



# Scottish Water

Trusted to serve Scotland

## Delivery Plan 2015 to 2021

Improving  
performance



Enhancing  
service



Delivering  
value



For our  
customers



Trusted to care for the water  
on which Scotland depends

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# Introduction

As we conclude the 2010-15 period, Scottish Water is performing strongly. Over the period drinking water quality has improved, customer satisfaction is at record levels and our environmental performance is at its highest ever level, protecting and enhancing Scotland's environment. As measured by the Institute of Customer Service, we are one of the top performing companies in the utilities sector while charges to household customers are on average £50 a year below the levels in England and Wales. This is testament to the dedication and commitment of all our staff and supply chain partners.

We were pleased to work with the Water Industry Commission for Scotland on developments to the approach for setting prices for 2015 to 2021, and embraced their innovative approach to involve customers in agreeing our business plan through the formation of the Customer Forum.

The Water Industry Commission for Scotland concluded its strategic review of charges in November 2014 with the publication of the final determination. The final determination, with one minor addition in relation to a leakage incentive, reflected the agreement that we reached with the Customer Forum on our business plan for 2015 to 2021 and which we published in March 2014. To maintain transparency with the process that has been undertaken, this Delivery Plan mirrors the Business Plan, while providing supplementary information associated with delivery and monitoring.

Our ambitious plan for further improvement and efficiency of our services builds on our success to date and will provide our customers with a leading service while at the same time reducing their charges in real terms. In light of customer research, and to reflect our increased ambition, we have updated our corporate vision to being 'Trusted to care for the water on which Scotland depends'.

While the targets in this Delivery Plan are very challenging, we are determined to deliver significant further improvements for our customers and out-perform our commitments. Any financial out-performance will enable us to manage risks and discuss with stakeholders and the Scottish Government how that out-performance could be utilised to the benefit of our customers.

Overview

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# 1. Overview

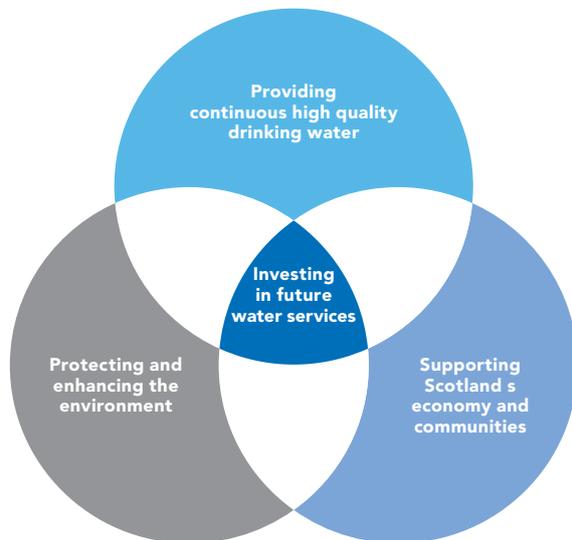
## Customer expectations

Customers, both household and businesses, rightly 'take for granted' that they will always have a safe and reliable supply of high quality drinking water and that their waste water will be taken away and returned safely to the natural environment.

Customers do not want us to compromise on delivering existing service levels. Our customer research shows that, fundamentally, customers trust us to care for the water on which they depend. This insight has led us to update our vision to that of being 'Trusted to care for the water on which Scotland depends', or in short-hand of being 'Trusted to serve Scotland'.

Customers also wish us to further improve services and provide a leading customer experience, but to manage the rate of service improvement so that prices are stable, predictable and rise by below inflation across the 2015 to 2021 period.

Figure 1 – Customer expectations



## Trusted to serve Scotland

Our Strategic Projections, **Your future water and waste water services**, set out our long term plans for delivering services to customers over the next two to three decades.

Implementing these strategic plans will support achievement of our vision to be trusted to care for the water on which Scotland depends. Our vision recognises customers' fundamental trust that we will always deliver valuable services that are essential to their lives and businesses.

We have worked closely with all stakeholders through the Quality & Standards process to understand the investment needs and priorities, ensuring that the needs are robust and where appropriate supported by customer research. The Technical Expression that underpins our statutory obligations has been agreed with the Scottish Environment Protection Agency (SEPA) and the Drinking Water Quality Regulator for Scotland (DWQR).

We set out the research that underpins this plan, the improvements we plan to deliver to meet our customers' priorities and the statutory obligations set out in the Ministers' objectives statement of September 2014 in the following sections:

Section 2: Putting customers at the heart of our plans

Section 3: Sustaining existing high service for customers

Section 4: Improving our services for customers

Section 5: Providing continuous high quality drinking water

Section 6: Protecting and enhancing the environment

Section 7: Supporting Scotland's economy and communities

Section 8 sets out how we will finance our services, while Section 9 sets out our proposals for monitoring and performance. Section 10 explains our capital delivery strategy.

We refer to the Customer Forum throughout this document. This reference is not intended to imply that a decision has been taken on the future of the Customer Forum and any future role it may have, and we note that Citizens Advice Scotland is leading a review into this role. The reference is simply a short-hand for consistency and identifies areas where customer input to discussions and arrangements will be appropriate and important, whatever the particular form of that customer body.

We look forward to working with Citizens Advice Scotland and the Water Industry Commission for Scotland in determining the most effective way that customers remain at the heart of decision making in the water industry consistent with their statutory remits.

# Our plan for 2015 to 2021

## High quality service

We will continue to deliver high service levels during 2015-21 so that household and business customers receive a water and waste water service that is among the best provided across the UK, improving service in all their priority areas.

## Household prices

We are committed to annual household prices which increase by 1.6% for 2014/15 to 2017/18. Thereafter prices will be set to achieve an overall CPI minus 1.8% across the 2015 to 2021 period. This will be achieved by delivering further significant efficiencies and will keep prices lower than the average in England and Wales.

## Wholesale charges

A revenue cap will be set for wholesale customers, based on increases at 0.3% below CPI. This will protect household customers from revenue uncertainties in the business customer market and provide a further incentive to Licensed Providers to introduce new customers.

## Delivering value

We will build on our leading levels of employee engagement to continually improve the effectiveness and efficiency of our service delivery to customers.

## Financing

The financing of this plan will require £830 million of net new government borrowing in the 7 years from 2014 to 2021. Financing this plan with our proposed mix of customer prices and new borrowing will enable us to maintain our financial strength.

## Service to Licensed Providers

We will continue to listen to the needs of Licensed Providers as the UK retail market develops and adapt our wholesale services to meet their needs.

## Out-performance

We will endeavour to out perform this plan. We propose that any savings arising from out performance are held until 2018 to support the ambition of nominal household prices increases of 1.6% from 2018 to 2021 and/or investment in further improvements to improve the resilience of water supplies and to reduce the risk and incidence of sewer flooding. These would be agreed at the time with stakeholders and the Scottish Government.

## Customer experience

We will further improve customers' experience of their service from us so that it is as good as that provided by leading suppliers of other essential products and services. We will monitor our customer service through the Overall Performance Assessment, enhanced Customer Experience Measures and we will implement with the Customer Forum further measures of service that could be introduced.

## Innovation

Our plans are based on a detailed assessment of the most cost effective way to deliver customers' expectations and improved compliance. These involve both innovative and proven approaches to operating and investment solutions. Our detailed studies and investigations have enabled us to avoid extensive investment where there would be no clear benefit. We will use the IR18 investment review process to address emerging priorities or requirements arising through innovation outcomes.

## Risk

Inevitably, circumstances in the 2015-21 period will vary from those set out in this plan. In 2010-15, overall favourable circumstances and business out performance enabled us to both reduce customer prices in real terms and new government borrowing. In 2015-21, actual circumstances may require greater or lesser financial resources than assumed in this plan.

Putting customers at the heart of our plans

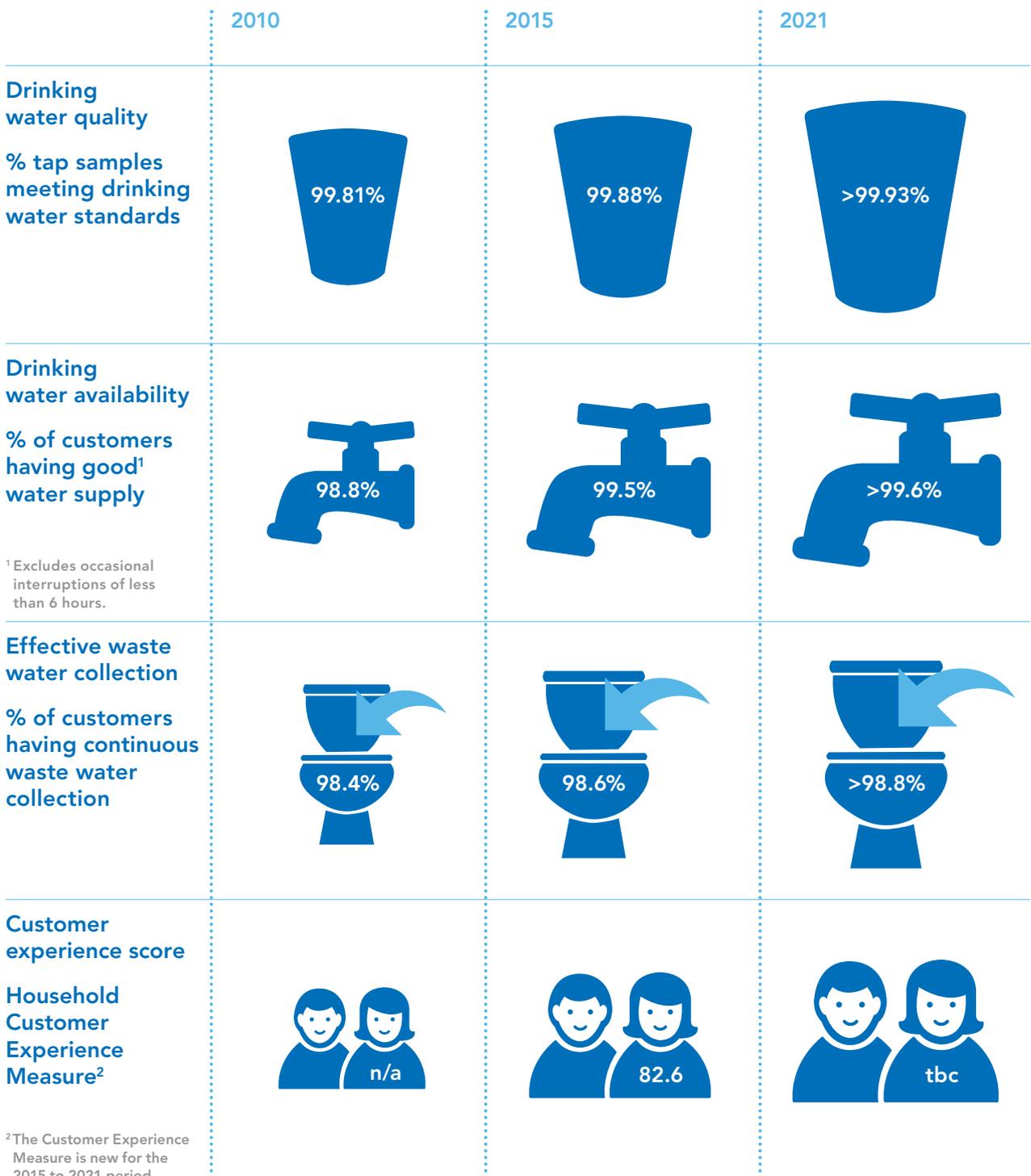
Sustaining existing high service for customers

Improving our services for customers

Providing continuous high quality drinking water

Protecting and enhancing the environment

Figure 2 – Benefits of this plan



## 2. Putting customers at the heart of our plans

Listening to customers' views and building these in to our plans is part of an on-going customer engagement approach that allows Scottish Water to ensure that our customers' needs are at the heart of our service delivery.

In preparing our Strategic Projections and Business Plan for 2015-21, we undertook an extensive customer research programme which involved targeted research activities, speaking with our customers to find out what they think, listening to our customers' views and building this into our plans.

The following summarises our understanding of customers' expectations of Scottish Water from that research:

- Customers trust that they have a safe and reliable supply of drinking water and expect us to maintain current high standards.
- Customers expect that their waste water will be taken away and returned safely to the environment.
- Both household and business customers have demonstrated that they have no desire to see service levels reduce in any area, and overall show desire, and place a value on, further service improvement once prompted with information about specific service areas.

Customers recognise that the quality of drinking water is high, and whilst investments are required in other areas to improve services, this should not be at the expense of drinking water quality.

Most of our customers currently receive 100% service reliability from Scottish Water. However, there are occasions when issues arise. In relation to specific areas for service improvement research from both business and household customers' findings show that:

- Minimising interruptions to water supplies is an important issue for customers due to the inconvenience that this may place on daily life, with long term interruptions having greater impact than short term interruptions. For certain business customers this would be a top priority due to their business being dependant on water to operate. Long term interruptions to supply due to extreme weather were thought to be difficult to prevent, but there is an expectation that Scottish Water should plan ahead to avoid or minimise the impact of these events.
- Reducing internal property flooding from sewers is consistently a high priority for improvement.

- External flooding represents one of the highest volumes of contact received by Scottish Water, and customers who discussed this issue in qualitative research expected Scottish Water to take steps to reduce its impact both in terms of the overall number of customers affected and those impacted by recurring issues.
- Despite the low levels of customer contacts relating to pollution incidents, this is viewed as an area for improvement, with a focus to be placed on the more serious 'category 1' incidents.
- Reducing discolouration (the appearance) and poor taste or odour from drinking water supplies is a priority for improvement as these give concern to customers that water quality has been compromised.
- Coastal and inland bathing water quality is an important issue driven by the pride customers have in Scotland and its natural environment, but a relatively lower priority for improvement for customers who rarely bathe in Scotland's water bodies.
- There was high agreement that everyone should be striving to cut down their carbon emissions, and therefore customers, in particular business customers, liked the idea of Scottish Water aiming to lower its carbon footprint. Customers expect Scottish Water to strive to be a climate champion and make a sustained effort towards reducing and mitigating the risks arising from climate change.
- While customers are keen for improvements to river water quality they thought that Scottish Water should prioritise investment where it will have the biggest impact on the river, and expect that other individuals or businesses should also address their environmental impact.
- Customers want the level of visible leakage reduced, but were not willing to pay extra to achieve this, and expect that repairs are carried out quickly.
- Low pressure was of lower priority to both customer groups, with many feeling that those affected still receive a level of service and the issue would be more of an inconvenience than have a significant impact on daily life. However, we know that this can be a major concern for our customers affected by low water pressure.

- Odour from waste water treatment facilities was also seen as a relatively minor issue, as it was considered to be primarily a temporary issue for those affected. However, we know that this can be a major concern for any community affected by malodour.
- Customer service was viewed as an important element, but customers are not willing to pay Scottish Water more to improve this as they expect good customer service as a matter of course.
- Customers want us to be more proactive in providing information about our Price Promise and Guaranteed Service Standards.

These priorities for further service improvement are as shown in figure 3 below.

**On-going engagement**

We are committed to working with the Customer Forum on deepening customer engagement. We will agree an annual programme of research with the Customer Forum which will include research into understanding the needs of vulnerable customers, customers within particular geographical areas and customers within particular service improvement needs. Engagement areas will also include lead pipe replacement, rural sewerage provision and private water supplies.

**Figure 3 – Customers’ relative priorities for further service improvements**



# 3. Sustaining existing high service for customers

In our research, customers have told us very clearly that we must not compromise existing service levels. Our first priority is therefore to sustain the high service levels we are delivering in 2014/15 throughout the 2015 to 2021 period.

## Our plans to sustain existing high service

Most of our customers never experience an interruption to the services they receive and rightly trust this will continue. Our plan will, as a minimum, maintain the current service risk profile to sustain the high levels of service we are delivering in 2014/15 throughout the 2015 to 2021 period. We will further improve services in areas identified as priorities by customers and these improvements are covered in section 4, 'Improving our services for customers'.

Our service to customers is principally delivered through the effective operation and maintenance of our assets such as water and waste water treatment works, pumping stations, water mains and sewers. The effective delivery of high levels of service requires the right balance between operational activity, routine maintenance, operational response and asset maintenance as shown in figure 4.

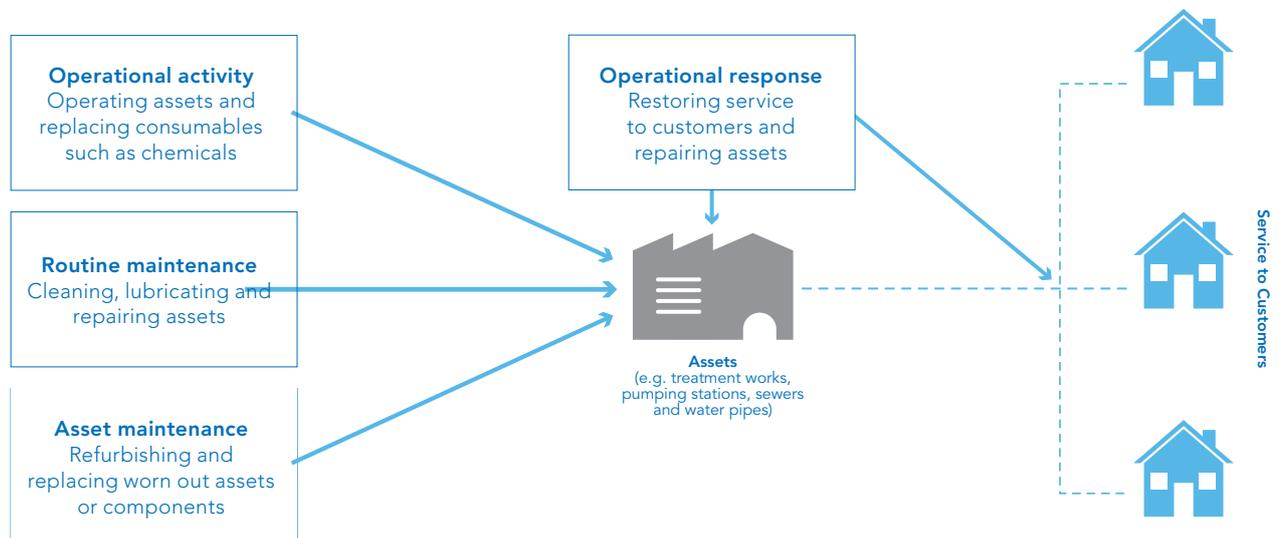
## Operation of our assets

Our operational strategy is to make proactive and preventative interventions that ensure our customers receive continuous services. Every day our employees manage and optimise our treatment works and networks to ensure that we will deliver our services to meet customer expectations and the required legal standards. Some assets only require periodic interventions to sustain high service levels, others require intensive management. Although our aim is to provide continuous high quality services, occasionally our customers experience issues with their services. In these situations, we aim to resolve these promptly leaving our customers fully satisfied that we have done everything possible to provide a leading service experience.

Efficient and effective operation of our assets requires the development and introduction of new technology, innovative ways of working and most of all the commitment of our people, both those directly employed and those engaged through partnerships and contract relationships. The commitment of our workforce is reflected in our leading scores in employee engagement.

We will continue our emphasis on leadership development and staff engagement that has led to a virtuous circle, as shown in figure 5 overleaf, of increased employee engagement, leading to improved performance and customer service, resulting in improved customer satisfaction, which reinforces employee engagement.

Figure 4 – Activities to sustain high service for customers



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Providing continuous high quality drinking water

Protecting and enhancing the environment

Figure 5 – Improving customer satisfaction



Our Intelligent Control Centre uses technology to allow us to sustain high quality services, by pulling together information to identify potential problems and take action before they affect service to our customers, through our leading use of information systems. The planned development of further intelligent controls during 2015 to 2021 will support our aims of moving to an ever more planned approach to both operation and operational maintenance, and allowing greater remote control of assets.

#### Routine maintenance of our assets

Many of our assets such as treatment works and pumping stations require operational maintenance including cleaning, lubricating and minor repairs. Without this routine maintenance the assets would not last as long and require replacing.

#### Operational response

At all times we focus on sustaining high services to customers. Despite good operation and maintenance practice there are times when incidents arise as a consequence of an asset failure, such as a burst main causing a potential interruption to supply. Our priority is always to seek to maintain service to customers or, if this is not possible, to provide a fantastic recovery service that minimises the disruption and gives the customer an excellent service experience.

Operational response starts from when the issue is identified, whether by our control systems or by customers through our contact centre.

## Asset maintenance

Effective asset maintenance is an essential foundation for maintaining the current service risk profile and delivering high quality service to customers.

Scottish Water manages assets worth over £56 billion to provide customers' water and waste water services. Of these assets, treatment plants and pumping stations are worth around £10 billion, about 50% of which have been built in the last 20 years.

#### Assessing asset maintenance demand

To assess our required asset maintenance investment for 2015 to 2021 we have used asset management modelling techniques and detailed assessments. We have validated the output from these models and assessments with the predicted demand from asset life models and trends from similar operations in England and Wales.

Our industry leading asset management models have been developed by our in-house teams in partnership with Edinburgh and Glasgow Universities and used to model the deterioration of our assets and their impact on service.

#### Forecast capital maintenance requirement

Our asset maintenance costs are rising and are forecast to do so over the next 10 years. This investment will sustain the significant improvements we have made to customer service and statutory compliance over the last 13 years, resulting from the extensive investment made over the past 20 years.

Our forecast capital maintenance demand will average £280 million per year over the 2015 to 2021 period.

#### Sustained high service

Our overall service is currently measured by the Overall Performance Assessment (OPA) which reflects service across 17 measures. The table on page 9 summarises the service levels, for key service measures and OPA, we expect to achieve by 2015 and, as a minimum, sustain during the 2015 to 2021 period.

**Table 1 – Service measures to be sustained as a minimum during 2015 to 2021**

Service measure	Expected minimum service levels for 2015 to 2021
<b>Water service</b>	
Drinking water quality compliance at customers' taps	99.88%
Number of properties affected by unplanned water supply interruptions:	
> 12 hours	< 1,000
> 6 hours	13,000
Drinking water – discolouration contacts	10,000
Drinking water – taste contacts	5,000
Properties below reference level for pressure	100
Security of supply index	91
Leakage (MI/day)	575
<b>Waste water service</b>	
Internal sewer flooding: annual number of incidents due to blockages and failures (all sewers)	650
Internal sewer flooding: number of properties at risk	370
Internal sewer flooding: annual number of incidents due to overloading (all sewers)	95
External sewer flooding: annual number of incidents due to blockages and failures (all sewers)	13,000
External sewer flooding: number of properties at risk	<5,000
External sewer flooding: annual number of incidents due to overloading (all sewers) <sup>1</sup>	400
Number of failing waste water treatment works <sup>2</sup>	5
Number of pollution incidents	330
% sludge disposed of satisfactorily	100%
<b>Customer service</b>	
Household Customer Experience Measure	82.6
Wholesale service key performance indicator <sup>3</sup>	95%
<b>Other</b>	
OPA <sup>4</sup>	382.5
Carbon footprint (kg/household)	125

<sup>1</sup> The annual number of incidents of internal sewer flooding due to overloading (all sewers) is outwith the 64-72 range indicated in our business plan to reflect annual outturns.

