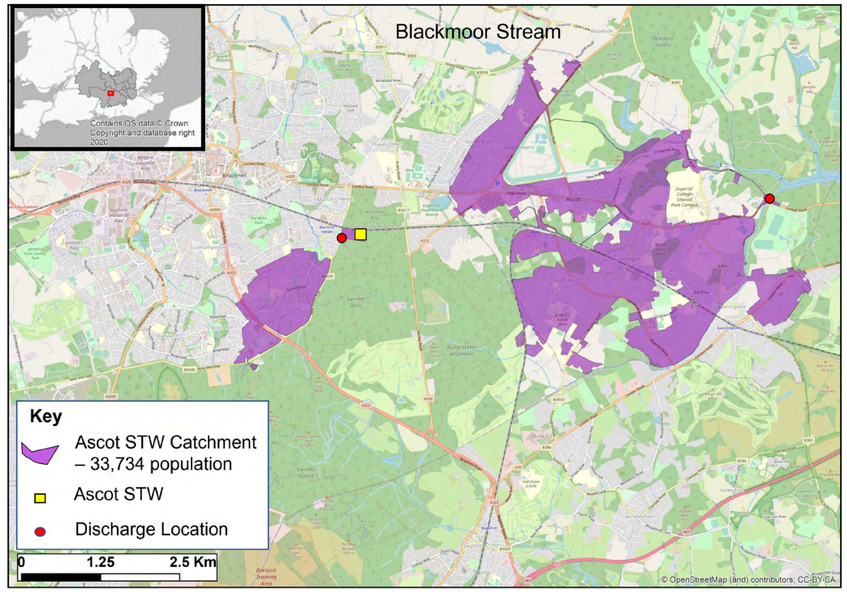


	2025	2030	2035	2050
Timescale	← Short term →	← Medium Term →	← Long Term →	
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	**We will:** • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Provide sewer network improvements to meet growth and climate change drivers	**We will:** • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing rainfall runoff that is entering our foul sewer system and enhance our surface water sewerage systems	**We will:** • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures • Continue to provide sewer network improvements • Invest in our sewage treatment works to ensure compliance	

Lightwater STW catchment spans two L2 strategic planning boundaries and the costs and benefits of the proposed solutions are allocated solely to the West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead, Hampshire and West Sussex catchment strategic plan.

Ascot STW Catchment

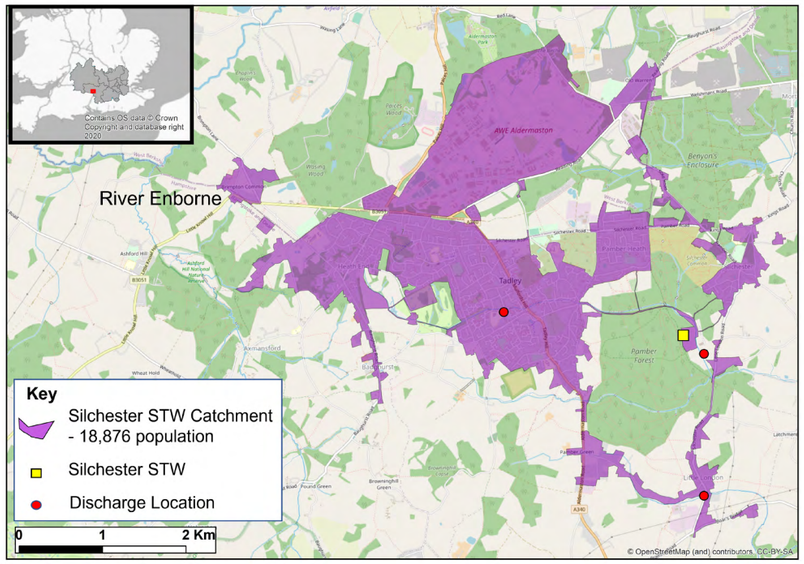
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.1 % to 0.1 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (7) at risk up to a 1 in 30-year storm in 2025 to 0.1 % of properties (10) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.1 % to 0.3 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.1 % of properties (15) at risk up to a 1 in 30-year storm in 2025 to 0.3 % of properties (29) at risk by 2050 • Increased hydraulic sewer flooding – from 0.3 % to 0.5 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.3 % of properties (31) at risk up to a 1 in 50-year storm in 2025 to 0.5 % of properties (62) at risk by 2050 • The two overflows in this area discharged 56 times in 2021
Which of our solutions are best suited?	• Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatments works to achieve 100 % compliance



	2025	2030	2035	2050
Timescale	← Short term →	← Medium Term →	← Long Term →	
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems • Invest in our sewage treatment works to ensure compliance	We will: • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures • Provide sewer network improvements • Continue to invest in our sewage treatment works to ensure compliance	

