

Making the right choices

Water services stakeholder workshop

12 June 2012



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Andy Smith

Water Services Director

12 June 2012

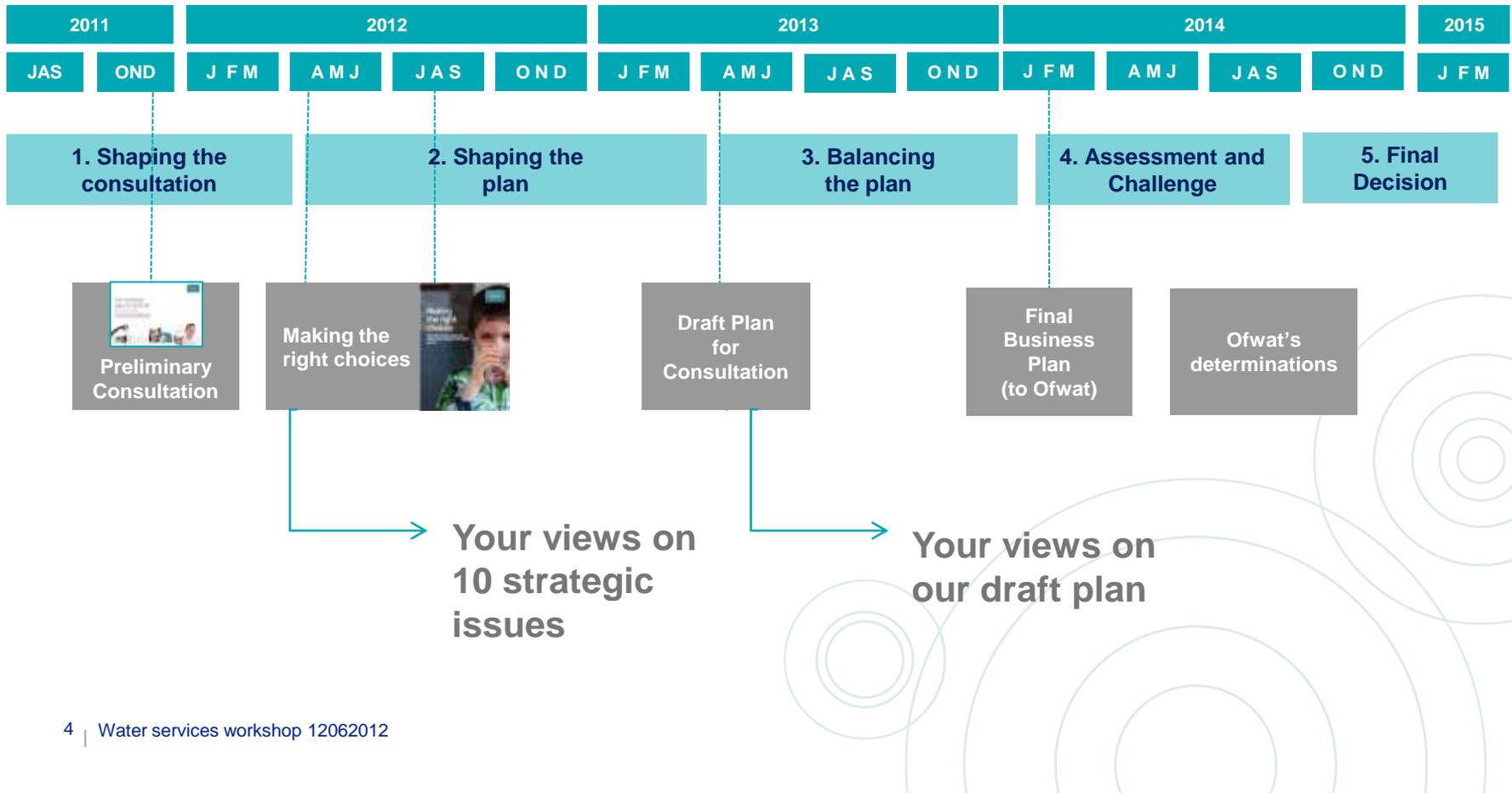


Introductory DVD



Today is part of a programme of consultation

We will use what you tell us today, together with the outcome of customer research, to develop a draft plan.



We will need to make trade-offs between priorities for 2015-20

We cannot take decisions on water resources and resilience in isolation from other issues.

A guide to help calibrate discussions today:

- Each £50m capital we invest \approx £1 change in customer bills.
- For every £5m operating expenditure spent (per year) \approx £1 change in bills.
- The average combined water and sewerage bill in the Severn Trent region for 2012/13 is £326 (the lowest in England and Wales).

Please use this as a guide. Precise bill impacts depend on a range of factors such as specific details on the type of asset, timing etc.

Thank you



Introduction from Green Issues Communiqué

The role of GIC

- Independent workshop facilitation
- Ensuring the comments are noted
- Production of the Stakeholder Participation Report

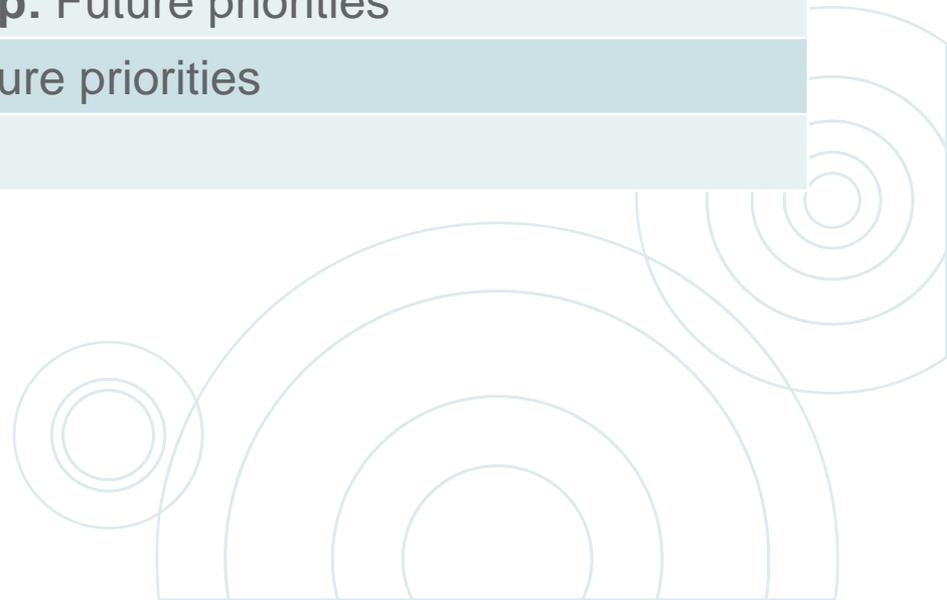
Format for the day

- Sessions 1 & 2: Making sure we have enough water to supply our customers
- Sessions 3 & 4: Keeping our services reliable



Agenda for the day

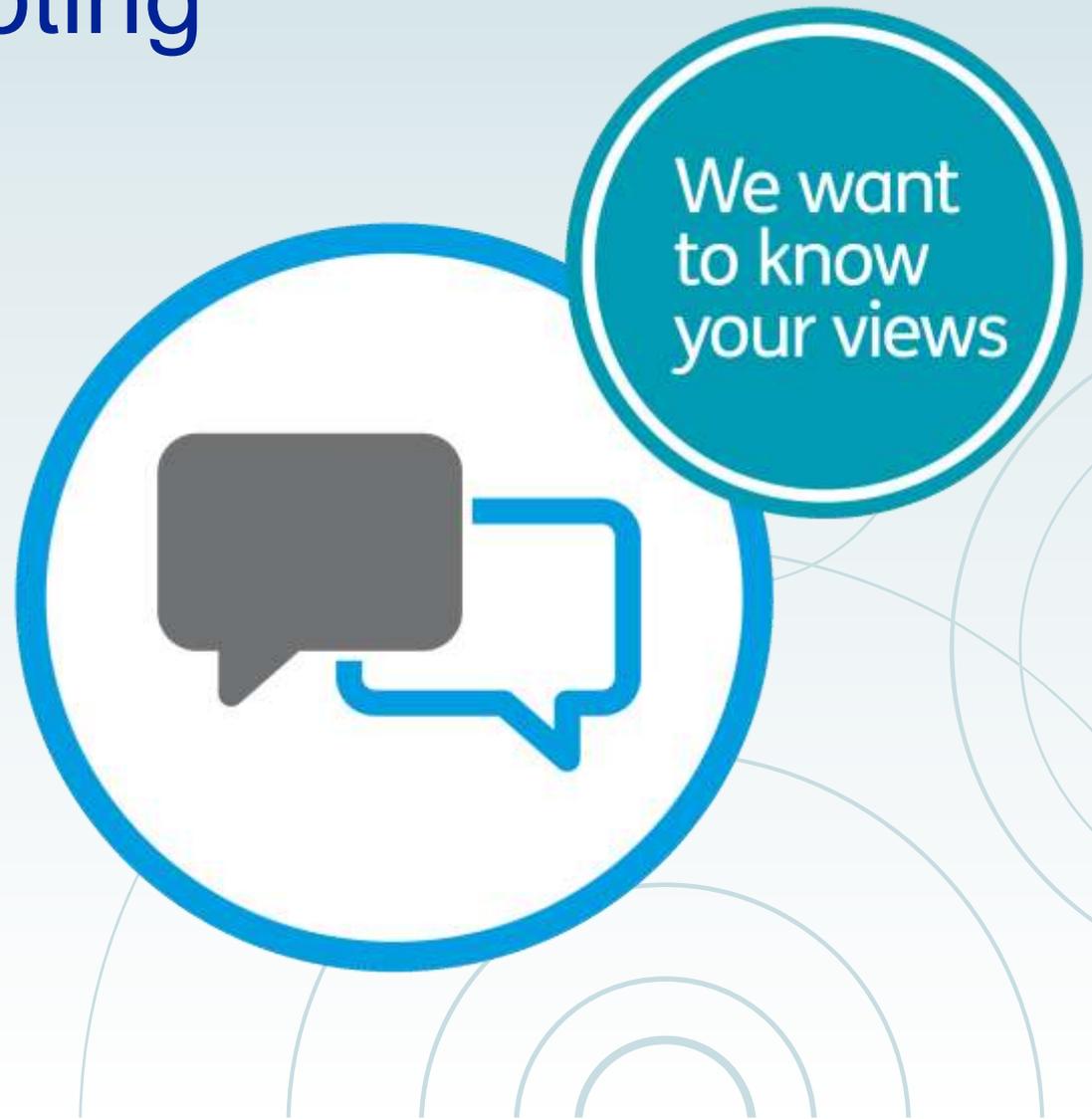
Part 1	Making sure we have enough water to supply our customers
10.20 - 10.30	Presentation: Background and current priorities
10.30 - 11.00	Round table workshop: Background and current priorities
11.00 - 11.05	Electronic voting: Current priorities
11.05 - 11.25	Coffee break
11.25 - 11.35	Presentation: Future priorities
11.35 - 12.20	Round table workshop: Future priorities
12.20 - 12.25	Electronic voting: Future priorities
12.25 – 13.15	Lunch



Agenda for the day

Part 2	Keeping our services reliable
13.15 - 13.20	GIC introduction
13.20 – 13.30	Presentation: Background and current priorities
13.30 - 14.00	Round table workshop: Background and current priorities
14.00 - 14.05	Electronic voting: Current priorities
14.05 - 14.20	Coffee break
14.20 - 14.30	Presentation: Future priorities
14.30 - 15.15	Round table workshop: Future priorities
15.15 - 15.20	Electronic voting: Future priorities
15.20 - 15.30	Close and thank you
15.30	Opportunity to meet STW staff

Electronic voting



Electronic voting: practice questions

QA: Are you awake?

1. Yes
2. No



Electronic voting: practice questions

QB: How did you travel to the event?

1. By car
2. By train
3. Walked
4. Taxi
5. Bicycle



Electronic voting: practice questions

QC: Who are our stakeholders today?

1. Council officer or elected representative
2. Developer
3. Environmental / conservation group representative
4. Customer
5. Business group representative
6. Domestic customer representative
7. Regulator or national government
8. Water Forum member
9. Other

Electronic voting: practice questions

QD: Are you a Severn Trent Water customer?

1. Yes
2. No
3. Rather not say!



Making the right choices:

Making sure we have enough water to supply our customers

Water services stakeholder workshop

Marcus O'Kane, Water Resources Strategy Manager

12 June 2012

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Session 1: Background and current priorities

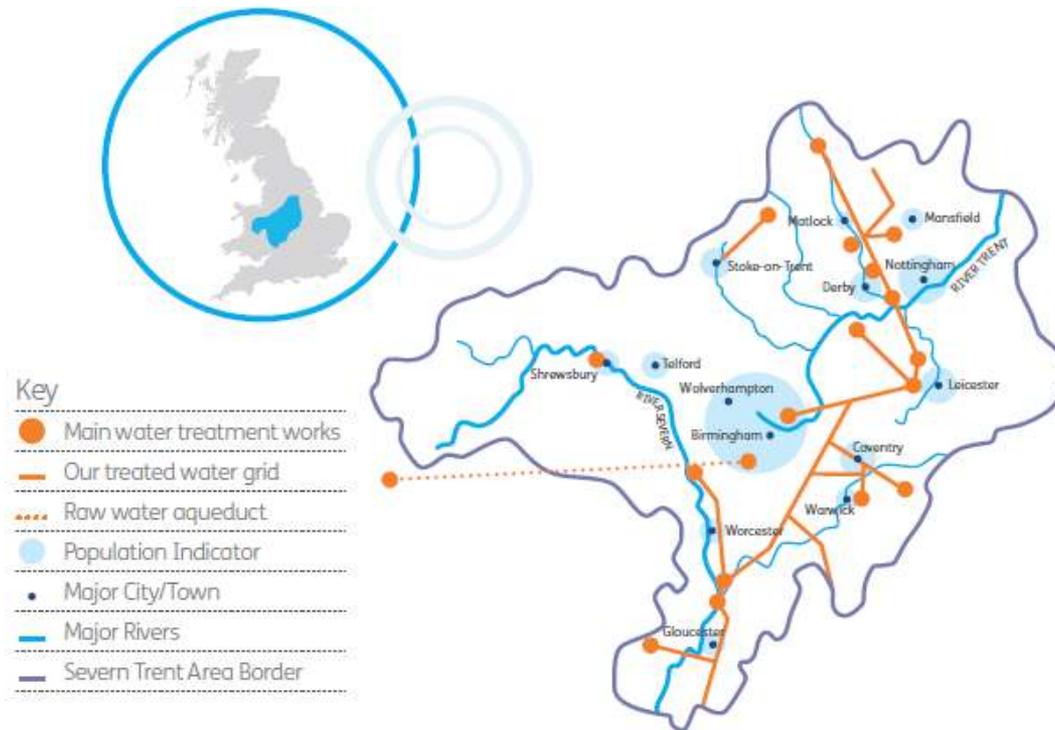
Objectives of the session:

Inform: Raise awareness of the Water Resources Management Planning process

Inform: Explain the building blocks of water supply / demand assessment

Consult: Are there any other issues our plans should take into account?

