



# Welsh Water 2050

CONSULTATION SUMMARY | MAY 2017



**WELSH WATER 2050 –**  
TO BECOME A TRULY  
WORLD CLASS, RESILIENT  
AND SUSTAINABLE WATER  
SERVICE FOR THE BENEFIT  
OF FUTURE GENERATIONS





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# FOREWORD:

PLANNING AHEAD TO 2050  
TO ENABLE US TO EARN  
THE TRUST OF FUTURE  
GENERATIONS OF CUSTOMERS

At Welsh Water, we are proud to provide essential public services in the management of the water cycle to over three million people across most of Wales, and some adjoining parts of England.

Uniquely, we are a not-for-profit business with no shareholders, which means that we can focus exclusively on what is in the best interest of our customers.

**Because we provide an essential public service, we need to:**

- Plan for the very long-term, so that we can aim to protect future generations from potential challenges (such as climate change) and take full advantage of potential opportunities (for example, new technology and data analysis);
- Be customer-led in everything we do – both in terms of our day to day activities and also in developing our plans for the future;
- Work in partnership with many other organisations, to ensure that we play our part in delivering society's wider goals;
- Have the best people to deliver the best outcomes for our customers;
- Constantly look for opportunities for research, innovation and adoption of best practice to help us deliver a better and more efficient service to our customers;
- Provide a high quality service in which all of our customers can place their trust in; and
- Ensure that this service represents good value for money and is affordable for our customers.

**Back in 2013, following engagement with over a thousand of our colleagues, we adopted a simple, clear vision for our business, which is:**



TO EARN  
THE TRUST OF  
CUSTOMERS,  
EVERY DAY



From a wide variety of customer research and also from our daily tracking of customer sentiment (including complaints, contacts, compliments and satisfaction ratings), we know that we have many differing groups of customers, with a wide variety of wants and needs from our services.

Customers across all groups place a particular emphasis on the reliability of the essential services we provide (safe drinking water and environmental protection).

Our customers expect us to protect the integrity of these services against short-term events (such as extreme storms or major asset failures).

They also need to know that they can trust us to be looking well into the future, anticipating challenges to service reliability and taking the necessary action to ensure that the service is resilient to those future risks and trends.

We have developed Welsh Water 2050 to respond to that customer priority.

We have worked with Arup, a leading multidisciplinary consultancy, to review worldwide best practice in resilience planning, such as the 100 Resilient Cities programme (supported by the Rockefeller Foundation), and to develop a customised strategic resilience framework for Welsh Water.

That resilience framework incorporates all the elements of a truly resilient business - including assets, finance, governance, people, systems and culture.

**In September 2016, the Glas Cymru board adopted a new mission statement:**



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Further work with Arup and Cardiff University has enabled us to draw up a comprehensive list of eight major challenges and opportunities likely to be relevant to our service, drawing on a worldwide review of best practice.

### **Trends of particular importance include:**

- Climate change will lead to more extreme weather events;
- Urbanisation and intensification of land use may lead to greater pressure on our environment;
- Customers' expectations for a reliable and personalised service will increase;
- An ageing population will create new challenges; and
- Essential infrastructure will need to be upgraded and maintained, at an affordable rate.



Our customers expect us to plan for these future trends, and to ensure that the well-being of future generations is not compromised by a failure to prepare for foreseeable trends and risks. We have therefore developed 14 strategic responses, which set out plans of action for how we will respond to these trends.

Of course, there is a high level of uncertainty when considering such potential challenges and opportunities as far out as 2050, particularly in respect of future technology advances and future customer and community expectations for water and wastewater services.

Hence, our approach in Welsh Water 2050 puts much emphasis on maintaining flexibility in how we respond to trends and also in making “no regrets” decisions, taking first those steps which address the most urgent priorities of our customers, whilst targeting research and innovation to address longer term potential challenges and opportunities.

However, uncertainty cannot be an excuse for inaction or simply leaving future generations to mitigate the impacts as best they can – we have to plan ahead. This approach is consistent with the Welsh Government’s strategy as set out in the Well-being of Future Generations (Wales) Act 2015.

For each strategic response, we have considered a range of possible actions, from research to investment.

In many cases, the responsibility clearly rests with us. In others, there are a range of possible ways in which this agenda could be approached to deliver a wider societal outcome – such as tackling urban flooding, environmental quality and lead in drinking water.

As a consequence, the current business areas and our legal responsibilities may change over the period. In some cases, there may be a case for government to consider placing wider legal responsibilities on Welsh Water, as has happened with the transfer of private sewers and lateral drains.

In other cases, aspects of service that we currently deliver could be opened up to other potential service providers, through regulatory reform and the development of market mechanisms.

