

EXECUTIVE SUMMARY

The overall aim of our supply / demand strategy is to achieve and maintain the level of headroom necessary to ensure we can deliver our target levels of service at least cost to customers, whilst minimizing the impact on the environment. We plan to do this in part by reducing leakage and managing the demand for water, and partly by developing new resources.

In the long term, our strategy is to make better use of our existing resources by maximising their sustainable use and further integrating our network. This strategy is aligned with our supply resilience plans and our water supply investments will provide both resilience and supply / demand benefits.

Our final plan has been prepared on the basis that annual leakage targets should not be allowed to rise in future. It is clear from feedback on the draft plan that a strategy of allowing leakage targets to rise is unacceptable to our customers, our stakeholders and to Government. Our policy of not allowing future leakage targets to rise is in line with the ambitions set out in our Strategic Direction Statement. The impact of this policy decision on investment is that more mains renewal will be needed in the short term to prevent leakage deterioration in the longer term.

Outlined below are the strategic objectives that have shaped our Water Resources Management Plan. These objectives are aligned with our 2010-2035 Strategic Direction Statement, and form part of the assessment criteria used in the Strategic Environmental Assessment of the WRMP.

Water Resources Management Plan – Strategic objectives

The overall aim of the Water Resources Management Plan is to define how we will meet demand now and in the future in as efficient and sustainable a way as possible, whilst complying with environmental legislation and regulatory requirements.

The company's strategic objectives for water supply demand planning are to:

- Adopt the overall least financial, social and environmental cost strategy for achieving and maintaining target headroom throughout the planning period to 2035,
- Comply with environmental legislation and meet environmental obligations in everything we do
- Continue to promote water efficiency programmes and water recycling for businesses and consumers
- Accelerate the installation of water meters and more sophisticated tariffs
- Continue to drive down the level of leakage from our network
- Reinforce our network to avoid interruptions to supply
- Design and maintain our water resources and supply systems with the aim of having no more than three hosepipe bans in 100 years
- Increase the scope for water transfers across our own region and between water companies
- Develop new water resources when required
- Ensure no failures in water quality

In seeking to achieve these objectives we will give due consideration to:

- The costs and benefits of different investment options
- Our customers' willingness to pay for improvements
- Projections of long term growth in demand
- The long run reliability of savings in demand from water efficiency measures
- The vulnerability of our supply system to climate change impacts and uncertainties

- The carbon footprint of our water supply operations
- The impacts of new and existing environmental legislation
- The sustainable level of water abstraction
- The time required to plan and deliver any new water resources schemes
- The risks associated with delivering the chosen strategy in the timescales required
- The relative flexibility of options, and their ability to enable us to adapt to changing circumstances in the future

The short term strategy

Our immediate investment strategy to maintain security of supply to 2015 is to:

