



Department
for Environment
Food & Rural Affairs

Creating a great place for living

Enabling resilience in the water sector

March 2016



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Any enquiries regarding this publication should be sent to us at

waterservices@defra.gsi.gov.uk

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Introduction

1. Climate change and population growth are putting increasing pressure on the water sector in England. The sector needs to adapt to ensure that it can continue to meet the needs of people, businesses and the environment – and the Government's framework needs to adapt too. This roadmap sets out how we will enhance our policy framework during this Parliament to secure the long-term resilience of the sector, helping to deliver a cleaner, healthier environment, benefiting people and the economy.

Future pressures

2. By the 2050s, summer temperatures are likely to increase while summer rainfall decreases, leading to increased risks of short-duration droughts. The population in England is forecast to grow by over 10 million people over the same period, with a large part of this growth occurring in areas where water is already scarce.
3. The likely impacts of these changes on water supplies are set out in the Environment Agency's 2011 [Case for Change](#), which explains that while demand management will have an important role, significant new water resources will be needed to meet the needs of people, businesses and the environment. Following this, we asked the Environment Agency to provide us with an overview of the long-term resilience of water supplies in England. Its analysis, provided in October 2015 and published alongside this document, explains that parts of the country are exposed to higher risks of water restrictions than the public might expect and supports the case to make water supplies more resilient.
4. The changing climate and growing population are also putting pressure on our sewerage network. Population growth and new development increase the flows entering the network. More intense rainfall can overwhelm the wastewater system and cause sewer flooding and environmental pollution. We need to enhance our policy framework to ensure it enables the water sector to increase its resilience to these pressures.
5. Of course, the water sector needs to maintain resilience to a range of pressures in the short- and long-term – from pollution of water supplies through to network outages or attacks on computer systems. These important issues are the subject of separate policy measures, such as the Security and Emergency Measures Direction, and are not the focus of this roadmap.

Adapting to climate change

This roadmap is part of a much broader programme of work to adapt to the changing climate. In 2017 we will publish a UK Climate Change Risk Assessment to help understand the specific risks that climate change poses to the UK, while in 2018 we will review the National Adaptation Programme, which sets out what government, businesses and society are doing to adapt to the changing climate.

We need to make sure that essential services and infrastructure – whether that's water supplies or railways – are ready to cope with potential changes. Using our adaptation reporting power, we've invited water companies and other organisations to report on risks to their activities from climate change and how they plan to respond. We expect to receive these reports by 2016, in order to inform the next Climate Change Risk Assessment and National Adaptation Programme.

The extreme weather events associated with climate change can affect the integrity of the water supply and wastewater network, as well as the flows through these systems. This roadmap does not examine these wider threats, which companies already consider through their adaptation reports and other policy measures.

Securing resilience

6. This roadmap sets out our plans to enhance our policy framework, building on discussions with the water industry, regulators, consumer groups and other water users to understand the priorities for reform. In Part 1, we set out how we will enable water companies to enhance the resilience of the public water supply. Some industries take water directly from rivers or groundwater; Part 2 explains how we will support these businesses to manage their resilience risks, including through closer collaboration with water companies. Part 3 sets out how we will enable water companies to enhance the resilience of the sewerage network. In tandem, Ofwat is evolving its regulatory framework in line with its new duty to further the long-term resilience of the water sector. Part 4 sets out how we will work with Ofwat to enhance the sector's resilience.

Part 1: The public water supply

Understanding future needs

7. Without further action parts of England will face a gap between demand for water and available supplies.
8. Water companies currently determine how to balance supply and demand over a minimum of 25 years through the [water resources management planning](#) process. This requires companies to identify all the options that are available to them to meet demand over the long term and show how they have decided which options to pursue.
9. This planning framework has helped water companies understand future needs and maintain the balance of supply and demand within their boundaries. But it has not fundamentally increased the resilience of water supplies in parts of the country or driven a step change in how water is traded between regions. The Environment Agency's analysis shows that as a nation, we are not managing the water available to us optimally, with some customers at greater risk of supply interruptions than they might expect.
10. To address this, we have asked the water industry to develop a national¹ [water resources long term planning framework](#), which will establish our water needs over the next 50 years and the strategic options that could meet these needs. This Water UK-led project will be assured by an independent expert panel and deliver its conclusions by summer 2016. It is intended to shape and inform both our policy framework and the water resources management plans that companies develop.

Taking a long-term, national view

11. Looking at future water needs at a national level reveals more options for balancing supply and demand than are available within regions. For example, there is potential to trade more water between companies², and possibilities to develop water supply infrastructure to supply multiple companies. Similarly, it is important to take a long-term

¹ The Welsh Government is also participating in this project, which will examine water resources in both England and Wales.

² Ofwat's recent [consultation](#) on the future regulatory framework for the water industry, suggests possible cost savings of up to £1 billion (in 2012-13 prices, over the lifetime of the assets) from more water trading compared with the cost of the schemes proposed in water companies' 2014 water resources management plans. The scope for individual trades depends on a range of factors, including environmental considerations.

view of our future water needs, to ensure that options that represent best value for money are not ignored in favour of the cheaper.