At this stage, our priority is to consider what needs to be done to meet the expectations of customers and communities, rather than how and by whom that should be delivered.

In many cases, we cannot achieve our goals without working in partnership and in new ways with other organisations, particularly at a catchment level.

Equally, our actions can have wider benefits to other societal agendas with our commitment to recreation and education services contributing to public health and well-being.

Again, this co-operative and catchment based approach to solving society's potential issues is very much in line with the approach set out in the Environment Act (Wales) 2016 and could make a significant contribution towards delivering the environmental improvements discussed in the first State of Natural Resources Report (published by Natural Resources Wales in 2016).

For many of the 14 strategic responses, we have set out a comprehensive response and a progressive response. The comprehensive response would involve taking all actions that may be necessary to meet the future expectations of our customers by 2050, where these actions fall within our current remit.

The progressive response comprises actions which we believe will be essential, either to meet current customer expectations or to address existing clear trends. As such, it constitutes a 'no regrets' programme of action, but could leave more work for future generations to do to accelerate the pace of mitigation.

There is clearly a balance between the scope of the ambition of the long-term plan and its likely cost to customers. There are also important inter-generational issues as to when customers should pay for these improvements.

These are key trade-offs which we will be exploring further with customers and a wide range of stakeholders over coming months.

The costs of mitigating the challenges and harnessing the opportunities from now until 2050 will only be affordable for our customers if we are committed to innovation.

We are planning to ensure that bills will remain affordable for our customers through better ways of working, reduced operational costs, research and innovation in partnership with others and continued access to long-term, low cost finance for asset investment.

We believe that we should try to ensure that every household customer will have a bill which is affordable, recognising that more disadvantaged households will struggle to pay their equal contribution to the cost of delivering the improvements to service, resilience and the environment that may be desired by society as a whole.

However, we would need continued support from Government and from our overall customer base to make such a commitment work in practice.

Following this consultation exercise, we intend to publish a final version of Welsh Water 2050 in 2018.

This document will set the long-term context within which we will develop our future 5-year investment plans, particularly for 2020-25 (AMP7), which we will be submitting to the industry regulator (Ofwat) in September 2018.

Before then, we will be engaged in a far-reaching customer involvement programme to ensure that our plans are driven by the priorities of our customers, in terms of current service improvements, progress towards the goals set out in Welsh Water 2050 and the affordability of bills over the next 10 years.

We look forward to your input.



A handwritten signature in dark ink, appearing to read 'C.A. Jones', written in a cursive style.

**CHRIS JONES**

Chief Executive  
Welsh Water



The final Welsh Water 2050 document will set out our current view of what our customers can expect from us over the course of the next 30 years, so that we are able to earn the trust of future generations of customers.

**The outcomes of Water 2050 could include:**

- All customers will receive a defined, acceptable service for drinking water supply and drainage – or else they won't have to pay for that service;
- Individualised customer service delivery, reflecting their preferences and choices as to the services that they wish to receive – integrated with other essential services to contribute to smart homes and smart cities;
- Business customers receive a range of high quality services that match the best available in the rest of the UK and beyond;
- Good ecological quality for all water bodies affected by our activities, with a wider contribution to enhance biodiversity and promote the resilience of ecosystems;
- A business that is adapted to meet the challenges of climate change (from droughts to flooding);
- All key assets meet prescribed resilience standards to maintain service to customers irrespective of shocks and stresses and the potential for increased outages in the future;
- Smart network management pro-actively identifies problems and deals with them before customers are affected;
- Exposure of the public to lead in drinking water is significantly reduced, particularly for the young;
- A circular economy business that will make full use of wastewater and other opportunities to maximise energy generation and the recycling of valuable materials;
- A business which uses its land holdings and other assets to maximise the well-being of its customers, encouraging healthy lifestyles and recreation;
- Good value for money for customers as a whole – with any increase in bills being affordable in relation to average household disposable incomes;
- Affordable services for all, with every household receiving a bill which is fair and which they can afford; and
- A fully resilient business – in terms of its people, assets, governance, finance and culture – which is ready to meet the challenges beyond 2050.



# INTRODUCTION

Welsh Water is proud to provide essential public services in the management of the water cycle to over three million people across most of Wales and some adjacent parts of England.

In 2013, following involvement of a thousand of our colleagues, we adopted a clear vision for our business, which is:



TO EARN  
THE TRUST OF  
CUSTOMERS,  
EVERY DAY



From our extensive customer research and continued tracking of customer sentiment, we understand that we serve many differing groups of customers, with individual wants, needs and expectations of our services.