<sup>2</sup> The number of failing waste water treatment works is higher reflecting a change in measurement to be consistent with OPA and our current performance.

<sup>3</sup> The wholesale service KPI is lower than indicated in our business plan pending a review of the wholesale service measure.

<sup>4</sup> The OPA score of 382.5 reflects the minimum average score to be achieved over the 2015 to 2021 period.

## 4. Improving our services for customers

We believe that everyone in Scotland should receive a safe and reliable supply of drinking water and have their waste water collected and safely returned to the environment.

We aim to be trusted to care for the water on which Scotland depends, deliver ever improving value for money and support Scotland's economic growth.

Building on our successes over the past 13 years, our strategies are geared to help us achieve these aims and further improve our performance and efficiency. In developing these strategies we have considered the potential future opportunities and challenges and our customers' views as set out in our Strategic Projections, **Your future water and waste water services.**

### Rolling investment review

As part of the methodology for the 2015 to 2021 price control, we have agreed changes to the planning process with the Water Industry Commission, Quality & Standards stakeholders and the Customer Forum that will encourage greater flexibility in the process. Under this approach, investment plans will be updated on a 'rolling' basis at 3 yearly intervals, allowing a more stable investment profile to be developed, with the prospect of continuous investment period to period. This effectively removes the need for Scottish Water's investment plan to be fully specified for the full duration

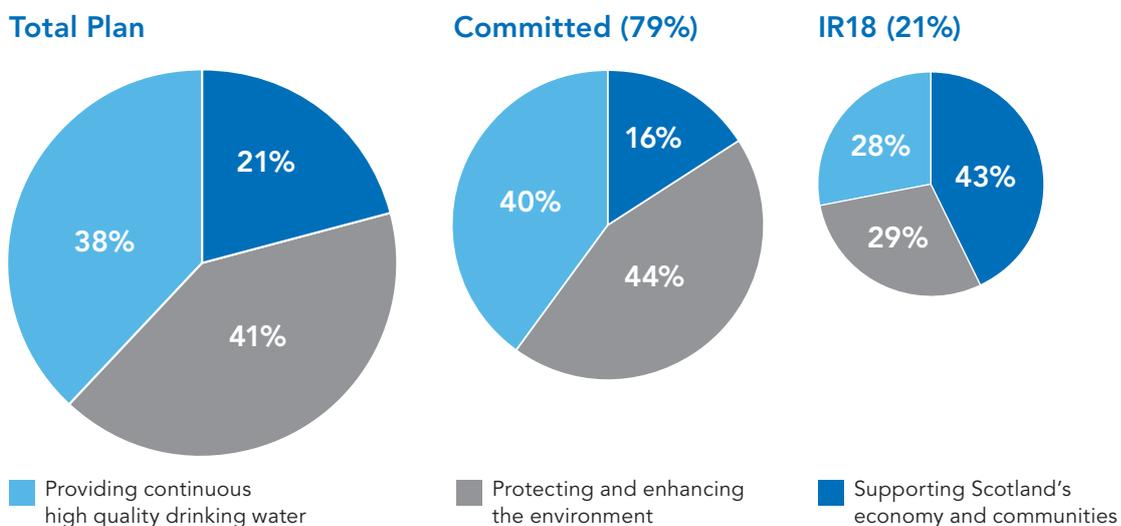
of the next regulatory control period and avoids 'locking in' solutions too early and constraining potential innovative solutions.

This approach is intended to bring benefits for customers by providing greater flexibility in meeting existing and emerging priorities, a better environment for adopting innovative approaches, a more efficient (smoother) delivery profile between regulatory periods, and facilitating longer term strategic solutions. It will also allow opportunity to address changes to priorities that emerge in the 2015 to 2021 period due to new legislation or a changing water environment and for customers to be represented in decisions regarding the next rolling update and the balance between investment and prices.

We have included allowances (IR18) that will be reviewed at the rolling update in December 2017. In total this amounts to £286 million in the 2015 to 2021 period with an on-going commitment of around £289 million for investment completion in the 2021 to 2027 period.

The mix of improvement costs across the different areas of our services is as shown below, in figure 6, with 79% of planned investment in the period being fully committed and 21% subject to further review in December 2017 as part of the rolling investment review (IR18).

Figure 6 – Breakdown of service enhancement investment



# 5. Providing continuous high quality drinking water

## Our strategy at a glance

Scottish Water’s customers are receiving the highest ever level of drinking water quality thanks to significant investment. But we need to do more to ensure we meet our statutory obligations in future. That’s why we want to improve water quality even further while ensuring every customer can always receive a safe and reliable supply of drinking water.

## Our strategy to improve water quality

Scottish Water will monitor and maintain its network to provide high quality drinking water. We will work to protect our water sources from pollution and, where necessary, invest in new treatment works and pipes to meet statutory drinking water standards, to improve the look and taste of water and address the challenge of climate change.

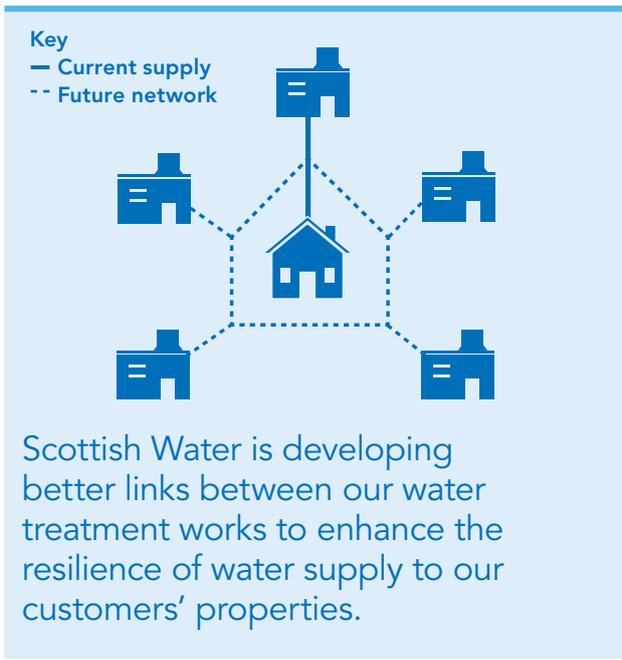
## Our strategy to supply water whenever and wherever it is required

The challenges of climate change, population growth and aging infrastructure may increase the risk of long term interruption to customers’ water supply.

We will take steps to ensure that all customers, regardless of where they live, are always able to turn on their taps and receive the best possible water.

Improving long term resilience could be achieved by importing water using road tankers in extreme circumstances and creating new links between supply systems for larger communities. This will help ensure we can always provide customers with water if there is a problem with their normal supply.

We will work to reduce water leaks from our pipes and encourage customers to use water wisely – recognising that water is a precious resource.



## Our plans to improve drinking water supplies in 2015 to 2021

We set out in this section the planned improvements for providing our customers with a safe and reliable supply of drinking water. These improvement areas align with customers’ priorities and have been agreed with DWQR, where appropriate, and discussed and supported by the Customer Forum. Table 2 overleaf summarises the investment we plan to make to provide continuous high quality drinking water.

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Table 2 – Summary of proposed investment to improve water service

Service area	Improvement programme	2015 to 2021 Capex £m (2012/13 prices)		
		Committed	IR18	Total
Improving drinking water quality	Improvements to compliance required by DWQR to improve supplies for over 1 million customers	208.9	42.0	250.9
	Improvements supported by the Customer Forum and DWQR to improve reliability of drinking water quality for up to 3 million customers	96.8	21.3	118.1
	<b>Sub total</b>	<b>305.7</b>	<b>63.3</b>	<b>369.0</b>
Improving the availability of drinking water	Improvements required by Scottish Government to meet security requirements	23.4	2.6	26.0
	Improvements supported by the Customer Forum	114.7	13.5	128.2
	Improved drought resilience for 47,000 customers (SOSI)	35.8		35.8
	Critical asset risk – reservoirs	18.1		18.1
	Water supply resilience strategy and improvements	55.0	12.0	67.0
	Understanding water pressure level of service and improving where appropriate	0.5	1.5	2.0
	Improve response times to reduce average duration of short term interruptions to supply	4.5		4.5
	Improve response times to reported visible leakage from 3 days to 1 day	0.0		0.0
	Water efficiency advice	0.8		0.8
	<b>Sub total</b>	<b>138.1</b>	<b>16.1</b>	<b>154.2</b>
<b>Total</b>		<b>443.8</b>	<b>79.4</b>	<b>523.2</b>

### Improving drinking water quality

The most recent DWQR report shows 99.89% of samples from customers' taps met the required standards – the best ever compliance level. We recognise this can be improved further, particularly in addressing impurities that occur naturally in the environment, further enhancing some treatment plants and replacing iron water pipes.

Ministers' objectives require us to address all known areas of non-compliance with our statutory obligations. Following engagement with the Customer Forum and the DWQR, our plan also includes actions to address identified risks to future drinking water quality compliance that moves towards a more proactive and preventative approach to improving the reliability of drinking water quality. While this plan reduces risks to drinking water quality in line with the World Health Organisation approach to drinking water safety plans, it will not eliminate all risks as explained in table 21 of this plan (page 42).

Our plan has been informed by investigations into previous exceedances of the water quality standards, our on-going water quality monitoring at treatment works, and our drinking water safety plans.

The required improvements have been reviewed and agreed with DWQR. For each issue we have studied all the available options to identify the lowest whole life cost solution.

Our plan adopts a mix of innovative and proven solutions. We have included operational solutions such as mains flushing to remove iron and manganese deposits that are affecting water quality at customers' taps and sustainable land management activities to manage the impact of catchment run-off on our raw water sources. We have also included innovative asset solutions such as reservoir mixing to control manganese levels entering our treatment works which, if successful, will avoid the need for additional investment to upgrade treatment works. We expect the IR18 investment review to consider the success of these innovative approaches and prioritise any further investment where appropriate. However there are situations where the only effective option is to build additional or new treatment plants, or replace or reline water mains, to achieve the water quality standards that our customers expect.

**Improvements to statutory compliance required by DWQR**

We plan to incur expenditure of £369 million in the 2015 to 2021 period improving and protecting drinking water quality. Of this, £208.9 million is for confirmed solutions to address statutory improvement requirements for:

- 26 water supplies that do not comply with current standards serving 534,000 (11%) customers;
- Rehabilitating 397km of water mains and cleaning 1,216km of water mains confirmed as causing non-compliance serving 647,000 (13%) customers;
- 23 supplies commenced in the 2010 to 2015 period under Q&SIIIb that will improve supplies for customers; and
- Replacing around 6,500 lead communication pipes to ensure compliance with lead standards and respond to customers’ requests to remove lead.

We have only committed to investment solutions in this plan once all available options have been studied and we understand the cause of non-compliance.

There is one site at Burncrooks Water Treatment Works that is a priority for improvement where the investment is ring-fenced to allow confirmation of the proposed solution. There are four other sites where we wish to undertake further investigation into the causes of the non-compliance to confirm the most appropriate solution. For example at one of these sites we have problems with increasing organic material in the source water, leading to higher than expected trihalomethanes (THM) in drinking water. We will investigate further the characteristics of the organics to implement the lowest cost solution.

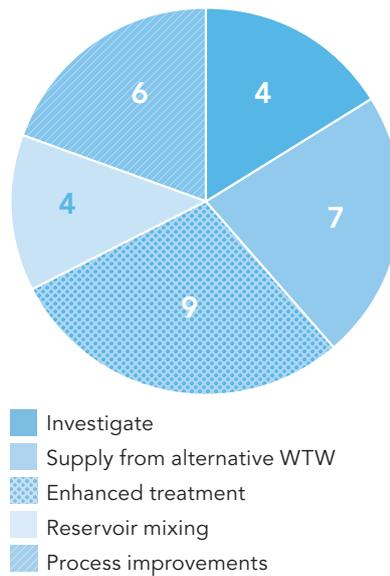
We have included in our programme an allowance of £42 million:

- For resolving the four non-compliant sites serving around 48,000 (1%) customers that are being investigated to confirm solutions; and
- To begin to address distribution mains that may be causing non-compliance for up to 853,000 (16%) customers and that are being investigated in the early years of our plan.

These allowances will be reviewed as part of the IR18 investment review in December 2017.

Figure 7 sets out the types of solution being adopted to address the 30 supplies that are currently non-compliant.

**Figure 7 – Range of solutions used to improve drinking water supply compliance**



We are aware that in the longer term there may be a move towards lead free water supplies and customers’ plumbing to protect public health. At this stage we have included no allowance for investment and will remain watchful of developments.

**Improvements to reliability supported by the Customer Forum and DWQR**

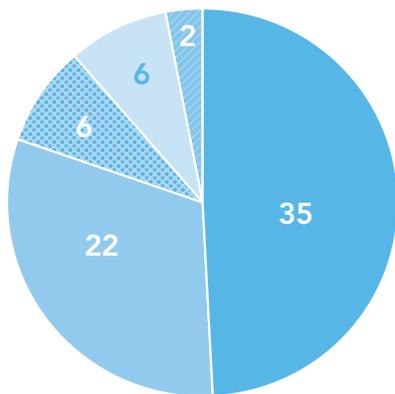
Following engagement with the Customer Forum and the DWQR, our plan includes actions to move towards a more proactive and preventative approach to improving the reliability of drinking water quality. We plan £96.8 million of improvements to increase the reliability of drinking water quality by:

- Managing catchments and improving treatment on 71 supplies serving over 1.7 million (31%) customers;
- Network or service reservoir enhancements to improve reliability of drinking water quality serving around 1.2 million (22%) customers; and
- Cleaning 5,928km of water mains serving 650,000 (12%) customers.

We have also included an IR18 allowance of £21.3 million for further actions to reduce risks of future non-compliance in supplies serving around 1 million customers that we are still investigating.

Figure 8 shows the range of solutions we are using to improve the reliability of drinking water quality on the 71 supplies.

**Figure 8 – Range of solutions used to reduce risks of supply non-compliance**



- Process improvement
- Catchment management
- Catchment improvement
- Enhanced treatment
- Investigate

**Discoloured water**

We expect that our planned improvements to drinking water quality through reducing iron and manganese levels will lead to fewer instances of discoloured water at customers’ taps.

**Taste and odour**

We have not included any specific investment to address complaints regarding taste and odour of drinking water. We expect these to reduce through on-going improvements to operational management and quality control.

**Private water supplies**

We are supporting DWQR and the Scottish Government to look at ways to improve the quality of private drinking water supplies through our research into sustainable rural communities. We have included no investment in the 2015 to 2021 period to connect any private supplies to the public network, as the priority supplies and most appropriate means of improving these have still to be determined. We expect these to be discussed as part of the IR18 investment review process.

**Improving drinking water availability**

Most of our customers have never experienced an interruption to their water supply, and they expect us to take reasonable steps to ensure that this continues. Fortunately, we have only experienced a few events that have resulted in a prolonged service failure to our customers; or where there have been circumstances where we have come close to significant loss of supply.

Such historic events demonstrate that we are vulnerable to unexpected events or failures at critical assets, or extreme events, that could leave us unable to continue normal supplies. Therefore we have identified that we need to improve the resilience<sup>5</sup> of water supplies to reduce the risk of future interruptions and meet customers’ expectations for uninterrupted service.

Our initial assessment indicates that around only 15% of our customers can be provided with a normal service from an alternative source of supply in the event of the loss of a critical asset (treatment works, raw water supply or certain strategic trunk mains).

The development of greater resilience involves the following:

- Ensuring critical assets are secure;
- Improving the supply system to ensure it has the necessary levels of duplication, reliability and resistance to withstand extreme events and maintain customer supply;
- Improving our ability to respond to customers’ needs and recover the service in the presence of extreme events;
- Improving the drought resilience of our reservoir storage;
- Managing demand through leakage management and providing water efficiency advice to customers; and
- Reducing the risk of failure in critical assets.

**Security of assets**

This plan sets out investment of £23.4 million to meet the Scottish Government’s defined security requirements, and reservoir flood resilience improvements required by the Flood Risk Management Act. A £2.6 million IR18 allowance has been included to address emergency shutdown requirements and reservoir flood resilience improvements once these have been investigated.

**Critical asset risk – reservoirs**

We plan to invest £18.1 million to move to a more proactive and preventative approach that reduces the risk of dam failures by accelerating actions to address emerging issues raised by the independent inspecting engineers before they become matters in the interest of safety.

We continue to undertake inspections of our critical raw water and trunk mains to identify risks that may exist and have identified some emerging issues. As projects reach an appropriate level of maturity we will bring forward proposals for agreement to ensure the risks are mitigated timeously, financed where possible from additional cash balances created by out-performance.

<sup>5</sup> Resilience is the ability of our supply systems to maintain essential services under extreme circumstances such as those caused by extreme weather, climate change (low rainfall or flooding), or unforeseen asset failure.

**Resilience of supplies**

This a priority area for service improvement for customers and the Customer Forum wishes to consider further the appropriate level of investment to be made and benefits this will deliver for customers.

This plan includes £35.8 million to improve the drought resilience of supplies serving around 47,000 customers during periods of dry weather and to complete the improvements to the drought resilience of supply to Inverness.

We plan to invest £55 million to improve resilience of supplies and support response to extreme events. This includes: £21.5 million to improve resilience of the Edinburgh water supply system to loss of supply from the Megget reservoir; £25 million in increasing the reliability of supplies by resolving risks identified through our Drinking Water Safety Plan process that could compromise the reliability of drinking water quality and the availability of supplies in 12 systems serving 815,000 customers and the Sullom Voe oil terminal; £3 million for a mobile water treatment plant and £5.5 million to undertake detailed investigations of our critical assets/ systems and their capability to deal with unforeseen events or catastrophic asset failure, and develop proposals for the strategy to improve resilience of other water supplies to extreme events across Scotland.

We are developing a risk assessment methodology that will facilitate a discussion with customers about the priority for addressing these risks. However, recent work on the Ayrshire system has identified a need to bolster resilience as the system serves major population centres. To address this risk we plan to accelerate the development and design of a wider strategic solution connecting Ayrshire to the Glasgow system. We plan that the early stage development and design are financed from early utilisation of the £12 million IR18 water supply resilience allowance for beginning to improve the longer term resilience of water supplies. This will enable early consideration to be given to implementing the identified strategic solution.

**Leakage**

Our research identified leakage as an issue of concern to customers. When we explored this issue further with customers and the Customer Forum, it became clear that customers wish us to reduce the time taken to respond and fix visible leakage (water running in the street) and the waste of a valuable resource.

On average we respond to visible leaks within 3 days of notification. In this plan we will improve our response times to same/next day and thus improve our customers' perception of our services.

The final determination included a new leakage incentive scheme. Under this scheme, we will be permitted to recover in the next regulatory period the £10 million of one-off transition costs required to reduce leakage to 500 Megalitres per day. The incentive scheme allows for an additional £5 million of recoverable costs if the target is achieved a year earlier, or a reduction if it is achieved a year later. We are reviewing our options to reduce our leakage to 500 Megalitres per day and the timescales for doing so.

**Water efficiency**

We have included in our plan new operating costs of £1.4 million and capital costs of £0.8 million for increasing awareness and providing water saving packs and advice to around 49,000 household customers about the benefits to them of the efficient use of water in the home.

**Short term interruptions to water supplies<sup>6</sup>**

We plan to invest £4.5 million to further improve our speed of response to potential or actual short term interruptions to water supplies through further real time network monitoring to identify issues early and take action to restore or maintain supplies. We are also looking for further opportunities to control pressures within our network to reduce the likelihood of bursts.

**Water mains pressure**

By 2015 we expect there to be only around 100 properties receiving pressure below the required minimum standard and a further 5,000 properties that may not receive the minimum standard without some booster pumping due to their location in relation to the storage tank that supplies them.

We receive many customer contacts about the pressure that customers are experiencing. Some of these relate to internal plumbing issues and others to managed changes in network pressures to reduce leakage where the minimum standard may not meet customers' expectations.

We have agreed with the Customer Forum to invest £0.5 million to undertake a detailed assessment of the range of pressure experienced by customers and explore further customer service expectations to inform our future plans. At the request of the Customer Forum, we have assessed the potential investment that may be needed should improvements be required and have included a £1.5 million IR18 allowance for priority improvement works that may arise from this improved understanding.

<sup>6</sup> A short term interruption to supply is one that can last up to 48 hours. In general these are caused by asset failures, mainly water mains bursts and on occasion failures at pumping stations or water treatment works. The majority of customers have supply restored within 6 hours and it is rare for an interruption to last more than 24 hours.

Table 3 – Drinking water quality programme – cumulative outputs profile<sup>7</sup>

	Programme area	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Post 2022
1	Number of water treatment works made compliant with water quality standards			13	19	21	26		
2	Number of water supply zones made compliant with iron and manganese standards				25	43	81	88	
3	Water quality completion programme	5	10	20	23				
4	Number of raw water catchments where reliability is improved			1	3	3	34	40	47
5	Number of enhancements to networks and treated water storage to improve reliability of supply		2	6	14	16	79	81	
6	Length of distribution mains refurbished			365	841	2,142	5,394	5,928	
7	Water supply resilience strategy and the number of improvements made	1	3	6	9	11	14		
8	Number of zones to improve security of supply (SOSI)				4	6	8	11	
9	Number of improvements required to meet Security and Emergency Measures Directive requirements		79	79	209	483	603		
10	Number of improvements to dams to meet the obligations of the Flood Risk Management Act				45				
11	Number of lead communication pipes replaced	1,082	2,168	3,250	4,332	5,418	6,500		
12	Number of improvements in the infrastructure of critical – reservoirs	3	9	20	32	44	56		
13	Detailed assessment of the range of pressure experienced by customers				1				
14	Number of water efficiency advice and water saving packs provided (to 2% of customer base)	8,167	16,333	24,500	32,667	40,833	49,000		
15	Number of water quality studies to prepare for future investment periods	22	51	51	51	341			

<sup>7</sup> IR18 outputs will be added on once confirmed through the IR18 process.

# 6. Protecting and enhancing the environment

## Our strategy at a glance

Scottish Water’s environmental performance has been transformed over the last decade. But there is further work we must do to protect and enhance the environment, meet legislative requirements and achieve further reductions in flooding and pollution from sewers. Our customers have told us to target investment in areas where we can achieve the biggest environmental benefit.

### Our strategy to prevent flooding from sewers

If climate change results in even more wet weather, building bigger sewers would help deal with increased rainfall. However, we will explore more sustainable and lower cost ways of managing rainwater from roofs, roads and car parks, where feasible.

We will work with customers and promote the best ways of disposing of household and business waste such as nappies, wipes and used fats and oils to reduce the extent of flooding from sewers.

### Our strategy to protect and enhance the environment

We will operate and maintain our waste water treatment works to reduce the likelihood of pollution and protect the natural environment. We will play our part in tackling climate change by acting to reduce carbon emissions.

We will encourage farmers and landowners to play their part in preventing pollution in the water environment.