Silchester STW Catchment

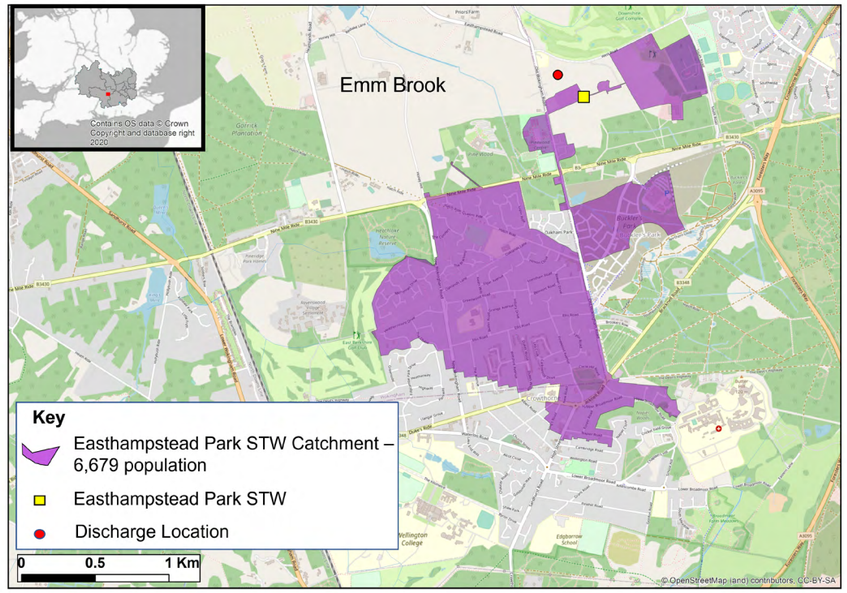
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.1 % to 0.2 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (9) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (18) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.6 % to 0.7 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.6 % of properties (46) at risk up to a 1 in 30-year storm in 2025 to 0.7 % of properties (58) at risk by 2050 • Increased hydraulic sewer flooding – from 1.0 % to 1.5 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 1.0 % of properties (78) at risk up to a 1 in 50-year storm in 2025 to 1.5 % of properties (118) at risk by 2050 • The three overflows in this area discharged 145 times in 2021
Which of our solutions are best suited?	• Sewer lining to target infiltration hotspots • Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term	2050
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions	We will: • Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems • Provide sewer network improvements • Invest in our sewage treatment works to ensure compliance	We will: • Continue to improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Continue to provide sewer network improvements • Continue to invest in our sewage treatment works to ensure compliance • Implement property level protection measures	

Easthampstead Park STW

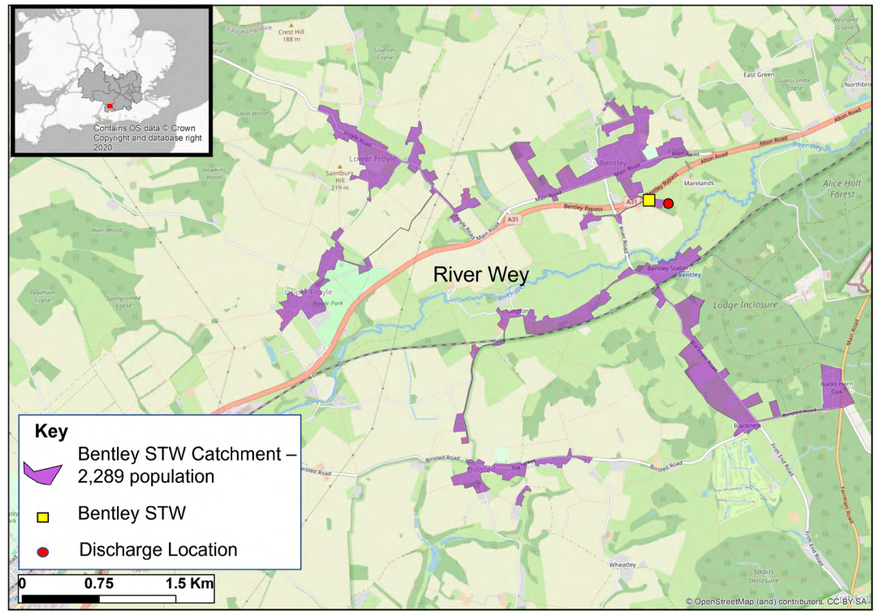
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.4 % to 0.5 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.4 % of properties (10) at risk up to a 1 in 30-year storm in 2025 to 0.5 % of properties (13) at risk by 2050 • Increased external hydraulic sewer flooding - from 1.2 % to 1.8 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 1.2 % of properties (34) at risk up to a 1 in 30-year storm in 2025 to 1.8 % of properties (50) at risk by 2050 • Increased hydraulic sewer flooding – from 2.1 % to 3.3 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 2.1 % of properties (59) at risk up to a 1 in 50-year storm in 2025 to 3.3 % of properties (93) at risk by 2050 • The only overflow in this area, at the STW, discharged 15 times in 2021
Which of our solutions are best suited?	• Surface water management • Network improvements • Invest in our sewage treatments works to achieve 100 % compliance



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term	2050
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Invest in our sewage treatment works to ensure compliance	We will: • Further develop our catchment-level planning and implement surface water management solutions to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems • Provide sewer network improvements to meet growth and climate change drivers	We will: • Continue to reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Continue to provide sewer network improvements to meet growth and climate change drivers • Continue to invest in our sewage treatment works to ensure compliance	