12. The Water UK-led project will help address this gap by taking a long-term, national overview. As well as informing companies' water resources management plans, it should provide valuable evidence for the National Infrastructure Commission, to help its assessment of long-term infrastructure needs.

The National Infrastructure Commission

In October 2015, the Chancellor announced the creation of a National Infrastructure Commission to provide expert independent analysis of the long-term infrastructure needs of the country. The Government is currently [consulting](#) on the governance, structure and operation of the Commission.

Under the Government's proposals, the Commission would publish a National Infrastructure Assessment every Parliament setting out its analysis of the UK's infrastructure needs over a 10 to 30 year horizon. The Government would be required to respond to the recommendations of the Commission, either endorsing them or proposing alternatives. Endorsed recommendations would become government policy and would provide a strong signal to the water sector.

Setting the right level of service

13. When planning how to manage their water resources, companies consult with different customer groups to agree how often they are likely to use water restrictions to reduce demand during droughts. Water restrictions range from temporary use bans (hosepipe bans) to more significant service interruptions, such as rota cuts and standpipes. The frequency with which companies plan to use these restrictions is known as their 'level of service'.
14. It is essential that companies understand the future risks of drought when setting their level of service. The Water UK-led project will draw on future rainfall models which are based on a range of climate change scenarios, as well as demand and sustainability forecasts. In developing their water resources management plans, we expect that companies will choose an appropriate drought model to test their systems.
15. We expect companies to have regard to the impacts of restrictions on businesses and households when deciding on their planned level of service. Preliminary evidence³ suggests that the benefits to customers, the economy and the environment of increasing this level of service could outweigh the costs. The Water UK-led project will gather further evidence on the costs and benefits of investing in more resilient water supplies.

³ See, for example, the Environment Agency's analysis and the [impact assessment for the Water Act 2014](#).

16. The Water Act 2014 provides the Government with powers to direct companies on their planned levels of service. We expect companies will continue to undertake extensive engagement with customers; the Government will also be examining the case for it to use its direction powers.
17. We will announce our approach to using our powers of direction⁴ in autumn 2016, in response to the Water UK-led project and further technical advice from the Environment Agency. Following the announcement we may issue a direction to one or more companies and/or issue guidance on their level of service in winter 2016. As required by the legislation, before issuing any guidance or direction, we will consult.

Considering every option to meet future needs

18. To meet the water scarcity challenge, companies will need to consider every option to balance supply against demand – including options outside their own boundaries – to identify the best value solutions.
19. In spring 2016, the Government will set out new guiding principles for companies on developing their water resources management plans, reflecting its priorities on resilience. This will be complemented by shorter, more flexible technical guidance that the Environment Agency has developed in response to company feedback. This will enable companies to be more responsive to their region's long-term needs and more innovative when developing their methods and solutions.
20. The guiding principles will aim to trigger a step change in how companies plan their water resources, building on the direction of travel in the last round of water resources planning. As we set out in our [joint letter⁵ to water companies in November 2015](#), the guiding principles will set a strong expectation that companies look beyond the minimum 25 year planning period to understand their long term needs and consider options that ensure resilient supplies over the long term. In doing this we expect companies to demonstrate consideration of every option to balance supply and demand, for example:
 - collaboration with neighbouring companies, for example to trade or enable cascades of water (see Part 4) or develop joint infrastructure/interconnections;
 - collaboration with other sectors (e.g. energy, agriculture), for example to develop joint infrastructure, offer water services or procure water supplies (see Part 2);

⁴ To apply to water companies who operate wholly or mainly in England.

⁵ The letter sets out Defra, Welsh Government, Ofwat, the Environment Agency and Natural Resources Wales expectations for water resources management plans.