We are updating our plans for supplying drinking water to 7.7 million people across the Midlands and mid-Wales

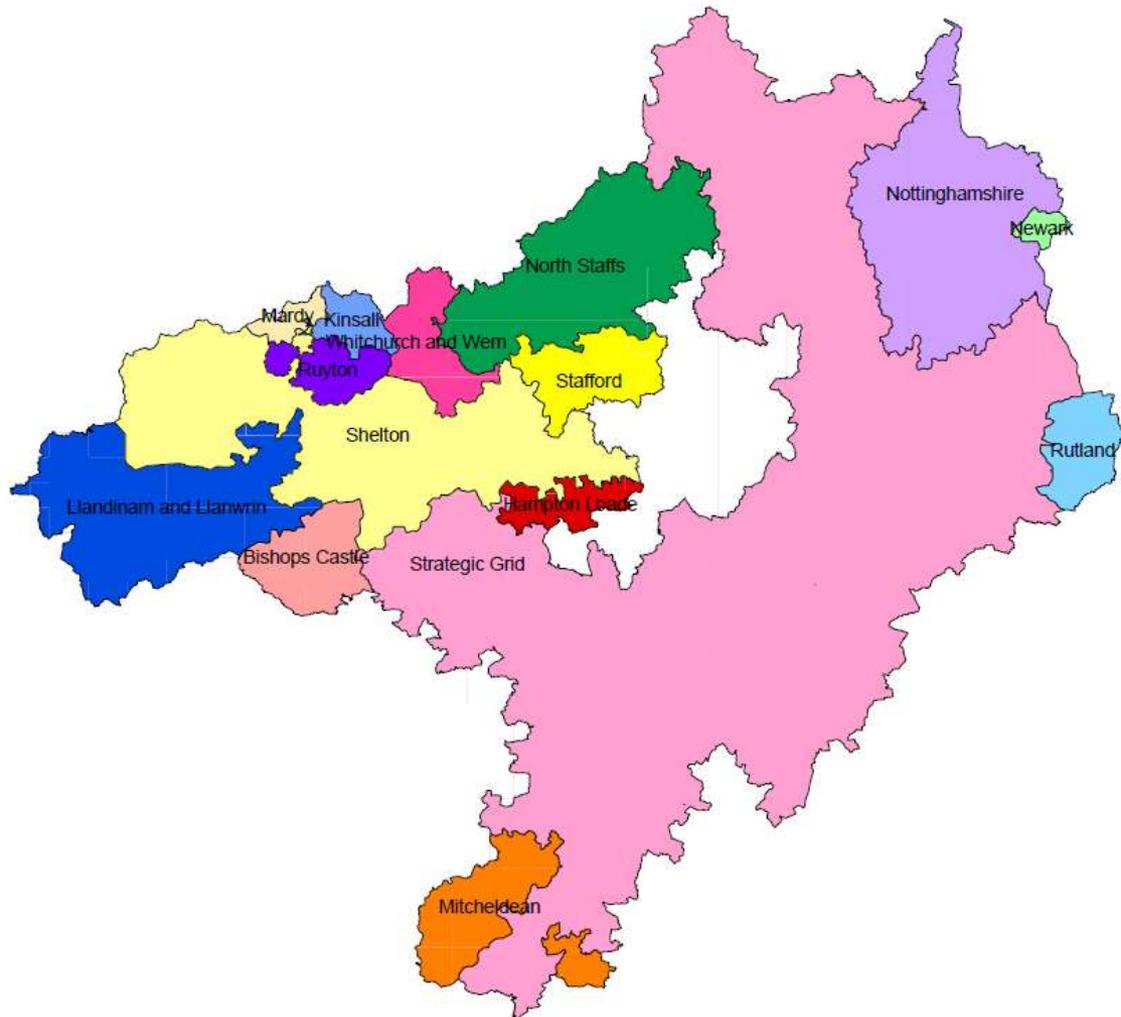


- In 2011-12 we supplied 1.8 billion litres of treated water to 7.7 million people
- Our supplies come from a balanced mix of reservoirs, rivers and groundwater sources.
- We operate 126 water treatment works and distribute water through 47,000km of pipes.
- Our integrated strategic grid provides supplies to 2/3 of the region's population and gives us great supply flexibility. As a result we were able to maintain unrestricted supplies during the recent drought.

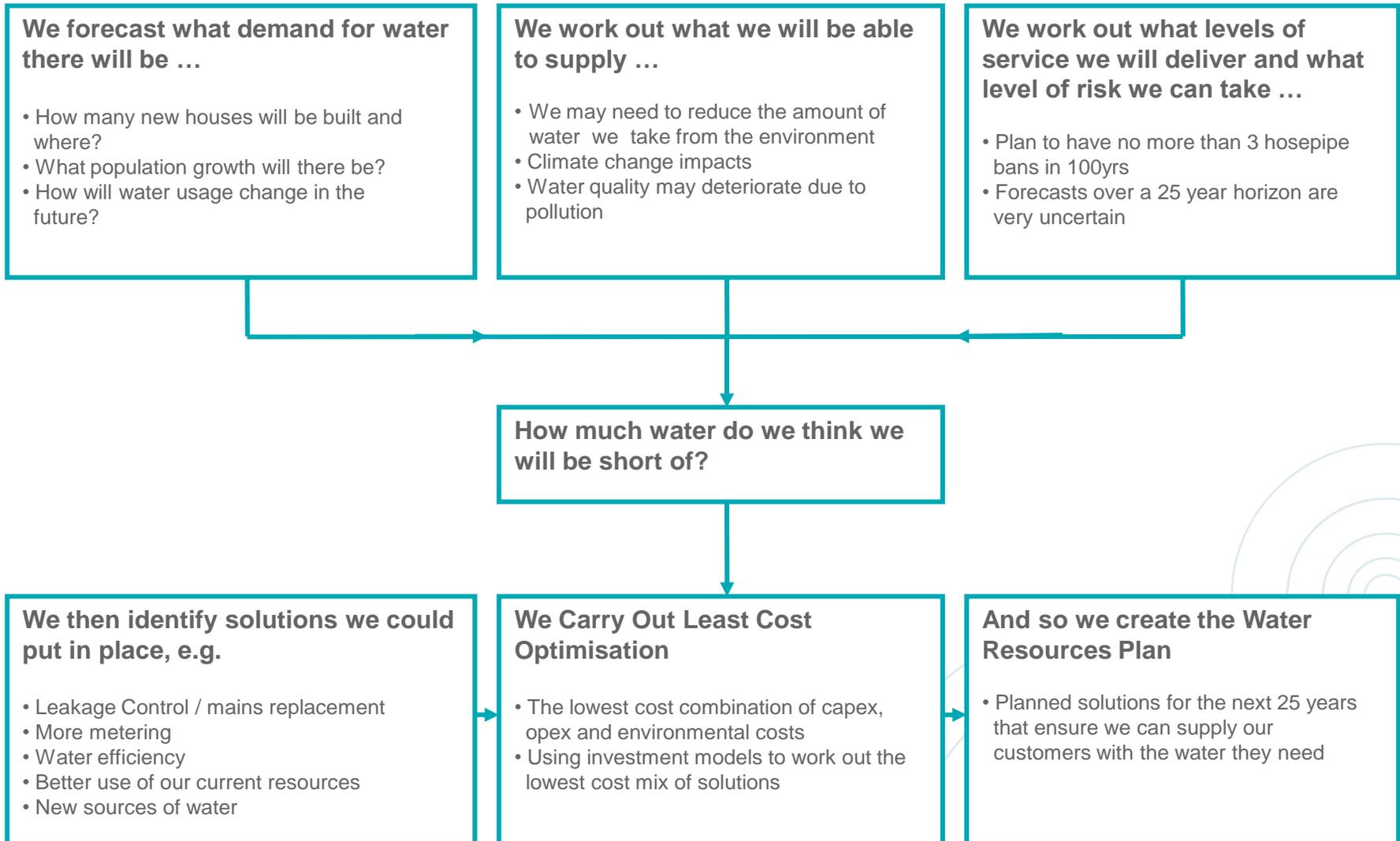
Water resources planning uses a well established framework

- Since 2003 Government has required all water companies to produce a Water Resources Management Plan (WRMP) that explains how we will provide our customers with a sustainable and reliable supply of water.
- The WRMP sets out what we need to do to ensure that we have enough water for the next 25 years.
- It considers what the future pressures might be on the demand for water and our ability to supply customers.
- The WRMP is submitted to Defra every five years and goes through a public consultation process.
- Our current plan can be found on our website.
- We are here today to discuss the issues that will shape our next WRMP.

We plan on the basis of 15 water resource zones



How do we build a Water Resources Plan?



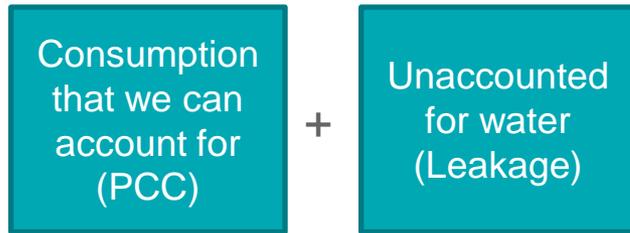
We are already working to deliver the right balance between supply and demand for water

- Between 2010 and 2015 we will have invested:
 - Over £50m in enhancing our future supply capability, which will provide an additional 100MI/d benefit in the next 10 years
 - £360m to manage and reduce leakage
 - £53m to manage customer demand, principally through metering
- We will have increased the number of customers who have water meters from 34% to over 40% by 2015
- Our current approach is to find the mix of demand and supply options that balances the impact on the environment and on customers' bills.

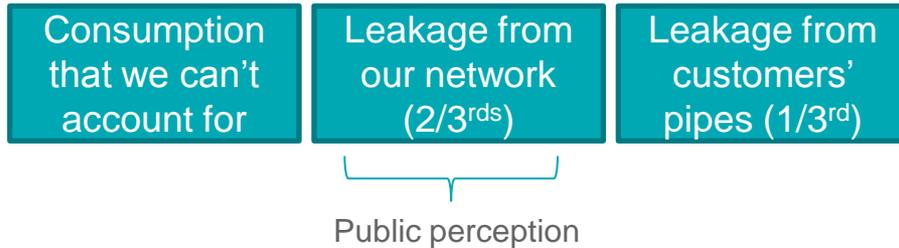
	2010-15
New supply capacity	0MI/d
Leakage reduction	43MI/d
Customer demand management	18MI/d
Total benefit	61MI/d

We have focused on using water resources efficiently

The water we put into our system is made up of:



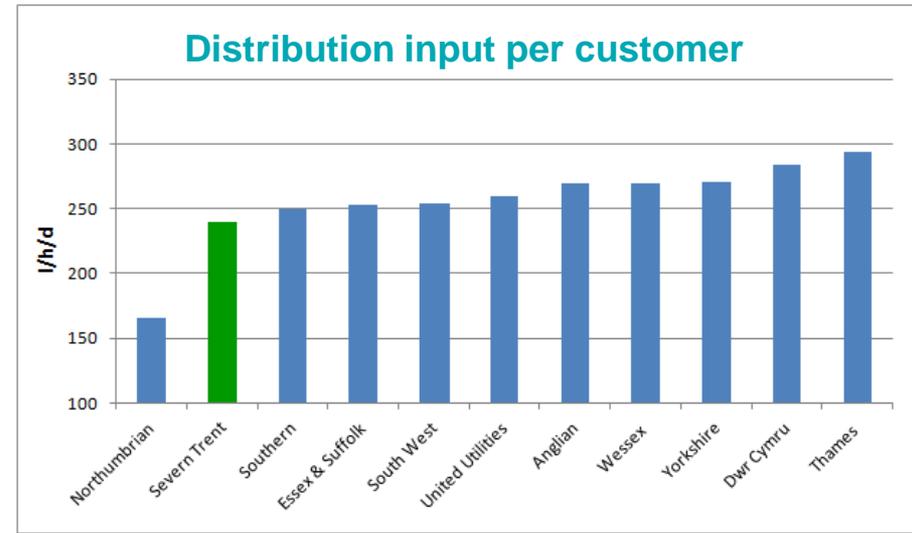
The popular description of leakage is formally ‘unaccounted for water’, and is made up of:



On occasions customers without meters consume more water and it appears that ‘leakage’ goes up.

We make adjustments for this in our calculations and we plan to improve our measurement systems.