Bentley STW Catchment

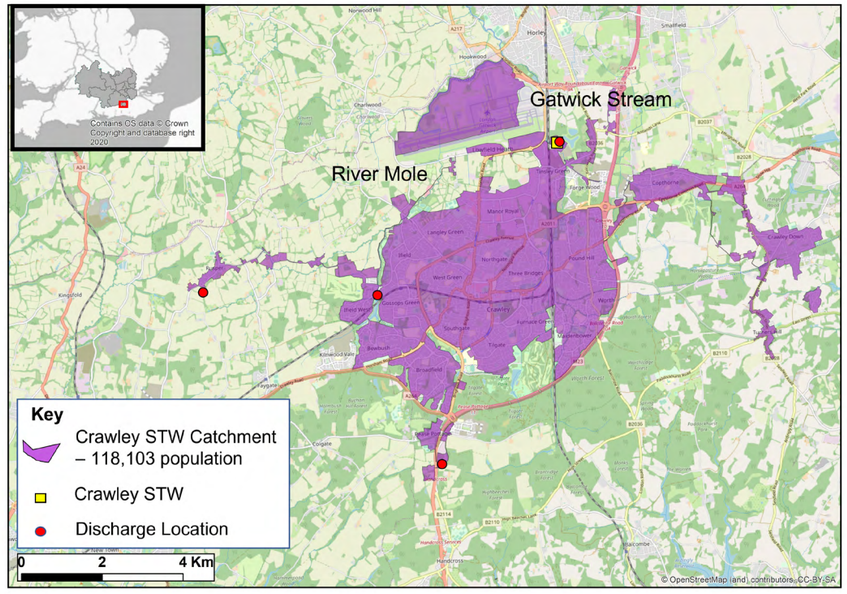
What are the challenges?	• Increased external hydraulic sewer flooding - from 0.3 % to 0.4 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.3 % of properties (4) at risk up to a 1 in 30-year storm in 2025 to 0.4 % of properties (5) at risk by 2050 • Increased hydraulic sewer flooding – from 0.5 % to 0.6 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.5 % of properties (6) at risk up to a 1 in 50-year storm in 2025 to 0.6 % of properties (7) at risk by 2050 • The only overflow in this area, at the STW, discharged 129 times in 2021
Which of our solutions are best suited?	• Sewer lining to target infiltration hotspots • Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term (2050)
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance		
How will we achieve the targets?	We will: • Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Provide sewer network improvements to meet growth and climate change drivers	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems	We will: • Implement property level protection measures to prevent individual buildings from hydraulic sewer flooding • Continue to provide sewer network improvements to meet growth and climate change drivers • Invest in our sewage treatment works to ensure compliance

Crawley STW Catchment

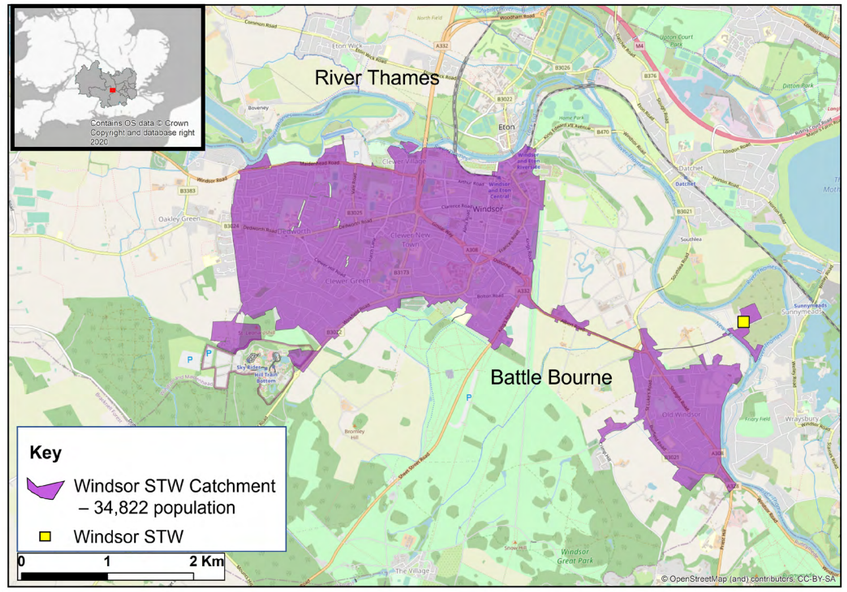
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.1 % to 0.2 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (52) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (87) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.3 % to 0.3 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.3 % of properties (154) at risk up to a 1 in 30-year storm in 2025 to 0.3 % of properties (174) at risk by 2050 • Increased hydraulic sewer flooding – from 0.5 % to 0.7 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.5 % of properties (284) at risk up to a 1 in 50-year storm in 2025 to 0.7 % of properties (356) at risk by 2050 • The three overflows in this area discharged 41 times in 2021
Which of our solutions are best suited?	• Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term	2050
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions • Provide sewer network improvements to meet growth and climate change drivers	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems • Invest in our sewage treatment works to ensure compliance	We will: • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures • Continue to provide sewer network improvements • Continue to invest in our sewage treatment works to ensure compliance	