We will reduce leaks from our pipes and encourage recycling of water to reduce demand on supplies stored in lochs and reservoirs.

We will look for ways to operate our treatment works and networks in greater harmony with the environment. We will seek to influence others to remove chemicals and substances that find their way into waste water to avoid expensive treatment.



Over 80% of flooding from sewers is caused by inappropriate items being disposed of in toilets and drains. Encouraging customers to properly dispose of waste items will help prevent flooding of other customers’ properties and improve the environment.

### Our plans to enhance the environment in 2015 to 2021

We plan to make further improvements to our treatment plants and sewer networks to enhance the collection and treatment of our customers’ waste water so it can be safely returned to the environment. These improvements have been agreed with SEPA, where appropriate, and discussed with and supported by the Customer Forum.

Table 4 overleaf summarises the investment we plan to make to protect and enhance the environment.

Overview

Putting customers at the heart of our plans

Sustaining existing high service for customers

Improving our services for customers

Providing continuous high quality drinking water

Protecting and enhancing the environment

Table 4 – Summary of planned investment to improve the environment

Service area	Improvement programme	2015 to 2021 Capex (£m, 2012/13 prices)		
		Committed	IR18	Total
Protecting and enhancing the environment	Improvement required by SEPA to support improvements to the environment	367.2	25.9	393.1
	Urban Waste Water Treatment Directive (UWWTD)	295.6	3.7	299.3
	Water Framework Directive (WFD)	4.0	12.8	16.8
	Revised Bathing Waters Directive	31.6	3.9	35.5
	Industrial Emissions Directive	7.6	3.7	11.3
	Shellfish Directive	0.0		0.0
	Priority Substances Directive	3.4		3.4
	Flood Risk Management Act	14.0		14.0
	Habitats Directive	0.4		0.4
	Compliance Assessment Scheme	1.0	1.8	2.8
	Preparation for future investment periods	9.6		9.6
	Improvements required by Scottish Government to protect the water environment	5.9		5.9
	Improvement required by SEPA and local authorities to reduce odour nuisance	2.4	0.4	2.8
<b>Sub total</b>	<b>375.5</b>	<b>26.3</b>	<b>401.8</b>	
Reducing flooding and pollution from sewers	Improvements supported by the Customer Forum	110.5	58.2	168.7
	Internal flooding improvements	78.8	33.1	111.9
	External flooding improvements	24.1	25.1	49.2
	Flood resilience assessments	5.9		5.9
	Surface water management investigations	1.7		1.7
<b>Sub total</b>	<b>110.5</b>	<b>58.2</b>	<b>168.7</b>	
<b>Total</b>		<b>486.0</b>	<b>84.5</b>	<b>570.5</b>

### Protecting and enhancing the environment

We have made significant improvements to our discharges over the past 20 years to support a better water environment.

The main drivers for improvement in environmental water quality have been, and continue to be, European Directives that have subsequently been transposed into Scots law. The main European Directives are: the Urban Waste Water Treatment Directive (UWWTD), the Water Framework Directive, the revised Bathing Waters Directive, the Waste Framework, Industrial Emissions and Contaminated Land Directives, the Shellfish Directive and the Priority Substances Directive.

The basis for our plan is to take forward improvements only where the following three key principles are met:

- There is robust scientific evidence that our discharges are having an impact on the water environment;
- There will be a clear benefit from the proposed investment; and
- Investing in our assets is the most sustainable way of achieving the required environmental outcome.

We have worked closely with SEPA to investigate the impact of our activities and the most cost effective ways of meeting the legislative requirements. Based on this work we have agreed areas that require further investigation or appraisal before committing to improvement. These areas include studies in relation to the Water Framework Directive, the revised Bathing

Waters Directive, the Shellfish Directive and the Priority Substances Directive. These investigations are included as part of this plan with a view to informing investment from 2018 to 2027.

Our plan is based on the principles set out above and the outcome from 99 studies undertaken in partnership with SEPA to understand the impacts of around 1,400 assets, potentially impacting on 800km of receiving water and 42 protected areas. The studies demonstrated that around 600 of our assets are adversely impacting receiving waters. The remaining assets were confirmed as not having a significant impact and no investment is planned to these discharges at this time.

For each issue that has passed our three key principles we have studied all the available options, including innovative and non-investment options, such as surface water management and oxygenation of the water body, to identify the lowest whole life cost solution.

The majority of the investment in this plan to improve environmental water quality is to continue to improve our sewer networks to meet the requirements of the Urban Waste Water Treatment Directive, predominantly in the Greater Glasgow area. This will meet our commitments identified through the Metropolitan Glasgow Strategic Drainage Partnership.

Our plan is as follows:

- Urban Waste Water Treatment Directive:** We plan to invest £295.6 million to improve all known discharges that are confirmed as being non-compliant with the Directive. This includes £9.5 million to improve discharges from 20 small waste water treatment works serving 944 customers; £182.6 million to complete work started in 2010 to 2015 to reduce the impacts of 97 discharges to the River Clyde and its tributaries; £36.2 million to improve a further 62 storm overflows to the River Clyde and Water of Leith catchments and undertake drainage, aesthetic and river/marine studies as required in order to confirm whether 519 intermittent discharges that may be unsatisfactory require improvement.<sup>8</sup> We have included an allowance in the committed programme of £67.4 million to reduce the impact of discharges from two large waste water treatment works in Glasgow serving over 500,000 customers. This allowance is ring-fenced, using the seven stage approval process, in our plan as there remain significant uncertainties regarding the solution and cost of this project. We have included

an IR18 allowance of £3.7 million to commence delivery of improvements to storm overflows confirmed in the 2015 to 2018 period.

- Water Framework Directive:** Our plans for improvements to meet Urban Waste Water Treatment Directive requirements also support meeting the requirements of the Water Framework Directive. We have included further studies of the River Almond and Water of Leith to understand strategic solutions for these catchments and allow full consideration of costs. We have confirmed, through studies, 9 water resource zones that require improved abstraction regimes to ensure there is sufficient water remaining in water bodies during periods of low rainfall and 11 dams or weirs to provide opportunity for migratory fish to pass our weirs and reservoirs. With the exception of four water resource zones where investment of £3.5 million is planned to protect drinking water quality and investment of £0.5 million for two fish passes, we have included all other confirmed improvements within the IR18 allowance of £12.8 million to allow consideration of phasing of delivery within the available finance to achieve overall compliance by 2027.

Where private discharges are impacting the water environment, we will support SEPA and the Scottish Government in evaluating the most appropriate means to address the environmental risk.

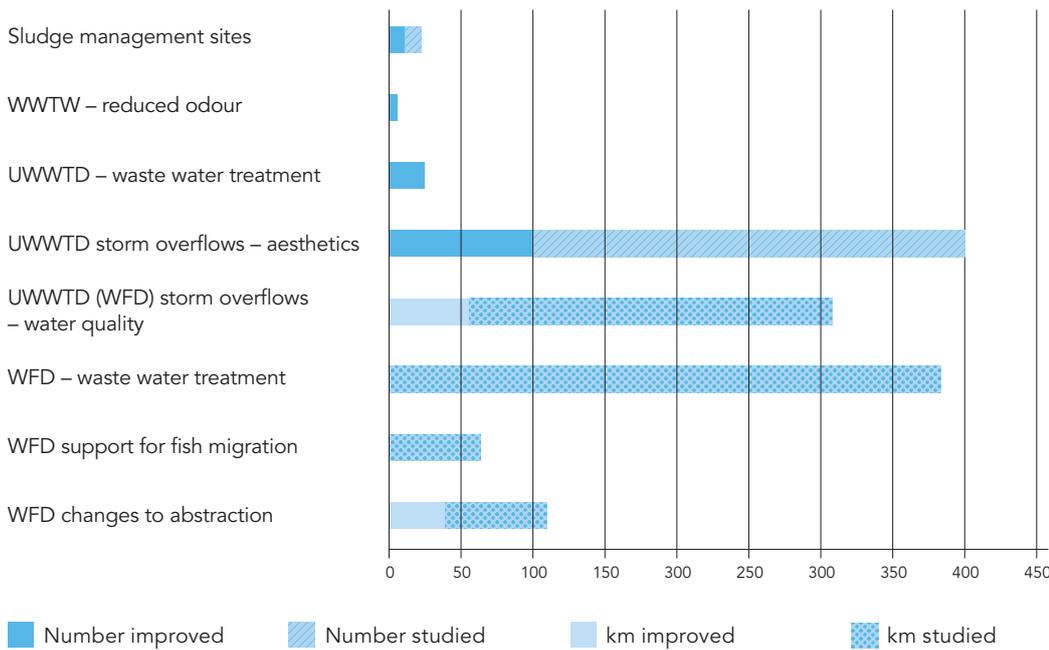
- Revised Bathing Waters Directive:** Our plan is to support SEPA in understanding when reductions in diffuse pollution are sufficient to allow Scottish Water to deliver an improvement that will measurably improve the standard of the bathing water. We have included investment of £31.3 million to complete works commenced in the 2010 to 2015 period and to complete the strategic studies, commenced in 2010 to 2015, of assets on two rivers impacting 3 Ayrshire bathing waters and the newly designated 'Fisherrow' (Musselburgh) bathing water. We have included an IR18 allowance of £3.9 million to commence delivery of any solutions arising from these studies. We will also update our existing water quality models at 11 locations across Scotland at a cost of £0.3 million as new performance data becomes available. We will invest £1.7 million operating costs undertaking beach surveys to confirm whether our discharges are causing sewage related debris at designated bathing waters and clean up as appropriate.

<sup>8</sup> As agreed at the Output Monitoring Group (OMG), 5 UID outputs included in the Business Plan for the 2015 to 2021 period have been deferred to support the delivery of projects financed through the OMG180.

- Waste Framework, Industrial Emissions Directive:** We have undertaken studies at 30 sites where we store sludge produced at water or waste water treatment works. We plan no further activity at 10 locations because no risks to the environment have been found, or risks have been transferred. We will carry out further monitoring at 10 sites to confirm whether the environment can be impacted by stored sludge and to clarify the impact associated with remedial activity and have made an IR18 allowance of £3.7 million in our plan for any necessary land restoration. We plan to invest £7.6 million to remove environmental risks at the remaining 10 sites either by stabilisation<sup>9</sup> of sludge at 4 sites and removal at the other 6 sites.
  - Shellfish Directive:** There are 80 designated coastal shellfish waters in Scotland. Scottish Water has previously been required to improve waste water treatment works and intermittent discharges close to shellfish waters, with the intention that this would protect water quality and improve shellfish flesh quality. Monitoring has shown that although minimum water quality standards are met where we have improved our assets, there has been little measurable improvement in shellfish quality. We are proposing no further investment in this area until all other impacts are understood.
  - Priority Substances Directive:** This was introduced in 2008 by the European Commission and is aimed at progressively reducing the impact of substances which are toxic to aquatic life. There is limited information about the prevalence of these substances in the environment and their source is not always understood so our plan is to invest £3.4 million on further research and development to allow substance specific strategies to be developed with SEPA. Until these strategies are in place, we are not proposing to make any improvements at our treatment works to remove these substances.
  - Flood Risk Management Act:** We will fulfill our duties under the Act to assess the risk of customers being affected by sewer flooding due to overloading and work with the local authorities and SEPA to develop plans to reduce flood risk. We have included £14.0 million in our plan for these studies and expect any matters arising from current studies to be considered as part of the 2018 investment review. We have made no IR18 allowance for this as we are unable at this stage to quantify the activities that may arise.
  - The Habitats Directive (together with the Birds Directive):** Scottish Natural Heritage has identified three sites where changes to Scottish Water's activities could help improve designated sites. At one site we plan to invest £0.4 million improving our discharges to protect dolphins, at two other sites we will undertake studies to confirm if we can make changes without impacting services to customers.
  - Compliance Assessment Scheme:** SEPA introduced the compliance assessment scheme in 2011 to assess compliance with all aspects of discharge licenses, not just the quality of the effluent discharged. Implementation of the scheme has identified that investment is required to provide new and improved flow and event monitoring equipment to record overflow discharge rates. The improvements will reduce the risk of non-compliance with the discharge standards. We will invest £1 million to improve monitoring at sites with confirmed requirements and have made an IR18 allowance of £1.8 million for anticipated improvements to be agreed with SEPA.
- Continuing with the approach adopted in the current period we plan to invest £9.6 million to undertake studies that will confirm future investment requirements to meet our statutory obligations. These studies have been agreed with SEPA and will ensure that we can meet our future obligations in the most cost effective way with due consideration of the impacts of all parties on the water environment.
- The water bodies and discharges to be studied and improved under our plan are shown in figure 9.

<sup>9</sup> Stabilisation is an innovative approach that if successful avoids the costs of removing all the sludge from site.

**Figure 9 – Benefits of environmental water quality improvement plan**



**Odour code of practice and Waste Management Licences**

Waste water treatment works can generate malodour due to the nature of the material being treated. There are statutory requirements to control odour. These are set out under the ‘Code of Practice on Sewerage Nuisance’, which is enforced by Local Authorities, and where sites are subject to ‘Waste Management Licences’, the control of odour emissions are enforced by SEPA. Using malodour complaint information received from customers, local authority environmental health teams and SEPA, we have identified 13 sites that generate, on average, 4 or more complaints per year. We plan to invest £2.4 million in delivering odour improvement plans at 2 sites subject to Waste Management Licences and 3 other sites identified as causing a nuisance under the Code of Practice. We plan to defer investment in the remaining 8 sites until after 2021 as agreed with the Customer Forum. However, this will be reconsidered during the IR18 investment review should further priorities arise and we have included a £0.4 million allowance for this.

During 2014, there has been heightened customer concern of odour issues associated with Shieldhall Waste Water Treatment Works and, in particular, its proximity to the new South Glasgow University Hospital that will open in Spring 2015. We will undertake operational

and capital maintenance improvements at this site, but we may need to consider further capital enhancement, that is not currently financed, if the improvement measures on the existing assets are insufficient to address the concerns of the local community, particularly once the new hospital is operational.

**Security of waste water assets**

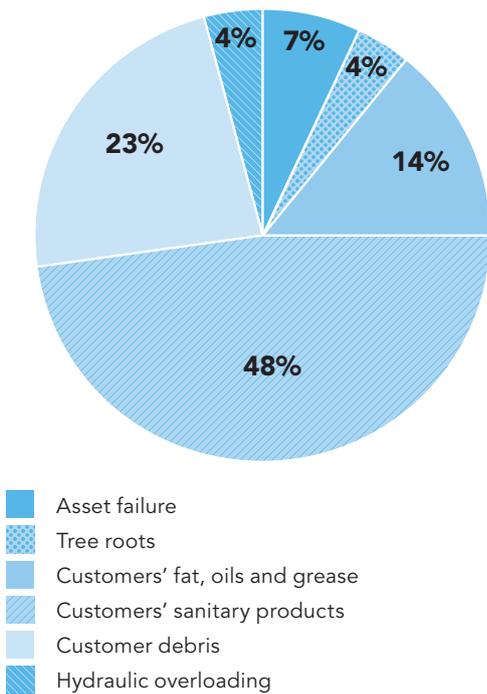
This plan includes investment of £5.9 million to meet the Scottish Government’s defined security requirements.

**Reducing flooding and pollution from sewers**

Flooding from sewers occurs when sewage escapes from the sewerage network, either by coming back out of baths, toilets and sinks, or up through manholes and flowing overland into customers properties and streets. Scottish Water records all incidents of sewer flooding reported to us and investigates all incidents of internal flooding to ascertain whether they are due to the inability of our sewers to cope with storm events or due to blockages.

On the next page, figure 10 shows the causes of flooding from sewers and figure 11 shows the level of flooding incidents reported to Scottish Water annually.

Figure 10 – Causes of flooding from sewers

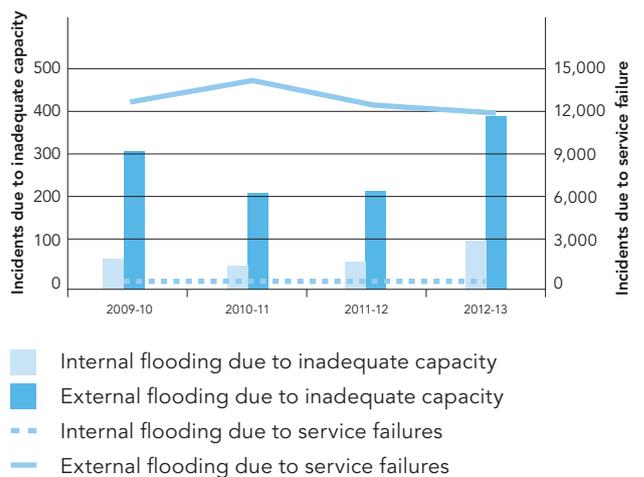


Where these flooding incidents are due to blockages our sewer response teams attend and address the cause of the blockage, undertaking surveys of the sewer where appropriate to ensure there is no defect requiring attention. Our experience shows that the majority of incidents are caused by inappropriate items being disposed of in our sewers.

Through our extensive customer research and our engagement with the Customer Forum we have identified sewer flooding (internal and external) as a high priority area for service improvement. By listening to our customers we realise that our current approach, while consistent with that adopted across the UK water industry, could be improved. Instead of focusing only on those customers that have actually been flooded we plan to make progress towards understanding those customers that are at risk of flooding.

We believe that intervening only once service has fallen to a 10% or greater chance of being flooded annually is not appropriate and we should progress towards sustaining services at no more than the 3% chance of flooding annually that our sewers were designed to achieve for all customers.

Figure 11 – Flooding events caused by sewers



To improve our services by 2021 our plan includes:

- £13 million of new operational costs incurred on a long term customer education campaign and targeted consultation approach to reduce the volume of inappropriate material disposed of via the sewer, with targeted advice in areas of repeat occurrences. The outcome of this approach is uncertain since it depends upon us being able to successfully influence customer behaviour. If the campaign is successful, further extensions could be considered under the rolling enhancement programme.
- Providing support and care to customers during the investigation of their problems until these are fully resolved, including installation of temporary measures to alleviate the problem such as floodguards, given that many of these problems may take several years until they are fully resolved.
- Investment of £110.5 million to improve our sewer network so that we can remove all customers from the internal sewer flooding register as quickly as possible, typically within four years of their problem being confirmed. This will reduce the register of customers with a 10% chance of internal flooding from a forecast level of 340 to 370 properties in 2015 to around 250 to 280 properties in 2021, addressing an expected 72 emerging new properties each year as a consequence of 'urban creep' and changing rainfall patterns.

This investment will also restore the resilience to flooding of neighbouring customers to 3% in the local catchment area. We have allocated £33.1 million of this investment as an IR18 allowance for review in December 2017 when more information will be available concerning the actual rate of emerging properties.

- Investment of £24.1 million to develop solutions to 400 external sewer flooding areas (properties, public open spaces and highways) and deliver confirmed solutions to resolve around 159 known high priority external flooding issues where customers are experiencing repeat events. We have included a £25.1 million IR18 allowance to begin delivering solutions to the 400 external flooding areas being investigated.
- Investment of £5.9 million to extend existing models and build new ones, beyond those required to support our Flood Risk Management Act obligations, to give a greater understanding of the customers' properties that have a resilience of less than 1:30 years. This will allow a prioritised programme of work to be developed and implemented after 2021 to proactively restore service resilience for as many of these customers as possible before they do experience flooding.
- Investment of £1.7 million to investigate the potential for surface water management approaches to reduce the hydraulic burden on our sewer systems.

Table 5 – Environment programme – cumulative outputs profile<sup>10</sup>

	Programme Area	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
1	Number of improvements delivered to meet UWWTD: above ground works				5	9	22		
2	Number of improvements delivered to meet UWWTD: below ground networks			5	11	32	46	62	
3	Number of improvements started in the 2010 to 2015 period to meet UWWTD: Glasgow scheme	38	79	84	97				
4	Number of improvements to meet the Water Framework Directive			10	10	11	20		
5	Number of improvements to meet the revised Bathing Waters Directive				11	12			
6	Number of catchments improved to meet the Flood Risk Management Act (FRMA)				218				
7	Number of studies to prepare for future investment periods	1	3	18	84	113	140		
8	Number of sludge management sites investigated or improved	1	2	2	3	6	10		
9	Develop a national strategy on the Priority Substances Directive						1		
10	Number of improvements to meet the Habitats Directive		1						
11	Number of improvements required under the Compliance Assessment Scheme			23					
12	Number of improvements required by Scottish Government to protect the water environment						16		
13	Number of improvements required by SEPA and Local Authorities to reduce odour nuisance	1	1	4	5				
14	Number of properties removed from the internal flooding register	24	94	164	211	257	285		
15	Number of external flooding investigations and improvements	11	74	105	133	173	211		
16	Completion programme from the 2010 to 2015 period (excluding UWWTD Glasgow scheme)	8	10	14	14	15			

<sup>10</sup> IR18 outputs will be added on once confirmed through the IR18 process.

# 7. Supporting Scotland's economy and communities

## Our strategy at a glance

Since 2002 Scottish Water has transformed Scotland's water infrastructure, investing in the economy to support jobs and growth while reducing charges to customers. We plan to build on this while meeting new demand for our services and delivering a positive customer experience.

## Our strategy to keep costs low

We will find new technologies and ways of working to further improve the efficiency of our activities. We will continue to pursue opportunities to develop renewable energy from our land and assets.

## Our strategy to meet new demand quickly and effectively

Encouraging customers to use water efficiently and reducing leaks from pipes can help maximise available water resources. We will encourage the development of new homes and businesses in areas that are well served by existing water supplies.

We will invest to ensure our treatment works and networks can meet the demands of new development.

## Our strategy to support communities

We will seek opportunities to share our knowledge to help communities prosper, while providing education resources that increase awareness of how valuable water and the environment are. To support employment we will continue to provide opportunities for training and apprenticeships.



Scottish Water is supporting the growing requirements for housing in Scotland by meeting the demand for new connections to the water and waste water networks.

## Our strategy to deliver a positive customer experience

We will continue to improve our communications with customers to keep them informed when problems occur and restore services as fast as possible. We will also seek to better understand our customers' priorities and provide the services they want.

## Our plans to support Scotland's economy and communities in 2015 to 2021

We plan to make the improvements set out in this section to support the on-going growth of Scotland's economy and our communities and further improve our leading customer experience. These improvements have been agreed with the Scottish Government and supported by the Customer Forum. Table 6 overleaf summarises the investment we plan to make in this plan to support economic growth and communities.

