

# Catchment Strategic Plan

Part of our Drainage and Wastewater Management Plan (DWMP)



Co-creating resilient wastewater catchments

A long-term Strategic Plan for **Central Bedfordshire, Buckinghamshire, Slough and Luton**

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# 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.

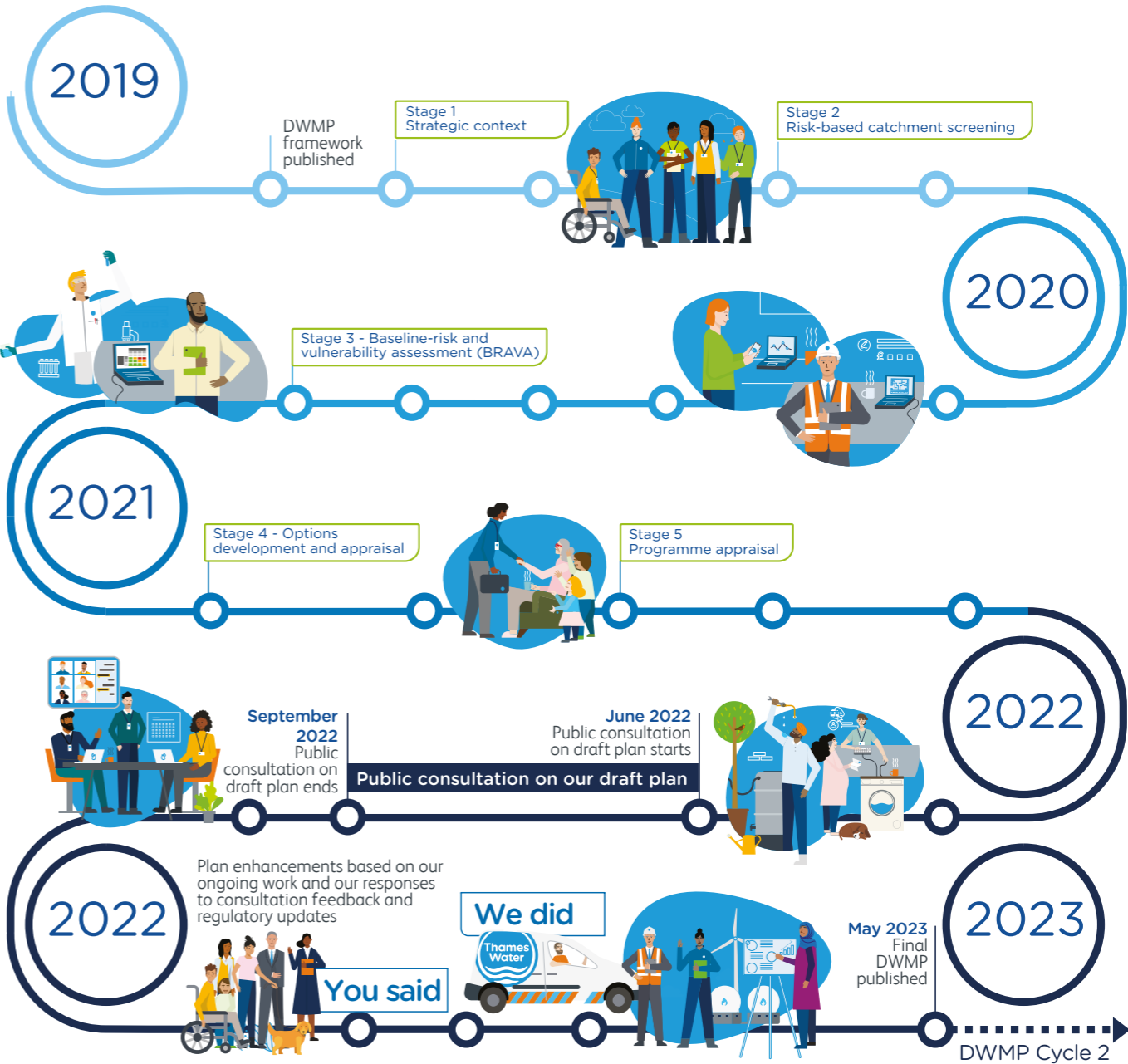
Our plan aligns with wider industry strategic plans and delivery programmes, such as the Water Industry National Environment Programme (WINEP) and the Long-Term Delivery Strategy (LTDS), and we'll make sure it continues to do so as we tackle current pressures and future challenges.

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.

### DWMP Cycle 1



# 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
- 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 plan will be funded - by business-as-usual activities (base funding) or enhancement funds
- Adaptive planning scenarios to evidence how our 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

**Delivering the plan**  
Solutions and deliverability of the plan

**Enhancing the plan**  
Technical clarifications and ease of navigation

**Working together**  
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

**Increased** evidencing around best value and justification for our preferred plan

**Increased** alignment of DWMP to other strategies and delivery plans

**Increased** number of proposed solutions

**Rewritten** and restructured parts of the documents to be clearer and more accessible

**More** detailed content throughout, especially on strengthening partnership working and stakeholder engagement

**Additional** future scenario testing

**Increased** balancing of risk, ambition and deliverability

**Earlier** planned implementations

**New** dedicated technical appendices

\* 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.

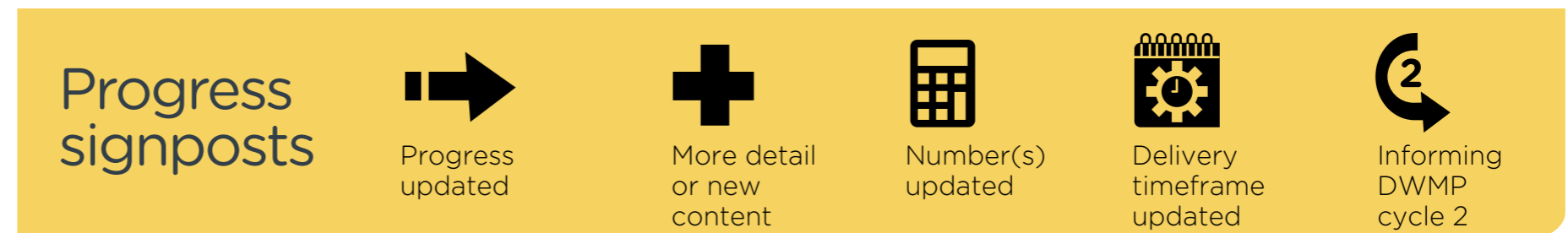
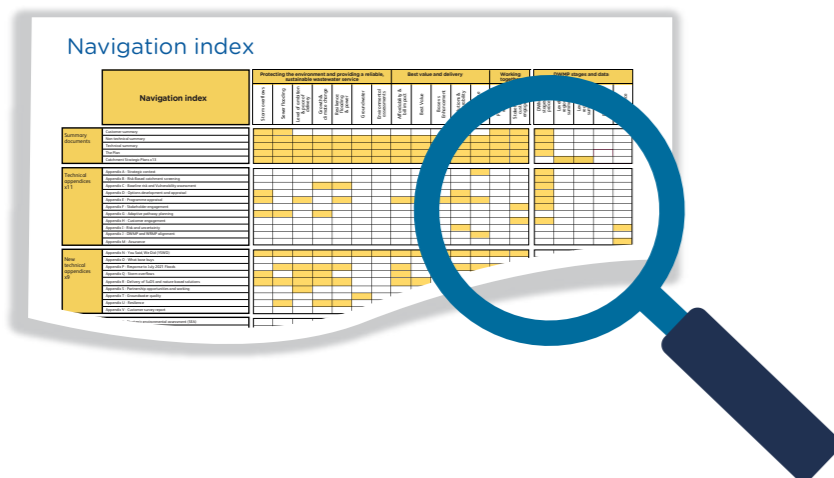
# Preface

## 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.

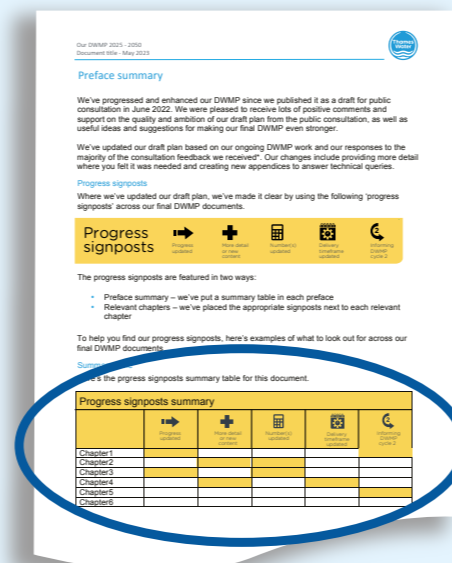
You can spot all the places we've updated our draft plan with our 'progress signposts', which we've used across all our final DWMP documents. Here's where they'll be:

- 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



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 <a href="#">here</a> .
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.

Term	Definition
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 <a href="#">here</a> 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 Central Bedfordshire, Buckinghamshire, Slough and Luton 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’ll 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 34 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 further 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](mailto: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

Our DWMP

The Plan




DWMP portal

Strategic Context

Technical Summary

Technical Appendices

Non-Technical Summary

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

# The Central Bedfordshire, Buckinghamshire, Slough and Luton TRFCC area

This TRFCC area follows the border between Buckinghamshire and Oxfordshire to the west, then borders Berkshire north of Henley on Thames, moving east the TRFCC area boundary follows the River Thames through Marlow, to Slough which is one of the major conurbations included in this region.

Cutting across the area is a large band of chalk forming the Chiltern Hills where chalk springs give rise to the River Wye, which runs through High Wycombe and is a valuable habitat for wildlife including fish such as brown trout, chub and pike. The chalk geology means the network in this area is susceptible to impacts from fluctuations in groundwater.

Our drainage and wastewater service needs to protect this unique area and support the growth ambitions of its communities.

The River Chess catchment is a trial Smarter Water Catchment Plan location. We are working with the Chilterns Conservation Board to investigate and test catchment-based opportunities in headwaters, floodplains, rural communities and urban communities. Our vision is to build better functioning river catchments in a cost-efficient manner without negatively impacting the environment. To achieve this, we are working in partnership to apply a ‘systems thinking’ approach to address multiple challenges holistically. We are creating a 10-year plan and have identified key activities for delivery by all participants.

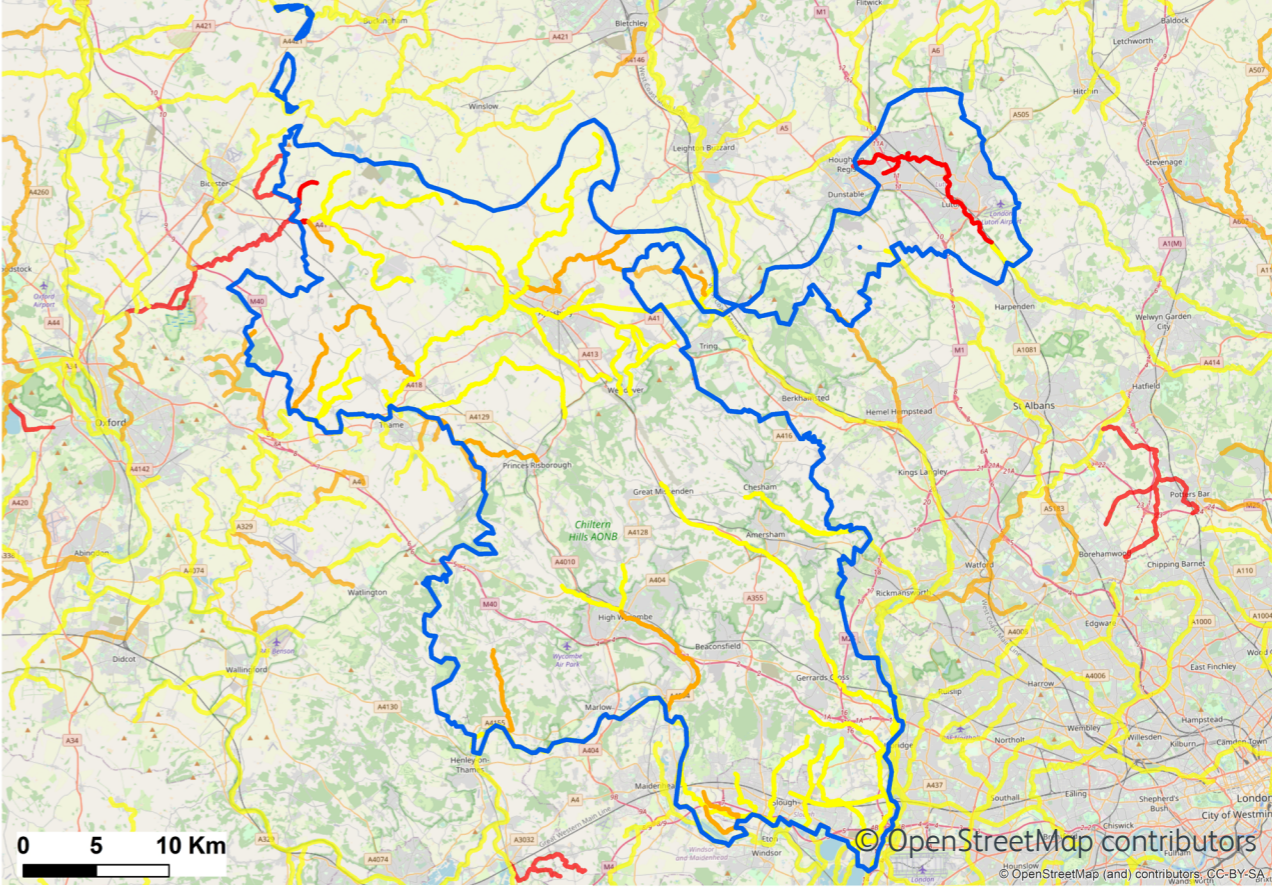
For further details please see [Co-creating a long-term plan for the River Chess catchment](#).