Windsor STW Catchment

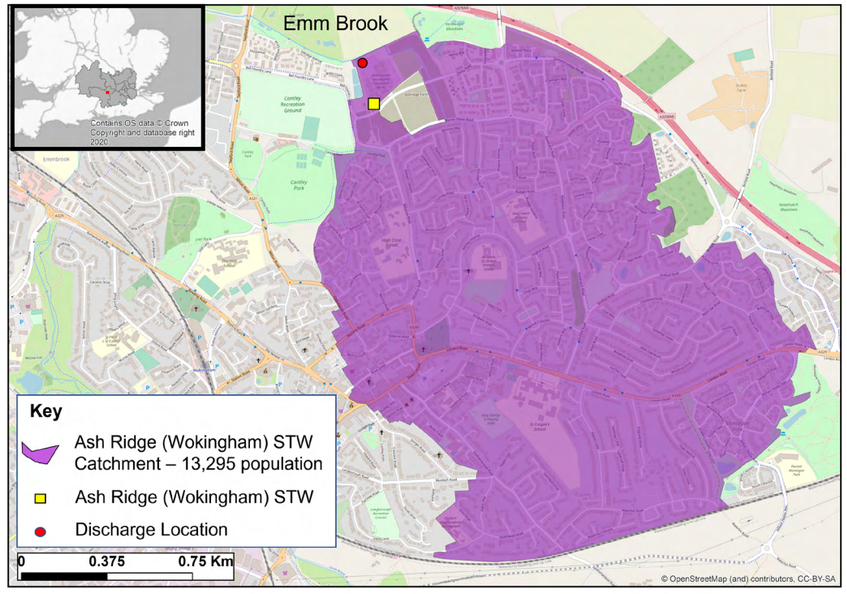
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.1 % to 0.2 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (26) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (37) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.3 % to 0.4 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.3 % of properties (50) at risk up to a 1 in 30-year storm in 2025 to 0.4 % of properties (66) at risk by 2050 • Increased hydraulic sewer flooding – from 0.5 % to 0.7 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.5 % of properties (92) at risk up to a 1 in 50-year storm in 2025 to 0.7 % of properties (126) at risk by 2050
Which of our solutions are best suited?	• Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term	2050
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems • Invest in our sewage treatment works to ensure compliance	We will: • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures to prevent individual buildings from hydraulic sewer flooding • Provide sewer network improvements to meet growth and climate change drivers	

Ash Ridge (Wokingham) STW Catchment

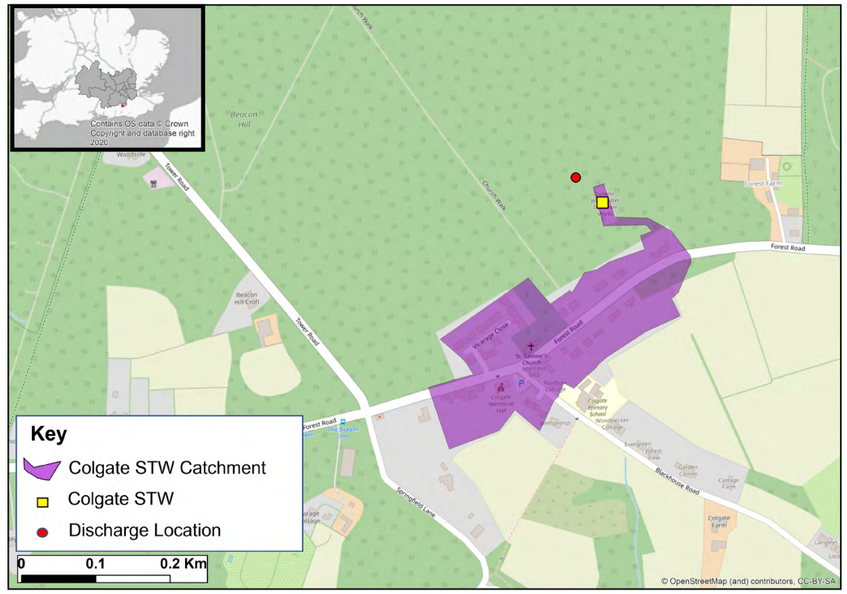
What are the challenges?	• Increased internal hydraulic sewer flooding - from 0.3 % to 0.5 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.3 % of properties (22) at risk up to a 1 in 30-year storm in 2025 to 0.5 % of properties (36) at risk by 2050 • Increased external hydraulic sewer flooding - from 0.8 % to 1.1 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.8 % of properties (53) at risk up to a 1 in 30-year storm in 2025 to 1.1 % of properties (77) at risk by 2050 • Increased hydraulic sewer flooding – from 1.5 % to 1.9 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 1.5 % of properties (104) at risk up to a 1 in 50-year storm in 2025 to 1.9 % of properties (126) at risk by 2050 • The only overflow in this area, at the STW, discharged 50 times in 2021
Which of our solutions are best suited?	• Surface water management • Property level protection measures to prevent individual buildings from hydraulic sewer flooding • Network improvements • Invest in our sewage treatment works to achieve 100 % compliance



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term	2050
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Achieve 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems • Invest in our sewage treatment works to ensure compliance	We will: • Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions • Implement property level protection measures • Provide sewer network improvements • Continue to invest in our sewage treatment works to ensure compliance	

Colgate STW

What are the challenges?	• No hydraulic sewer flooding is predicted and the only overflow in this area, at the STW, did not discharge in 2021. However, we predict that by 2050 the storm overflow would discharge >10 times in an average year without intervention
Which of our solutions are best suited?	• Network improvements



Timescale	2025 – Short term	2030 – Medium Term	2035 – Long Term	2050
What targets are we seeking?	To: • Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 % • Reduce storm discharges (where overflows are present) to <10 in an average year by 2050 • Maintain 100 % STW permit compliance			
How will we achieve the targets?	We will: • Increase the confidence in our plans for long-term investment to reduce the risk of internal and external hydraulic sewer flooding and enable catchment-level planning of surface water management solutions	We will: • Further develop our catchment-level planning to reduce the risk of hydraulic sewer flooding by removing surface water that is entering our foul sewer system and enhance our surface water sewerage systems	We will: • Provide sewer network improvements to meet growth and climate change drivers	

