# June Return 2010
# Overview

Dŵr Cymru
Welsh Water

# Contents

# Summary for the year

This report provides an overview of our performance in the year to 31 March 2010 and accompanies our annual June Return. It covers levels of service and outputs for our water and sewerage activities, serviceability assessment, environmental performance, financial performance and overall progress since the 2004 price review.

## PROTECTING PUBLIC HEALTH

- The overall quality of the water supplied to our customers in the calendar year 2009, as measured by Drinking Water Inspectorate's (DWI) mean zonal compliance index, continued to be of a high standard with 99.94% of samples meeting the required quality standards, just slightly down on 2008.
- Compliance with drinking water quality standards 'at the tap' as measured by the Distribution Maintenance Index, formerly OPI (TIM), was 99.67% compared to 99.83% last year.
- Compliance with the coliform standard at Water Treatment Works (WTWs) was 99.91% compared to 99.85% last year.
- The number of water quality events reported to the DWI classified as significant or above (previously reported as incidents) fell from 24 last year to 21 this year.
- During the report year, we dealt with some challenging operating conditions, including the issue of a precautionary boil notice affecting some 75,000 properties served from Alwen WTW. Amongst these challenges were an exceptionally wet autumn, a very cold winter and extreme freezing conditions at the start of 2010.

## PROTECTING THE ENVIRONMENT

- 100% of EU designated beaches achieved the mandatory standards.
- 91% of EU designated beaches achieved the higher guideline standards, leading to 45 Blue Flag Beaches and 5 Blue Flag Marina Awards.
- 99.9% 'Look up' compliance at Wastewater Treatment Works (WwTWs), slightly down from our 100% compliance achieved last year.
- Compliance with environmental quality standards (numeric consents) at WwTWs was 95.95%, compared to 98.99% last year.
- The number of 'category 1 & 2' sewage related pollution incidents was 9, up from 3 last year.
- The leakage target reduced from 194 Ml/d last year to 193 Ml/d this year.

## CUSTOMER SERVICE

- Properties at risk of low pressure (DG2) has reduced to 194 (last year: 197) or 0.01% of connected properties.
- Unplanned interruptions to supply (DG3) was 0.04% of connected properties compared with 0.10% last year.
- There was a decrease in the overall burst rate (167 per 1,000km as against 184 per 1,000km last year).
- The properties at risk of flooding (DG5) reduced from 265 last year to 250 this year.
- There was an increase in properties subjected to internal sewage flooding (other causes) from 186 last year to 198 this year. However, excludng severe weather, the number of properties subjected to internal sewage flooding caused by hydraulic overload fell from 106 last year to 73 this year.
- Performance on written complaints responded to within 10 working days (DG7) improved from 99.3% last year to 99.6% this year.
- We achieved an improved score of 4.72 (out of a maximum of 5) on the telephone handling satisfaction measure (last year: 4.65).
- Performance with regard to sewer collapses improved from 29.5 per 1,000km last year to 28.4 per 1,000km this year.
- Continuing high customer satisfaction was achieved, as measured by independent tracking research.

## OVERALL PERFORMANCE ASSESSMENT (OPA)

- Our estimate for OPA this year is 402 points (last year: 406 points).
- The reduction in OPA points this year is mainly attributable to an increase in the number of iron compliance sample failures in water distribution, pollution and other cause sewer flooding incidents, plus a small deterioration in WwTWs compliance.

## CUSTOMER BENEFITS

- 'Customer dividend' increased in the report year to £22 per customer, up from £21 per customer last year.
- Welsh Water Assist, introduced on 1st April 2009 on a trial basis, has had a successful first year. Customer take-up has exceeded 8,800, (compared to only 800 when we operated WaterSure). The Water Collect trial is also progressing well and these tariffs, as well as with our Water Direct discount and Customer Assistance Fund, provide a range of affordability support options for customers who struggle to pay their water bills, benefiting some 27,000 customers during the year.
- Our IT Enabled Change (ITEC) programme includes substantial deployment of a new workload management system, which is aimed at improving service to our customers and is nearing completion.

## FINANCIAL PERFORMANCE

- Glas Cymru's financial reserves (RCV less net debt) as at 31 March 2010 were £1,068 million, up from £1,001 million in 2009.
- Financial gearing has fallen slightly, from 72% last year to 71% as at 31 March 2010, which compares with 93% on Glas's acquisition of Welsh Water in May 2001.
- Total turnover rose by 4.7% to £688 million (2009: £657 million). The impact of price rises of 5.4%, and some 5,500 new customers joining our network, has been offset by around 17,500 customers switching to metered charging during the year. Our 'customer dividend' means that total charges were some £28 million less than the increase allowed by Ofwat.
- Operating costs before exceptional items are in line with last year at £260 million (power cost reductions have been offset by inflation and a rise in bad debt charges), while exceptional costs of £29.5 million provide for the estimated cost of restructuring the organisation including the decision to bring the operational contracts back in house, these having previously been outsourced.
- After a 'customer dividend' of £28 million, the current cost profit before taxation was £166 million (2009: loss of £2 million, having given a 'customer dividend' of £27 million).
- We have a robust liquidity position, with a balance of funding of £669 million available as at 31 March 2010, leaving us well-placed financially as we head into the AMP5 regulatory period.

## AMP4 INVESTMENT PROGRAMME

- Outputs are generally in line with the 2004 Final Determination (FD04) when the change protocol with the Environment Agency (EA) and DWI undertakings are taken into account. There are however 14 delayed CSO schemes which run into AMP5, the majority of which are either fully designed or in construction.
- During the report year, we delivered 232km of water mains renewals and rehabilitation, 98 environmental outputs and, through company action, removed 83 properties from the sewer flooding at risk registers (ARR).
- The S19 programme was reduced to reflect a revised undertaking with the DWI, reducing the total output from 2,557km to 1,853km. The total final output completed was 1,778km.
- Previously, we agreed a re-prioritised sewer flooding reduction plan with Ofwat to ensure that we deliver the best value for our customers. Total outputs (as defined by Ofwat) are ahead of the Monitoring Plan by 76 properties. However, the number of properties remaining on the flooding registers at the end of the AMP4 period is 250, which is above the original Monitoring Plan. In addition to the outputs above, we have completed 403 outputs in respect of measures not recognised by Ofwat – such as low risk internal flooding. We believe we have acted in the best interests of our customers by not delivering low value, high cost solutions - in these circumstances, we have provided mitigation where possible at a reasonable cost. The overall number of customer properties with flooding issues that were resolved was 1,241, compared to the FD04 target of 1,165.
- We have completed work at 13 WTWs under our Early Start programme to improve the capabilities those facilities. Work on the advanced digestion schemes at three WwTWs is also progressing well and this will improve energy efficiency and make a significant contribution to reducing our carbon footprint. Work is expected to be completed by March 2011.
- Actual expenditure of £306 million in 2009-10 (excluding £42 million of Early Start maintenance expenditure) was £52 million over our AMP4 Year 5 allowance (as revised at FD09) of £255 million (inclusive of logging up adjustments etc.). Included in this £52 million are;
  - some £20 million for delivery of WTW outputs at Crai, Court Farm and Tal-y-bont which completed later than anticipated;
  - purchase of a new operational building in Cardiff for control and billing activities of £13 million;
  - expenditure to complete our Switch ITEC project of some £10 million; and
  - increased expenditure at the new Llanelli CSO of £5 million.

  Neither the £42 million (Early Start maintenance expenditure) nor the variance of £52 million has yet been recognised in the RCV.

# Performance

## against the Monitoring Plan

In our Monitoring Plan, published in April 2005, we set our commitments on the work to be done. This overview provides a summary of our progress against this plan

## Performance measures

| | Units | The Monitoring Plan Target | Previous Performance 2008-09 | Actual Performance 2009-10 |
|---|---|---|---|---|
| **WATER SERVICE** | | | | |
| DG2 properties below reference level for low pressure | No. | 242 | 197 | 194 |
| DG2 properties at risk of receiving low pressure | % | 0.02 | 0.01 | 0.01 |
| DG3 overall performance score (interruption to supply) | % | 0.08 | 0.10 | 0.04 |
| DG4 restrictions on water supply | No. | - | - | - |
| Burst mains per 1,000km of main | No. | 194 | 184 | 167 |
| Distribution input not covered by S19 undertakings | % | 93.40 | 82.67 | 84.89 |
| Water quality mean zonal compliance | % | N/A | 99.95 | 99.94 |
| Iron compliance 'at the tap' | % | 99.10 | 99.44 | 99.27 |
| Distribution Maintenance Index, formerly OPI (TIM) | % | N/A | 99.83 | 99.67 |
| **SEWERAGE SERVICE** | | | | |
| Properties flooded internally - hydraulic overload (excluding extreme/severe weather) | No. | 67 | 106 | 73 |
| Properties flooded internally - other causes | No. | 120 | 186 | 198 |
| Total properties subject to internal flooding (excluding extreme/severe weather) | % | 0.016 | 0.021 | 0.019 |
| Properties at risk of flooding | No. | 308 | 265 | 250 |
| Sewer collapses per 1,000km of sewer | No. | 27.0 | 29.5 | 28.4 |
| Wastewater Treatment Works complying with numeric consents | % | 100 | 98.9 | 95.95 |
| Percentage population equivalent served by compliant works (LUT) | % | 100 | 100 | 99.9 |
| Combined sewer overflows (CSOs) satisfactory | % | 93.9 | 97.0 | 97.6 |
| Sewage sludge disposed of satisfactorily | % | 100 | 100 | 100 |
| Bathing waters - compliance with mandatory standards | % | 100 | 99 | 100 |
| Bathing waters - compliance with guideline standards | % | Stable | 77 | 91 |
| Number of pollution incidents (cat. 1 & 2) | No. | 6-12 | 3 | 9 |
| **CUSTOMER SERVICE** | | | | |
| DG6 billing contacts responded to within 5 days | % | 100 | 99.99 | 100 |
| DG7 written complaints responded to within 10 days | % | 99.90 | 99.32 | 99.59 |
| DG8 bills based on company or customer meter readings | % | 99.96 | 99.90 | 99.97 |
| DG9 telephone handling satisfaction | / 5 | N/A | 4.65 | 4.72 |

# Key outputs and service delivery

Over the last year, we have generally maintained our levels of service to customers at acceptable levels, with some important areas of improved performance. We carry out regular research with customers to understand their satisfaction with the services we provide. Latest research shows that overall satisfaction with our levels of service remains high.

## WATER SERVICE LOW PRESSURE DG2

A total of 194 properties remained on the low pressure register at the end of the report year, a lower figure than reported last year. This is ahead of the AMP4 Monitoring Plan target of 242 properties. This represents 0.014% of our connected properties and we remain ahead of the sector average of 0.027%. **1. 2.**

We have continued to review our DG2 strategy during the report year with our main target being to maintain levels of service over the AMP4 period. Through our zonal planning approach, every opportunity is taken to achieve synergies with other capital projects and to seek improvements on a cost/benefit priority basis (i.e. number of properties removed per £ invested). The majority of properties added to the register during the report year was subsequently removed by undertaking minor asset improvements and operational changes.

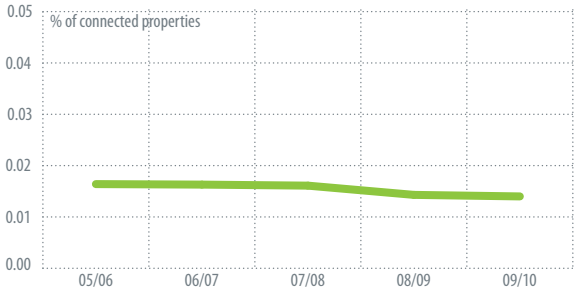
## INTERRUPTIONS TO SUPPLY DG3

In the report year, the number of properties that suffered unplanned interruptions lasting more than 6 hours was 477 compared with 894 properties last year. The number of interruptions lasting more than 12 hours affected 40 properties, compared with 411 last year. 27 of these properties had no water due to the supplies being frozen during extreme weather conditions in January 2010. Of the 20 properties which had interruptions lasting more than 24 hours (8 last year), 19 were due to frozen supplies in January 2010.

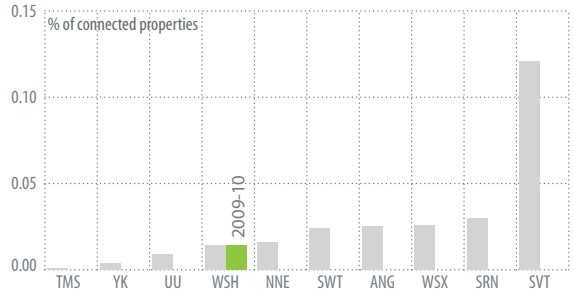
Our performance, as measured by Ofwat's overall performance score, was 0.04% of connected properties compared with 0.1% last year. **3. 4.**

There were no overruns of planned interruption periods during the report year, compared with 143 last year.

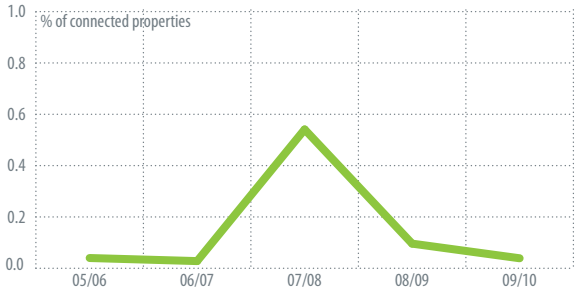
### 1 | DG2 PROPERTIES AT RISK OF LOW PRESSURE



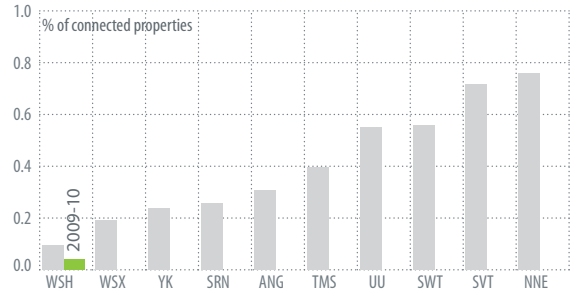

### 2 | DG2 PROPERTIES AT RISK OF LOW PRESSURE - ACROSS THE INDUSTRY




### 3 | DG3 UNPLANNED INTERRUPTIONS TO SUPPLY




### 4 | DG3 UNPLANNED INTERRUPTIONS TO SUPPLY - ACROSS THE INDUSTRY



## DRINKING WATER QUALITY

The overall quality of the water supplied to our customers in the calendar year 2009, as measured by the DWI's mean zonal compliance index, continued to be of a high standard with 99.94% of samples meeting the required quality standards. However, on other key water quality measures used by DWI, performance dipped in the report year. Although the number of water quality incidents reported to the DWI fell from 24 to 21, there was a significant incident in April 2009 at Alwen WTW which resulted in a precautionary boil water notice affecting some 75,000 properties. The boil water notice was lifted after 7 days, once all samples were clear and treatment processes at Alwen WTW were operating properly. Whilst bacteriological contamination was identified in samples at Alwen WTW, all samples in distribution remained clear throughout this incident.