Every day, our sewerage network in this TRFCC area manages the needs of 861,000 customers. Our sewerage network consists of:

- 34 STWs and their associated networks (10 non Thames Water STWs)
- An area covering 1,277 km<sup>2</sup>
- 7,130 km of sewers
- 421 pumping stations

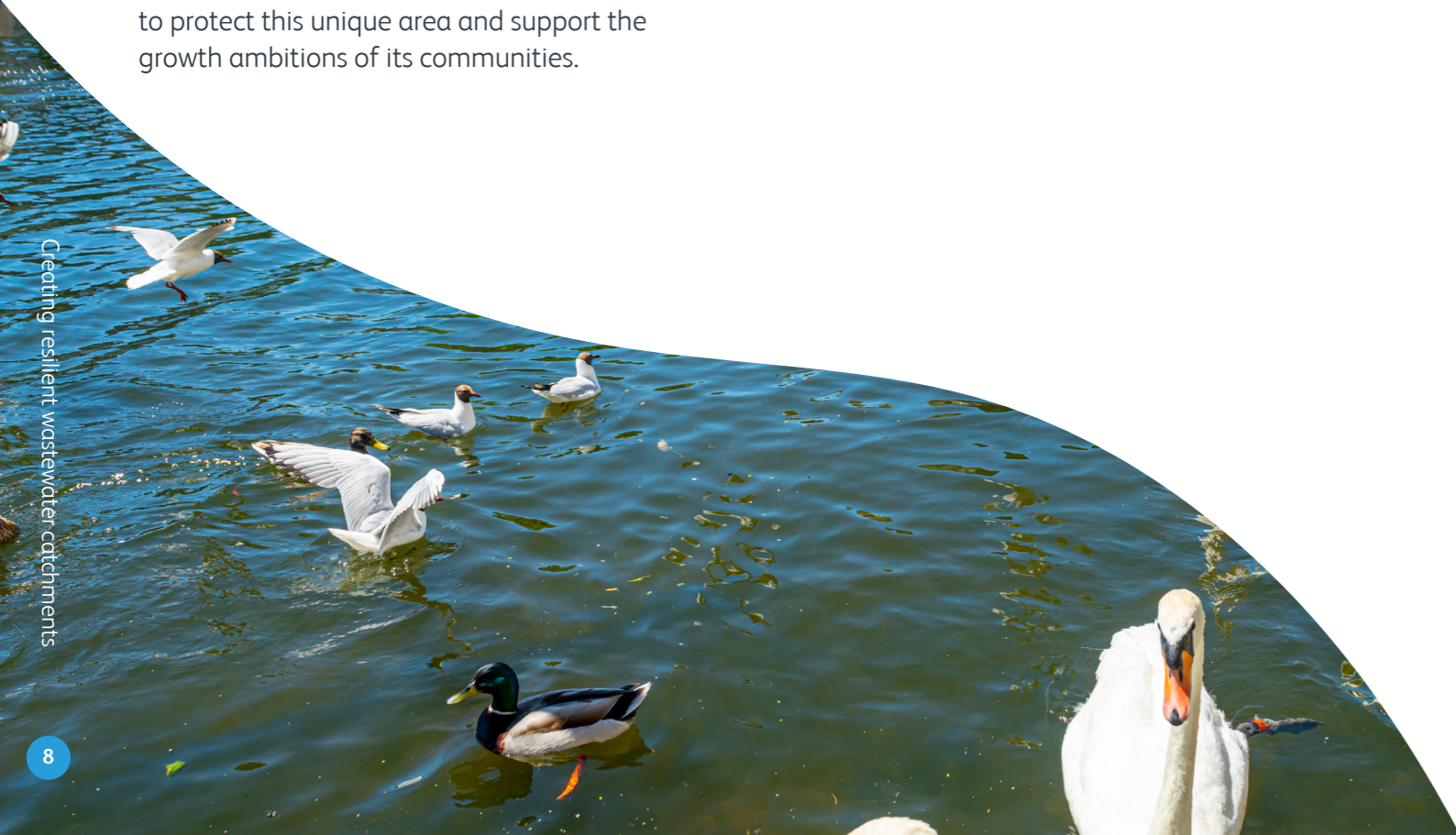
The region has mostly separate sewer systems that convey wastewater and surface water from homes and businesses. Rainfall runoff is often collected by surface water sewers, highway drainage, or privately owned assets and directly discharged to nearby watercourses.

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



□ L2 TRFCC Strategic Planning Area  
Environment Agency WFD River Water Quality Status 2019

High Good Moderate Poor Bad



# 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, Department for Environment, Food and Rural Affairs (Defra), Water Services Regulation Authority (Ofwat), Natural England, Consumer Council for Water, Thames Water Customer Challenge Group (CCG), Thames21, Rivers Trust, Thames Rivers Trust, South East Rivers Trust, Bedfordshire County Council, Buckinghamshire Council, Luton Borough Council, River Chess Association, Chilterns AONB Chalk Stream Project.



## 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.

From 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 that our stakeholders want our strategic plan to deliver the following things 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 the following table records all of the plans and policies and how they align with the DWMP.

“ Greater emphasis on environmental targets. SuDS interventions prioritise sustainability as opposed to resolving the connecting - for environmental and social benefits rather than targets. ”

“ More emphasis on sustainability/climate change/carbon. ”



# Partners' policies

Management Plan ( <a href="#">Hyperlink</a> )	Key aspects that align with the DWMP
<b>Local Flood Risk Management Strategies</b>	
<a href="#">Buckinghamshire County Council, Local Flood Risk Management Strategy</a>	<ul style="list-style-type: none"> <li>The council has a duty to develop, maintain, apply and monitor a strategy for local flood risk management in its area.</li> </ul>
<a href="#">Local Flood Risk Management Strategy for Central Bedfordshire</a>	<ul style="list-style-type: none"> <li>This strategy is an opportunity for the Central Bedfordshire Council to set out how they plan to manage local flood risk both now and in the future.</li> </ul>
<a href="#">Luton Borough Council, Local Flood Risk Management Strategy</a>	<ul style="list-style-type: none"> <li>This strategy will enable the long-term management of flooding arising from rivers, surface water and groundwater in the borough and to communicate the risks and consequences of flooding to their residents.</li> </ul>
<a href="#">Local Flood Risk Management Strategy for Slough</a>	<ul style="list-style-type: none"> <li>Identifying where flooding occurs, and what it affects, and reducing flood risk where appropriate.</li> <li>Avoiding inappropriate development in areas of flood risk</li> <li>Developing public awareness of flood risk</li> </ul>
<b>Surface Water Management Plans</b>	
<a href="#">Luton Borough Council, Surface Water Management Plan (Draft)</a>	<ul style="list-style-type: none"> <li>The report outlines the preferred surface water management strategy for the borough and for the part of the contributing hydrological catchment that lies within Central Bedfordshire. Aligns with the DWMP.</li> </ul>
<a href="#">Buckinghamshire County Council Surface Water Management Plan for Chesham and High Wycombe</a>	<ul style="list-style-type: none"> <li>This plan aims to identify sustainable responses to manage surface water flooding and to prepare action plans for Chesham and High Wycombe.</li> </ul>
<a href="#">Buckingham Surface Water Management Plan</a>	<ul style="list-style-type: none"> <li>The plan aims to identify sustainable responses to manage surface water flooding prepare action plans for the areas concerned.</li> </ul>
<a href="#">Marlow Surface Water Management Plan</a>	<ul style="list-style-type: none"> <li>The purpose of this plan is to identify sustainable responses to manage surface water flooding and prepare an action plan.</li> </ul>

Management Plan ( <a href="#">Hyperlink</a> )	Key aspects that align with the DWMP
<a href="#">Slough Surface Water Management Plan (Draft)</a>	<ul style="list-style-type: none"> <li>The Slough Surface Water Management Plan is needed to provide a clearer picture of areas at risk of surface water flooding and other types of flooding that occur in combination with surface water flooding.</li> </ul>
<b>River Catchment Partnership Plans</b>	
<a href="#">Luton Lea Catchment Partnership</a>	<ul style="list-style-type: none"> <li>Community engagement and participation</li> </ul>
<a href="#">The Colne Catchment Action Network</a>	<ul style="list-style-type: none"> <li>Involve people with their local waterbodies</li> <li>Improve wildlife corridors</li> <li>Manage flow</li> <li>Work together</li> </ul>
<a href="#">Lea Catchment Partnership</a>	<ul style="list-style-type: none"> <li>The vision of this plan is that all watercourses flow year-round with plentiful, quality water that supports its characteristic flora and fauna.</li> </ul>
<a href="#">River Thames Catchment Plan</a>	<ul style="list-style-type: none"> <li>Provide a clear understanding of the challenges affecting the River Thames catchment, based on current evidence.</li> <li>Work out priorities for improvement – what needs doing and where, and to seek to deliver these improvements in a joined-up and cost-effective way.</li> </ul>
<a href="#">Cherwell and Ray Catchment Plan</a>	<ul style="list-style-type: none"> <li>The vision statement is 'that the Cherwell and Ray catchment is clean, healthy and full of wildlife, that it is enjoyed, valued, and managed sustainably by all for the long-term.'</li> </ul>
<a href="#">South Chilterns Catchment Partnership</a>	<ul style="list-style-type: none"> <li>The partnership aims to bring together all the interested parties in the South Chilterns catchment to collaboratively protect, enhance and improve its water environment through a shared vision.</li> </ul>
<a href="#">Maidenhead to Teddington Catchment Plan</a>	<ul style="list-style-type: none"> <li>The vision statement of this plan is to protect, improve and enhance all rivers within the Lower Thames catchment by 2027, making them cleaner, more accessible and more attractive, to benefit local communities and wildlife, both now and for the benefit of future generations.</li> </ul>
<b>Sustainability and Planning</b>	
<a href="#">Chalk Stream Restoration Strategy</a>	<ul style="list-style-type: none"> <li>Enhanced status for all chalk streams</li> </ul>

Management Plan ( <a href="#">Hyperlink</a> )	Key aspects that align with the DWMP
SuDS Design and Evaluation Guide	
<a href="#">Luton Design and Evaluation Guide</a>	<ul style="list-style-type: none"><li>• Create a shared vision around SuDS for all involved in design and evaluation.</li><li>• Enable the design and evaluation of SuDS to meet agreed standards</li><li>• Ensure SuDS are maintainable now and in the future</li></ul>
AONB Management Plans	
<a href="#">Chilterns AONB Management Plan</a>	<ul style="list-style-type: none"><li>• The vision of this plan is that the Chilterns will be cared for, forever and for everyone. A place where people are inspired by its distinctive natural beauty, space and tranquillity, to enjoy and care for the landscape. A place where natural beauty and cultural heritage is celebrated and enhanced. A place which gives space for nature to flourish and which provides us with the ingredients for healthy living, such as clean water, healthy soils and thriving wildlife. A place where communities live, work and breathe. A haven for people and wildlife.</li></ul>
Green/Blue Infrastructure Plans	
<a href="#">Buckinghamshire Green Infrastructure Strategy</a>	<ul style="list-style-type: none"><li>• This strategy examines strategic Green Infrastructure assets across the board, incorporating accessible green space, biodiversity, heritage, access routes and landscapes on an equal basis and integrating these themes to provide plans for a multi-functional accessible green network.</li></ul>
<a href="#">A town-wide vision for Luton 2020-2040</a>	<ul style="list-style-type: none"><li>• The shared vision for Luton is “Luton will be a healthy, fair and sustainable town, where everyone can thrive and no-one has to live in poverty.”</li></ul>

Our co-creators

# Issues today

The initial [risk-based screening](#) in this TRFCC area, published in December 2019, found that 62 % 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 in some locations flooding is many more times likely to occur as a result of blockages, rather than hydraulic overload as a result of storm flows.

