



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

**Delivery Plan Update
March 2017**

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Overview

This update to our Delivery Plan is submitted to Scottish Ministers for approval. It highlights those areas where the content of our original Delivery Plan for the 2015-21 period and the update provided in 2016 have been revised.

In our 2015 Delivery Plan we stated that we were determined to deliver significant further improvements for our customers and out-perform our commitments. As we conclude the second year of the 2015-21 period we are on-track to achieve this ambition. Key highlights of our progress so far include:

- We have successfully driven up customer satisfaction and driven down the number of complaints. As a result our Customer Experience score has risen further this year, and is currently at 85.3, well above our Delivery Plan target of 82.6. Since the start of the regulatory period we have reduced the points lost by more than 15%;
- The momentum in delivering our investment programme has increased. Since April 2015 we have delivered over £1 billion of investment, with over 1,500 projects starting on site. Around 216 businesses employing over 2,200 people are delivering the programme. As a result our Overall Measure of Delivery score for 2016/17 is already well above our Delivery Plan year-end target of 82 points;
- The water quality we delivered to our customers' taps in 2016 continued to outperform levels delivered in previous regulatory periods, and was well above our Delivery Plan target;
- We have delivered further leakage reduction in 2016/17, already out-performing the target level set in the Final Determination for the end of the regulatory period;
- Through successful joint working with SEPA, the Scottish Government and the Water Industry Commission for Scotland we are trialling in the first half of 2017 a potential option to achieve the required environmental outcomes in the Lower River Clyde at a substantially lower cost than envisaged in our 2016 Delivery Plan update. Also, under the Ethical Business Regulation approach, we are working with SEPA to review the required improvements to our discharges into the lower River Kelvin;
- We support new housing and economic growth across the length and breadth of Scotland. In the first three quarters of 2016/17 we connected over 17,000 new properties to our network. In addition, we have broadened our investment approach to provide strategic capacity for the water and domestic sewerage services for additional business demand as well as new housing;

- We are now generating and hosting more renewable electricity than we consume in our operations;
- We continue to receive wider recognition. The pursuit of our vision to be trusted to care for the water on which Scotland depends has been recognised in a recent WHICH? report which ranked the water industry as the most trusted sector amongst Scottish consumers;
- In 2016, we were awarded the UK Water Industry Sector Award for Health and Safety; the Scottish Business award for 'Fair Work Employer'; and the HR Network 'Best Workplace in Scotland' award;
- In 2016, we were accredited with a gold standard in Investors in Young People, which is the highest award available; and
- We are outperforming the challenging financial limits for 2016/17 set out in the Final Determination 2014 and forecast a closing cash balance in March 2021 of £57 million compared to our 2015 Delivery Plan position of £40 million.

This update to our Delivery Plan builds on our success to date and remains ambitious - to provide our customers a leading service while at the same time reducing their charges in real terms.

We have delivered strong financial out-performance to date on revenue and costs. We are forecasting that this will allow us to manage the pressures and opportunities associated with the investment programme within the price limits set out in the 2014 Final Determination and the agreed borrowing of £760 million from the Scottish Government. In this update we have allocated £100 million of our actual and forecast financial outperformance to augment capital maintenance to address emerging risks to customer service and to manage any cost pressures in the overall investment programme.

In our 2016 Delivery Plan update we included a £100 million risk allowance to address discharges to the Lower River Clyde. As highlighted above, through successful collaboration, a substantially more cost effective option has been identified and this option is being trialled in the first half of 2017. If the trials continue to reflect their early positive results this risk allowance may not be required. In this situation we would propose that, subject to the views of Ministers, in line with the financial tramlines approach implemented by the Water Industry Commission for Scotland, this risk allowance should be available to augment the IR18 allowances.

In finalising our updated Delivery Plan, we have met with the Regulators to ensure that they are aware of the changes to our original plan.

1. Delivering for our customers

Our plan will maintain the high service levels that we are delivering and we will further improve services in areas identified as priorities by customers. Here we set out updates on the key high level customer service metrics that we and our stakeholders and customers monitor our performance by.

Customer Experience Measure (CEM)

As we set out in our 2015 Delivery Plan, we introduced our household Customer Experience Measure to ensure that the delivery of service to our customers continues to sit at the heart of what we do and be a key driver of our performance. Our commitment was to improve on the score of 82.6 (out of 100).

Over the last year we have successfully driven up customer satisfaction and driven down the number of complaints. This has been achieved by reviewing all feedback that indicates where our service could be improved, intervening to prevent issues escalating and learning lessons to improve our performance. As a result our Customer Experience score has risen further this year, and is currently at 85.3, well above our Delivery Plan target of 82.6. Since the start of the regulatory period we have reduced the points lost by more than 15%.

Looking forward, we have plans in place to gain better insight into those customers who experience an issue and choose not to contact us, and to make greater use of social media to inform customers of planned and emergency works and provide updates as those works progress.

We have been working to develop a separate Customer Experience Measure that will allow us to measure the service experience to our non-household customers and Licensed Providers operating in Scotland. We plan to deliver year on year improvements in our performance to these customers.



Overall Performance Assessment (OPA)

In our 2015 Delivery Plan we set out our commitment to achieve an OPA score at, or above, the threshold for leading water and waste water companies, (380 points in 2015/16 rising to 385 points by 2020/21), and our aspiration to be best in class, achieving an equivalent OPA score at, or above, 400 points.

Through our continued focus on delivering high levels of drinking water quality, reducing the number of interruptions to supply and reducing environmental pollution incidents, we are on track to again exceed our 2015 Delivery Plan OPA commitment and be close to our aspiration to be 'best in class'.

Working with SEPA we have identified that the way in which the OPA component on waste water treatment works compliance is measured is no longer consistent with prior years, resulting in slightly lower scoring that we would have expected for equivalent performance when setting the Delivery Plan. Furthermore we believe there is scope for better alignment with SEPA’s environmental priorities. We have therefore established a workstream with SEPA and the Water Industry Commission for Scotland to consider whether a revised calibration/re-definition should apply to the remainder of the regulatory period. To ensure alignment we expect to propose that the minimum service level to be achieved for waste water treatment works compliance reflects any revised calibration/re-definition agreed for the OPA element.

Customer Trust

We are pleased to note that the pursuit of our vision to be trusted to care for the water on which Scotland depends has been recognised in a recent WHICH? report. Their Consumer Insight report tested customers’ views of the trust they had in different sectors and ranked the water industry as the most trusted sector amongst Scottish consumers:

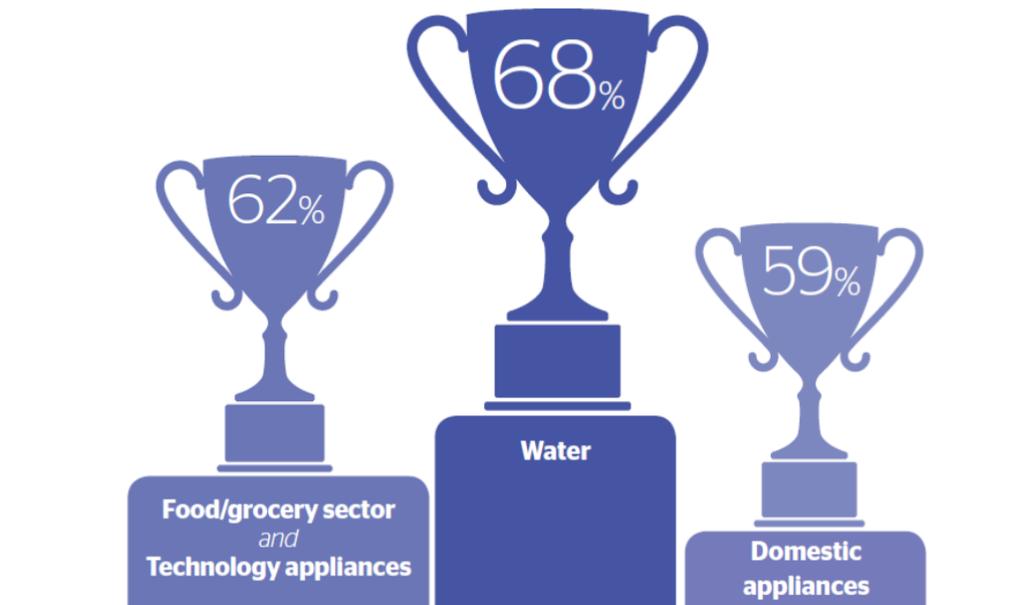


Figure 2 – The industry sector / organisations most trusted in Scotland are¹:

¹ WHICH? Consumer Insight report: A Scottish consumer snapshot 2016
<https://drive.google.com/file/d/0BxZIN9spD4TSUTE0T1BITnp2NFoyeTY3Mm51cUhjYjIER3Rn/view>

Customer Education, Care and Support

Our strategy on customer education is to focus on engaging with our customers, current and future generations, and to seek innovative educational opportunities and partnerships.

We run customer campaigns throughout the year on a range of messages, from how to protect against blocked drains, burst pipes and bogus callers through to water safety and how to use water wisely. Our Cycle campaign highlights how everyone can play their part in helping to keep Scotland's water cycle moving by taking simple steps to save water and prevent blockages in drains and sewer pipes.

We have taken a range of campaign-related activities directly to local communities with particular problems of blocked drains and sewers. Over the last 3 years this has included Musselburgh, Inverness, Thurso, Dunfermline, Hamilton, Dumfries and Stirling. Since the campaign started, we have seen around a 10% reduction in the number of blockages. While this cannot necessarily be attributed to the campaign alone, we believe one of the best ways to tackle blocked drains and sewer flooding is to work with our customers to reduce preventable blockages. We will therefore be continuing to undertake campaign activities focused on local communities with particular problems of blocked drains and sewers and will be seeking to build on the reductions we have achieved to date.

We have a range of online activities, experiments and games, based around the theme of water, for children and young people (from early years up to 16 year olds). These educational resources have been developed for use by teachers in schools and by community groups across Scotland to compliment current activity-based learning and interactive teaching styles, and support learning experiences and outcomes set out in the Curriculum for Excellence.

Retail Market Developments

Activity in the retail market has continued to grow in recent years with the number of Licensed Providers now up to 25 and more than half of the market having switched provider. The public sector contract switch from Business Stream to Anglian Water on 1 March 2016 was successful and we worked closely with both Licensed Providers to support a smooth process.

We continue to develop our wholesale service, particularly via the replacement of many of our key IT systems, to enable a more efficient, responsive and automated service to Licensed Providers. In agreement with Licensed Providers, we are proposing increasing the coverage of the wholesale service key performance to encompass our meter replacement programme and exemption scheme requests and updating the connections timescales that are required to be met.

Changes are being implemented to the credit terms for Licensed Providers to ensure that Scottish Water's core functions are adequately protected from any financial exposure as Licensed Providers expand their operations into England.

In April 2015 a new exemption scheme was launched to provide relief from charges to charitable organisations with almost 2,000 additional charities and Community Amateur Sports Clubs benefitting from the new scheme to date.

From April 2017 water and waste water charges will apply at vacant non-household properties, aligning with the existing charging policy for households.

The rateable value used in the calculation of some elements of the water and waste water charges for business customers will start to be aligned with the current values used for business rates from April 2018.

Employee engagement

Everyone within Scottish Water plays a vital role across communities in demonstrating that we are trusted to care for the water on which Scotland depends and we have a strong and committed workforce with a diverse range of skills and talents. We are committed to engaging our employees and monitor how well we are sustaining their engagement through regular employee opinion surveys. In 2016 Scottish Water was awarded The HR Network "Best Workplace in Scotland" for the second time in recent years, and awarded the "Fair Work Employer of the Year" at the 2016 Scottish Business Awards.

We recognise the importance of attracting and developing the next generation of people to work in the water industry in Scotland. In 2016 Scottish Water was accredited with a gold standard in Investors in Young People, which is the highest award available. We are supporting Career Ready Scotland, which is providing paid work experience for groups of school pupils.

Since the launch of our volunteer programme in 2011, over 3,000 of our employees have been involved in volunteering activities in schools and communities to develop skills and teamwork, focusing on education, the environment, local community involvement and **WaterAid** (our adopted charity). The activities help to strengthen relationships with communities while supporting equality and diversity outcomes, as well as our employees' wellbeing.



Safety, Health and Wellbeing

We take our responsibility to provide a safe working environment extremely seriously and are proud to have achieved the Royal Society for the Prevention of Accidents United Kingdom Water Industry sector award for four years out of five. Over recent years, we have made real improvement in our health and safety performance achieving the lowest lost-time accident rates in the UK Water Industry. However we believe that there is no acceptable reason for anyone to be injured or to suffer ill-health as a result of work, no matter how infrequent. That is why our objective must always be zero harm.

We have therefore revised our strategy to now lead our industry in Scotland on a journey to zero harm; creating safe, healthy and productive workplaces where our people can thrive. In support of this, we will seek to:

- Keep people safe: by pursuing best practice on the journey to zero harm and ensuring that all our assets are constructed, operated and maintained safely.
- Keep people healthy: through embedded behaviours and practices that ensure safe and healthy workplaces, and promote health and wellness to avoid preventable ill health.
- Help people thrive: by encouraging and enabling employees to make positive lifestyle choices, build personal resilience and the ability to cope with change.

2. Delivering our investment programme

Our investment programme is well underway, delivering both the maintenance and improvements required to our existing assets to deliver Ministers' objectives for improvements in drinking water quality and the environment, and to support growth in the Scottish economy. Key points to note include:

- Our supply chain is fully mobilised. We are investing on average over £50 million a month with around 216 individual businesses employing over 2,200 people delivering the programme. Our supply chain has also provided opportunities for 64 modern apprentices and 93 graduates.
- The momentum in delivering investment that we built in 2015/16 has been increased during 2016/17 - over 90% of our enhancement programme has completed the feasibility stage and nearly half has started on site. As a result our Overall Measure of Delivery score at the end of December 2016 was 94 points, already well above our Delivery Plan target for 2016/17 of 82 points.
- Delivery of all of the 26 programme areas monitored through the Output Monitoring Group, are either on or ahead of target. While many of the outputs in the 'Water Treatment Works improved' programme are progressing well, and remain on schedule to deliver on or ahead of target. In others previously identified risks are emerging and are being closely managed.
- We have made good progress in delivering the remaining projects from the 2010-15 period. We have already completed 28 projects leaving 9 to be completed.
- Preparations are underway for the rolling investment review in 2018 (IR18) to confirm those outputs included in our Delivery Plan 2015-21 that are subject to further investigation or the level of customer demand.
- Through successful joint working with SEPA, the Scottish Government and the Water Industry Commission for Scotland we are trialling in the first half of 2017 a potential option to achieve the required environmental outcomes in the Lower River Clyde at a substantially lower cost than envisaged in our 2016 Delivery Plan update. We have included a £100 million risk allowance to address discharges to the Lower River Clyde. If the trials continue to reflect their early positive results this risk allowance may not be required. In this situation, we would propose that, in line with the financial tramlines approach implemented by the Water Industry Commission for Scotland, this risk allowance should be used to augment the available IR18 allowances.
- We have allocated £100 million of our actual and forecast financial outperformance to augment capital maintenance to address emerging risks to customer service and to manage any cost pressures in the overall investment programme.