The quality of water supplies is measured against a set of standards that are specified in the Water Supply (Water Quality) Regulations 2001 (Amendment) Regulations Wales 2007.

Performance against a range of water quality parameters is shown in the charts. **5. 6. 7. 8. 9. 10.**

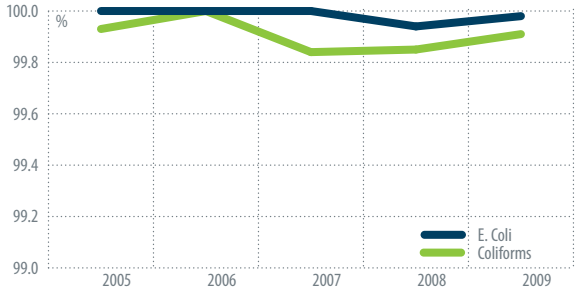
There were no restrictions on water supply during the year.

Coliforms were absent from 99.92% of samples taken from service reservoirs and absent from 99.77% of samples taken from customers' taps, a performance similar to last year. E.Coli was absent from 99.99% of samples from service reservoirs and absent from 99.99% of samples taken from customers' taps. Substantial trunk and distribution mains rehabilitation schemes have been completed under the S19 programme. Although we have seen some improvement in iron compliance on the network over the AMP4 period, performance deteriorated in the report year. A total of 182km of unlined iron mains was refurbished in the report year (375km last year).

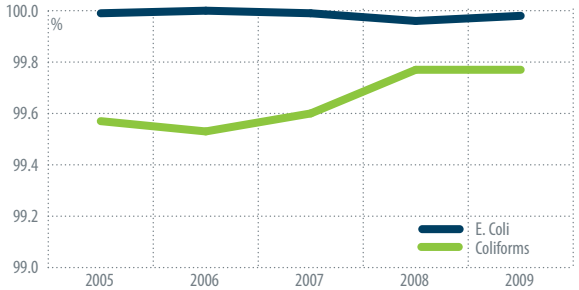
### BACTERIOLOGICAL COMPLIANCE - 2009

| | Coliforms | E.Coli |
|---|---|---|
| WTWs | 99.91 | 99.98 |
| Service reservoirs | 99.92 | 99.99 |
| Water supply zones | 99.77 | 99.99 |

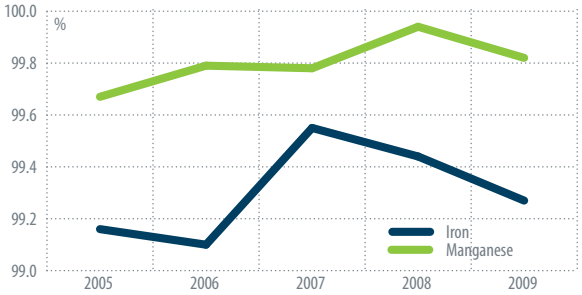
### 5 | WTWs BACTERIOLOGICAL COMPLIANCE



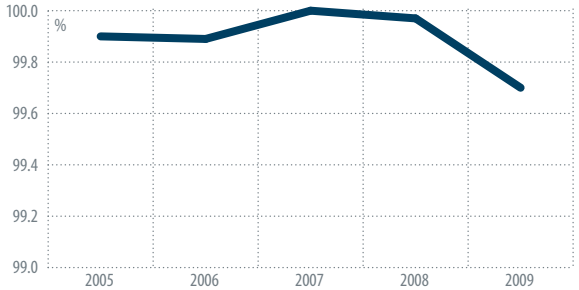

### 6 | BACTERIOLOGICAL COMPLIANCE AT THE TAP




### 7 | IRON AND MANGANESE COMPLIANCE




### 8 | ALUMINIUM COMPLIANCE AT THE TAP



Despite an intensive water sampling programme, with some zones being sampled three times a year, far fewer schemes passed the justification criteria for inclusion in the S19 rehabilitation programme than had been expected. Consequently, we discussed with the DWI what would be regarded as an acceptable output for AMP4. The S19 Undertaking has now been discharged and extensive zonal water sampling will be undertaken during the summer of 2010 to demonstrate that water quality objectives have been met.

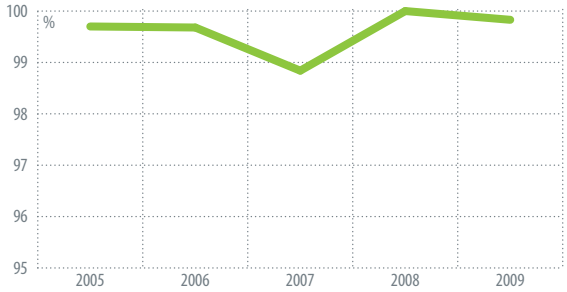
The total length of refurbishment during AMP4 was 1,778km, against the original estimate of 2,557km. The programme, agreed as part of the revised S19 Undertaking was substantially completed in September 2009. The 1,778km of mains refurbished to date is 75km behind the revised S19 Undertaking of 1853km and the DWI have been advised of this final output. There was also a significant change in the nature of the programme in the earlier years of the programme, with more work required on trunk mains and in more difficult urban areas than had originally been planned. Consequently, average unit rates for both relining and replacement are significantly higher than the target unit rate in the FD04 settlement.

## MAINTAINING SERVICE TO CUSTOMERS

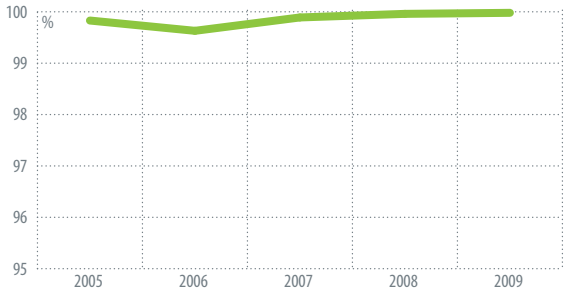
In addition to minimising the duration of supply interruptions, we have a programme of work aimed at reducing the frequency of supply interruptions to most 'at risk' customers. Our zonal approach to improving performance continues to maximise the value from our water quality mains rehabilitation programme and to prioritise the installation of pressure reducing valves and the replacement of water mains that are in a poor condition.

The overall burst rate during the report year was 167 bursts per 1,000km, compared to an equivalent figure of 184 bursts per 1,000km last year. The rate is better than the Monitoring Plan target of 194 per 1,000km. Apart from a slight deterioration in 2009, our serviceability has remained stable. **11. 12.**

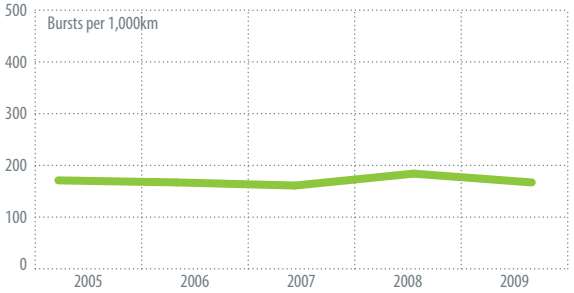
### 9 | THM COMPLIANCE



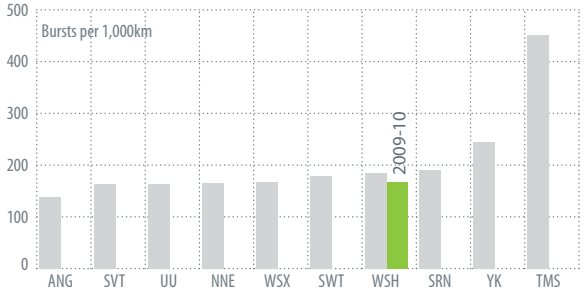

### 10 | TURBIDITY COMPLIANCE




### 11 | WATER MAINS BURST RATE




### 12 | WATER MAINS BURST RATE - ACROSS THE INDUSTRY



## SEWERAGE SERVICE SEWER FLOODING DG5

During year 3 of the AMP4 period, we completed a thorough review of our data and processes and rebased our flooding risk registers, continuing to prioritise work to address problems at properties where flooding had occurred most frequently. Reducing the incidence and the risk of flooding remains a priority. In the AMP4 period, we have and going into AMP5 will continue to tackle current and new hydraulic overload problems and also contain the number of incidents of flooding from other causes (such as blockages, collapses, vandalism and equipment failure). **13. 14. 15. 16. 17.**

During the report year, we removed 83 properties from the ARR. The Monitoring Plan assumed that 25 properties would be added in the report year; in fact 102 properties were added. New additions across the AMP4 period were 203 more than was assumed in the Monitoring Plan. The resulting year end ARR is now 250, some 214 properties behind the Monitoring Plan.

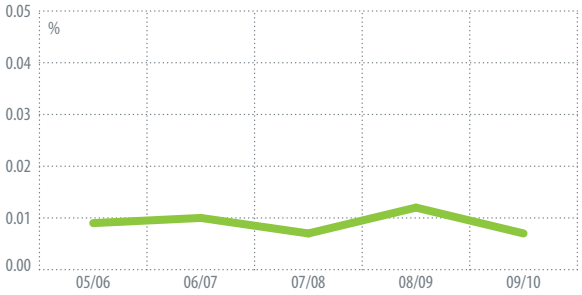
In addition, 24 properties were removed from the '1 in 20 register' through capital improvements. A further 18 properties were removed through better information, but this was offset by 31 properties being added to the ARR during the report year.

We removed a further 29 properties from the external flooding registers through capital schemes.

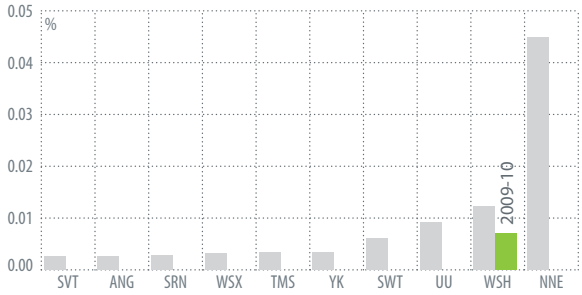
### 13 | INTERNAL FLOODING OUTPUTS

| | ARR | 1 in 20 |
|---|---|---|
| Start of report year | 265 | 275 |
| Removed (company action) | 83 | 24 |
| Removed (better info) | 34 | 18 |
| Added (better info) | 102 | 31 |
| End of year report | 250 | 264 |

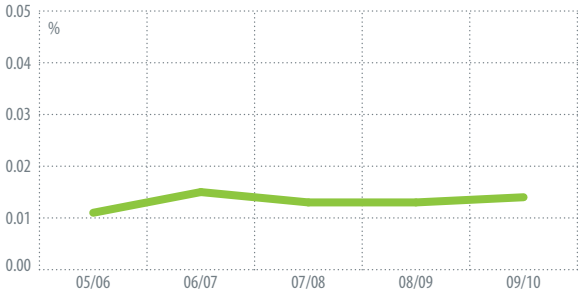
### 14 | % PROPERTIES FLOODED (HYDRAULIC OVERLOAD)



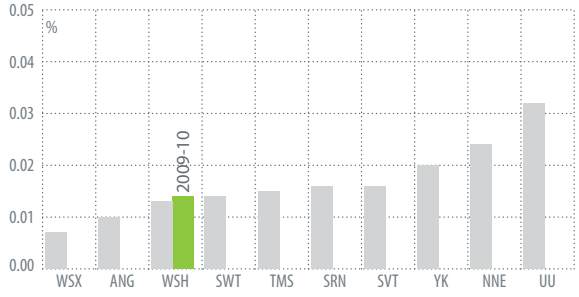

### 15 | % PROPERTIES FLOODED (HYDRAULIC OVERLOAD) - ACROSS THE INDUSTRY




### 16 | % PROPERTIES FLOODED (OTHER CAUSES)




### 17 | % PROPERTIES FLOODED (OTHER CAUSES) - ACROSS THE INDUSTRY



Although we are addressing the issues around properties that we know to be at risk, each year new incidents occur where flooding has not been experienced before. We continue to pursue initiatives to identify these vulnerable areas before the problems occur and to set up flooding forums in those areas in order to engage all parties, including regulators and the other authorities that have responsibilities for flooding.

The percentage of properties that experienced internal flooding (all causes) was 0.019% in the report year, an improvement on last year's figure of 0.021%. During the report year, a total of 92 properties was affected by flooding due to hydraulic overload. This is a decrease of 78 properties compared to last year. This measure is affected by severe weather and can change considerably year on year.

We have seen an increase in the number of other cause flooding in the report year, from 186 to 198 properties.

Most other cause incidents are caused by sewer blockages. The main cause of blockages are fat, oil and grease deposited in sewers located near food establishments, silt build up in flat sewers and rags accumulating around open joints. We have made the reduction of sewer flooding and pollution incidents our highest priority and we continue to pursue initiatives with a view to tackling sewer flooding. Some of these are described in the section of this Overview headed 'Sewerage Network Performance Improvement Plan'. We expect this strategy to deliver a reduction in the numbers of incidents over the next five years.

## DELIVERING THE QUALITY ENHANCEMENT PROGRAMME

Our objective during the AMP4 period, following the Change Protocol process, was to tackle 431 intermittent discharges, achieve improvements at 107 WwTWs and carry out 125 environmental investigations. We also planned to provide First Time Sewerage services to 182 properties.