Table 6 – Summary of planned investment to support economic growth and communities

Investment area	Programme	2015 to 2021 net Capex (£m, 2012/13 prices)		
		Committed	IR18	Total
Supporting economic development	Statutory requirement to connect 113,000 new customers	90.9	114.2	205.1
	Reasonable Cost Contributions (Part 2&3)	49.0	59.3	108.3
	Treatment Strategic Capacity (Part 4)	31.4	48.6	80.0
	First time installation of non domestic meters	9.1		9.1
	Adoption of developer constructed assets (Part 2&3)	1.4	6.3	7.7
	Statutory requirement to relocate services for transport infrastructure projects	6.9	6.9	13.8
	<b>Sub total</b>	<b>97.8</b>	<b>121.1</b>	<b>218.9</b>
Customer experience	Improvements supported by the Customer Forum	20.8		20.8
	Improved contact management and proactive communication	6.7		6.7
	Wholesale meter accuracy improvements	14.1		14.1
Climate Change	Vulnerability assessments and monitoring supported by the Customer Forum	2.9	1.4	4.3
Reduce long term cost of service	Improvements supported by the Customer Forum	50.8		50.8
	Renewable power	37.5		37.5
	Energy efficiency	6.5		6.5
	Research & Innovation	6.8		6.8
<b>Total</b>		<b>172.3</b>	<b>122.5</b>	<b>294.8</b>

### Supporting economic development

Scottish Water has a statutory duty to provide water supplies and to drain domestic sewage, surface water and trade effluent where it can be provided at reasonable cost. Ministers' objectives are to service demand for new strategic capacity to meet all new housing development and the domestic requirements of commercial and industrial customers and to support developers in connecting to our system to the extent that it is reasonable to do so.

When assessing the demand from new customers, the location and timing of the demand, the impact of that demand on different parts of our networks and other changes such as falling average household size must all be considered. We have considered the National Records of Scotland's (NRS)<sup>11</sup> population projections, and our current trends of new connections as shown in figure 12. As can be seen from the graph, our forecast growth requirements are significantly below the principal projections.

### Reasonable cost contributions

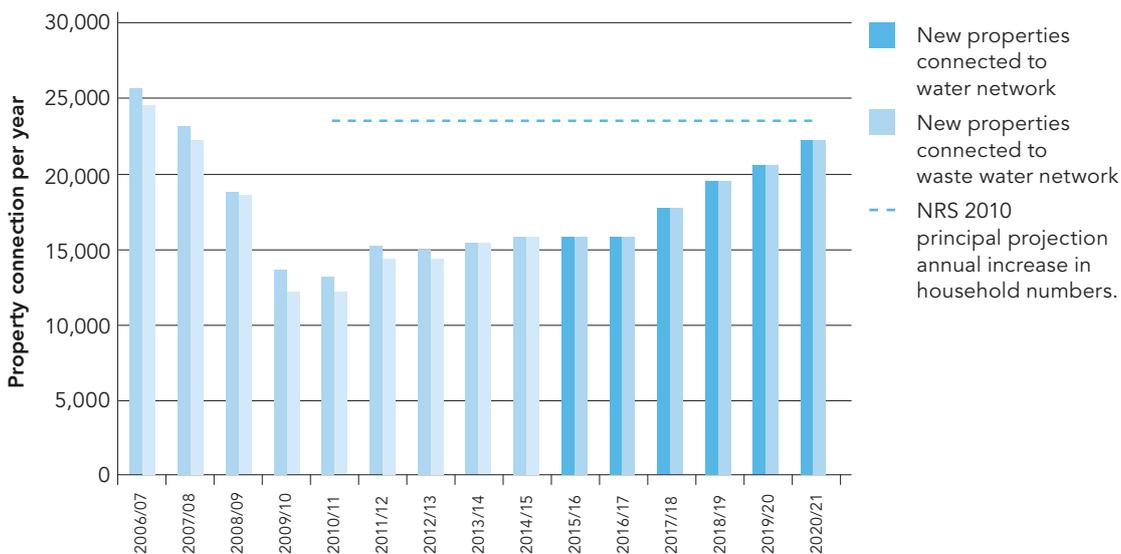
Between 2015 and 2021 we anticipate connecting around 113,000 (4.5%) new household and business properties to the water and drainage systems. We estimate we will have to make reasonable cost contributions of £108.3 million across the six years of our plan and have allocated £59.3 million of this to IR18 to allow the investment review to take account of actual growth rates and costs.

### Treatment strategic capacity

To meet new demand we estimate we will require additional waste water treatment capacity for around 58,000 customers at a potential cost of £80 million, primarily in small rural catchments. Our analysis at present has identified that we have adequate water treatment capacity to meet new demand as a consequence of our activities to reduce leakage in the 2010 to 2015 period. Given the uncertainty surrounding the specific demand and locations of new development we have allocated £48.6 million of this investment as an IR18 allowance to allow the investment review to take account of actual demand and costs.

<sup>11</sup> From 1 April 2011, the General Register Office for Scotland merged with the National Archives of Scotland to become the National Records of Scotland.

Figure 12 – Historic and forecast new connections by service



We will continue to work with planning authorities and developers to encourage sustainable development, such as encouraging new development in areas where there is surplus capacity in our existing assets. As new demand emerges we will continue our approach of assessing how best to provide for this, considering demand management options before committing to investment to build new treatment facilities. We will also, where appropriate, explore options with Licensed Providers for Section 29e opportunities for alternative supplies for wholesale customers where this is beneficial to both parties.

**First time installation of non-domestic meters**

When connecting new non-domestic developments/premises, they must be provided with a water meter. Annual volumes of these are subject to the normal pressures of economic growth and development, however we anticipate connecting around 3,000 new business premises over the 2015 to 2021 period. Additionally as business premises merge, divide or change use (from domestic to non-domestic) there is a need to install new meters, often at the request of Licensed Providers; we forecast installing around 6,000 new meters to fulfil this customer demand. Some business premises currently do not have meters installed; we forecast installing 9,000 additional new meters as these are identified with Licensed Providers. Overall we forecast that between 2015 and 2021 we will undertake a total of 18,000 first time meter installations at an estimated cost of £9.1 million. The costs may vary depending on the type of meter selected and the specific configurations of the property for installation.

**Adoption of developer constructed assets**

We have identified a number of assets built by private developers who have now gone out of business, where the assets do not meet our minimum adoptable standard.

We plan to develop a process with key stakeholders to deal with these issues, ensuring that all other avenues for recovery of costs from developers are exhausted. We have made an initial assessment of the costs of bringing these assets up to standard to allow formal adoption and then maintenance and operation. We plan to invest £1.4 million in new asset maintenance and £3.8 million in operation of new assets successfully adopted from developers, and included an IR18 allowance of £6.3 million to deal with the adoption and operation of the remaining assets, which are serving existing customers.

Consistent with current practice, we plan that the investment allocation for meeting new demand (including the adoption of legacy assets) should be ring fenced within the investment plan and the allocation reviewed in December 2017 as part of the investment review.

**Service relocations**

Scottish Water has a statutory duty to support the relocation of water and waste water services to allow transportation improvements to be delivered. The physical relocation works can be undertaken by either Scottish Water or the Transportation Authority with the costs split between both based on the condition of the infrastructure replaced. We forecast we will invest £6.9 million between 2015 and 2018 and the same between 2018 and 2021 (IR18 allowance).

**Customer experience**

Customers have highlighted that we should be providing the best possible service, as measured across all industries, and many were of the opinion that investment is essential to enhance their customer experience. We therefore wish to enhance the service experience that we provide, being accessible to our customers, and giving them a satisfactory and timely resolution to their queries. This is reinforced by our Guaranteed Standards Scheme and Price Promise.

**Price Promise**

In 2010 we introduced a price promise to customers to clearly signal that they are at the heart of all aspects of our business. We have agreed with the Customer Forum to enhance this promise in the 2015 to 2021 period. Our price promise to customers comprises three elements:

1. Household and wholesale charges that will continue to decrease, in real terms by reference to CPI, by 2021.
2. Where we cannot consistently provide the minimum level of service under normal operating conditions, customers will receive an appropriate rebate of their charges, as indicated in table 7, up to a maximum of £1,000.
3. Compensation under a Guaranteed Standards of Service scheme will continue to be provided to customers inconvenienced for transient failures in service.

Our Code of Practice will continue to be improved and simplified such that it is easy to access and understand for all customers. A key development in the 2015 to 2021 period will be to merge our existing service standards and price promise, and taking a more proactive approach to offering rebate and compensation payments.

**Table 7 – Price promise**

Standard	Rebate
Properties on register of unacceptable pressure	100% of annual water charge while on the register.
Properties at risk of internal flooding from overloaded sewers	100% of annual waste water charge while on the register.
Properties flooded internally from overloaded sewers	Where a customer suffers from internal sewer flooding, the rebate paid for being on the register will be increased to a minimum of the band D level of household waste water charges.
Properties flooded externally from overloaded sewers	50% of the annual waste water charge on each occasion, up to a maximum of 100% of the annual waste water charge in any one year.
Unplanned interruptions to supply	25%-100% of annual water charge for between 2 and 5 incidents, up to a maximum of 100% of the annual water charge in any one year.
Water quality	100% of the annual water charge in the year if not resolved in 3 months.
Getting connected	£20-£100 per day's delay up to a maximum of 100% of the connection charge.

**Improving our communication with customers**

During 2015 to 2021 we plan to further improve our communication channels with customers by enhancing our Customer Relationship Management system, at a cost of £6.7 million, and approach so that by 2021:

- Customers will have greater accessibility to Scottish Water to be able to communicate with us in the way that best suits them.

- We will provide easier to access information on our services, and enable customers to request and manage services through direct online access.
- The speed of our response to customer issues will be reflective of the issue and customers' circumstances. During resolution we will maintain contact and ensure the issue is resolved to the customer's satisfaction.

- Licensed Providers will find us easier to deal with as a wholesaler and provide their customers with the levels of service they expect.
- We will seek to improve our new connections services, making this quicker to respond and easier to deal with.
- When developing capital projects our community liaison team will ensure that we are listening to feedback from our customers and providing relevant information and updates to help customers prepare for any disruption.
- Our Customer Code of Practice will be improved and simplified such that it is easy to understand and transparent to all customers.

#### Wholesale meter accuracy improvements

We currently offer a choice of meters to Licensed Providers and their customers through a meter menu. The selection of meters by Scottish Water and the choices available on the meter menu will continue to be kept under review with Licensed Providers taking on board wider manufacturer and industry developments.

Licensed Providers can also choose to instruct suitably accredited companies to undertake certain metering, new connection and data logging activities, thus offering choice and flexibility. The framework supporting this is still in its early stages and we will continue to support its development.

To improve service, and support advanced metering infrastructure, it is recommended meters are replaced every 15 years. Investigations show that this frequency would allow us to continue to assure Licensed Providers and business customers that consumption and bills are accurate. It is forecast that around 84,000 meters will require to be replaced between 2015 and 2021 requiring an increased investment of £14.1 million.

#### Climate change

We have the lowest carbon water service in the UK owing to the greater opportunity to use gravity to supply our customers (rather than pumping).

Conversely, the carbon intensity of our waste water service is among the highest. This is because Scotland's geography, topography and extensive low density, distributed population requires many small treatment works and pumping of waste water.

Over the past 5 years we have reduced our carbon footprint by 10%. We forecast that our carbon footprint will reduce by around a further 2% by 2021 as a result of this plan. This is due to the proposed improvements in energy efficiency and investments in renewable power generation (3%) offsetting the upward pressures from

increased operational emissions arising from the planned service improvements (1%). We also forecast that if the electricity grid decarbonises, in accordance with UK Government targets, our carbon footprint could potentially be reduced by a further 27% by 2021.

We will invest £2.9 million to undertake further vulnerability assessments and monitoring to inform our understanding of the impacts of climate change on our services and have made an IR18 allowance of £1.4 million for further work that may arise from this.

#### Community involvement

We agree with the Customer Forum that there is more that can be done to get close to customers and to help them co-produce outcomes for themselves, their community, and the water and sewerage systems as a whole.

We will build on the work done to improve customer education on blockages to sewers caused by customer behaviours; to develop, with the Customer Forum, potential approaches to customer education, care and support; and to subsequently trial and evaluate such approaches.

#### Reducing longer term cost of service

'Invest to save' opportunities are those that take longer than the business plan period to pay back the initial investment and thus, by definition, require upfront investment to enable them to take place. We have identified four main invest to save opportunities, these being:

- Generation of renewable energy;
- Energy demand reductions;
- Further rationalisation of our water treatment works; and
- New approach to lead standards compliance.

In this plan we propose to invest £6.5 million to improve energy efficiency of our assets, reducing energy consumption by around 11 GWh, and £37.5 million to generate an additional 14 GWh of renewable energy from advanced anaerobic digestion, hydro and photovoltaic generation.

The benefits of this investment are an on-going reduction in operating costs of £3.7 million a year by 2021 and a reduction of our carbon footprint of 3%.

We have identified 7 water treatment works rationalisations that we will undertake as part of our drinking water quality programme. We do not plan to invest in any other identified rationalisation opportunities due to the extended payback periods as agreed with the Customer Forum.

We have deferred the option to remove lead pipes to enable switching-off of our ortho phosphoric dosing plants as the payback periods are long, and we wish to further explore options to protect drinking water quality within our customers' pipe work.

An area of future development for Scottish Water, and the industry at large, may be the potential to recover value from waste water streams. As natural resources, e.g. phosphorus and nitrogen (used as fertiliser), become depleted, the potential of recovery of these elements from waste water streams becomes more attractive. Waste water streams also have energy potential (heat recovery and energy generation) and this will be a focus of our research and innovation activity in this area. There is also the potential, with national zero waste strategies, to divert material that currently goes to landfill for beneficial use. This will be part of our research and innovation focus in the 2015 to 2021 period.

We have included in our plan £6.8 million of investment in research and innovation that could reduce costs of future services or improve services. These are over and above our normal water industry innovation collaborations and were discussed and supported by the Customer Forum and cover the following areas:

- New technologies that reduce the economic level of leakage.
- Value generation from waste.
- Automation and real time control.
- Sustainable rural communities.
- Trialling new technologies with our supply chain.

#### Supporting business growth

We plan to build better relations with business customers in matters specifically under the direct control of Scottish Water (wholesale) and that may facilitate business growth. We will engage with the Customer Forum in reviewing progress in this area.

**Table 8 – Supporting Scotland's economy and communities programme – cumulative outputs profile<sup>12</sup>**

	Programme Area	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Number of reasonable cost contributions made to connect new households and businesses	18,218	36,552	56,500			
2	Delivery of new waste water capacity for 58,000 people	15,353	33,782	58,000			
3	Number of first time non domestic meters installed						18,000
4	Number of wholesale meters	13,223	26,721	40,494	54,721	69,223	84,000
5	Renewable power generation (GWh)						14.00
6	Reduction in energy usage (GWh)				11.00		
7	Number of vulnerability assessments and monitoring improvements to support Climate Change mitigation and reduction	1	14	66	75	75	129
8	Number of research and innovation projects completed			1	1	1	5

<sup>12</sup> IR18 outputs will be added on once confirmed through the IR18 process.

# 8. Financing our services

## Our strategy at a glance

Household water and waste water charges in Scotland are among the lowest in Great Britain. Customers have told us that their preference is to continue with stable charges (charges that increase by no more than inflation over the 2015 to 2021 period) to allow investment to further improve services in the areas that customers have told us are a priority.

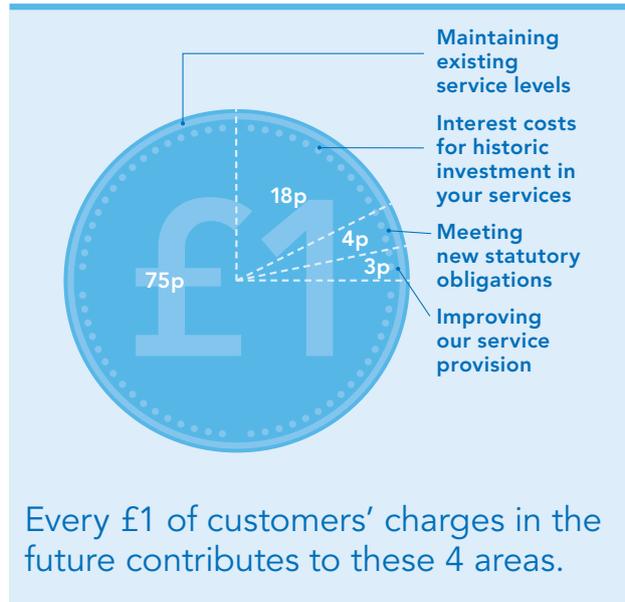
## Our expectation of future costs

The charges customers pay finance most of Scottish Water’s annual budget, which is currently spent on maintaining existing service levels for customers and for the payment of interest charges associated with historic investment in services.

We will continue to look for ways to be more efficient in how we deliver services and have taken these into account in our projections, but we expect that our maintenance costs will rise as existing treatment works – built in the last 15 to 20 years – are refurbished. However, we expect the number of customers will also rise, which could help to keep costs for everyone more stable while maintaining services.

In our projections we have assumed that investment to meet statutory obligations, based on known requirements, will reduce over the next 25 years. We expect that our future capital investment requirements will remain around £500 million per annum (in 2012/13 prices) as a result of increasing capital maintenance requirements and on-going investment to improve services to meet customers’ expectations in areas of water supply resilience and prevention of flooding from sewers.

Over the years, Scottish Water has taken out loans to efficiently finance investment, to make improvements to services and meet statutory obligations. We will continue to incur interest costs on these loans over the coming years and on new loans taken out to finance our statutory and service improvement plans.

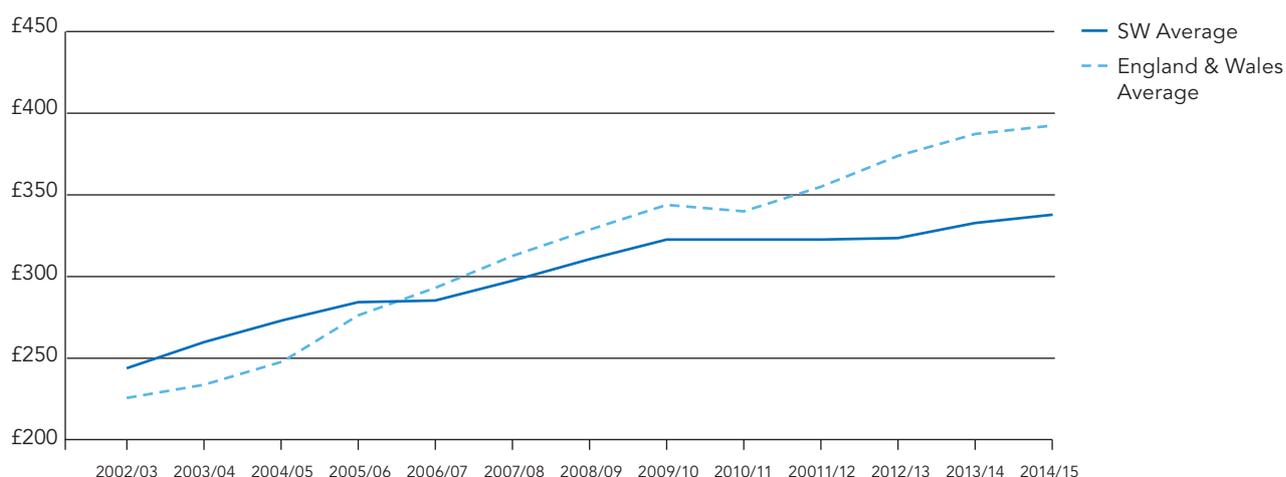


## Financing our services

The costs of providing water and waste water services are primarily met by household customer and wholesale charges, with borrowing from the Scottish Government supporting investment in service improvement and legislative compliance.

Since Scottish Water was formed, 13 years ago, charges have risen by less than inflation and significantly less than those in England and Wales. This has been possible due to the significant efficiencies we have delivered, reducing our operating costs and the costs of building new treatment plants and infrastructure. In 2014/15 average household charges in Scotland at £339 a year are £54 below the average charges in England and Wales.

Figure 13 – Comparison of household prices 2002 to 2014 (nominal prices)



Uniquely among water companies in Great Britain, we committed in the 2010 to 2015 period that our charges would rise by less than inflation. We have listened to our customers priorities and agree with the Customer Forum that we need to carefully balance the rate of on-going service improvements with the affordability of future charges, given the current economic climate. We therefore remain committed to charges reducing in real terms across the 2015 to 2021 period.

**Charges to apply from 2015**

The Scottish Government sets the principles of charges for water and waste water services. A key principle is that charges should be broadly cost reflective across different customer groups. The Water Industry Commission undertook work at the last price control in 2009 to establish cost reflective wholesale charges. Our plan recovers revenue in accordance with this principle.

**Household charge cap**

The Customer Forum highlighted that customers recognise the Consumer Prices Index (CPI) as their primary measure of inflation because of its recognised status as the UK Government’s measure of inflation, and its use as the index for changes to pensions and benefits. We therefore agreed that changes in prices in the 2015 to 2021 period should be considered in the context of CPI. The final determination has set an overall household charge cap of 1.8% less than CPI over the 2015 to 2021 period, with fixed annual price caps of 1.6% for each of 2015/16, 2016/17 and 2017/18. These charge caps are consistent with our agreement with the Customer Forum.

Any under or over recovery during the 2015 to 2018 period may be adjusted for in 2018 to 2021 under the charge cap arrangements. However, if the application of the charge cap methodology would require household prices during the 2018 to 2021 period to exceed 1.6% per annum then, prior to the application of such an increase, Scottish Water, the Customer Forum and the Water Industry Commission for Scotland will consider whether any, or all, of the increase above 1.6% can be off-set by overall favourable external factors, re-phasing of IR18 investment to after March 2021, or by returning any early sustainable out-performance to customers.

**Wholesale revenue cap**

Our wholesale revenue in the 2010 to 2015 period has been significantly below that expected as a result of the challenging economic conditions and the focus on improving water efficiency by customers and Licensed Providers. In the 2015 to 2021 period, we expect significant uncertainty in the wholesale customer revenue base because of changes to charging arrangements that will occur over the next 6 years and further efficiency in customers’ water and waste water service consumption arising because of increased market competition.

We have agreed to introduce a wholesale revenue cap for the 2015 to 2021 period. This will protect household customers from the risk of under-recovery of wholesale revenues and provide the incentive for full revenue collection by Licensed Providers as the average price per non-household customer would be further reduced if more revenue is collected than expected. The wholesale revenue cap assumes that the underlying total wholesale revenue will increase annually by no more than 0.3% below CPI, as set out in the final determination, excluding the impact of charging for vacant properties from 2017. The wholesale charges will be adjusted, as required, to recover this total revenue. If Licensed Providers secure more customers, then the average charge for each business customer will reduce, and vice versa.

**Affordability**

While our research indicated that there may be an overall acceptance of price rises in line with general inflation, our discussions with the Customer Forum revealed a concern that there could be an increasing risk of charges becoming unaffordable for certain groups of customers. We will continue to work with the Scottish Government and other stakeholders, including the Customer Forum, to investigate if more can be done to support vulnerable customers within the principles of charges laid down by Scottish Ministers.

**Financing**

The key assumptions underpinning our financial projections are that:

- CPI inflation applied to prices for 2015/16 is 1.3%, and will be 1.9% for each year from 2016/17 to 2020/21;
- RPI inflation applied to costs will be 2% for 2014/15, and 2.65% for each year in the 2015 to 2021 period;
- RPI for costs will average 0.75% p.a. above CPI throughout the period;
- Our domestic customer base will grow by 0.74% p.a. on average while our non-household customer demand will remain stable;
- The introduction of charging for vacant properties from 2017 will increase wholesale revenues by £15 million a year; and
- The charge caps are those we have set out above.