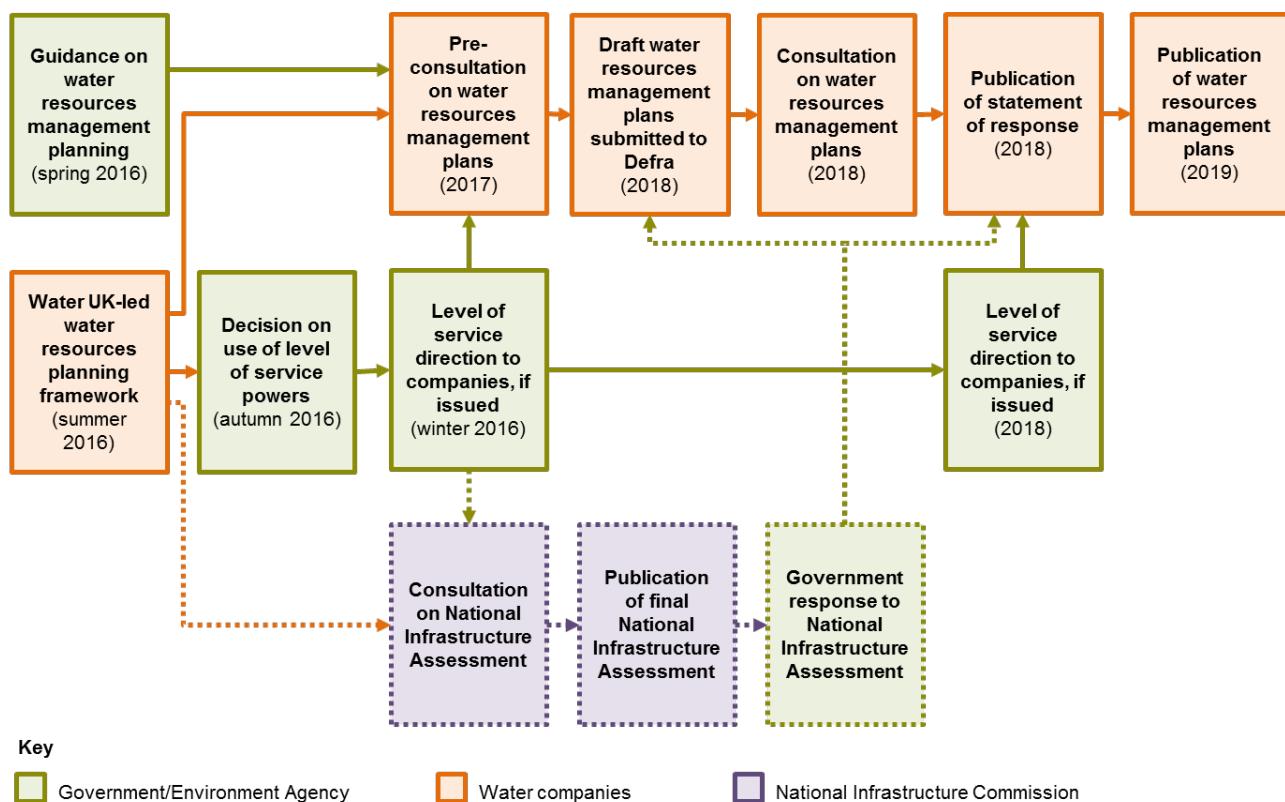
- enhancing the natural resilience of the catchment, to increase the water available for abstraction without posing unacceptable pressures on the environment; and
- minimising leakage, reusing water (e.g. through effluent reuse) and helping customers use water efficiently.

Enhancing the natural resilience of catchments

Some water companies are working in partnership with landowners and others to improve the morphology (shape) of rivers in their region and enable them to better support water ecosystems. This can increase the water that is available for water companies to abstract without placing unacceptable pressures on river ecosystems. This approach is in the early stages of development and there may be potential for it to be used more widely as a cost-effective approach to help deliver improved resilience for our water supplies.

21. Many of these options will be considered at a high level through the Water UK-led project. Companies will be able to draw on this project when considering what options are available to them, with a view to developing more detailed evidence to support their plans. In due course, they should also consider how to meet the endorsed recommendations from the National Infrastructure Commission.
22. As set out in the previous section, companies will need to test their options against scenarios to understand the risks to the resilience of their systems. Whilst the increased risk from drought is important, we expect companies to take a wide view of the resilience of their system. A new ‘resilience’ section should be included in water resources management plans, which should include information on how they have considered options that will improve resilience.

Figure 1: Indicative timeline for development of water resources management plans



Notes:

- (A) The Government, Ofwat and the Environment Agency have committed to working together to improve the water resources and business planning processes and to streamline their alignment. As a consequence, the timing of certain milestones may change.
- (B) The timing of the National Infrastructure Assessment is yet to be announced by the National Infrastructure Commission. Subject to its timing, it could help inform development of water resources management plans.

Towards a new approach

23. The context for water resources management planning is changing. Changes to the abstraction licensing system and the development of upstream markets for water resources will drive an increase in water trading, with new opportunities and risks for companies as they manage their supply-demand balances. We will review the case for introducing a revised approach to water resources management planning when the current cycle concludes in 2019.

Recognising future needs in the regulatory and planning systems

24. To meet the water scarcity challenge, companies don't simply need to develop the right water resources management plans – they need to be able to put them into practice.

The regulatory system

25. The outcomes of water resources management planning feed into the business planning process. As part of the price review, Ofwat scrutinises company business plans and determines the revenue that they can raise over a five year period.