During the report year, we dealt with a total of 84 unsatisfactory intermittent discharges. This included 66 schemes identified in the FD04 settlement and 18 additional outputs incorporated into the programme through Change Protocol. A total of 99.98% of our intermittent discharges are now satisfactory against a Monitoring Plan target of 100%. **18.**

We have carried out improvements at 14 WwTWs during the report year, bringing the total number of outputs completed in AMP4 to 115. One scheme has been delayed in agreement with the EA through the Change Protocol process.

A total of 50 environmental investigations was completed in the report year, against the Monitoring Plan target of zero. Cumulatively, we have now delivered a total of 124 investigations against a Monitoring Plan target of 66.

No S101a First Time Sewerage schemes were completed during the report year, the total number of schemes completed in the AMP4 period remaining at seven.

In the report year, the number of collapses has improved with the rate decreasing 29.5 per 1,000km last year to 28.4 per 1,000km this year. **19.**

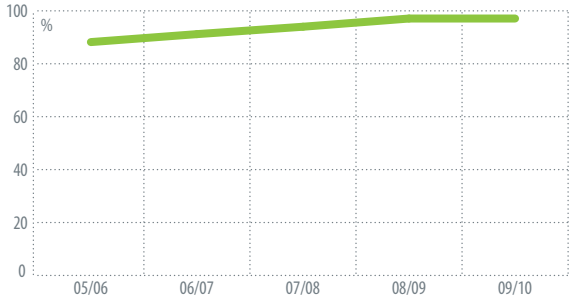
During AMP4, our plan was to renovate or replace 123km of sewers. In the report year, we renovated or replaced 21.6km, against a Monitoring Plan target of 24.9km. In the report year, we also laid or adopted 146km of new sewers against a Monitoring Plan target of 41km. Our cumulative figure for new sewers laid or adopted to the end of the report year is 276km against a target of 165km. Targeting the most vulnerable assets remains a priority.

Our programme of desilting, cleaning and inspecting continued, and a total of 288km of sewers were inspected by CCTV in the report year, including 72km on the critical sewer network. This has provided significant information on asset condition and has resulted in a better focussed approach to planned capital maintenance.

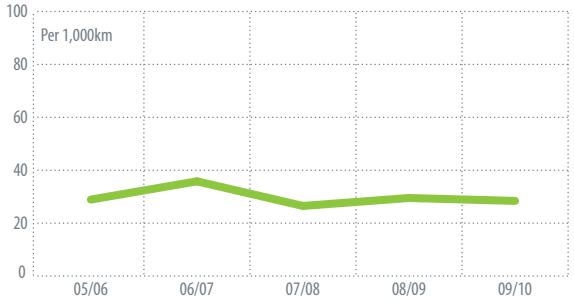
We have reported a total of nine category 1 and 2 pollution incidents, of which three were associated with CSOs and foul sewers. This compares with three last year, two of which were associated with CSOs and foul sewers. With the inclusion of 302 Category 3 incidents, the total number of sewage related incidents was 311 for the report year. Of this total, 209 were associated with CSOs and foul sewers, against a figure of 167 for last year. **20. 21.**

We have developed plans to address odour issues at the 33 sites identified in the Monitoring Plan. We have now delivered 31 of the 33 named schemes identified in the FD04. In addition, we have made improvements at a further eight sites across our area.

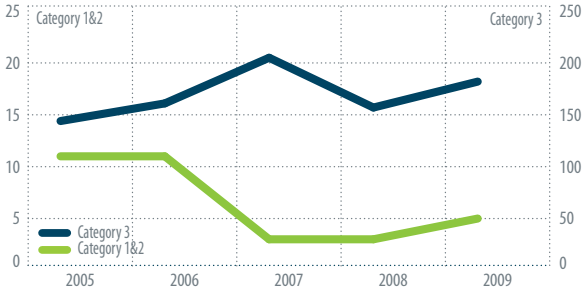
### 18 | % SATISFACTORY INTERMITTENTS




### 19 | NUMBER OF SEWER COLLAPSES PER 1,000KM




### 20 | NUMBER OF POLLUTION INCIDENTS AT CSOs CATEGORY 1, 2 AND 3




### 21 | NUMBER OF POLLUTION INCIDENTS ASSOCIATED WITH CSOs AND FOUL SEWERS DURING 2008

| Incident category | No. of incidents associated with CSOs | No. of incidents associated with foul sewers | No. of incidents associated with rising mains |
|---|---|---|---|
| 1 | 0 | 0 | 0 |
| 2 | 1 | 2 | 2 |
| 3 | 78 | 128 | 5 |
| Total | 79 | 130 | 7 |

## SEWERAGE NETWORK IMPROVEMENT PLAN

We have sought to address sewerage network performance in a number of ways, and during the report year we undertook the following initiatives:

1. Continued with the implementation of an improved scheme prioritisation process, underpinning the planned capital maintenance programme and ensuring that problems on the worst performing sewerage assets were addressed.
2. Continued with the targeted desilting and CCTV inspections across our area, resulting in 177km of sewers being inspected in the report year.
3. Installed an additional 49 'early warning' telemetry land devices (Hawkeyes) across our area in the report year, aimed at proactively reducing pollution incidents. This is an integral part of a pollution strategy which also includes surveys, inspections and investigations at a wide selection of CSOs.

We expect these initiatives to continue to deliver increased ongoing benefits and to improve the performance of the sewerage network, in particular reducing the incidents of other cause internal sewer flooding.

## ASSET MANAGEMENT AND PLANNING

Long term, evidence-based maintenance of our assets is critical to delivering good service to our customers, protecting the environment and doing so cost efficiently. It is equally important in ensuring we achieve 'best value' from our expenditure when we create new or maintain existing assets.

We have continued to develop our asset planning approach to ensure it is in line with the Capital Maintenance Planning Common Framework. Our approach to investing in our assets is both forward looking and risk based, with a clear emphasis on the use of cost/benefit analysis when evaluating the optimal timing and the optimal investment needed to maintain performance. Throughout the year we have worked to understand issues on the assets, and to match these issues with those predicted from our deterioration models. Over the next year, we will review the requirements of our asset systems to ensure that we are developing as needed.

It is important that we ensure our asset management is systematic and coordinated to a defined standard. We have successfully retained accreditation through the best practice specification for asset management (PAS55: 2008). The improvement plan that underpins our PAS55 accreditation is key to delivering improvements in asset management across the business.

The use of systems continues to be key to the way we approach asset management. We introduced the Unit Cost Database in JR09. This system is now in use in day to day investment planning.

Over recent years, the quality of our management information and asset models has improved significantly. This has allowed us to operate and maintain our networks more efficiently. We will develop and trial strategies designed to further improve our asset information systems, and to continue to improve and drive cost effective asset management and service throughout our business.

## CUSTOMER CONTACT

### Billing contacts DG6

During the report year, we handled 1,051,517 billing contacts, an increase of 4.4% on last year's figure of 1,007,437. The total billing contacts consisted of 901,511 telephone calls, 149,803 written contacts and 163 visits to our offices. Performance in the year remained high, with almost all contacts being handled within 5 working days. **22.**

### Written complaints DG7

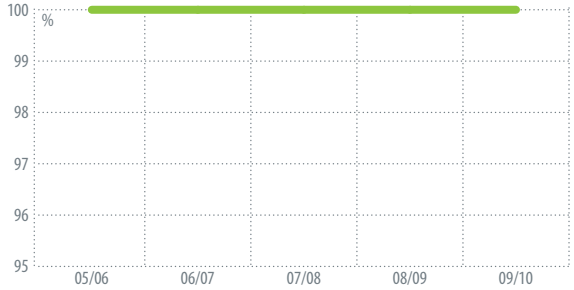
During the report year, we received 13,313 written complaints, an increase of 5.6% on last year. Within this total, the number of email complaints increased from some 2,300 to some 2,900. Performance in responding to complaints within 10 working days has improved from 99.3% last year to 99.6% this year. This demonstrates that, even though volumes of complaints have increased marginally, the level of service offered to our customers on this measure has improved.

Our highest increases in complaints are around instances of disputed consumption and customers requesting explanation of charges and recovery action as the recent recession continues to affect customers' ability to pay. Also, there were several operational incidents during the year which generated written complaints. We have also seen the volume of email contacts increase by 27% over the last year, and 22% of all complaints are now received via email. **23. 24.**

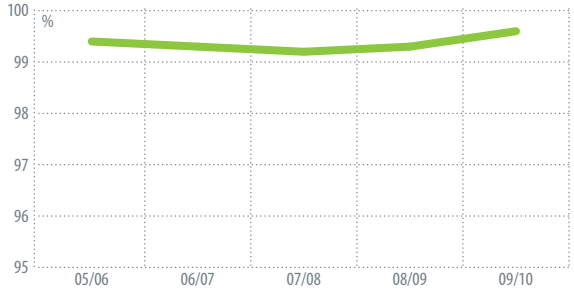
### Meter reading DG8

Performance against this measure continues to improve, with 99.97% of metered customers receiving at least one bill based on an actual reading (by ourselves or the customer) during the report year. This is an improvement on last year, and there were only 158 cases where we were unable to get an actual reading and had to rely on an estimate. We now have over 485,000 metered accounts.

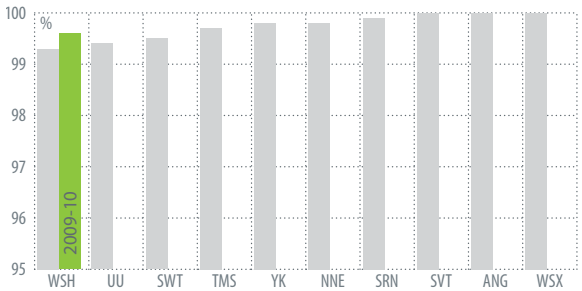
**22 | DG6 % OF BILLING CONTACTS DEALT WITH WITHIN 5 WORKING DAYS**



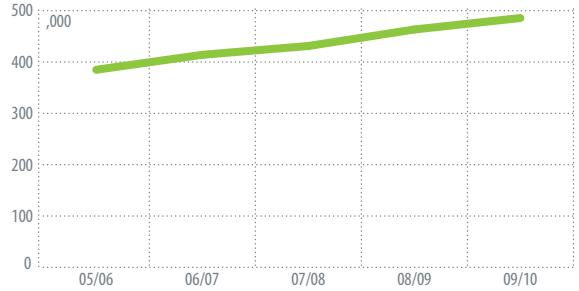

**23 | DG7 % OF WRITTEN COMPLAINTS RESPONDED TO WITHIN 10 DAYS**




**24 | DG7 % OF WRITTEN COMPLAINTS RESPONDED TO WITHIN 10 DAYS - INDUSTRY**




**25 | NUMBER OF METERED ACCOUNTS**



The metered customer base continues to grow from unmeasured customers opting for a meter and from new connections, although new connection numbers have reduced during the report year compared to last year, due to the effect of the recession on the building industry. **25. 26.**

### Telephone contact DG9

During the report year, our two call centres (handling billing and operational calls respectively) received 1,270,922 calls, an increase of 11,504 on last year. Of the calls received, 926,490 were about billing and 303,020 about water and sewerage services. The remaining calls were primarily to the New Connections service and metering services. Our customer satisfaction score, measured by an independent market research company, was 4.72 out of a maximum score of 5. This was an improvement on last year's figure of 4.65.

The number of unwanted calls for the report year was 566,449. This is the first year we have reported 12 months data and we estimate that, on a like for like basis, the figure has increased by some 34,000, this year. This is largely attributable to the method of categorising calls (where those which cannot be identified are recorded as unwanted) and the inclusion of debt collection calls.

We are undertaking system improvements which, along with ongoing training and awareness to allocate contact codes in the billing and operational call centres correctly and consistently, will address the issue going forward. We are committed to reducing unwanted calls from our customers.

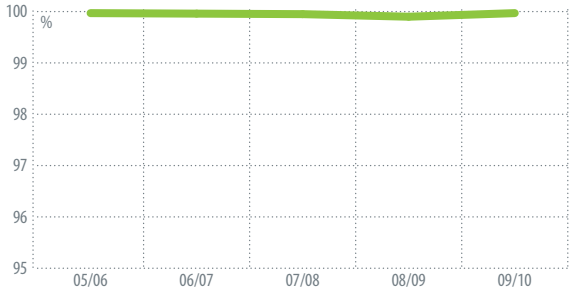
There was a sizeable decrease in calls abandoned during the report year, from 55,003 to 26,939. We continue to focus on training of call handlers and encouraging operational staff to take a more proactive role by ringing customers back. **27.**

### GSS payments

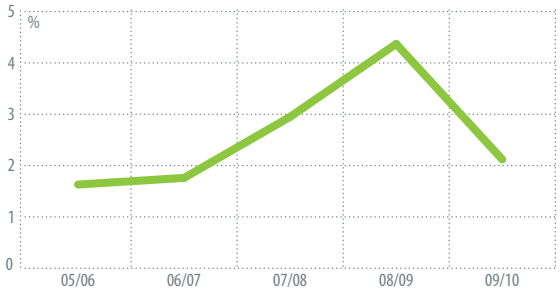
The total number of payments made was 1,429, with 486 relating to appointment failures. Last year, there were 2,794 payments of which 1,527 related to appointment failures. The decrease from last year's equivalent figure for appointments is mainly attributable to a review of our processes and refresher training for staff.

There was a decrease in DG5 GSS payments for internal flooding during the report year from 392 last year to 317. There was a small increase in the number of payments for external flooding from 153 to 166. There were no payments in respect of any planned interruptions where the supply was not restored within the specified time period (141 last year).

**26 | DG8 % OF METERS READ**




**27 | DG9 % CALLS ABANDONED**



## CUSTOMER EXPERIENCE

Our objective is to deliver the highest standards of service possible to our customers. Improving the customer experience is an important aspect of our business and features prominently in both our business plans and the customer service strategy.

In the report year, we have made progress in a number of key service areas through the following initiatives, all of which are designed to achieve higher standards of service:

**Customer research** - We are committed to understanding the views of customers, and during the year commissioned several pieces of research. A survey, undertaken twice yearly by Beaufort Research and involving 2,000 randomly selected customers, provides us with general feedback on how we are performing. Holden Pearmain also carry out quarterly research on how we deliver water, sewerage and billing services to customers who have reason to contact us with a problem. The outputs from these studies help inform our strategies and develop initiatives for the future.