**Revenue forecast**

Table 9 sets out our forecast revenue based on the assumptions set out above.

**Borrowing requirements**

To finance the delivery of our capital enhancement programme we require £830 million of net new borrowing over the 7 years from 2014 to 2021 (£760 million within the 2015 to 2021 period).

After 2021, new borrowing may need to increase to around £170 million per annum in the 2021 to 2027 period to support the required on-going investment to meet statutory obligations as set out in our Strategic Projections.

**Table 9 – Revenue forecast 2015 to 2021**

Revenue forecast (£m outturn)	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Household revenue	812	830	849	868	887	907	5,153
Wholesale revenue	281	285	305	309	314	319	1,813
Other revenue	5	6	6	6	7	7	37
<b>Total revenue</b>	<b>1,098</b>	<b>1,121</b>	<b>1,160</b>	<b>1,183</b>	<b>1,208</b>	<b>1,233</b>	<b>7,003</b>

## Forecast costs of delivering services 2015 to 2021

Table 10 summarises the forecast costs of delivering this plan over the 2015 to 2021 period. Our financial projections are presented at outturn prices.

**Table 10 – Financing and expenditure 2015 to 2021**

Financing and expenditure £m	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Customer revenue	1,098	1,121	1,160	1,183	1,208	1,233	7,003
Net new borrowing	80	136	136	136	136	136	760
Infrastructure charges income	11	11	12	14	15	16	79
Disposals	9	3	1	1	1	1	16
Use of cash balances	27	40	22	41	50	53	233
<b>Total financing</b>	<b>1,225</b>	<b>1,311</b>	<b>1,331</b>	<b>1,375</b>	<b>1,410</b>	<b>1,439</b>	<b>8,091</b>
Capital investment	509	584	585	614	632	642	3,566
Operating costs	381	393	402	410	419	430	2,435
PFI contracts	164	169	173	178	182	187	1,053
Interest	163	166	170	174	178	182	1,033
Change in working capital	8	-1	1	-1	-1	-2	4
<b>Total expenditure</b>	<b>1,225</b>	<b>1,311</b>	<b>1,331</b>	<b>1,375</b>	<b>1,410</b>	<b>1,439</b>	<b>8,091</b>

Our assessment, in outturn prices, of the overall cost of delivering our plan is £8,091 million during the 2015 to 2021 period. We will finance this with revenue from customer charges of £7,003 million, net new government borrowing of £760 million, utilising £233 million of opening cash balances and funding from infrastructure charges and asset disposals of £95 million.

We expect to exit the 2010 to 2015 period with £273 million of cash balances. The planned cash utilisation profile during the 2015 to 2021 period is summarised in table 11.

**Table 11 – Cash balance profile**

£m, forecast out-turn	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Opening cash balance	273	246	206	184	143	93
Closing cash balance	246	206	184	143	93	40
Cash utilised	27	40	22	41	50	53

### Capital investment

We set out in table 12 opposite the component elements of our investment plan for the 2015 to 2021 period.

Table 12 – Capital expenditure forecasts (2012/13 prices)

Improvement area	2015 to 2021 Capex (2012/13 prices)		
	Committed	IR18	Total
<b>Drinking water quality</b>	<b>443.8</b>	<b>79.4</b>	<b>523.2</b>
Improving drinking water quality	305.7	63.3	369.0
Improving the availability of drinking water	138.1	16.1	154.2
<b>Environment</b>	<b>486.0</b>	<b>84.5</b>	<b>570.5</b>
Protecting and enhancing the environment	375.5	26.3	401.8
Reducing flooding and pollutions from sewers	110.5	58.2	168.7
<b>Scotland's economy and communities</b>	<b>172.3</b>	<b>122.5</b>	<b>294.8</b>
Supporting economic development	97.8	121.1	218.9
Improving the customer experience	20.8		20.8
Climate change	2.9	1.4	4.3
Reducing the long term cost of service	50.8		50.8
<b>Sub total: enhancement</b>	<b>1,102.1</b>	<b>286.4</b>	<b>1,388.5</b>
Sustaining existing high service for customers	1,680.0		1,680.0
<b>Total investment</b>	<b>2,782.1</b>	<b>286.4</b>	<b>3,068.5</b>

Our investment plan is of a size that is affordable and deliverable efficiently as we have planned a delivery profile that includes both a start early programme and investment completion after March 2021. The forecast investment completion after March 2021 is excluded from the costs that are financed in the 2015 to 2021 period.

We expect to continue to improve the efficiency of our investment activities and have identified opportunities to improve on the costs used to prepare this plan by 13%. We have set ourselves a stretching challenge to deliver additional efficiencies beyond those we have identified, such that we will improve efficiencies by 14.4% to 17.9% over the period from the costs used to prepare this plan. These efficiencies are over and above the strategic and innovation efficiencies identified in development of the solutions to deliver the required improvements, including the rationalisation of assets and the synergies between investment areas.

Our efficiency plans are a mix of revised procurement arrangements, streamlining our investment management processes and improved productivity within our supply chain. Therefore we are dependant on our suppliers working in partnership with us to deliver better value for our customers.

Investment continuity is supported through having outputs identified in the 2010 to 2015 period that have completion dates in 2015 to 2021. These outputs include solutions to improve intermittent discharges to the River Clyde in Glasgow, and the additional outputs to accelerate priorities for drinking water quality improvements and sewer flooding. Our forecast cost of completing these outputs is £307 million (outturn prices), equivalent to £277 million in 2012/13 prices.

As these outputs, being progressed under the 'seven stage process', are not yet fully developed there is a risk that these completion costs could change. We will update the forecast costs for projects financed from the 2010 to 2015 period OMG180 allowance, along with the ring-fenced £67.4 million scheme for upgrading the discharges at Dalmarnock and Daldowie waste water treatment works in Glasgow as we progress, with any outturn variance being taking into account in IR18.

Beyond these there are also a small number of projects (37 in total) that were due for completion by 31 March 2015 but that will not have been delivered by then. Our forecast cost of completing these projects is £32 million (outturn prices), equivalent to £29 million in 2012/13 prices. We will continue to maintain a strong focus on delivering the remaining projects from the 2010 to 2015 period to the revised profile as shown in table 13 overleaf.

**Table 13 – Projects due to have completed by 31 March 2015**

Programme area	31 March 2015	31 March 2016	31 March 2017	31 March 2018	31 March 2019
Projects due to have completed by 31 March 2015	37	8	4	3	0

Investment continuity is also supported through our early start programme of £38 million financed in the 2010 to 2015 period and the planned £284.1 million IR18 allowance for solutions to known improvement priorities that are being investigated and emerging priorities that will be reviewed and confirmed in December 2017<sup>13</sup>.

Our forecast investment profile for the 2015 to 2021 period is shown in table 14.

We expect to deliver annual capital investment within +/- 5% of the overall annual profile of forecast investment set out in table 14.

**Table 14 – Forecast investment profile 2015 to 2021**

Capital Expenditure Profile (£million)	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Sustaining existing high service for customers	253	278	280	280	294	295	1,680
Enhancement 2015-21	102	151	183	209	217	221	1,083
Completion programme	115	94	49	32	14	2	306
<b>Sub total (2012/13 prices)</b>	<b>470</b>	<b>523</b>	<b>512</b>	<b>521</b>	<b>525</b>	<b>518</b>	<b>3,069</b>
Nominal Inflater (RPI)	1.08	1.11	1.14	1.17	1.20	1.23	
<b>Sub total (nominal prices)</b>	<b>504</b>	<b>578</b>	<b>580</b>	<b>608</b>	<b>625</b>	<b>634</b>	<b>3,529</b>
Investment funded from Infrastructure Charges	3	4	5	6	7	8	33
PFI investment	2	2					4
<b>Total investment (nominal prices)</b>	<b>509</b>	<b>584</b>	<b>585</b>	<b>614</b>	<b>632</b>	<b>642</b>	<b>3,566</b>

<sup>13</sup> Investment of £9.6 million (2012/13 prices) associated with the 5 UID outputs included in the Business Plan that have subsequently been deferred to support the delivery of projects financed through the OMG180 has been included in the 2010 to 2015 programme planned to be completed over the 2018 to 2021 period.

### Operating costs

Our forecast operating costs, shown in table 15, are consistent with the efficient range that the Commission has reported in its information notes to the Customer Forum.

We have made significant efficiency improvements over the last 13 years and therefore the opportunities for on-going improvement are smaller than they have been in the past. The primary focus of our efficiency plans is further productivity improvements, greater energy efficiency, increased renewable energy generation and reducing the costs associated with service failures by preventing these from happening.

In addition to this we will continue to seek ever more innovative ways to deliver services such that we can reduce the costs of service provision:

- Using sustainable land management techniques to improve the quality of raw water such that we can use fewer chemicals in drinking water treatment processes, and prolong the life of filters;
- Seeking to operate our waste water treatment plants to a standard that is appropriate to the actual conditions; and
- Using pressure management techniques to control the level of interruptions to supply and reduce leakage further.

Overall we believe that our on-going efficiency and productivity improvement programme will off-set the underlying operating cost pressures associated with delivering higher service levels and meeting new statutory objectives and the increase in employers national insurance contributions.

It is important to note that there are several costs we incur that are not fully in our control. While indexing of costs by RPI will protect us from most cost changes, there are risks of one-off changes to our costs that we may not be able to manage within this plan. The main risks are a revaluation of business rates in 2017, changes to employer pension contributions, introduction of a road works levy, changes to the cost of collecting household charges by local authorities, and changes in the level of non-payment by household customers.

#### PFI costs

Around 50% of our waste water and about 80% of our waste water sludge is treated in plants operated by PFI companies. The costs of these contracts are generally fixed and linked to RPI through the terms of the contract. The cost of these contracts includes for the full repayment of the financing incurred by the PFI companies to build these plants. Over the years we have investigated whether it would be efficient for Scottish Water to buy out these contracts. To date we have not identified any contracts where this would be the case.

**Table 15 – Annual operating costs**

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
<b>2012/13 base operating costs</b>	<b>350</b>	<b>350</b>	<b>350</b>	<b>350</b>	<b>350</b>	<b>350</b>
Severance cost reduction	-3	-3	-3	-3	-3	-3
Base efficiency plan	-8	-9	-10	-11	-12	-14
<b>Forecast base operating costs</b>	<b>339</b>	<b>338</b>	<b>337</b>	<b>336</b>	<b>335</b>	<b>333</b>
Energy cost increase (2013-2015)	3	3	3	3	3	3
Cost of collection increase (2014/15)	2	2	2	2	2	2
National insurance contributions increase	0	2	2	2	2	2
<b>Adjusted base operating costs</b>	<b>344</b>	<b>345</b>	<b>344</b>	<b>343</b>	<b>342</b>	<b>340</b>
SR10 new operating costs 2013-15	7	7	7	7	7	7
SR15 new operating costs	3	4	5	5	5	7
SR15 invest to save benefits	0	-1	-2	-3	-4	-4
<b>Forecast total operating costs (2012/13 prices)</b>	<b>354</b>	<b>355</b>	<b>354</b>	<b>352</b>	<b>350</b>	<b>350</b>
Nominal Inflater (RPI)	1.08	1.11	1.14	1.17	1.20	1.23
<b>Forecast operating costs (forecast out-turn prices)</b>	<b>381</b>	<b>393</b>	<b>402</b>	<b>410</b>	<b>419</b>	<b>430</b>

We do not see opportunities in the 2015 to 2021 period to reduce the costs in this area and are looking at the opportunities that may arise post 2021 when the first of these nine contracts reaches expiry.

#### Interest payable

Closing debt as of 31 March 2015 is forecast to be £3,464 million. The anticipated weighted average interest rate on the closing debt at 31 March 2015 is around 5%.

For new borrowing in 2015 to 2021, we have assumed an average interest rate of 4%. While we will continue to manage our debt portfolio efficiently and in a way that protects customers from significant risks, we are exposed to the consequences of increasing interest rates.

#### Financial overview

Table 16 sets out our forecasts for key financial projections.

**Table 16 – Key financial projections**

Financial projections (HCA) outturn prices – £m	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Total revenue	1,098	1,121	1,160	1,183	1,208	1,233
Profit before interest and tax	233	230	247	252	255	256
Net interest payable	186	187	190	193	196	200
Profit before tax	47	43	57	59	59	56
Tax	9	8	11	12	12	11
Retained profit	38	35	46	47	47	45
Capital investment	509	584	585	614	632	642
Net new borrowing	80	136	136	136	136	136
Closing RCV	7,085	7,422	7,758	8,125	8,515	8,915
Closing debt	3,504	3,640	3,776	3,912	4,048	4,184

#### Financial strength

In setting the balance of financing from customers and new borrowing we have targeted broadly maintaining the overall financial strength of Scottish Water at the

forecast levels that will be achieved in 2014/15. This strength is within the tramlines set by the Commission in its final determination. Table 17 sets out our financial ratios.

**Table 17 – Financial ratios**

Financial ratio	Forecast 2014/15	Forecast 2020/21	WICS' lower limit
Cash interest cover II	1.63	1.48	1.27
Ratio of funds flow from operations to debt	11.0%	10.1%	8.8%
Gearing	53%	51%	47%

## Financial projections

### Profit and loss account

Table 18 – Profit and loss account (historic cost basis)

£m, forecast outturn	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Turnover	1,098	1,121	1,160	1,183	1,208	1,233
Operating expenditure	381	393	402	410	419	430
PFI operating costs	123	127	132	137	141	145
Depreciation charges – non infrastructure assets	219	220	221	223	227	233
Depreciation charges – infrastructure assets	14	12	14	13	15	15
Depreciation charges – PFI assets	19	19	19	19	19	19
Infrastructure capital maintenance charge	118	122	125	129	132	136
Amortisation of deferred income	-1	-1	-1	-1	-1	-1
<b>Operating profit</b>	<b>225</b>	<b>229</b>	<b>248</b>	<b>253</b>	<b>256</b>	<b>256</b>
Profit or loss on disposal of fixed assets	8	2	0	0	0	0
Net interest receivable less payable	-163	-166	-170	-174	-178	-182
PFI interest payable	-23	-22	-21	-20	-19	-18
<b>Profit before taxation</b>	<b>47</b>	<b>43</b>	<b>57</b>	<b>59</b>	<b>59</b>	<b>56</b>
Taxation – current	0	0	0	0	0	0
Taxation – deferred	-9	-8	-11	-12	-12	-11
<b>Retained profit</b>	<b>38</b>	<b>35</b>	<b>46</b>	<b>47</b>	<b>47</b>	<b>45</b>

## Balance sheet

Table 19 – Balance sheet (historic cost basis)

£m, forecast outturn	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
<b>Fixed assets</b>						
Tangible assets	5,263	5,482	5,698	5,936	6,184	6,431
PFI assets	362	345	326	307	288	269
Third party contributions	-14	-13	-12	-11	-10	-10
<b>Other operating assets and liabilities</b>						
Working capital	-304	-309	-312	-317	-323	-331
Cash	247	207	185	143	93	40
<b>Net operating assets</b>	<b>5,554</b>	<b>5,712</b>	<b>5,885</b>	<b>6,058</b>	<b>6,232</b>	<b>6,399</b>
<b>Non-operating assets and liabilities</b>						
Borrowings (excluding Government loans)	-1	-1	-1	-1	0	0
Financial reserve	0	0	0	0	0	0
Investment in subsidiaries	35	35	35	35	35	35
<b>Total non-operating assets and liabilities</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>35</b>	<b>35</b>
<b>Provisions for liabilities &amp; charges</b>						
Deferred tax provision	-391	-399	-410	-422	-435	-445
Post-employment asset/(liabilities)	-112	-112	-112	-112	-112	-112
Other provisions	-5	-4	-4	-4	-4	-4
<b>Total provisions</b>	<b>-508</b>	<b>-515</b>	<b>-526</b>	<b>-538</b>	<b>-551</b>	<b>-561</b>
<b>Net assets employed</b>	<b>5,080</b>	<b>5,231</b>	<b>5,393</b>	<b>5,554</b>	<b>5,716</b>	<b>5,873</b>
<b>Capital and reserves</b>						
Government loans	3,503	3,639	3,775	3,911	4,048	4,184
PFI debt/lease	364	344	324	302	280	256
Retained earnings	1,191	1,226	1,272	1,319	1,366	1,411
Pension surplus/(deficit)	-111	-111	-111	-111	-111	-111
Other reserves	133	133	133	133	133	133
<b>Total capital and reserves</b>	<b>5,080</b>	<b>5,231</b>	<b>5,393</b>	<b>5,554</b>	<b>5,716</b>	<b>5,873</b>

## Cashflow statement

Table 20 – Cashflow statement (historic cost basis)

£m, forecast outturn	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
<b>Regulatory income and expenditure</b>						
Turnover	1,098	1,121	1,160	1,183	1,208	1,233
Operating expenditure	-381	-393	-402	-410	-419	-430
PFI operating costs	-123	-127	-132	-137	-141	-145
Capital maintenance expenditure	-271	-306	-316	-324	-351	-361
Amortisation of deferred income	1	1	1	1	1	1
<b>Operating profit for regulatory purposes</b>	<b>324</b>	<b>296</b>	<b>311</b>	<b>313</b>	<b>298</b>	<b>298</b>
<b>Reconciliation of regulatory operating profit to net cash flow</b>						
Operating profit for regulatory purposes	324	296	311	313	298	298
Movement in working capital	-7	0	-1	-1	1	2
Capital maintenance expenditure	272	307	317	326	351	362
Amortisation of deferred income	-1	-1	-1	-1	-1	-1
<b>Net cash flow from operating activities</b>	<b>588</b>	<b>602</b>	<b>626</b>	<b>637</b>	<b>649</b>	<b>661</b>
<b>Taxation</b>						
Taxation paid	0	0	0	0	0	0
<b>Returns on investments and servicing of finance</b>						
Interest received	1	1	1	1	1	0
Interest paid	-165	-167	-171	-175	-178	-183
PFI interest payable	-23	-22	-21	-20	-19	-18
PFI finance lease repayments	-19	-20	-21	-22	-23	-24
<b>Net cash flow from returns on investment and servicing of finance</b>	<b>-206</b>	<b>-208</b>	<b>-212</b>	<b>-216</b>	<b>-219</b>	<b>-225</b>
<b>Net cash flow before investment and maintenance charges</b>	<b>382</b>	<b>394</b>	<b>414</b>	<b>421</b>	<b>430</b>	<b>436</b>
<b>Capital expenditure and financial investment</b>						
Capital enhancement expenditure	-237	-277	-268	-287	-281	-280
Capital maintenance expenditure	-272	-307	-317	-326	-351	-362
Infrastructure charges income	11	11	12	14	15	16
Disposal of fixed assets	9	3	1	1	1	1
<b>Net cash outflow from investing activities</b>	<b>-489</b>	<b>-570</b>	<b>-572</b>	<b>-598</b>	<b>-616</b>	<b>-625</b>
<b>Net cash flow before financing</b>	<b>-107</b>	<b>-176</b>	<b>-158</b>	<b>-177</b>	<b>-186</b>	<b>-189</b>
<b>Financing</b>						
New Government loans	200	255	259	259	261	271
Government loans repayments	-120	-119	-123	-123	-125	-135
<b>Net cash inflow from financing</b>	<b>80</b>	<b>136</b>	<b>136</b>	<b>136</b>	<b>136</b>	<b>136</b>
Increase (decrease) in cash and cash equivalents	-27	-40	-22	-41	-50	-53
<b>Net cash flow</b>	<b>107</b>	<b>176</b>	<b>158</b>	<b>177</b>	<b>186</b>	<b>189</b>

## Risk

Our plans are, necessarily, underpinned by forecasts many of which are outside of our control. Table 21 highlights the key risks currently identified and the associated potential financial impact during the 2015 to 2021 period.

**Table 21 – Risk analysis**

Influences	Risk	Scenario/sensitivity	Estimated value (£m) of impact 2015 to 2021
Economic	Economic growth	Household customer base grows by 0.1% per annum less than the assumed 0.74% in our plan.	Lower household revenue of c£20 million in the 2015 to 2021 period.
	General inflation	If the difference between CPI for prices and RPI for costs was 0.1% per annum more than the 0.75% assumed in our plan.	The margin between revenue and cost over the period would reduce our cash position by c£25 million.
	Business rates	The potential impact of a business rate revaluation in 2017.	Based on the c40% increase across SR10, rates revaluation could increase costs by £100 million for the period 2017 to 2021.
	Revenue collection	Impact of welfare reform on cash collection.	£8 million impact for every 1% reduction in cash collection from case load associated with Welfare Reform.
	Interest charges	An increase in nominal interest rates of 1% relative to our plan assumptions.	Increase in costs by c£40 million in the period.
	Accessibility of new borrowing	£100 million reduction in new borrowing availability with no change to investment plans.	Charges would have to rise by 0.35% above CPI.
Legal and policy	Cryptosporidium	Detections requiring upgrading of any of 20 water treatment works that do not have adequate treatment.	Increased investment of up to around £50 million.
	Sludge	Loss of agricultural routes.	Increase cash costs by around £52 million.
	Roadwork repairs levy	Proposals to introduce an annual levy of around £5 million.	Increase cost of £30 million over the period.
	First time provision	Delivery of six waste water projects that SEPA indicated would supply environmental benefit.	Estimated cost £14.5 million assumed this would be met from increased borrowing or reprioritisation of objectives in the period.
	One UK retail market	Size and scope of the potential changes to the Scottish retail market is at this stage unknown.	Estimated costs at this stage unknown.
	Urban Waste water Treatment Directive	Compliance with the potential DEFRA position across the UK on combined sewer overflows.	An increase in investment of up to £100 million in the period.
	Odour	New sites emerge with statutory requirement to improve.	Estimated costs of £10 million with low level of complaints not included in this plan; and a further £50 million for Shieldhall waste water treatment works.
	PFI	Possibility of contract terminating prior to contractual end date due to PFI company default.	Termination payments dependent on circumstances but up to £50 million may be required.

As it is not possible to reliably assess the specific financial impact of these risks, we have set out the potential ranges of costs or a possible sensitivity for each risk. We acknowledge that the economic growth, general inflation and interest rate assumption risks could also result in favourable circumstances.

Our analysis suggests that while higher growth benefits customers in the longer term, it is likely to generate more costs than additional revenue within the 6 year period.

Where risks materialise, we would seek to use established regulatory mechanisms to manage the impact. It is noteworthy that in the current period exogenous risks such as business rates and carbon tax increases have materialised at a total cost of £147 million. It has only been possible to absorb these additional costs due to favourable financial conditions in the 2010 to 2015 period. If risks of a similar magnitude materialise in the 2015 to 2021 period it is likely that we will need to reprioritise this plan and/or seek a redetermination of charges.

We have discussed with the Customer Forum the prospect of significant price increases after 2018 should inflation or other costs outwith our control be materially greater than we have assumed in our plan, given the low fixed prices we have agreed for 2015 to 2018.