**We have developed six customers promises to reflect the service we should provide to all of our customers:**



## INTRODUCTION

Above all, customers place a particular emphasis on the reliability of essential services – the provision of safe drinking water, and the protection of the environment.

They expect us to protect them against short-term shocks (for example, extreme storms or unexpected technical failures in assets) and longer-term stresses (for example, population change and climate change).

They also need to know that they can trust us to anticipate future trends that present challenges to service reliability, and opportunities to improve it. They want to be sure that we are taking the necessary action to ensure that the services we provide are resilient to future trends.

We have developed Welsh Water 2050 to respond to these customer priorities, and to ensure that we can continue to deliver our customer promises and achieve our vision in the context of a changing world.

**This is encapsulated in our Welsh Water 2050 mission statement:**



WELSH WATER 2050 – TO BECOME A TRULY  
WORLD CLASS, RESILIENT AND SUSTAINABLE  
WATER SERVICE FOR THE BENEFIT OF FUTURE  
GENERATIONS

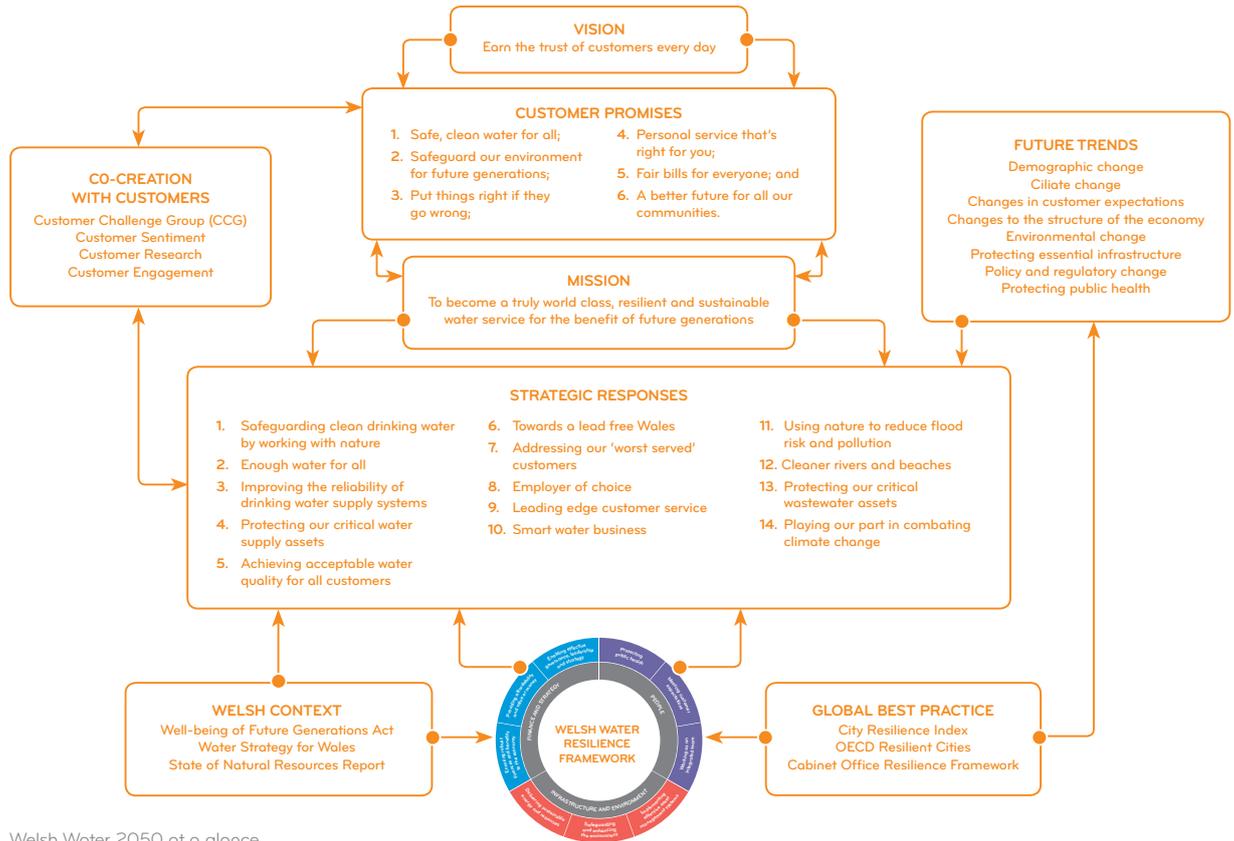


Welsh Water 2050 identifies significant trends over the next 30 years, how these will impact on us and our customers, and how they will be addressed.

In order to mitigate the challenges and harness the opportunities presented by these trends, we have developed 14 strategic responses, which set out a plan for action to respond to these trends.