Overall Measure of Delivery (OMD)

The Water Industry Commission for Scotland introduced the Overall Measure of Delivery (OMD) as a single objective indicator of overall performance in delivering Ministers' objectives. The changes to our plan agreed by the Output Monitoring Group have had a minor impact on our OMD profile and an updated position is shown in Table 1 below²:

	2017/18	2018/19	2019/20	2020/21
Full OMD profile (including IR18)	124	168	205	250
Committed OMD profile (excluding IR18)	124	163	195	229

Table 1: OMD profile

Maintaining momentum in delivery

Momentum in delivering investment increased during 2016/17 with our supply chain of Alliances and Tier 1 contractors, rural and supplier frameworks now fully mobilised. We set out below the progress made on a number of investment projects during 2016/17.

Projects due to have been completed by March 2015

We started the 2015 to 2021 period with a small number of projects (37 in total) that were due for completion by 31 March 2015 but were not delivered by then. We completed 22 of these by 31 March 2016 and we have completed a further 6 projects (taking the total to 28) so far in 2016/17, ahead of our 2016 Delivery Plan commitment of 26. Of the remaining 9 projects, 3 are already providing beneficial use to customers and 3 projects are under construction or at the commissioning stage.

Strategic Glasgow Sewerage Scheme

We are continuing to progress our plan to improve the river water quality and the natural environment of the River Clyde and its tributaries; to enable the Greater Glasgow area to grow and develop, alleviate sewer flooding and deal with the effects of increased rainfall and climate change.

Projects completed as part of this programme in the last year included work to address unsatisfactory overflows in the Clydebank, Barrhead and Thornliebank areas of the city; as well as the installation of two large storage tanks at Elmvale Row to protect properties from flooding. Work has also commenced on a £13 million tunnelling scheme in Paisley town centre.

² There are 250 OMD points for planned milestone completions by 31 March 2021. This includes 229 OMD points for confirmed milestones to 31 March 2021, and an allocation of 21 OMD points for milestones that are to be confirmed as part of IR18.

The 5 kilometre-long Shieldhall waste water tunnel in the south of Glasgow is part of the biggest upgrade of the city's waste water network in more than a century. This significant tunnel is being constructed from Craigton Industrial Estate and will run under Bellahouston Park, Pollok Park, along Titwood Road to Queen's Park where it will tie into the existing sewer network. The project will improve water quality in the River Clyde and its tributaries and reduce flooding issues at key locations including the Hampden area. Tunnelling is well underway (as shown in the photo) with over one third (1,750m) of the 4.6m diameter tunnel now constructed. The project is forecast to complete in late 2017.



Ayrshire Strategic Resilience Scheme

The Ayrshire Strategic Resilience Scheme launched at Ministerial level in December 2015 will provide improved water supply resilience to around 85,000 properties in four water operational areas: Bradan, South Moorhouse and Corsehouse and Amlaird. We are delivering the scheme in three phases, as outlined below:

- Phase 1 is the main-out of Amlaird, Corsehouse and South Moorhouse water treatment works from the Gorbals pumping station. Installation of the pipeline is progressing well and due to complete in Spring 2017. The photographs show the tunnelling of the pipeline under a railway at Barrhead and mains laying alongside the M77.



- Phase 2 of the scheme is the connection from the Amlaird Trunk Main to Highlees Service Reservoir on the Bradan water supply system, including the installation of a new pumping station. Construction work is forecast to start in Summer 2017.
- Phase 3 of the scheme is the reinforcement of the strategic main across Glasgow. Investigation work is nearing completion. Confirmation of the extent of reinforcement works required and the preferred pipeline route will be confirmed in Summer 2017.

Work to divert strategic mains in five operational areas is also progressing under our exceptional capital maintenance programme.

The forecast costs of this programme have been developed as projects have progressed through our 'Plan, Prepare, Deliver' process. Our forecast is that the programme will outturn in the range of £128 million to £148 million and these costs will be managed within the financing set out in this plan.

Killylour

The project to deliver a £13 million new water treatment works to safeguard the supply for Dumfries and the surrounding area was completed in summer 2016.

Community engagement

We have placed an increased focus on ensuring communities are genuinely at the heart of our business to ensure that, through meaningful and early engagement, our activities enhance communities while leaving a positive and long-lasting legacy.

Every day we carry out planned works in communities all across Scotland to maintain the levels of service to customers or to improve drinking water quality or the environment. Our work tends to involve street works or building which can have an impact not only on our customers lives, but on the community overall. This activity can be welcomed by the community as it addresses their needs. However in some cases the local community impacted by our works does not directly benefit from the improvement that is being provided to the wider customer base and this can lead to tensions which we seek to manage sensitively.

We set out below examples of where we have engaged with local communities during 2016/17 in the course of delivering our investment programme.

Dundee water infrastructure



We are midway through a £5 million upgrade of Dundee's water infrastructure. The investment is being made to ensure customers continue to receive the highest quality drinking water possible. We have engaged with the community through local radio adverts, Facebook and other social media campaigns and community events across the City well ahead of any works

starting in the local areas. We provide updates on work for the week ahead to local media outlets to make sure the community is kept informed.

Stromness Harbour



Our investment of £10 million to reduce the risk of pollution in Stromness Harbour (shown above) has been planned to ensure the solution is harmonious with the character of Stromness, and that disruption to the local community is minimised. Throughout the on-going work we have held a number of community information events and a poster competition for the local primary school, which attracted 140 entrants. The winning posters now feature on the construction site near the school.

Rolling Investment Review (IR18)

Our Delivery Plan 2015-21 included allowances of £286.4 million (2012/13 prices) for outputs subject to confirmation through the rolling investment review (IR18), once better information is available through studies, investigations or a clearer understanding of customer demand. Through agreement with the Output Monitoring Group, we have already allocated £31.2 million to the following investment priorities (leaving £255.2 million to be confirmed):

- £10.7 million for improving drinking water quality to over 255,000 customers served by the Bradan and Afton water treatment works to meet the drinking water quality regulations for trihalomethanes (THMs);
- £2.2 million for security and emergency measures;
- £12.1 million towards improving the resilience of water supplies in Ayrshire; and
- £6.2 million for the adoption of developer-constructed assets which are serving existing customers.

We have identified the following additional demands on the IR18 allowances:

- With the Scottish Government's focus on growing the economy we have supported an increase in the provision of infrastructure for new housing. In the first nine months of 2016/17 we have supported over 17,000 new connections to our networks compared to 15,000 over the whole of 2015/16. We expect the growth in new housing to continue, which will require additional investment by Scottish Water in the provision of new infrastructure and strategic capacity.

- The investment required to deal with sewer flooding is greater than envisaged in our Delivery Plan. There has been an increase in the number of properties that have suffered sewer flooding and are at high risk of flooding again. Combined with this, the solutions required to protect these properties are typically more complex than those required in previous regulatory periods.
- Improvements required to the drinking water quality at 2 water treatment works (Invercarnie and Oykel Bridge) have been identified in conjunction with DWQR since the 2015-21 investment plan was developed. We estimate the cost of these could be around £28 million.
- The OMG180 programme was established in the 2010-15 period for projects where there was a known need but where there was considerable uncertainty and complexity as to the required solution. As these projects have progressed through our 'Plan, Prepare, Deliver' process the costs have become more certain. As a result we forecast that the cost of the OMG180 projects included in our 2015 Delivery Plan, including the ring fenced allowances for Kelvingrove and Portobello West (see Pages 18 and 19) will outturn in the range of £3 million below to £29 million above that provided for in our 2015 Plan.