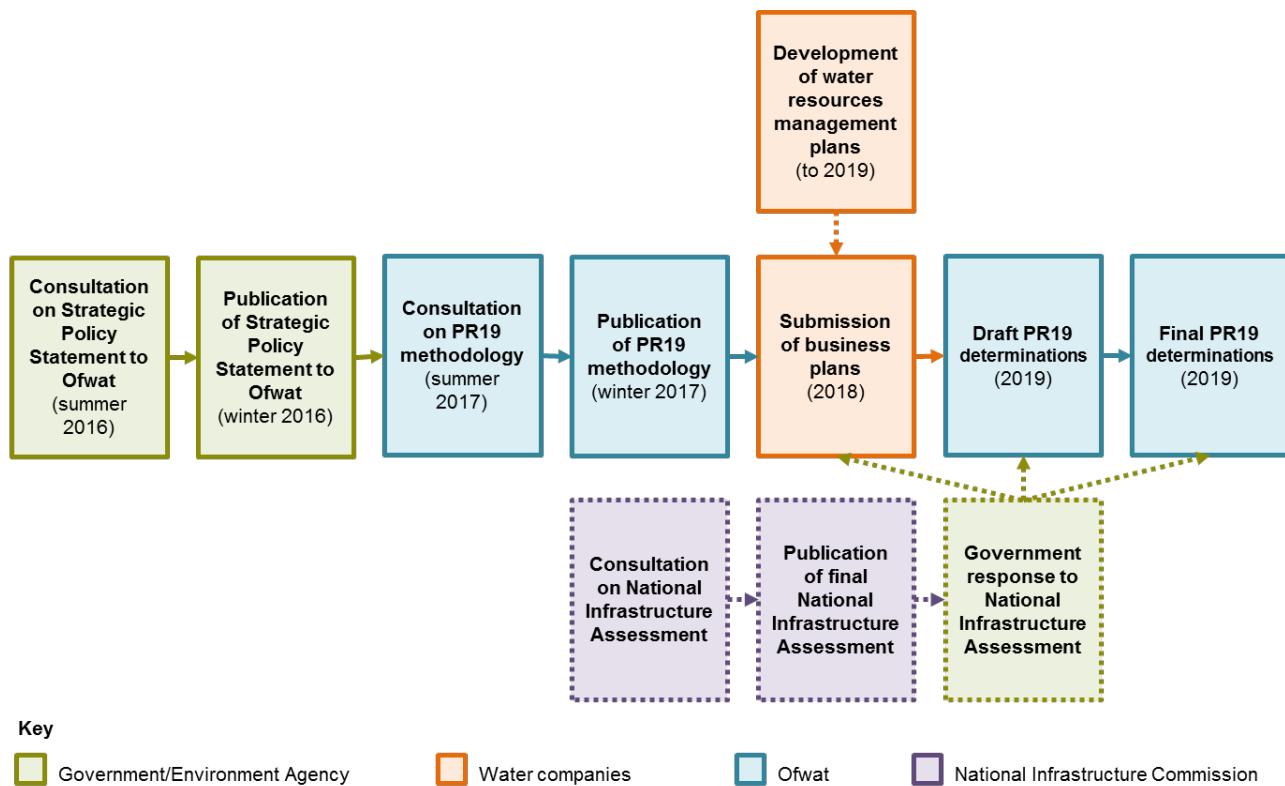
Historically, companies have argued that Ofwat's efficiency challenge through the price review tends to prioritise concerns about short-term bill impacts over the case for investment in long-term resilience. Partly in reflection of this, the Government placed a new resilience duty on Ofwat through the Water Act 2014.

26. Ofwat's 2014 price review marked a shift to greater company responsibility for implementation of business plans, with increased customer engagement and a 'total expenditure' approach to price limits rather than detailed assessment of operating and capital expenditure. This gave companies greater flexibility to set the rates at which the costs of new investment are recovered from current or future customers, encouraging a more long-term focus. It also provided greater incentive and opportunity for companies to apply more flexible, sustainable approaches to delivering the approach agreed with customers.

27. Part 4 sets out the plans on consultation on a new Strategic Policy Statement in summer 2016. This will set out the strategic objectives and priorities for Ofwat in England. They will include incentivising and challenging water companies to understand and develop solutions to meet future needs. It will also explain how the Government is working with Ofwat to promote increased water trading and the development of upstream markets.

28. The Government consultation on the operation of the National Infrastructure Commission proposes that economic regulators should have regard to the Commission's recommendations which have been endorsed by the Government.

Figure 2: Indicative timeline for the 2019 price review



Notes:

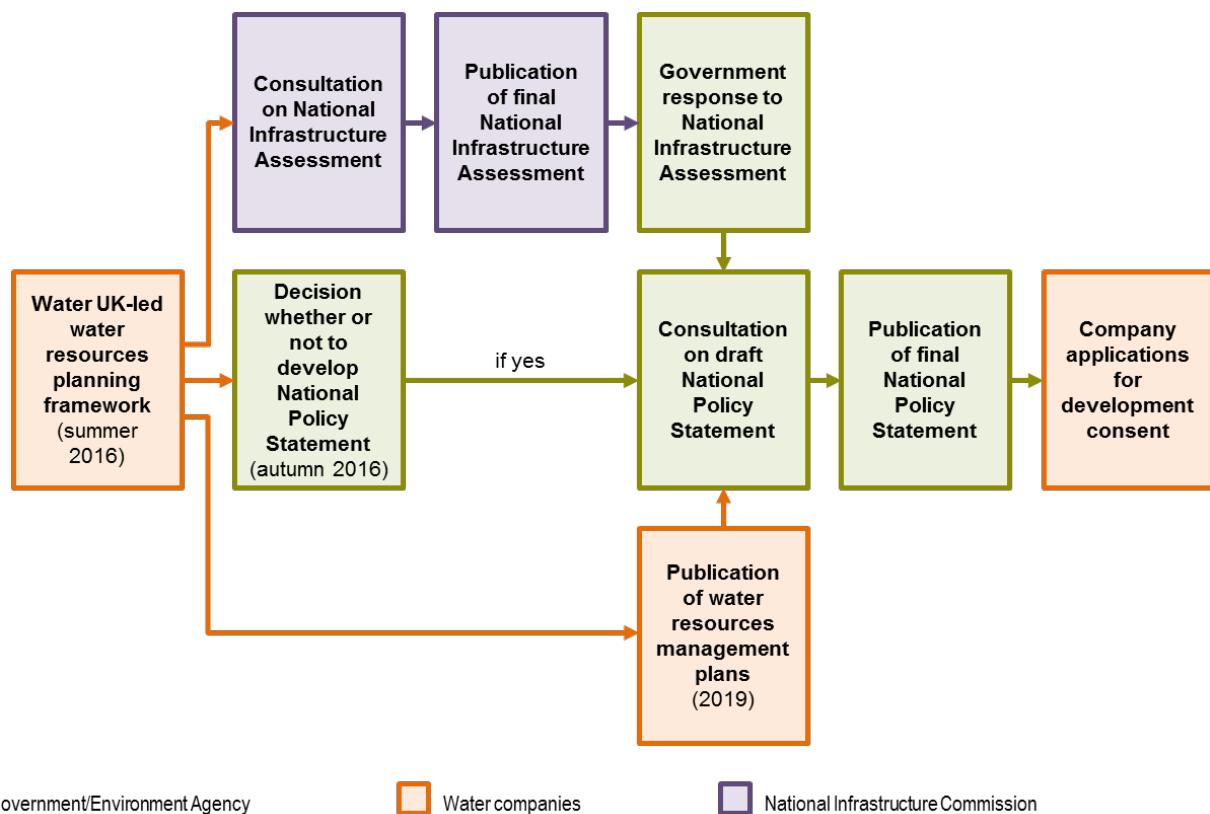
- (A) Ofwat has recently [consulted](#) on the timeline for the 2019 price review. The Government, Ofwat and the Environment Agency have committed to working together to improve the water resources and business planning processes and to streamline their alignment. As a consequence, the timing of certain milestones may change.
- (B) The timing of the National Infrastructure Assessment is yet to be announced by the National Infrastructure Commission.