We will tackle the potential risk of hydraulic sewer flooding in accordance with our goals, where predicted flows entering the sewer exceed the 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.

Our analysis has also identified risks of pollution and sewer collapses in this TRFCC area. It's important to note that our sewer collapses in this area are extremely low, and particularly low when compared nationally.

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 - 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 flooding internally from the sewerage system for up to a 1 in 50-year storm, for example in areas such as Luton and Dorton village.

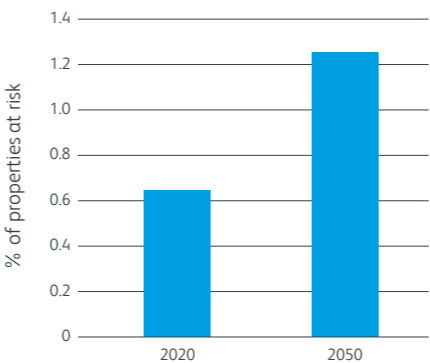
In terms of protecting our rivers, if we don't act our modelling predicts by 2050 that growth and climate change would impact on our storm overflow performance with 43 % of L3 catchments having an average storm discharge rate >10 storm discharges per annum per overflow to rivers including the Thames, Cherwell and Thame.

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 8 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.

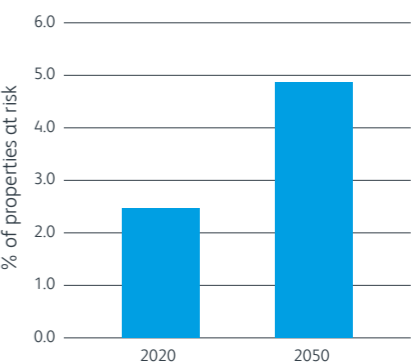
[Practitioner portal \(thameswater.co.uk\)](https://thameswater.co.uk/practitioner-portal)

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

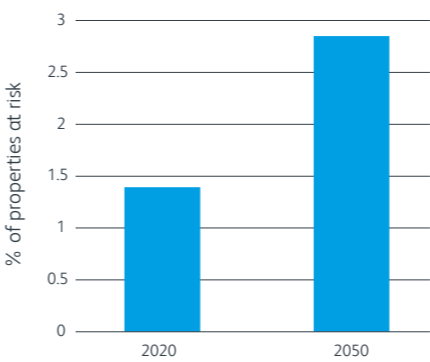
Internal hydraulic sewer flooding (1 in 30-yr storm)  
- i.e > 3.3% chance of happening each year



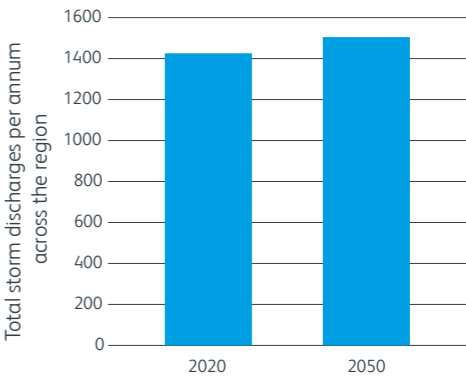
Hydraulic sewer flooding (1 in 50-yr storm)  
- i.e. > 2% chance of happening each year



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

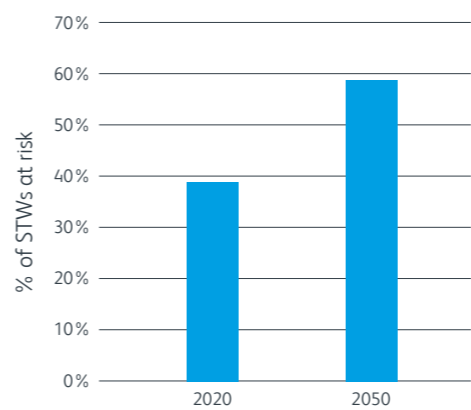


Annual storm overflow performance



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

STWs at risk of water quality compliance failure



Our predictions for the future

# Sustainable solutions

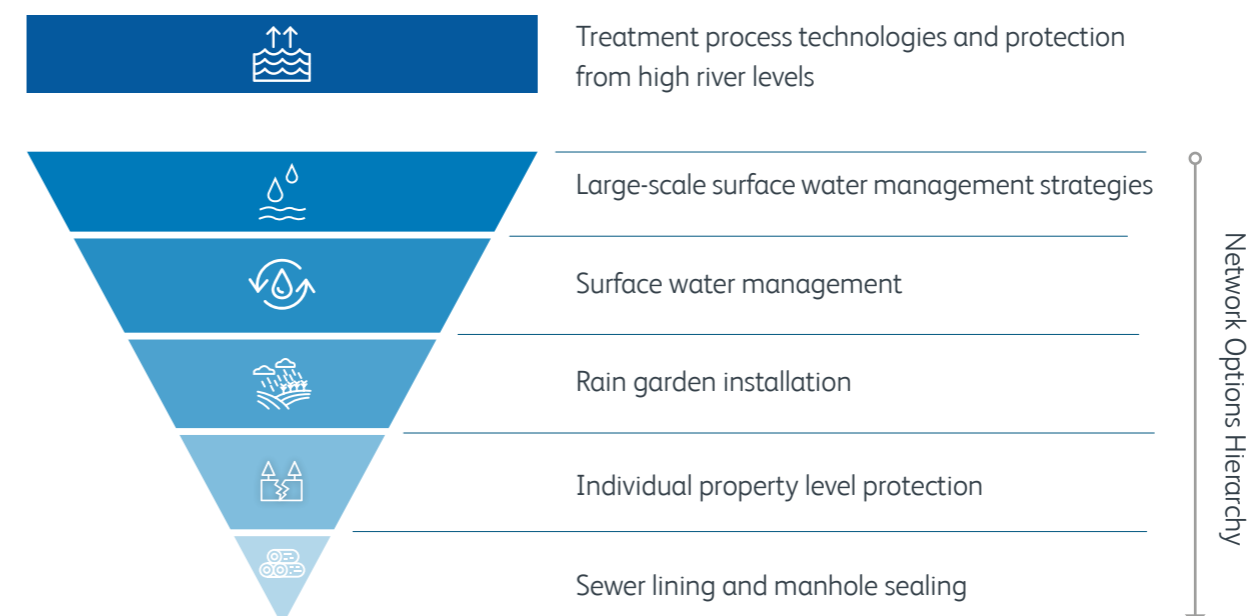
We've combined our knowledge of the catchments with the stakeholder feedback we've received to help us identify the solutions required to meet the future needs of this area. We've used a structured approach that started with over 40 generic solutions, to ensure broad thinking, and identified and assessed 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 available 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

### Large-scale surface water management strategies

Delivery of large-scale surface water management strategies in specific areas of development in this area to significantly reduce rainfall entering the separate foul sewer network.



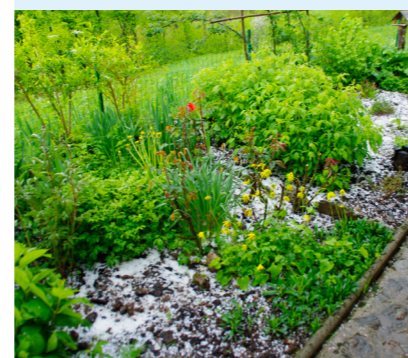
### Surface water management

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 system or foul to surface water.



### Rain garden installation

Rain gardens are one example of a surface water management feature and they allow rainwater to naturally soak into the ground. Installations will be targeted and include residential properties, schools and other public, commercial and industrial buildings.



### 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.



### 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 and with a high potential to reduce unwanted flows into our sewer system that currently take up much of its capacity.



### 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.



## Chesham

Chesham is a high priority area for all the Risk Management Authorities involved and close links will be required with the Flood Risk Management Plan, River Chess Society and the Chess Smarter Water Catchment plan.

Partnership working with the Colne Catchment Partnership has already shown that there are potential benefits to the wider environmental health of the River Chess, a chalk stream.

The Catchment Plan, published earlier this year, identified areas of potential improvement in both the upper catchment and the valley. A strategic plan is being produced to identify feasible options in the following three areas:

- i) Land above Chesham, Vale to the River Chess – Natural Flood Management and drainage opportunities in the upper catchment of the River Chess
- ii) Broad Street – Surface water management opportunities in Chesham
- iii) Pednornmead End – Surface water and groundwater management opportunities in lower Chesham adjacent to the River Chess

## Ickford Village

Ickford is an example of where local community engagement and working through partnership has successfully progressed the following:

- installation of flow monitors
- monitoring of the pumping station
- visual inspection of sewers

Thames Water and Buckinghamshire Lead Local Flood Authority (LLFA) are currently collaborating on a flooding investigation for Ickford Village to investigate improving community resilience, following historic use of tankers by Thames Water to remove flows from sewers at Church Lane junction to reduce flooding.

Ickford village suffers from groundwater infiltration and surface water misconnections into the foul network.

The area has also been identified for growth and this option would avoid future problems.

A future impermeable study would identify any combined connections raised as a concern by residents. Community reuse, smart water management, natural flood management

and sustainable water management, including use of water butts and recycling of roof drainage, have been proposed along with community engagement.

The project would reduce flood risk associated with the drainage network and has the potential to support wider community water re-use projects.

## Chalfont St Peter and St Giles

This is a high priority area for Buckinghamshire and forms part of the portfolio of Groundwater Resilience and Engagement (GRACE) projects. Surface water and foul flooding in Chalfont St Peter and Chalfont St Giles affected businesses in the summer and October of 2020.

There are a range of challenges including surface water management, groundwater infiltration and fluvial flooding. Solutions could reduce the pressure on Maple Lodge STW and complement a potential refurbishment at Blackbirds STW.

An investigation and appraisal of options could look to identify natural flood management as well as surface water management solutions, with additional wider environmental benefits to tributaries of the River Colne.



Opportunity	Partners
Chesham	Buckinghamshire Council and Colne Catchment Partnership
Chalfont St Peter and St Giles Flood and Coastal Resilience Innovation Programme (FCRIP)	Buckinghamshire Council and Colne Catchment Partnership
Ickford Village	Buckinghamshire Council and River Thame Catchment Partnership
Warden Hill Junior School SuDS	Luton Borough Council, Department for Education and Environment Agency
Smarter FCRIP	Slough Borough Council, Buckinghamshire Council, Environment Agency, The Wildfowl and Wetlands Trust, Thames21, National Flood Forum and Mayflower Smart City Platform
Farnham Common	Buckinghamshire Council and Thames Water
West Marlow	Buckinghamshire Council

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 this TRFCC area has been formulated based 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 Central Bedfordshire, Buckinghamshire, Slough and Luton 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.