**Welsh Water 2050 is built on four key elements:**

- The Welsh Water customer promises;
- A review of future trends;
- The Welsh Water resilience framework; and
- Welsh Government policy and context.



Welsh Water 2050 at a glance



# THE DEVELOPMENT OF WELSH WATER 2050



The process used to develop this strategy is based on global resilience best practice set in the context of Welsh Water's operating area, including the legislation and policy of the Welsh Government.

## THE WELSH WATER RESILIENCE FRAMEWORK

Working with Arup (a global multi-disciplinary consultancy firm) and Cardiff University, we have undertaken horizon scanning to identify significant future trends for our customers and our business, and developed a resilience framework.

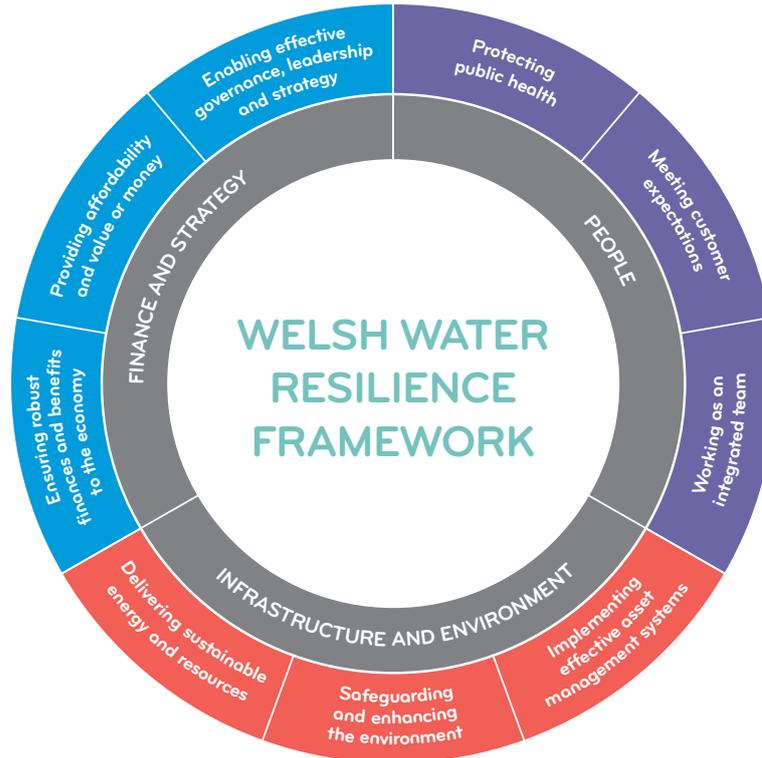
In this context, resilience encompasses all aspects of our business, including assets, systems, people and governance.

The framework was developed by drawing on best practice from a range of institutions and cities around the world, including existing resilience guidance, methodologies, frameworks and strategies.

This included the City Resilience Index, developed by Arup with support from the Rockefeller Foundation, and Ofwat Towards Resilience, developed to challenge the water utilities sector and to inform Ofwat's work.

The framework provided an independently facilitated assessment of Welsh Water's current resilience performance, and forms the basis for the strategic responses identified in Welsh Water 2050.

We will regularly assess our progress against this framework, and set ourselves objectives to improve our resilience in line with the Welsh Water 2050 mission statement.



The Welsh Water resilience framework. © Welsh Water



# FUTURE TRENDS

There is a great deal of uncertainty around the future environment within which we will be operating, but there are several foreseeable future trends that are likely to have a significant impact on our service provision.

It is essential that we consider the challenges and opportunities presented by these trends in Welsh Water 2050, so that we can continue to meet our customer promises into the future.



### DEMOGRAPHIC CHANGE

Population growth will lead to increased water demand in certain areas; ageing population may lead to more customers in vulnerable circumstances, but opportunities may emerge to develop a more diverse age profile in the workforce.



### CLIMATE CHANGE

Extreme rainfall events, which could lead to increased risk of flooding and pollution. Drier, hotter summers are projected, which could result in water supply deficits and the potential for increased water demand.



### CHANGE IN CUSTOMER EXPECTATIONS

Customer expectations are likely to change dramatically with a desire for a more personalised service and control over their use of services and less tolerance of service outages. This will particularly be the case for business customers.



### CHANGES TO THE STRUCTURE OF THE ECONOMY

The growth of the digital, knowledge-based economy will create opportunities to provide services in more efficient ways. However, it could also have an impact on the nature of society, and present a challenge to continuing to meet the needs and expectations of our customers.