The above highlights that there are considerable pressures on the IR18 allowances and we will work with stakeholders to ensure these are managed within the finance provided through the final determination of charges 2014. In our 2016 Delivery Plan update we included a £100 million risk allowance to address discharges to the Lower River Clyde. Through successful joint working with SEPA, the Scottish Government and the Water Industry Commission for Scotland we are trialling, in the first half of 2017, a potential option to achieve the required environmental outcomes in the Lower River Clyde in a substantially lower cost way than envisaged in our 2016 Delivery Plan update. If the trials continue to reflect their early positive results then this risk allowance may not be required. In this situation we would propose that, subject to the views of Ministers, in line with the financial tramlines approach implemented by the Water Industry Commission for Scotland, this risk allowance should be available to augment the IR18 allowances.

3. Providing continuous high quality drinking water

We set out in this section the progress we have made in 2016/17, and the changes we are proposing to our 2016 Delivery Plan for providing our customers with a safe and reliable supply of drinking water.

Improving drinking water quality

As a result of our on-going focus the water quality we have delivered to our customers' taps in 2016, at above 99.91%, continued to outperform levels delivered in previous regulatory periods. We are also making significant progress in the removal of cryptosporidium with major projects such as the upgrade of Oban's water supply underway forecast to complete in Autumn 2017.

Resilience

Our customers have told us that improving the resilience of water supplies is a priority area for service improvement in order to reduce the likelihood of long-term interruptions to supply. While most of our customers have never experienced a significant interruption to their water supply, they have told us that they expect us to take reasonable steps to ensure that this continues.

As highlighted on Page 12, we are making good progress with the Ayrshire Strategic Resilience Scheme to create a strategic connection to the Glasgow supply system. In addition to this, we are delivering projects to enhance resilience to customers connected to a further 4 systems/assets across Scotland.

Leakage

We achieved a leakage level of 500 Megalitres per day (MI/d) during 2015/16, which was significantly below the 575 MI/d minimum service level for the period. We are on target to deliver a further annual reduction of around 15 MI/day by March 2017, and so will outperform the target level for the end of the regulatory period as set out in the Final Determination. We will continue to target leakage over the remainder of the regulatory period where it is cost effective to do so.

Water Efficiency

Our plan to increase awareness of the benefits of water efficiency to the environment and customers is progressing. Our water efficiency trial is now in the second year of data collection and early indications show that modest consumption reductions look possible where properties have both physical interventions and customer education activities applied. A financial incentive is being included to this during 2017. The learning from the trial to date has allowed us to develop our plan to provide water efficiency advice packs to 49,000 household customers in areas which are more susceptible to water supply shortages. We are working closely with the Energy Saving Trust to deliver this plan and a further 3 pilots during 2017.

Drinking water quality programme

Below we set out our planned delivery profile of drinking water outputs for those programme areas that have altered as a result of changes approved by the Output Monitoring Group.

	Programme area		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1	Number of water treatment works made compliant with water quality standards	Current		1	4	12	18	26	27
		Previous		1	4	12	18	27	28
2	Number of improvements required to meet Security and Emergency Measures Directive requirements	Current		30	109	109	260	633	
		Previous			79	109	260	633	
3	Reservoirs Act: Number of improvements to dams	Current		7	17	25	39	57	
		Previous		8	9	14	28	45	
4	Number of water quality studies to prepare for future investment periods	Current		44	124	226	284	329	344
		Previous		45	127	229	290	326	341

Table 2: Drinking water quality programme – cumulative outputs profile³

- Number of water treatment works made compliant with water quality standards: since our Delivery Plan 2016 update we have agreed with the Output Monitoring Group that Beasdale water treatment works, supplying around 8 customers, should be removed from the programme as no longer required. The confirmed programme now totals 27 water treatment works to be improved, serving 789,000 customers.
- Number of improvements required to meet the Security and Emergency Measures Directive requirements: the delivery profile for the 30 outputs added to the programme in 2015/16, and included in our Delivery Plan update in 2016, was confirmed during the year.
- Reservoirs (Scotland) Act 2011 - number of improvements to dams: the number of improvements required to meet the obligations of the Reservoirs (Scotland) Act 2011 increased by a net 12 outputs (from 45 outputs to 57) over the 2015-21 period. The additions arose from increased asset knowledge regarding the capacity of our reservoirs.
- Number of water quality studies to prepare for future investment periods: the number of studies has increased to 344 outputs due to a net 3 additional outputs on the hydrological information programme.

³ IR18 outputs will be added on once confirmed through the IR18 process in 2017/18

4. Protecting and enhancing the environment

We set out in this section the progress we have made in 2016/17 and the changes we are proposing to our 2016 Delivery Plan.

Urban Waste Water Treatment Directive

Glasgow and the River Clyde remain a major focus in our plan as we implement the outcomes of the Glasgow Strategic Study. This supports an integrated approach to the delivery of environmental and flooding needs, recognising the hydraulic dependencies across the waste water network.

We are progressing with our plan to address the discharges from Daldowie and Dalmarnock waste water treatment works in Glasgow (which jointly serve over 500,000 customers) to meet the requirements of the Urban Waste Water Treatment Directive. As highlighted on Page 15, through successful joint working with SEPA, the Scottish Government and the Water Industry Commission for Scotland a potential option to achieve the required environmental outcomes in a lower cost way has been identified and this option is being trialled in the first half of 2017.

A tunnelling project was included in our 2015 Delivery Plan to improve the Lower River Kelvin. Recent data has suggested that SEPA's work in the wider catchment has driven improvements in river quality. Following the Ethical Business Regulation approach, in light of these improvements and the scale and potential impact of the proposed tunnel solution in terms of the work required in Kelvingrove Park, we are working with SEPA to review the required improvements for our discharges and the options to address these. In light of this review, which we are seeking to conclude by the end of 2017, we are proposing that it would be appropriate to pause and ring-fence the investment financing associated with this project pending the outcome of the review.

Reducing flooding and pollution from sewers

Reducing flooding and pollution from sewers is one of our customers' highest priorities and we continue to deliver our strategy to address internal flooding for those customers at highest risk, i.e. those customers with a 10% chance or greater per annum of being flooded internally.

This year has seen a record number of new properties identified as being at this highest risk. The primary reason for this has been the Oak Mall, Greenock. Following a flooding event, 30 premises within the Mall were added to our high risk register in 2015/16. Further investigations have confirmed that 69 premises in total at the Mall are at high risk. As a result of the number and complexity of additions this year, and particularly the 69 additions at Oak Mall, we expect the number of properties on our 'at risk of internal sewer flooding' register will remain above the expected service level minimum of 370 until at least 2019.

As part of our work to improve our understanding of customers' properties that have a sewer flooding resilience of less than 1:30 years, we are identifying a higher level of external sewer flooding incidents from overloaded sewers than was previously understood. This is being further investigated and an update will be provided to the Output Monitoring Group.

Bathing Waters

We continue to work closely with SEPA on bathing waters where our assets could impact on water quality in order to mitigate the risk of failing and to help achieve the Scottish Government's aim for all bathing water to have reached the 'sufficient' standard by 2020. The projects to improve bathing waters being progressed are:

- Rockcliffe: following investigation, we are implementing a temporary solution for the 2017 bathing season and concurrently developing a long term, permanent solution.
- Kinghorn Harbour: our work to eliminate impact from the sewer at Bleaching Hill should allow improvement for the 2018 Bathing Season.
- Fisherrow and Portobello West: we are developing solutions to the issues identified in the Edinburgh Integrated Catchment Study, which was completed in late 2016. As design work to establish the solution is likely to extend beyond the timescales for confirming IR18 outputs, we are proposing the provisional allocations from OMG180 and IR18 are held as a ring fenced allowance in the 2015-21 period.
- Rivers Ayr and Doon Strategic Study: the strategic study of bathing waters impacted by the Rivers Ayr and Doon is forecast to complete in April 2017. This will identify whether any intervention is required at our assets in order to improve the standard of the bathing waters at Heads of Ayr, Ayr South Beach and Prestwick.