Development planning

29. Where companies propose to develop water supply infrastructure they typically need to secure approval in the planning system.
30. The vast majority of planning applications are decided locally under the Town and Country Planning Act 1990. For 'nationally significant infrastructure projects' (such as a major new reservoir), a separate regime was established under the Planning Act 2008, in which development consent is decided nationally based on policy set out in designated National Policy Statements. This has significantly accelerated the process of providing development consent for such projects.
31. To meet the water scarcity challenge, the water industry may need to develop new water supply infrastructure that could be considered to be 'nationally significant'. We

are minded to develop a National Policy Statement which sets out the need for water supply infrastructure, and will announce whether we will do so by autumn 2016, in response to the Water UK-led project and further technical advice from the Environment Agency. Should we develop a National Policy Statement, we will assess the type and scale of projects that should be treated as 'nationally significant infrastructure projects', with the intention of clarifying this by an amending order to the Planning Act 2008.

Figure 3: Indicative timeline for development of a National Policy Statement for water supply infrastructure



Notes:

(A) The timing of the National Infrastructure Assessment is yet to be announced by the National Infrastructure Commission. The timing of any National Policy Statement will be set to enable the Government to take account of the National Infrastructure Assessment's recommendations and the outcomes of water resources management planning.

32. A National Policy Statement will need to take into account the endorsed recommendations from the National Infrastructure Commission. The Government's [consultation](#) on the operation of the National Infrastructure Commission also proposes that such endorsed recommendations be treated as a material consideration in the planning system.

Part 2: Wider water use

Boosting business resilience

33. In Part 1 we set out how we will enhance our policy framework to enable water companies to meet the water scarcity challenge. But not all businesses use the public water supply: many rely on directly abstracted freshwater for cooling, washing, incorporating into products and growing crops.

34. As the Environment Agency's analysis shows, the risks from water scarcity vary considerably between businesses, depending on:

- how much water they are able to access (particularly as flows reduce);
- how much water their business will need in future;
- what options they have to meet that need; and
- the capacity they have to adapt to reduced water availability (for example, changing crops or installing water reuse systems).

Without a step change in our national approach, lack of access to adequate water supplies could lead to some businesses being unable to operate while farmers and growers could lose crops or have lower quality crops. If enough power stations had reduced operations due to lack of cooling water, this could affect the national grid particularly if other generation sources were unavailable.

35. Water scarcity is just one of the many risks facing these businesses which they must manage to be successful. Some sectors have taken a lead in this area, such as the food and drink sector⁶, while others recognise the need to do more. It is the responsibility of individual businesses to plan for their own water resilience.

Supporting individual businesses to be resilient

36. We intend to [reform the water abstraction management system](#). This regulates how water is taken from rivers and groundwater to help businesses manage their resilience risks. We plan to increase the flexibility of the system to help businesses manage when river flows and groundwater levels are low (for instance by facilitating water trading),

⁶ For example, Defra has supported [Business in the Community](#) to develop a framework for action to enable food and drink sector businesses to identify and manage their risks relating to water.

while creating a framework to better manage resources in catchments and support businesses to plan.

37. A key element of this will be providing better data and information to businesses on the risks to water availability in their water catchment over the longer term. In addition, catchment rules will set out tailored approaches to manage access to water during extreme shortages, based on an understanding of the costs and benefits and the needs of essential water users.
38. We are taking action to remove regulatory barriers to businesses that are looking to increase their resilience. As part of the [Rural Productivity Plan](#) launched in August 2015, the Government committed to review the planning and regulatory constraints facing rural businesses and measures that can be taken to address them. This will include examining planning barriers to agricultural reservoirs. The Countryside Productivity scheme also supports investment in reservoirs, irrigation and water management systems to help improve farm resilience and productivity.
39. We are also working closely with DECC, the National Grid, Energy UK and the Environment Agency to identify any risks to security of the electricity supply during extreme droughts, and to ensure any future investment in thermal generation capacity is informed as far as possible by water availability risks over the long-term. Energy companies also report on their action to adapt to climate change under the Climate Change Act 2008.

