

Llyr Gruffydd MS  
Chair  
Climate Change, Environment and Infrastructure Committee  
Welsh Parliament  
Cardiff Bay  
Cardiff  
CF99 1SN

4 August 2023

Dear Llyr,

Thank you for your letter of 25 July in respect of our environmental performance. I have responded to the specific points you have raised in turn below.

### Downgrade in our Environmental Performance Assessment

Despite the disappointment of being downgraded to a 2\* Environmental Performance Assessment (EPA) rating in 2022, I want to assure you that we will be doing all we can to recover this and I thought it would be helpful if I set out the recent trend against these key environmental metrics contributing to the EPA.

Year	WWTW (Waste water treatment works – 597 in total)	WWTW Discharge Permit Compliance	Serious pollutions	Total pollutions	Self-reporting of pollution	EPA Rating
2019	5	98.3%	2	95	73%	3*
2020	3	99.7%	3	77	80%	4*
2021	5	98.3%	3	83	76%	3*
2022	6	98.7%	5	89 <sup>1</sup>	69%	2*

(<sup>1</sup> 89 total incidents was the 2<sup>nd</sup> lowest number of incidents recorded by Water & Sewerage Companies in England and Wales in 2022).

In line with our commitment to the First Minister, our Board places the highest priority on achieving the best possible standards of environmental performance. We take great pride in Wales having a significantly better record of waterbodies' ecological performance than England, and in the number of blue flag bathing beaches in Wales. That pride is not just at Board level – it is shared by our people throughout the company, particularly on the wastewater side of our business, whose recent engagement survey results show that they are deeply committed to what they do for the environment and for Wales. That is why moving from 3\* to 2\* EPA as a consequence of the assessment placed on the 2 serious pollution incidents was of such significance to us.

Not as an excuse, but as an important factor in terms of our overall pollution performance, the drought and high temperatures experienced in 2022 should be taken into account when assessing our pollution

performance. During the drought we saw some of the lowest ever river levels in Wales whereby any blockage leading to a sewage spill had a higher impact. Similarly, the lower flows in sewers saw our blockage rate increase by 7% leading to an increased risk of pollution.

The primary reason for the dip to 2\* EPA rating relates to a slight increase (2) in serious pollution incidents. The incidents were:

- **Crundale, Pembrokeshire** – a third party discharge from a local trader caused our pumping station to block and an emergency overflow activated. Regrettably, our remote telemetry alarm did not activate at the time. This has subsequently been rectified and similar installations inspected across Wales.
- **Cadoxton, Barry** – a connection was made by a developer to an abandoned sewer without our knowledge. We will continue close liaison with developers, but it is difficult to predict this type of incident.
- **Kilgetty sewage pumping station, Pembrokeshire** – there was a blockage on the final chamber before the pumps due to wet wipe detritus. We will therefore increase future inspections at the site.
- **Bridgend** – the incident was caused by a sewer blockage. We have increased inspection and monitoring to prevent recurrence.
- **Trebanos waste water treatment works, Swansea** – the discharge of storm water on this occasion was compliant with the treatment work’s permit, but it was still designated as a pollution incident by Natural Resources Wales. We are investing over £20m to improve the the plant in our next regulatory period 2025 – 2030.

As a means of comparison with performance across the sector the table below shows that two companies had more than 10 serious pollutions incidents and only two reported zero such incidents.

<b>Number of Serious Incidents 2022</b>	0 incidents	1 incident	2 incidents	4 incidents	5 incidents	> 10 Incidents	> 15 incidents
<b>Number of Water Companies</b>	2	1	1	1	2	1	1*

\* 19 serious incidents were actually reported

In terms of total non-serious pollution, the incidents occurred as follows;