Porthcawl. By Gareth Thompson, Creative Commons License (CC BY 2.0)



## ENVIRONMENTAL CHANGE

Invasive species, land use change and increased risk of environmental pollution may lead to a reduction in water quality and biodiversity. Co-operative approaches for the delivery of enhanced ecosystems services could lead to better environmental outcomes.



## PROTECTING ESSENTIAL INFRASTRUCTURE

Ageing infrastructure, a limited supply chain and cyber security are key concerns for future service provision. Technological advances could lead to significant efficiencies in the planning, delivery and operation of new assets.



## POLICY AND REGULATORY CHANGE

Changes in policy and regulation are expected due to the UK leaving the European Union, devolution and changing quality standards; this creates uncertainty, but provides the opportunity for us to help shape future policy. Improved regulatory methods and innovative policy developments could lead to more efficient delivery of services to our customers.

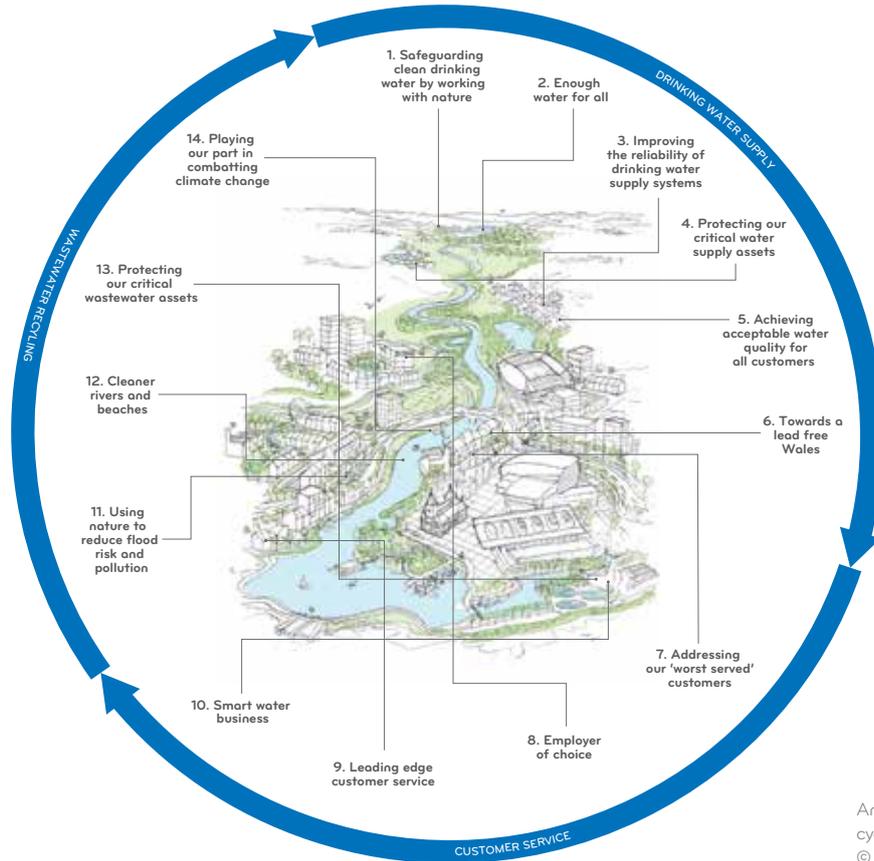


## PROTECTING PUBLIC HEALTH

Drinking water quality are likely to continue to tighten in the future. We will have a role to play in promoting healthier and more sustainable lifestyles for our customers.



# OUR STRATEGIC RESPONSES



An artist's impression of the water cycle, and our strategic responses.  
© Arup

Our future trends identify challenges and opportunities that we expect to face between now and 2050. To respond to these challenges and opportunities, we have developed 14 strategic responses.

For each strategic response we have considered a range of possible actions, from research to investment and set out a comprehensive response and progressive response. The comprehensive response would involve taking all actions that may be necessary to meet the future expectations of our customers by 2050, where these actions fall within our current remit.

The progressive response comprises actions which we believe will be essential, either to meet current customer expectations or to address existing clear trends.

As such, it constitutes a 'no regrets' programme of action, but could leave more work for future generations to do to accelerate the pace of mitigation.

For each strategic response, we explore the outcomes that we expect to achieve by 2050, the investment required and how the outcomes meet the customer promises and the goals of the Well-being of Future Generations Act. An outline of the 14 strategic responses is included overleaf.

There is huge uncertainty when considering future trends as far out as 2050, particularly in respect of future technological advances and future customer expectations.

Our approach in Welsh Water 2050 puts emphasis on maintaining flexibility in how we respond to trends, and in making 'no regrets' decisions, taking first those steps which address the urgent priorities of our customers, whilst targeting research to address longer term potential challenges and opportunities.