We have the second lowest water input per customer:

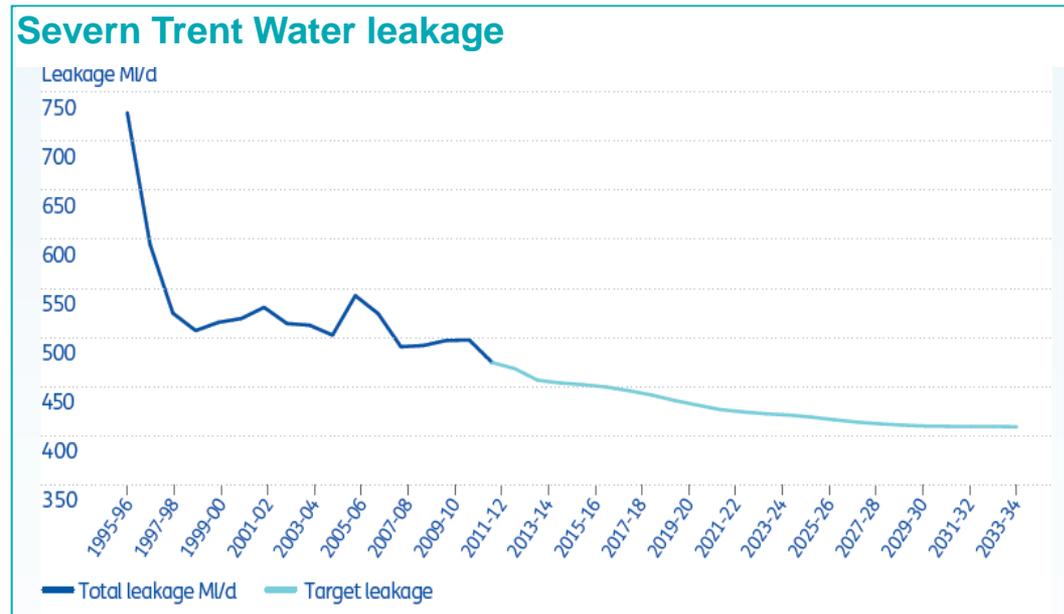


The amount of water we lose through leakage is now at the lowest ever levels and it will continue to fall

- We operate a network of 47,000km of pipes. Our leakage and mains renewal investment means that the amount of water lost has reduced by 36% since the early 1990's.
- Leakage on our pipes can occur as a result of:
 - Bursts which are relatively easy to find and fix;
 - Background weeps and seeps which are difficult to find.
- It becomes increasingly difficult and costly to drive leakage down as we have to find more and more of the small leaks.

For example:

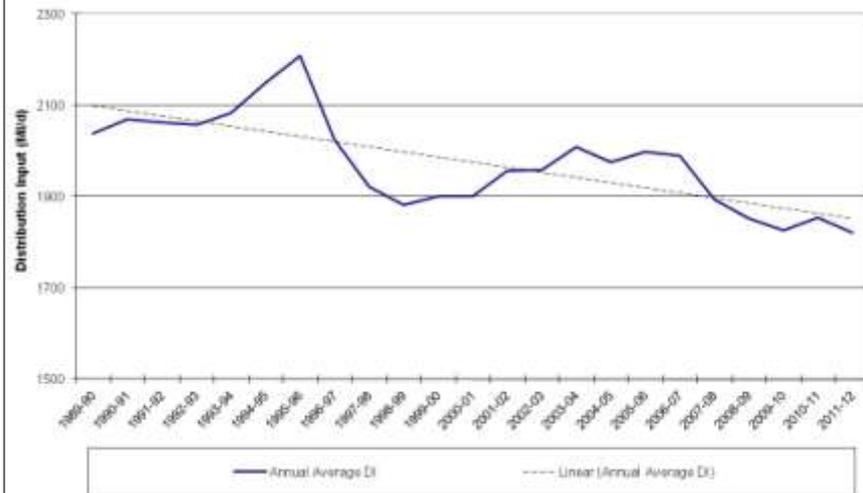
- A 10% reduction = + £14 on bills
- A 20% reduction = + £32 on bills



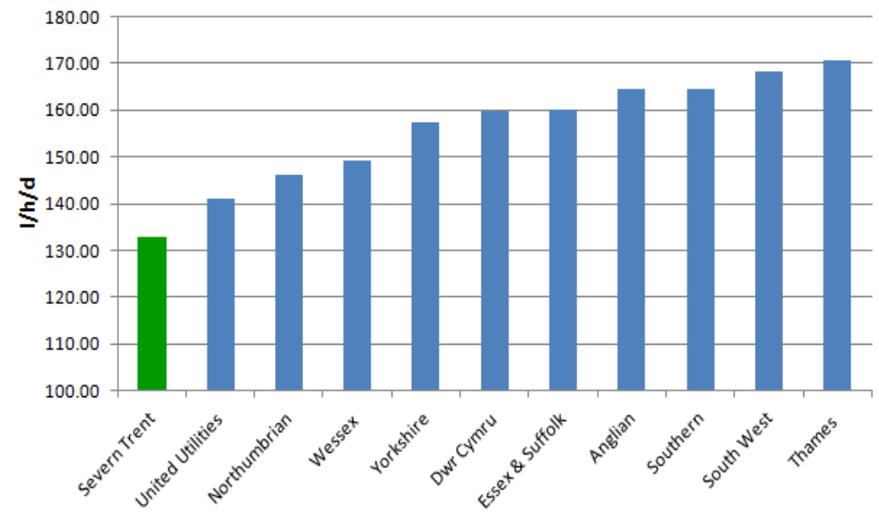
Demand for water in our region has reduced despite population and housing growth

- Population has increased across our region
- Modern living has introduced a range of in home devices that use significant amounts of water
- Despite this Severn Trent have successfully offset this increasing demand through:
 - our water efficiency activities,
 - our leakage reduction programme
 - declining demand from commercial customers
- Using 126 litres per person per day, Severn Trent customers are amongst the most efficient water users in the UK.

Total distribution input since 1989

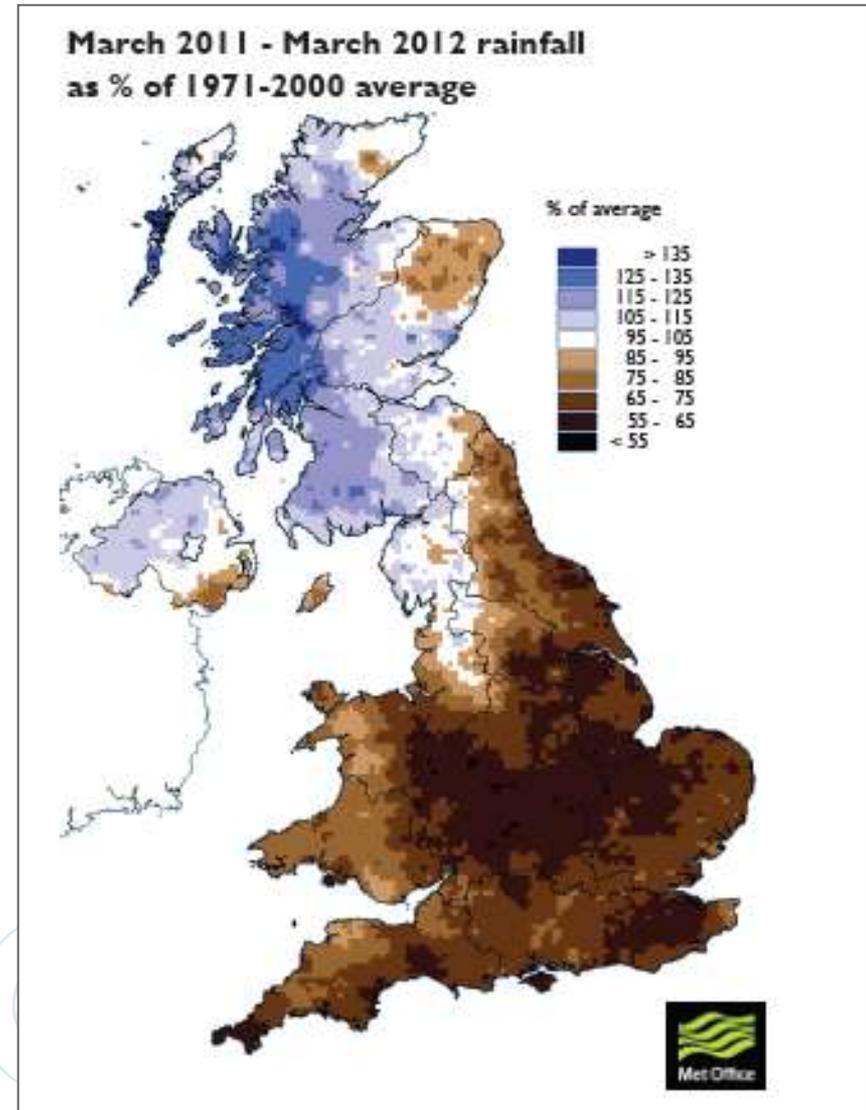


Unmeasured household per capita consumption



Our aim is to ensure customers do not experience a hosepipe ban unless there are exceptional conditions

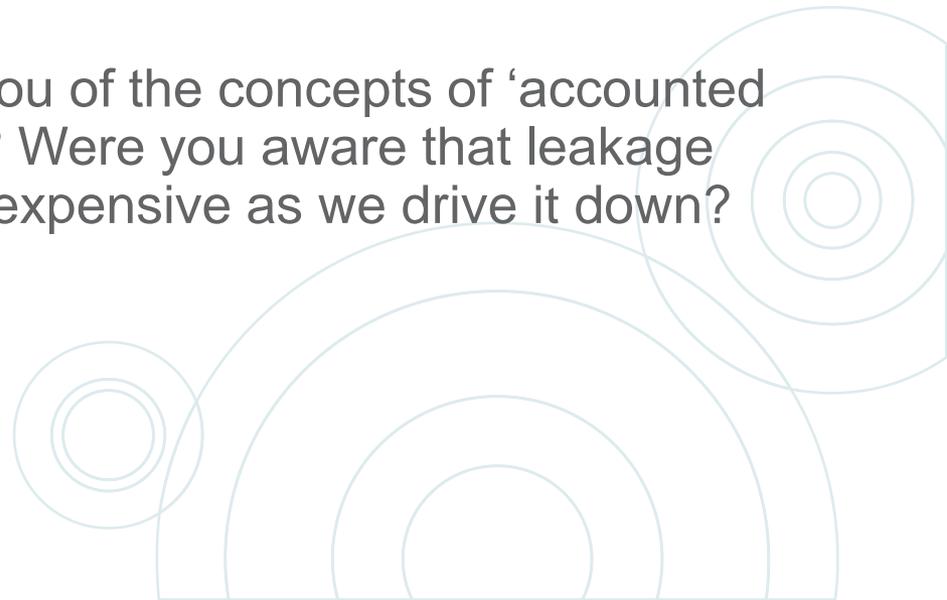
- Despite the driest 12 month period on record for our region we have avoided the need for hosepipe bans this year.
- However, long term records show that in the past there have been more exceptional and prolonged droughts when we would have had to impose hosepipe bans.
- Our current plans mean that customers should not experience a hosepipe ban more frequently than 3 times in 100 years.
- The last time we imposed a hosepipe ban was during the severe 1995-96 drought.



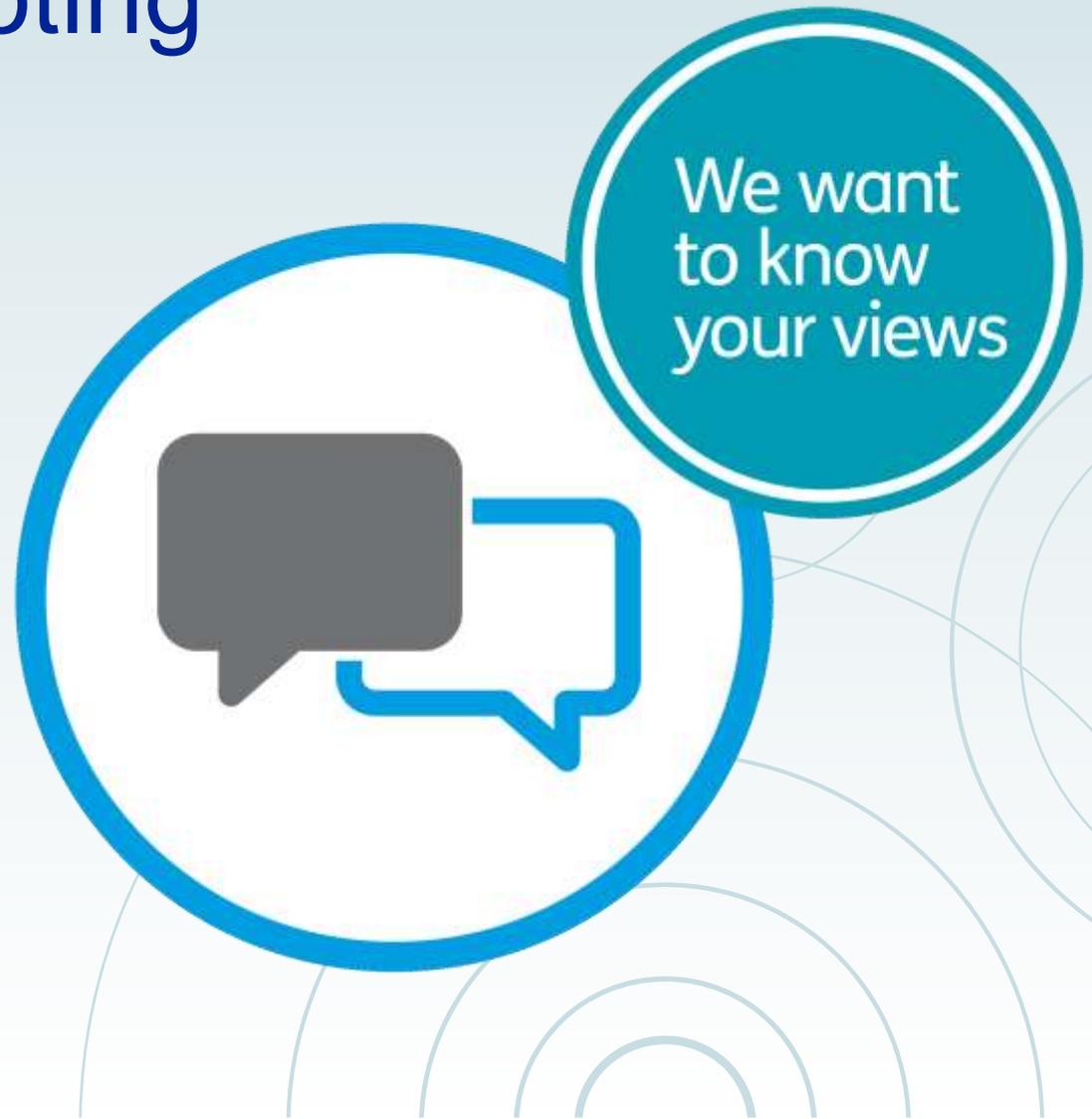
Session 1: Current priorities

Discussion questions

- Q1:** Have we identified the right issues in our water resources management planning. Are there any other issues that we should take into account?
- Q2:** Should hosepipe bans be used as an option to manage supplies?
- Q3:** Before today, how aware were you of the concepts of 'accounted for' and 'unaccounted for water'? Were you aware that leakage reduction becomes increasingly expensive as we drive it down?