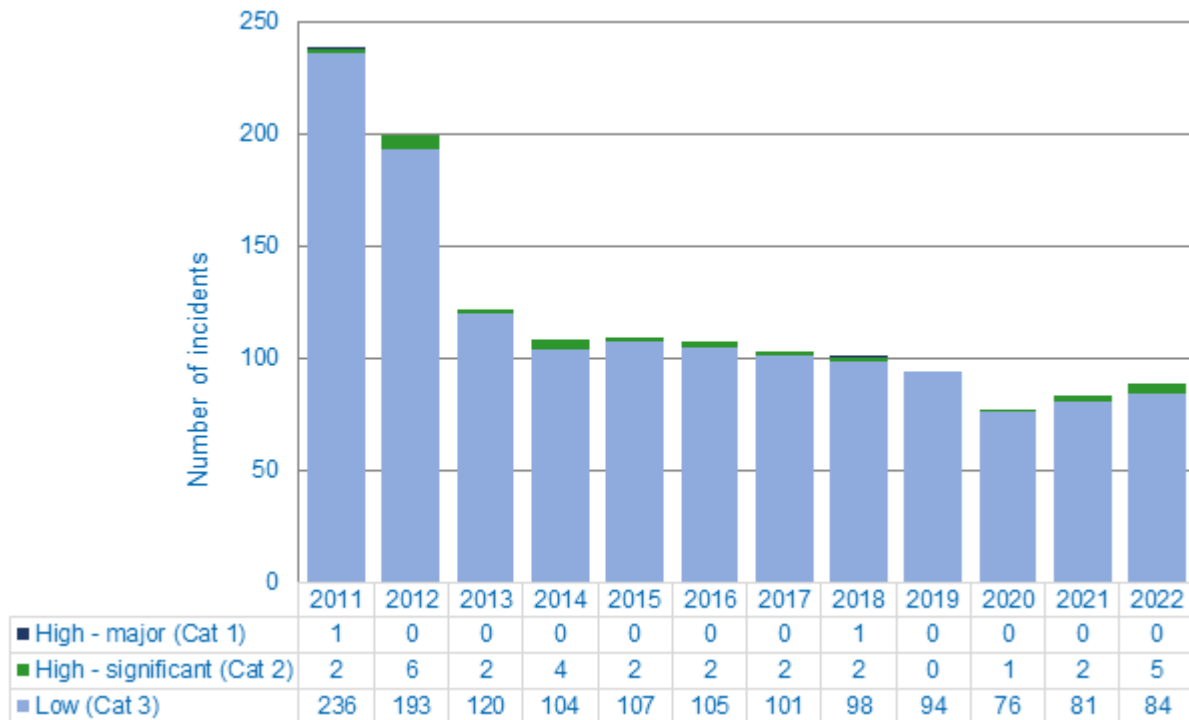
<b>Year</b>	<b>Foul Sewer</b>	<b>Combined Storm Overflow</b>	<b>Pumped Sewer</b>	<b>Pumping Station</b>	<b>Treatment Works</b>
<b>2021</b>	37	15	12	12	8
<b>2022</b>	47*	9	4	18**	11***

\* Increase due to low flows in sewers due to 2022 drought conditions

\*\* Increase due to blockages and minor levels of equipment failure

\*\*\* Increase linked to low river levels into which treated effluent discharged and due to drought conditions had more impact / was more visible

The table below shows the total pollution incidents per year since 2011.



The above data and more historical information is used to develop and implement our evidence-led improvement plans.

We have a comprehensive pollution reduction strategy combining a range of specific improvement activities which I have summarised below:

- **AMP7 (2020 – 2025) Capital Investment** - £52m has been allocated to reduce pollution risk. In addition, planned maintenance of sewers, storm overflows, sewage pumping stations and wastewater treatment works covered in our overall £830m waste water investment programme in AMP7.
- **Sewer Remote Monitoring** – early predictive warning alarms to enable earliest intervention, forming part of our wider ‘Smart Network’ programme. This combines real time data with a data science analytical approach to model our network and target preventative interventions. We have also increased the inspection frequency of sewer pumping mains, particularly those which are known serious incident risk assets. These monitors have helped us reduce sewer flooding (arguably the worst type of service failure for our customers) and where we have the best performance records in the industry despite the high rainfall in Wales.
- For above ground assets such as sewage pumping stations and treatment works we are installing new remote monitoring to confirm pumping capacity and flow measurement.
- **High Risk Asset Emergency Plans** – specific plans aimed at preventing potential high impact incidents. Including assessment and plans to deal with factors such as loss of mains power.
- **‘Stop the Block’ Campaign** – with over 90% of first time pollutions attributable to sewer blockages caused by plastic wet wipes, this is our effort to raise public awareness generally to prevent ‘sewer abuse’ but to target communities with emerging or known blockage history. This also includes

working with traders to reduce fat and oil disposal to sewers, with the power to prosecute persistent offenders.

- **Capability and engagement of our people** – we invest in providing our people with the latest maintenance equipment and the training to go with it. We have a sewer jetting simulation rig at our training centre in Abercynon. The awareness of preventing pollution and protecting the environment more generally is the subject of team meetings / briefings and is supported from the Executive team through communication such as my live call to all colleagues each month. We have also invested in River Quality Liaison Managers and more Pollution Prevention Technicians covering Wales, who interact daily with local communities and interest groups in river catchment areas. Our waste water teams are provided with performance target information and encouraged to contribute to our improvement plans.

