# DWMP Consultation Document

2022

# Welcome to our consultation

Our Drainage and Wastewater Management plan (DWMP) sets out how wastewater systems, and the drainage networks that serve them, are to be extended, improved and maintained to ensure they are robust and resilient to future pressures.

The aims of our plan are to:
1. protect our environment
2. improve the health of our rivers
3. increase resilience to the risks of flooding
4. generate wider benefits for the communities we serve

The DWMP identifies the wastewater catchments most at risk due to future pressures. For those catchments, DWMP delivers a strategic-level costed investment plan to tackle the key challenges of growth and climate change over a 25-year time horizon

Please access our draft plans at thameswater.co.uk/dwmp and use this consultation form to submit your views. Responding to these questions will help us to understand your views and shape our plan for the future.

Thank you for your time.

This form contains 9 sections, each containing 2-3 questions

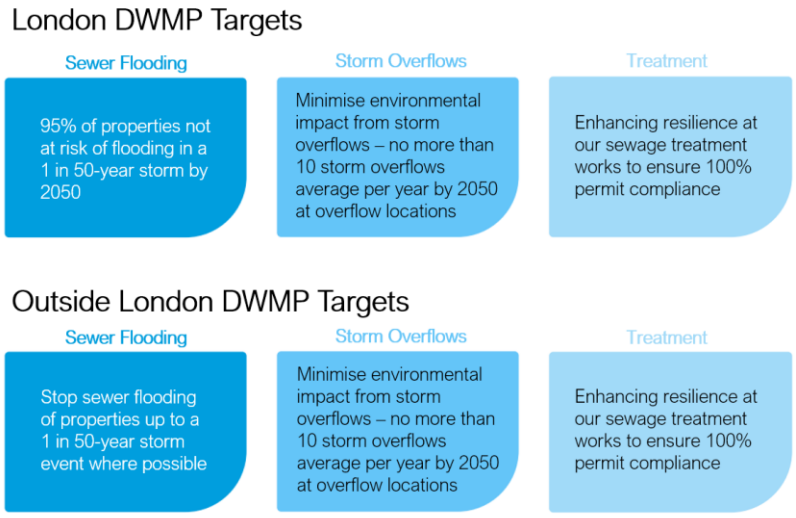
# Planning Objectives

Through collaboration with stakeholders, we set 12 planning objectives for our shared DWMP (6 common to all water companies and 6 local to our region (bespoke). These focused on tackling storm overflows (spills), property flooding and achieving wider community benefits:

- Common objectives: Risk of sewer flooding in a 1 in 50 year storm*, storm overflow performance, sewage works compliance, collapses, internal sewer flooding and pollution incidents.
- Bespoke objectives: Wellbeing, carbon neutrality, reducing misconnections, reduced surface water runoff, external sewer flooding and dry weather compliance.

We set challenging targets for these planning objectives. For example, virtually eliminating sewer flooding risk in a 1 in 50 storm* as well as achieving no more than 10 storm overflows annually at storm overflow locations to minimise environmental impact**. This is driving unprecedented levels of expenditure.

We have three key DWMP targets for London & Outside London/Thames Valley to achieve the planning objectives. These can be found in the image below. The flooding targets for London are different to our Thames Valley region, reflecting the different scale of challenge in the capital city compared to less urban communities. For storm overflows we have modelled the impact of different spill scenarios on investment, see Section 7 of our Programme Appraisal Technical Appendix.




*1 in 50 storm - The risk of sewer flooding in a 1 in 50-year storm is defined as the likelihood that flooding will occur as a result of rainfall in a storm that has a 1 in 50 (or 2%) probability of happening in any given year
**Storm overflow rate - this aligns to latest Defra Consultation on Storm Overflows

Planning objectives see Strategic Context document. https://bit.ly/3HYSujq
Targets see Technical Summary. https://bit.ly/3QWXPMb
More detail see our Draft Plan. https://bit.ly/3ucIRYN

1. Do you think these targets are too ambitious or not ambitious enough for a 25-year plan?

The proposed storm overflow target for the 'outside London' area, which includes South Oxfordshire and Vale of White of Horse, is not ambitious enough.