**New tariffs** - Take up of the Welsh Water Assist tariff, introduced on a trial basis in April 2009, has proved popular with customers, with some 8,800 customers participating. The Water Collect trial is also progressing well and we anticipate extending it to more registered social landlords next year. These tariffs, plus Water Direct and the Customer Assistance Fund, provide a range of affordability support options for customers who struggle to pay their bills.

**Written customer contact manual** - The new manual, designed to focus on the process of dealing with written contacts and improving the quality of responses, was introduced last year and is now fully embedded into the business. The audit programme in place provides ongoing review of the application of this procedure to ensure compliance.

**Customer call back** - With a view to avoiding follow up calls from customers, securing improvements in service and obtaining better customer satisfaction ratings, we apply a proactive 'closing the loop' process whereby customers are contacted to ensure that they are satisfied with the service provided and that the matter has been resolved. This has proved successful with positive feedback received from customers.

**Additional services - distraction burglary prevention** - During the report year, we continued to work with many of our community partners and police forces to reduce the rise of distraction burglaries in our area, using the "If in doubt keep them out" message. We also encouraged customers to use password schemes and we monitored feedback from customers to identify staff who had not shown their ID cards..

## ADDITIONAL SERVICES

We offer a range of free services for customers who require extra help. This is called Additional Service. The number of customers on our Additional Services Register has risen by 3,389 to 6,690 in the report year. This is attributable to the extended application of the Welsh Water Assist tariff and the automatic registration of customers with a medical condition. We continue to promote our services through care organisations, company leaflets, the bills and through day to day contact with staff.

# Health & Safety
## performance in 2009-10

Our health and safety management system applies to all our contract partners who work with us to deliver services to water and sewerage customers and is described more fully in our annual health and safety report. The 2010 Health and Safety Report will be published on our website in July 2010.

We assess the health and safety competence of all contractors before appointment. We set performance targets and monitor against them on a monthly basis to establish robust health and safety practices and to promote continuous improvement.

Furthermore, we operate an innovative process of internal cross auditing to supplement the external and independent auditing of health and safety performance.

Our management system ensures that all incidents and 'near hits' are reported and investigated, and this helps set targets to drive continuous improvement in health and safety performance. This is the sixth year in which we have captured performance data not only from contract partners, but also from their lead subcontractors.

### NUMBER OF ACCIDENTS

| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|
| Reportable injuries | 46 | 42 | 35 | 34 | 39 |
| Non-reportable injuries | 284 | 301 | 374 | 384 | 353 |
| Dangerous occurrences | 0 | 1 | 4 | 0 | 2 |
| Near hit/misses | 306 | 378 | 537 | 761 | 678 |
| Reportable diseases | 0 | 0 | 3 | 1 | 2 |
| Enforcement Action | 0 | 0 | 0 | 0 | 0 |
| Days lost due to accidents | 748 | 898 | 827 | 799 | 1,225 |
| Days lost due to all illness | 21,995 | 21,059 | 25,534 | 23,281 | 23,419 |
| Average no. employees (FTE) | 3,906 | 4,279 | 4,425 | 4,869 | 4,843 |
| Total hours worked in year | 7,599,229 | 8,292,064 | 8,638,506 | 9,600,997 | 9,785,275 |

### PERFORMANCE FOR THE YEAR

In the report year we delivered of 171 occupational health and safety initiatives to deal with major risks and to maintain management focus on continuous improvement in health and safety. By the end of the year, 98% of all the stated objectives in the plans had been achieved and delivered.

Although we saw the number of non-reportable accidents continue to fall, there were more reportable injuries and we saw a rise in the number of work days lost due to accidents. This is reflected in a higher 'Accident Incident Rate' (AIR) of 805 injuries per 100,000 employees for reportable accidents (2008-09: 700). However, there was a lower AIR for non-reportable accidents of 7,289 injuries per 1,000 employees (2008-09: 7,898).

In the report year, we lost 23,419 working days, a slightly higher figure than last year.

We have an effective system for managing occupational health and safety, which protects the health and well-being of the people who work to deliver services to our customers.

During the report year, we also undertook a number of other health and safety initiatives and, in particular:

- The environment and education team was successful in achieving OHSAS 18001:2007 in formal recognition of the health and safety risk management systems established to reduce the risks to visitors.
- We extended the use of the IT database which now allows recording of some 40 cross-partner audits undertaken per year and includes a process to track close out of actions.
- We provided driver training to the majority of our staff who drive as part of their day-to-day work.

# Serviceability assessment

Welsh Water has used the recently issued serviceability tool kit from Ofwat to assist with this section of the June Return Overview.

We have used Ofwat's serviceability tool kit to review all of the individual measures within each of the four serviceability sub services and led us to report a stable assessment of each sub service. Further details can be found within table commentaries (tables 3, 11a, 16, 16a) with our highlight comments given below.

## WATER INFRASTRUCTURE

We assess the water infrastructure sub-service performance as stable following improvements on most measures.

- DG2 - 194 properties (0.014%) out of a total of 1.3 million properties we serve remain on the DG2 low pressure register (197 last year).
- DG3 - 40 properties affected by interruption to supply of over 12 hours (411 last year).
- Mains burst per 1,000km is 167 compared to 184 last year.
- Customer contacts (discolouration) per 1,000 population has improved to 2.74 from 2.92 last year.
- Distribution have losses has also seen an improvement to 161.48 Ml/d from 167.98 Ml/d last year.

However, iron mean zonal non-compliance stands at 0.73%, down from 0.47% last year. We have undertaken a root cause analysis of iron failures over the last two years and attribute the deterioration to an increase in failures of supply pipes and failures in zones where S19 refurbishment was taking place at the time of the failure.

Distribution Index (TIM) non-compliance is the other indicator showing a slight deterioration this year (0.33% against 0.17% last year). This arises from the increase in iron and manganese failures in zones that were subject to S19 refurbishment.

## WATER NON-INFRASTRUCTURE

We assess the water non-infrastructure sub-service as stable following improved performance on most of the measures.

- The number of service reservoirs having more than 5% of coliform samples failing has remained at zero for all of the AMP4 period.
- The % of WTWs where turbidity 95 percentile is greater than or equal to 0.5NTU has also remained at zero for the last three years.
- Enforcement actions considered by the DWI for microbiological standards have also seen an improvement with zero reported in the year.

On the WTWs coliform measure, we saw a number of water quality failures in 2007 and 2008. We have undertaken extensive work to review the root cause of these failures and have in place an improvement plan with actions designed to improve coliform performance at our WTWs. Our performance on the % figure of samples leaving WTWs which failed due to the presence of coliforms has improved from 0.116% last year to 0.037% this year, which puts our performance in line with our serviceability reference level.

As this measure is calculated on a calendar year basis we are encouraged by performance in the first six months of 2010. As at 31 May 2010, the level of sample failures for coliforms leaving WTWs currently stands at 0.02%.

Unplanned maintenance numbers have been reassessed as part of our on-going review of the new serviceability measures. As a consequence, the report used to generate the figures has been improved this year with an increase in the reported number. Recalculating for previous years suggests that the underlying trend is stable. Detail of the approach taken can be found within Chapter 11a.

## SEWERAGE INFRASTRUCTURE

We assess the sewerage infrastructure sub service as stable following improved performance on most measures.

- Sewer collapses have fallen from 542 last year to 525 in the report year.
- Rising mains sewer collapses have fallen from 88 last year to 53 in the report year.
- Flooding incidents (hydraulic overload), excluding severe weather, have fallen from 132 last year to 86 in the report year.
- Sewer blockage performance has improved again this year, with the number falling from 13,049 to 12,499. Performance remains better than the lower control limit of 13,127.
- Equipment failures have reduced from 237 last year to 225 in the report year.

On pollution, we have seen an increase in the number of incidents occurring at CSOs, foul sewers and rising mains up from 175 last year to 216 in the report year.

For the internal flooding other cause measure, the reference level assessed at PR09 is 120 properties and the target output in 2015 has been assessed at 100 properties. Following a period of stable serviceability between 2002 and 2005, we have seen an increase in annual incidents of internal flooding from other causes. We have in place an improvement plan to achieve our AMP5 targets against this measure and full details are included in the Chapter 3.

There has been an increase in the number of gravity sewer collapses from 453 last year to 472 in the report year.

## SEWERAGE NON INFRASTRUCTURE

We assess the sewerage non infrastructure sub service as stable following improved performance on most measures.

Unplanned maintenance numbers have been reassessed as part of our on-going review of the new serviceability measures. As a consequence, the report used to generate the figures has been improved this year with an increase in the reported number. Recalculating for previous years suggests that the underlying trend is stable. Detail of the approach taken can be found within Chapter 16a.

Over the past four years, the percentage of WwTWs failing numeric consents has shown an improving trend. However, in the report year we have seen an increase in the number of works that failed (seven works last year compared to 24 works for the report year). We will be addressing this through targeted maintenance, and we believe that this is an anomaly and we will recover the position next year.

The percentage of population equivalent served by WwTWs failing LUT is marginally higher than last year (0.1% in the report year compared to 0.0% last year). This slight deterioration will also be addressed through targeted maintenance in the coming year.

# Carbon accounting

| | DESCRIPTION | UNIT | VALUE | CONFIDENCE GRADE |
|---|---|---|---|---|
| 1 | Gross operational emissions | tonnes of CO2 equivalent emissions | 294,800 | B2 |
| 2 | Net operational emissions | tonnes of CO2 equivalent emissions | 294,169 | B2 |
| 3 | Operational emissions according to CRC definition | tonnes of CO2 equivalent emissions | 263,235 | B2 |
| 4 | Operational GHG emissions per Ml of treated water | kg of CO2 equivalent emissions per Ml | 381 | B2 |
| 5 | Operational GHG emissions per Ml of sewage treated | kg of CO2 equivalent emissions per Ml | 778 | B2 |

The denominators used within lines 4 and 5 in the table above, have been derived from the volumes of water and sewage as reported in Table 10 line 2 and Table 14 line 7 of the June Return 2010

The Carbon Accounting Workbook (CAW v1.0) was originally issued in January 2008 as a draft tool for UKWIR and formalised as a final workbook in June 2008 (CAW v2.0). The 2009 Ofwat June Return used an updated version of the workbook (CAW v3.0), and a further revised version (CAW v4.0) has been produced by WRc/UKWIR for the 2010 June Return (JR10).

CAW v4.0 takes into account the updated lists of emission factors (EFs) and new methodologies to be used for company reporting in 2009/10, issued by Defra in July 2009. It also takes into account the 'Guidance on How to Measure and Report your Greenhouse Gas Emissions' (GHG) issued by Defra and the Department of Energy and Climate Change (DECC) in September 2009. This represents a substantial revision and enhancement of the reporting guidelines previously published by Defra which had been used to develop the CAW methodology. Additionally, in October 2009, DECC released Government Response and Policy Decisions on the latest consultation on the draft Carbon Reduction Commitment (CRC) Order 2010. With this document, the CRC, to be called the CRC Energy Efficiency Scheme from then onwards, started to assume its final shape in anticipation of the start date of 1 April 2010.

In December 2009, Ofwat published their reporting requirements for JR10. According to these specifications, companies are obliged to include more detailed information on their operational carbon emissions in the report year than in previous years. Ofwat's requirements are drawn from the latest developments of the Defra/DECC Guidance and the Government Decisions on the CRC published in October 2009. All of the above documents and guidance have resulted in substantial changes to the CAW v4.0 from v3.0.

Calculation of operational GHG emissions has been undertaken in accordance with the Water UK methodology 2010 and covers the report year.

Direct and indirect emissions associated with the provision of water, wastewater and sludge disposal are included. It applies to all areas where we have management responsibility, such as the activity of operational partners. They exclude emissions from the supply chain and embedded carbon in construction activities. Supply chain emissions are those associated with the manufacture and transport of consumables and embedded emissions are those associated with the manufacture and distribution of materials.

### 1.COMPARISON OF JR10 AGAINST JUNE RETURN 2009 (JR09)

Our annual operational emissions according to the CRC methodology have increased slightly, by less than 1%, whereas our annual operational emissions according to the Defra methodology have increased significantly by 26%.

The increase in the CRC carbon footprint is mainly due to the updated emissions factors used in CAW v4.0 (largely for electricity, as this is the dominant emission).

The increase in the Defra carbon footprint is because of a change in the Defra guidelines that have been applied in CAW v4.0. Unlike CAW v3.0, v4.0 does not allow for any emission credits due to imported electricity being purchased from good quality CHP sources from the grid (often referred to as 'brown energy'). This is because Defra is currently reviewing its position on CHP backed tariffs. In JR09 this credit accounted for a 20% reduction in the overall Defra carbon footprint. If it were not for the change in the Defra Reporting requirements, then the Defra emissions total would include a credit of 63,000 tCO2e. This would result in a Net Operational Emission of 252,760 tCO2e, an increase of less than 1%.

In CAW v4.0, emissions are reported under Scope 1, 2 and 3 headings in line with the new Defra Guidance:

- Scope 1 emissions cover all emissions that are emitted directly from the companies' regulated activities either by burning fossil fuels, process emissions or transport emissions from vehicles owned or leased by the company.
- Scope 2 emissions cover all emissions that are indirectly emitted as a result of electricity usage by the company.
- Scope 3 emissions relate to all other indirect emissions, including emissions from business travel in public and private vehicles and also emissions from outsourced activities not included in Scope 1 and Scope 2 emissions.

In the report year, a large proportion of the appointed business was been undertaken by outsourced operators; as a result, 99% of the emissions associated with the appointed business are included in the Scope 3 emissions. Following the in-sourcing of operations by the company in April and May 2010, there will be a major change in these proportions next year.

## 2. STRATEGY

Our Strategic Direction Statement (SDS) outlines our aspiration to reduce our operational carbon emissions by at least 50% by 2035. We will need to embed a low carbon approach across all of our activities in order to achieve this. The reduction of carbon costs will be a major factor in our business planning and infrastructure development, particularly when considering increased treatment standards or assessing other carbon intensive investment schemes.

At a macro level, we will continue to explore additional opportunities to develop further energy saving initiatives and to exploit the potential within our business to develop renewable energy sources. To this end, a number of initiatives has been identified and will be built into the delivery plans for AMP5. These include an expansion of hydro power and four large methane gas sludge digestion schemes, as well as many energy efficiency initiatives such as maintaining mechanical pump efficiency.