Responding to the future trends

**+** Opportunities associated with this future trend are harnessed by the strategic response

**-** Challenges associated with this future trend are mitigated by the strategic response

STRATEGIC RESPONSES	FUTURE TRENDS							
	DEMOGRAPHIC CHANGE	CLIMATE CHANGE	CHANGES IN CUSTOMER EXPECTATIONS	CHANGES TO THE STRUCTURE OF THE ECONOMY	ENVIRONMENT CHANGE	CHANGES TO ESSENTIAL INFRASTRUCTURE	POLICY AND REGULATORY CHANGE	PROTECTING PUBLIC HEALTH
1. Safeguarding clean drinking water by working with nature		-		+ -	+ -		+ -	+ -
2. Enough water for all	-	+ -		+ -	-		-	
3. Improving the reliability of drinking water supply systems		-			-	-		
4. Protecting our critical water supply assets		-		-	-	-		
5. Achieving acceptable water quality for all customers	-	-				-		
6. Towards a lead free Wales		-					+ -	-
7. Addressing our 'worst served' customers	-		-					
8. Employer of choice	+ -		-	+ -				
9. Leading edge customer service	+ -		+ -	+ -				+
10. Smart water business	-	-	-	+		+ -		
11. Using nature to reduce flood risk and pollution	-	-		-	-	+ -	+ -	
12. Cleaner rivers and beaches	-	-		+ -	-		+ -	+ -
13. Protecting our critical wastewater assets		-	-	-		-		
14. Playing our part in combating climate change		-		+ -			+ -	

1



### SAFEGUARDING CLEAN DRINKING WATER BY WORKING WITH NATURE

Catchments as a first line of defence: we will face increased levels of pesticides, fertilisers, nutrients and pathogens in raw water, and increased turbidity of water reaching our water treatment works due to the intensification of agriculture and greater intensity of storms. Therefore, we will co-create an extensive, innovative programme of catchment management with landowners and partners.

WELSH WATER 2050

2



### ENOUGH WATER FOR ALL

Confronted with an increasing water supply demand gap from a combination of population growth and drier summers due to climate change, we will use our Water Resource Management Plan to review the water supply balance to 2050. We propose to implement water transfers, demand management measures and leakage reduction programmes to address any deficits.

3



### IMPROVING THE RELIABILITY OF DRINKING WATER SUPPLY SYSTEMS

Faced with an increased risk of outages due to agricultural run-off, extreme weather events, terrorism, and cyber attacks, we will build more flexibility and integration into our water treatment and supply systems.

4



### PROTECTING OUR CRITICAL WATER SUPPLY ASSETS

With increasing risks of disruption (for example, from severe weather events resulting from climate change and increased reliance on technology) and limited customer tolerance of supply outages, we will improve the resilience of critical water assets which have high consequences of failure.

5



### ACHIEVING ACCEPTABLE WATER QUALITY FOR ALL CUSTOMERS

Ageing water mains and more extreme weather events increase the risk of supplying water which is discoloured or has a poor taste. This will be addressed through a targeted replacement of iron mains.

6



### TOWARDS A LEAD FREE WALES

We have the opportunity to help improve public health, and propose a targeted replacement of lead communication and supply pipes, as part of a wider societal effort to address lead in drinking water.

7



### ADDRESSING OUR 'WORST SERVED' CUSTOMERS

Faced with increasing customer expectations for a good service at all times, we will address the longstanding service complaints of 'worst served customers' to ensure that everyone receives an acceptable level of service.

8



### EMPLOYER OF CHOICE

With an ageing workforce, an increasing shortage of technically skilled employees and more flexible working behaviours, we will need to continue to be an employer of choice; attracting, training and retaining the best people to deliver excellent customer service.

9



### LEADING EDGE CUSTOMER SERVICE

Changing customer expectations, the digital revolution and demographic and lifestyle change are all leading Welsh Water to develop a customer service culture. We will harness technological change to provide a personalised service for customers through their preferred contact channel.

10



### SMART WATER SYSTEM MANAGEMENT

Technological advances, we will improve the service performance and resilience of our assets through remote sensing, data analysis and automation; solving problems before they happen.

11



### USING NATURE TO REDUCE FLOOD RISK AND POLLUTION

RainScaping our communities: confronted with urban creep due to demographic change and increased intensity of rainfall due to climate change, Welsh Water is proposing to reduce the risk of sewer flooding and pollution through sustainable urban drainage systems.

12



### CLEANER RIVERS AND BEACHES

With increasing pressure on the natural environment from increased population, changing land use, climate change and new sources of pollution, we will improve our wastewater assets to help achieve 'good' environmental status for our rivers, lakes and coastal waters.