Overarching our improvement plans deployment is regular oversight and constructive challenge from our Executive team and our Board. The Quality & Safety Committee of our Board (QSC), is unique in the sector, and is responsible for the detailed scrutiny of our performance which underlies it holding our management to account. It is also closely involved with the development of environmental improvement strategies. It includes an independent expert advisor (a former strategy Director of a leading water company and currently a respected environmental consultant) to aid scrutiny and to provide challenge in terms of our deployment of effective improvement plans and contemporary use of technology etc.

In terms of lessons learned from 2022 I would summarise as follows:

- We have an increasing level of remote monitoring technology equipment installed at our assets. Ensuring a consistent level of management oversight of the operation and maintenance of this technology is critically important. This is linked to the Crundale incident referenced above.
- Linked to the above, we will also continue to roll out remote monitoring equipment to confirm pump operation and equipment is online and performing to expected standard status.
- Ensuring that we are targeting future investment to mitigate potentially high risk assets – this includes £170m to replace strategic sewer pumping mains in north and south Wales. We will also increase levels of capital maintenance with a proposal to double sewer maintenance by £50m in AMP 8 (2025 – 2030).
- Continue to develop our Smart Network capability, with a sustained level of focus on potential new technology and ways of working to prevent pollution risk. (See *Comparing Performance with Other Companies* section below).
- Continue with public engagement to reduce the incidence of sewer blockages and continue to lobby for a plastic wet wipe ban in Wales.
- Our serious pollution risk assessment indicates that the greatest threat in terms of future incident lies with failure of a number of strategic sewage pumping mains. Such as the South East Wales Coastal Main, Kinmel Main in north Wales and the Bynea Main in south west Wales. We have included these in our AMP 8 investment plans. Clearly this will need regulatory approval to help mitigate these significant risks.

## Environmental Impact

For the avoidance of doubt, we are always very sorry for any adverse environmental impact that we cause and are absolutely committed to doing better.

We fully accept that we have a high level of combined storm water overflow (CSO) discharges compared to other water companies and there are significant factors that should be considered in relation to this:

- **Combined Sewerage System** – we have one of the highest percentage (c65%) of combined sewer network in the UK. Whereby our sewers convey both sewage and surface water, this in part is due to age of the housing stock in Wales.
- **Rainfall** – being on the western side of the UK we see amongst the highest levels of rainfall and increasingly see the most periods of intense rainfall ‘events’ linked to climate change. It is rainfall that directly activates CSOs to prevent flooding. If we had the rainfall of East Anglia, our CSO would operate 60% less than they currently do.
- **Number of Combined Storm Overflows (CSOs)** – our number of waste water catchments (some of them very small), sparsity of population, geography and topography, mean that we have more sewerage infrastructure to serve our customers compared to other companies. This includes more CSOs at c2,300 compared to Thames or Southern Water who have c300 or so each.

In addition, many of our river catchments have steep hydraulic gradients and the rivers described as ‘flashy’ due to their rapid increase in flow linked to rainfall and subsequent decrease when rainfall subsides. Taking all these factors into account means that while we have a high level of CSO operation this does not necessarily link to high levels of pollution or environmental impact.

The main cause of river pollution in Wales is linked to nutrient (phosphorous) pollution. We fully support the Welsh Government policy of making phosphorous reduction the priority to improve river quality.

The First Minister through his programme of ‘Phosphate Summits’ has made it clear that this is his priority and we have aligned our pollution reduction strategy with this approach, as it will deliver more improvement than if we were to focus on reducing spills from CSOs.

We are - as directed by the strategy highlighted above - prioritising our phosphorous reduction investment on the six failing Special Area of Conservation (SAC) rivers in the current investment period and in AMP 8. This means that by 2030 we will have reduced our phosphorous load on these rivers by 90% and by 2033 by 100%. We have modelled total pollution loading on the SAC rivers and the average impact of CSOs is less than 5%, whereas our phosphorous loading is c23%. The remainder coming from other sectors – the modelling has been independently verified by NRW.