A 'Carbon Roadmap' has been prepared with the assistance of Carbon Trust Wales, which lists the actions that will be necessary to achieve the SDS target.

## 3. OMISSIONS AND ASSUMPTIONS

Our approach to Omissions and Assumptions has been to take account of the scale of activity and to use judgement in accounting for and including emissions relating to activities. All activities outsourced to United Utilities Operating Services (UUOS) and Kelda Water Services (KWS) which generate direct emissions are included. However, it is acknowledged that not all the activities are necessarily operational activities as staff are also engaged on capital investment projects which involve the construction of assets, i.e. there is time associated with embedded emissions.

Administration and Transport account for less than 4% of our operational emissions, therefore we have taken into account the scale of the activity and decided to exclude all of the UUOS and KWS emissions as they are unlikely to be material to the overall value and will be off-set by the activities of our smaller operational partners that have not been included. Activities such as the sampling and monitoring programme and the IT support provided by other operational partners have not been included in the scope. Consultants and contractors working closely with Welsh Water are normally based in our offices and depots, and their energy use is therefore indirectly captured (although their business mileage is not).

This is in part due to the difficulty in extracting relevant data that is specific to Welsh Water when these organisations also provide services to other companies. For the majority of these organisations, the most significant carbon impact is likely to be associated with business travel, and this forms a minor element of our total carbon footprint.

The data set for liquid fuel used at treatment works (e.g. diesel and gas oil for back-up generators) is currently not as robust as we would like. A method has been put in place for monitoring diesel, LPG and gas oil fuel use across all of our sites and this data is more robust than in previous years. However, it still reflects fuel purchased rather than used. For year on year reporting, this will have no impact on carbon emissions as the fuel volumes are small compared with electricity and gas consumption.

In JR09, the contribution of refrigerants to overall carbon emissions was excluded due to the small volumes involved and the lack of data. For JR10, we have included the recorded refrigerant use across nine offices. During the data collection process we have identified that there may be further (single) chilling units across a number of other locations. These units have not yet been fully identified and are therefore not included in this calculation. However, further investigations will be undertaken to include them in next year's return. One of the refrigerants in use is R22 which is not listed in the UKWIR workbook. However, after consultation with WRc, we have used R410A as this has the closest Global Warming Potential to R22. Due to the small nature of the refrigeration volumes held in our air conditioning units (especially when compared with emissions from energy use, sludge treatment etc), emissions from the losses associated with air conditioning refrigerants are likely to be minimal. However, their high global warming potential means that we will continue to try and improve the data collection and recording of their emissions contribution.

In some cases, assumptions had to be made in order to provide a base for calculation. In these instances, the assumption calculations have been based on guidance in the CAW or other information. These include the use of 60g BOD/day (to be consistent with Table 17) for the calculation of population served by secondary treatment and the calculation of biogas used in CHP, which is based on the power produced by the CHP plants.

An assumption has been made concerning the accounting of renewable energy produced on site. This is discussed further in the Carbon Accounting Appendix Commentary, Section 9.

Finally, due to the structure of Welsh Water it is assumed that all electricity use for drinking water, sewage and sewage sludge operations are Scope 3 emissions by our outsourced operators, UUOS and KWS.

## 4. DATA ROBUSTNESS

Electricity consumption is responsible for the majority of our operational emissions (approximately 75%). Electricity use is monitored by the energy management system and this is then scrutinised closely by our dedicated energy management teams. Processes and tools have been developed, primarily to drive cost efficiencies, and as a result of this, we can apply a high degree of confidence to this data with a reliability band of A. In particular, all data from renewable power sources are metered and therefore have a high degree of accuracy: Confidence grade A1.

Improvements have been made in the data capture procedures for sources of direct carbon emissions, for example, fuel used on site, process emissions and transport, with confidence grades applied to all data sets. We report that all data is from sound textual records. However, we accept there will be minor shortcomings, and we therefore report a reliability band of B.

With regard to accuracy banding, we acknowledge definitive processes are not in place to account for direct emissions and in some cases are omitted due to the complexity of data analysis and collection. With this in mind we have variable accuracy bands depending on the class of data reported.

Fuel sources information can only be gathered from procurement records and, therefore, are not an exact representation of fuel use. For transportation, in some instances, volumes of fuel are unavailable and therefore, the emissions must be calculated from mileage records. As a result the accuracy level can only be 1-5%. In future, we will be working with our procurement department to ensure that we capture all data as accurately as possible.

Whilst we have input some information for refrigerant use for the first time this year, there are still some records outstanding and the method of data capture must improve. We will do this by including data reporting requirement in future facilities management contracts. Therefore, we have given this information a confidence level of B3.

Finally, whilst the power generated from the CHP plants is metered and therefore as a consequence recorded accurately, there are currently no heat meters to record the quantity of heat produced. Therefore, this data has been given a confidence level of C4 to an accuracy of within 25%.

## 5. JUSTIFICATION FOR INCREASES/DECREASES

Good quality CHP use – Whilst UUOS purchased electricity from good quality CHP sources in the report year, within CAW v4.0 the carbon allowance for this has been removed. This has resulted in a large increase in the carbon footprint of approximately 60,000 tonnes, even though our electricity use has actually fallen slightly.

Electricity – Overall use has decreased due to a concentrated effort on energy efficiency and an increase in renewable generation. The exception was an increase in the electricity used for drinking water treatment which we believe is due to the enhanced treatment now being undertaken on a number of sites across North Wales, particularly the increased use of ultra violet disinfection.

**Natural Gas** – Use of natural gas has decreased due to the planned shutdown of the gas dryer at Afan WwTW.

**Gas Oi**l - Volumes of gas oil recorded show a slight increase over last year. This is due to better recording methods where previous data gaps have been filled.

**Ozonation** – The decrease is due to Rhiwgoch WTW being switched off between October 2009 to March 2010.

Renewable energy generated on site has increased from 7,854,000 kWh (JR09) to 10,732,000 kWh (JR10). This increase is partly due to the full year effects of those sites which were commissioned part way through 2008/09 and also due to an increase in the capacity installed at sites such as at Eign WwTW. This increase results in over 600 tCO2e credits in the Defra calculation.

**Transpor**t – There has been a decrease in the contribution of transport to the overall calculation. Decreases in freight fuel use are as a result of better planning of tanker routes and control of distances travelled. Also, alternative sludge centres have been used resulting in shorter journeys. The use of actual fuel volumes in place of mileage also results in improved accuracy of data.

# Financial
## Overview

### FINANCIAL RESULTS

Our appointed business turnover in the report year was £682 million (2009: £650 million) - an increase of 4.8%. The increase primarily reflects the price increase of 5.4% in the report year, with additional revenue from new customers being more than offset by a loss of revenue due to customers switching to metered charging. Our 'customer dividend' means that our total charges in the report year were some £28 million lower than if we had applied the full price increase determined by Ofwat (2009: £27 million lower). The rate of voluntary customer switching to metered charging in the report year fell to around 18,400 customers (2009: 22,000 customers), whilst some 5,500 new customers (2009: 9,000 customers) were added during the report year, all of whom are metered.

The current cost depreciation charge was £123 million (2009: £157 million). The decrease is due to the revaluation of the fixed asset base and the reassessment of remaining useful lives.

The infrastructure renewals charge was £60 million (2009: £62 million). The charge takes into account the projected expenditure in our maintenance plans for AMP5 and reflects the medium to long-term maintenance needs of the infrastructure network.

Net interest charges for the report year were £104 million (2009: £167 million), including an indexation 'credit' on index-linked bonds of some £10 million due to a fall in the Retail Prices Index (2009: charge of £41 million).

The current cost profit before tax was £166 million (2009: loss of £2 million). This profit was made after funding the 'customer dividend' of £22 for all customers receiving both water and wastewater services, totalling £28 million (2009: £21 per customer, £27 million in total).

The taxation charge for 2009-10 of £1 million relates to a deferred tax movement of £3 million, offset by a current tax credit of £2 million. The deferred tax is primarily the effect of capital allowances exceeding the depreciation charge for the year.

### CONTINUED FOCUS ON COST CONTROL

Our appointed business operating costs, excluding exceptional items, totalled £260 million (2009: £260 million); lower power costs (£8 million) have been offset by inflation (£4 million) and an increase in the provision for bad debts (£4 million).

In the year to 31 March 2010, around two thirds of operating costs related to outsourced service contracts. The major contracts were with UUOS, for the operation of the water network and the wastewater network in North Wales and with KWS, for the operation of the wastewater network in South Wales and Herefordshire. These contracts included a target cost mechanism aimed at enhancing operating efficiency in the period to end of the AMP4 regulatory period in 2010.

All water and sewerage companies need to draw on significant energy resources, particularly for water treatment and pumping processes, and Welsh Water - with its network spread across Wales's undulating topography - is no exception. This year we have experienced reductions in energy prices which have seen power costs fall by around 20% to £35 million (2009: £43 million).

Customer debt recovery remains a high priority for Welsh Water and our billing and income contract partner, Veolia Water. In a challenging economic environment, in which water companies have no sanction to disconnect supplies to non-paying domestic customers, cash collection performance has continued to be challenging. The bad debt charge for the year of £23 million (2009: £19 million) represents around 3% of annual turnover (2009: 3%), and reflects an increase in the provision based on a review of historical collections and having regard to the deterioration experienced, particularly during the first half of the year.

On 9 February 2010 Glas Cymru announced its intention to restructure Welsh Water following the decision to bring back in-house the operational activities which had been outsourced. £29.5 million of restructuring costs are considered exceptional by nature and have been disclosed separately on the face of the Income Statement in the company and group's statutory financial statements prepared under IFRS. These costs include

the discounted expected costs of the restructuring to be incurred over the next five years. It is not anticipated that any further significant expenditure will be incurred in relation to the restructuring of the business. Total appointed operating costs therefore amounted to £289 million (2009: £260 million).

Total capital expenditure during the year (including IRE) was a record £361 million (2009: £355 million), bringing the total expenditure over the five-year AMP4 period to £1,521 million. Welsh Water works with an alliance of capital investment partners to deliver the investment programme at the best value for money for customers. Welsh Water is planning to invest some £1.2 billion over the next AMP period which will run from 2010 to 2015.

## FUTURE FINANCING STRATEGY

Our strong financial position has been built up over the last eight years and provides a stable base from which we can respond positively to the challenges of the current economic climate. Over £1.5 billion has been invested since April 2005, bringing high value and long term improvements to customer service, drinking water quality and the environment.

Our policy is to reduce gearing to around 70%, and maintain gearing at around this level. A key part of our strategy is to minimise customer bills in the long term, and we judge that this level of gearing will enable the company to efficiently fund the AMP5 investment programme.

To protect the high credit quality of the business, we have in place prudent financial policies, predominantly covering the fixing of interest rates and the investment of cash balances. Policies set by the Board ensure that we meet the requirements of our licence and therefore undertake no speculative trading. Our policy is to minimise our exposure to movements in market rates, with a minimum of 85% of our liabilities being fixed rate, index-linked to the UK Retail Price Index (RPI) or matched by cash balances. We consider that linking debt to UK RPI inflation is particularly appropriate, as our revenues and Regulatory Capital Value are also linked to RPI through the regulatory system operated by Ofwat. As at 31 March 2010, approximately 60% of the group's gross debt was index-linked via bonds and derivatives (2009: 58%).

Despite difficult conditions in the borrowing and capital markets, on 31 March 2010 Glas Cymru issued £140 million of 2048 index-linked B series bonds. A further £35 million of funding, provided by KfW Bank, was drawn on 15 December 2009.

## BOND SPREADS AND CREDIT RATING

There has been a significant downward reduction in the spread differential to Government gilts during the year across the water sector, reflecting an easing of the difficult credit conditions over the last year. Glas bonds continue to trade at spread differentials generally below those of equivalent water sector bonds of similar maturities. The strong credit quality of the business is reflected in credit ratings which are now the highest in the water sector.

## LOOKING AHEAD

Ofwat has set us an efficiency target of a reduction of some 20% in our day to day running costs. In addition to a headcount reduction of around 300, we aim to meet this by exploiting our recent large investment in new technology, by eliminating the profit element, overhead and contract management costs of the previously outsourced services, and by investing in 'green energy' and processes to reduce power costs. This will involve considerable expenditure by the company and forms part of our planned £1.2 billion investment programme to improve services over the next five years.

In the face of these major challenges, our priority will remain the essential task of guaranteeing safe and reliable services for all our customers, as well as safeguarding the environment.

# Key supporting information

During the report year, we delivered the following major outputs from our water service investment programme.

## WATER TREATMENT WORKS (WTWs)

- One scheme was completed at Penybont WTW in line with the agreed undertaking with DWI.
- Construction has continued at Talybont and Court Farm WTW.
- Work has also commenced at Crai WTW, now that previous planning problems have been overcome.

## WATER MAINS PROGRAMME

- 182km of unlined iron water mains were refurbished to improve water quality and iron compliance at customers' taps.
- 50km of water mains causing frequent supply interruptions to customer supplies were replaced.
- 1,271km of mains were cleaned for water quality improvements and ongoing maintenance of the distribution system.

## WATER SUPPLY ASSET MAINTENANCE

We are required to identify any WTWs where maintenance investment in the year has exceeded £5 million or is over £100k and is 10% or more of the Gross Modern Equivalent Asset (GMEA) value of the works. This threshold of investment is high and does not reflect the amount of capital maintenance we actually carried out.

During the report year, we have carried out planned capital maintenance work at two WTWs and one water pumping station, having an investment of more than £100k and 10% of the GMEA value.

A total of 50km of water mains were renewed under prime purpose maintenance and 14km were replaced as a result of diversions.