Whilst the proposed target aligns with the Defra consultation on storm overflows (31 March - 12 May 2022) and the government's subsequent Storm Overflows Discharge Reduction Plan (published 26 August 2022), South Oxfordshire and Vale of White of Horse District Councils both submitted responses to the Defra consultation stating that storm overflow targets should be more ambitious, reflecting the level of harm caused by storm overflows and the fact that storm overflow discharges are only legally permitted in exceptional circumstances. These consultation responses can be viewed on South Oxfordshire District Council's website and Vale of White Horse District Council's website.

The DWMP Non-Technical Summary (page 3) states "*any discharge of untreated sewage into the environment is completely unacceptable"*. We strongly agree that the discharge of untreated sewage is completely unacceptable. Targets to address storm overflows should therefore be much stronger, clearer and more ambitious in order to address this issue as soon as possible.

A target that allows up to 10 storm overflows average per year at overflow locations suggests that it is acceptable to allow hundreds, if not thousands, of untreated sewage releases to occur each year. In addition, no consideration is given to the volume or duration of these releases. This is not acceptable, particularly when it is possible for even one occurrence to have significant environmental impacts.

2. If not, what targets would you like to see in the final plan/our next DWMP?

The aim of the plan should be to prevent all storm overflows from occurring by 2050, if not sooner, with a reducing average of overflows per year over the course of the plan supported by interim/phased targets to ensure this issue is addressed as soon as possible. There needs to be a method of measuring and publicly reporting performance against targets at least every 3 years to assess where Thames Water is in relation to this, with penalties if interim targets are not achieved.

There should be also a target linked to funding spend. Budgets should be published with actual spend each year relative to each target, with some brief information on projects spend has been on and the county / local authority area.

Reassurance should be provided that the fitting and ongoing maintenance of flow meters to accurately monitor releases at all storm overflow locations will be prioritised.

Targets for storm overflows should take appropriate account of flow duration and volume in order to minimise environmental harm.

The councils are also concerned that the use of an average figure could hide where storm overflows are discharging more frequently. This could allow some areas to suffer disproportionately high levels of harm. Consideration should be given to developing specific sub-targets for individual storm overflows to increase transparency.

# Solutions

We propose a set of solutions to help overcome a series of long-term challenges for both London and outside London. These include:

- SuDS - Sustainable Drainage Systems - Uses 'green infrastructure' to divert rainwater and surface water away from wastewater drains
- Network enhancements - Increase the capacity of the current sewer systems in order to hold and transport more wastewater
- Sewer lining - Sewer lining to prevent extra water getting into our sewers and overloading them
- Sewer upsizing - Increase network capacity by installing larger sewers
- Separation - New pipes are built underground and the existing combined sewer system is separated.
- Misconnections - Sometimes pipes for rainwater are incorrectly connected to pipes containing sewage. This uses up capacity, and these misconnections should be corrected.
- Sewage treatment works upgrades - Build additional or larger treatment processes on an existing wastewater treatment works to increase capacity so that additional wastewater from population growth can be treated.
- Property mitigation - Properties that are at risk of sewer flooding during storms are provided with temporary measures such as flood gates that can be fitted during heavy rainfall
- SMART networks - Use technology more to increase automation of the current system and actively control the wastewater flowing through the network

For more information see the Draft Plan https://bit.ly/3ucIRYN and the ODA Appendix https://bit.ly/3nIRJC5

3. Do you have any comments on the main solutions set out in the draft plan?

The main solutions are considered appropriate and greater investment in the network, particularly in green solutions are welcome.

There is however a lack of transparency on what solutions will be implemented and by when to tackle growth related improvements required to reinforce Thames Water's network and this needs to be addressed.