Progress +

L3 STW catchment summary table

	2025 modelled baseline (no.& % of properties)					2050 Performance without DWMP (no.& % of properties)					2050 Performance with DWMP (no.& % of properties)				Preferred solutions			
L3 STW Catchments	Internal flooding (2025)	External flooding (2025)	Resilience flooding (2025)	Number of monitored storm overflows (2021)	Recorded (EDM) storm overflow discharges (2021)	Internal flooding (2050)	External flooding (2050)	Resilience flooding (2050)	Number of modelled storm overflows (2050)	Modelled average annual storm discharges (2050)	Internal flooding (2050) DWMP	External flooding (2050) DWMP	Resilience flooding (2050) DWMP	Modelled average annual storm discharges (2050) DWMP	2025-2030	2030-2035	2035-2050	Investment Band (£)
ALDERMASTON STW	N/A	N/A	N/A	1	87	N/A	N/A	N/A	1	34	N/A	N/A	N/A	<=10	CP, NI, SL, SWM	CP	NI, STW	Low
ALDERSHOT STW	79 (0.4%)	177 (0.9%)	357 (1.9%)	1	30	117 (0.6%)	213 (1.1%)	446 (2.4%)	2	56	0	0	0	<=10	CP, NI	CP, NI	IPP, NI, STW, SWM	High
ALTON STW	12 (0.1%)	13 (0.1%)	33 (0.3%)	2	2	14 (0.1%)	26 (0.2%)	53 (0.4%)	2	17	0	0	0	<=10	CP, NI	CP	IPP, NI, SL, SWM	Medium
ARBORFIELD STW	16 (0.2%)	50 (0.7%)	93 (1.2%)	1	15	21 (0.3%)	73 (1%)	130 (1.7%)	1	20	0	0	0	<=10	CP, NI, STW	CP	IPP, NI, STW, SWM	Medium
ASCOT STW	7 (0.1%)	15 (0.1%)	31 (0.3%)	2	56	10 (0.1%)	29 (0.3%)	62 (0.5%)	3	55	0	0	0	<=10	CP	CP, STW	IPP, NI, STW, SWM	Medium
ASH RIDGE (WOKINGHAM) STW	22 (0.3%)	53 (0.8%)	104 (1.5%)	1	50	36 (0.5%)	77 (1.1%)	126 (1.9%)	2	30	0	0	0	<=10	CP	CP, STW	IPP, NI, STW, SWM	Medium
ASHFORD HILL STW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CP	CP, STW	STW	Low
BASINGSTOKE STW	9 (0%)	22 (0%)	42 (0.1%)	1	1	21 (0%)	35 (0.1%)	74 (0.1%)	1	0	0	0	0	<=10	CP, STW	CP	IPP, NI, SL, STW, SWM	Medium
BEENHAM STW	N/A	N/A	N/A	1	30	N/A	N/A	N/A	1	106	N/A	N/A	N/A	<=10	CP	CP	NI	Low
BENTLEY STW	1 (0.1%)	4 (0.3%)	6 (0.5%)	1	129	1 (0.1%)	5 (0.4%)	7 (0.6%)	2	87	0	0	0	<=10	CP, NI, SL	CP	IPP, NI, STW	Medium
BILLINGBEAR STW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CP	CP, STW		Low
BORDON STW	93 (0.6%)	115 (0.7%)	228 (1.4%)	4	30	115 (0.7%)	115 (0.7%)	254 (1.6%)	4	347	0	0	0	<=4	CP, NI	CP	IPP, NI, STW, SWM	High
BOXFORD STW	1 (0.6%)	4 (2.5%)	5 (3.2%)	N/A	N/A	1 (0.6%)	4 (2.5%)	5 (3.2%)	N/A	N/A	0	0	0	N/A	CP	CP, NI, SWM	IPP, NI, SWM	Low
BRACKNELL STW	17 (0%)	38 (0.1%)	76 (0.2%)	2	71	28 (0.1%)	119 (0.3%)	156 (0.4%)	3	41	0	0	0	<=10	CP	CP, NI, STW	IPP, NI, STW, SWM	Medium