In addition to the risks identified we have set out in our plan innovative solutions, such as reservoir mixing, catchment management, mains flushing and land stabilisation and surface water actions plans, to deliver service and statutory improvements. It is possible that some of these innovative solutions may not deliver the required outcomes and we expect the IR18 investment review to consider the success of these innovative approaches and prioritise investment where appropriate.

## 9. Monitoring our delivery

### Our performance dashboard

Table 22 – Scottish Water’s performance dashboard

Measure to be reported	Expected performance 2015	Expected performance 2021
<b>Measuring customer service</b>		
Overall Performance Assessment (OPA)	380-400	385-400
Household Customer Experience Measure (CEM)	82.6	tbc
Non-household Customer Experience Measure (CEM)	n/a	tbc
Wholesale KPI	95%	>95%
<b>Monitoring financial performance</b>		
Adjusted cash interest cover	1.63	1.54
Funds from operations to net debt	11.0%	10.1%
Gearing	53%	51%
Cash out-performance	n/a	>£0m
<b>Monitoring output delivery</b>		
Delivery of outputs (OMD Measure)	n/a	250
Q&SIIB projects due for completion by March 2015 (Projects)	37	0
<b>Measuring corporate performance</b>		
Carbon footprint (kg/household)	125	122
<b>New service measures to be developed</b>		
Security of Supply Index	Band B (97%)	Band B (99%)
Resilience of Supply Index	To be developed	To be developed
Number of properties at risk of external flooding	<5,000	<5,000
Annual number of incidents of sewer external flooding due to blockages and failures (all sewers)	<13,000	<13,000

Table 22 sets out the principal factors that we will use with the Output Monitoring Group stakeholders, the Customer Forum and the Commission to monitor our performance over the 2015 to 2021 period. The aim is to ensure that all parties use the same key information in reporting and analysing the performance of Scottish Water against the Strategic Review of Charges 2015 to 2021.

#### Output monitoring

The Output Monitoring Group is responsible for monitoring the delivery of the Ministers’ objectives and reporting progress to Ministers. Tables 3, 5 and 8 set out the baseline for monitoring delivery of the outputs required in the 2015 to 2021 period. These tables and the baseline will be updated annually to take account of any changes to the requirements.

#### Annual review meeting with customers

We have agreed to review annually with the Customer Forum the levels of service and performance as represented by: OPA; the CEMs; the High Esteem Test; Wholesale KPIs – and the component parts of each; and other agreed service activity measures under development. Following any such meeting, the Customer Forum undertakes to write to us identifying any issues of principle it considers relevant to the question of service level and wider performance monitoring, and we have agreed to consider the issues raised.

#### Measuring customer service

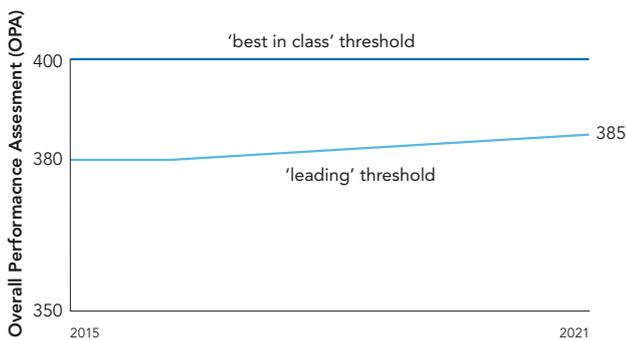
##### Overall Performance Assessment (OPA)

We aspire for our OPA performance to be ‘best in class’, and have set out our performance expectations as follows:

We aspire to be best in class, achieving an equivalent OPA score at, or above, 400 points. It is recognised by the Customer Forum that this is unlikely to happen consistently based on the experience from England and Wales.

We plan to be leading, achieving an OPA score at, or above, the leading companies' threshold shown in figure 14. The threshold increase over the period reflects the service improvements set out in this plan. It is acknowledged by the Customer Forum that, occasionally, this may not be achieved because of significant events.

Figure 14 – OPA thresholds



In recognition of the occasional risk to delivering a leading level of service to customers, we commit to achieving an average OPA score across the 2015 to 2021 period that exceeds the leading companies' performance threshold (i.e. an average score across 2015 to 2021 that exceeds 382.5 OPA points).

**Customer Experience Measure (CEM)**

We have agreed with the Customer Forum to replace our current customer satisfaction measure with a new Customer Experience Measure (CEM) to ensure that delivery of service to customers sits at the heart of what we do and continues to be a key driver of our performance. CEM represents a development of the key components of the Service Incentive Mechanism (SIM) introduced in England and Wales with some refinement and development to meet the needs of Scottish Water and its customers. We have agreed to establish separate CEM for household and non-household customers to recognise the different retail market arrangements for business customers.

The detailed methodology for the household CEM has been agreed with the Customer Forum and baseline data for 2014/15 collected, with a score of 82.6 in the 9 months to 31 December 2014.

Recognising the relative immaturity of this measure within Scottish Water, we have agreed an improvement target of greater than 82.6 for 2015/16 with the Customer Forum, acknowledging that this may not be achieved if significant events arise.

For the non-household CEM we have agreed the components with the Customer Forum and are seeking to establish a Scottish water industry wide business-end-user survey through engaging with Licensed Providers and key industry stakeholders. This will enable baseline data to be collected during 2015/16 with improvement targets being set thereafter.

**High Esteem Test**

We have agreed with the Customer Forum to build a benchmarking comparison which would track customers' satisfaction of Scottish Water alongside other companies in other sectors, using the six monthly UK Customer Service Institute (UKCSI) survey, enhanced by a booster survey for Scottish Water. Examination of UKCSI results has highlighted considerable volatility of even the best performing organisations. We have therefore agreed with the Customer Forum to obtain survey results from four waves (July 2014 to January 2016) to establish a robust baseline.

**Wholesale key performance indicators**

We monitor the overall performance of our service to retailers across a range of our activities. This is not only to maintain service standards, but also to ensure that there is no bias in the provision of services to Licensed Providers. The overall measure takes account of wholesale services and response to requests associated with trade effluent, connections, disconnections and byelaws metering. We will work with Licensed Providers to develop further key performance indicators that meet the needs of the market as it develops.

**Monitoring financial performance**

We set out in table 17 the financial parameters required to ensure that Scottish Water maintains an appropriate level of financial strength over the medium to long term. We will monitor these through the tramlines set out by the Commission across the planning period, taking account of both actual and forecast performance.

While the tramlines will monitor the on-going level of financial strength, we will continue to monitor our performance against the cash measure that has been used since 2006. Measuring our cash performance ensures that there is transparency between performance due to management action and the favourable or adverse impact of external circumstances on our financial position.

### Monitoring output delivery

The Overall Measure of Delivery (OMD) combines information on outputs, time and expenditure to give a single objective measure of investment progress against our plan. Our OMD profile for the 2015 to 2021 period is shown in Table 23 below<sup>14</sup>.

**Table 23 – OMD profile**

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Full OMG profile (including IR18)	73	103	138	181	212	250
Committed OMD profile excluding IR18	73	103	138	175	200	226

#### Customer priorities

We have been discussing with the Customer Forum and the Commission particular areas of interest for additional measurements of performance.

#### Security of Supply Index (SOSI)

In our research, customers told us that avoiding long term interruptions to supply was a high priority. The Security of Supply Index (SOSI) is an industry indicator of a water company's ability to guarantee provision of its planned level of service in relation to certain drought conditions. Our plan aims to improve our security of supply against drought conditions that have a 1 in 40 year chance of occurring from 97% of supplies to 99%. This means we will have some supplies with marginal deficits under these drought conditions and our SOSI performance will remain in band B. We will continue to use SOSI to monitor how we manage the risk of water supply restrictions in future dry spells until we have fully developed the proposed new Resilience of Supply Index (ROSI).

#### Resilience of Supply Indicator

We are working to establish a measure during the 2015 to 2021 period that goes beyond the SOSI to focus on the outcomes to customers and measure the overall resilience of the water service to customers across Scotland, taking account of customer demand, leakage levels, raw water availability, treatment capacity, distribution system resilience and the operational plans that we can implement to manage supplies in extreme circumstances.

#### Other measures

We have agreed with the Customer Forum to report on the following activity measures as part of the annual review meeting with customers:

- External flooding;
- Visible leakage;
- Extreme weather events excluded from OPA; and
- Escalated and upheld complaints to the Scottish Public Services Ombudsman.

#### Other areas for development

##### Asset Health Indicator

The intention is to develop a measure that will provide assurance of asset stewardship by monitoring the general state of our portfolio of assets. This will complement other regulatory monitoring tools such as OPA (customer service) and OMD (delivery of enhancement expenditure).

We are developing the asset health indicator with the Commission staff and expect to pilot this over the 2015 to 2021 period.

<sup>14</sup> There are 250 OMD points for planned milestone completions by 31 March 2021. This includes 226 OMD points for confirmed milestones to 31 March 2021, and an allocation of 24 OMD points for milestones that are to be confirmed as part of IR18.

# 10. Delivering our investment programme

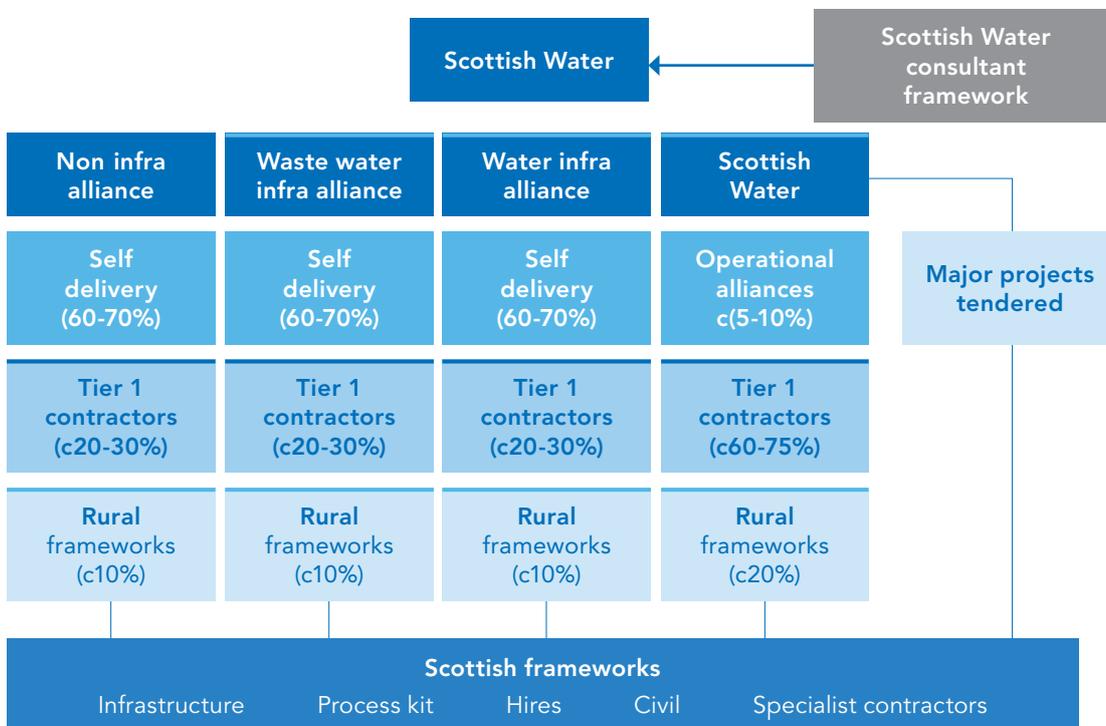
To enable Scottish Water to deliver the required stretching efficiencies the delivery of our capital programme has been completely re-designed.

Our new capital delivery strategy is to deliver programmes of work through a streamlined tailored supply chain that matches contractors' capability directly with specific programmes of work. This ensures less reliance on sub-contractors and brings optioneering in-house. This, together with the provision of greater visibility of the pipeline of work, will allow our partners to deliver benefits through efficient resource planning and to invest in modern day apprentices, graduates and training. Supporting this tailored approach, we have created rural frameworks to enable our partners to have access to the best local contractors throughout Scotland. Through this approach we seek to create a more sustainable supply chain for Scotland.

We have reorganised within Scottish Water to ensure that best practice and innovation is shared across delivery vehicles. Furthermore, in collaboration with our new partners, we will seek additional efficiencies, quality, time and safety improvements through a 'production mentality' which drives standard products, productivity and off site fabrication.

Following an extensive procurement process we anticipate, subject to final commercial negotiations, to shortly implement a streamlined supply chain as set out in figure 15.

Figure 15 – Expected capital delivery arrangements for the 2015 to 2021 period



The specific delivery vehicles, programmes of work and frameworks are:

**Non Infrastructure Alliance:** this will deliver the majority of the programmes associated with complex work on our water and waste water treatment works. This is currently being procured, with the intention of being in place by June 2015.

**Waste water Infrastructure Alliance:** this will deliver the majority of the programmes associated with our waste water networks. It will involve sewer rehabilitation and the upsizing of sewers or the creation of large storage tanks to prevent environmental pollution incidents and internal and external flooding. This alliance is currently working with us as a preferred bidder with the aim that final commercial contracts will be in place by March 2015.

**Water Infrastructure Alliance:** this will deliver the majority of the programmes associated with our water networks. It will involve water main rehabilitation and the lining of mains to improve water quality. It will also be involved in the construction of large trunk mains to improve resilience of supply. This alliance is currently working with us as a preferred bidder with the aim that final commercial contracts will be in place by March 2015.

**Scottish Water Managed Delivery:** this is the in-house delivery team which will deliver the majority of programmes associated with non-complex capital maintenance. It will also tender and manage large reputational standalone projects. A separate team is being created to solely focus on the work to complete the 2010 to 2015 period programme and, as part of this, will take over the management of the remaining Solutions 2 projects to enable that delivery vehicle to be closed down during 2015/16.

**Scottish Water frameworks:** Scottish Water has created a number of frameworks covering specialist kit, contractors, civil commodities and plant hire. This ensures that we drive best value through volume rebates while ensuring quality and compliance with our specification and standards. All delivery vehicles will be contracted to use these frameworks.

**Scottish Water Consultant Framework:** Scottish Water is bringing the feasibility and optioneering phase of projects in-house. This ensures the option selected considers the best value solution, whether that is an operational or capital intervention. It also ensures that the projects are aligned to Scottish Water's long term strategies. To assist with this work Scottish Water is currently procuring a consultant framework which will be in place by March 2015.

Our new capital delivery strategy is a shift away from our previous emphasis on competition in delivery through mini-competitions within frameworks and market tendering. We are moving to best practice alliancing, enabled by collaborative behaviours, where we have clear mutual goals and are aligned to reduce cost and community impact for the benefit of our customers.

# Appendices

We provide further detail on our Delivery Plan in the following appendices.

**Appendix 1:** Ministers objectives for 2015-21

**Appendix 2:** Principles of charging

**Appendix 3:** Letter of endorsement from SEPA

**Appendix 4:** Letter of endorsement from DWQR

**Appendix 5:** Letter of endorsement from WICS

**Appendix 6:** Letter from Citizens Advice Scotland

**Appendix 7:** Minute of Agreement between Scottish Water and the Customer Forum

# Appendix 1

## The Scottish Water (Objectives: 2015 to 2021) Directions 2014

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### DIRECTIONS

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### ENVIRONMENTAL PROTECTION

### WATER SUPPLY

#### The Scottish Water (Objectives: 2015 to 2021) Directions 2014

*Made.....1st October 2014*

*Coming into force..... 2nd October 2014*

The Scottish Ministers give the following Directions to Scottish Water in exercise of the powers conferred by sections 56 and 56A of the Water Industry (Scotland) Act 2002(a).

In accordance with section 56(4) of that Act, the Scottish Ministers have consulted Scottish Water.

In accordance with section 56A(4) of that Act, the Scottish Ministers have consulted every water services provider and sewerage services provider and Citizens Advice Scotland.

#### Citation and commencement

1.- (1) These Directions may be cited as the Scottish Water (Objectives: 2015 to 2021) Directions 2014 and, except for article 5, come into force on 2nd October 2014.

(2) Article 5 comes into force on 1st April 2015.

#### Interpretation

2.-(1) In these Directions-

"the 2005 Act" means the Water Services etc. (Scotland) Act 2005(b);

"the Act" means the Water Industry (Scotland) Act 2002(c);

"core functions" has the same meaning as it has in section 70(2) of the Act;

"the next period" means the next period (beginning with 1st April 2021) to be specified under section 29B(2) of the Act;

"the period " means the period beginning with 1st April 2015 and ending with 31st March 2021 ;

"previous objective" means an objective (as it applied immediately before 1st April 2015) specified in the Schedule to the Scottish Water (Objectives For 1st April 2010 to 31st March 2015) Directions 2009, as amended by the Schedule to the Scottish Water (Objectives For 1st April 2010 to 31st March 2015) (Amendment) Directions 2011 and by article 3 of the Scottish Water (Objectives for 1st April 2010 to 31st March 2015) Amendment Directions 2014;

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(a) 2002 asp 3; section 56A was inserted by section 22 of the Water Services etc. (Scotland) Act 2005 (asp 3) and amended by section 130(6) of, and paragraph 12 of schedule 2 to the Public Services Reform (Scotland) Act 2010 (asp 8).  
(b) 2005 asp 3.  
(c) 2002 asp 3.

"previous service or standard" means a service to be provided or a standard to be attained as set out in the previous Technical Expression;

"previous Technical Expression" means document "Q&S3B Technical Expression 2010 Directions", as last amended and published on the Scottish Government's website before 1st April 2015;

"public sewerage system" has the same meaning as it has in section 29 of the 2005 Act; "Schedule" means the Schedule to these Directions headed "Schedule to the Scottish Water

(Objectives: 2015 to 2021) Directions 2014" (which comprises part of these Directions);

"SEPA" means the Scottish Environment Protection Agency;

"service" means a service provided by Scottish Water in the exercise of its core functions;

"sewerage services provider" has the same meaning as it has in section 6(4) of the 2005 Act;

"standard to be attained" means the standard of a service to be attained;

"Technical Expression" means the document "Q&S4 Technical Expression 2014 Directions" as amended from time to time and published on the Scottish Government's website; and

"water services provider" has the same meaning as it has in section 6(2) of the 2005 Act.

(2) In these Directions-

- (a) a reference to a numbered article refers to the paragraph so numbered (other than a paragraph in the Schedule); and
- (b) a reference in the Schedule to an enactment refers to that enactment as amended from time to time and, in so far as a provision of the enactment has been repealed (or revoked) and re-enacted (with or without modifications), includes that re-enacted provision .

#### **Objectives as to the standard of services**

3. In respect of the period, Scottish Water must (except to the extent that it would be inconsistent with the exercise of its functions) fulfil-

- (a) each objective (as to the standard of a service) set in the Schedule; and
- (b) each previous objective, in so far as it has not been fulfilled before 1st April 2015.

#### **Objectives as to work for or in connection with services**

4. In respect of the period, Scottish Water must (except to the extent that it would be inconsistent with the exercise of its functions)-

- (a) for each service to be provided (or standard to be attained) as set out in the Technical Expression plan to complete that work by the date or, as the case may be, within such period as may be specified for completing the work in the Technical Expression or as agreed with the Scottish Ministers in a Delivery Plan;
- (b) where work required in connection with the provision of a previous service or standard has not been completed before 1st April 2021, plan to complete the work by the date or, as the case may be, within such period as may be specified for completing the work in the Technical Expression or as agreed with the Scottish Ministers in a Delivery Plan; and
- (c) plan the work so as to provide a stable delivery profile for the construction industry to support efficient delivery across regulatory periods.

# Appendix 1

continued

## Revocations

5. The following Directions are revoked-
- (a) the Scottish Water (Objectives For 1st April 2010 to 31st March 2015) Directions 2009;
  - (b) the Scottish Water (Objectives For 1st April 2010 to 31st March 2015) (Amendment) Directions 2011; and
  - (c) the Scottish Water (Objectives for 1st April 2010 to 31st March 2015) Amendment Directions 2014.



**Bob Irvine**

A member of the staff of the Scottish Ministers

St Andrew's House,  
Edinburgh  
1st October 2014

## SCHEDULE

Articles 2(1) and 3(a)

SCHEDULE TO THE SCOTTISH WATER (OBJECTIVES: 2015 TO 2021)  
DIRECTIONS 2014*A wealthier and fairer Scotland***Efficient public services**

1. To deliver better and more efficient public services that enhance our quality of life, support sustainable economic growth and assure those that fund and rely on them that their public services are responsive, provide value for money and are continually improving, Scottish Water must-

- (a) ensure that assets are maintained so that there is no overall deterioration in performance from that required to be achieved immediately before 1st April 2015;
- (b) improve services to customers in relation to the measures listed(a); and
- (c) ensure that performance, as measured by the Overall Performance Assessment, exceeds an average score across the period of 382.5.

2.---(1) To support a wealthier and fairer Scotland and Scotland's vision for a Hydro Nation, Scottish Water must identify and deliver longer term investments which will reduce the future costs of service delivery.

- (2) In particular, Scottish Water must work with other stakeholders to identify and pursue opportunities available to achieve more innovative and sustainable means of delivering services.

**Rural communities**

3. To support the delivery of the Government's priorities in rural communities, in particular with a view to improving water and sewerage provision in rural areas, Scottish Water must-

- (a) assist the Drinking Water Quality Regulator for Scotland and SEPA with the assessment of the sustainable and cost effective options to address the-
  - (i) public health risks;
  - (ii) limitations to sustainable economic growth; and
  - (iii) customer willingness to connect to public water and sewerage services associated with community private water supplies and sewerage provision; and
- (b) facilitate the provision to communities of appropriate water and/or wastewater services, as approved by the Scottish Ministers.

**Strategic capacity for new development objectives**

4.---(1) Scottish Water must identify and make provision to enable it to service demand for new strategic capacity to meet all new housing development and the domestic requirements of commercial and industrial customers for the period.

- (2) In doing so, Scottish Water must take account of-
  - (a) historical trends;
  - (b) extant development plans and their associated action programmes;
  - (c) the national records of Scotland's population projections; and

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(a) Measures include internal sewer flooding, interruptions to supply, malodour, external sewer flooding, drinking water discolouration, taste and odour of drinking water supplies, customer satisfaction.

# Appendix 1

continued

- (d) any memorandum of understanding or other agreement with SEPA on the impact of proposed development on the public sewerage system.
- (3) Scottish Water must prioritise the delivery of provision required by sub-paragraph (1) in accordance with-
  - (a) the spatial priorities identified in the National Planning Framework; and
  - (b) development priorities identified by local authorities in-
    - (i) structure plans;
    - (ii) strategic development plans;
    - (iii) associated action programmes;
    - (iv) local plans;
    - (v) local development plans; and
    - (vi) local housing strategies.
- (4) Scottish Water must ensure that such strategic assets are delivered in support of committed development so as to minimise the likelihood of redundant assets.
- (5) With a view to establishing whether a development is committed, Scottish Water must, among other things, obtain from the developer confirmation-
  - (a) of land ownership or control;
  - (b) that the development is supported by the local plan and/or has full planning permission;
  - (c) of the time remaining on the current planning permission;
  - (d) that plans are in place to mitigate any network constraints that will be created by the development through a minute of agreement with Scottish Water; and
  - (e) of reasonable proposals in terms of annual build rate within the approved development.