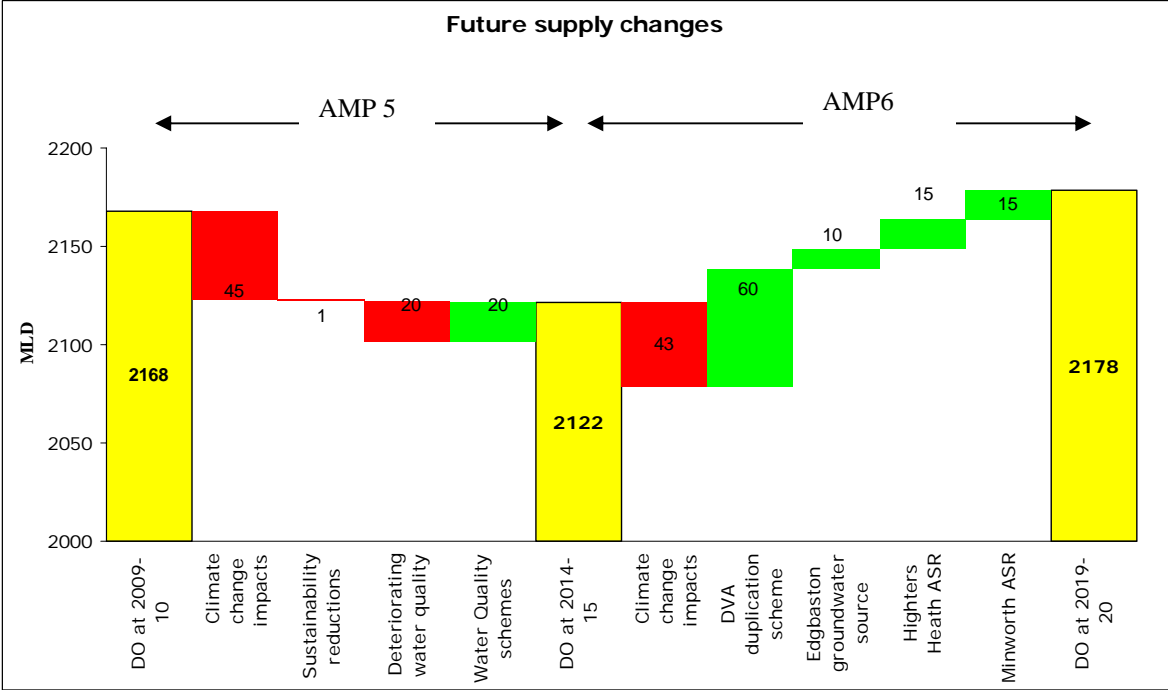
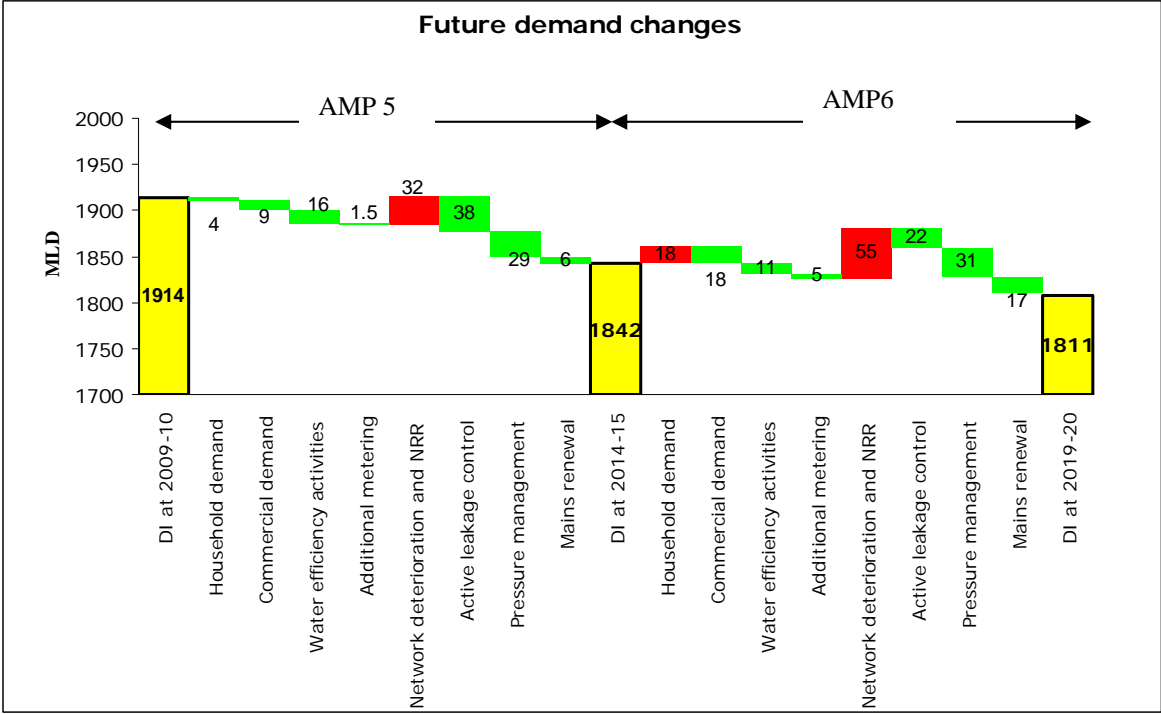
- Prevent the loss of deployable output due to worsening water quality through our nitrate treatment and blending strategy.
- Reduce demand through driving leakage down and setting ourselves a new leakage target of 453MI/d by 2015. This will be achieved through more active leakage control and pressure management.
- Reduce demand by accelerating the rate of household metering through promotion of our free meter option and by a targeted policy of metering on change of occupier, reducing demand by around 1.5MI/d by 2015. We are limiting our change of occupier policy to the East Midlands zone for AMP5 in order that we can build up robust cost and benefit data to inform our longer term strategy.
- Reduce demand by increasing our water efficiency activities to achieve our target savings of 16MI/d during AMP5.

There are no new water resources schemes being delivered for AMP5 supply / demand balance purposes. This is partly because our supply / demand balance investment plan is integrated with other parts of our Business Plan, which includes investment in schemes to increase our strategic treatment and distribution capacity. These links are with:

- The East Midlands and Severn zone resilience strategy which includes a key project to duplicate a section of our Derwent Valley Aqueduct to release available resources and treatment capacity in the north of our region. This scheme will also provide supply / demand benefits going into AMP6 as it will allow us to make best use of our existing resources and strategic infrastructure to increase water available for use.
- The Birmingham resilience strategy which includes a new Edgbaston groundwater source and two new aquifer storage and recovery schemes to provide resilience cover for the potential loss of Frankley treatment works. These schemes will also provide an increase in deployable output once they are operational in AMP6.
- The capital maintenance strategy which includes investment on mains renewal to maintain serviceability as measured by burst frequency and unplanned interruptions.
- The water quality strategy which includes investment in schemes to treat or blend water at sources with high nitrate concentrations.