## CAPITAL EXPENDITURE

Actual expenditure during the report year was £173 million, which is £61 million more than the £112 million allowed in the inflated FD04. The cumulative position for the AMP4 period shows an overall overspend of £74 million (as compared to FD04 inflated at outturn RPI after S19 log-down). **28.**

The main 2009-10 variances are as follows:

- The S19 programme is some £17 million less than the FD04 allowance, primarily due to a reduction in outputs. The current total AMP4 programme output is 1,778km, against the revised S19 Undertaking of 1,853km. Additionally, we are £2 million below allowance for S19 mains cleansing (1,271km against 902km in FD04) as a result of lower unit costs.
- The AMP4 WTWs quality programme is £20 million above the FD04 allowance, with the programme having overcome previous delays with planning consents and now meeting the amended target completion dates. Additionally, we have incurred £41 million expenditure in respect of our WTWs AMP5 Early Start programme.
- Total maintenance (including analysed expenditure) is £34 million ahead of the FD04 allowance, having accelerated significantly during year 5. Additionally, we have seen significant expenditure in our ITEC programme during the year and also acquired a new Customer and Operational Control Centre property in Cardiff.
- Expenditure on security measures at key sites is £7 million ahead of the FD04 allowance, the programme having been substantially completed in Year 5.
- Expenditure on supply/demand schemes is £6 million less than the FD04 allowance. This is due to a lower spend on servicing new developments and a lower take up of option meters by customers.

### 28 | CAPITAL EXPENDITURE BY PURPOSE WATER SERVICE

| £m | Actual year Capex 2008-09 (Outturn) | Actual year Capex 2009-10 (Outturn) |
|---|---|---|
| Base – infrastructure | 49.4 | 43.1 |
| Base – non infrastructure | 48.7 | 51.3 |
| Enhanced service | 0.0 | 0.0 |
| Supply & demand & SOSI | 15.0 | 6.7 |
| Quality | 67.4 | 72.1 |
| Total water service (£m) | 180.5 | 173.2 |

**Total capex for water and sewerage (2009-10) was £358 million gross of infrastructure contributions and third party costs. - net of rechargeable income.*

## NEW ASSETS FOR DEVELOPMENT AND GROWTH:

» Some 34km of new water mains were laid during the report year with the vast majority being mains extensions or branch mains to serve new developments.

## LEAKAGE

### Leakage reduction

» We have reduced our leakage from 194 Ml/d to 193 Ml/d which is 2 Ml/d below the 195 Ml/d Monitoring Plan target.
» The rate of leakage is now 7.1 m3/km/day, down from 7.2 m3/km/day last year. **29.**

### Distribution input and water delivered

The amount of water supplied from our WTWs (Distribution Input) has reduced again over the report year. The saving achieved in leakage reduction is reflected in the 13 Ml/d drop in average daily Distribution Input for the report year from 829 Ml/d to 816 Ml/d**. 30.**

## SECURITY OF SUPPLY (SOSI)

The SOSI has Increased from 93 to 99 for annual average and from 96 to 99 for critical period. This is due to the delivery of a major capital scheme (£8 million) in the North Eryri Ynys Mon zone and to the completion of an early Start AMP5 scheme in Vowchurch. Completion of these schemes has brought SOSI back into line with our AMP4 Monitoring Plan.

## WATER RESOURCES MANAGEMENT PLAN (WRMP)

In March 2008, we published the draft WRMP. The public consultation period has now ended. We will work closely with the Welsh Assembly Government (WAG) and the Environment Agency (EA) with regard to the publication of a revised plan in due course.

## WATER EFFICIENCY

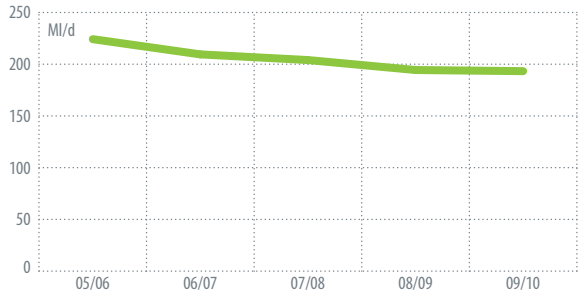
We continue to promote water efficiency by delivering a focused water efficiency message through various methods of engagement with both domestic and non-domestic customers.

Our Water Efficiency Strategy, comprises four keys areas of delivery:

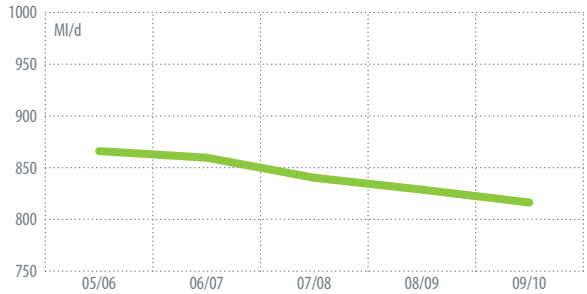
» Customer engagement through the 'Be Waterwise' campaign;
» Various research projects aimed at improving our knowledge base for water efficiency;
» Work undertaken in Water Resource Zones which were in deficit during the AMP4 period; and
» Education through schools.

The communication campaign has seen a significant increase in customer engagement through various joint initiatives.
The campaign engages with customers through community groups and third party endorsers. A key focus has been on holding road shows and theme days throughout our area.

**29 | TOTAL LEAKAGE ML/D**




**30 | DISTRIBUTION INPUT ML/D**



It is our intention to maintain and extend the approach of promoting the 'water efficiency' message through communication and education. This will be reviewed to meet the wider objectives of sustainability and we will have in regard to any future guidance issued by WAG.

We will also closely monitor the water resource status of our resource zones as part of the Water Resource Management Planning process and plan accordingly.

During the report year, over 15,000 pupils attended our education centres. A core module is the importance of water efficiency and, supported by the national Eco-schools initiative, pupils are encouraged to use water wisely and to avoid wastage.

## SEWERAGE SERVICE CAPITAL OUTPUTS

During the report year, we delivered the following major outputs from our sewerage service investment programme.

### Wastewater Treatment Works (WwTWs)

- 14 identified AMP4 outputs, serving a population of 43,000, have been delivered in the report year against a Monitoring Plan figure of six outputs.
- The overall plan is now 37 outputs less than the original Monitoring Plan. This has arisen primarily due to delays resulting from EA reviews of consents under the Habitats Directive. All deferred schemes have been agreed with the EA through the Change Protocol process, and we have delivered all agreed schemes from AMP4.

### Sludge/biosolids

- Work has continued at our 36 Sludge Centres to maintain compliant sludge for agricultural disposal.
- Our programme to provide advanced digestion in order to reduce carbon emissions and mitigate the impacts of fluctuating energy costs has now been fully developed. One scheme has been substantially completed and two further schemes are under construction with completion due in Year 1 of AMP5. This work has been accelerated to achieve ROCS accreditation by March 2011.
- All sludge was disposed of satisfactorily. Treated sludge was largely disposed to agricultural land to meet either the conventional or enhanced treated standard and to comply with the Safe Sludge Matrix. The total figure for sludge, grit and screenings was 88.8ttds.

### Section 101A (first time sewerage) Schemes

- During AMP4 we reviewed the benefits of the 23 schemes in our Monitoring Plan.
- The assessment concluded that we would progress with seven of the 23 schemes, only one of which demonstrated a positive cost benefit. The other six schemes were ones where we had a commitment to provide a public sewer.
- All seven schemes have now been completed.

### Intermittent discharges

- 84 AMP4 schemes have been completed in the report year against our Monitoring Plan target of 81 schemes.
- Cumulative progress to the end of the report year is 420 schemes against an original Monitoring Plan target of 446 schemes. The majority of outputs achieved by the end of the report year have been agreed with the EA and Ofwat under the Change Protocol process. There are a total of 14 delayed CSO schemes which are bridging into AMP5, the majority of which are fully designed or on site.

### Environmental investigations

- 50 investigations under Groundwater and Habitats directives were completed against a Monitoring Plan target of zero. This will take our cumulative total for AMP4 to 124 against a target of 66.

### Sewer flooding

- 207 properties were removed from the flooding registers as a result of company action, with 83 being removed from the ARR of internal flooding, 29 properties from the 1 in 20 register of internal flooding, 17 from the 1 in 20 + register of internal flooding and 78 from the external flooding register.

### New sewers and other sewer refurbishment

» The overall length of public sewers increased by 108km and 22km of sewers were refurbished in the report year.
» We continued our ongoing programme of CCTV surveys with 177km of sewers being inspected in the report year, of which 41km were critical sewers.

### Sewerage asset maintenance

» Work was carried out at a substantial number of sites to improve or maintain asset serviceability and ensure compliance with consents.
» We are required to identify where maintenance investment in the report year has exceeded £5 million or is over £100k and 10% or more of the GMEA of the asset.
» Capital maintenance in excess of £100k and greater than 10% of GMEA, has been carried out at one WwTW.
» Additionally, capital maintenance in excess of £100k but not greater than 10% of GMEA value has been carried out at 21 WwTWs and four Sludge Centres, during the report year.

### Capital expenditure

Actual expenditure in the report year was £185 million, which is some £81 million above the RPI inflated FD04. The cumulative position for the AMP4 period shows an overall under-spend of £78 million (as compared to the FD04 inflated at outturn RPI and after excluding the Advanced Digestion Early Start expenditure). **31.**

The main 2009-10 variances are explained as follows:

» Maintenance expenditure on the sewerage infrastructure network is some £3 million ahead of the FD04 allowance. A significant element of this represents analysed maintenance.
» Expenditure on above ground maintenance has continued to increase in year 5, mainly due to an increase in our substantial ITEC programme and our AMP5 advanced digestion programme. In addition, we have acquired a new Customer Services and Operation control centre property.
» Expenditure on the continuous discharge and intermittent programme is £22 million above the FD04 allowance. In agreement with the EA, work on the Llanelli intermittent catchment scheme, valued at £13 million, has been completed during the report year.
» In agreement with the EA, a number of intermittent discharge schemes have been delayed to next year. These have been subject to the Change Protocol process.
» Delays in the intermittent discharge programme have been partly mitigated via the Change Protocol process, resulting in the overall achievement of 420 outputs, against the original Monitoring Plan target of 446 for the AMP4 period.
» The re-prioritised DG5 programme was completed in year 5, delivering £15 million of investment to reduce numbers on the flooding registers.

**31 | CAPITAL EXPENDITURE BY PURPOSE SEWERAGE SERVICE**

| £m | Actual year Capex 2008-09 (Outturn) | Actual year Capex 2009-10 (Outturn) |
|---|---|---|
| Base – infrastructure | 24.5 | 24.2 |
| Base – non infrastructure | 66.9 | 83.6 |
| Enhanced service | 13.3 | 7.4 |
| Supply & demand | 11.2 | 10.7 |
| Quality | 56.2 | 59.5 |
| Total sewerage service (£m) | 172.1 | 185.4 |

**Total capex for water and sewerage (2009-10) was £358 million gross of infrastructure contributions and third party costs. - net of rechargeable incomee.*

# Sustainable procurement

In 2005-06, we established outsourced arrangements for key business activities, including operations, billing and income, sampling and analysis, IT and network development. We also established asset investment framework arrangements for the delivery of capital projects. All of these arrangements were put in place following robust competitive procurement processes.

The operations contracts, subject to a satisfactory outcome of the required price and performance review, could have continued until 2020. During the last year we have undertaken an extensive period of review and re-negotiation of the operations contracts and this has resulted in the termination of the contracts with UUOS and KWS, and the activities have been re-integrated within Welsh Water.

In line with the provisions of the asset investment contracts, we also undertook a detailed review and re-negotiation with our existing contractors. The framework arrangements with MorganEst, Costain, Morrisons, Laing O'Rourke, Black and Veatch and Imtech were extended until 2015.

Through the AMA we have worked collaboratively to establish a consistent approach with the next level of the supply chain, utilising common processes and reporting.

We have undertaken a very limited amount of procurement activity outside the main outsourced arrangements. Our procurement activities are governed by well established procurement processes that cover the requirements of the European Procurement Directives and key aspects and practices detailed in British Water's 'Guide to Sustainable Procurement'.

# Efficiencies

## COST COMPARISONS 2009-10

| £m (2009-10 prices) | JR 2009-10 | JR 2008-09 | Change | FD 2009-10 | Variance |
|---|---|---|---|---|---|
| Water | 148.2 | 135.8 | 12.4 | 125.9 | 22.3 |
| Sewerage | 140.9 | 125.9 | 15.0 | 116.9 | 24.0 |
| Total | 289.1 | 261.7 | 27.4 | 242.8 | 46.3 |

## OPERATING EXPENDITURE PERFORMANCE

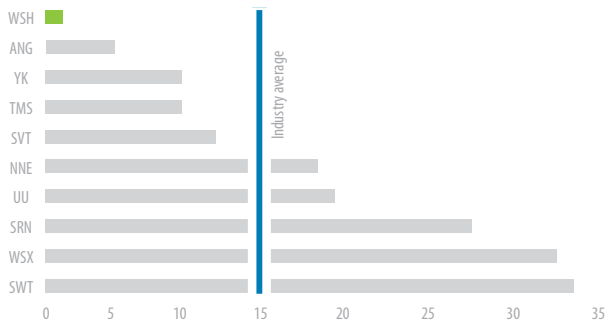
We continued to experience significant upward cost pressures during the report year. Cost increases in areas such as doubtful debts and business restructuring have meant that opex costs have increased by £27 million when compared to JR09 and are significantly above that allowed in the 2004 FD (see table above). However, some decreases were experienced in specific areas such as power costs (decrease of almost 20%) and customer services costs.

The graph below shows the consolidated impact of our progress in driving operating expenditure efficiencies since 2001. This approach has resulted in the lowest increases in operating costs when compared to the other water and sewerage companies (WaSCs). Despite these efforts, Ofwat's relative efficiency report still shows us behind the other WaSCs and has resulted in the significant efficiency challenge we have been set for the AMP5 period.

During the AMP4 period, we ensured that:

- opex cost increases remained below the industry average;
- installed-generation electricity capacity was increased;
- improved operational efficiencies were achieved with £200k savings in the cost of operating the sewer network in North Wales in one year alone; and
- smaller efficiency projects, such as the heating of offices from the residual heat in the final effluent to save some 75% of the total heating bill for the site, were delivered.

## OPERATING COSTS SINCE 2001




*Source: Ofwat - financial performance and expenditure 2008-09 report (at 2008-09 prices)*

## OPERATING EXPENDITURE EFFICIENCIES IN THE REPORT YEAR

During the report year, our operating partners, UUOS, KWS and Veolia Water, undertook efficiency activities ranging from restructuring and integration, through chemical optimisation to site-specific projects. These delivered over £1 million of operating efficiencies that are expected to be sustained in future years. This figure is comparable to that delivered throughout AMP4. Much of this has come from the aeration reduction initiative which commenced at Cardiff WwTW during 2008-09. Through respiromatic control, further savings have been made at Cardiff WwTW and four other sites. At one site, a downsized blower was installed and at another the diffuser membranes were replaced.