## *A healthier Scotland*

### **Drinking water quality**

5. To support the delivery of the Scottish Government's healthier strategic objective, Scottish Water must contribute to improvements that help people to sustain and improve their health, Scottish Water must-
- (a) address all current known non-compliances with-
    - (i) the Water Supply (Water Quality) (Scotland) Regulations 2001(a); and
    - (ii) the Cryptosporidium (Scottish Water) Directions 2003(b);
  - (b) reduce the risk of non-compliance with-
    - (i) those Regulations; and
    - (ii) those Directions,
 by improving the resilience to risks as identified in its drinking water safety plans; and
  - (c) assist the Drinking Water Quality Regulator for Scotland with the assessment of a long-term policy to reduce or, as the case may be, eliminate exposure to lead in drinking water.

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(a) S.S.I. 2001/207, as amended by S.S.I. 2001/238, S.S.I. 2003/331, S.S.I. 2010/95, S.S.I. 2013/1177 and S.I. 2013/1387.  
 (b) These Directions were made by the Scottish Ministers in exercise of powers conferred by section 56(3) of the Water Industry (Scotland) Act 2002 (asp 3) and came into force on 31st December 2003.

*A greener Scotland***Environment**

6.--(1) To support the delivery of the Scottish Government's greener strategic objective, Scottish Water must contribute to improvements to Scotland's natural and built environment and the sustainable use and enjoyment of it.

(2) In particular, to support compliance with the Water Environment and Water Services (Scotland) Act 2003(a), the Marine Strategy Regulations 2010(b), the Bathing Waters (Scotland) Regulations 2008(c) and the Urban Wastewater Treatment (Scotland) Regulations 1994(d), Scottish Water must-

- (a) reduce the impact of its discharges, abstractions and impoundments so as to contribute to the achievement of the environmental objectives for water bodies and protected areas listed in each associated river basin management plan, and do so in accordance with each programme of measures to be applied to achieve those objectives including by virtue of-
  - (i) the Water Environment (River Basin Management Planning: Further Provision) (Scotland) Regulations 2013(e);
  - (ii) the Water Environment (Water Framework Directive) (Solway Tweed River Basin District) Regulations 2004(f);
  - (iii) the Water Environment (Water Framework Directive) (Northumbria River Basin District) Regulations 2003(g); and
  - (iv) the Water Environment (Shellfish Water Protected Areas: Environmental Objectives etc.) (Scotland) Regulations 2013(h);
- (b) monitor and study the impact of its discharges on bathing waters and take action where necessary to reduce that impact so as to contribute to the achievement of the environmental objectives referred to in sub-paragraph (2)(a);
- (c) undertake strategic studies to understand future investment requirements for discharges and abstractions identified as potentially contributing to--
  - (i) a non-compliance with legislation referred to in sub-paragraph (2)(a); or
  - (ii) a failure to meet the environmental objectives referred to in sub-paragraph (2)(a);
- (d) work with SEPA, water services providers and sewerage services providers (as appropriate) to undertake catchment management and customer education to reduce the impact of priority substances being disposed of via the sewer and drainage system;
- (e) undertake research to assist in identifying the effective treatment of priority substances that catchment management may not be successful in reducing to acceptable levels;
- (f) improve intermittent discharges identified through modelling, and agreed with SEPA, as downgrading the aesthetic or environmental condition of water bodies to support compliance with the Urban Wastewater Treatment (Scotland) Regulations 1994; and
- (g) take steps, in partnership with other stakeholders, to reduce the impact of its discharges on sewage-related litter in the marine environment.

(3) In sub-paragraph (2)(d) and (e), "priority substances" has the same meaning as it has in Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy(a), as amended from time to time.

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(a) 2003 asp 3.  
 (b) S.I. 2010/1627.  
 (c) S.S.I. 2008/170, as amended by S.S.I. 2012/243.  
 (d) S.S.I. 1994/2842, as amended by S.S.I. 2003/273.  
 (e) S.S.I. 2013/323.  
 (f) S.I. 2004/99.  
 (g) S.I. 2003/3245.  
 (h) S.S.I. 2013/325.

# Appendix 1

continued

## Nature

7. To support the achievement of the Scottish Government's targets for the proportion of natural features in favourable condition, Scottish Water must work with Scottish Natural Heritage to identify and undertake management activities at identified sites that will contribute to achievement of the national indicator 'Improve the condition of protected nature sites'.

## Waste

8. Scottish Water must manage the environmental risk associated with sludge historically stored at wastewater and water treatment sites as agreed with SEPA.

## Climate change adaptation

9. Scottish Water must improve Scotland's resilience to climate change by-

- (a) continuing to invest in modelling the likely impact of climate change on its assets; and
- (b) where appropriate, investing to manage risks arising from climate change impacts.

## Climate change mitigation

10.-(1) Scottish Water must contribute towards Scotland meeting its climate change obligations of achieving greenhouse gas emissions reductions in Scotland of 42% by 2020, and of 80% by 2050, by taking all necessary steps to fulfil its duties and obligations required of it as set out in the Climate Change (Scotland) Act 2009**(b)**.

(2) In particular, Scottish Water must-

- (a) work with relevant stakeholders to assess, pilot, and where appropriate, implement measures needed to reduce its direct greenhouse gas emissions and energy usage;
- (b) ensure that all investments made as a consequence of these Directions take into account the associated carbon impact; and
- (c) invest to reduce its demand for Scotland's resources (water and electricity from the national grid) where it is cost effective to do so.

## *A safer and stronger Scotland*

## Flood risk management

11.-(1) To support the Scottish Government's safer and stronger strategic objective, Scottish Water must assist local communities to flourish, becoming stronger, safer places to live, offering improved opportunities and a better quality of life.

(2) In particular, Scottish Water must, as regards flood management, take all necessary steps to fulfil its duties and obligations required as set out in the Flood Risk Management (Scotland) Act 2009**(c)**, including steps to-

- (a) assess flood risk from sewerage systems and update the latest assessment as required;
- (b) continue to deliver its agreed share of the improvements that will reduce the risk of flooding in Greater Glasgow through its participation in the Metropolitan Glasgow Strategic Drainage Partnership (and working collaboratively with their partners);

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(a) OJ L 327, 22.12.2000, p. 1, as amended by Decision No 2455/2001/EC (OJ L 331, 15.12.2001, p. 1), Directive 2008/32/EC (OJ L 81, 20.3.2008, p. 60), Directive 2008/105/EC (OJ L 348, 24.12.2008, p. 84), Directive 2009/31/EC (OJ L 140, 5.6.2009, p. 114) and Directive 2013/39/EU (OJ L 226, 24.8.2013, p. 1).

(b) 2009 asp 12.

(c) 2009 asp 6.

- (c) in partnership with responsible authorities-
  - (i) undertake studies to inform investment requirements in the next period as agreed with the Scottish Advisory and Implementation Forum for Flooding; and
  - (ii) commence its agreed share of the investment requirements arising from the flood studies as agreed with the Scottish Advisory and Implementation Forum for Flooding;
- (d) protect its own assets where they lie within an area vulnerable to flooding; and
- (e) ensure reservoirs are monitored, inspected and maintained in accordance with the Reservoirs Act 1975<sup>(a)</sup> and, where applicable, the Reservoirs (Scotland) Act 2011<sup>(b)</sup> to ensure their structural integrity.

### Security of supply

**12. -(1)** Scottish Water must provide an appropriate level of physical security to Security Service standards agreed with the Scottish Ministers.

(2) In particular, Scottish Water must in accordance with the standards agreed with Scottish Ministers-

- (a) provide the necessary improvements to provide a level of service in water resource zones, such that these zones are adequately protected against the risk of water shortages;
- (b) maintain a sufficient supply of water in all water supply zones that reflects the most cost effective operating regime, and takes account of the opportunities for demand management including leakage control and water efficiency measures; and
- (c) develop an understanding of the overall resilience of water supply systems across Scotland under extreme events and commence implementation of improvements, as approved by the Scottish Ministers.

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<sup>(a)</sup> 1975 c. 23.

<sup>(b)</sup> 2011 asp 9.

# Appendix 1

continued

## EXPLANATORY NOTE

*(This note is not part of these Directions)*

These Directions set objectives in respect of the period 1st April 2015 to 31st March 2021 as to:

- the standard of the services to be provided by Scottish Water in the exercise of its core functions and the time by which a particular standard of any of those services is to be attained,
- the time by which particular work required for or in connection with the provision of those services is (in part or whole) to be commenced or completed.

In formulating these objectives the Scottish Ministers have had regard to Scottish Water's duty under section 51(1) of the Water Industry (Scotland) Act 2002 ("the Act") which provides that Scottish Water must, in exercising its functions, act in the way best calculated to contribute to the achievement of sustainable development (so far as is consistent with the purposes of any enactment relation to the functions of Scottish Water).

For the purposes of section 29C(5) (exercise of functions regarding charges) and 29F(1) (review of determinations and charges), as read with section 29G (effective exercise of core functions), of the Act, Scottish Water is taken to be exercising its core functions effectively if (in discharging its statutory duties and contractual obligations) it makes such use of its resources that, year on year, it:

- achieves the objectives contained in any directions (including these Directions) given by reference to section 56A of the Act; and
- does so at the lowest reasonable overall cost.

The Water Industry Commission for Scotland must have regard to these Directions in exercising its functions under section 29A (charges schemes), 298 (determination of maximum charges), 29E (departure from certain charges) and 29F (review of determinations and charges).

# Appendix 2

## Principles of charging

### SCOTTISH GOVERNMENT

#### GENERAL STATEMENT OF POLICY – PRINCIPLES OF CHARGING FOR WATER SERVICES 2015-2021

Scottish Ministers make the following statement in relation to the principles that must apply to water charges for 2015-21. This statement supports the delivery of the Government's Purpose of focussing government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. The following principles will guide the Water Industry Commission for Scotland when determining the charge limits that Scottish Water is able to set during 2015-21.

Ministers recognise that since Scottish Water was formed in 2002, the quality and efficiency with which services are delivered to customers have been transformed. As a result of these dramatic improvements and policies set out in statements relating to previous regulatory periods, Ministers are confident that customer charges are now broadly cost-reflective and generate sufficient income to ensure that Scottish Water has a secure financial position in the long-term. Ministers wish the industry to build on these achievements and ensure that charges for all customers remain stable and affordable.

These high-level principles have been prepared in consultation with Scottish Water (SW), the Water Industry Commission for Scotland (the Commission), the Drinking Water Quality Regulator, the Scottish Environment Protection Agency and Citizens Advice Scotland and reflect decisions taken following consultations on "Investing in and Paying for Your Water Services from 2015" published in June 2012 and "Water and Sewerage Charges - Exemption Scheme for Small Third Sector Organisations" published in November 2013.

#### Principles

##### ***Principle 1 - Stable charges***

1. Ministers recognise the importance that customers attach to stability and certainty in charging. The Commission will determine charges that give customers certainty about the maximum level of charges they will face over the regulatory period.

##### ***Principle 2 - Level of charges***

2. Ministers' policy is for charges that do not rise by more than inflation, as measured by the Consumer Price Index, across the period.

##### ***Principle 3 - Full cost recovery***

3. Charges should cover the full costs of providing services to customers.

##### ***Principle 4 - Harmonised charges***

4. Ministers require that charges should, for similar services provided to customers of a similar category, be the same for each customer in that category regardless of location in Scotland.

##### ***Principle 5 - Cost-reflective charges***

5. Charges should remain broadly cost-reflective. In particular charges for given services (for example drinking water) to particular customer groups (for example households) should be set to recover the cost to SW nationally of providing that service to that group as a whole.

# Appendix 2

continued

## Additional Requirements

### Household charges

6. Ministers confirm that, in relation to unmetered households, the present collection arrangements and the tariff structure should continue for the period 2015- 21, that is in general:
- Local Authorities will continue to bill and collect unmeasured household water and sewerage charges - Ministers will ensure that an order under section 37 of the Water Industry (Scotland) Act 2002 is in place to secure this.
  - The bandings for household water and sewerage charges should replicate council tax bandings, with reductions on water and sewerage charges also mirroring the discounts that apply to council tax. The exceptions are outlined in Annex A to this statement.
7. Purpose-built student accommodation is only brought into charge whilst it is not occupied solely by full-time students studying at a Scottish University or College.
8. Metered and unmetered household charges should continue to include appropriate elements to recover the cost to Scottish Water of draining:
- Roofs and other impermeable surfaces from household premises; and
  - Those public roads that are connected to its sewers.

### Business charges

9. Ministers confirm that, in relation to non-domestic charges, wholesale charges should continue to be set in line with these principles and should take note of the following:
- *Paying for public roads drainage* -wholesale charges should continue to include an appropriate element to recover the cost to SW of draining public roads.
  - *Surface drainage* - wholesale charges should include an element set to recover the costs of draining roofs and other impermeable surfaces within private properties where properties are connected to public sewers.
  - *Vacant non-domestic properties* - In support of Ministers' policy of cost- reflective charging, Ministers confirm their intention to bring vacant non- domestic properties into charge during the period 2015-21 and will consult on the most appropriate way to implement this. This policy will be confirmed in the light of that consultation.
10. In relation to wholesale charges which are based on Rateable Value, including roads drainage and surface drainage charges, such charges should continue to be made by reference to the Rateable Value using practices as described in the 2014-15 Scheme of Charges. From a date to be specified by Ministers the relevant charges will be based on the Rateable Values most recently assigned by the Assessor.

### Financing

11. Ministers confirm that, in relation to the financing of SW, the following should apply:
- *Financial Strength* - SW's financial strength should be appropriate to the governance framework within which it operates.
  - *Dividend* -The Government will not take a dividend from its ownership of SW.
  - *Lending* - The Government will continue to make finance available through lending to SW in the 2015-21 period in support of its investment programme. The Government wishes to ensure that this lending is at the lowest practicable level consistent with the principle of stable charges. Ministers will provide the amount advised by the Commission up to a maximum of £720 million during the period<sup>1</sup>.
  - *Financial Performance* - Financial performance should be monitored in line with the financial tramlines as set out by the Commission. These will also ensure that customers will only be asked to meet additional costs beyond those allowed for in a charges determination, where these arise as the result of external factors beyond the influence of SW. This arrangement protects the position of customers and ensures that they do not compensate SW for inefficiency or poor management. Any financial outperformance will be distributed in line with Ministers' approval.

<sup>1</sup> This assumes that £110m is made available in 2014-15 to support the completion of the 2010-15 programme. Any adjustments to this would be reflected in the amounts made available to Scottish Water over the 2015-21 period.

#### *Paying for increased local capacity*

12. Ministers confirm that existing arrangements in relation to paying for enhancements to the local infrastructure should continue. Where these are required to enable new developments to be connected to the public networks, developers should meet the net cost to SW of such enhancements. The Commission should continue to provide for SW to levy infrastructure charges for each new property connected to the water or sewerage infrastructure.

#### *Assistance for Charitable organisations*

13. Ministers recognise the contribution that charities make to Scotland's well-being and prosperity and confirm that a new scheme is to be implemented for 2015-21 to provide an exemption or a reduction on water and sewerage charges payable by charities. £4.5 million of this scheme is to be funded by the generality of non-household customers and the remainder through a grant to Scottish Water from the Government. The scheme will be subject to the conditions set out in Annex B.

#### *Paying for economic regulation and customer representation*

14. Ministers confirm that the cost of economic regulation and customer representation should be covered by an annual levy on SW funded out of charge income.

#### *Preparing a Detailed Statement*

15. Ministers will issue, following consultation with stakeholders, a detailed statement consistent with the terms of s29 of the Water Industry (Scotland) Act 2002 which sets out the approach to the key principles listed at paragraphs 1 to 5 above to be taken by Scottish Water in setting the Annual Scheme of Charges during the regulatory period. This Statement should be completed by 31 December 2014.

#### *Preparing for Future Regulatory Periods*

16. Ministers require that preparatory work be undertaken for the 2021-27 period. The charging policies as contained within this document should be reviewed to ensure that they meet the Government's overall policy priorities.

October 2014

# Appendix 2

continued

*Annex A*

## **Reductions to apply to water and sewerage charges at unmetered Households**

1. Reductions to water and sewerage charges at unmetered households should apply in relation to dwellings (where "dwelling" has the same meaning as in part II of the Local Government Finance Act 1992) where all the following circumstances apply:-

- (a) A person is liable to pay water and/or sewerage charges under a charges scheme; and
- (b) The dwelling in respect of which the charges are payable is not one to which the Council Tax (Discount for Unoccupied Dwellings) (Scotland) Regulations 2005 apply.

2. Where the dwelling is subject to a Council Tax discount under section 79 of the Local Government Finance Act 1992, the discounts to be applied to unmetered water and sewerage charges shall be the same as those applied to Council Tax charges. If there is no such discount under section 79, but a person receives Council Tax Reduction in respect of the dwelling, the following formula should be used to calculate the level of reduction for which that dwelling is eligible.  $R = 25 \times A + B$

Where:

- R is the percentage discount to be applied to water and/or sewerage charges;
- A is the amount of Council Tax Reduction which a person receives in respect to that dwelling in that year; and
- B is the council tax for which that person is liable in respect to that dwelling in that year.

3. No reduction in water charges should be applied for 2nd homes or to dwellings supplied through a water meter.

*Annex B***Assistance for Charitable organisations**

Ministers confirm that there is to be a new scheme to assist charities with the payment of water and sewerage charges. Assistance is to be provided to an organisation which meets the following criteria subject to any further technical exclusions that may be considered necessary. These will be confirmed in the final scheme details:

- It is either registered:
  - with the Office of the Scottish Charity Regulator as a charity; or
  - with HMRC as a Community Amateur Sports Club (CASC) operating in Scotland.
- Where it has a gross annual income of less than £200,000 as disclosed in its most recent set of accounts submitted to the relevant regulatory body it will be exempt from the payment of water and sewerage charges.
- Where it has a gross annual income of more than £200,000 but less than £300,000 it will be eligible for a 50% reduction in wholesale water and sewerage charges. Water and sewerage retail charges will be subject to a cap to be determined by the Water Industry Commission for Scotland.

**Other conditions:**

1. Any eligible charity or CASC seeking exemption or a reduction must:
  - Apply to their Licensed Provider.
  - Renew their request for exemption annually.
2. Where organisations are awarded charity or CASC status, exemption or a reduction will be granted from the beginning of the financial year in which the award is made.
3. Exemption or a reduction will only be awarded where the records held by OSCR or HMRC are up to date and in line with the regulator's expectations.

**Transition Arrangements**

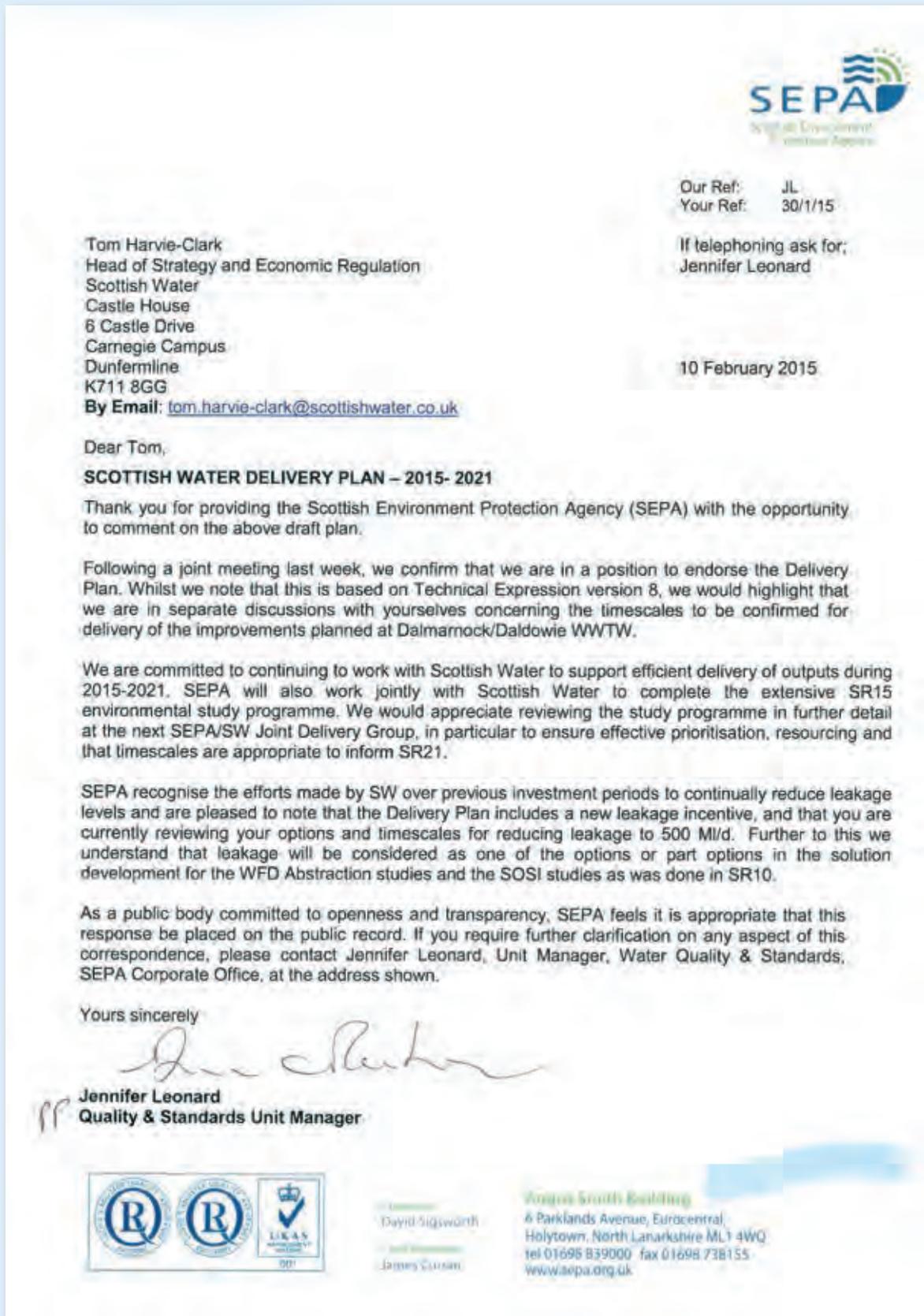
4. All exempt organisations that are eligible under the 2010-15 exemption scheme as set out in <http://www.scotland.gov.uk/Topics/Business-Industry/waterindustryscot/publications/Polycystatments/poc10to15>) will retain their exemption in 2015-16.
5. In 2016-17 any exempt organisation that is eligible under the 2010-15 exemption scheme but is not eligible under the new scheme, will receive a 50% reduction in wholesale water and sewerage charges.
6. From 2017 only organisations that meet the qualification requirements of the new scheme will receive support with their wholesale water and sewerage charges as outlined in the new scheme.