Enabling collaboration

40. There is real potential for businesses to enhance their resilience by working with water companies. The majority of businesses do not have the capacities that water companies have to enhance their resilience, for example to build large-scale water storage or to move water around the network.
41. In some places, businesses and water companies have already taken the initiative to explore how this can work. For example, the Water Resources East Anglia group brings together water companies, farmers, the energy sector and others to work together to improve water resilience over the long-term. Kent County Council is working with Southern Water, South East Water, farmers and growers to explore the potential for collaboration. These groups have examined the potential for water companies to sell water to businesses outside the public water supply, transporting it either through rivers or pipes, and to develop new water resources to enable this.
42. In Part 1, we explained that we will encourage water companies to consider the potential for collaboration with other sectors in developing their water resources management plans. Such collaboration depends on strong mechanisms for trading water. Reforming the water abstraction management system will facilitate short-term

trading in catchments where abstractors are likely to benefit. We are also collaborating with Southern Water and Anglian Water to explore how the increased flexibilities brought through abstraction reform can further support multi-sector trading.

43. There may be opportunities for companies to develop new water resources for the public water supply which can also help meet the needs of businesses outside the public water supply. Anglian Water has commissioned FTI Consulting to appraise the [alternative approaches to financing multi-sector water supply assets](#) – from joint ventures through to work by individual water companies. There may also be opportunities for water companies to use temporary surplus capacity in their supply network to provide water to businesses outside the public water supply. We will work with Ofwat and the Environment Agency to explore how we can support development of markets to enhance the resilience of businesses outside the public water supply. It is important that markets develop in a way that does not increase risks to customers of the public water supply nor lead to them subsidising these services.
44. We will also consider where the legislative framework inhibits multi-sector collaboration. For example, the planning regime for ‘nationally significant infrastructure projects’ currently applies only to dams or reservoirs where construction is carried out by one or more water companies. Should we develop a National Policy Statement for water supply infrastructure, we will look to amend the Planning Act 2008 to ensure that collaborative projects between water companies and other businesses are not excluded.
45. Some businesses do have the capability to develop water resources for the use of others, such as farmers with land available to build reservoirs bigger than their immediate needs. Part 4 explains how we are working with Ofwat to facilitate the development of upstream water markets.

Part 3: Drainage

Understanding future needs

46. Climate change and population growth are expected to put major pressure on our sewerage network⁷. More intense rainfall can overwhelm the wastewater system and cause sewer flooding and environmental pollution. New development, such as houses, requires capacity in the network, meaning investment to meet the need.
47. The sewerage network is already underachieving in some places and there are opportunities for some companies to improve the performance of individual sewer assets. By 2020, sewerage companies will introduce monitoring for the vast majority of their combined sewer overflows and use this data to plan investment in the network. Companies are also working with their customers and partners to reduce pressures from misconnected assets and sewer misuse.
48. Understanding future drainage needs is challenging, due to the diverse range of external pressures and the highly localised nature of the network. We expect sewerage companies to understand the condition of their assets – including any deterioration – and show leadership in working with the wide range of actors with an impact on drainage systems to assess future pressures. We are working with sewerage companies to improve the data available to support their decision-making, including by ensuring that local plans are in place.

Local plans

The Government is committed to a planning system that provides communities with certainty on where new homes are to be built. Local plans are the cornerstone of this approach.

Local plans set out local planning policies and identify how land is used and what will be built where. Every area in England should have a local plan in place. In areas where no plan has been produced by early 2017, the Government will intervene to arrange for the plan to be written in consultation with local people.

49. Water UK has established 21st Century Drainage, looking at ensuring sewerage systems are fit for the future. The group is developing tools to enable long-term planning and ensure that action is taken ahead of failures which affect services or the environment. The group's programme includes technical workstreams looking at how to assess the condition of sewerage assets and calculate sewerage capacity, the impact

⁷ See, for example, the [Future Impacts on Sewer Systems in England and Wales](#) report commissioned by Ofwat and the [Rainfall Intensity for Sewer Design](#) report by UKWIR.

of infiltration on capacity, and how to address combined sewer overflows which cause pollution. We want to see this programme transform the industry's evidence base ahead of the 2019 price review so that companies are able to develop plans which reflect future needs.

50. In tandem with this work to inform company planning, we need to develop a better national overview of the health of sewerage systems and the need for future investment. In support of this, we have established a pilot project working with Severn Trent Water and Thames Water to examine their evidence and models with a view to further work with all companies to develop a national overview following the conclusion of this pilot in spring 2016. This will help inform the first National Infrastructure Assessment, which will set out a clear view of the nation's future infrastructure needs.