L3 STW Catchments	2025 modelled baseline (no.& % of properties)					2050 Performance without DWMP (no.& % of properties)					2050 Performance with DWMP (no.& % of properties)				Preferred solutions			
	Internal flooding (2025)	External flooding (2025)	Resilience flooding (2025)	Number of monitored storm overflows (2021)	Recorded (EDM) storm overflow discharges (2021)	Internal flooding (2050)	External flooding (2050)	Resilience flooding (2050)	Number of modelled storm overflows (2050)	Modelled average annual storm discharges (2050)	Internal flooding (2050) DWMP	External flooding (2050) DWMP	Resilience flooding (2050) DWMP	Modelled average annual storm discharges (2050) DWMP	2025-2030	2030-2035	2035-2050	Investment Band (£)
BRIFF LANE (BUCKLEBURY) STW	0 (0%)	1 (0.2%)	1 (0.2%)	1	63	0 (0%)	1 (0.2%)	1 (0.2%)	1	34	0	0	0	<=10	CP	CP	IPP, NI, STW	Low
BURGHFIELD STW	3 (0.1%)	15 (0.5%)	25 (0.8%)	1	118	6 (0.2%)	16 (0.5%)	49 (1.6%)	1	6	0	0	0	<=10	CP, STW, SWM	CP	IPP, SL, STW	Medium
CHAPEL ROW STW	N/A	N/A	N/A	1	57	N/A	N/A	N/A	1	30	N/A	N/A	N/A	<=10	CP, NI, SL, SWM	CP, STW	NI	Low
CHIEVELEY STW	3 (0.2%)	10 (0.5%)	18 (0.9%)	1	3	5 (0.3%)	10 (0.5%)	21 (1.1%)	1	8	0	0	0	<=10	CP	CP, STW	IPP, NI, SWM	Low
COLGATE STW	0 (0%)	0 (0%)	0 (0%)	1	0	0 (0%)	0 (0%)	0 (0%)	1	41	0	0	0	<=10	CP	CP	NI	Low
COMPTON STW	1 (0.2%)	10 (1.5%)	15 (2.3%)	1	60	1 (0.2%)	15 (2.3%)	21 (3.2%)	1	47	0	0	0	<=10	CP, NI, SL, SWM	CP, NI	NI	Medium
CRAWLEY STW	52 (0.1%)	154 (0.3%)	284 (0.5%)	3	41	87 (0.2%)	174 (0.3%)	356 (0.7%)	4	122	0	0	0	<=10	CP, NI	CP, STW	IPP, NI, STW, SWM	High
CRONDALL STW	2 (0.4%)	10 (1.8%)	15 (2.7%)	1	23	3 (0.5%)	15 (2.7%)	24 (4.3%)	1	3	0	0	0	<=10	CP, SL, SWM	CP	IPP, NI, STW	Medium
EAST ILSLEY STW	1 (0.2%)	10 (2.4%)	17 (4%)	N/A	N/A	1 (0.2%)	14 (3.3%)	21 (5%)	N/A	N/A	0	0	0	N/A	CP	CP, NI, SL, SWM		Low
EAST SHEFFORD STW	9 (0.4%)	38 (1.6%)	65 (2.7%)	2	170	14 (0.6%)	53 (2.2%)	94 (3.9%)	2	33	0	0	0	<=10	CP, NI, STW, SWM	CP, SL	NI, SL	Medium
EASTHAMPSTEAD PARK STW	10 (0.4%)	34 (1.2%)	59 (2.1%)	1	15	13 (0.5%)	50 (1.8%)	93 (3.3%)	1	46	0	0	0	<=10	CP, STW	CP, NI, SWM	NI, STW, SWM	Medium
FAWLEY STW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CP	CP	STW	Low
FLEET STW	40 (0.2%)	162 (0.8%)	270 (1.3%)	3	108	85 (0.4%)	292 (1.4%)	446 (2.2%)	3	93	0	0	0	<=10	CP, NI	CP, STW	NI, SWM	Medium

L3 STW Catchments	2025 modelled baseline (no.& % of properties)					2050 Performance without DWMP (no.& % of properties)					2050 Performance with DWMP (no.& % of properties)				Preferred solutions			
	Internal flooding (2025)	External flooding (2025)	Resilience flooding (2025)	Number of monitored storm overflows (2021)	Recorded (EDM) storm overflow discharges (2021)	Internal flooding (2050)	External flooding (2050)	Resilience flooding (2050)	Number of modelled storm overflows (2050)	Modelled average annual storm discharges (2050)	Internal flooding (2050) DWMP	External flooding (2050) DWMP	Resilience flooding (2050) DWMP	Modelled average annual storm discharges (2050) DWMP	2025-2030	2030-2035	2035-2050	Investment Band (£)
GREENHAM COMMON STW	1 (0.2%)	1 (0.2%)	1 (0.2%)	N/A	N/A	1 (0.2%)	1 (0.2%)	2 (0.4%)	N/A	N/A	0	0	0	N/A	CP	CP	IPP, NI, STW, SWM	Low
HAMPSTEAD NORREYS STW	0 (0%)	10 (3.9%)	14 (5.5%)	1	153	0 (0%)	10 (3.9%)	14 (5.5%)	1	74	0	0	0	<=10	CP, NI, STW, SWM	CP	NI	Medium
HAMSTEAD MARSHALL STW	0 (0%)	0 (0%)	0 (0%)	1	57	0 (0%)	0 (0%)	0 (0%)	1	25	0	0	0	<=10	CP, NI, SL, SWM	CP, STW	NI	Low
HARTLEY WINTNEY STW	17 (0.2%)	70 (0.8%)	119 (1.3%)	4	50	31 (0.4%)	93 (1.1%)	170 (1.9%)	4	100	0	0	0	<=10	CP, NI	CP, NI	IPP, NI, SWM	Medium
HUNGERFORD STW	3 (0.1%)	6 (0.2%)	10 (0.3%)	1	6	3 (0.1%)	8 (0.3%)	13 (0.4%)	1	16	0	0	0	<=10	CP, NI	CP	IPP, NI, SWM	Low
HURLEY STW	1 (0.2%)	9 (1.5%)	13 (2.1%)	N/A	N/A	2 (0.3%)	11 (1.8%)	15 (2.5%)	N/A	N/A	0	0	0	N/A	CP	CP, STW	IPP, NI, SWM	Low
KINGSCLERE STW	2 (0.1%)	8 (0.4%)	12 (0.6%)	1	77	4 (0.2%)	8 (0.4%)	17 (0.9%)	1	14	0	0	0	<=10	CP, NI	CP	IPP, NI, STW	Low
KINTBURY STW	2 (0.2%)	4 (0.3%)	6 (0.5%)	1	46	2 (0.2%)	5 (0.4%)	6 (0.5%)	1	50	0	0	0	<=10	CP, NI, SL, SWM	CP	IPP, NI, STW	Medium
LONGWATER STW	0 (0%)	11 (2.6%)	16 (3.8%)	N/A	N/A	0 (0%)	17 (4%)	22 (5.2%)	N/A	N/A	0	0	0	N/A	CP, NI	CP, NI, SWM	NI, STW, SWM	Low
LOWER BASILDON STW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CP	CP, IPP		Low
LOXWOOD (SW) STW	N/A	N/A	N/A	No data	No data	N/A	N/A	N/A	1	25	N/A	N/A	N/A	<=10	CP, NI	CP	NI	Low
MAIDENHEAD STW	38 (0.1%)	68 (0.2%)	147 (0.5%)	1	2	50 (0.2%)	87 (0.3%)	199 (0.6%)	2	73	0	0	0	<=10	CP, NI	CP, NI, STW	IPP, NI, SL, SWM	Medium
MIDGHAM STW	N/A	N/A	N/A	1	4	N/A	N/A	N/A	1	0	N/A	N/A	N/A	<=10	CP	CP, STW	NI	Low