Environment programme

Our planned delivery of environmental outputs has changed in 5 programme areas as a result of changes approved by the Output Monitoring Group as set out in Table 3 below.

	Programme Area		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1	Number of improvements delivered to meet UWWTD: above ground works	Current	5	7	7	19	22	25	
		Previous	5	7	7	18	19	22	
2	Number of improvements delivered to meet UWWTD: networks	Current	3	7	17	21	32	43	60
		Previous	3	7	17	22	34	45	62
3	Number of studies to inform the requirements of the revised Bathing Waters Directive	Current			1	2	2	10	
		Previous						7	
4	Number of studies to prepare for future investment periods	Current			1	36	62	130	
		Previous			1	37	63	131	
5	Number of Sludge Management sites investigated or improved	Current	4	8	9	10	10	13	15
		Previous	4	8	8	8	8	8	10

Table 3: Environment programme – cumulative outputs profile⁴

- Number of improvements delivered to meet UWWTD - above ground works: the number of waste water treatment works to be improved has increased from 22 to 25 due to the addition of Earlston, Bonchester Bridge waste water treatment works and the combined sewer overflow at St. Fords Road, Wormit.
- Number of improvements delivered to meet UWWTD – networks: the number of below ground improvements has decreased from 62 to 60 as the outputs at Greenside St / Burnbank St and Busby Cartside Lower waste water pumping station are no longer required.
- Number of studies to inform the requirements of the revised Bathing Waters Directive: the number of studies required has increased from 7 to 9 due to the addition of Eyemouth (Scottish Borders) and Monifieth (Firth of Tay). We have also included the improvement required at Gairloch (Wester Ross) following its designation as a bathing water in 2017.
- Number of studies to prepare for future investment periods: the number of studies required has reduced from 131 to 130.
- Number of Sludge Management sites investigated or improved: the number of sludge management sites to be improved has increased from 10 to 15 due to the addition of the sludge holding facilities at Londornoch, Savalbeg, Torra, Orbiston and Golspie water treatment works to provide a long term solution to sludge management at these works.

⁴ IR18 outputs will be added on once confirmed through the IR18 process in 2017/18

5. Supporting Scotland's economy and communities

We set out in this section the progress we have made in 2016/17 and the changes we are proposing to our 2016 Delivery Plan.

Supporting economic development

The Scottish Government published its Programme for Government in 2016 setting out the imperative of supporting economic growth. In response, we have broadened our investment approach to provide strategic capacity for the water and domestic sewerage services for new housing and additional business demand, subject to minimising the likelihood of creating redundant assets. This will enable us to proactively support housing and business growth; thereby contributing to the Scottish Government's aim of growing a productive, sustainable economy, while protecting existing customers from undue risk. We expect that implementing this change will have only a modest impact on the total investment required for economic development in the 2015-21 period.

As highlighted on Page 15, we have supported an increase in the provision of infrastructure to housing. In the first three quarters of 2016/17 we supported over 17,000 new connections to our networks compared to 15,000 over the whole of 2015/16.

Over the last year we have been implementing our strategy to improve how we work with developers to support the achievement of Ministers' housing and economic development targets. Our revised approach is to ensure that we engage early in the development planning process with key stakeholders, so that we can plan for proposed developments and are better able to effectively and efficiently build the required strategic capacity in a timely manner to meet the development community's needs. We have also re-engineered our processes on connections applications. Through this we can now respond faster and at an earlier stage, enabling connections applications to be processed ahead of receiving planning permission, to ensure that connections timescales fully meet the requirements of developers and customers moving into new properties.

Energy programme

Our energy strategy supports the Scottish Government's Hydro Nation ambition of a greener and stronger economy and is a key part of our strategy to reduce the cost of delivering water and waste water services to customers.

Through our core renewable energy generation and the hosting of large scale wind projects on our land, we are enabling renewable energy generation in excess of our total annual electricity consumption.

By the end of 2016/17 we will have delivered 8GWh of renewables and energy efficiency projects, ahead of our Delivery Plan target of 6.9GWh. By 2021 we are aiming to deliver a combined total of 17.5GWh of energy efficiency and renewable energy, re-profiled as shown against line 3 in Table 4 below.

	Programme area		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1	Renewable power generation (GWh)	Previous	0.9	1.6	1.6	1.6	1.6	6.5	
2	Reduction in energy usage (GWh)	Previous		5.3	5.3	6.8	9.0	11.0	
3	Combined renewable power generation and reduction in energy usage (GWh)	Current	0.9	6.9	6.9	8.0	10.1	17.5	

Table 4: Supporting Scotland's economy and community programme – cumulative outputs profile for energy renewables and efficiency programme⁵

In September 2016 we successfully connected Girvan waste water treatment works to a renewable agriculture waste Anaerobic Digestion Plant, which enables us to receive low-cost green energy whilst supporting local businesses and the local economy. We are working with a number of local businesses and community renewable schemes in conjunction with Local Energy Scotland with the aim of delivering similar schemes in the future.

Although significant cuts have been made to renewable support tariffs by the UK Government, which have affected the financial viability of some of our schemes, we will continue to seek opportunities to generate renewable electricity and heat for the benefit of Scotland and communities. We will provide a final position as part of the rolling investment review for 2018 (IR18).

Starter Farms initiatives

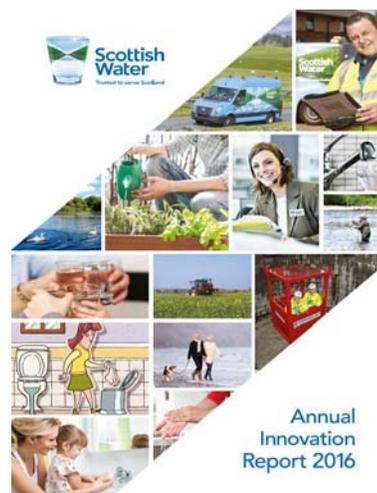
During 2016/17 we responded to the Scottish Government's request to support the creation of starter farms. We have identified an initial 10 possible sites totalling over 800 hectares to support the Scottish Government's Starter Farms initiative and to help develop opportunities for new entrants to farming across Scotland.

⁵ IR18 outputs will be added on once confirmed through the IR18 process in 2017/18.

Research and Innovation

We continue to recognise that innovation is a key enabler for delivering a sustainable high quality affordable service for our customers. We produced our first Annual Innovation Report in 2016 which sets out the progress we are making in addressing our Delivery Plan strategic themes of:

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



Our report highlights an active research and innovation programme with over fifty projects developing knowledge and capability to improve efficiency and service. This is in addition to the continued development of our innovation testing centres at Bo'ness and Gorthleck to facilitate live testing of solutions to help speed up design and implementation.

We will continue to work in partnership with academia, our supply chain, the Hydro Nation Water Innovation Service and with the Water Industry Commission for Scotland and the Scottish Government to create new opportunities to deliver higher levels of service for our customers.

Voluntary Registration of Land

In November 2016, we submitted a plan setting out how we intend to meet the Scottish Government's target date of May 2019 for completion of voluntary registration of land. Scottish Water owns in the region of 90,000 acres of land. Although registering the catchments we own, which account for the vast majority of the 90,000 acres, is relatively simple there is considerable complexity in registering the very large number of small parcels of land we own for minor pumping stations, kiosks etc. As a result the estimated cost of registering all of our land is between £7 million and £10 million. As this project has been requested by the Scottish Ministers, it will be included as a change to the Technical Expression for 2015-21.

6. Financing our services

The main changes reflected in this update to our Delivery Plan are:

- inclusion of the audited actual results for 2015/16;
- updated forecasts for 2016/17 and 2017 to 2021;
- revised delivery profile and costs for the investment programme;
- customer charges to be applied in 2017/18; and
- revised profile for the £760 million net new borrowing.