Other efficiencies in the report year have included:

- The data on sludge thickness that the data loggers provided was used to track and minimise sludge tanker costs. New pumps were installed at some combined heat and power (CHP) sites and additional protection installed on others to improve generation output.
- Energy usage initiatives remained a key area during the report year. A review of power usage produced savings through supply capacity reductions, and voltage optimisation devices were installed to further reduce consumption.
- Feasibility work was carried out on wind turbines for four sites prior to planning permission application. We have also invested in the refurbishment and replacement of energy intensive assets such as pumps and compressors. We continually monitor external factors such as oil, energy and commodity pricing in order to ensure that we have secured the best possible arrangements with suppliers of items such as chemicals, pipes and fittings and other contract services.
- Savings were also made through a review of sewerage contracts and other supply chain initiatives. Further fleet efficiencies were also achieved, delivering savings on both maintenance and fuel consumption, as the fleet modernisation programme continued.
- The continuation of the IT Enabled Change (ITEC) programme, which commenced in 2006. During the year this has included the introduction of SAP to the waste operations business teams and all waste depots and catchments. This will be introduced to the clean water operations teams during 2010-11.

## CAPITAL EXPENDITURE EFFICIENCIES IN THE REPORT YEAR

The water and sewerage capital programme for AMP4, allowed in the FD04, is approximately £1.32 billion (inflated at RPI).
Our total AMP4 expenditure for the five-year period is £1.36 billion, although we have identified a further £38 million as AMP4 expenditure deferred to the AMP5 period. In addition to the £1.36 billion, we have delivered £83 million of AMP5 Early Start expenditure during the period - specifically in respect of water treatment and advanced aerobic digestion schemes.

During the report year, we have:

- Substantially completed the delivery of the overall investment programme at a cost broadly in-line with the overall FD04 allowance although, as previously noted, the water programme in particular has experienced significant upward cost pressures.
- Resolved potential delays to our AMP4 water treatment programme due to planning issues, to ensure delivery of those schemes in line with the regulatory undertakings. We have also delivered the two AMP5 Early Start schemes in line with their undertaking deadlines.
- Fully completed the S19 mains rehabilitation programme – taking the total for the AMP4 period to 1,778 km.

## FUTURE INITIATIVES

As a result of our position in Ofwat's relative efficiency analysis, the FD09 settlement means that we are required to reduce operating costs by some 20% by 2015. This is a significant challenge, but we are already working towards achieving this through organisational restructuring, our continued investment in new technology and investment in 'green energy' and processes to further reduce power costs.

# Competition

## WATER ACT 2003

We reviewed and published revised versions of our Access Code and Indicative Access Prices in October 2009.

There have been and continue to be a number of industry consultations in respect of competition in the water and sewerage industry to which we have and will continue to contribute. In particular, Professor Martin Cave led a Government review of competition and innovation in the water industry and published his final report in April 2009.

In September 2009, following on from the Cave Review, a consultation was published in respect of proposed legislation to extend and enhance competition and innovation in the water and sewerage industries in England, and to comment on the appropriateness of the recommendations in relation to Wales. We have responded to this consultation.

## INSET APPOINTMENTS

There are two companies who hold appointments in Wales. Albion Water in North Wales and SSE in South Wales. In March 2009, SSE was granted an inset appointment in respect of the Llanilid site near Bridgend. This appointment was subsequently the subject of a Judicial Review challenge. The claim was unsuccessful and was dismissed by the High Court in December 2009. We have continued to work with SSE to progress arrangements for the water and sewerage services to the Llanilid site.

In addition we are dealing with a number of potential applications from new appointees in respect of other sites in Wales.

# Board endorsement

The Company has established appropriate processes and systems of internal control that provide the necessary assurance concerning the reliability, accuracy and completeness of the information in the June Return. These systems have recently had ISO9001:2008 accreditation reaffirmed following a surveillance audit undertaken by SGS UK Ltd in March 2010

## POLICIES AND PROCEDURES

- Subsequent to the June Return 2006 submission, Grant Thornton was asked to undertake an audit evaluating the systems utilised within the business for the completion of that Return. This involved documenting key processes and internal controls and Grant Thornton assessing the quality of systems and processes used for generating regulatory information. The conclusion of this study found that the systems of control were largely satisfactory. These processes have been followed to produce this year's June Return and in some areas strengthened.
- The process mapping exercise, originally undertaken by Grant Thornton, has been expanded. As part of due diligence, each Welsh Water owner was required to confirm that they had completed the table in accordance with the process maps and procedure notes and to highlight whether any updates were required. The procedures are kept up to date and are published on the Welsh Water Intranet.
- Our policy document for the June Return (the 'Process for the Welsh Water June Return') was republished. This outlined the formal process to be undertaken and, inter alia, the roles and responsibilities of key people including line owners, table owners, the Regulation team, Welsh Water Executive (collectively and individually), the Audit Committee and the Board.
- The Company's 'Whistle-Blowing Policy' was reissued in May 2010 as part of the Welsh Water 'Compliance for Staff' booklet with its importance re emphasised, both to Welsh Water staff and those of service providers. This policy contributes to a culture of openness within Welsh Water and right across the Asset Management Alliance, where issues can be discussed and any concerns raised without fear of criticism or recrimination.
- A clearly defined organisational structure has been established for completion of the June Return, with appropriate delegated authorities and clearly defined allocation of responsibilities, all co-ordinated and managed by the Regulation Department.
- Ownership and responsibility for individual lines and each regulatory table have been clearly defined. Each individual is responsible for adhering to all appropriate guidance in the compilation of the data and associated commentary. This also involved formal 'sign off' by the individual, verifying that the figures in each line had been obtained from a recognised data source and have been accurately compiled in accordance with Ofwat's latest reporting requirements. In addition, confirmation was required that any material judgements or assumptions had been highlighted and documented, ensuring an accurate audit trail, with a review of confidence grades where applicable. Where material is within an individual's personal knowledge, he or she is required to confirm that it is true or, where not, that appropriate enquiry has been made.
- This 'sign off' requirement included all the main Service Providers involved in the compilation of data at both data provider and Director level.
- Allocation of overall responsibility for individual tables and associated commentaries was assigned to the appropriate Welsh Water Executive Member. Each was responsible for the review and 'sign off' of their own tables and commentaries.
- We have worked with the Wales Quality Centre to build on our continuous improvement plans and review our processes for JR09. ISO9001:2008 accreditation was reaffirmed following a surveillance audit undertaken by SGS UK Ltd in March 2010, with no major or minor non-conformities recorded within our quality management system during their assessment. This external endorsement recognises the structured processes that we have in place.

## IMPLEMENTATION AND INTERNAL REVIEW

- Production of 'June Return Table Packs' by the Regulation team ensured that all table owners had a single point of reference for all information necessary to undertake their specific responsibilities. The majority of this information was also available on the Welsh Water Regulation team intranet site. These 'Packs' included the Reporting Requirements for each table, any subsequent points of clarification issued by Ofwat, queries received on the previous June Return with the Company response, any Company specific guidance to Reporters, information on confidence grades, the Reporter's report on each individual table and Ofwat feedback to the Reporter. Our main Service Providers also received a version of the 'sign off' document.
- In 2009, we introduced a new June Return section on the Welsh Water Infozone system, with all the information included within the table packs (described above) having been placed on the Infozone. This streamlined the process,

improved communication, facilitated swifter and more efficient management of documents and reduced the risk of misunderstandings or errors occurring. The process worked well and, with some small modifications, has been used again this year.

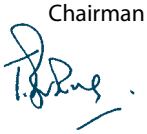
- Regular communication between the Regulation Department and all line and table owners was undertaken prior to and during the preparation of the June Return.
- During the report year, a programme of mid-term audits and ongoing dialogue with the Reporter was undertaken to ensure that issues were identified and highlighted at an early stage. We can report that no significant issues were raised via these audits during the report year.
- There was regular reporting of key performance indicators to the Board, the Quality and Environment Committee (QEC) and Senior Management Team throughout the report year.
- A rigorous process of internal due diligence meetings was undertaken by the Regulation Department between the 4th May and 4th June, to challenge information, judgements and assumptions made and to ensure compliance with all relevant regulatory guidance.
- Particular scrutiny was undertaken of those subject areas which, from previous June Returns, Ofwat had highlighted to the Reporter as requiring attention.
- A review was undertaken by the Regulation team to ensure consistency between the Overview and the individual tables and commentaries.
- The 'sign off' forms were endorsed by each line owner, table owner and the responsible member of the Welsh Water Executive before the June Return was submitted to Ofwat. The 'sign off' form also included confirmation from table owners that the process maps had been followed.
- Process review meetings, involving the Welsh Water Executive, took place on 26th May, also attended by the Reporter's Lead Auditor, the Auditor and table owners. Each table was scrutinised and progress reports were delivered on the internal challenge, Reporter sessions and the 'sign off' processes, with any relevant and material issues highlighted and discussed.

## EXTERNAL REVIEW AND BOARD ENGAGEMENT

- The involvement of Grant Thornton initially and subsequently the Welsh Water internal audit department in the review of processes has meant that there was a rigorous independent evaluation of the procedures in place.
- The recent high level evaluation of the systems in place within Welsh Water, undertaken by the internal audit department, concluded that the adequacy and application of internal controls are good, with an overall rating of: Full Assurance.
- The successful attainment of ISO9001:2008 accreditation, with no major or minor non conformities, further reinforced the adequacy and suitability of the procedures in place.
- There was a formal review and certification of the June Return by the external Reporter and Auditor. The Reporter and Auditor also attended the June Board Meeting and provided a briefing on the results of their oversight process.
- There were formal Audit Committee reviews of the June Return processes and progress in the implementation of these processes. On the 4th February 2010, the Audit Committee received the timetable for JR10 and reaffirmed the adoption of the same processes as in the previous year. On the 21st May 2010, the Audit Committee received an update on progress.
- At its June meeting, the Board received reports from management, internal audit, the Reporter and the Auditor on the implementation and review of the June Return processes which it had approved at earlier meetings. The Board also reviewed and endorsed the Board Overview document.
  As part of the June Return process, each Director has confirmed that, as at the date of the Board Overview, and as far as the Director is aware, there is no relevant audit information of which the Company's Auditor or Reporter are unaware.

The Board met on 4th June 2010 to review the overall June Return process and the operation of the systems of internal control as highlighted above. On this basis, the Board were satisfied that these processes and systems provide the necessary degree of assurance that the information reported in the June Return was of the standard that can reasonably be expected of a water and sewerage company complying with its regulatory obligations.

**Terry Burns**
Chairman



**Nigel Annett**
Managing Director

# Carbon accounting

## Operational Greenhouse Gas Emissions

The Carbon Accounting Workbook (CAW v1.0) was originally issued in January 2008 as a draft tool for UKWIR and formalised as a final workbook in June 2008 (CAW v2.0). The 2009 Ofwat June Return used an updated version of the workbook (CAW v3.0), and a further revised version (CAW v4.0) has been produced by WRc/UKWIR for the 2010 June Return (JR 10).

CAW v4.0 takes into account the updated lists of emission factors (EFs) and new methodologies to be used for company reporting in 2009-10, issued by Defra in July 2009. It also takes into account the 'Guidance on How to Measure and Report your Greenhouse Gas Emissions' issued by Defra and DECC in September 2009. This represents a substantial revision and enhancement of reporting guidelines previously published by Defra which had been used to develop the CAW methodology. Additionally, in October 2009, DECC released Government Response and Policy Decisions on the latest consultation on the draft Carbon Reduction Commitment (CRC) Order 2010. With this document, the CRC, to be called the CRC Energy Efficiency Scheme from then onwards, started to assume its final shape in anticipation of the start date of 1 April 2010.

In December 2009, Ofwat published their reporting requirements for JR10. According to these specifications, companies are obliged to include more detailed information on their operational carbon emissions in the report year than in previous years. Ofwat's requirements are drawn from the latest developments of the Defra/DECC Guidance and the Government Decisions on the CRC published in October 2009. All of the above documents and guidance have resulted in substantial changes to the CAW v4.0 from v3.0.

Calculation of operational GHG emissions has been undertaken according to the Water UK methodology 2010 and covers the financial year April 2009 to March 2010.

Emissions include direct and indirect emissions associated with the provision of water, wastewater and sludge disposal. This includes all areas where Welsh Water has management responsibility such as the activity of operational partners. They exclude emissions from the supply chain and embedded carbon in construction activities. Supply chain emissions are those associated with the manufacture and transport of consumables. Embedded emissions are those associated with the manufacture and distribution of materials.

### 1. COMPARISON JR09 AGAINST JR10

Our annual operational emissions according to the CRC methodology have increased slightly, by less than 1%, whereas our annual operational emissions according to the Defra methodology have increased significantly by 26%.

The increase in the CRC carbon footprint is mainly due to the updated emissions factors used in this version of the CAW v4.0 (largely for electricity as this is the dominant emission).

The increase in the Defra carbon footprint is because of a change in the Defra guidelines that have been applied in CAW v4.0. Unlike CAW v3.0, v4.0 does not allow for any emission credits due to imported electricity being purchased from good quality CHP sources from the grid (often referred to as 'brown energy'). This is because Defra is currently reviewing its position on CHP backed tariffs. In JR 08 this credit accounted for a 20% reduction in the overall Defra carbon footprint. If it were not for the change in the Defra reporting requirements, then the Defra emissions total would include a credit of 63,000 tCO2e. This would result in a Net Operational Emission of 252,760 tCO2e, an increase of less than 1%.

In CAW v4.0 emissions are reported under Scope 1, 2 and 3 headings in line with the new Defra Guidance:

- Scope 1 emissions cover all emissions that are emitted directly from the companies' regulated activities either by burning fossil fuels, process emissions or transport emissions from vehicles owned or leased by the company.
- Scope 2 emissions cover all emissions that are indirectly emitted as a result of electricity usage by the company.
- Scope 3 emissions relate to all other indirect emissions including emissions from business travel in public and private vehicles and also emissions from outsourced activities not included in Scope 1 and Scope 2 emissions.