L3 STW Catchments	2025 modelled baseline (no.& % of properties)					2050 Performance without DWMP (no.& % of properties)					2050 Performance with DWMP (no.& % of properties)				Preferred solutions			
	Internal flooding (2025)	External flooding (2025)	Resilience flooding (2025)	Number of monitored storm overflows (2021)	Recorded (EDM) storm overflow discharges (2021)	Internal flooding (2050)	External flooding (2050)	Resilience flooding (2050)	Number of modelled storm overflows (2050)	Modelled average annual storm discharges (2050)	Internal flooding (2050) DWMP	External flooding (2050) DWMP	Resilience flooding (2050) DWMP	Modelled average annual storm discharges (2050) DWMP	2025-2030	2030-2035	2035-2050	Investment Band (£)
MORTIMER STW	2 (0.1%)	7 (0.4%)	11 (0.6%)	1	79	4 (0.2%)	8 (0.4%)	16 (0.9%)	1	3	0	0	0	<=10	CP, SL, SWM	CP	NI, STW	Medium
NEW MILL STW	N/A	N/A	N/A	1	31	N/A	N/A	N/A	1	0	N/A	N/A	N/A	<=10	CP, NI, SL, SWM	CP	NI, STW	Low
NEWBURY STW	33 (0.1%)	147 (0.5%)	260 (0.8%)	1	25	91 (0.3%)	297 (0.9%)	561 (1.8%)	1	0	0	0	0	<=10	CP, NI, SL, STW	CP, NI, SWM	IPP, NI, STW, SWM	Medium
PANGBOURNE STW	11 (0.2%)	19 (0.4%)	35 (0.7%)	1	15	14 (0.3%)	26 (0.5%)	47 (1%)	1	11	0	0	0	<=10	CP	CP, STW	IPP, NI, SWM	Medium
READING STW	125 (0.1%)	272 (0.3%)	635 (0.7%)	3	6	187 (0.2%)	523 (0.6%)	913 (1%)	3	69	0	0	0	<=10	CP, NI	CP, STW	IPP, NI, SL, STW, SWM	High
RUSPER STW	N/A	N/A	N/A	1	21	N/A	N/A	N/A	1	25	N/A	N/A	N/A	<=10	CP, NI	CP	NI, STW	Low
SANDHURST STW	15 (0.1%)	113 (0.5%)	184 (0.9%)	1	35	37 (0.2%)	190 (0.9%)	321 (1.5%)	1	2	0	0	0	<=10	CP, NI	CP, STW	NI, SWM	Medium
SELBORNE STW	0 (0%)	2 (0.7%)	2 (0.7%)	2	83	0 (0%)	2 (0.7%)	2 (0.7%)	2	0	0	0	0	<=10	CP, SL, SWM	CP, NI	NI, STW	Low
SHERBORNE ST JOHN STW	0 (0%)	10 (0.9%)	14 (1.3%)	1	27	0 (0%)	16 (1.5%)	18 (1.6%)	1	25	0	0	0	<=10	CP	CP, NI, SL, SWM	NI, STW	Medium
SHERFIELD-ON-LODDON STW	2 (0.1%)	33 (1.4%)	48 (2%)	1	26	5 (0.2%)	42 (1.7%)	71 (2.9%)	1	62	0	0	0	<=10	CP, NI	CP, NI, STW, SWM	NI, SWM	Low
SILCHESTER STW	9 (0.1%)	46 (0.6%)	78 (1%)	3	145	18 (0.2%)	58 (0.7%)	118 (1.5%)	3	54	0	0	0	<=10	CP	CP, NI, SL, STW	IPP, NI, SL, STW, SWM	High
STRATFIELD SAYE STW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CP	CP, STW		Low
STREATLEY STW	1 (0.3%)	2 (0.6%)	3 (0.9%)	N/A	N/A	1 (0.3%)	3 (0.9%)	4 (1.2%)	N/A	N/A	0	0	0	N/A	CP	CP	IPP, NI, STW, SWM	Low