Thames Water should provide better information on plans and programmes, particularly during planning consultations to allow planners to be confident that the network will be suitably reinforced to meet the needs of the associated local area.

Temporary property protection measures should only be used where no feasible permanent solution can be identified or during a temporary period before a permanent solution can be delivered.

SUDS should also be installed by Thames Water to increase the network capacity of surface water networks. Whilst the aim to use SUDS to divert surface water away from wastewater drains is welcomed, SUDS could also be used in some instances rather than simply installing larger sewers. There should perhaps be a focus by Thames Water on using a SUDS type hierarchy when planning schemes to see whether there is a better way of building with greater benefits rather than simply relying on more traditional piped solutions. Greater engagement with partners on Thames Water led schemes may therefore be of benefit.

Thames Water's position on the new Sewer Sector Guidance is a potential hindrance to improvements on this front, particularly with regard to retrofitting of SUDS as schemes are potentially limited in scope where a third party is required to take on the SUDS asset. We would encourage Thames Water to work with OFWAT to find a solution to this, which has the potential to unlock more sustainable options.

There should be greater recognition of pollution caused by pumping station breakdowns. Thames Water should invest in the ongoing monitoring and maintenance of pumping stations.

More should be done to address misconnections. This should include consideration of foul to surface water misconnections. More could be done to proactively identify misconnections, as well educating and/or providing more information to householders and developers to avoid misconnections taking place.

It is important that all solutions take appropriate account of the expected impacts of climate change, to 2050 and beyond.

4. Please tell us about any alternative solutions that you feel should also be considered

There should also be investment in inspection and maintenance as this is one of the areas where Thames Water could probably improve performance.

As Local Authorities, we have had numerous examples where flooding from Thames Water apparatus is not investigated properly from the outset. A typical response would be to direct customers to the local authority, particularly where Thames Water assets are not shown on records. For these instances there should be more of an assumption that sewers serving more than one property are likely to be Thames Water's given the transfer of sewers happened several years ago and in some cases some rather basic investigation on site will identify linkage and therefore ownership.

A further poor practice is the reliance on lift and check surveys. These types of surveys are typically undertaken by Thames Water after a flood event and only check manholes and do not check the condition of the linking sewers. Pipe blockages, root ingress and pipe damage are all often missed resulting in the risk that follow on storms could cause damage and / or further issues for residents. Early inspection with the right equipment would enable the root cause, which is often sewer related rather than manhole related to be tackled.

Where surface water sewers cross or run adjacent to open space, Thames Water should seek opportunities to remove below ground pipework and convey surface water through above ground channels. We also encourage Thames Water to return any culverts under their ownership to open watercourses.

Stronger alignment between the DWMP and water resource management planning could deliver benefits for both elements of Thames Water's work. For example, investment in/greater incentives for greywater recycling schemes could reduce pressure on both water resources and wastewater infrastructure. These opportunities should be explored.

# Partnership Solutions

The interactive workshops sessions with our stakeholders, during DWMP development, has resulted in the identification of 105 potential partnership opportunities. These are all at different localities across the region and require further investigation.

As the DWMP is in its first cycle, the focus has been on the development of a portfolio of potential partnership opportunities. Although we have not secured funding for partnership schemes at this stage, the scale of the opportunity demonstrates that partnership solutions are going to play a key role in balancing ambition, delivery, and affordability in the future.

For more information on how we went about identifying partnership solutions please read the Stakeholder Engagement Technical Appendix https://bit.ly/3u9l0co. For examples of partnership solutions in your area see the appropriate Catchment Strategic Plan https://bit.ly/3OtOtpG. A full list of partnership opportunities is provided at the end of the Technical Summary Document https://bit.ly/3R02pcD.

5. Do you agree that working in partnership will have a significant contribution to make in meeting the objectives of DWMP?

Partnership working will potentially unlock additional schemes that would otherwise be difficult to implement.