Electronic voting



Session 1: Current priorities

Electronic voting

Q4: Before this session, how aware were you that we had a published Water Resources Management Plan?

1. Completely unaware
2. Aware
3. Very aware



Session 1: Current priorities

Electronic voting

Q5: How relevant is our current Water Resources Management Plan to your organisation?

1. Irrelevant
2. Relevant
3. Very relevant
4. Don't know



Session 1: Current priorities

Electronic voting

Q6: To what extent do you agree with the following statement?

“A hosepipe ban this year in the Severn Trent region would have been a reasonable response to the exceptionally low rainfall”

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree



Session 1: Current priorities

Electronic voting

Q7: To what extent do you agree with the following statement?

“Severn Trent Water is doing enough to reduce unaccounted for water”

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree



Session 1: Current priorities

Electronic voting

Q8: What is an acceptable frequency of hosepipe bans?

1. Never
2. Maintain current levels of service
3. More frequent than current
4. Less frequent than current
5. Don't know



Session 2: Future priorities

Objectives of the session:

Inform: Discuss the future pressures on water supply and demand

Consult: How should we balance the needs of customers with the needs of the environment?

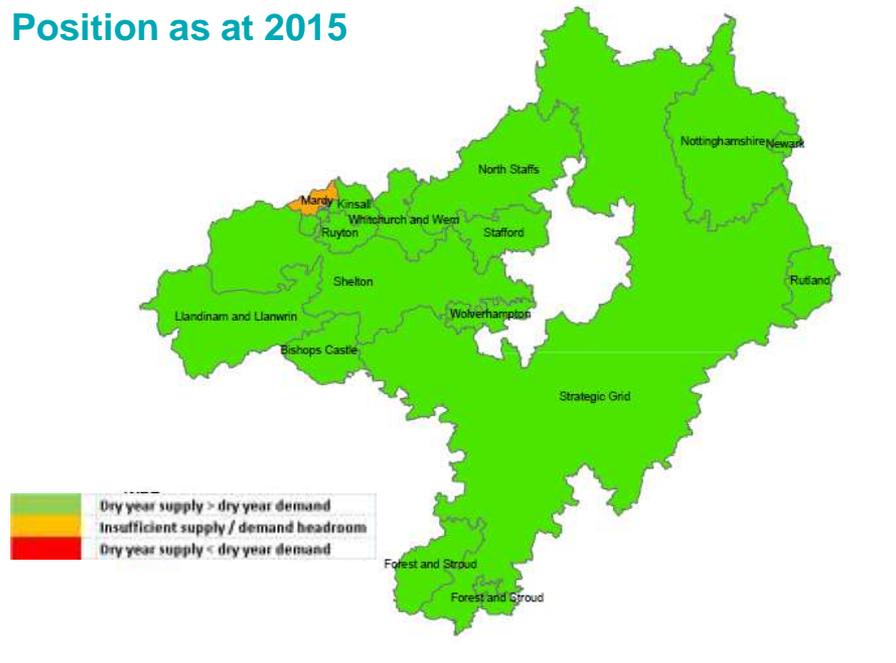
Our future water resource plans have to address some significant long term risks and uncertainties

- The most immediate risk to our current water resources is the need to reduce our abstractions where they are found to be environmentally unsustainable.
- In the longer term, climate change impacts present us with the biggest planning uncertainties.
-
- Diffuse pollution and deteriorating raw water quality puts the long term viability of some of our sources at risk.
- Population and housing growth is not expected to be a major driver of investment at a water resource zone level, although it will trigger more local investment in water distribution.

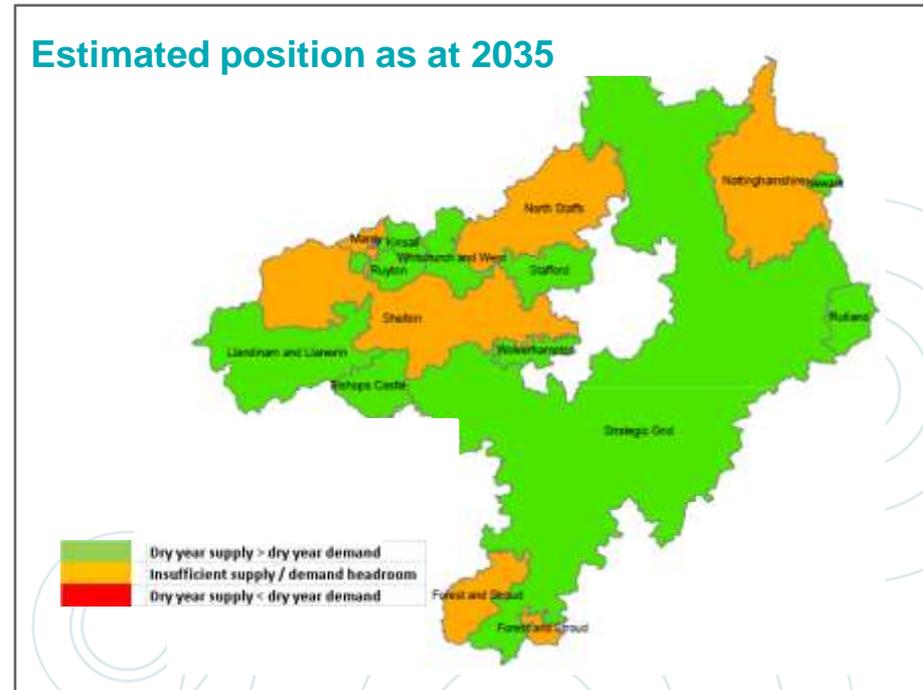
Without action our future supply is unsustainable

- We estimate that at least 5% of our supply capability is likely to be lost by 2030 largely due to sustainability reductions and climate change
- We will need future investment to prevent a deterioration in levels of service to customers
- We have choices about how we respond to these supply / demand pressures.

Position as at 2015



Estimated position as at 2035



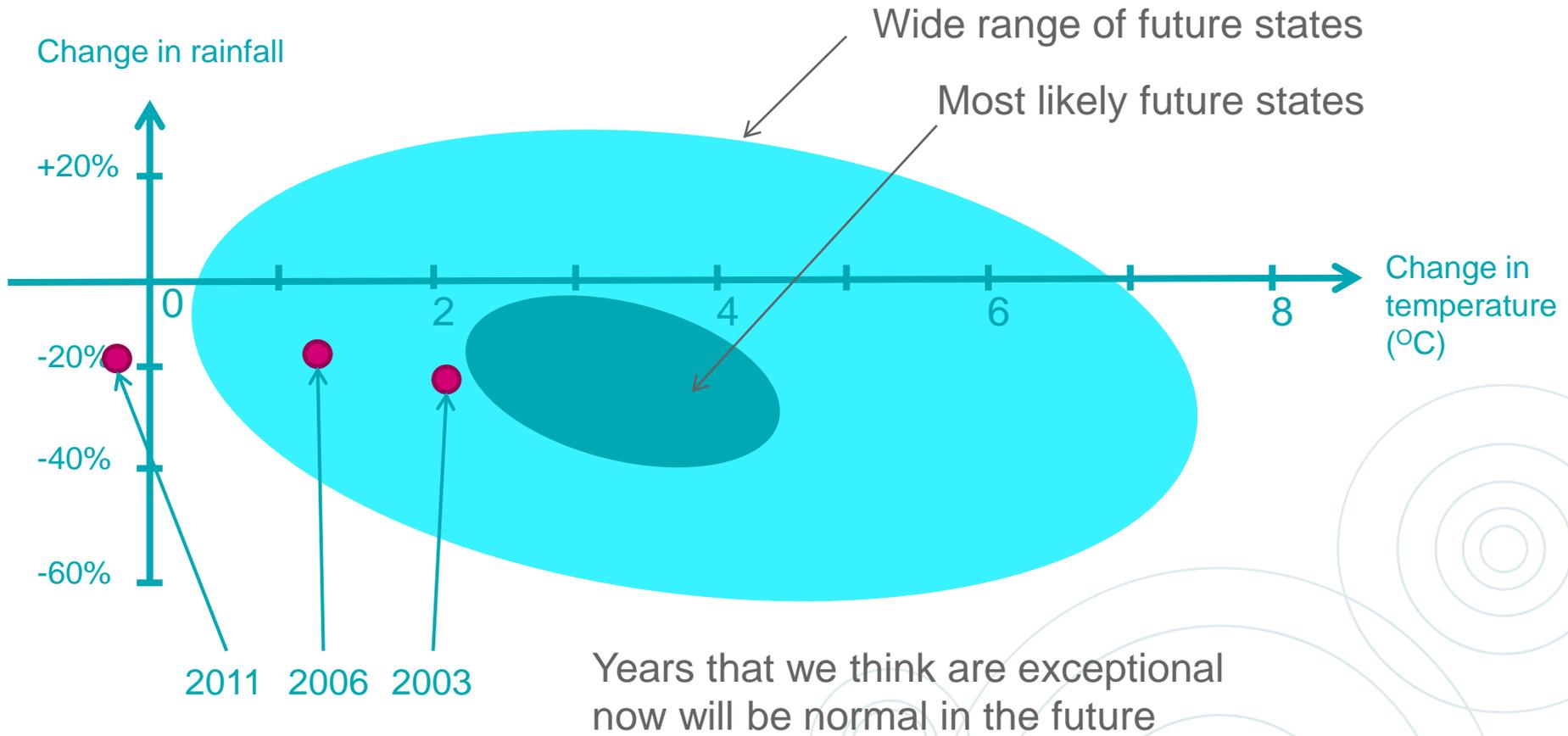
We need to protect our current water resources from diffuse pollution risks

- Historic land use practices can in some cases lead to deteriorating raw water quality which cannot be dealt with by our existing water treatment processes
- Our choices include:
 - Abandon the water source
 - Enhance treatment capability
 - Work in the catchment to change practices to reduce pollution

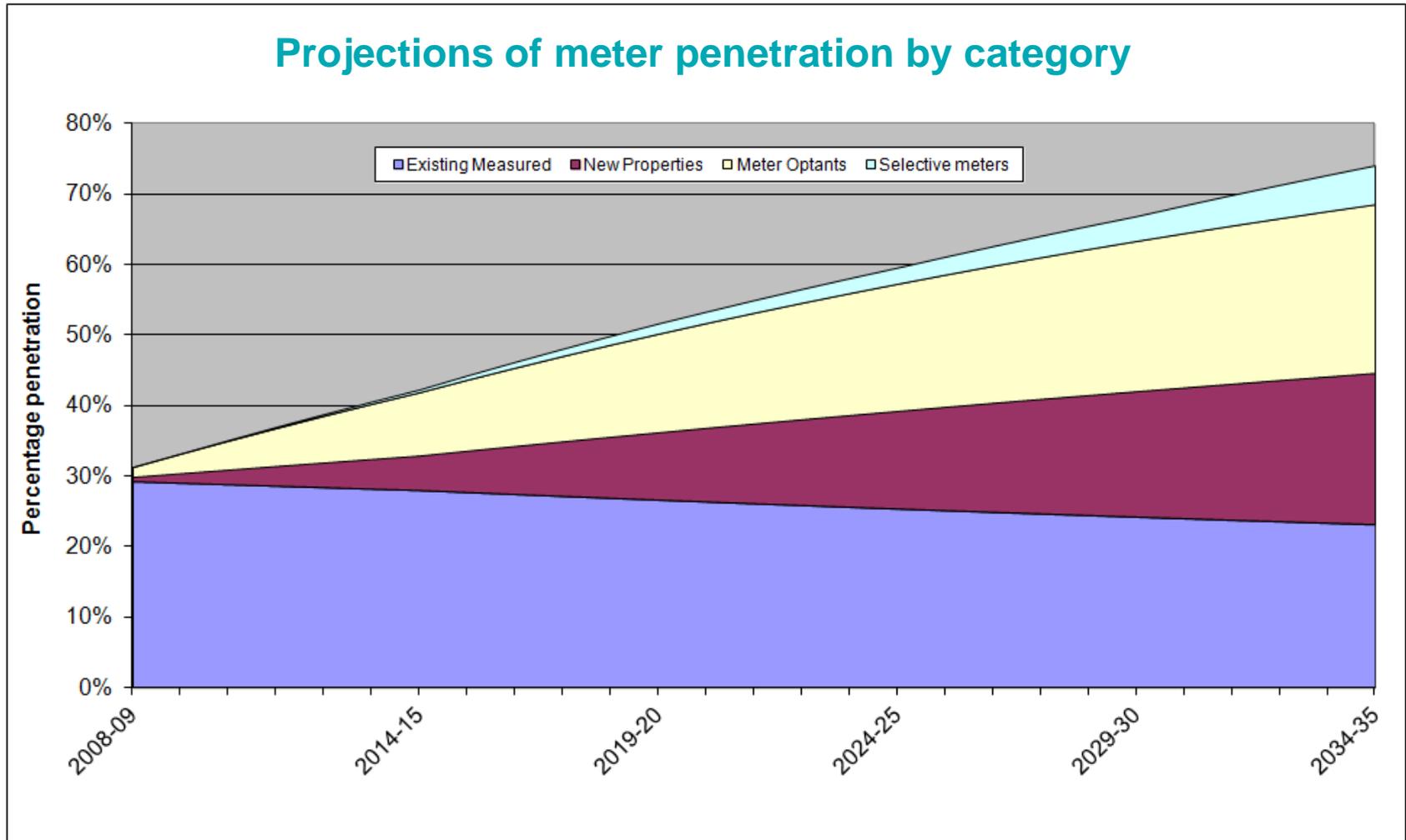


In addition, we need to be able to cope with the uncertainties presented by future climate change impacts

The 2080s.....