13



### PROTECTING OUR CRITICAL WASTEWATER ASSETS

Faced with an increased risk of disruption, for example, from an increase in severe weather as result of climate change, and reduced customer acceptability of pollution events, we will improve the resilience of our critical wastewater assets, which have high environmental and customer impacts of failure.

14



### PLAYING OUR PART IN COMBATTING CLIMATE CHANGE

Faced with a changing climate and increased energy costs, we will aim to become an energy neutral business, whilst maximising the opportunities to reuse treated water and other potentially valuable natural materials, contributing to the circular economy.



# AFFORDABILITY FOR CUSTOMERS

At Welsh Water, we are acutely aware that any expenditure we incur is ultimately paid for by our customers through water and sewerage bills and that the areas of Wales and England that we serve include communities that are amongst the poorest in the UK.

The potential investment cost of addressing the future challenges we face would be between £4 and £10 billion over the next 30 years and, it is important that we consult with customers and stakeholders on the investment underlying Welsh Water 2050.

**We always aim to deliver value for money for our customers and are committed to drive down costs by:**

- Seeking innovative new technologies to deliver lower investment costs;
- Working in partnership with others to take advantage of synergies that will deliver improved outcomes more efficiently; and
- Minimising our running costs by looking at new ways of working and exploiting opportunities for savings.

For the purposes of the costs presented in in this document, we have assumed that technological advances and new innovative practices will present opportunities for reducing unit investment costs by some 1-2% a year (excluding the impact of inflation).

If this could be achieved, it would mean that our unit cost of delivery would be some 50% lower in 2050 than it is today.



WE ALWAYS AIM  
TO DELIVER VALUE  
FOR MONEY



## AFFORDABILITY FOR CUSTOMERS

Welsh Water's charges to customers are set every 5 years by the industry regulator, Ofwat through a process known as a Price Review. The next Price Review is in 2019 which will set charges for the 5 years 2020- 2025.

If we were to pursue the comprehensive scenario for all strategic responses, we estimate that customer bills would increase by around 1% per annum above inflation.

Similarly, if we were to pursue the progressive scenario for all strategic responses, we estimate that customer bills would increase by inflation only.

Welsh Government estimates that some 23% of people of in Wales are currently living in relative poverty (where the total household income from all sources is less than 60 per cent of the average UK household income). If society as a whole decides that that it wants improved outcomes and is prepared to pay more in bills for them, then it becomes increasingly important to protect those that struggle to pay.

Welsh Water is the industry leader in providing support to customers with difficulty in paying their bills. Our range of affordability tariffs currently helps over 70,000 customers and we aim to extend this to some 100,000 customers by 2020.

The cost of lower tariffs to these customers is met by charging other customers a little more, and by Welsh Water itself through the application of part of the surpluses that are available through not having to pay shareholders dividends.

Our customer research shows that our customers consistently show strong support for this approach, and it is our intention to continue to help those customers who struggle to pay their bills.

Investment costs and total costs for all comprehensive and progressive strategic responses

1. Investment costs represent the capital expenditure that would be incurred at today's unit cost of delivery before future efficiency improvements.
2. Total cost is the investment cost plus the additional running costs to operate and maintain the investment net of any offsetting savings that result, and net of forecast improvements in efficiency from new technology and innovative ways of working. In some cases, the efficiencies more than offset the additional running costs, resulting in the total cost being less than the investment cost.
3. Price base – all costs are stated at today's price levels i.e. excluding the effect of inflation.

WELSH WATER 2050 EXPENDITURE SUMMARY	COMPREHENSIVE		PROGRESSIVE	
	INVESTMENT COSTS (1)	TOTAL COSTS (2)	INVESTMENT COSTS (1)	TOTAL COSTS (2)
STRATEGIC RESPONSES	£m	£m	£m	£m
1. Safeguarding clean drinking water by working with nature	400	317	150	121
2. Enough water for all	600	527	600	527
3. Improving the reliability of drinking water supply systems	1,400	929	500	330
4. Protecting our critical water supply assets	150	298	150	298
5. Achieving acceptable water quality for all customers	2,400	1,762	600	446
6. Towards a lead free Wales	45	33	45	33
7. Addressing our 'worst served' customers	240	213	0	6
8. Employer of choice	0	26	0	26
9. Leading edge customer service	180	147	180	147
10. Smart water business	250	496	250	496
11. Using nature to reduce flood risk and pollution	2,600	2,091	700	577
12. Cleaner rivers and beaches	1,200	1,507	600	807
13. Protecting our critical wastewater assets	200	397	200	397
14. Playing our part in combating climate change	500	48	500	48
	<b>10,165</b>	<b>8,766</b>	<b>4,475</b>	<b>4,259</b>



# THE FUTURE OF WELSH WATER

## CONTRIBUTING TO THE FUTURE OF WALES

Welsh Water 2050 considers both the direction for our own business and outlines the impact we want to have on the people, economy and natural environment of our operating area in Wales and England in the long-term.