Partners may have separate targets such as biodiversity or amenity improvements in an area where sustainable drainage features that reduce surface water flow to a sewer can be used in combination to achieve shared goals. It may also be that partnership working will allow land to be unlocked to allow the implementation of Thames Water required solutions that would otherwise be difficult to implement in particular in a more sustainable way.

Whilst Thames Water will need to invest in their own projects as well, partnership working is considered advantageous and to provide a greater range of opportunities to reduce flooding and improve water quality.

In particular working with Lead Local Flood Authorities may assist with scheme identification as they play a lead role in this area.

6. How do you think we could do this differently to generate even more opportunities? If we have missed a great opportunity, let us know here.

Greater transparency on Thames Water schemes would be advantageous. As part of planning consultations, there is very little information on how Thames Water will reinforce their network, to cope with new development, with the focus on whether a build timetable is required or not but very little detail on the actual solution.

Whilst Thames Water have a relatively good level of foul sewer modelling, there seems to be a lack of surface water modelling to predict potential capacity constraints. This and greater sharing of data on historic flood issues may assist with scheme identification and prioritisation.

Thames Water should engage with highway authorities at an early stage to get an understanding of planned resurfacing, maintenance and highway improvement schemes. Whilst the highway authority will be responsible for the gully and connection, many of the surface water sewers are owned and maintained by Thames Water. Engagement at an early stage will highlight opportunities to retrofit SUDS into the planned works, reducing runoff rates into the Thames Water sewer network, and providing water quality benefits.

# A range of plans – London area

Our approach for our catchments in London is to deliver a transformational SuDS programme to reduce spills and properties at risk of sewer flooding in each of the thirty-five risk zones. Through discussions at stakeholder forums, we have devised different plan scenarios. The radar plot compares how different plans perform against the planning objectives.

The resilient plan is our preferred plan as it ensures an optimum balance across outcomes while keeping plans deliverable and affordable in the near term.

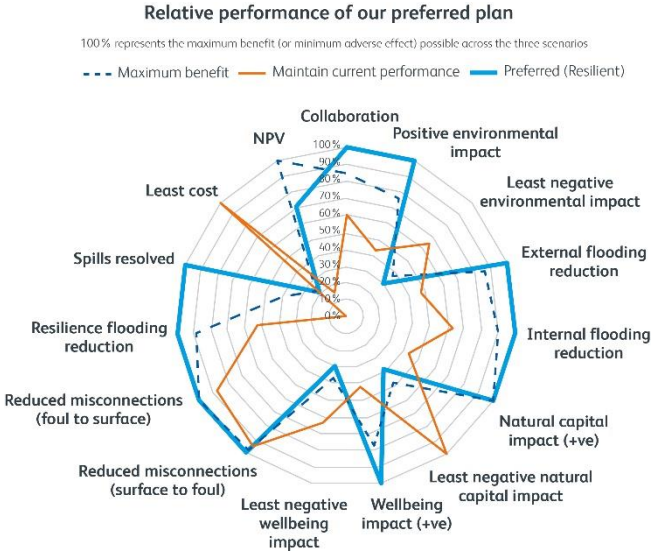
The maximum score plan achieves similar outcomes but maximises benefits earlier resulting in deliverability and affordability concerns in the near term.

The maintain flooding plan retains current flooding performance for the next 25 years, taking pressure off bills but does not address ambitious environmental improvements.

No harm from storm overflows plan reduces overflows by 2050 to no more than 10 in a typical year, with minimal reduction in flooding

Note: The plan with the largest area under the radar best balances criteria. The closer the line is to the outside of the graph, the better the outcome. Bill impact is an indicative view in real terms, with inflation excluded. Bill impact reflects timing and size of investment. A plan with more upfront investment may have a greater bill impact despite the construction cost being less than other plans.