Our current plan is to achieve c.75% metering over the next 25 years – we could choose to accelerate this



Our investment choices need to find the right balance between meeting the needs of customers and the environment

Supply / demand options	Relative Cost	Environmental benefit	Certainty of outcome
More metering to manage customer demand	££	High	Low
Encourage more efficient use of water by customers	£	High	Low
Drive down leakage on our own network and more mains renewal	££	High	Medium
Expand our grid and redeploy between areas of surplus and deficit	££	High	High
Strengthen the links with neighbouring companies for sharing water	££	High	Medium
Upsize our current treatment works and make better use of what we have	£	Medium	High
Protect our water sources from pollution using catchment management	£	High	Low
Enhance water treatment at our works to remove pollution	££	Low	High
Develop new sources of water	££££	Low	High

In summary

Our preferred approach is to find the mix of demand and supply options that balances the impact on the environment and on customers' bills.

An alternative approach might prioritise one aspect over the other.

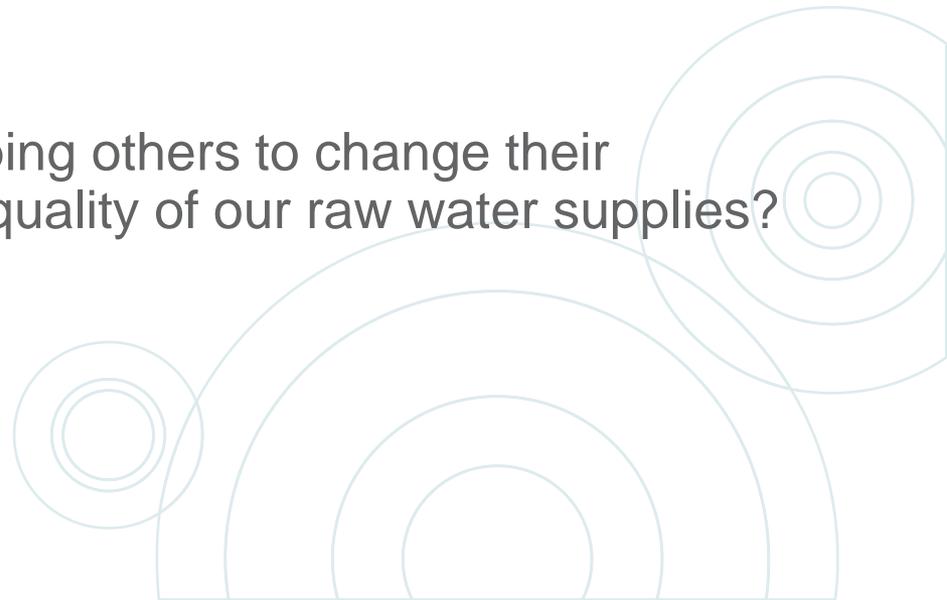
We want your views...



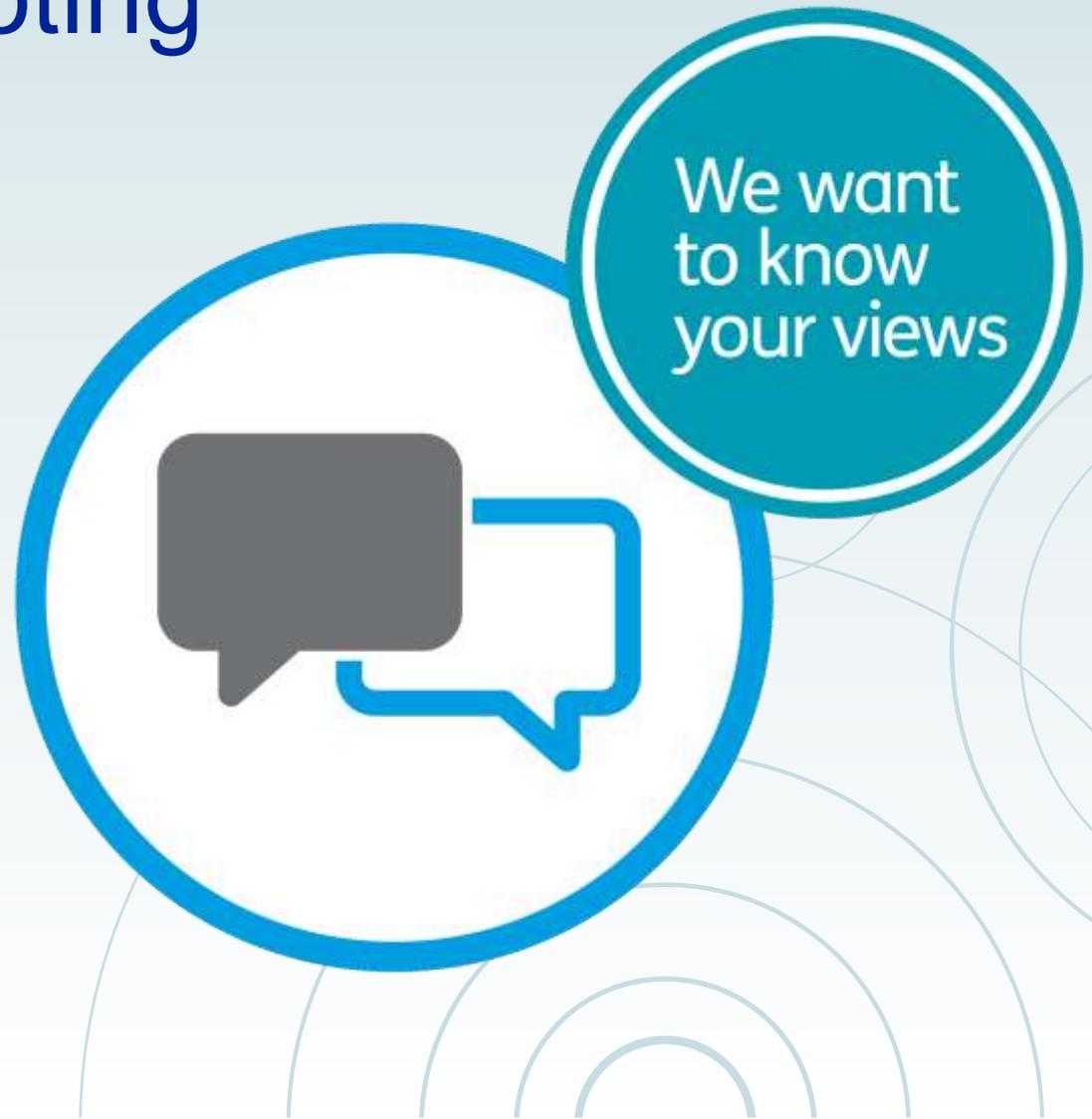
Session 2: Future priorities

Discussion questions

- Q9:** How should we balance the needs of our customers and the water environment?
- Q10:** At what pace should we reduce our least environmentally sustainable abstractions?
- Q11:** Given the future challenges should all customers pay for the amount of water they use?
- Q12:** What should our role be in helping others to change their practices if it helps protect the quality of our raw water supplies?



Electronic voting



Session 2: Future priorities

Electronic voting

Q13: To what extent do you agree with the following statement?

“STW should prioritise demand reduction options over new source development”

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree



Session 2: Future priorities

Electronic voting

Q14: To what extent do you agree with the following statement?

“STW should maintain its current focus on water resource efficiency (keeping the water input per customer low)”

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree



Session 2: Future priorities

Electronic voting

Q15: “If we had £1 on bills available should we spend it...”

Where on the following scale would you be?



Session 2: Future priorities

Electronic voting

Q16: To what extent do you agree with the following statement?

“STW should incentivise land owners to change their land use practices if it protects raw water supplies”

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

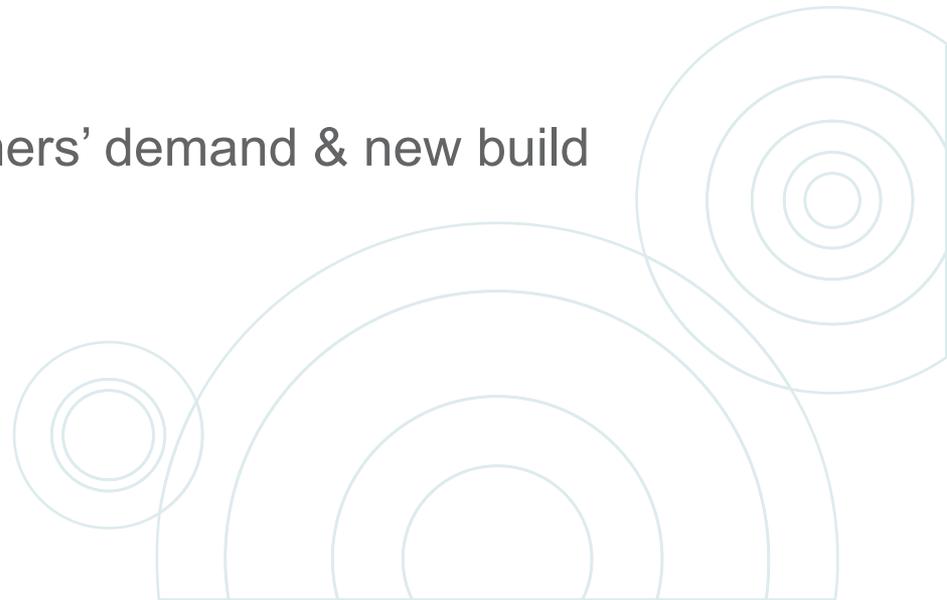


Session 2: Future priorities

Electronic voting

Q17: All customers should have a meter:

1. In the next 5 years
2. In the next 10 years
3. In the next 20 years
4. Never
5. At a rate determined by customers' demand & new build properties
6. Don't know



Appendix: Catchment management .In future we aim to use integrated catchment management solutions to protect the water we treat and to improve the water environment

We want to work in partnership with our stakeholders to reduce the risk of water pollution by using catchment management activities.

Working together with farmers and land owners we can produce wholesome good quality drinking water, enhance the water environment and deliver sustainable agriculture.

By working in partnership we can reduce the need for future water treatment and have the added benefit of improving the water environment.



Thank you



Agenda for the day

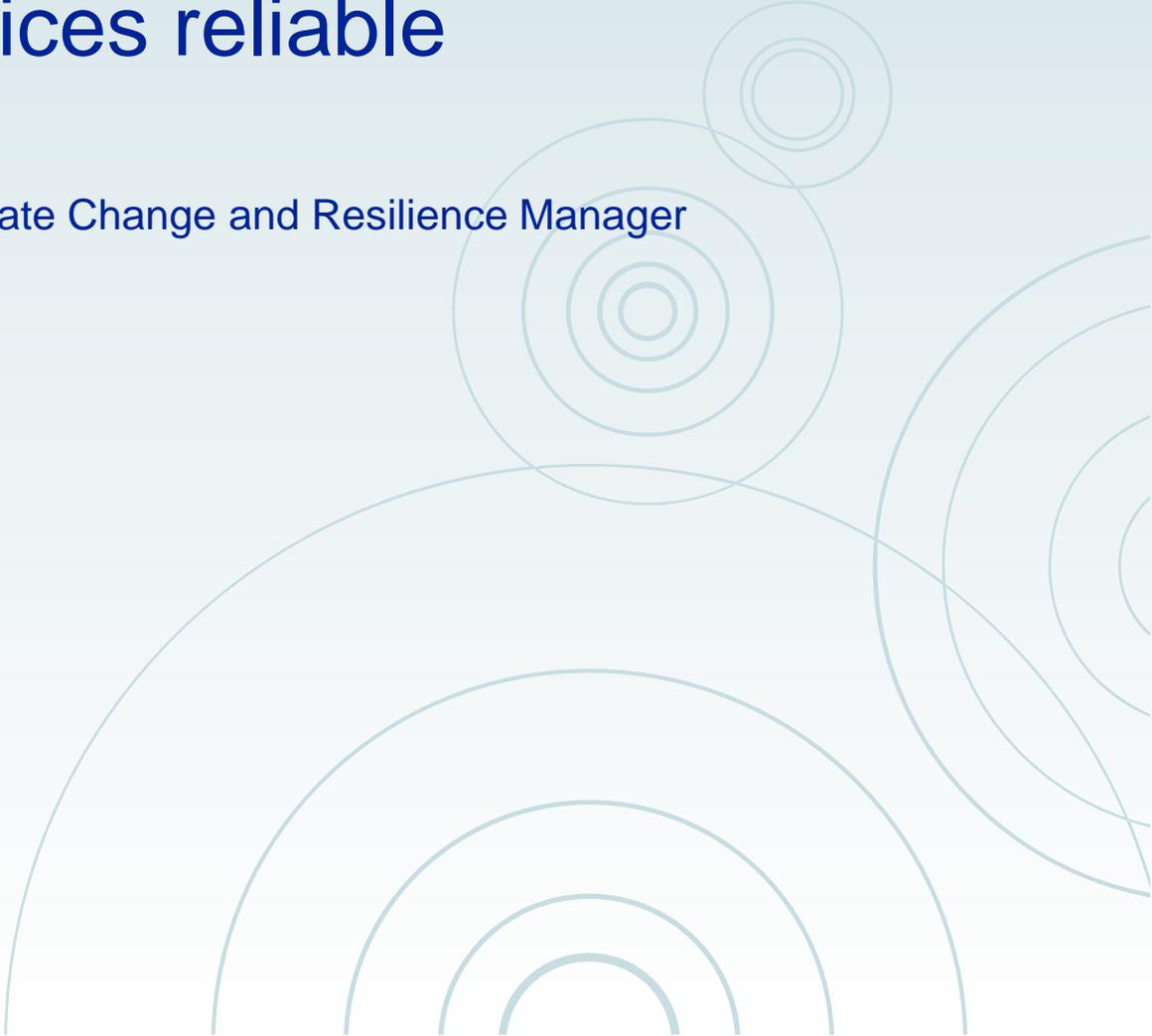
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Making the right choices: Keeping our services reliable