**Review Arrangements**

7. The Scheme which replaces the current arrangements is to be reviewed in 2017-18.

# Appendix 3

## Endorsement letter from the Scottish Environment Protection Agency



# Appendix 4

## Endorsement letter from the Drinking Water Quality Regulator



Supporting Scotland's economy and communities

Financing our services

Monitoring our delivery

Delivering our investment programme

Appendices

# Appendix 5

## Endorsement letter from the Water Industry Commission for Scotland



Date: 26 February 2015  
Our Ref: AS-DM-26-Feb-2015

Douglas Millican  
Chief Executive  
Scottish Water  
Castle House  
6 Castle Drive  
Dunfermline  
KY11 8GG

Dear Douglas

**Strategic Review of Charges 2015-21: Scottish Water's draft delivery plan**

Thank you for providing a draft of Scottish Water's delivery plan for 2015-21. While the approval of the delivery plan is a matter for the Scottish Government, we welcome the opportunity to provide our initial observations on this draft which we received on 30 January 2015.

Overall, we welcome the consistency in format and content between the March 2014 Scottish Water draft business plan and the draft delivery plan. We believe that the draft delivery plan sets out a clear vision for Scottish Water for the 2015-21 regulatory period which is consistent with the Commission's November 2014 Final Determination.

As part of finalising the monitoring arrangements for the 2015-21 period through the OMG forums, it will be important to ensure that the output delivery profile set out in the draft delivery plan meets the expectations of stakeholders, promotes efficient delivery and recognises the benefits of long term planning between regulatory periods. The monitoring arrangements should also ensure that a strong focus is maintained on the delivery of the completion programme.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Alan D A Sutherland".

**Alan D A Sutherland**  
Chief Executive

Water Industry Commission for Scotland  
First Floor, Moray House  
Forthside Way  
Stirling FK8 1QZ  
**Chairman** Gordon Hughes

**Telephone** 01786 430 200  
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# Appendix 6

## Letter from Citizens Advice Scotland

Supporting Scotland's  
economy and communities

Financing our services

Monitoring our delivery

Delivering our  
investment programme

Appendices



FAO Tom Harvie-Clark  
Head of Strategy and Economic regulation  
Scottish Water  
Castle House  
6 Castle Drive,  
Dunfermline  
Fife  
KY11 8GG

**Scottish Association  
of Citizens Advice Bureaux**  
1st Floor Spectrum House  
2 Powderhall Road  
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Telephone 0131 550 1000  
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e-mail [info@cas.org.uk](mailto:info@cas.org.uk)  
website [www.cas.org.uk](http://www.cas.org.uk)  
need advice? [www.adviceguide.org.uk](http://www.adviceguide.org.uk)

Dear Tom,

24<sup>th</sup> February 2015

**Draft Delivery Plan 2015-21 “Trusted to care for the water on which Scotland depends”**

Citizens Advice Scotland welcomes the opportunity to respond to Scottish Water's draft Delivery Plan 2015-21. We also welcome the increasingly customer-centric approach evident in the Delivery Plan.

This response focuses on two areas where we would wish to see amendments to the plan. These are; the role of any customer representative body in working with Scottish Water over the coming period and Scottish Water's role in supporting customers who struggle to pay.

Role of a customer representative body

The Draft Delivery Plan 2015-21 states that Scottish Water will work with the Customer Forum throughout the 2015-21 period within a number of areas including affordability, customer engagement and community involvement. As you are aware, Citizens Advice Scotland has raised concerns with Scottish Water about this commitment to work with the Customer Forum beyond the agreed scope of the SRC process, and within areas of work that fall under the remit of CAS as the statutory consumer representative body.

We recognise the fact that Scottish Water states that any reference to the Customer Forum within the Delivery Plan is '*simply a short-hand for consistency and identifies areas where customer input to discussions and arrangements will be appropriate and important*'. However, we are of the view that using the phrase "Customer Forum" pre-empted the outcomes of the independent review of the Customer Forum. In addition,



**Patron  
Chair** HRH The Princess Royal  
Dominic Notarangelo

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# Appendix 6

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we feel that the use of the term “Customer Forum” could cause confusion to consumers and water industry stakeholders as to the role and remit of Citizens Advice Scotland and any future customer challenge/representation group.

Therefore we would ask that the language be changed from “Customer Forum” to “customer representative body”.

#### Supporting customers who struggle to pay

Citizens Advice Scotland welcomes the affordability measures already in place to help customers who struggle to pay and we are committed to working with you to ensure that every customer gets the support they need to allow them to pay for their water and sewerage service. We also welcome the commitment from Scottish Water to work with stakeholders on what more can be done for vulnerable consumers within the Principles of Charging.

However, we also note with disappointment that the Principles of Charging no longer contain “affordability” as a core principle. Whilst we will continue to discuss this with the Scottish Government, we would welcome commitment from Scottish Water to work with us and others to find new ways to better support struggling consumers.

Despite some signs of economic recovery, the reality for a great many people in Scotland is that their incomes simply do not meet their outgoings. We know, for example, that the cost of essential goods and services has risen by 28% since 2008 whilst wages have only risen by 9%. At the same time, benefit payments have decreased in value to the extent that they now only cover 39% of required expenditure to meet the minimum income standard.<sup>1</sup>

Interim findings from our research with Citizens Advice into the impact of welfare changes on people’s ability to pay for utilities shows that many people on low incomes or who rely on benefits as their main source of income are finding it increasingly difficult to meet the costs of essential services, resulting in debt and further hardship, particularly when additional charges are added for late payment, debt collection or court proceedings.

Therefore we would very much welcome a strong commitment from Scottish Water in the Delivery Plan to work with us, the Scottish Government and local authorities to address the harm and hardship caused by the current arrangements for consumers who struggle to pay.

We would be very happy to discuss these areas with you in more detail and look forward to working closely with you over the coming regulatory period.

Yours sincerely,

Sarah Beattie-Smith  
Consumer Futures Scotland Manager

<sup>1</sup> Joseph Rowntree Foundation, *Minimum Income Standard for the UK 2014*, <http://www.jrf.org.uk/publications/minimum-income-standard-2014?gclid=CJGyy8aL-MMCFafLtAod7xQAiQ>

# Appendix 7

## Minute of Agreement

### Scottish Water and the Customer Forum

#### Minute of agreed modifications to Scottish Water’s draft business plan for 2015-21

#### Introduction

1. The formal document setting out the procedures for the setting of charges for water in Scotland – ‘Strategic Review of Charges 2015-21: Innovation and Choice’ issued by the Water Industry Commission for Scotland, had at its heart an invitation to Scottish Water and the Customer Forum for water to agree the business plan the Water Industry Commission would consider in determining charges for 2015-21. This minute of agreement represents the agreement reached and as sought in the formal procedures for the Strategic Review of Charges 2015-21.

2. This minute of agreement should be read in the context of Scottish Water’s draft business plan for the 2015-21 period. Scottish Water’s draft business plan is agreed by the Customer Forum unless, and to the extent, modified by this minute of agreement. For completeness, by 28 February 2014, Scottish Water will update its draft business plan for all the matters set out in this minute of agreement to create ‘the agreed business plan’.

3. Where the term ‘Customer Forum’ is used throughout this document and referring to matters beyond the current process for the price review and current powers to agree, this reference is not intended to imply that a decision has been taken on the future of the Customer Forum and any future role it may have. This is simply a short-hand for consistency and identifies areas where customer input to discussions and arrangements will be appropriate and important, whatever the particular form of that customer body.

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Best in class performance threshold	400	400	400	400	400	400
Leading companies performance threshold	380	381	382	383	384	385

### Delivering for customers

#### Overall Performance Assessment (OPA)

4. Scottish Water and the Customer Forum aspire for Scottish Water’s performance to be ‘best in class’, and this is reflected in the agreed approach towards OPA where a three tier approach is agreed, based around the following thresholds:

- Scottish Water aspires to be best-in-class, achieving an equivalent<sup>1</sup> OPA score at, or above, 400. It is recognised by the Customer Forum that this is unlikely to happen consistently based on the experience from England and Wales.
- Scottish Water plans to be leading, achieving an OPA score at, or above, the leading companies’ threshold in every year. It is acknowledged by the Customer Forum that, occasionally, this may not be achieved because of significant events.

- In recognition of this occasional risk to delivering a leading level of customer service, Scottish Water commits to achieving an average OPA score across the 2015-21 period that exceeds the leading companies’ performance threshold (i.e.: an average score across 2015-21 that exceeds 382.5).

5. The following detailed points with regard to the OPA have been agreed in addition to those identified for the drinking water quality measure and the waste water treatment compliance in the draft business plan:

- Exclusions: the current exclusions that apply to OPA are to continue during 2015-21. Scottish Water to identify and report the exclusions to the OPA calculation to an annual performance review meeting with the Customer Forum.
- Response to formal complaints: the period for a substantive response to formal complaints to be reduced from 10 days to 5 days.
- Independent verification of the OPA: Scottish Water to continue to undertake an annual independent audit and verification of its OPA score.

<sup>1</sup> The equivalent score reflects that, given the revised scoring being introduced for drinking water quality and Scottish Water improvement plans for SOSI, Scottish Water’s equivalent score will be between 3 and 4 points below that recorded in England and Wales. Only one company has achieved an equivalent score above 400 points.

# Appendix 7

continued

## Customer Experience Measure (CEM)

6. A separate Customer Experience Measure (CEM) will be introduced for each of household and business customers. The non-household CEM is to include Licensed Providers, businesses and developers. Scottish Water will work with the Customer Forum on the development of the measures for agreement and implementation by March 2015.
7. The following detailed points with regard to the introduction of a household Customer Experience Measure (CEM) have been agreed:
  - Perception survey: the perception survey is to constitute 30% of the qualitative element of the household CEM.
  - The qualitative survey elements of CEM to be conducted independently of Scottish Water.
  - Timetable: Scottish Water to operate the household CEM on a shadow basis from April 2014 with a view to establishing a baseline level of performance during 2014/15 and a CEM improvement plan by March 2015.
  - Affected non-contact customers: a commitment from Scottish Water to work with the Customer Forum in developing for implementation by March 2015 a separate component (weighting to be agreed) element of household CEM covering the customer experience of Scottish Water's response to planned and unplanned Scottish Water service events from those customers who are likely to have been affected but have chosen not to contact Scottish Water.
  - SPSO complaints upheld: these are given a weighting of 1000 times 'unwanted' contacts within the CEM. Scottish Water will also report on escalated and SPSO complaint levels in the annual performance review meeting (see note 17).
  - 'Calls abandoned' and 'all lines busy': to be included within the quantitative element of CEM.
  - Independent verification of the CEM: Scottish Water to seek independent audit and verification of its CEM score.
8. It is agreed that the disaggregated elements of the household CEM can and will be benchmarked with the Service Incentive Mechanism (SIM) in England and Wales as it is constituted currently. It is noted that SIM is currently under review and any changes to SIM which would affect comparability with CEM will be discussed with the Customer Forum to assess any effect on the understanding of CEM this might have.
9. Scottish Water and the Customer Forum will keep the relative weightings of the components of the CEM under review.
10. Scottish Water and the Customer Forum recognise that further steps could be taken to achieve a better understanding of business customers' perceptions of the service outcomes they experience and agree that they will, together, seek to conclude discussions with all relevant parties aimed at developing a non-household CEM by March 2015 to capture:
  - Licensed providers' views as a customer of Scottish Water.
  - Scottish Water component of business users' experience.
  - Scottish Water service to the developer community.
11. Scottish Water are taking steps to develop improved working relations with business customers where that is relevant to matters specifically under the direct control of Scottish Water and which may facilitate business growth. Scottish Water will engage with the Customer Forum in reviewing progress on this strand of work.

## High Esteem Test (UKCSI)

12. Scottish Water and the Customer Forum agree that benchmarking Scottish Water's customer satisfaction against other utilities and companies in other sectors would be of value. Scottish Water and the Customer Forum have agreed that Scottish Water will bring forward its proposals for building a robust benchmark tracking survey to the Customer Forum for agreement and implementation by March 2015.

## Additional Service Activity Measures

13. Scottish Water will work with the Customer Forum to agree separate service activity measures in the following areas for implementation from April 2015:
  - External flooding due to hydraulic overloading;
  - The annual number of properties externally flooded;
  - Visible leakage;
  - Carbon footprint reduction;
  - Extreme weather events excluded from OPA; and
  - SPSO escalated complaints and upheld complaints.

### Customer engagement

14. Scottish Water and the Customer Forum are committed to working together throughout the 2015-21 period on deepening customer engagement. Each year, as appropriate, a wider programme of research into customers with particular service requirements will be conducted. This work may encompass, for example, vulnerable customers, customers within particular geographic areas, customers with particular service improvement needs, research to inform future customer driven priorities and long term issues such as lead pipe replacement, rural sewerage provision, and private water supplies.

### Customer education

15. Scottish Water and the Customer Forum agree that there is more that can be done to get close to customers and to help customers co-produce outcomes for themselves and the water and waste water system as a whole, through more comprehensive customer education, care and support arrangements.
16. Building on work done to improve customer education on blockages to sewers caused by customer behaviours, Scottish Water will engage with the Customer Forum during 2014/15 with a view to developing potential approaches to education, care and support programmes, and the subsequent trialling and evaluation of such programmes.

### Annual review meeting

17. The Customer Forum and Scottish Water agree that there will be an annual meeting between Scottish Water and the Customer Forum specifically for the purpose of looking at levels of service and performance as represented by: OPA; the CEM; the High Esteem Test (UKCSI); Wholesale KPIs – and the component parts of each; and other agreed service activity measures under development. Following any such meeting the Customer Forum undertakes to write to Scottish Water identifying any issues it considers relevant to the question of service level and wider performance monitoring, and Scottish Water agrees to consider the issues raised.

### Customer prices

18. The financial modifications and mechanisms set out in this minute of agreement are intended to achieve the following prices for customers.

#### Household customers

19. There will be an overall household price cap of CPI-1.75% across the 2015-21 period – this is the overall price control that is consistent with achieving annual nominal price increases of 1.6% in 2015-21 assuming that actual CPI adheres to the assumptions given in note 22 below. This mechanism protects both customers and Scottish Water from actual inflation differing from that assumed in this note of modifications. The overall household price cap will be operated in accordance with the following 3 principles:
  - a) A fixed nominal price increase of 1.6% pa in each of 2015/16, 2016/17, and 2017/18 for household customers only, albeit that any over/under recovery of revenue in these three years may be adjusted for in 2018-21 under the price cap arrangements. This follows a limiting of the household price increase in 2014/15 to 1.6% in light of the pricing intention for 2015-18.
  - b) An indicative nominal price increase of 1.6% pa in each of 2018/19, 2019/20 and 2020/21 for household customers only, that will be subject to assessment at the time based on out-turn and forecast CPI.
  - c) If the application of the price cap methodology would require household prices in 2018-21 to exceed the indicative price increase of 1.6% pa then, prior to the application of such an increase, Scottish Water, the Customer Forum, and the Commission will consider whether any, or all, of the increase above 1.6% can be off-set by overall favourable external factors, re-phasing of IR18 allowances to after March 2021, or by returning any early sustainable out-performance to customers.
20. Affordability: Scottish Water agree to commence work with the Scottish Government and other stakeholders, including the Customer Forum, by April 2015 to investigate if more can be done to support vulnerable customers within the principles of charges laid down by Scottish Ministers.

# Appendix 7

continued

## Wholesale customers

21. There will be a target annual wholesale price change in 2015-21 of CPI-0.3%, but this would be subject to annual adjustment to reflect actual growth and CPI so that Scottish Water's revenue complies with the annual wholesale revenue cap as adjusted for out-turn CPI.

## Other financial changes

### Inflation assumptions

22. The inflation assumption forecasts are modified as follows:

- CPI for prices will be reduced to 1.9% pa in line with the Bank of England's inflation forecast of November 2013<sup>2</sup>.
- The differential between CPI and RPI will be reduced to 0.75%.
- In light of the falling forecasts for RPI, the RPI cost assumptions for 2013/14 and 2014/15 shall be reduced to 2.8% and 2.65% respectively.

This is set out, for clarity, in the table below.

	2013/14	2014/15	Each year from 2015/16 to 2020/21
Modified CPI for prices	-	-	1.9%
Draft business plan CPI for prices	-	-	2.0%
Modified RPI for costs	2.8%	2.65%	CPI+0.75% (i.e.: 2.65%)
Draft business plan RPI for costs	3.0%	2.9%	CPI+0.9% (i.e.: 2.9%)

## Household growth

23. The Commission set out in note 22 that household growth may exceed that set out in our draft business plan. In response to this, the assumption on household growth has been increased from an average of 0.67% pa in the draft business plan to an average of 0.74% pa in this note. This revised average growth assumption is based on an assumed rising annual growth from 0.6% in 2015/16 to 0.9% in 2020/21. The assumed financial consequences arising from this additional growth (in out-turn revenues and costs) are:

	£m
Additional customer revenue	11
Additional infrastructure charge income	7
Additional investment in strategic infrastructure	(4)
Additional reasonable cost contributions	(11)
Additional investment in strategic capacity	(13)
Net cash cost in 2015-21	(10)

24. To the extent that growth exceeds the assumptions set out in our draft business plan, as amended above, the further net additional costs (investment in excess of additional revenue) would require further re-phasing of IR18 investment allowances to after March 2021, beyond those set out in note 27.

## Investment levels and priorities

### Updates to draft business plan forecasts

25. Cash provision is being made for the £61 million SR10 investment risk provision that was highlighted in the table commentary accompanying the draft business plan but omitted from the accompanying financial model projections. This cash provision is essential in the context of the Commission's guidance to lower significantly the closing cash balance at March 2021.

<sup>2</sup> [www.bankofengland.co.uk/publications/pages/inflationreport/2013](http://www.bankofengland.co.uk/publications/pages/inflationreport/2013)

26. Recognition, but no overall net cash adjustment, is being made for two compensating understatements in the draft business plan that were identified by the Commission through their business plan review process, which are:

- A cost increase of £21 million to correct for an understatement in relation to reasonable cost contributions (RCC).
- Infrastructure charge income is increased to reflect an under-statement by £3 million to £4 million a year. This will provide additional income that off-sets the additional RCC, albeit that part of this may need to be invested in additional strategic infrastructure capacity.

**IR18 allowances**

27. To create a positive cash balance of £20 million at March 2021, £40 million (2012/13 prices) of IR18 allowances need to be re-phased to after March 2021. The impact on the phasing of IR18 is set out below.

All figures £m (2012/13 prices)	2018-21	2021-24	Total
Modified IR18 allowances	259	280	539
Draft business plan IR18 allowances	299	240	539
Re-phasing of IR 18 allowances	(40)	40	–

**Additional investment priorities**

28. Any additional priorities for investment including lead pipe replacement pilots, private water supplies and sewerage provision to rural communities, acceleration of Water Framework Directive actions, and reduction in the economic level of leakage will be considered under the rolling investment review in December 2017, taking account of the available financing in relation to section 19 of this agreement. To the extent that financial provision is required for further additional investment priorities the value of the IR18 re-phasing to after March 2021 set out in note 27 above would need to increase further.

**Improving resilience of water supplies**

29. The Customer Forum has sought a robust methodology for assessing the risks, costs and benefits associated with large projects to improve resilience within the system. The procedure set out by Scottish Water in January 2014 provides the basis for such robust assessments and sets out how Scottish Water will consult and seek the support of the Customer Forum on these issues over time. This procedure will be incorporated into Appendix 6 to 'the agreed business plan'.

30. Scottish Water and the Customer Forum agree that part of the assessment process to be undertaken by Scottish Water into the issues of resilience will include developing a risk assessment to facilitate discussion with customers and allow them to come to judgements about the scale of risk to assets and how it is assessed and the priority for addressing these risks.

**Price Promise and Guaranteed Standards**

31. Scottish Water and the Customer Forum have agreed a simplification and enhancement of Scottish Water's Price Promise and Guaranteed Standards of Service.

32. Scottish Water has committed to merging the two schemes, promoting them to customers using plain English both in its publications and on the website; and taking a more proactive approach to offering rebate and compensation payments. Scottish Water has agreed that higher levels of payment should be made available and that they will be implemented from April 2015 as follows:

- All the financial payments are uprated in light of inflation since they were last updated.
- On unplanned interruptions to supply to move to give a rebate of 25% to 100% of annual water charge for between 2 and 5 incidents in future, rather than 3 and 6.
- Where a customer suffers from internal sewage flooding, the rebate will be increased to a minimum of band D level of household waste water charges.

# Appendix 7

continued

## Cash balances

33. The forecast closing cash balance, including the financial reserve, at 31 March 2021 is reduced to £20 million.

## Financial performance

34. Scottish Water and the Customer Forum agree that the description in 'Innovation and Choice' that out-performance could potentially be used to 'reduce charges, provide additional customer service improvements, improve the condition or performance of the assets in place, or build up its financial reserve' are the appropriate areas for engagement between Scottish Water and the Customer Forum.
35. The Customer Forum accept that 'out-performance would be shared at the discretion of Scottish Water at this point, provided its financial strength did not exceed the upper limit of the tramlines', and both parties accept that 'if Scottish Water's financial strength reaches the upper limit and is forecast to stay there for the remainder of the price control period, the company would use the proceeds over

that limit to the benefit of customers, subject to the agreement of the Water Industry Commission for Scotland (the Commission) and the Scottish Government'.

36. Both parties recognise that Scottish Water will seek to trigger discussions with the Customer Forum, the Commission and other stakeholders when the circumstances indicate this would be either beneficial or necessary, with the Commission having the power to determine when discussions under the tramlines should take place if this is not already happening voluntarily. Scottish Water and the Customer Forum recognise that the Scottish Government, as owners of the company, would have to be party to any agreement on the use of out-performance.

## Summary of the forecast out-turn cash impact of the financial changes and limiting of price increases

37. For completeness, tabulated below are each of the financial adjustments and their impact on the forecast closing cash balance at March 2021.

Modification	Cash impact of modification £m	Closing cash balance at 31 March 2021 £m
Cash (including financial reserve) balance in draft business plan		117
Additional net investment requirements arising from omissions from draft business plan financial model	(61)	56
Impact of reduction in household price increase in 2014/15 from 3% in draft business plan to 1.6%.	(97)	(41)
Reduction in 2015-21 prices to 1.6%.	(72)	(113)
Reduction in forecast RPI for costs: arising from reduction in 2013/14 from 3% to 2.8%. in the annual differential between RPI and CPI from 0.9% to 0.75% in 2014-21 arising from a reduction in forecast CPI by 0.1% to 1.9%	18 46 31 95	(18)
Impact of increase in assumed average household growth from 0.67% pa to 0.74% pa	(10)	(28)
Rephasing of IR18 allowances to after March 2021 (£40m 2012/13 prices)	48	20

38. An updated financial appendix containing all of these changes will be provided in 'the agreed business plan'.

**Peter Peacock**  
On behalf of the Customer Forum  
30 January 2014

**Douglas Millican**  
On behalf of Scottish Water  
30 January 2014



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