Considering every option to meet future needs

51. Some in the sector argue that there should be a framework to ensure that companies maintain and enhance their assets in a way that will manage pressures and meet future capacity requirements. For example, the [independent task and finish group](#) established to advise Ofwat on resilience has recommended the development of sewerage and wastewater plans for each company.
52. Sewerage companies have a clear statutory duty to provide, improve and extend the sewerage network in order to effectively drain their area⁸. We firmly expect that companies will undertake the necessary long-term planning and investment to meet their duties, and support the recommendation that companies should have plans in place. These can help provide assurance that companies intend to meet future needs, and provide a mechanism for engaging the wide range of different actors with an impact on drainage systems.
53. The Environment Agency and Ofwat have published voluntary [guidance for companies on how to prepare drainage strategies for their catchments](#). This set out key principles, including that plans should: be developed in partnership; be risk-based; tackle uncertainty; be innovative and sustainable; consider whole-life costs and benefits; and be kept 'live'. To complement this, UK Water Industry Research has developed an [approach for companies to balance supply and demand within the sewerage network](#).

⁸ Under the [Water Industry Act 1991](#) (as amended), sewerage undertakers have a general duty to:

- (a) provide, improve and extend such a system of public sewers (whether inside its area or elsewhere) and so to cleanse and maintain those sewers and any lateral drains which belong to or vest in the undertaker as to ensure that that area is and continues to be effectively drained; and
- (b) make provision for the emptying of those sewers and such further provision (whether inside its area or elsewhere) as is necessary from time to time for effectively dealing, by means of sewage disposal works or otherwise, with the contents of those sewers.

54. Ofwat is working with the 21st Century Drainage programme to understand the impact of existing drainage planning guidance and what it can do in the design of the next price review to encourage greater innovation and long-term planning, in line with its new resilience duty⁹. In its [Water 2020 consultation](#) Ofwat set out its expectation that companies will provide strong evidence of a long-term strategic approach to wastewater planning and service provision in support of any special cost-factor claims.

Selecting options

55. To meet future needs, companies will need to consider every option to balance pressures on the sewerage network.

56. Innovation must be a part of addressing future pressures. Sewerage companies can encourage sustainable drainage systems (SuDS) and green infrastructure to manage surface water and reduce the demand on the network. Some sewerage companies are working upstream to encourage better land management which slows rainfall runoff and reduces the volumes of water entering the system.

57. Collaboration with other parties who have drainage responsibilities is important. Sewerage companies can continue to develop partnerships with local authorities, environmental groups and others. They also will continue with their work to support customers in understanding the consequences of sewer misuse, protecting properties from flooding caused by blocked pipes.

58. Sewerage companies will also need to consider the potential for more integrated management of water resources and drainage. By managing water at a catchment scale, companies can develop solutions to sewerage problems that can help address the water scarcity challenges. We expect that sewerage providers will collaborate in managing water resources.

Recognising future needs in the regulatory and planning systems

The regulatory system

59. Through the price review process, companies develop business plans which reflect their customers' preferences (such as reductions in sewer flooding incidents or improvements in bathing water quality) and their legal obligations. Ofwat scrutinises

⁹ Ofwat's resilience duty includes an objective to 'secure that undertakers take steps for the purpose of enabling them to meet, in the long term, the need for ... the provision of sewerage services to consumers, including by promoting ... appropriate long-term planning and investment by relevant undertakers'.

these plans and determines the revenue that companies can raise over a five year period in order to deliver those outcomes.

60. Making the case for investment in sewerage systems in response to population growth and climate change can be challenging, given the gaps in our evidence base. Part 4 sets out our intention to consult on a new Strategic Policy Statement for Ofwat in summer 2016 setting out our strategic objectives and priorities. Closing the gap in our understanding of future drainage needs is a priority for Defra. Improvements in the evidence base will inform both company business plans and the forthcoming National Infrastructure Assessment.

Development planning

61. The vast majority of planning applications for wastewater infrastructure are decided locally, due to the small scale of the infrastructure.

62. In 2012, Parliament approved a National Policy Statement setting out the framework for planning decisions on nationally significant wastewater infrastructure. The National Policy Statement was used as the primary basis by decision-makers for deciding to give development consent for the Thames Tideway Tunnel – a major new sewer that will help tackle the problem of overflows from the capital's Victorian sewers and protect the River Thames from increasing pollution for at least the next 100 years.'

63. The Government's [consultation](#) on the National Infrastructure Commission proposes that its recommendations be treated as a material consideration in the planning system, where these have been endorsed. In addition, we will formally review the existing National Policy Statement on wastewater infrastructure, with a view to taking account of any endorsed recommendations if appropriate.

Part 4: A resilient regulatory system

64. It is not just our policy framework that is evolving. Ofwat is also taking action to adapt its regulatory framework to take account of the long-term challenges posed by climate change, population growth and changes in consumer behaviour.
65. Through the Water Act 2014¹⁰ the Government placed a new resilience duty on Ofwat. This builds on Ofwat's existing primary duties to protect both current and future consumers and to ensure that water and sewerage companies are able to both finance and perform their statutory functions effectively. Ofwat has recently issued a resilience [statement](#) clarifying how its new duty will shape its work, building on recommendations from an [independent body](#) and consultation with the sector.
66. The Act also provided enhanced powers for the Government to issue a Strategic Policy Statement to Ofwat, setting out clear policy priorities and objectives for the regulation of the water sector. Ofwat must act in accordance with this statement in carrying out its functions. Our Strategic Policy Statement will complement Ofwat's resilience statement and put it in the context of the Government's priorities and objectives. We will consult on a draft Strategic Policy Statement in summer 2016, following dialogue with the industry, regulators and consumer groups.