Whilst concentrating our pollution reduction investment on reducing phosphorous this does not mean that we are not also addressing CSOs. In the current period we are investing over £140m and in AMP8 we will invest a further £300m. In line with Welsh Government policy, we are targeting investment on those CSOs which cause the most significant environmental harm and are agreeing prioritisation of this investment with NRW, through the ‘Storm Overflow Assessment Framework’ (SOAF). The assessment also takes into account ecological or amenity impact and this also considered in the prioritisation process. This approach - concentrating on reducing environmental and amenity impact - will deliver better sustainable improvement than is achievable by solely focusing on CSO spill number reduction.

Underpinning the logic of the strategy is the condition of river and coastal water quality in Wales. In Wales 44% of rivers meet ‘good’ status under the EU Water Framework Directive, compared to 14% in England (and

8% in Germany and Holland). Also the main causes of pollution are also very different in terms of comparison with England. Here in Wales sewage pollution accounts for broadly 23% of total pollution whereas in England it is 44%. Our proposed AMP8 plan will improve over 750km of rivers in Wales.

### Self-Reporting of Incidents

We were disappointed to see our self reporting dip to 65% in 2022, the primary reason for this, is that with the drought conditions and low river levels, more incidents were evident and were reported directly to NRW for example by the public.

However, in an attempt to increase our ability to self report we are;

- Continue to brief our colleagues on the importance of self reporting and sharing respective performance data with them regularly. Including our 24 hour control centre team to ensure out of hours remote alarms are escalated for quick response.
- Continuing to work with river user groups across Wales to build effective working relationships and to encourage them to report any issues with our assets.
- Continue deployment of remote alarm monitoring across our waste water infrastructure – particularly linked to our Smart Sewer Network programme.
- Deploy new technology such as CCTV at remote assets or on treatment works outfalls where standard telemetry equipment is unable to effectively be deployed.

### Comparing Performance with Other Water Companies

As an Executive and through the Board Quality and Safety Committee, we expect each of the primary environmental improvement strategies that we review to demonstrate how we benchmark our performance and bring innovation into our improvement plans. To bring this to life our benchmarking and improvement plans are linked to;

- **Water UK National Pollution Group** – a monthly review of shared best practice, performance and innovation from all water and sewerage companies / authorities in the UK. (Hafren Dyfrdwy are also involved in this process. Self reporting is also reviewed here and our practices are totally aligned with sector good practice in this area).
- **International Benchmarking** - Close links with Hofor, the waste water service provider in Copenhagen. Annual benchmarking with Sydney Water in Australia.
- **Smart Water Networks International Association (SWAN)** – Founding and active member of this international forum for best practice in the development of the application of AI and predictive analytics.
- **UK Water Industry Research (UKWIR)** – Tony Harrington our Environment Director is an UKWIR Board Member and leads on a range of innovation and research programmes linked to waste water.
- **Ofwat Innovation Fund** – Again Tony Harrington is one of the founding Directors of SPRING the vehicle used to coordinate applications for the £200m AMP7 fund and we lead on a number of environmental projects linked to key elements of our future waste water improvement plans.

We also have our own extensive inhouse innovation programme, where our water and waste water innovation teams are working with 79 leading organisations and universities (including most of the Universities in Wales) on innovation and R&D projects. These are linked, in the case of waste water, directly to our short term improvement plan and longer term risks / ambitions. In AMP7 we estimate that we will leverage £80m innovation value through this process. It was also recently independently reported that along with United Utilities (a company three times our size), are the two companies who have applied for and secure

the most projects from the Ofwat £200m AMP 7 Innovation Fund – for us this has meant 54 applications with 27 projects secured.

### Comparative Performance: Dwr Cymru and Hafren Dyfrdwy

Thank you for reference to Hafren Dyfrdwy and their record of no serious pollution incidents in 2022. We have a positive working relationship with them and collaborate through the respective industry forums as touched on above and bi-laterally as neighbouring companies in Wales. We will ensure that we continue to share best practice and learn from others at every opportunity.