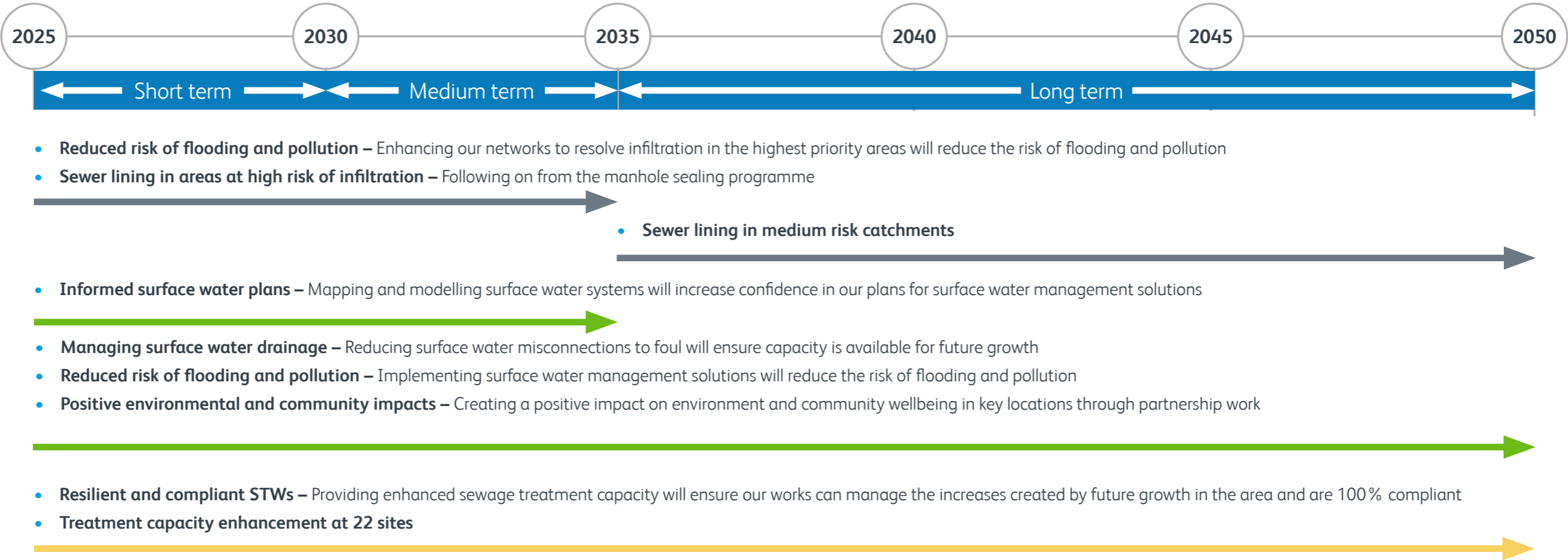
We will achieve this through an adaptive approach whereby we will aggressively target unwanted flows to restore capacity in our foul only network incrementally at system level over the next 25 years. This will include sewer and manhole sealing to reduce groundwater infiltration and fluvial/pluvial inundation 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.

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:



Restore

Enhance

Maintain

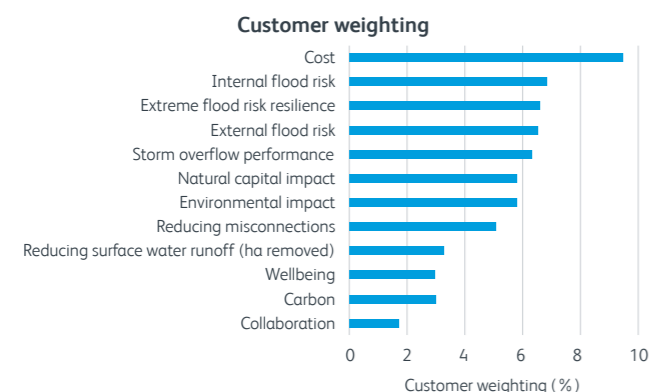
# Developing our preferred plan

## 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. Delivers a feasible level of surface water management within the first 10 years of the plan

**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.



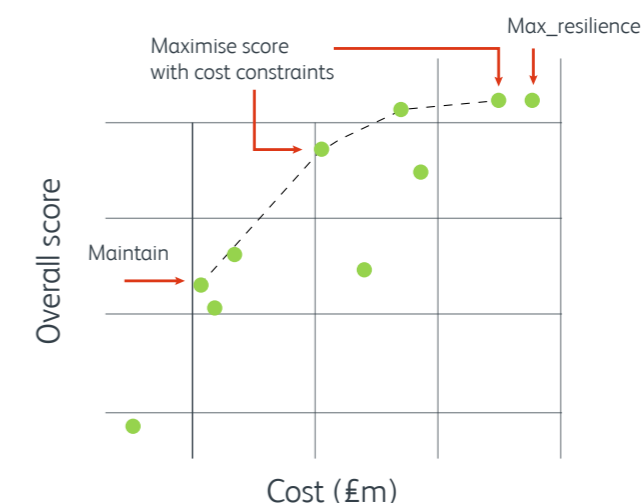
### Reducing misconnections

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.

### Illustrative score vs cost



## 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

Central Bedfordshire, Buckinghamshire, Slough and Luton

We believe we will need to invest £1.1bn in this area to achieve our long-term ambitious targets by 2050 to mitigate growth and climate change.

	£bn
Best cost estimate	1.1
Embodied carbon 143,070 tonnes	

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

- £752m 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
- £134m on improvements to surface water management, with a particular focus on removing surface water from impacting on the networks
- £108m upgrading 22 STWs
- £116m on sewer lining
- £14m on individual property level protection



### Storm overflow performance

Reduce the number of average annual storm discharges by 1,195. By 2050, none of the 68 storm discharge locations in this catchment will overflow more than ten times per annum on average



### Property flooding

Protect 493 properties from internal sewer flooding up to a 1 in 30-year storm event  
Protect 1,337 properties from external sewer flooding up to a 1 in 30-year storm event  
Protect 2,588 properties from sewer flooding up to a 1 in 50-year storm event  
If we don't invest, over 0.9 % of properties would be at risk in a storm up to a 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 22 sites

Upgrade 22 STWs by 2050



### Asset improvements

Reline 107km of sewers



### Reduce misconnections / Reduce surface water runoff

75 ha (equivalent to 5,000 properties) to be disconnected from our sewers and reconnected to a surface water sewer with attenuation or to a soakway

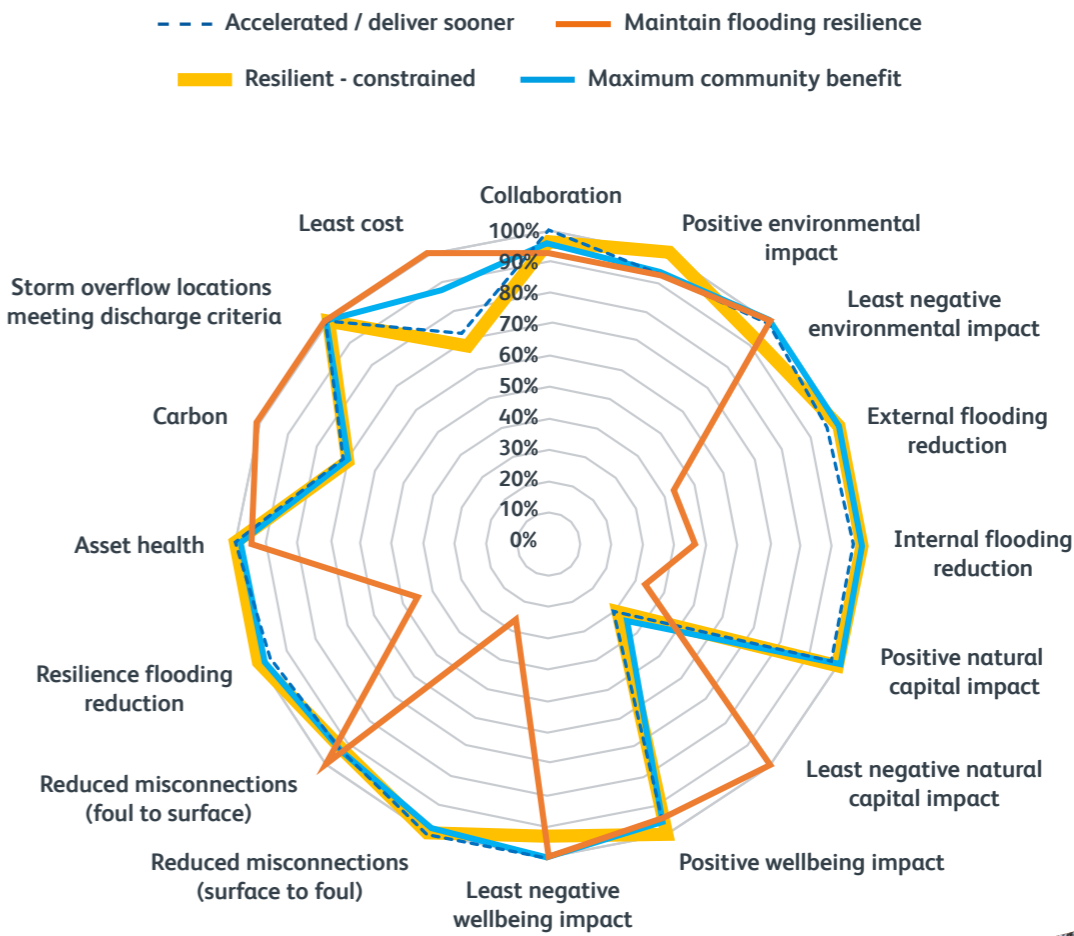


### Carbon

143,070 tonnes of carbon embodied in delivering the plan, with 52 tonnes of carbon sequestered in delivering the plan

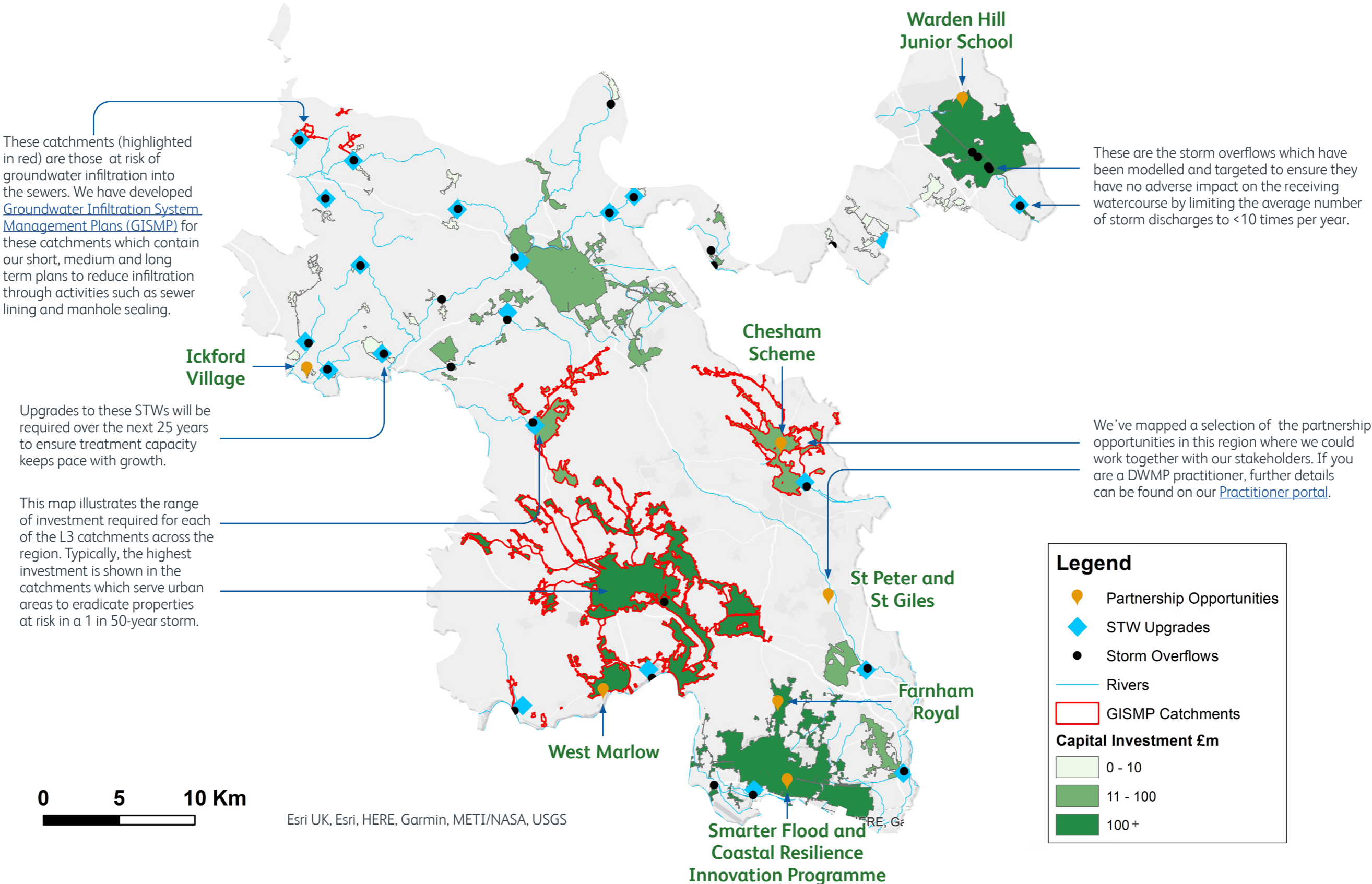
Our preferred plan (resilient - constrained) has been optimised to offer the best value solution to reduce sewer flooding, protect the environment, and enhance natural capital as shown in the relative performance of our preferred plan figure.