Promoting long-term planning and investment

67. Long-term planning and investment are essential to securing the water sector's resilience and form an important part of Ofwat's regulatory role. In our Strategic Policy Statement, we propose to reinforce the high priority the Government places on securing long-term, efficient investment in resilient outcomes and make the links between these objectives and effective long-term planning by the industry.

¹⁰ Under the [Water Act 2014](#), both the Secretary of State and Ofwat are required to further the resilience objective; that is:

- (a) to secure the long-term resilience of water undertakers' supply systems and sewerage undertakers' sewerage systems as regards environmental pressures, population growth and changes in consumer behaviour, and
- (b) to secure that undertakers take steps for the purpose of enabling them to meet, in the long term, the need for the supply of water and the provision of sewerage services to consumers, including by promoting:
- appropriate long-term planning and investment by relevant undertakers, and
 - the taking by them of a range of measures to manage water resources in sustainable ways, and to increase efficiency in the use of water and reduce demand for water so as to reduce pressure on water resources.

68. Ensuring that the water industry is able to secure efficient investment in long-term resilience while keeping customer bills at an acceptable level is the challenge at the core of Ofwat's role as the independent economic regulator. In addressing this Ofwat will need to collaborate with the Environment Agency and the National Infrastructure Commission in their assessments of future infrastructure needs¹¹.
69. Our understanding of future infrastructure needs is stronger in some areas than others. For example, there is an identified gap in our assessment of the future resilience of drainage systems. Ofwat has a role in working with water companies, the Environment Agency and the National Infrastructure Commission to help to close such gaps.
70. Ofwat also has a role in incentivising and challenging water companies to develop solutions to meeting future infrastructure needs which offer best value for money over the long-term. This will increasingly involve challenging companies to look beyond their own boundaries to develop innovative and cost-efficient solutions to meet future needs.
71. Ofwat is already taking action on many of these issues to encourage companies to take a longer term view. For example, in its [Water 2020 consultation](#) on the future regulatory framework for the water industry, it set out its intention to assess the extent to which business plans are part of a coherent longer term plan for both water and wastewater services. It has sought views on whether it should encourage, or even mandate that certain performance measures, such as "asset health", should span more than one regulatory period. It has also proposed that each company's Customer Challenge Group should challenge and assure the quality of its customer engagement, including on resilience.

Promoting markets

72. The Government is taking action to promote the use of markets in the water sector. Opening up retail competition in the non-household market in England from 2017 will create the largest retail water market in the world and deliver nationally £200 million in benefits¹². It will also provide increased opportunities and incentives for businesses to use water efficiently – cutting costs and improving environmental outcomes.
73. The Government is also introducing the world's first competitive market for the sale of water and the disposal of waste water in upstream water markets. This will deliver almost £1.8 billion in benefits across the economy – building resilience and improving

¹¹ Under the Government's [proposals](#) for the National Infrastructure Commission, Ofwat will also be required to have regard to the Commission's recommendations, where these have been endorsed by ministers.

¹² The Government is also looking at the potential to extend choice to households. It has asked Ofwat to provide an assessment of the costs and benefits of extending retail competition to household water customers by summer 2016.

incentives for innovation. Upstream water markets will be facilitated by modernising the way water abstraction is regulated to enable trading – promoting the efficient use of water resources.

74. Improving resilience is an important component of the case for these market reforms.

Well-functioning markets can enhance resilience, for example by making more efficient use of resources and boosting innovation. In tandem with promoting long-term planning by water companies, we are making it easier for them to trade water with each other. This will encourage better interconnections in the water supply system. New businesses will be able to enter this market, selling water to existing companies or directly to third parties. We are also unlocking new markets for treatment and disposal of sewage sludge.

75. Ofwat has recently [consulted](#) on how best to lay the foundations for the development of these markets through its 2019 price review. In setting out our priorities for economic regulation of the sector through the next Strategic Policy Statement, we will establish our clear expectation that the design and development of upstream markets reflects the Government's resilience objectives. We expect market development will complement long-term planning and investment by water companies, and build upon the benefits we currently get from integrated delivery by statutory undertakers.

Conclusion

76. Securing the long-term resilience of the water sector is not simply the role of government or regulators. Water companies must lead the way in taking action to ensure that they can continue to meet the needs of people, businesses and the environment. We want to see the sector work with customers, partners and regulators to develop a strong understanding of future needs, explore every option to meet these needs, and build consensus on their plans for delivery. Outside of the public water supply, we want to see businesses assessing and managing their resilience risks and coming together to find the best way to meet their needs.

77. We welcome Water UK's work to establish a Water and Wastewater Resilience Action Group to promote and enhance the sector's resilience, and to develop a sector-wide strategic dashboard which should enable us and others to compare levels of resilience, now and in the future. We will continue to work with the water industry, regulators, consumer groups and other water users to deliver, and ensure that our policy framework enables the transition to a more resilient water sector.