The key assumptions underpinning our financial projections are that:

- CPI inflation applied to prices for 2015/16 is 1.3%; -0.1% for 2016/17; 0.9% for 2017/18; 3.0% for both 2018/19 and 2019/20; and 2.5% for 2020/21;
- RPI inflation applied to costs is 1.1% for 2015/16; with 2.3% for 2016/17; 4.0% for 2017/18; 3.5% for 2018/19 and 2019/20; and 3.0% for 2020/21;
- Our domestic customer base will grow by 0.74% p.a. on average while our non-household customer demand will remain stable over the 2018 to 2021 period;
- The overall charge cap for household customers remains as originally planned as 1.8% less than CPI over the 2015 to 2021 period;
- Wholesale revenue charges increase annually by no more than 0.3% below CPI and reflect forecast revenue in respect of charging for vacant properties from 2017. Through extensive work to ensure that all properties are being correctly charged, we are significantly out-performing the wholesale revenue assumptions set out in the Delivery Plan. We forecast that we will generate an additional £48 million of wholesale revenue across the 2015 to 2021 period, which will be used to part finance the exceptional capital maintenance which has been included in this Delivery Plan update. The wholesale revenue assumes no impact from the implementation of tapering the move to live rateable values; and
- The Delivery Plan reflects an estimated impact of £4 million from the restriction in use of tax losses following the 2017 UK Government Budget announcement.

Table 5 sets out our forecasts for key financial metrics. Our financial projections are presented at forecast outturn prices.

Financial projections (IFRS) Outturn prices - £m	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21
Turnover	1,121	1,147	1,165	1,194	1,219	1,243
Profit before interest and tax	275	261	240	245	245	246
Net interest payable (inc PFI)	172	170	174	178	184	189
Profit before tax	103	91	66	67	61	57
Tax	-21	18	13	15	14	11
Retained profit (IFRS)	124	73	53	52	47	46
Capital investment	462	630	630	727	738	730
Net new borrowing	0	0	120	210	215	215
Closing RCV	6,902	7,255	7,736	8,290	8,869	9,406
Closing debt	3,424	3,424	3,544	3,754	3,969	4,184

Table 5: Key financial projections

Financing

Revenue forecast

Table 6 sets out our forecast revenue based on the assumptions set out above.

Revenue Forecast Outturn prices - £m	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Household revenue	821	839	857	876	893	910	5,196
Wholesale revenue	292	297	300	309	317	324	1,839
Other revenue	8	11	8	9	9	9	54
Total revenue	1,121	1,147	1,165	1,194	1,219	1,243	7,089

Table 6: Revenue 2015 to 2021

Borrowing requirements

We are forecasting £760 million of net new borrowing from the Scottish Government over the 4 years from 2018 to 2021. This, together with the price limits set out in the 2014 Final Determination, the outperformance we have delivered to date and are forecast to deliver over the remainder of the regulatory period, will allow us to deliver this plan.

Forecast costs of delivering services 2015 to 2021

Table 7 summarises the forecast financing and costs of delivering this plan over the 2015 to 2021 period, excluding IFRS adjustments.

Financing and Expenditure £m	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Customer revenue	1,121	1,147	1,165	1,194	1,219	1,243	7,089
Net new borrowing	0	0	120	210	215	215	760
Infrastructure Charges Income	12	12	12	14	16	17	83
Grants and contributions	16	9	7	3	2	2	39
Disposals	16	8	1	1	1	1	28
Use of cash balances	-23	138	19	52	55	48	289
Total Financing	1,142	1,314	1,324	1,474	1,508	1,526	8,288
Capital investment	462	630	630	727	738	730	3,917
Operating costs	368	381	397	408	421	433	2,408
PFI contracts	154	158	172	178	184	190	1,036
Interest	153	149	153	157	163	170	945
Tax	0	0	0	2	2	0	4
Working capital	5	-4	-28	2	0	3	-22
Expenditure for trading purposes	1,142	1,314	1,324	1,474	1,508	1,526	8,288

Table 7: Financing and expenditure 2015 to 2021

Our assessment, in outturn prices, of the overall cost of delivering our plan is £8,288 million during the 2015 to 2021 period. We will finance this with revenue from customer charges of £7,089 million, net new government borrowing of £760 million, utilising £289 million of opening cash balances and £150 million from infrastructure charges, customer contributions and asset disposals.

Capital investment

Our forecast investment profile for the 2015 to 2021 period is shown in Table 8.

Capital Expenditure profile (£m)	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Sustaining existing high service for customers	253	278	280	281	293	295	1,680
Enhancement 2015-21	102	151	183	209	217	221	1,083
Sub total (2012/13 prices)	355	429	463	490	510	516	2,763
Nominal inflator (RPI)	1.060	1.085	1.128	1.168	1.208	1.245	
Sub total (nominal prices)	376	465	522	572	616	642	3,193
Re-phasing of investment	-41	-28	-8	49	21	-5	-12
SR10 completion costs	75	129	74	65	15	3	361
PFI completion	4	2	0	0	0	0	6
Infrastructure charges investment	2	22	6	5	1	0	36
Total Investment (nominal prices)	416	590	594	691	653	640	3,584
Exceptional capital maintenance	30	31	29	0	0	4	94
Additional investment financed from customer contributions	16	9	7	3	2	2	39
Sub total (nominal prices)	462	630	630	694	655	646	3,717
Potential additional financing for Dalarnock / Daldowie (or IR18)	0	0	0	33	33	34	100
Additional capital maintenance risk financed from out-performance	0	0	0	0	50	50	100
Investment profile (nominal prices)	462	630	630	727	738	730	3,917

Table 8: Forecast investment profile 2015 to 2021

We expect to deliver annual capital investment within +/- 5% of the overall annual profile of forecast investment set out above⁶.

Our forecast costs for the investment programme are higher than in our 2016 Delivery Plan as a result of higher forecast inflation, an additional capital programme risk provision and an improved understanding of the costs of the exceptional capital maintenance programme as these projects have matured⁷.

Operating costs

Our forecast operating costs, shown in Table 9, reflect the 2015 Delivery Plan adjusted for revised RPI and lower property rates charges following the settlement of the 2010 Water Undertaking rating revaluation.

Costs do not reflect the reduction in rates charges associated with the 2017 rating revaluation or the net savings arising from revisions to SEPA's charging scheme and self-monitoring. These savings will be required to fund additional costs associated with the voluntary land registration (see Page 23) as well as the impact of changes in legislation associated with holiday pay, the Apprenticeship Levy and the new Water Quality Regulation charges.

Operating costs - £m	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21
Forecast total operating costs per 2015 Delivery Plan (2012/13 prices)	354	355	354	352	350	350
Revised nominal inflator (RPI)	1.060	1.085	1.128	1.168	1.208	1.245
Forecast Total Operating Costs per 2015 Delivery Plan (outturn prices)	376	384	400	411	424	436
Adjusted for:						
(i) lower local authority rates charges - impact of 2010 revaluation	-3	-3	-3	-3	-3	-3
(ii) Reduction in actual costs in 2015/16	-5	-	-	-	-	-
Forecast Total Operating Costs (Outturn Prices)	368	381	397	408	421	433

Table 9: Annual operating costs (non IFRS)

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. These risks were set out in our 2015 Delivery Plan.

⁶ Our forecast costs of the investment programme continues to exclude the post 2021 investment completion referenced in our 2015 Delivery Plan.

⁷ The exceptional capital maintenance programme comprises the net costs of the Ayrshire Resilience scheme and strategic mains diversions (after off-setting financing release from other previous objectives). The figures in relation to 'Potential additional financing for Dalrnarnock/Daldowie (or IR18)' are subject to the progress of the trial and then, potentially, decisions on IR18.