For more information on plan scenarios and bill impact calculation, please read the Programme Appraisal Technical Appendix https://bit.ly/3OOhdZZ. Detail on a plan for London is provided in the Draft Plan document https://bit.ly/3uePA4v




| | Indicative Bill Impact (25 year average £/household) | CAPEX (£m) (Construction cost) | Spills (Nr) (Number of sewer overflows resolved) | Resilience (Nr) (Properties reduced risk of flooding in a 1 in 50 storm) |
|---|---|---|---|---|
| **Maximise score** (achieves targets, benefit upfront but near term cost and delivery concerns) | 109 | 14,427 | 2,422 | 147,639 |
| **No harm from storm overflows** (reduces overflows by 2050 to no more than 10 in a typical year) | 8 | 4,767 | 2,422 | 52,559 |
| **Maintain flooding performance** (focus on 1 in 50 year protection) | 12 | 3,206 | - | 83,128 |
| **Resilient system = Preferred Plan** (achieves targets, deliverable and affordable in the near term ) | 62 | 16,013 | 2,422 | 155,018 |

7. Our preferred plan is the resilient system plan. Do you agree with this?

N/A – Council area outside London

8. If not, what is your view on the other plan scenarios we show? What aspects are influencing your assessment?

N/A – Council area outside London

9. What alternative wider benefits would you like to see in the final plan/our next DWMP to improve the overall plan outcome?

N/A – Council area outside London

# A range of plans – Outside London area

Our approach for our catchments outside of London has focused on removing unwanted flow in our foul only systems, such as groundwater and surface water ingress, to meet spills and flooding reduction targets across the region. Through discussions at stakeholder forums, we have devised different plan scenarios. The radar plot compares how different plans perform against the planning objectives.

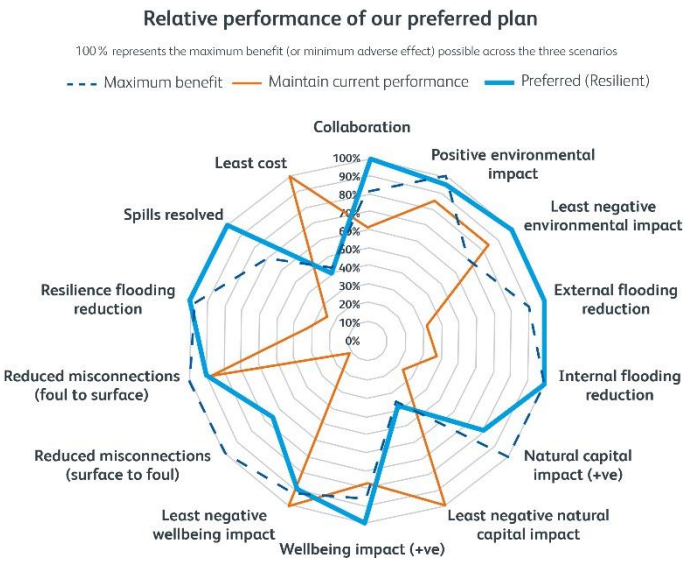
The resilient plan is our preferred plan as it ensures an optimum balance across outcomes while keeping plans deliverable and affordable in the near term.

The maximum score plan achieves similar outcomes but maximises benefits earlier resulting in deliverability and affordability concerns in the near term.

The maintain plan retains current system performance for the next 25 years, taking pressure off bills but does not address ambitious environmental improvements.

Note: The plan with the largest area under the radar best balances criteria. The closer the line is to the outside of the graph, the better the outcome. Bill impact is an indicative view in real terms, with inflation excluded. Bill impact reflects timing and size of investment. A plan with more upfront investment may have a greater bill impact despite the construction cost being less than other plans.