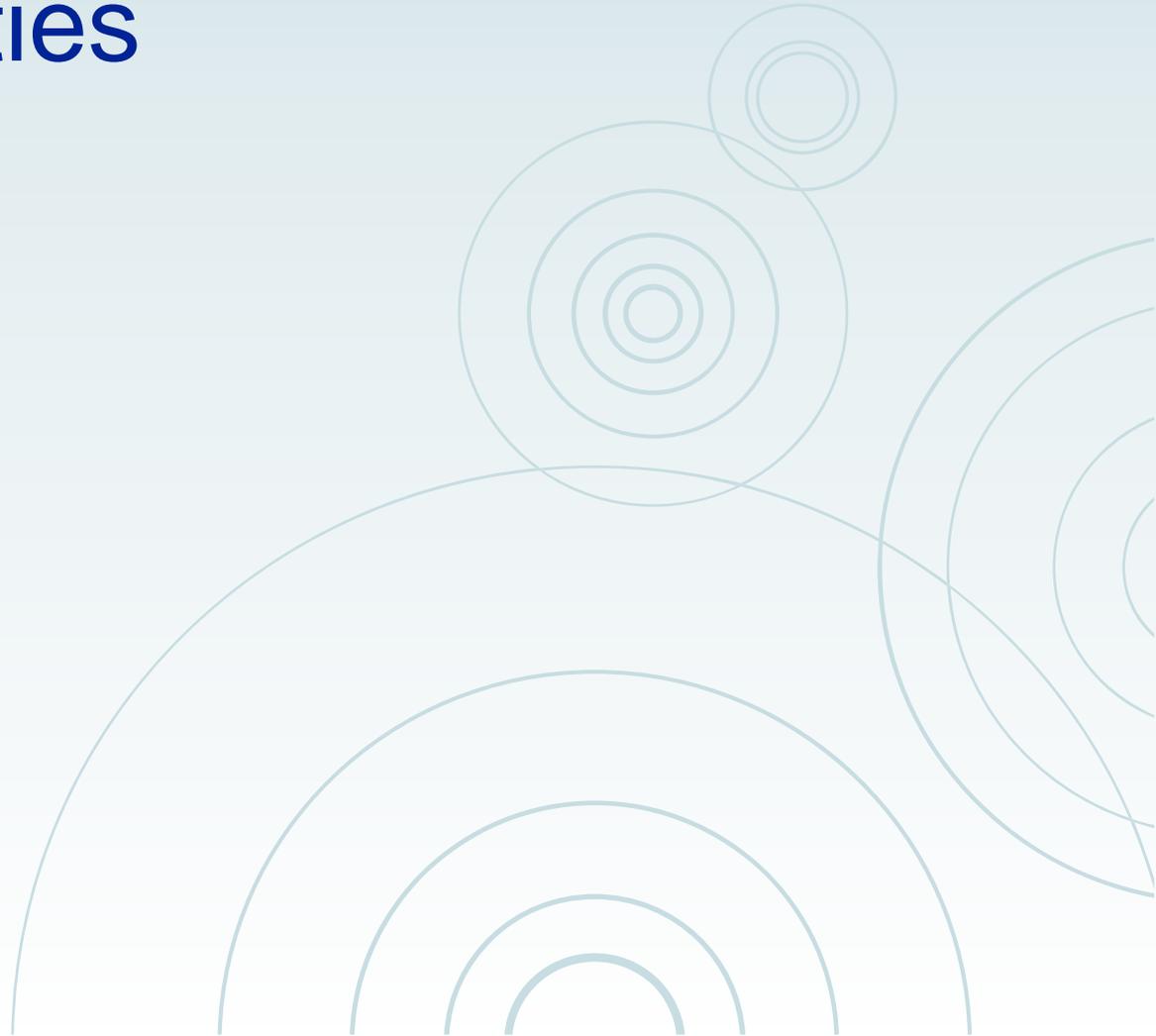
Water stakeholder workshop

Dr Mike Keil, Water Services, Climate Change and Resilience Manager

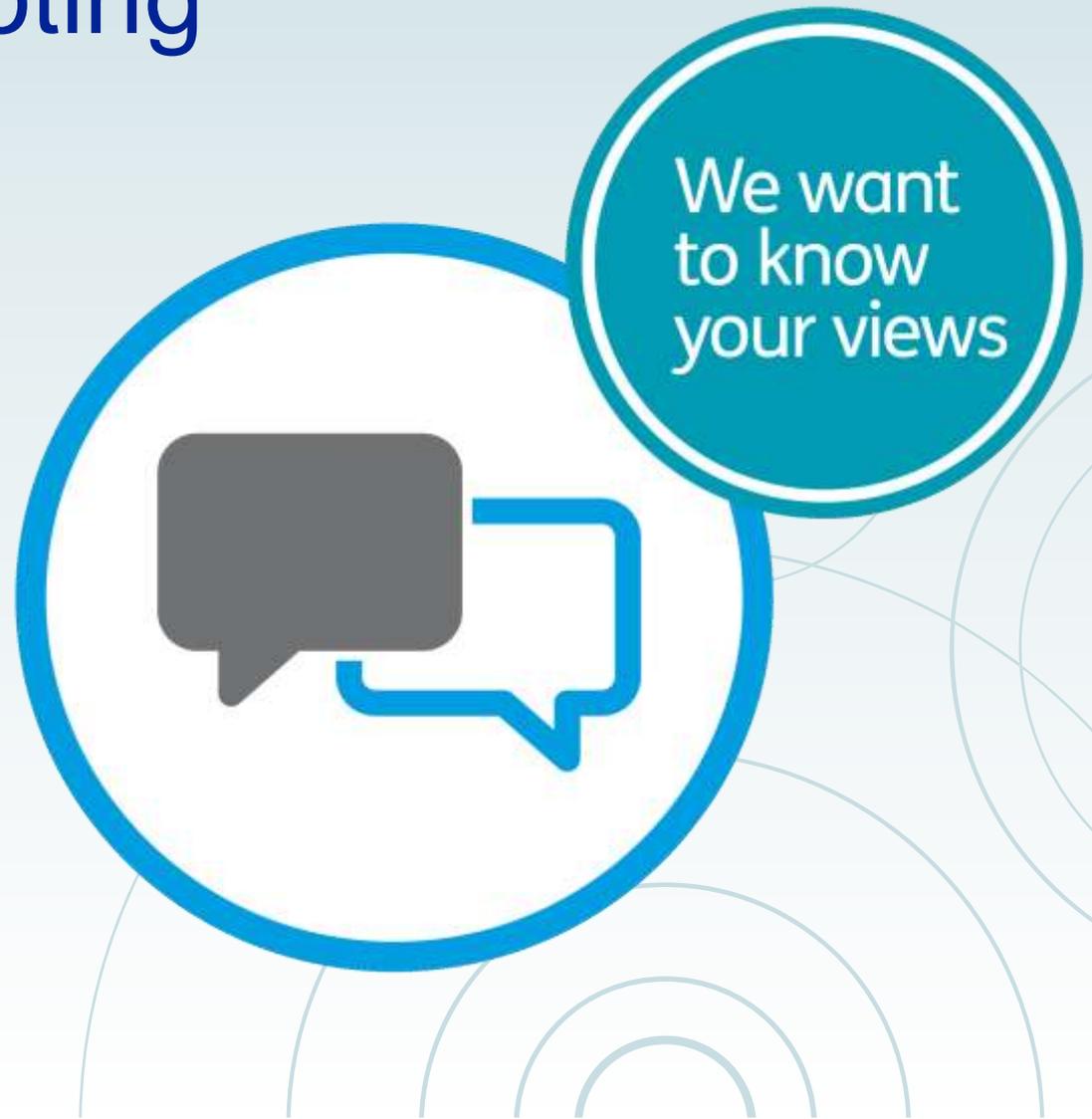
12 June 2012

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Session 3: Current priorities



Electronic voting



What would you least like to lose?

Q18: If you were going to lose one of your utilities for **one hour** which one would you least like to lose?

1. Communication (phone, mobile, internet)
2. Electricity
3. Water
4. Gas



What would you least like to lose?

Q19: If you were going to lose one of your utilities for **one week** which one would you least like to lose?

1. Communication (phone, mobile, internet)
2. Electricity
3. Water
4. Gas



What is resilience?

“being able to cope”

“being reliable”

“the ability to recover from an event”

“being resistant in the first place”

“the ability of a system or organisation to withstand and recover from adversity.”

Sir Michael Pitt



An outcomes focused view of resilience



How resilient are we?



Our current approach to resilience

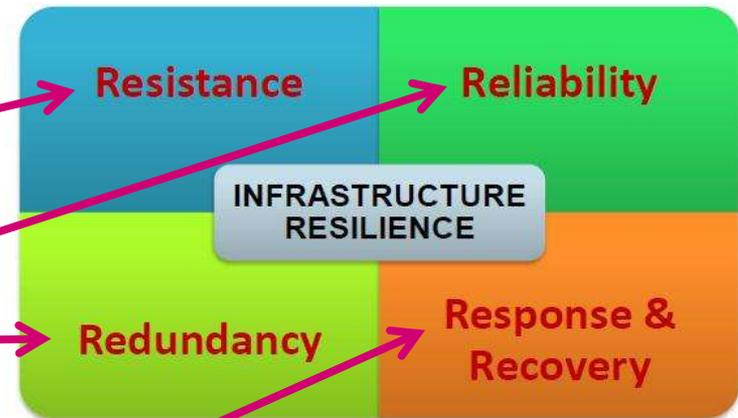
Our current work involves:

Protecting our services:

- From known hazards
- By looking after our key assets
- Through greater flexibility

Responding to events:

- Becoming faster at restoring service
- Being better prepared for emergencies



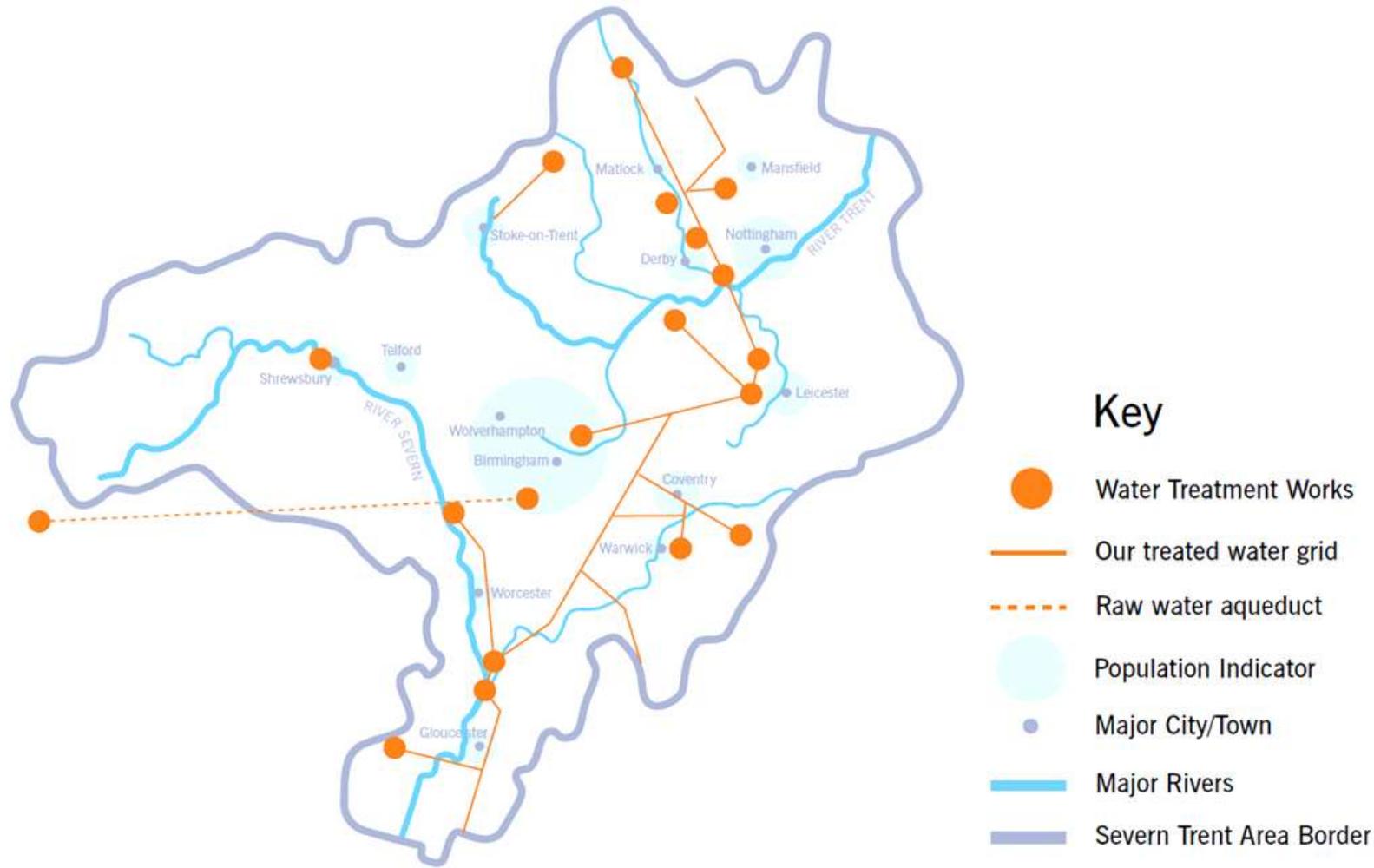
During the period 2010-15 we will spend around £200m on resilience

Protection from known hazards



River Severn flooding event May 2012 – the river peaked at 11.7 metres – this has given the defences the first successful test.

Protecting service through greater flexibility



Looking after our key assets



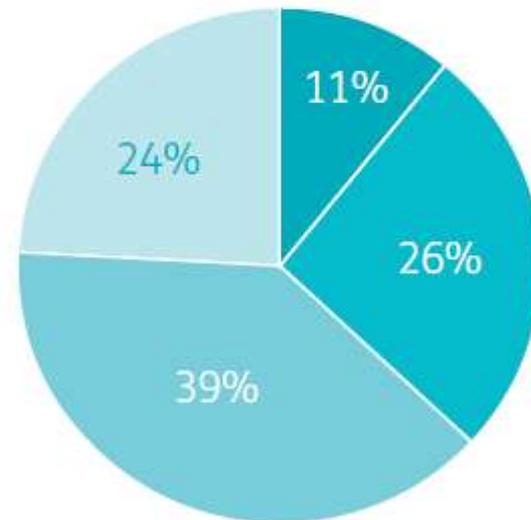
Looking after our key assets

Around 30% of the water in our region is delivered through aqueducts that are over 100 years old.