Company	Serious Pollution Incidents	Pollution per 10k km sewer	Treatment Works Compliance %	Internal Sewer Flooding per 10k connections	Sewer Collapse per 1k km sewer
Hafren Dyfrdwy	0	39.84	97.87%	2.34	22.36
Dwr Cymru	5	22.90	98.32%	1.36	6.71

### Increase in Prices and Future Plans

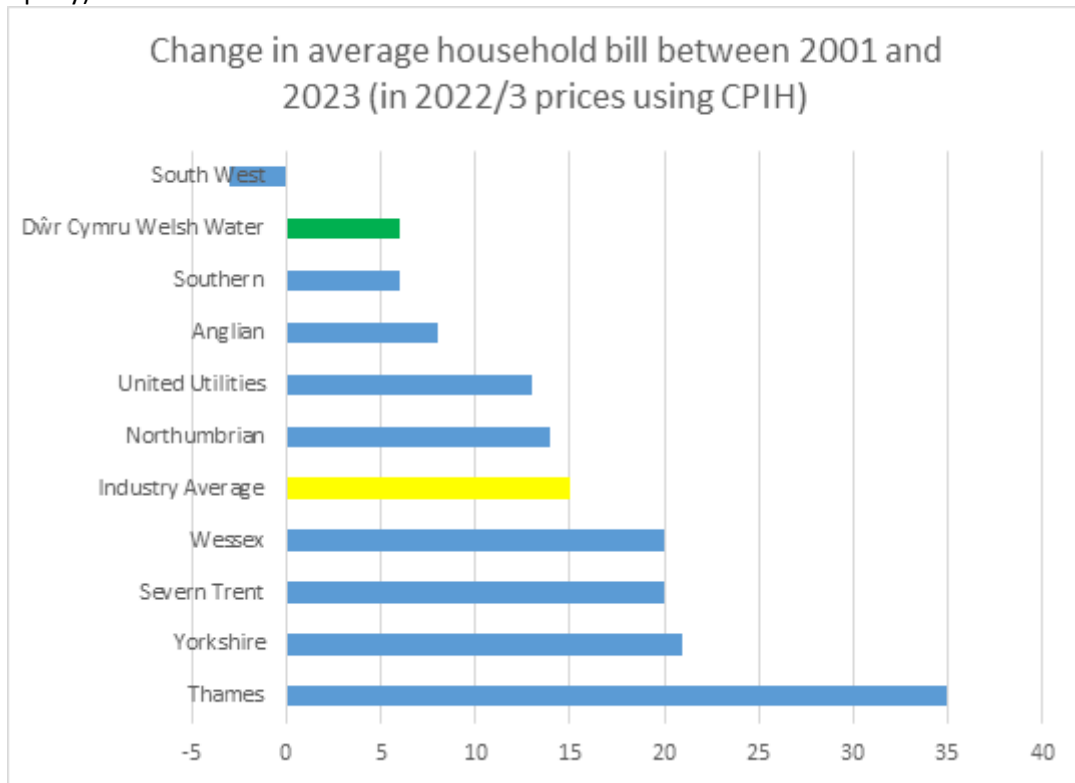
First of all, can I respond to your comment about us having the second highest charges in Wales and England? If you separate our bill into water and sewerage charges. We actually have the third lowest bill for water services at £193 (Average £213) of the companies in England and Wales. Our waste water bill is the second highest at £306 (Average £241) and this is linked to the fact that companies with the longest coastlines (ie , South West Water and Dwr Cymru) had to provide first time sewage treatment to its coastal communities after privatisation. In the case of Wales up until the late 1990's nearly 50% of the sewage in the country was discharged with minimal if any treatment into coastal waters. Our waste water bill since privatisation has had to fund building this waste water infrastructure. For us this was to provide full treatment on all communities above 15k population around the coast of Wales, including the coastal towns and cities of south Wales between Chepstow and Carmarthen. Other 'inland' companies such as Severn Trent with no coastline didn't have to fund this type of expenditure as their infrastructure was passed to them at privatisation.

The tables below show the comparative level of the total bill as well as broken down to cover the water and waste elements separately.

	Total		Water		Waste
South West*	526	Wessex	261	South West	310
Wessex	504	Thames	258	<b>DCWW</b>	<b>306</b>
<b>DCWW</b>	<b>499</b>	Anglian	222	Anglian	270
Anglian	492	South West	216	Southern	253
Thames	456	Severn Trent	213	Yorkshire	248
Yorkshire	446	United Utilities	210	Wessex	243
United Utilities	443	Yorkshire	198	United Utilities	233
Southern	439	Hafren Dyfrdwy	195	Severn Trent	206
Severn Trent	419	<b>DCWW</b>	<b>193</b>	Northumbrian	203
Northumbrian	391	Northumbrian	188	Thames	198
Hafren Dyfrdwy	372	Southern	186	Hafren Dyfrdwy	177
Average	<u>453</u>		<u>213</u>		<u>241</u>

\* adding back the £50 rebate from the UK Government

The chart below, shows the change in average household bill since 2001 (when Dwr Cymru became a not for profit company).