For more information on plan scenarios and bill impact calculation, please read the Programme Appraisal Technical Appendix https://bit.ly/3uafCpD Detail on a plan for outside London is provided in the Draft Plan document https://bit.ly/3OQdnj7.




| | Indicative Bill Impact (25 year average £/household) | CAPEX (£m) (Construction cost) | Spills (Nr) (Number of storm overflows resolved) | Resilience (Nr) (Properties reduced risk of flooding in a 1 in 50 storm) |
|---|---|---|---|---|
| **Maximise score** (achieves targets, benefit upfront but mid-term cost and delivery concerns) | 86 | 7,732 | 7,354 | 20,019 |
| **Maintain current performance** | 21 | 3,139 | 4,893 | 7,174 |
| **Resilient system = Preferred Plan** (achieves targets, deliverable and affordable in the near term ) | 56 | 8,213 | 9,739 | 20,601 |

10. Our preferred plan is the resilient system plan. Do you agree with this?

From the data, the Resilient System would appear to resolve a greater number of overflow spill issues and reduce the greater number of properties at risk of flooding, as well as having least negative environmental impact, than the maximum score plan, which we are in favour of. However, it is important that the chosen plan aims to reduce storm overflow releases as soon as possible.

Opportunities to have a more positive impact in terms of natural capital should be considered to help meet the overall project aims, particularly the aims relating to protecting the environment and generating wider benefits for communities. Partnership working could provide opportunities to achieve this.

11. If not, what is your view on the other plan scenarios we show? What aspects are influencing your assessment?

N/A

12. What alternative wider benefits would you like to see in the final plan/our next DWMP to improve the overall plan outcome?

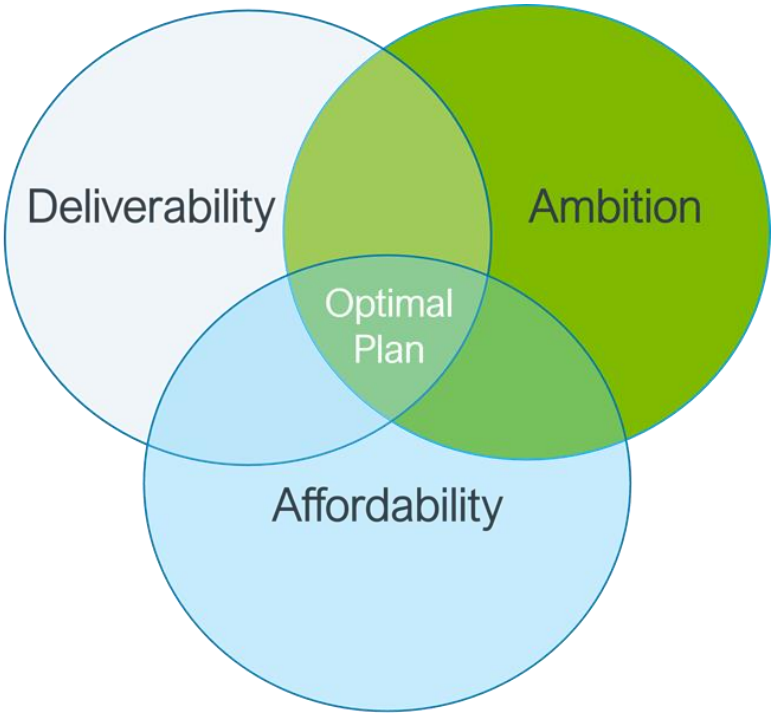
It would be good to see a focus on improving water quality of surface water discharges. The plan includes aims to improve treatment plants and treated effluent discharges however falls short on committing any improvements to surface water discharges.

There are methods that can be incorporated within Thames Water's network, both natural in terms of sustainable drainage techniques as well as mechanical products that could be used.

There should be a focus in particularly to improving discharges where connected to watercourses with sensitive habitats.

There should also be greater emphasis on carbon neutrality and supporting nature recovery.

## Trade-offs




To derive our preferred plan, it is necessary to trade-off different targets and objectives. In order to deliver on the ambitious targets on flooding and sewer overflows as expected by stakeholders, this must also be balanced against the affordability and deliverability of the programme.