### Relative performance of our preferred plan



# Our preferred 25 year plan for

Central Bedfordshire, Buckinghamshire, Slough and Luton



# 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

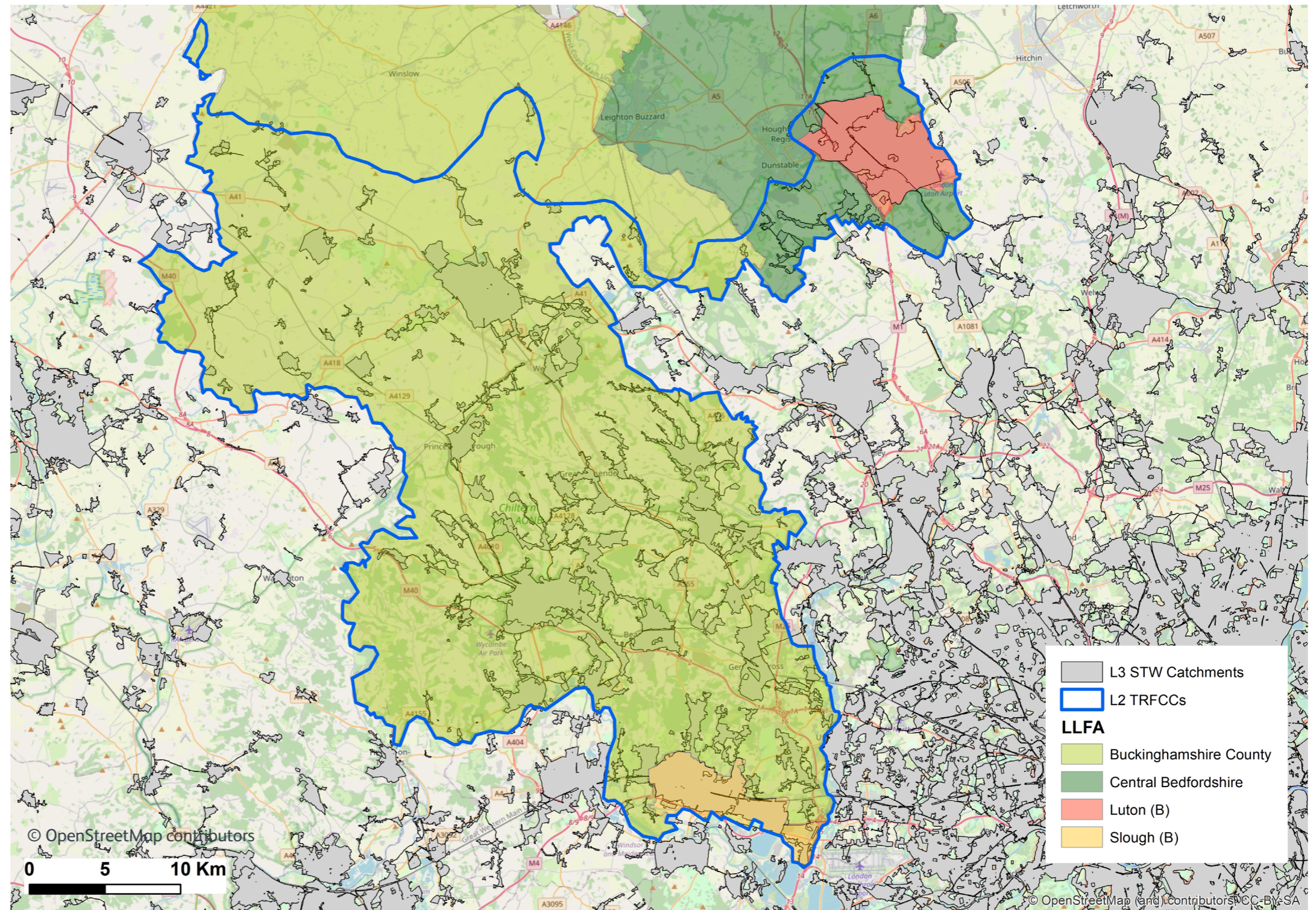
This DWMP is a 25-year rolling strategic plan. The first 5-years of the plan will be assessed through the price review process to confirm the funding to deliver the initial phase between 2025 and 2030.

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.



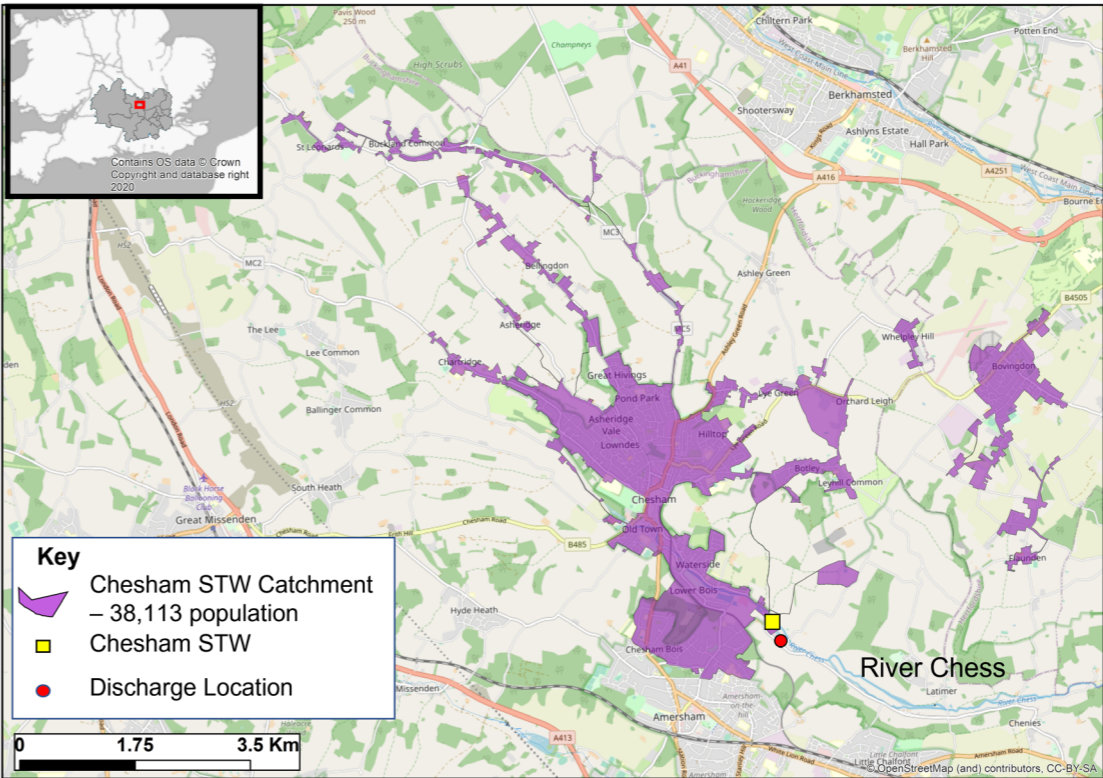
# Our shared plan at catchment level

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.



# Chesham STW Catchment

What are the challenges?	<ul style="list-style-type: none"><li>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 (2) at risk up to a 1 in 30-year storm in 2025 to 0.0 % of properties (4) at risk by 2050</li><li>Increased external hydraulic sewer flooding - from 0.1 % to 0.1 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.1 % of properties (10) at risk up to a 1 in 30-year storm in 2025 to 0.1 % of properties (20) at risk by 2050</li><li>Increased 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 (17) at risk up to a 1 in 50-year storm in 2025 to 0.2 % of properties (29) at risk by 2050</li><li>The only overflow in this area, at the STW, area discharged 116 times in 2021</li></ul>
Which of our solutions are best suited?	<ul style="list-style-type: none"><li>Sewer lining to target infiltration hotspots</li><li>Surface water management</li><li>Property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>Network improvements</li><li>Invest in our sewage treatment works to achieve 100 % compliance</li></ul>



<div><div>2025</div><div>2030</div><div>2035</div><div>2050</div></div>				
Timescale	<div>← Short term →</div> <div>← Medium Term →</div> <div>← Long Term →</div>			
What targets are we seeking?	<div>To:</div> <ul style="list-style-type: none"><li>• Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 %</li><li>• Reduce storm discharges (where overflows are present) to &lt;10 in an average year by 2050</li><li>• Achieve 100 % STW permit compliance</li></ul>			
How will we achieve the targets?	<div>We will:</div> <ul style="list-style-type: none"><li>• 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</li></ul>	<div>We will:</div> <ul style="list-style-type: none"><li>• 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</li><li>• Invest in our sewage treatment works to ensure compliance</li></ul>	<div>We will:</div> <ul style="list-style-type: none"><li>• Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works</li><li>• Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions</li><li>• Implement property level protection measures</li><li>• Provide sewer network improvements</li></ul>	

Chesham STW catchment spans two L2 strategic planning boundaries and the costs and benefits of the proposed solutions are allocated solely to the Hertfordshire catchment strategic plan.

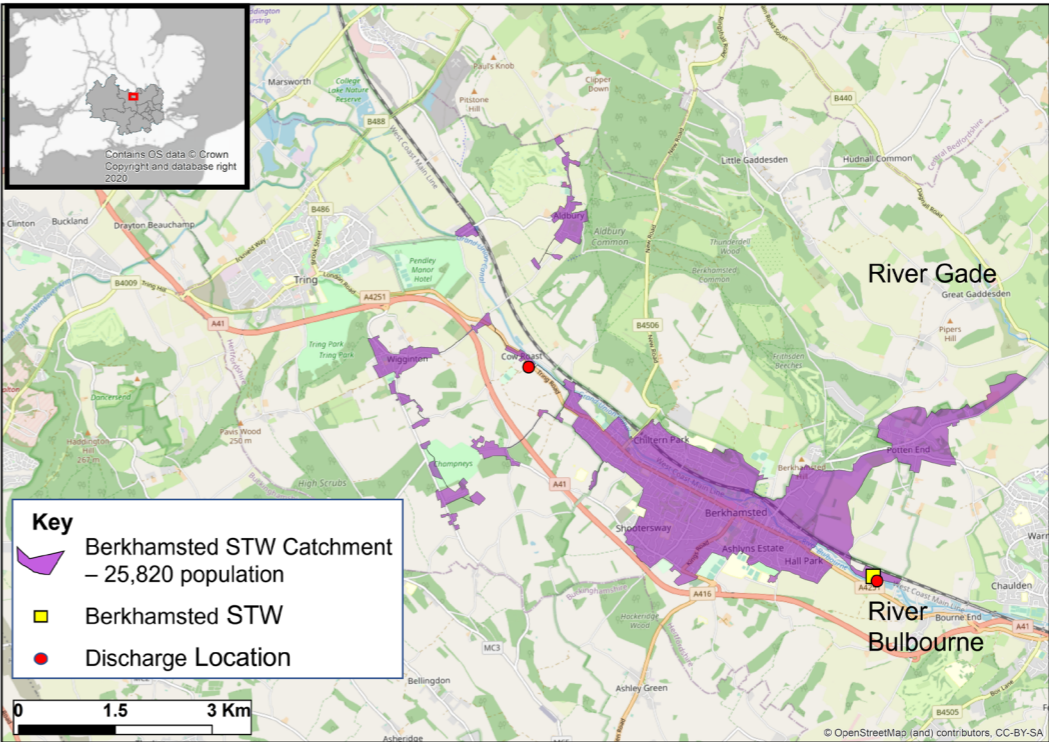
# Berkhamsted STW Catchment

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 (8) at risk up to a 1 in 30-year storm in 2025 to 0.1 % of properties (11) at risk by 2050
- Increased external hydraulic sewer flooding - from 0.1 % to 0.1 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.1 % of properties (13) at risk up to a 1 in 30-year storm in 2025 to 0.1 % of properties (17) at risk by 2050
- Increased hydraulic sewer flooding - from 0.2 % to 0.4 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.2 % of properties (28) at risk up to a 1 in 50-year storm in 2025 to 0.4 % of properties (41) at risk by 2050
- The only overflow in this area, at the STW, discharged 168 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