The extra £100m investment that we announced earlier this year to improve river quality by 2025 is funded from our financial surplus from our not for shareholder structure. This will be used to invest a further £40m to improve CSO and £60m being used to reduce phosphorous on various schemes across the failing SAC rivers touched on above. This is effectively accelerating future investment requirements to deliver the improvements more quickly.

Further information can be found in our River Water Manifesto which we published in March 2023 and is available on our [website](#).

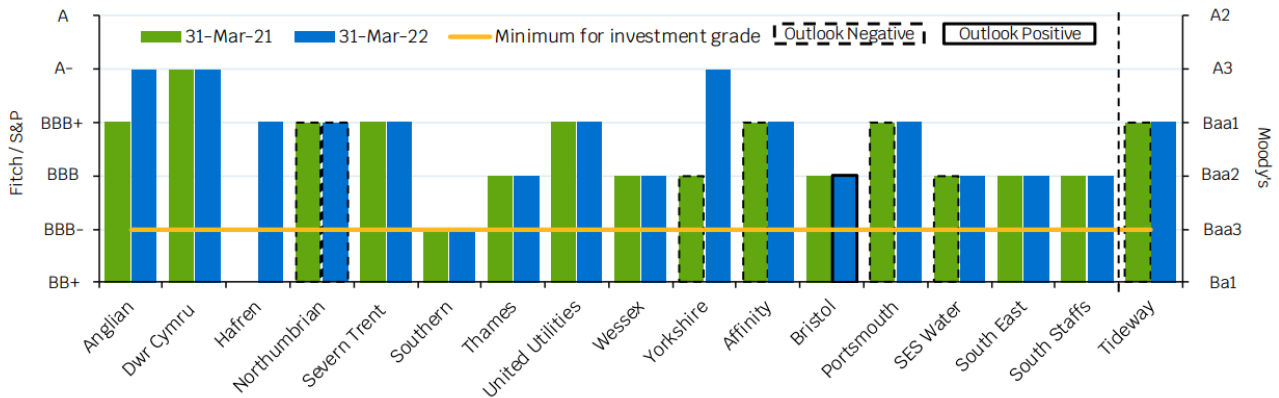
### **Dwr Cymru’s investment in infrastructure compared to privately owned water companies in England**

It is difficult to make a straightforward comparison as each company will have its investment agreed individually with regulators and based on their specific company requirements. Since Glas Cymru established the current not for profit model in 2001, we have always delivered our agreed regulatory capital programmes in full. In fact, we have during the latter AMP cycles used our ‘profit’ to undertake more capital investment in addition to our regulatory programmes.

Since 2001 all financial surplus has been used for the benefit of customers, in total this amounts to £3.5 billion. Some £2.9 billion has been retained to make the business more financially resilient - in 2001 our level of gearing was at 93%. Over the past 22 years we have brought this down to 58% well inside the guideline level proposed by Ofwat. The recent publicity about Thames Water has highlighted they have 83% gearing. Our low level of gearing and prudent financial approach has given us stable financial position. Together with our not-for-shareholder model, this has given us sector-leading credit ratings that allow us to borrow money at lower cost, which is better value for our customers.



The chart below shows our credit ratings compared to the rest of the sector as reported in Ofwat’s latest financial resilience report.



In addition, some £580m has been returned to customers since 2001 as a result of our “not for shareholder” model. This is the equivalent of an annual 2% dividend comparable with the other companies’ financial performance. The majority of this funding has been used to:

- **Help those who Struggle to Pay** – in the current period £60m is being used to fund our social tariffs, where proportionally we have the biggest scheme of this type in the sector assisting over 130k people in vulnerable circumstances. We have also recently launched Cymuned the first scheme of its kind by any UK utility to help those not on state benefits but classed with negative budgets or the working poor.
- **Mitigate key business risks such as climate change impact on our infrastructure** – where by as examples, we have accelerated investment to improve reservoir Dam safety, reduce flood risk in Cardiff and Chester city centres, improve the resilience of the water supply in Herefordshire.

In summary, our aim is to recover our previous 4\* EPA position and we are expending every effort to do this over the next couple of years. This ambition is supported by our plans to deliver our biggest ever capital investment programme in AMP8, of over £3.2bn with over half of this being on our waste water infrastructure. Regaining our 4\* position may take a couple years, but we are committed to doing so and are confident in our ability to do so.

Please do not hesitate to contact me if you require any further information.

Yours sincerely

Peter Perry  
Chief Executive