For our first DWMP we seek to achieve that balance by:

1. Keeping ambitious targets in sight as a 25-year goal.
2. Profiling significant spend uplifts into the medium to long term where partnership working, innovation and knowledge of surface water impacts will have matured and therefore better mitigated cost impact.
3. Addressing high risk performance issues in the near term, particularly on sewer overflows.

For more information, please read our Technical Summary https://bit.ly/3QV5Xgk and Programme Appraisal Technical Appendix https://bit.ly/3u9B2D6.

13. Do you believe our DWMP strikes the right balance between affordability, deliverability and ambition?

Whilst the plan appears to strike a reasonable balance, there must be methods of measuring improvement performance on an annual basis to assess whether long term goals are still in reach. This should be publicly reported to ensure transparency.

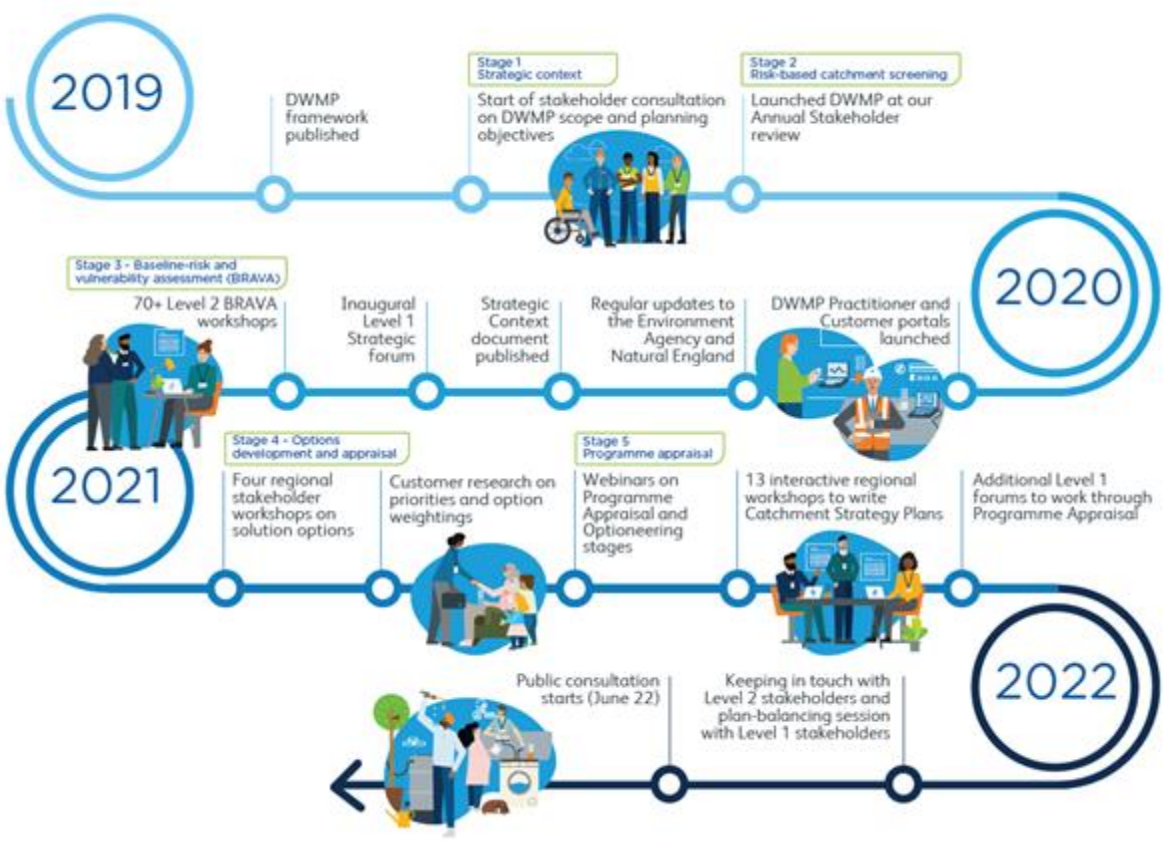
It is not reasonable to simply push goals into the future without a robust method of assessing improvement over the 25 year period.