At our current rate of investment it will take over 150 years to replace all of our water mains.

Water mains

- More than 100 years
- 50 to 100 years
- 20 to 50 years
- Less than 20 years



percentages by length of main

In summary

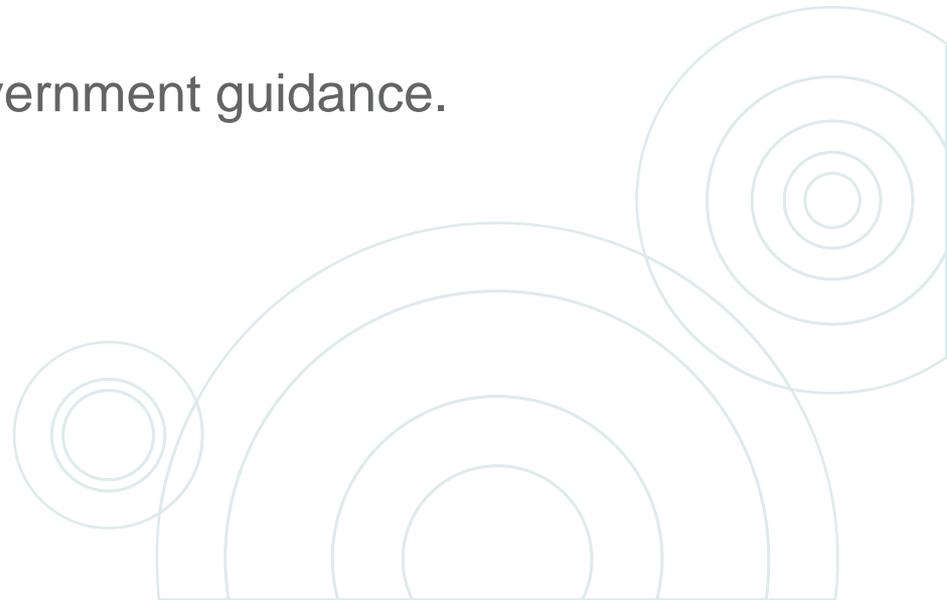
We are becoming more resilient to hazards and threats.

Our current programme will increase the resilience of the water service of almost 2 million of our customers.

We are working hard to understand the condition of our large and unique assets so we can manage the risks more effectively.

Our overall approach in-line with government guidance.

We still have more to do.....



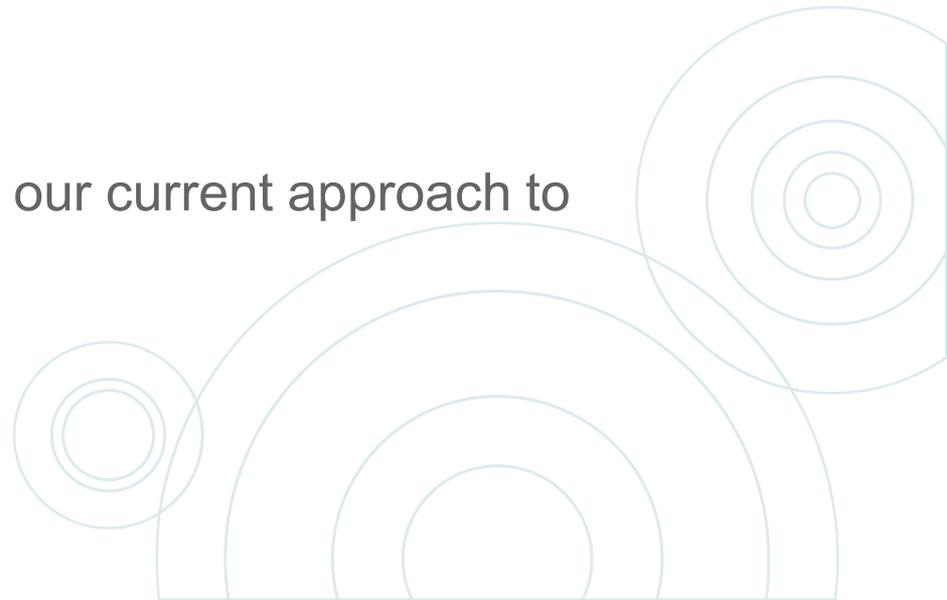
Session 3: Current priorities

Questions for discussion

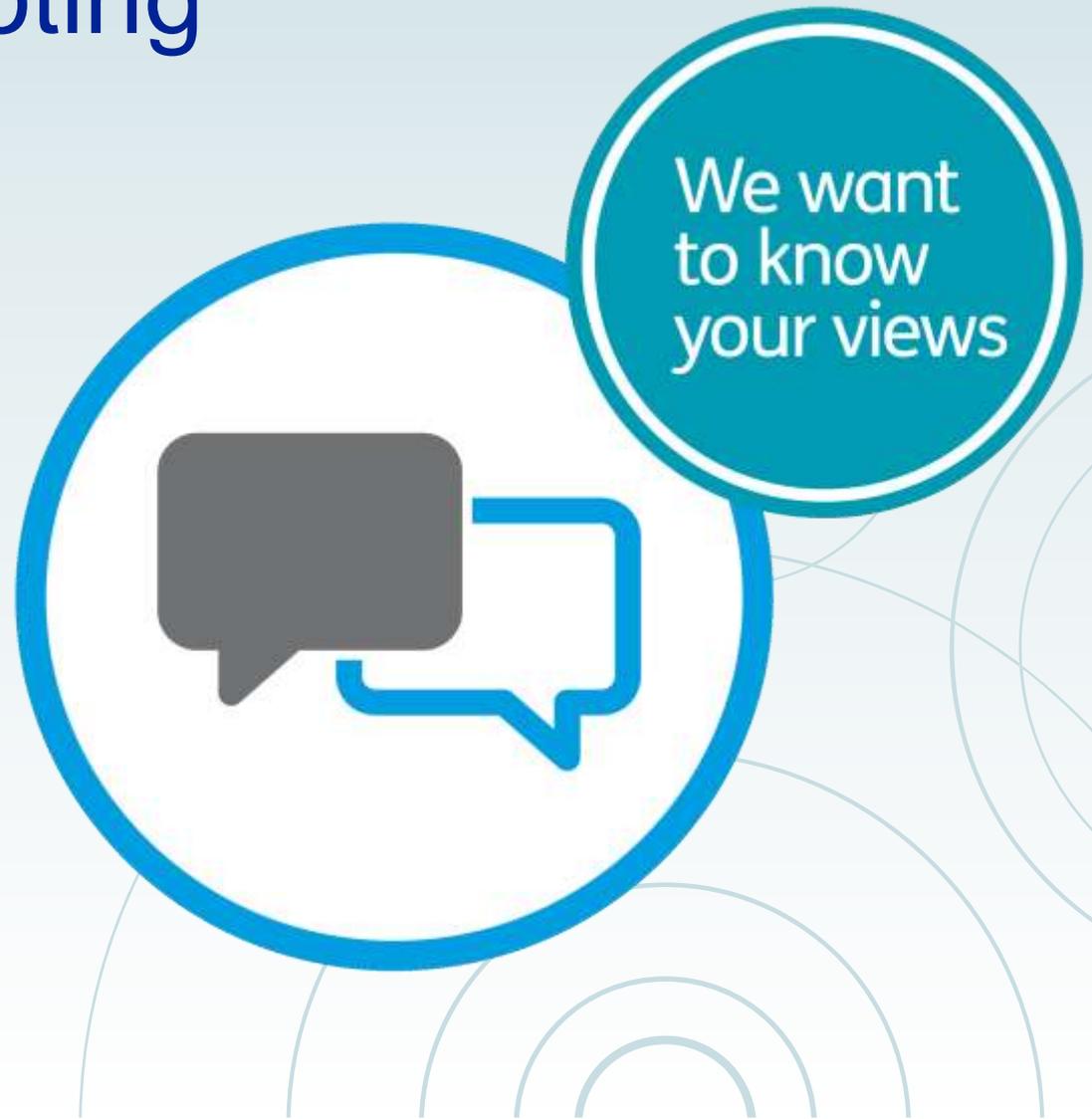
Q20: Before today, how aware were you of the potential risks to your water service?

Q21: What are your views on our approach which considers all hazards and risks to service together?

Q22: Do we have the balance right in our current approach to resilience?



Electronic voting



Session 3: Current priorities

Electronic voting

Q23: Before today, how aware were you that some of our key assets are over a hundred years old?

1. Unaware
2. Aware
3. Very aware



Session 3: Current priorities

Electronic voting

Q24: To what extent do you agree with this statement:

“STW should be able to provide piped water services under all circumstances”?

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree



Session 3: Current priorities

Electronic voting

Q25: To what extent do you agree with this statement:

“All our customers should benefit from the same level of resilience”

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree



Session 4: Future priorities



Future pressures and resilience challenges

We know that

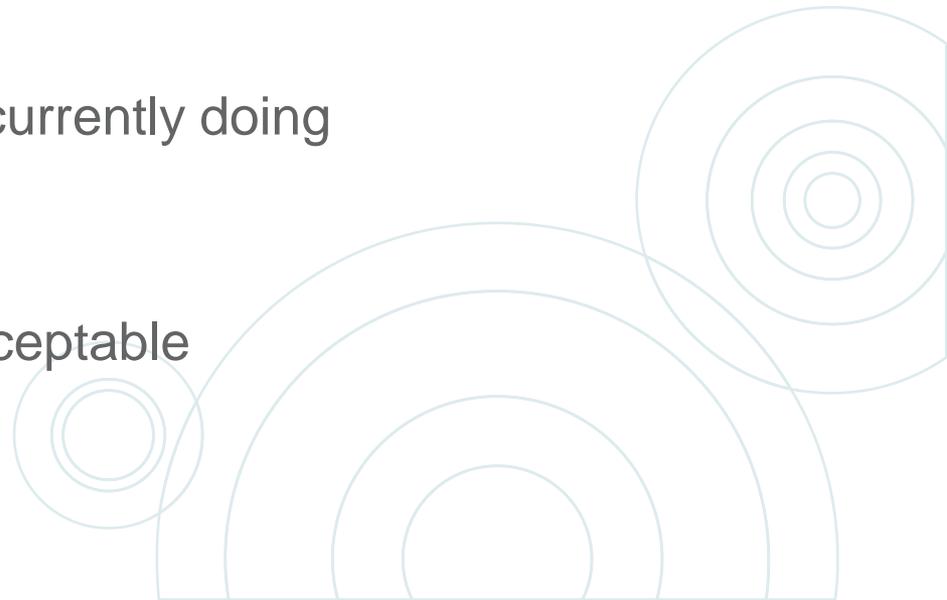
- Population growth
- Climate change
- Ageing infrastructure

All put further pressure on our ability to provide resilient services

We aim to build on the work we are currently doing

- Understanding the risks
- Reduce the risks in a targeted way

To a level that our customers find acceptable



How far and how fast do we go? We want your views

Our emerging ten year programme considers increasing the resilience of populations of >20k that rely on a single source of supply

This will cost in the region of £100m - £200m (£2 - £4 on bills)

We have choices:

- We could do this faster (in five years)
- We could also cover smaller population centres at increased cost
- We could be less ambitious and invest less
- We could take a different approach

Options for 2015 – 2020: Our approach to resilience

Becoming more resilient through growing the grid (where possible)

This approach delivers wider benefits:

- Supply demand balance
- Quality
- Low carbon
- Greater efficiency
- Potential for sharing water

Large areas of our region are not connected to our grid.



Options for 2015 – 2020: Our approach to aqueducts

We can become more resilient by changing the way we maintain our key assets.

We want our aqueducts to last into the future.

We need the capability for longer term shut downs.



Options for 2015 – 2020: Our choices for aqueducts

Maintaining our key assets is critical.

The costs of developing the capability for controlled shutdowns are significant:

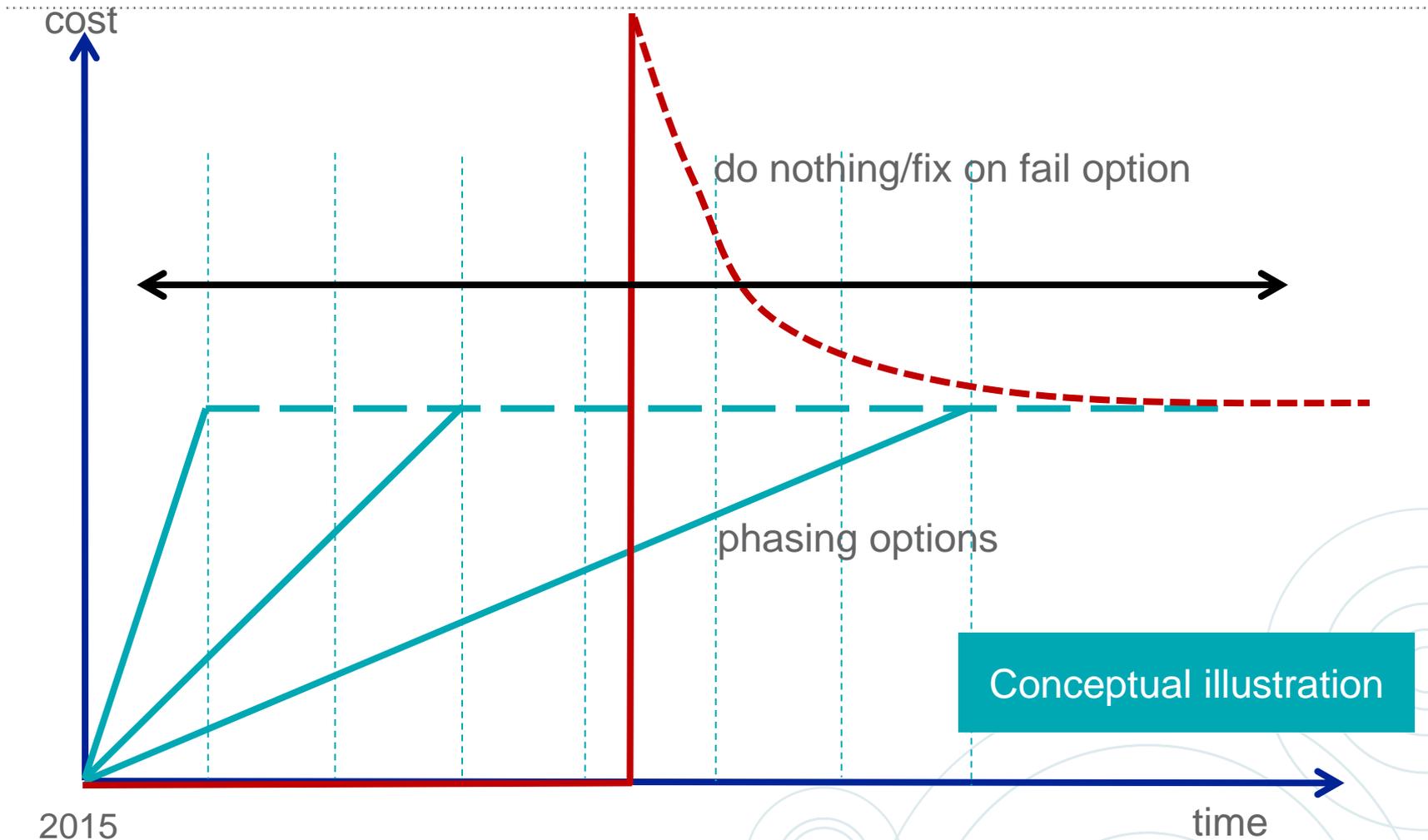
Option	Indicative cost	Indicative bill impact (p.a)
Duplicate the aqueducts	c. £2bn	c. £40
Develop new water resources as alternatives	c. £1bn	c. £20
Grow our grid / strengthen the aqueduct	c. £100m - £500m	c. £2- £10

And there could be other (and possibly cheaper) options we could develop

The big question is timescale and phasing of investments.