Interest payable

Closing debt as of 31 March 2016 was £3,424 million. The forecast weighted average interest rate of the outstanding long-term debt as at 31 March 2017 is 4.53%, a reduction from 4.86% at March 2015. For new borrowing the assumed average interest rates are 3% in 2017/18 and 4% in the 2018 to 2021 period. Interest charges also reflect the additional cost associated with the recent wholesale market reforms. 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 Strength

We exited the 2010 to 2015 period with £346 million of cash balances. The planned cash utilisation profile during the 2015 to 2021 period, assuming borrowing of £760 million over the 2017 to 2021 period, is summarised in Table 10.

£m, actual / forecast outturn	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21
Opening cash balance	346	369	231	212	160	105
Closing cash balance	369	231	212	160	105	57
Cash utilised	-23	138	19	52	55	48

Table 10: Cash balance profile

As shown in Table 10, we are forecasting a cash balance in 2021 of £57 million, which equates to around 2 weeks cashflow.

Financial Projections

Profit and Loss Account (IFRS)

£m, actual / forecast outturn	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21
Turnover	1,121	1,147	1,165	1,194	1,219	1,243
Operating expenditure	368	381	397	408	421	433
PFI operating costs	113	117	131	137	143	149
Depreciation charges - non infrastructure assets	226	238	238	240	242	243
Depreciation charges - infrastructure assets	17	17	17	17	17	17
Depreciation charges - PFI assets	19	19	19	19	19	19
Infrastructure capital maintenance charge	119	121	124	129	133	137
Amortisation of deferred income	-1	-1	-1	-1	-1	-1
Operating Profit	260	255	240	245	245	246
Profit or loss on disposal of fixed assets	15	6	0	0	0	0
Net interest receivable less payable	-149	-148	-153	-158	-165	-171
Interest on PFI and pension scheme net liabilities	-23	-22	-21	-20	-19	-18
Profit Before Taxation	103	91	66	67	61	57
Taxation - current	0	0	-2	-2	0	0
Taxation - deferred	21	-18	-11	-13	-14	-11
Retained Profit	124	73	53	52	47	46

Statement of Comprehensive Income

£m, actual / forecast outturn	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21
Retained profit for the year	124	73	53	52	47	46
IAS19 adjustments:						
- Actuarial gains/(losses), net of tax	83	0	0	0	0	0
- Service & finance costs, net of tax	-17	-12	0	0	0	0
Total comprehensive income for the year	190	61	53	52	47	46

Table 11 - Profit & loss account and Statement of Comprehensive Income

The Statement of Comprehensive Income includes all of the International Financial Reporting Standard (IFRS) adjustments resulting from International Accounting Standard 19 'Employee Benefits'. This layout is consistent with the layout in the Regulatory Accounts (M Tables) as agreed with the Water Industry Commission for Scotland in 2016.

Balance Sheet (IFRS)

£m, actual / forecast outturn	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21
Fixed Assets						
Tangible assets	5,168	5,386	5,620	5,945	6,283	6,608
PFI assets	364	347	328	309	290	271
Grants and contributions	-14	-13	-12	-11	-10	-9
Other Operating Assets and liabilities						
Working capital	-306	-307	-336	-340	-352	-362
Cash	369	231	212	160	105	57
Net operating assets	5,581	5,644	5,812	6,063	6,316	6,565
Non-operating assets and liabilities						
Borrowings (excluding Government loans)	-1	-1	-1	-1	0	0
Investment in subsidiaries	35	35	35	35	35	35
Total non-operating assets and liabilities	34	34	34	34	35	35
Provisions for liabilities & charges						
Deferred tax provision	-371	-389	-404	-415	-428	-439
Post employment asset / (liabilities)	-92	-107	-107	-107	-107	-107
Other provisions	-19	-7	-7	-7	-7	-7
Total provisions	-482	-503	-518	-529	-542	-553
Net assets employed	5,133	5,175	5,328	5,568	5,809	6,047
Capital and reserves						
Government Loans	3,423	3,423	3,543	3,753	3,969	4,184
PFI debt/lease	364	345	325	303	281	258
Retained earnings	1,213	1,274	1,327	1,379	1,426	1,472
Other reserves	133	133	133	133	133	133
Total capital & reserves	5,133	5,175	5,328	5,568	5,809	6,047

Table 12 Balance Sheet

Cashflow statement

£m, actual / forecast outturn	2015-16 (actual)	2016-17	2017-18	2018-19	2019-20	2020-21
Turnover	1,121	1,147	1,165	1,194	1,219	1,243
Operating expenditure	-368	-381	-397	-408	-421	-433
PFI operating costs	-113	-117	-131	-137	-143	-149
Capital maintenance expenditure	-261	-301	-316	-328	-355	-368
Amortisation of deferred income	1	1	1	1	1	1
Operating profit for regulatory purposes	380	349	323	322	300	294
Reconciliation of regulatory operating profit to net cash flow						
Operating profit for regulatory purposes	380	349	323	322	300	294
Movement in working capital	8	8	25	-1	0	-3
Capital maintenance expenditure	261	301	316	328	355	368
Amortisation of deferred income	-1	-1	-1	-1	-1	-1
Net cash flow from operating activities	648	657	663	648	654	658
Taxation						
Taxation paid	0	0	0	-2	-2	0
Returns on investments & servicing of finance						
Interest received	1	2	1	1	1	0
Interest paid	-154	-151	-154	-158	-164	-170
PFI interest payable	-23	-22	-21	-20	-19	-18
PFI finance lease repayments	-18	-19	-20	-22	-22	-23
Net cash flow from returns on Investment & servicing of finance	-194	-190	-194	-199	-204	-211
Net cash flow before investment and maintenance charges	454	467	469	447	448	447
Capital expenditure and financial investment						
Capital enhancement expenditure	-198	-324	-305	-396	-381	-360
Capital maintenance expenditure	-261	-301	-316	-328	-355	-368
Infrastructure Charges Income	12	12	12	14	16	17
Disposal of fixed assets	16	8	1	1	1	1
Net cash outflow from investing activities	-431	-605	-608	-709	-719	-710
Net cash flow before financing	23	-138	-139	-262	-270	-263
Financing						
New Government loans	324	343	243	333	340	350
Government loans repayments	-324	-343	-123	-123	-125	-135
Net cash inflow from financing	0	0	120	210	215	215
Decrease (increase) in cash and cash equivalents	-23	138	19	52	55	48
Net cash flow	-23	138	139	262	270	263

Table 13 - Cashflow statement

Risk

We identified the key risks in our 2015 Delivery Plan and our 2016 update, together with the associated potential financial impact during the 2015 to 2021 period. We also set out risks to viability in our 2015/16 Annual Report.

The implications of Brexit are continuing to be considered across Scotland and the UK, with the on-going identification and analysis of risk and opportunities for Scottish Water. We continue to consult with the Scottish Government and work with relevant industry groups to ascertain the potential impacts of Brexit.

In the short to medium term, the impact on Scottish Water is primarily financial; arising from on-going economic volatility due to uncertainty regarding the impact of exit from the European Union. Further clarity on the risks and opportunities are likely to emerge as negotiations commence and mature during 2017/18.