L3 STW Catchments	2025 modelled baseline (no.& % of properties)					2050 Performance without DWMP (no.& % of properties)					2050 Performance with DWMP (no.& % of properties)				Preferred solutions			
	Internal flooding (2025)	External flooding (2025)	Resilience flooding (2025)	Number of monitored storm overflows (2021)	Recorded (EDM) storm overflow discharges (2021)	Internal flooding (2050)	External flooding (2050)	Resilience flooding (2050)	Number of modelled storm overflows (2050)	Modelled average annual storm discharges (2050)	Internal flooding (2050) DWMP	External flooding (2050) DWMP	Resilience flooding (2050) DWMP	Modelled average annual storm discharges (2050) DWMP	2025-2030	2030-2035	2035-2050	Investment Band (£)
SULHAMSTEAD STW	0 (0%)	0 (0%)	0 (0%)	N/A	N/A	0 (0%)	0 (0%)	0 (0%)	N/A	N/A	0	0	0	N/A	CP	CP, STW		Low
TYLERS LANE (BUCKLEBURY) STW	0 (0%)	0 (0%)	0 (0%)	N/A	N/A	0 (0%)	0 (0%)	0 (0%)	N/A	N/A	0	0	0	N/A	CP	CP, STW		Low
WARGRAVE STW	66 (0.1%)	209 (0.4%)	390 (0.8%)	1	15	110 (0.2%)	350 (0.7%)	655 (1.3%)	1	18	0	0	0	<=10	CP, NI, STW	CP, STW	IPP, NI, SWM	High
WASH WATER STW	0 (0%)	7 (0.2%)	10 (0.4%)	3	102	1 (0%)	9 (0.3%)	14 (0.5%)	3	57	0	0	0	<=10	CP, NI	CP, NI	NI, STW	Medium
WELFORD STW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CP	CP, STW		Low
WHITE WALTHAM STW	3 (0.1%)	20 (0.7%)	33 (1.1%)	1	3	5 (0.2%)	30 (1%)	42 (1.4%)	1	16	0	0	0	<=10	CP, NI	CP	NI, STW, SWM	Medium
WICKHAM STW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CP	CP, STW		Low
WINDSOR STW	26 (0.1%)	50 (0.3%)	92 (0.5%)	N/A	N/A	37 (0.2%)	66 (0.4%)	126 (0.7%)	N/A	N/A	0	0	0	N/A	CP	CP, STW	IPP, NI, SWM	Medium
WINTERBOURNE STW	2 (5.9%)	8 (23.5%)	14 (41.2%)	1	43	2 (5.9%)	8 (23.5%)	14 (41.2%)	1	0	0	0	0	<=10	CP, SL, SWM	CP	NI, SL, STW	Low
WOLVERTON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	CP	CP	STW	Low
WOOLHAMPTON STW	0 (0%)	11 (1.6%)	16 (2.4%)	N/A	N/A	0 (0%)	22 (3.3%)	22 (3.3%)	N/A	N/A	0	0	0	N/A	CP, NI	CP, SL, STW	IPP, NI, SL, SWM	Low
YATTENDON STW	1 (1.2%)	2 (2.5%)	2 (2.5%)	N/A	N/A	1 (1.2%)	2 (2.5%)	2 (2.5%)	N/A	N/A	0	0	0	N/A	CP	CP, STW	NI, SWM	Low

CP = Catchment-level planning including mapping and modelling

SWM = Surface water management

NI = Network improvements

SL = Sewer lining

IPP = Individual property level protection

STW = Treatment process technologies and protection from high river levels

Navigation index

We've developed a comprehensive document suite to share our final DWMP. This includes five summary documents, that contain increasing levels of detail, as well as Catchment Strategic Plans. To help you to navigate around our document suite and to find key DWMP content, we provide a navigation index below.

Navigation index		Protecting the environment and providing a reliable, sustainable wastewater service							Best value and delivery					Working together		DWMP stages and data				
		Storm overflows	Sewer flooding	Level of ambition & pace of delivery	Growth & climate change	Resilience: flooding & power	Groundwater	Environmental assessments	Affordability & bill impact	Best Value	Base vs Enhancement	Solutions & deliverability	Programme alignment	Partnership working	Stakeholder & customer engagement	DWMP stages & process	Level 2 regional summaries	Level 3 regional summaries	Data tables	Risk & Assurance
Summary documents	Customer summary	■	■											■	■	■				
	Non-technical summary	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	Technical summary	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	The Plan	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	Catchment Strategic Plans x13	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■		
Technical appendices x11	Appendix A - Strategic context											■				■				
	Appendix B - Risk-Based catchment screening															■				
	Appendix C - Baseline risk and Vulnerability assessment				■	■										■				
	Appendix D - Options development and appraisal	■										■				■				
	Appendix E - Programme appraisal	■		■		■			■	■	■	■	■			■				
	Appendix F - Stakeholder engagement														■	■				
	Appendix G - Adaptive pathway planning	■	■		■															
	Appendix H – Customer engagement Part A – Draft DWMP														■	■				
	Appendix I - Risk and uncertainty											■								■
	Appendix J - DWMP and WRMP alignment												■							
	Appendix M - Assurance																			■
New technical appendices x9	Appendix N - You Said, We Did (YSWD)	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
	Appendix O - What base buys										■									
	Appendix P - Response to July 2021 Floods		■	■	■	■			■			■	■	■	■					
	Appendix Q - Storm overflows	■		■	■				■				■							
	Appendix R - Delivery of SuDS and nature-based solutions	■	■	■	■	■			■	■		■	■	■	■					
	Appendix S - Partnership opportunities and working			■								■		■	■					
	Appendix T - Groundwater quality						■													
	Appendix U - Resilience		■		■	■							■	■	■					
	Appendix V – Customer engagement Part B – Consultation Survey Report														■					
Environmental assessments	Appendix K - Strategic environmental assessment (SEA)							■												
	Appendix L - Habitats regulations assessment (HRA)							■												
Portals and data	Customer portal	■	■							■		■		■	■	■	■	■		
	Practitioner portal	■	■											■	■		■	■		
	Data tables			■							■								■	
	Data tables commentary																		■	

Find all the documents in our DWMP suite on our website.

Work with us

We want to continue to draw on your expertise and local knowledge and invite you to work further with us to meet the future needs of drainage and wastewater services in our region.

Please get in touch with us or provide feedback on this document by emailing our DWMP team at DWMP@thameswater.co.uk

For more information on our DWMP work or to share your views, please visit the DWMP portal on our website here.