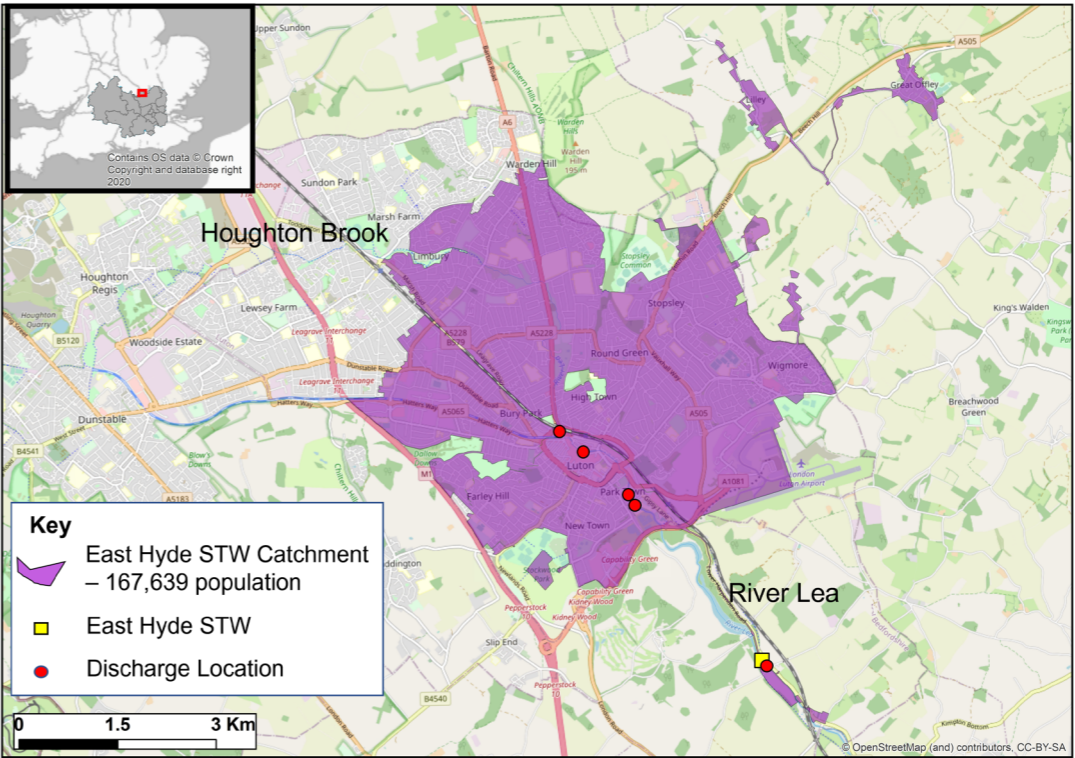


		2025			2030			2035			2050
Timescale		← Short term →		← Medium Term →		← Long Term →					
What targets are we seeking?		<p>To:</p> <ul style="list-style-type: none"><li>• Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 %</li><li>• Reduce storm discharges (where overflows are present) to &lt;10 in an average year by 2050</li><li>• Maintain 100 % STW permit compliance</li></ul>									
How will we achieve the targets?		<p>We will:</p> <ul style="list-style-type: none"><li>• 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</li><li>• Provide sewer network improvements to meet growth and climate change drivers</li></ul>				<p>We will:</p> <ul style="list-style-type: none"><li>• 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</li></ul>		<p>We will:</p> <ul style="list-style-type: none"><li>• Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works</li><li>• Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions</li><li>• Implement property level protection measures</li><li>• Continue to provide sewer network improvements</li></ul>			

Berkhamsted 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.

# East Hyde STW Catchment

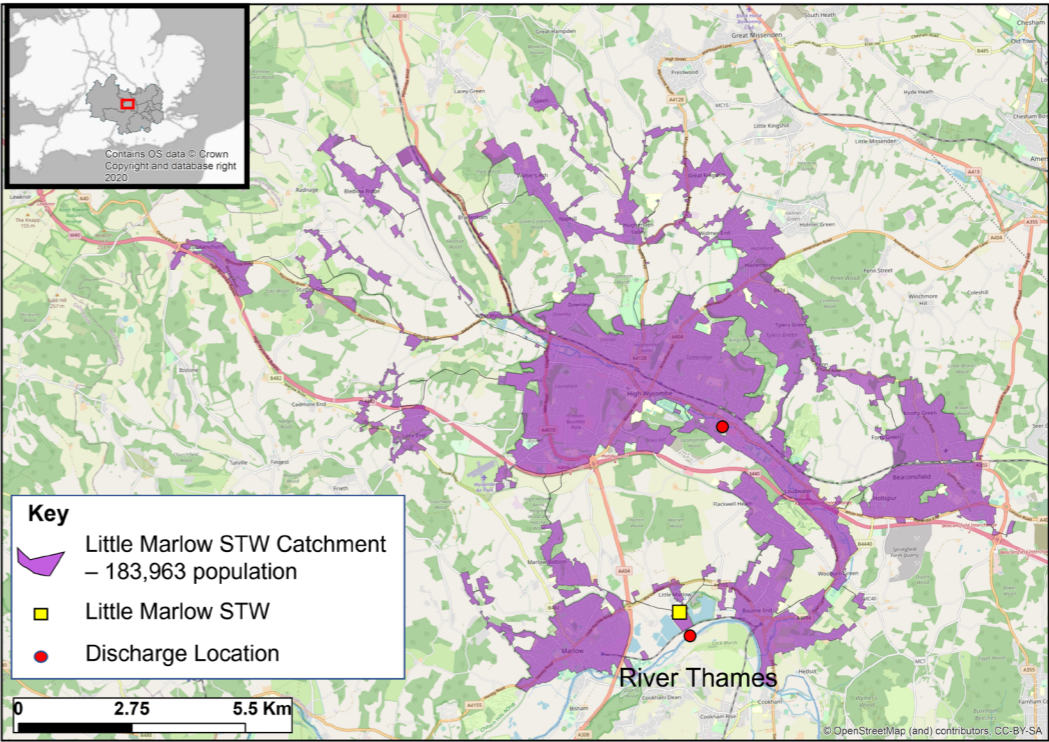
What are the challenges?	<ul style="list-style-type: none"><li>Increased internal hydraulic sewer flooding - from 0.0 % to 0.1 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.0 % of properties (29) at risk up to a 1 in 30-year storm in 2025 to 0.1 % of properties (46) at risk by 2050</li><li>Increased external hydraulic sewer flooding - from 0.1 % to 0.2 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.1 % of properties (70) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (110) at risk by 2050</li><li>Increased hydraulic sewer flooding - from 0.2 % to 0.4 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.2 % of properties (162) at risk up to a 1 in 50-year storm in 2025 to 0.4 % of properties (252) at risk by 2050</li><li>The five overflows in this area discharged 13 times in 2021</li></ul>
Which of our solutions are best suited?	<ul style="list-style-type: none"><li>Surface water management</li><li>Property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>Network improvements</li><li>Invest in our sewage treatment works to achieve 100 % compliance</li></ul>



Timescale	2025		2030		2035		2050	
	← Short term →		← Medium Term →		← Long Term →			
What targets are we seeking?	<p>To:</p> <ul style="list-style-type: none"><li>• Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 %</li><li>• Reduce storm discharges (where overflows are present) to &lt;10 in an average year by 2050</li><li>• Achieve 100 % STW permit compliance</li></ul>							
How will we achieve the targets?	<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• 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</li><li>• Provide sewer network improvements to meet growth and climate change drivers</li></ul>		<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• 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</li><li>• Continue to provide sewer network improvements to meet growth and climate change drivers</li><li>• Invest in our sewage treatment works to ensure compliance</li></ul>		<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions</li><li>• Implement property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>• Continue to provide sewer network improvements to meet growth and climate change drivers</li></ul>			

# Little Marlow STW Catchment

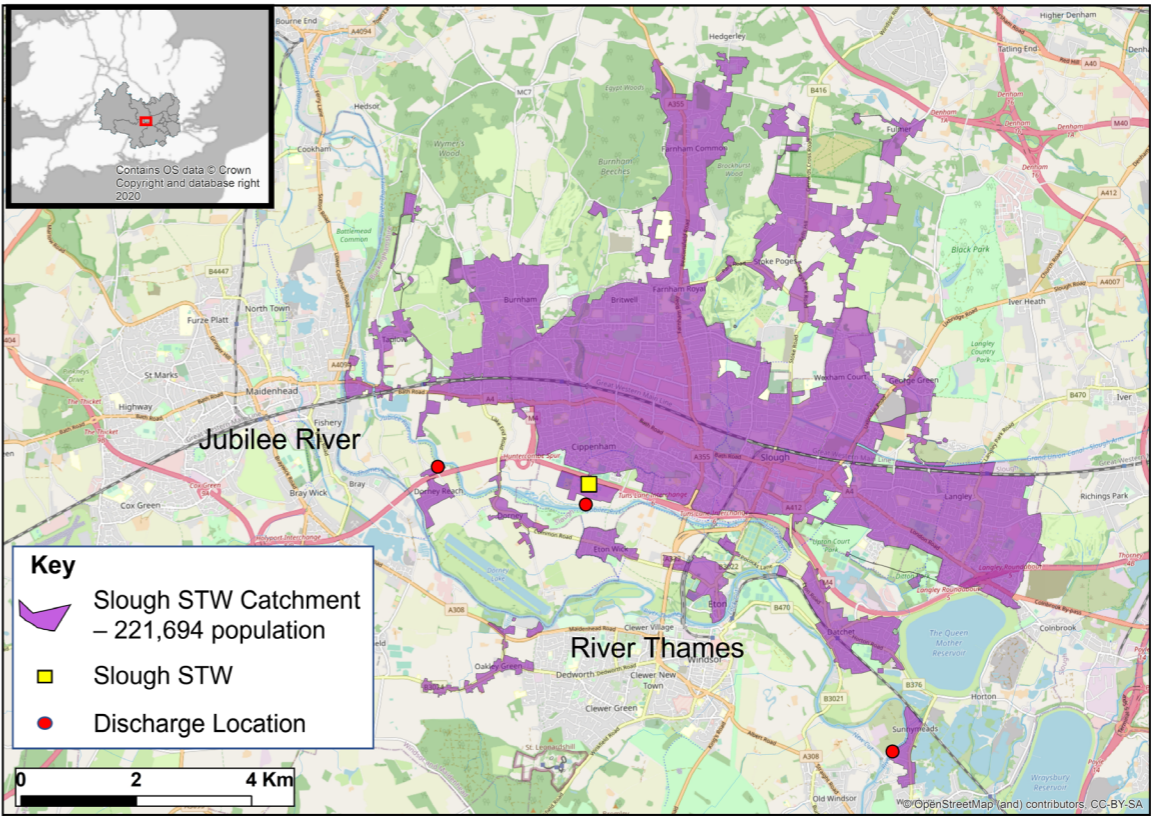
What are the challenges?	<ul style="list-style-type: none"><li>Increased internal hydraulic sewer flooding - from 0.2 % to 0.3 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.2 % of properties (146) at risk up to a 1 in 30-year storm in 2025 to 0.3 % of properties (212) at risk by 2050</li><li>Increased external hydraulic sewer flooding - from 0.4 % to 0.6 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.4 % of properties (343) at risk up to a 1 in 30-year storm in 2025 to 0.6 % of properties (510) at risk by 2050</li><li>Increased hydraulic sewer flooding - from 0.8 % to 1.2 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.8 % of properties (643) at risk up to a 1 in 50-year storm in 2025 to 1.2 % of properties (970) at risk by 2050</li><li>The two overflows in this area discharged 27 times in 2021</li></ul>
Which of our solutions are best suited?	<ul style="list-style-type: none"><li>Sewer lining to target infiltration hotspots</li><li>Surface water management</li><li>Property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>Network improvements</li><li>Invest in our sewage treatment works to achieve 100 % compliance</li></ul>