7. Scottish Water Group Plan Update & Supporting the Hydro Nation

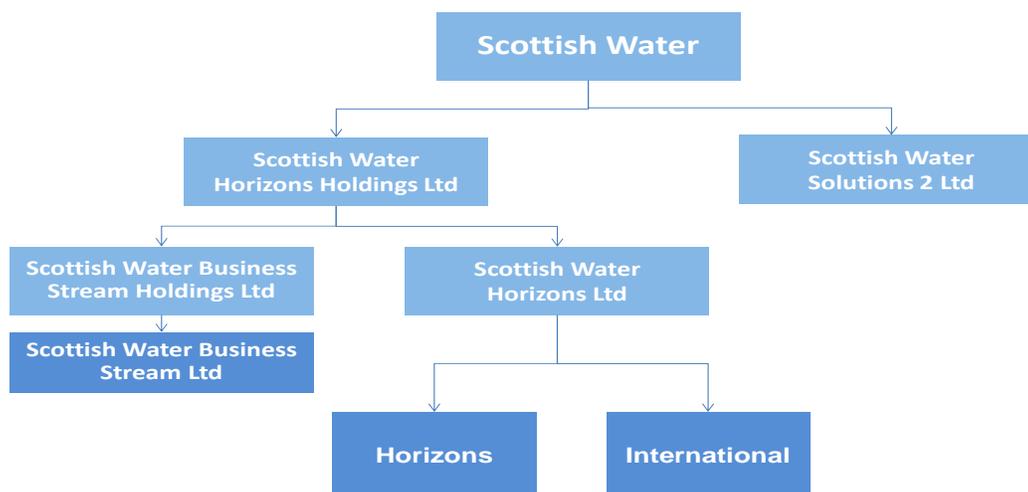
Business model

Scottish Water operates a business model comprising 4 main trading areas:

1. Scottish Water, which supplies households and wholesale Licensed Providers with regulated water and waste water services;
2. Scottish Water Business Stream Ltd (Business Stream), our licensed retail subsidiary which supplies water and waste water services to business customers;
3. Scottish Water Horizons (Horizons) which provides non-regulated services to customers; and
4. Scottish Water International (International) which provides non-regulated services to clients outside Scotland.

The Scottish Water group structure is summarised in Figure 3:

Figure 3 – Scottish Water group structure from April 2017



In accordance with the Governance Code (agreed with the Water Industry Commission for Scotland) Business Stream, which provides retail services to non-domestic customers, is operated and managed independently of Scottish Water.

We have set out our plan for Scottish Water’s core water and waste water services in Sections 2 to 6 above and below we set out how we support the Hydro Nation agenda including through Scottish Water Horizons and Scottish Water International.

From 1 April 2017, Horizons and International will maintain separate trading identities while operating as part of the same legal entity, Scottish Water Horizons Limited.

Supporting the Hydro Nation Agenda

Scottish Water maintains its commitment to support the Hydro Nation agenda of developing the value of Scotland's water resources. The main pillars of our work in this area remain renewables, international activities, supporting innovation and developing the next generation of water experts.

Renewable energy

Since 2013 we have doubled our installed, renewable capacity to over 54GWh and diversified our portfolio to include hydro, wind, biomass, photovoltaic and combined heat and power (CHP).

We currently have 36 hydro turbines in operation, 18 small-scale wind schemes, 24 photovoltaic solar schemes, 2 biomass boilers and 3 combined heat and power schemes. These are helping to offset the amount of electricity we need from the grid, with more than 70 of our sites now either partially or fully self-sufficient. Through these activities and by hosting renewable energy on our catchments, we are generating and hosting more renewable energy than we consume annually.

Despite significant cuts to renewable support tariffs we continue to find opportunities for generating renewable electricity and heat. We recently retendered our framework for photovoltaic schemes and believe we have now reduced costs sufficiently to take a number of previously unviable sites into construction.

We are working to accelerate deployment of heat from sewage technology throughout Scotland on the back of the successful project at Borders College. We are currently supporting bids for funding from the Low Carbon Infrastructure Transition Programme with our partner, SHARC Energy.

Scottish Water Horizons has also committed to building a biomass plant at Invercarnie Water Treatment Works which will be operational from March 2017. The plant will replace a diesel fired boiler.

International Activities

Scottish Water will continue to support international activity in three ways: through knowledge exchange with European and international partners to promote the Scottish water industry model; through our international consulting business; and through our support for international water aid.

Scottish Water International

Scottish Water International was created in 2012 and has invested in building its capability in several territories with its largest single contract in Qatar.

Scottish Water International delivers reputation-enhancing projects by using the skills and expertise within Scottish Water to deliver services to international clients such as utilities and governments. The principal product is utility transformation, building on Scottish Water's own journey to improve efficiency and service to customers.

Since its inception, Scottish Water International has built a network of partners, contacts and clients. It is actively engaged in Qatar, Australia, Ireland and Canada and has ambitions to promote its expertise in the transformation of water services further afield.

In the 2017 to 2021 period, Scottish Water International will continue to work alongside larger partners to build on its successes to date and focus on expanding its reach in a competitive global market

International Water Aid

In addition to sharing our water industry experience and knowledge through Scottish Water International, we will continue to support WaterAid, the chosen charity of the water industry in the UK. In 2016/17, our employees raised £220,000 to support WaterAid's work in Zambia. This has included World Water and Toilet Day events, as well as individual fundraising events such as charity cycles.

We are committed to supporting WaterAid's work in Zambia and Malawi for the next two years. With the partnership now going beyond raising cash for charity, there is a desire to maximise the opportunity to link up water and sanitation professionals in Scotland Malawi and Zambia, developing opportunities for engagement, influencing and knowledge sharing – alongside the fundraising element.

Supporting innovation in the water sector

We recognise that in order to innovate we need to work in partnership with academia, our supply chain and others. To this end we welcome the introduction of the Scottish Government's Hydro Nation Water Innovation Service (HNWIS) to support the development of a Scottish SME supply chain.

Horizons, in partnership with Scottish Enterprise, has created development centres at Gorthleck Water Treatment Works, near Inverness, and at Bo'ness Waste Water Treatment Works. These development centres are now in full operational use to test new products and processes associated with the treatment of drinking water and wastewater. The facility at Gorthleck is now powered by renewable energy provided by photovoltaic panels.

The development centres have already been used for 3 projects, one additional project is currently “live” with another one due to commence very shortly at the Gorthleck facility. There are a number of other projects at various stages in the shortlisting process.

We are working closely with Scotland’s Centre of Expertise for Waters (CREW) to promote collaborative research with our regulatory partners to increase knowledge of environmental factors that may improve our service and impact on water policy.

We are exploring opportunities to leverage the resources of our supply chain partners. We have been working with our IT partners (Fujitsu and TCS, primarily) to develop proof of concept trials in technology and digital communications. Areas that we are exploring include ‘connected vans’, ‘sewer network monitoring’ and ‘real-time water quality reporting’.

Developing the next generation of water experts

Developing sustainable capability for the future remains a key strategy for Scottish Water. We recognise that the need to attract and develop the next generation of people for the water industry in Scotland is both socially responsible and a business imperative. Our activities include:

- Being a key partner in the Hydro Nation Scholars programme through our involvement in the advisory steering panel and we act as mentors / sponsors to several of the scholars.
- Our Future Leaders Programme, a 2 year accelerated development programme for selected individuals with long-term senior leadership potential is ensuring a pipeline of emerging leadership talent.
- Actively supporting modern apprenticeship and graduate programmes by working with our partners and suppliers to create opportunities for young people to learn new skills. Each year we typically have around 100 apprentices, 40 graduates and 10 STEM interns completing development programmes with us. We provide work experience and mentoring for between 10 to 15 Career Ready students from high school each year. We have also facilitated the development of almost 200 apprentices within our construction partnerships and supply chain.
- Creating a Knowledge Centre of Engineering Excellence reflecting the recommendations of the Glasgow Youth Employment Action Group. The Centre of Excellence provides in-depth sector-based learning to complement subject learning for pupils, and CPD for teachers.

For more information on Scottish Water and our services contact our Customer Helpline on **0800 0778778*** or visit **www.scottishwater.co.uk**. Alternative formats of this document can be made available free of charge.

For information on Braille, large print, audio and a variety of languages, please call our Customer Helpline.

*We record all calls for quality and training purposes.