There are increasing risks to service if we do nothing.

Options for 2015 – 2020: Our choices for aqueducts



Doing nothing could cost us more in the long run.

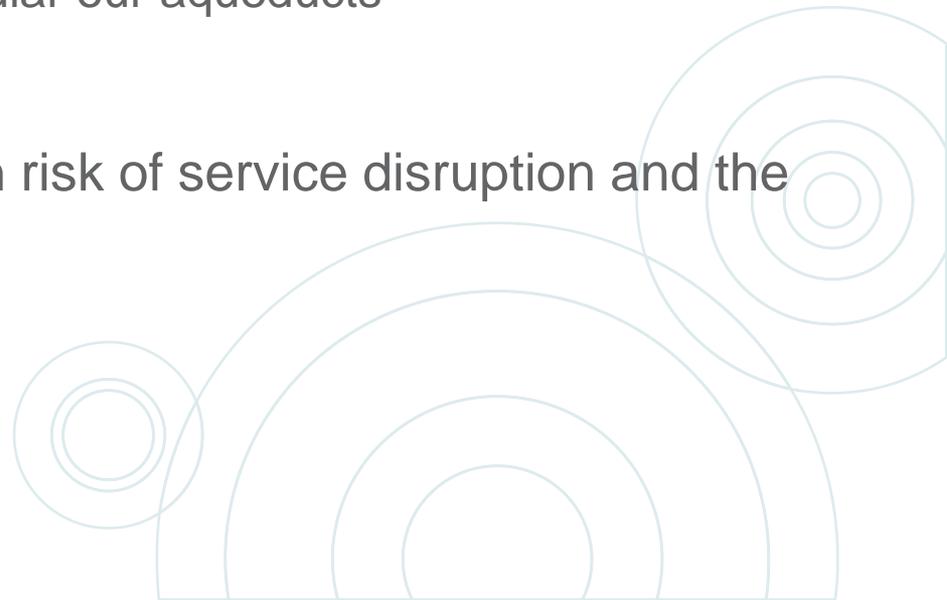
Options for 2015 – 2020: summary

How far and how fast should we be going with our resilience programme?

We want your views on our future approach to becoming more resilient through:

- Growing our grid
- Maintaining our key assets- in particular our aqueducts

How do we find the balance between risk of service disruption and the costs of becoming more resilient?



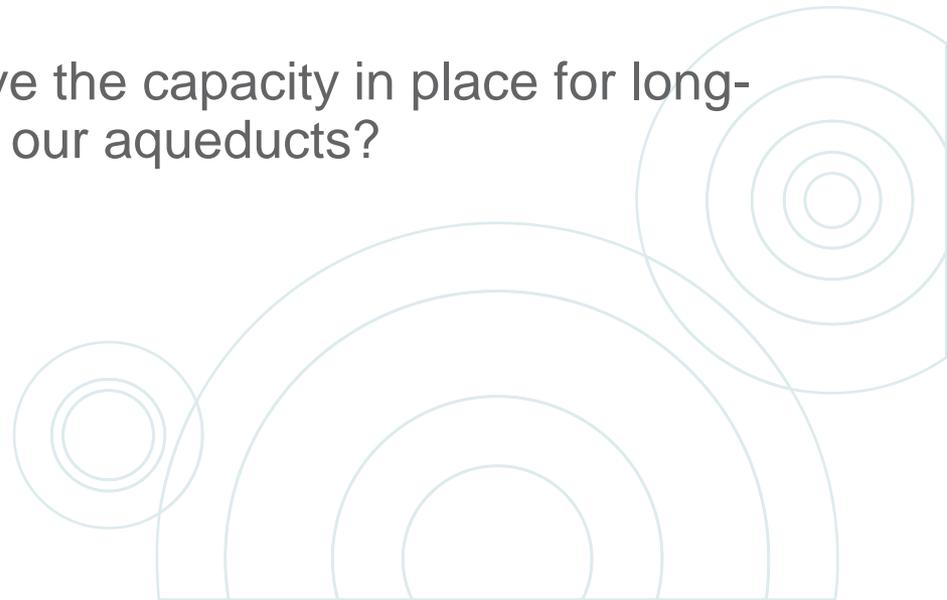
Session 4: Future priorities

Discussion questions

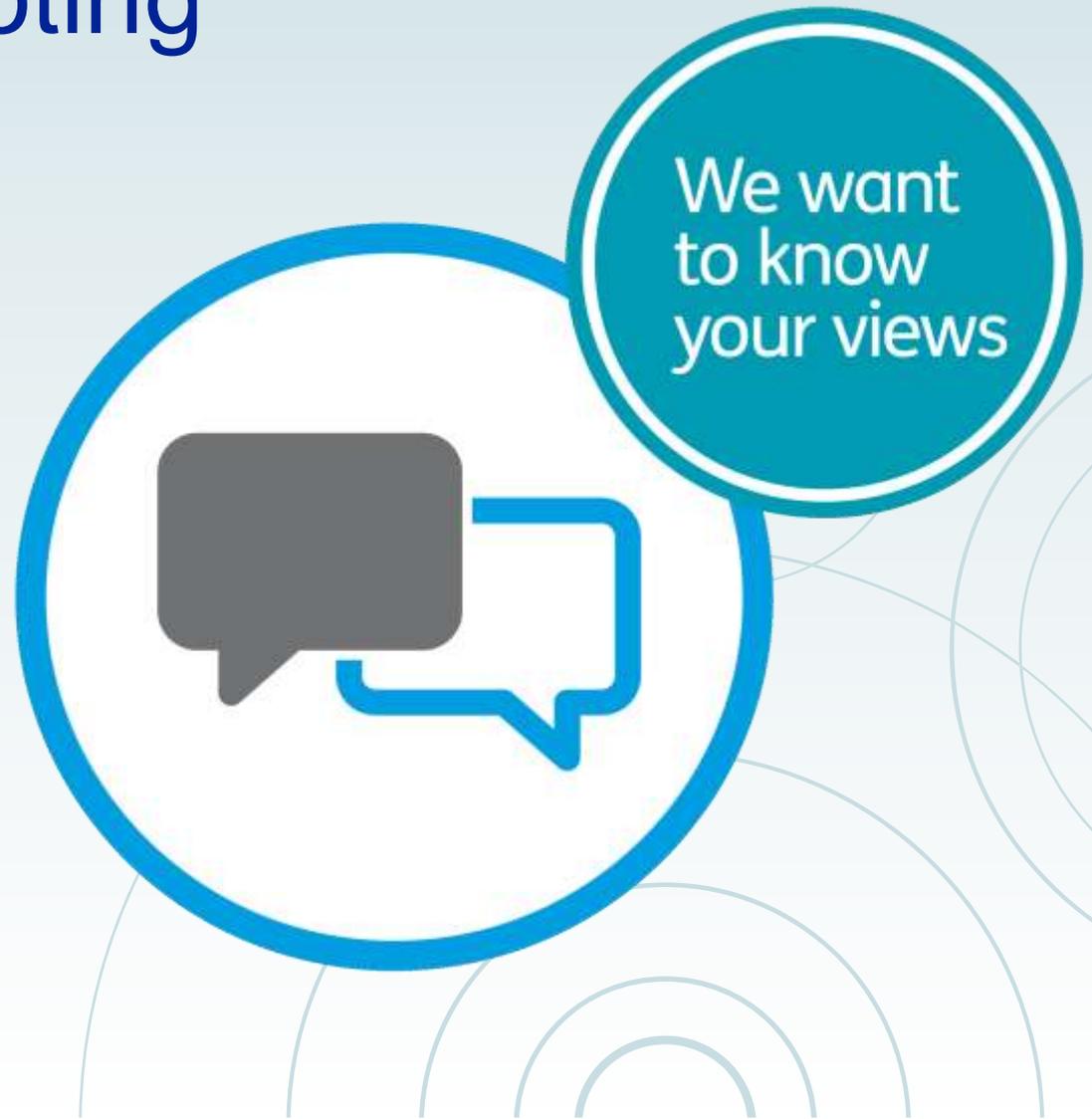
Q26: How far and how fast should we go with our resilience programme

Q27: What are your views on our favoured approach to resilience (through “growing the grid”)?

Q28: How quickly should we aim have the capacity in place for long-term controlled shut-downs for our aqueducts?



Electronic voting



Session 4: Future priorities

Electronic voting

Q29: STW plan to increase the resilience of populations of >20k that rely on a single source of supply over 10 years. Should we:

1. Do this faster – in five years
2. Lower the population threshold at a greater cost (do more)
3. Raise the population threshold at a smaller cost (do less)
4. Don't change the current plan
5. Don't know



Session 4: Future priorities

Electronic voting

Q30: To what extent do you agree with this statement:

“STW should increase the resilience of their customers’ water services through growing the grid”

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree



Session 4: Future priorities. Electronic voting

Q31: To what extent do you agree with this statement:

“Some assets are too critical to allow to fail under any circumstances”

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree



Session 4: Future priorities

Electronic voting

Q32: How quickly should we aim to mitigate the risk of disruption to water services presented by an aqueducts failure?

1. The short term (the next five years)
2. The medium term (now – 10 years)
3. The longer term (now – 15 years)
4. Don't know.



Appendix 1: Cabinet Office guidance for the protection of critical infrastructure



Figure 2: The components of infrastructure resilience: In building resilience, the contribution made by each of these four components needs to be considered

<http://www.cabinetoffice.gov.uk/sites/default/files/resources/natural-hazards-infrastructure.pdf>

Making the right choices

Water service stakeholder workshop

Andy Smith

Water Services Director

12 June 2012



We will use what you tell us to develop a draft plan

Together with customer research, we will use your feedback to help prioritise what we do in 2015-2020

- We are consulting as we believe what you tell us will help us make a better plan
- But, we will need to balance competing priorities and make some difficult choices
- And, in some areas we have no choice, we rightly must meet our obligations
- It means we cannot meet everyone's expectations, but we will listen to what they are, and take them into account where we can

Next steps

We will feed back to you:

- A copy of Green Issues' report will be available.
- Our Water Forum will discuss this report.
- We will keep you updated in a newsletter.
- When we publish our draft plan in April 2013, we will explain how views have been taken into account, and if not, why not.
- You can give us your views on whether we have made the right choices in our draft plan.



You can still give us your views in writing

Making the right choices

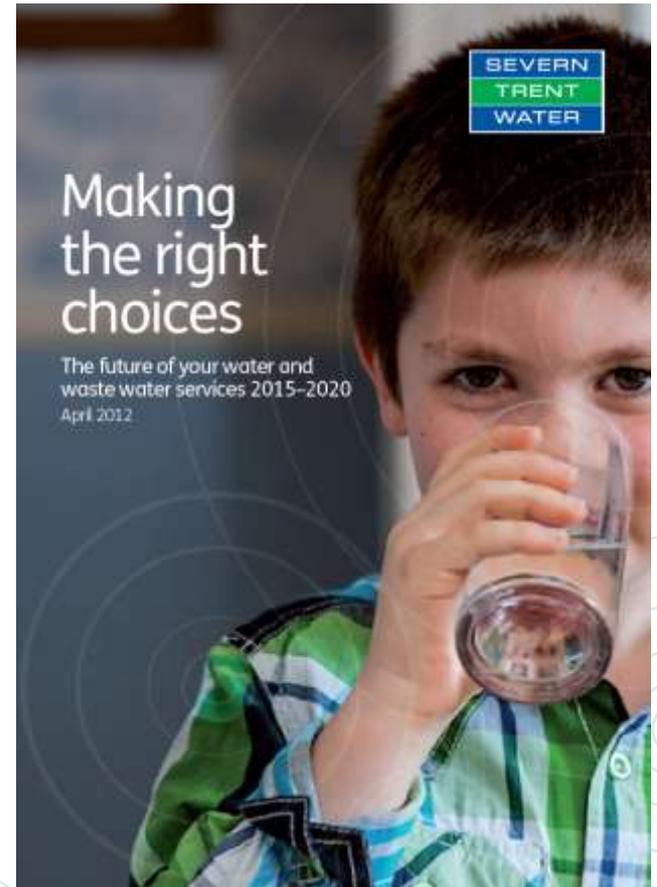
- Open for written responses until **31 July 2012**
- www.severntrent.com/makingtherightchoices

Tell us how we did today

- Please complete an evaluation form

Keep up to date

- By signing up for our newsletter at www.severntrent.com



Thank you