<div><div>2025</div><div>2030</div><div>2035</div><div>2050</div></div>				
Timescale	<div><div>←</div>Short term<div>→</div></div> <div><div>←</div>Medium Term<div>→</div></div> <div><div>←</div>Long Term<div>→</div></div>			
What targets are we seeking?	<div>To:</div> <ul style="list-style-type: none"><li>• Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 %</li><li>• Reduce storm discharges (where overflows are present) to &lt;10 in an average year by 2050</li><li>• Achieve 100 % STW permit compliance</li></ul>			
How will we achieve the targets?	<div>We will:</div> <ul style="list-style-type: none"><li>• 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</li><li>• Provide sewer network improvements to meet growth and climate change drivers</li></ul>	<div>We will:</div> <ul style="list-style-type: none"><li>• 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</li><li>• Continue to provide sewer network improvements to meet growth and climate change drivers</li><li>• Invest in our sewage treatment works to ensure compliance</li></ul>	<div>We will:</div> <ul style="list-style-type: none"><li>• Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works</li><li>• Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions</li><li>• Implement property level protection measures</li><li>• Continue to provide sewer network improvements</li></ul>	

# Slough STW Catchment

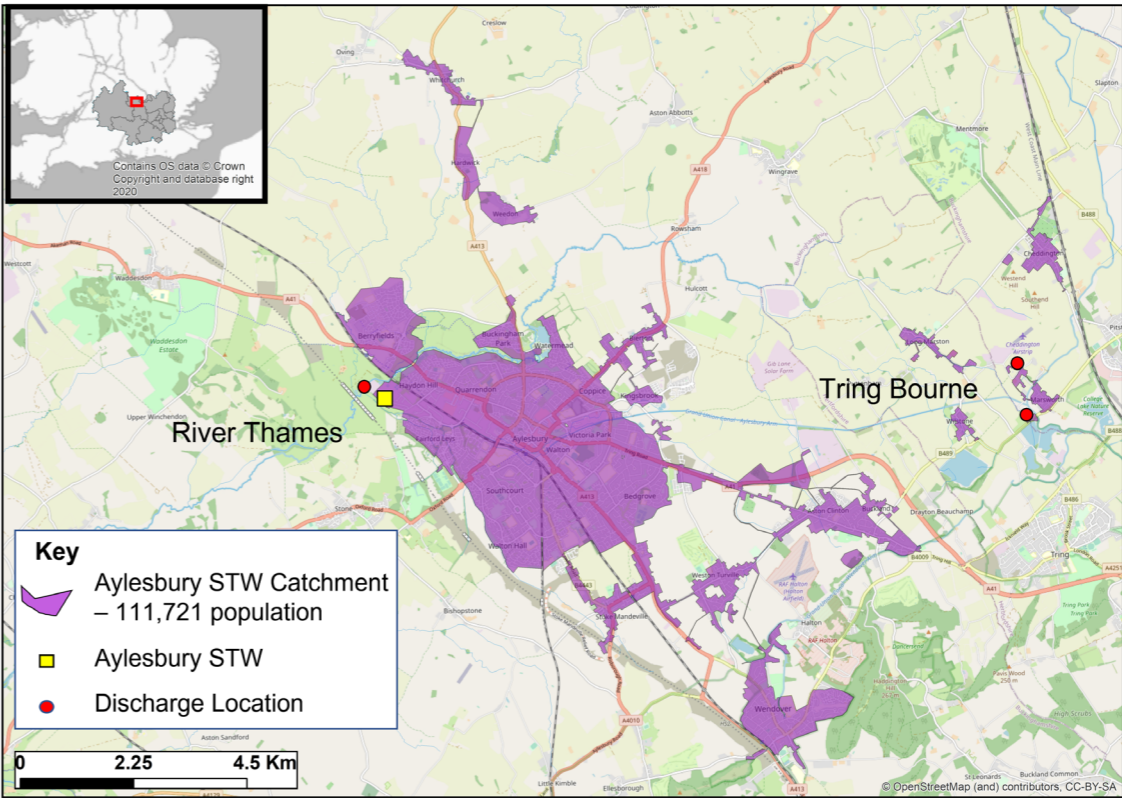
What are the challenges?	<ul style="list-style-type: none"><li>Increased internal hydraulic sewer flooding - from 0.1 % to 0.2 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (50) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (135) at risk by 2050</li><li>Increased external hydraulic sewer flooding - from 0.2 % to 0.5 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.2 % of properties (150) at risk up to a 1 in 30-year storm in 2025 to 0.5 % of properties (397) at risk by 2050</li><li>Increased hydraulic sewer flooding - from 0.4 % to 1.0 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.4 % of properties (284) at risk up to a 1 in 50-year storm in 2025 to 1.0 % of properties (739) at risk by 2050</li><li>The three overflows in this area discharged 89 times in 2021</li></ul>
Which of our solutions are best suited?	<ul style="list-style-type: none"><li>Surface water management</li><li>Property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>Network improvements</li><li>Invest in our sewage treatment works to achieve 100 % compliance</li></ul>



	2025	2030	2035	2050	
Timescale	← Short term →		← Medium Term →		← Long Term →
What targets are we seeking?	<p>To:</p> <ul style="list-style-type: none"><li>• Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 %</li><li>• Reduce storm discharges (where overflows are present) to &lt;10 in an average year by 2050</li><li>• Achieve 100 % STW permit compliance</li></ul>				
How will we achieve the targets?	<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• 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</li><li>• Provide sewer network improvements to meet growth and climate change drivers</li><li>• Invest in our sewage treatment works to ensure compliance</li></ul>		<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• 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</li><li>• Continue to provide sewer network improvements to meet growth and climate change drivers</li><li>• Continue to invest in our sewage treatment works to ensure compliance</li></ul>		<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions</li><li>• Implement property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>• Continue to provide sewer network improvements to meet growth and climate change drivers</li></ul>

# Aylesbury STW Catchment

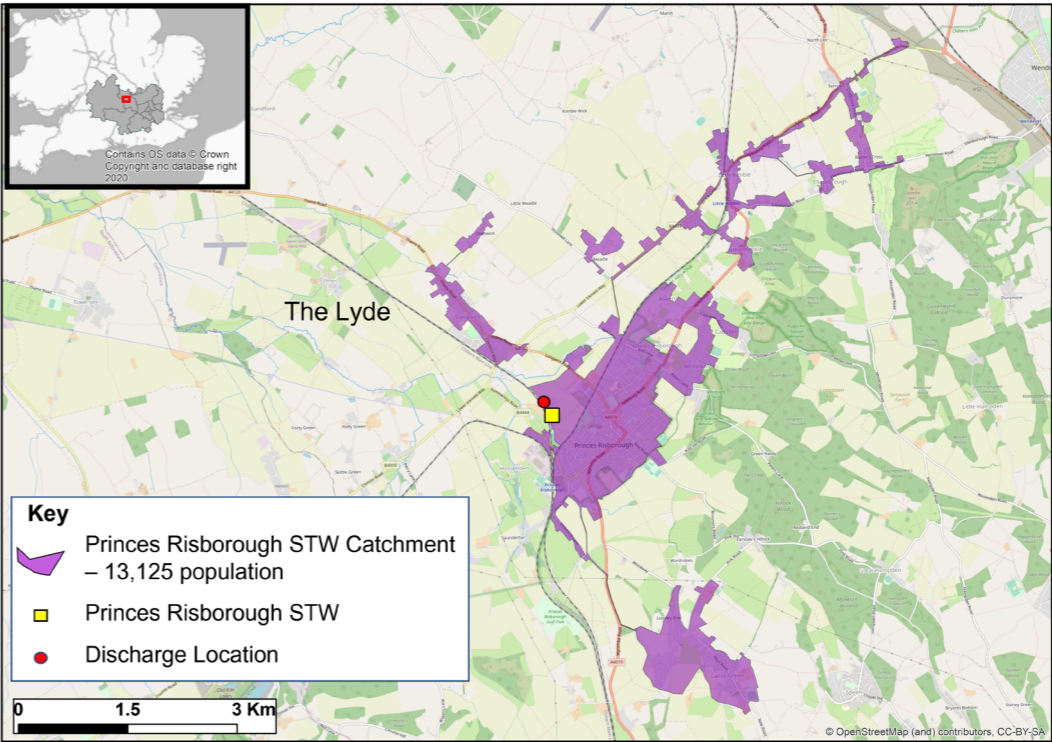
What are the challenges?	<ul style="list-style-type: none"><li>Increased internal hydraulic sewer flooding - from 0.1 % to 0.1 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 0.1 % of properties (26) at risk up to a 1 in 30-year storm in 2025 to 0.1 % of properties (58) at risk by 2050</li><li>Increased external hydraulic sewer flooding - from 0.2 % to 0.2 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.2 % of properties (81) at risk up to a 1 in 30-year storm in 2025 to 0.2 % of properties (120) at risk by 2050</li><li>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 (149) at risk up to a 1 in 50-year storm in 2025 to 0.5 % of properties (249) at risk by 2050</li><li>The three overflows in this area discharged 28 times in 2021</li></ul>
Which of our solutions are best suited?	<ul style="list-style-type: none"><li>Surface water management</li><li>Property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>Network improvements</li><li>Invest in our sewage treatment works to achieve 100 % compliance</li></ul>



		2025	2030	2035	2050
Timescale	<div><div>← Short term →</div><div>← Medium Term →</div><div>← Long Term →</div></div>				
What targets are we seeking?	<div>To:</div> <ul style="list-style-type: none"><li>• Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 %</li><li>• Reduce storm discharges (where overflows are present) to &lt;10 in an average year by 2050</li><li>• Achieve 100 % STW permit compliance</li></ul>				
How will we achieve the targets?	<div>We will:</div> <ul style="list-style-type: none"><li>• 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</li><li>• Provide sewer network improvements to meet growth and climate change drivers</li><li>• Invest in our sewage treatment works to ensure compliance</li></ul>	<div>We will:</div> <ul style="list-style-type: none"><li>• Further develop our catchment-level planning 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</li><li>• Continue to invest in our sewage treatment works to ensure compliance</li></ul>	<div>We will:</div> <ul style="list-style-type: none"><li>• Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions</li><li>• Implement property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>• Continue to provide sewer network improvements to meet growth and climate change drivers</li></ul>		