Welsh Water 2050 contributes to the wider goals of the Well-being of Future Generations Act 2015 and the Water Strategy for Wales. It also contributes to addressing the risks and opportunities outlined in the State of Natural Resources Report.

Links between Well-being goals and strategic responses

	WELL-BEING GOALS						
	A resilient Wales	A prosperous Wales	A healthier Wales	A more equal Wales	A Wales of cohesive communities	A Wales of vibrant culture and thriving Welsh language	A globally responsible Wales
1. Safeguarding clean drinking water by working with nature	Orange	Yellow	Red	Grey	Grey	Grey	Teal
2. Enough water for all	Orange	Grey	Red	Grey	Grey	Grey	Grey
3. Improving the reliability of drinking water supply systems	Orange	Yellow	Grey	Grey	Blue	Grey	Grey
4. Protecting our critical water supply assets	Orange	Yellow	Red	Grey	Grey	Grey	Grey
5. Achieving acceptable water quality for all customers	Orange	Grey	Grey	Purple	Blue	Grey	Grey
6. Towards a lead free Wales	Orange	Grey	Red	Purple	Grey	Grey	Grey
7. Addressing our 'worst served' customers	Grey	Yellow	Grey	Purple	Grey	Grey	Grey
8. Employer of choice	Grey	Yellow	Red	Purple	Grey	Pink	Grey
9. Leading edge customer service	Grey	Grey	Grey	Purple	Grey	Pink	Teal
10. Smart water business	Orange	Yellow	Grey	Grey	Grey	Grey	Grey
11. Using nature to reduce flood risk and pollution	Orange	Yellow	Red	Purple	Blue	Grey	Teal
12. Cleaner rivers and beaches	Orange	Yellow	Grey	Grey	Grey	Grey	Teal
13. Protecting our critical wastewater assets	Orange	Yellow	Grey	Grey	Grey	Grey	Grey
14. Playing our part in combating climate change	Orange	Yellow	Grey	Grey	Grey	Grey	Teal

## RESEARCH AND INNOVATION

It is clear that significant efficiencies will be required over the course of the next 30 years if we are to meet the expectations of our customers and mitigate the challenges ahead, whilst keeping bills at an affordable level.

The rapid pace of technological change holds out the prospect of providing services more efficiently and reliably in the future. Moreover, new methods of working together, including co-creation between water companies, their customers and other organisations could enable society to deliver its goals more efficiently.

One of the primary purposes of Welsh Water 2050 is to help us shape and prioritise our long-term science and research agendas, to ensure that the considerable expenditure that we make is focused and efficiently invested on the issues that will matter most to our customers in the long-term.





# GET INVOLVED

We want to know your views and so we are publishing this consultation draft of Welsh Water 2050.

### In particular, we would like to know:

- Have we identified the right trends?
- Have we developed the right strategic responses in order to meet these trends?
- Which strategic responses are priorities in the next 5-10 years in order to start to meet the challenges and opportunities up to 2050?
- Which scenario (progressive or comprehensive) is appropriate for each strategic response?
- What level of trade-off are you prepared to accept between bills and long-term investment in your water and wastewater services?

### You can play your part in this consultation by:

#### POST

Sending a written response to the questions asked in this document:

#### Welsh Water 2050

##### Communications Team

Dwr Cymru Welsh Water  
Nelson, Treharris,  
Mid Glamorgan  
CF46 6LY

#### EMAIL

Emailing your response to:  
[ww2050@dwrcymru.com](mailto:ww2050@dwrcymru.com)

#### ONLINE:

Going online to find out more about our plans and responding to our consultation at [dwrcymru.com/ww2050](http://dwrcymru.com/ww2050)

#### MEETINGS

If your business or organisation would like to discuss the consultation with us, we will arrange to meet with you or invite you to one of stakeholder workshops. Please contact us at [ww2050@dwrcymru.com](mailto:ww2050@dwrcymru.com)

We will be holding public events throughout our operating area where you can come and talk to us and tell us what you think.

Visit our website, [dwrcymru.com](http://dwrcymru.com), for details.

This consultation will end on **31 July 2017**.



WE WANT TO  
HEAR YOUR  
VIEWS SO  
THAT WE CAN  
BE CERTAIN  
THAT OUR  
PLANS MEET  
YOUR NEEDS.





Dŵr Cymru  
Welsh Water