In considering the priority attributed to different considerations, it is important that addressing the climate and ecological emergencies are not viewed as optional. We cannot afford to ignore these issues.

14. If not, what could we incorporate into the final plan/our next DWMP to improve this?

Progress on ambitious targets need to be measurable with continuous improvement an overall aim.

## Stakeholder engagement




Our aim for stakeholder engagement in the first cycle was to ensure we were creating a plan that was based on shared ideas. It was hugely important that the needs of everyone were being listened to through our varied stakeholder interactions. Stakeholder engagement has led to a better plan as detailed below:

- Planning objectives increased from 6 to 12, broadening the impact of our plan
- Customer research helped us to prioritise multiple objectives
- Co-creation/co-funding opportunities were identified through ongoing engagement with stakeholders

More of the benefits from stakeholder engagement can be found in our stakeholder engagement technical appendix https://bit.ly/3xZpDqR.

15. On a scale of 1 to 5, how well do you believe we achieved the aim of creating a shared plan through stakeholder interaction?

2 – Engagement with local authorities appears to have been focused towards county councils and unitary authorities. It is important that engagement is also undertaken with district planning authorities who have a key role to play, including as local planning authorities.

16. What could we do differently to encourage more engagement in the plan?

South Oxfordshire and Vale of White Horse District Councils are concerned that we did not receive notification of this consultation. We were only made aware of this consultation at a late stage, by a third party. We were disappointed that Thames Water did not allow an extension of time to enable us to consider this important consultation in these circumstances, particularly given the large number of documents to review.

## Final Questions

17. Do you have any further comments on the Drainage and Wastewater Management Plans not covered by the previous questions?

The plans could be expanded to cover the effects of new development and climate change with greater information provided on how the system will be expanded to ensure the area is adequately drained.

Climate change allowances should be included when considering the 1:50yr storm, given that this will likely change over the period of this management plan.

There should be an emphasis on proactive maintenance to reduce risk at areas where flooding is known to occur or where risk is known to be greater.

There is an issue of poor sewer condition being a root cause of flooding and greater effort is required to mend broken sewers or clear roots and debris. Having only a reactive maintenance regime will likely lead to reducing of capacity and flow potential resulting in modelling being potentially inaccurate.

Customers should not bear the cost of any past underinvestment.

## About you

Please tell us some information about you before you submit your response. This will allow us to ensure your response gets to the right people and let us contact you when our response document is published.

18. Are you responding as an individual or on behalf of an organisation or group? When we come to analyse the results of this consultation, it will help us to know if you are responding as an individual or on behalf of an organisation or group.

On behalf of an organisation.

19. Name of the organisation or group. If you don't want to give the name, please tell us what type of organisation it is.

South Oxfordshire and Vale of White Horse District Councils

20. Name?

21. In some cases, we may wish to follow up a consultation response where there is an offer of help or provision of evidence. If you're happy for us to do so, please provide your details below. We can also use it to let you know when we have published the Summary of consultation responses document.

22. Can we publish your response? We will not publish any personal information or parts of your response that will reveal your identity.

| |
|---|
| Yes. |

23. Finally, it would really help us if you let us know where you found out about this consultation.

| |
|---|
| South Oxfordshire and Vale of White Horse District Councils are concerned that we did not receive notification of this consultation. We were only made aware of this consultation at a late stage, by a third party. We were disappointed that Thames Water did not allow an extension of time to enable us to consider this important consultation in these circumstances, particularly given the large number of documents to review. |

**Thank you for taking the time to complete this questionnaire. Please email your response to us at:**

**DWMP@thameswater.co.uk**

**Nb. closing date for consultation response is 22nd September 2022.**