# Princes Risborough STW Catchment

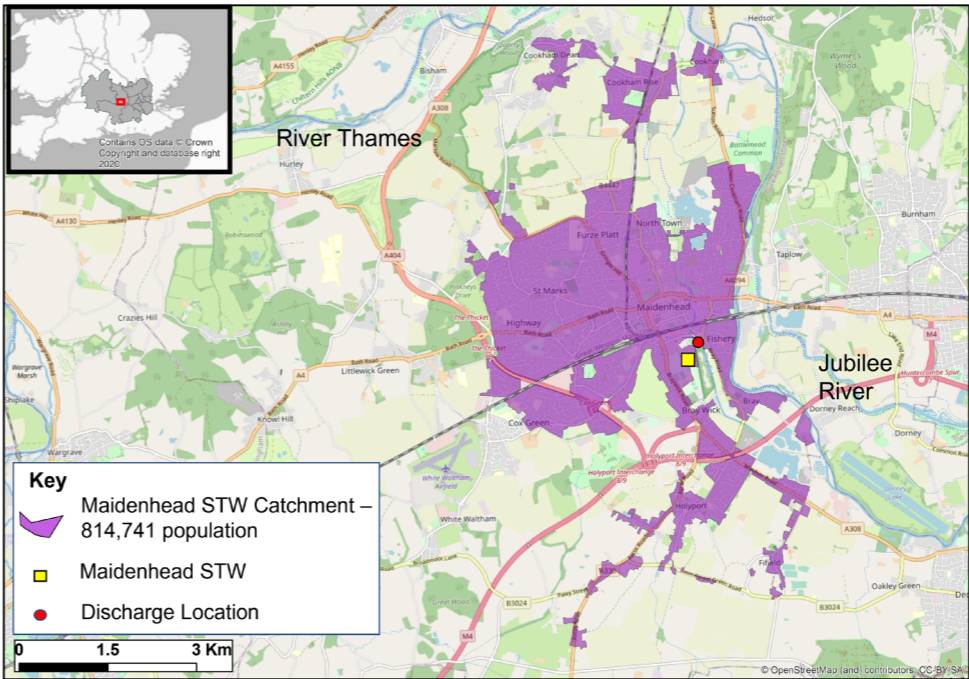
What are the challenges?	<ul style="list-style-type: none"><li>Increased external hydraulic sewer flooding - from 0.9 % to 1.8 % of properties: Calculated as increased modelled risk of external hydraulic sewer flooding from 0.9 % of properties (53) at risk up to a 1 in 30-year storm in 2025 to 1.8 % of properties (106) at risk by 2050</li><li>Increased hydraulic sewer flooding - from 1.2 % to 3.7 % of properties: Calculated as increased modelled risk of internal hydraulic sewer flooding from 1.2 % of properties (74) at risk up to a 1 in 50-year storm in 2025 to 3.7 % of properties (222) at risk by 2050</li><li>The only overflow in this, at the STW, area discharged 93 times in 2021</li></ul>
Which of our solutions are best suited?	<ul style="list-style-type: none"><li>Sewer lining to target infiltration hotspots</li><li>Surface water management</li><li>Property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>Network improvements</li><li>Invest in our sewage treatment works to achieve 100 % compliance</li></ul>



Timescale	2025		2030		2035		2050	
	← Short term →		← Medium Term →		← Long Term →			
What targets are we seeking?	<p>To:</p> <ul style="list-style-type: none"><li>• Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 %</li><li>• Reduce storm discharges (where overflows are present) to &lt;10 in an average year by 2050</li><li>• Achieve 100 % STW permit compliance</li></ul>							
How will we achieve the targets?	<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• 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</li><li>• Provide sewer network improvements to meet growth and climate change drivers</li><li>• Invest in our sewage treatment works to ensure compliance</li></ul>			<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works</li><li>• Further develop our catchment-level planning and implement local surface water management solutions 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</li><li>• Continue to provide sewer network improvements</li><li>• Continue to invest in our sewage treatment works to ensure compliance</li></ul>			<p><b>We will:</b></p> <ul style="list-style-type: none"><li>• Continue to provide sewer network improvements to meet growth and climate change drivers</li><li>• Implement property level protection measures to prevent individual buildings from hydraulic sewer flooding</li></ul>	

# Maidenhead STW Catchment

What are the challenges?	<ul style="list-style-type: none"><li>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</li><li>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</li><li>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 1x in 50-year storm in 2025 to 0.6 % of properties (199) at risk by 2050</li><li>The only overflow in this area, at the STW, discharged 2 times in 2021</li></ul>
Which of our solutions are best suited?	<ul style="list-style-type: none"><li>Sewer lining to target infiltration hotspots</li><li>Surface water management</li><li>Property level protection measures to prevent individual buildings from hydraulic sewer flooding</li><li>Network improvements</li><li>Invest in our sewage treatment works to achieve 100 % compliance</li></ul>



	2025	2030	2035	2050
Timescale	← Short term → Medium Term → Long Term →			
What targets are we seeking?	To: <ul style="list-style-type: none"><li>Reduce the number of customers at risk of internal and external hydraulic sewer flooding up to a 1 in 50-year storm by 100 %</li><li>Reduce storm discharges (where overflows are present) to &lt;10 in an average year by 2050</li><li>Achieve 100 % STW permit compliance</li></ul>			
How will we achieve the targets?	<div>We will:<ul style="list-style-type: none"><li>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</li><li>Provide sewer network improvements to meet growth and climate change drivers</li></ul></div> <div>We will:<ul style="list-style-type: none"><li>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</li><li>Continue to provide sewer network improvements to meet growth and climate change drivers</li><li>Invest in our sewage treatment works to ensure compliance</li></ul></div> <div>We will:<ul style="list-style-type: none"><li>Improve the resilience of our sewers at greatest risk of groundwater inflows by undertaking sewer lining works</li><li>Reduce the risk of hydraulic sewer flooding by removing surface water from our foul sewer systems through the implementation of surface water management solutions</li><li>Implement property level protection measures</li><li>Continue to provide sewer network improvements</li></ul></div>			

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.

# L3 STW catchment summary table

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 in 2021	Internal flooding (2050)	External flooding (2050)	Resilience flooding (2050)	Number of monitored 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 (£)
AYLESBURY STW	26 (0.1%)	81 (0.2%)	149 (0.3%)	3	28	58 (0.1%)	120 (0.2%)	249 (0.5%)	3	30	0	0	0	<=10	CP, NI, STW	CP, STW	IPP, NI, SWM	Medium
CADDINGTON STW	2 (0.1%)	4 (0.2%)	6 (0.2%)	1	8	2 (0.1%)	7 (0.3%)	10 (0.4%)	1	0	0	0	0	<=10	CP, STW	CP	NI, STW, SWM	Low
CHESHAM STW	2 (0%)	10 (0.1%)	17 (0.1%)	1	116	4 (0%)	20 (0.1%)	29 (0.2%)	1	2	0	0	0	<=10	CP	CP, STW	IPP, NI, SL, SWM	Medium
CHILTON STW	1 (1.1%)	0 (0%)	1 (1.1%)	N/A	N/A	1 (1.1%)	0 (0%)	1 (1.1%)	N/A	N/A	0	0	0	N/A	CP	CP, IPP		Low
CUDDINGTON STW	N/A	N/A	N/A	1	90	N/A	N/A	N/A	1	13	N/A	N/A	N/A	<=10	CP, NI, SL, SWM	CP	NI	Low
DAGNALL STW	N/A	N/A	N/A	1	52	N/A	N/A	N/A	1	103	N/A	N/A	N/A	<=10	CP, NI	CP		Low
DORTON STW	0 (0%)	1 (1.6%)	1 (1.6%)	1	30	0 (0%)	1 (1.6%)	1 (1.6%)	1	0	0	0	0	<=10	CP	CP, STW	NI, SWM	Low
EAST HYDE STW	29 (0%)	70 (0.1%)	162 (0.2%)	5	13	46 (0.1%)	110 (0.2%)	252 (0.4%)	35	1011	0	0	0	<=10	CP, NI	CP, NI, STW	IPP, NI, SWM	High
GERRARDS CROSS STW	7 (0.2%)	9 (0.2%)	20 (0.6%)	1	76	8 (0.2%)	17 (0.5%)	37 (1%)	2	33	0	0	0	<=10	CP, SL, SWM	CP, NI, STW	NI	Medium
GRENDON UNDERWOOD STW	1 (0.2%)	9 (1.9%)	14 (3%)	1	70	1 (0.2%)	9 (1.9%)	56 (11.9%)	1	50	0	0	0	<=10	CP, NI, SL, SWM	CP, NI	NI, STW	Low
HADDENHAM STW	2 (0.1%)	4 (0.1%)	6 (0.2%)	1	60	2 (0.1%)	6 (0.2%)	9 (0.3%)	1	67	0	0	0	<=10	CP	CP	IPP, NI, SWM	Medium
HAMBLEDEN STW	4 (1.4%)	16 (5.7%)	26 (9.3%)	1	2	5 (1.8%)	21 (7.5%)	30 (10.7%)	1	0	0	0	0	<=10	CP, NI, STW	CP, SL	NI	Low
IVER (NORTH) STW	3 (0.1%)	5 (0.1%)	8 (0.2%)	1	11	3 (0.1%)	6 (0.2%)	12 (0.3%)	1	0	0	0	0	<=10	CP	CP, STW	IPP, NI, STW, SWM	Medium
LITTLE MARLOW STW	146 (0.2%)	343 (0.4%)	643 (0.8%)	2	27	212 (0.3%)	510 (0.6%)	970 (1.2%)	3	31	0	0	0	<=10	CP, NI	CP, NI, STW	IPP, NI, SL, SWM	High

	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 in 2021	Internal flooding (2050)	External flooding (2050)	Resilience flooding (2050)	Number of monitored 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 (£)
LONG CRENDON STW	1 (0.1%)	2 (0.2%)	2 (0.2%)	1	4	1 (0.1%)	2 (0.2%)	3 (0.3%)	1	51	0	0	0	<=10	CP	CP, STW	IPP, NI, STW, SWM	Low
LUDGERSHALL STW	0 (0%)	1 (0.6%)	1 (0.6%)	1	29	0 (0%)	1 (0.6%)	1 (0.6%)	1	92	0	0	0	<=10	CP	CP, NI, STW, SWM	NI, SWM	Low
MARSH GIBBON STW	1 (0.2%)	11 (1.8%)	16 (2.6%)	1	87	1 (0.2%)	14 (2.3%)	30 (4.8%)	1	13	0	0	0	<=10	CP, NI, SL, SWM	CP, NI	NI, STW	Low
PRINCES RISBOROUGH STW	0 (0%)	53 (0.9%)	74 (1.2%)	1	93	0 (0%)	106 (1.8%)	222 (3.7%)	1	0	0	0	0	<=10	CP, NI, STW	CP, NI, SL, STW, SWM	IPP, NI	Medium
ROWSHAM STW	0 (0%)	0 (0%)	0 (0%)	1	14	0 (0%)	0 (0%)	0 (0%)	1	16	0	0	0	<=10	CP	CP, STW	NI	Low
SHABBINGTON STW	1 (0.5%)	2 (1%)	2 (1%)	1	24	1 (0.5%)	2 (1%)	2 (1%)	1	66	0	0	0	<=10	CP	CP, STW	IPP, NI, SWM	Low
SLOUGH STW	50 (0.1%)	150 (0.2%)	284 (0.4%)	3	89	135 (0.2%)	397 (0.5%)	739 (1%)	4	115	0	0	0	<=10	CP, NI, STW	CP, NI, STW	IPP, NI, SWM	High
STEWKLEY STW	N/A	N/A	N/A	1	122	N/A	N/A	N/A	1	8	N/A	N/A	N/A	<=10	CP, SL, SWM	CP		Low
STONE STW	1 (0.1%)	6 (0.4%)	10 (0.7%)	1	127	2 (0.1%)	7 (0.5%)	12 (0.9%)	1	33	0	0	0	<=10	CP, NI, SL, SWM	CP	NI, STW	Medium
STUDHAM STW	1 (0.1%)	1 (0.1%)	1 (0.1%)	N/A	N/A	1 (0.1%)	1 (0.1%)	1 (0.1%)	N/A	N/A	0	0	0	N/A	CP	CP	STW	Low
WADDESDON STW	2 (0.2%)	3 (0.2%)	6 (0.5%)	1	109	2 (0.2%)	5 (0.4%)	10 (0.8%)	2	31	0	0	0	<=10	CP, SL, SWM	CP, NI, STW	NI	Low
WINGRAVE STW	2 (0.3%)	4 (0.7%)	6 (1%)	1	72	2 (0.3%)	4 (0.7%)	6 (1%)	1	20	0	0	0	<=10	CP, NI, SL, SWM	CP	IPP, NI, STW	Low
WORMINGHALL STW	1 (0.1%)	8 (0.6%)	13 (0.9%)	1	42	2 (0.1%)	8 (0.6%)	15 (1.1%)	1	3	0	0	0	<=10	CP	CP, NI	NI, STW, SWM	Low

**CP** = Catchment-level  
planning including  
mapping and modelling

**SWM** = Surface  
water management

**NI** = Network  
improvements

**SL** = Sewer lining

**STW** = Treatment process  
technologies and protection  
from high river levels

**IPP** = Individual  
property level protection

# 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																			
New technical appendices x9	Appendix M - Assurance																			
	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																			
Environmental assessments	Appendix V – Customer engagement Part B – Consultation Survey Report																			
	Appendix K - Strategic environmental assessment (SEA)																			
Portals and data	Appendix L - Habitats regulations assessment (HRA)																			
	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](mailto: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](#).