We illustrate below how our overall investment strategy addresses the medium and longer term pressures on the supply/demand balance in our region. The figures show our best estimates of future pressures on our demand and supply, along with the benefits of the investment solutions. These figures illustrate how the schemes included in our Business Plan

to improve to enhance supply resilience, water quality and mains renewal investment are integrated with our long term supply / demand strategy.



Our strategy will ensure that our water available for use is sufficient to meet future demand plus target headroom. In the short term, we are projecting a fall in water available for use but our leakage and demand management strategy will mean that we maintain a supply / demand surplus.

Our strategy has been informed by the UKCIP02 climate change impact scenarios. We have tested the sensitivity of our AMP5 investment plan to the UKCIP02 impact scenarios, and this has shown that the most material change is to our 2014/15 leakage target. Our strategy includes investment to offset the impact of climate change, and sensitivity analysis has shown that if those impacts are excluded then our 2015 leakage target would be reduced by 16Ml/d to 469Ml/d.

Beyond 2015, our supply resilience schemes will deliver an increase in our water available for use while our leakage, mains renewal and demand management investment will continue to reduce demand.

The strategy for the longer term

Our best estimates of future supply / demand pressures show that we will need additional water resources and treatment capacity in the longer term. The schemes being delivered through our wider supply resilience investment strategy will provide a deployable output benefit and these form a key part of our longer term supply / demand plans. However, we have identified the likely need for further leakage reductions and water resource schemes during in the 2025 – 2035 period. A more detailed description of the 25-year investment strategy for each water resource zone is given in chapter 17.

Our analysis shows that the most significant risk to our long term supply / demand balance is the impact of climate change, which we have tested using the UKCIP02 scenarios. These scenarios show that our deployable output capability could be reduced by up to 115Ml/d by 2020. The results of our analysis have been shared with the EA, and we have followed their recommended best practice approach. The UKCP09 results were not available at the time of preparing our final WRMP, but we are working with UKCIP, the EA and other stakeholders to carry out analysis of the implied impacts of the latest scenario results.

There are a number of other long term planning uncertainties that are outside of our control that could have a significant impact on the 25 year strategy. In particular:

- the future requirements of the EA's National Environment Programme
- the EA's Catchment Abstraction Management Strategy (CAMS)
- the impacts of the Water Framework Directive

These planning uncertainties will be managed through the five yearly WRMP planning cycle and we will keep our long term strategy under review. These uncertainties underline the importance of beginning feasibility work for the longer term schemes as soon as possible.

New resource schemes

Our draft plan included expenditure associated with supply / demand schemes in the East Midlands at Church Wilne water treatment works and Nottingham groundwater. These two schemes are no longer included in our strategy as a result of our revised assessment of the impacts of climate change on deployable output and our revised demand forecasts. Using the full rainfall / runoff methodology, the implied loss of deployable output in the East Midlands is much less severe than the assessment made for the draft plan. Under our latest assessment, we show that we can maintain target headroom in the East Midlands to 2020 without the need for these additional schemes

Our longer term supply / demand plan is now integrated with our resilience strategy. The resilience strategy relies on:

- duplication of the Derwent Valley Aqueduct from Kings Corner to Hallgates
- a new groundwater source near our Edgbaston service reservoir
- a new aquifer storage and recovery scheme at Highters Heath and
- a new aquifer storage and recovery scheme at Minworth.

These schemes not only improve the resilience of our supply network, but they will also provide additional deployable output to the East Midlands, Severn and Birmingham zones and they form a key part of our supply / demand strategy.

Leakage targets

Our long term plan is based on a policy of not allowing our leakage target to rise once it has been driven down to a new low level. Consultation feedback on our draft plan made it clear that proposals to allow leakage to rise in future are unacceptable to our customers, our stakeholders and Government. A policy of not allowing leakage to rise is in line with the aspirations set out in our Strategic Direction Statement.

To achieve this long term objective we need to invest in mains renewal at a rate that prevents the rise in leakage that will result from the deterioration of ageing mains and customers' supply pipes. Our supply / demand strategy includes investment in mains renewal to ensure that leakage reductions in later periods can be achieved at least cost. If we defer this short term mains renewal in, then even more investment will be required in later periods to ensure that future leakage targets can be achieved.

In its 2009 final determination, Ofwat made no allowance in price limits for that element of AMP5 mains renewal investment that we proposed would deliver AMP6 and AMP7 leakage benefits. In the short term we believe we can compensate for this by even further use of pressure management in AMP5 to prevent leakage deterioration. But longer term, we will require an increase in mains renewal investment in AMP6 if we are to achieve our 25 year leakage target profile.