In the report year a large proportion of the appointed business was been undertaken by outsourced operators; as a result 99% of the emissions associated with the appointed business are included in the Scope 3 emissions. Following the in-sourcing of operations by the company in April and May 2010, there will be a major change in these proportions next year.

## 2. DATA COLLECTION

### Gross annual operational GHG emission

**Scope 1 -** Welsh Water Direct emissions are produced by the burning of natural gas for the heating of administration buildings; this data is collected from invoices.

Process and Fugitive emissions (Line 2) come from the use of refrigerants in cooling units around various Welsh Water offices. This data has been provided by the facilities management department from annual maintenance records. During the process of data collection, we have identified additional sites where cooling units are in use and are putting in place measures to collect additional data next year.

Line 3 records any company owned or leased vehicles. Welsh Water own two vehicles and this data has been recorded in the CAW. The data for the Renault Espace was recorded from the fuel card data in litres of diesel. However, for the transit van, the mileage used has been estimated from the annual MOT records in March of each year.

**Scope 2 -** Welsh Water Scope 2 emissions are from the electricity used by the company for administrative purposes; this data is collected from invoices.

**Scope 3 -** Business Travel (Line 5) in private cars has been collected from the Welsh Water payroll department. National Rail travel data was received from the travel consultant, Expotel, as an electronic report for the period concerned, and flight information was obtained from the Welsh Water travel booker. This information was then cross checked with a separate travel consultant report. The flight information had to be expanded to provide passenger kilometres for input to the CAW.

Line 6 is concerned with emissions from outsourced activities. In the report year, the majority of Welsh Water's appointed business was outsourced and, therefore, this section contributes the majority of the operational emissions.

Electricity data is collected using an energy management system. Non transport fuel usage such as gas oil is collected from invoices extracted from the procurement system. The flows and proportions of Ozonation are provided by the relevant area managers.

Sewage and Sewage Sludge treatment emissions are calculated from sludge volumes provided by the outsourced contractors, as is the volume of sewage. Power produced from CHP and hydro is accurately recorded using meters. However, heat produced from CHP can only be estimated from the guidance in the CAW.

Finally, transport fuel use by the outsourced operators is recorded using fuel cards and data is input as litres of petrol or diesel. The Gross Operational Emissions are calculated in Line 7 of the table.

### Net annual operational GHG emissions

The data to account for the exported renewables (generated onsite and exported) is based on the amount of power produced by the onsite renewable sources. This is accurately recorded by electricity meters.

No electricity was purchased under green tariffs. The Net Operational Emissions are calculated in Line 10 of the table.

### Annual operational GHG emissions according to the CRC definition

The operational GHG emissions according to the CRC definition are calculated from the electricity data that is recorded in the energy management system and the fuel volumes data, which is taken from the procurement system with allowance for the export of renewable energy and the sale of ROCs for the renewable energy.

Data for fuel volumes is based on invoices from the procurement system. This does not provide quantities of fuel used only quantities purchased. It was difficult to clearly separate the types of fuel purchased.

### Annual operational GHG intensity ratio values

These two ratios (Line 12 & 13) take the Drinking Water and Sewage Operational GHG Emissions contributions based on the data collected and described above. The Ratios are calculated using:

1. The Total Volume of Drinking Water Supplied, derived from JR10 Table 10 line 26; and
2. The Volume of wastewater treated, derived from JR10 Table 14.

### Renewable energy generated

Total energy generated from sludge processing (line 14) is based on the metered data collected for the CHP plants and the renewable energy created from sludge processing. This is recorded by the outsourced contractors.

Total renewable energy generated from other sources (line 15) is based on the renewable energy produced and exported from the hydropower installations on the Drinking Water pumping and treatment process. This is recorded by the outsourced contractors.

### Renewable energy generated

This value is the revenue from claimed ROCs; the data is collected from the outsourced contractors.

## 3. OMISSIONS AND ASSUMPTIONS

Our approach to Omissions and Assumptions has been to take account of the scale of activity and to use judgement in accounting for and including emissions relating to activities. All activities outsourced to UUOS and KWS which generate direct emissions are included. It is acknowledged, however, that not all the activities are necessarily operational activities as staff are also engaged on capital investment projects, which involve the construction of assets, i.e. there is time associated with embedded emissions.

Administration and Transport account for less than 4% of our operational emissions, therefore we have taken into account the scale of the activity and decided to include all of the UUOS and KWS emissions as they are unlikely to be material to the overall value and will be off-set by the activities of our smaller operational partners that have not been included.

Activities such as the sampling and monitoring programme and the IT support provided by other operational partners have not been included in the scope. Consultants and contractors working closely with Welsh Water are normally based in our offices and depots, and their energy use is therefore indirectly captured (although their business mileage is not).

This is in part due to the difficulty in extracting relevant data that is specific to Welsh Water when these organisations also provide services to other companies.

For the majority of these organisations, the most significant carbon impact is likely to be associated with business travel, and this forms a minor element of our total carbon footprint.

The data set for liquid fuel used at treatment works (e.g. diesel and gas oil for back-up generators) is currently not as robust as we would like. A method has been put in place for monitoring diesel, LPG and gas oil fuel use across all of our sites and this data is more robust than in previous years; however, it still reflects fuel purchased rather than used. For year on year reporting, this will have no impact on carbon emissions as the fuel volumes are small compared with electricity and gas consumption.

In JR09 the contribution of refrigerants to the overall carbon emissions was excluded due to the small volumes involved and the lack of data. For JR10, we have included the recorded refrigerant use across nine offices. During the data collection process, we have identified that there may be further (single) chilling units across a number of other locations. These units have not yet been fully identified and are therefore not included in this calculation. However, further investigations will be undertaken to include them in next year's return. One of the refrigerants in use is R22 which is not listed in the UKWIR workbook. However, after consultation with WRc, we have used R410A as this has the closest Global Warming Potential to R22. Due to the small nature of the refrigeration volumes held in our air conditioning units (especially when compared with emissions from energy use, sludge treatment etc), emissions from the losses associated with air conditioning refrigerants are likely to be minimal. However, their high global warming potential means that Welsh Water will continue to endeavour to improve the data collection and recording of their emissions contribution.

In some cases, assumptions have had to be made in order to provide a base for calculation. In these instances the assumption and calculation have been based on guidance in the CAW or other information. These include: the use of 60g BOD/day (to be consistent with Table 17) for the calculation of population served by secondary treatment and the calculation of biogas used in CHP which is based on the power produced by the CHP plants.

An assumption has been made concerning the accounting of renewable energy produced on site. This is discussed further in the Carbon Accounting Appendix Commentary, Section 8.

Finally, due to the structure of Welsh Water, it is assumed that all electricity use for drinking water, sewage and sewage sludge operations are Scope 3 emissions by our outsourced operators UUOS and KWS.

## 4. DATA ROBUSTNESS

Electricity consumption is responsible for the majority of our operational emissions (approximately 75%). Electricity use is monitored by the energy management system and this is then monitored and scrutinised closely by our dedicated energy management teams. Processes and tools have been developed primarily to drive cost efficiencies and, as a result of this, we can apply a high degree of confidence to this data with a reliability band of A. In particular, all data from renewable power sources are metered and therefore have a high degree of accuracy: Confidence grade A1.

Improvements have been made in the data capture procedures for sources of direct carbon emissions, for example, fuel used on site, process emissions and transport, with confidence grades applied to all data sets. We report that all data is from sound textual records. However, we accept there will be minor shortcomings, and we therefore report a reliability band of B.

With regard to accuracy banding, we acknowledge definitive processes are not in place to account for direct emissions and in some cases are omitted due to the complexity of data analysis and collection. With this in mind, we have variable accuracy bands depending on the class of data reported.

Fuel sources information can only be gathered from procurement records and, therefore, are not an exact representation of fuel use. For transportation, in some instances, volumes of fuel are not available and, therefore, the emissions must be calculated from mileage records. As a result, the accuracy level can only be 1-5%. In future, we will be working with our procurement department to ensure that we capture all data as accurately as possible. Whilst for the first time, we have input some information for refrigerant use, there are still some records outstanding and the method of data capture must improve.

We will do this by including the data reporting requirement in future facilities management contracts. Therefore, we have given this information a confidence level of B3.

Finally, whilst the power generated from the CHP plants is metered and therefore recorded accurately, there are currently no heat meters to record the quantity of heat produced. Therefore, this data has been given a confidence level of C4 to accuracy of within 25%.

## 5. JUSTIFICATION FOR INCREASES/DECREASES

Good quality CHP use – Whilst UUOS purchased electricity from good quality CHP sources in the report year, within CAW v4.0, the carbon allowance for this has been removed. This has resulted in a large increase in the carbon footprint of approximately 60,000 tonnes, even though our electricity use has actually fallen slightly.

**Electricity** – Overall use has decreased due to a concentrated effort on energy efficiency and an increase in renewable generation. The exception was an increase in the electricity used for drinking water treatment which we believe is due to the enhanced treatment now being undertaken on a number of sites across North Wales, particularly the increased use of ultra violet disinfection.
**Natural Gas** – Use of natural gas has decreased due to the planned shutdown of the gas dryer at Afan WwTW.
**Gas Oil** - Volumes of gas oil recorded show a slight increase over last year. This is due to better recording methods where previous data gaps have been filled.
**Ozonation** – The decrease is due to Rhiwgoch being switched off between October 2009 and March 2010.

Renewable energy generated on site has increased from 7,854,000 kWh (JR09) to 10,732,000 kWh (JR10). This increase is partly due to the full year effects of those sites which were commissioned part way through 2008-09 and also due to an increase in the capacity installed at sites such as at Eign. This increase results in over 600t CO2e credits in the Defra calculation.

**Transport** – There has been a decrease in the contribution of transport to the overall calculation. Decreases in freight fuel use are as a result of better planning of tanker routes and control of distances travelled. Also, alternative sludge centres have been used, resulting in shorter journeys. The use of actual fuel volumes in place of mileage also results in improved accuracy of data.

## 6. OVERVIEW OF FUTURE WORK

The current carbon accounting process has been in place for six years, albeit that a different carbon accounting methodology (Carbon Trust) was in place in the earlier years. In the report year, this approach changed to a more frequent real-time monitoring of both energy and carbon. This will assist in tracking performance against both the internal voluntary targets and the forthcoming CRC mandatory targets.

The methodology for future years will remain broadly the same, i.e. using the most up-to-date industry standard workbook provided by Water UK. However, we are observing significant changes in our overall footprint year-on-year due to changes in carbon accounting practice (e.g. treatment of CHP brown energy this year). This makes tracking and describing carbon reduction targets on a consistent basis difficult.

Other planned minor improvements are to review robustness of minor data, such as the refrigerant gas losses, and increase business mileage collection from smaller consultants and contractors who are not currently captured in our business mileage database.

## 7. SECOND SEWAGE INTENSITY RATIO VALUE

For JR10, Ofwat require the reporting of Carbon emissions using a second sewage intensity ratio. This ratio is based on the volume of sewage discharged from WwTWs and therefore accounts for the fact that the volume of sewage treated will be greater than the June return table 14 data due to surface water drainage.

The volume of sewage discharged from WwTWs is calculated from two sources:

1. the data from the MCERTS sites; and
2. consented Dry Weather Flow (DWF) at unmeasured (non MCERTS) sites.

The data for the MCERTS sites is for the period January to December 2009. This is the EA reporting period for which data is currently available. Next year, we will have financial year data available for this calculation. However, for JR10, this is the best available information in order to calculate the secondary sewage intensity ratio.

We have taken recorded MCERTS data as base information and adjusted it for missing day's data and derived an overall relationship to consented DWF. We have then applied that factor (1.09) to consented DWF at unmeasured (non MCERTS) sites to derive a total flow for those sites and hence a total volume of sewage discharged from WwTWs. Based on the above calculation methodology, the volume of sewage discharged from WwTWs is 523,495 Ml/year.

The MCERTS data accuracy is +/-8%. Whilst it is difficult to estimate changes in the accuracy of data through the calculation steps we have followed, we estimate that this data has an overall accuracy of +/- 10% to 15%.

The above volume of sewage discharged from WwTWs gives a sewage intensity ratio of 303 kgCO2e/Ml.

## 8. REPORT ON SITE GENERATED RENEWABLE ENERGY THAT IS NOT BACKED BY REGOs

The 2009 Defra/DECC guidance and the document 'June return requirements and definitions manual 2010', published by Ofwat, define renewable energy as "electricity from 'owned or controlled' renewable sources backed by Renewable Energy Guarantees of Origin (REGOs) within the UK".

We currently have a number of Non-Fossil Fuel Orders (NFFOs) for the renewable energy produced by the hydropower installations at Llyn Brenig and Llys y Fran. These Orders are with the Non-Fossil Fuel Purchasing Agency (NFPA), a government department who act as agents for the scheme which was the predecessor to ROCs. In previous versions of the CAW these have been included as renewable energy and received the full discount/benefit. However, CAW v4.0 requires that this energy is split into REGO and Non-REGO sources.

When the NFFOs expire (in 2018), Welsh Water can apply for ROCs accreditation and REGOs can be issued. Until then, only the NFPA may request REGOs which are sold on with the energy generated.

Welsh Water believe that whilst they do not hold REGOs for the renewable energy produced at their drinking water pumping sites, this energy should be classified and therefore accredited as full REGO renewable energy and this is how the data has been used in the JR10 CAW v4.0.

## 9. OFWAT REPORTING - GHG EMISSIONS DATA FOR PERIOD APRIL - 2009 TO MARCH - 2010

| Item | Type | Descriptor | Unit | Value | CG |
|---|---|---|---|---|---|
| **A** | **GROSS ANNUAL OPERATIONAL GHG EMISSIONS** | | | | |
| 1 | | Direct emissions from burning of fossil fuels (including natural gas CHP generated onsite) | t CO2e | 542 | A2 |
| 2 | | Process and fugitive emissions | t CO2e | 11 | B3 |
| 3 | Scope 1 emissions | Transport: Company owned or leased vehicles | t CO2e | 7 | B2 |
| 4 | Scope 2 emissions | Total grid electricity used by company (including CHP electricity purchased) | t CO2e | 1,261 | A2 |
| 5 | | Business travel on public transport and private vehicles used for company business | t CO2e | 212 | B2 |
| 6 | Scope 3 emissions | Outsourced activities (if not included in Scope 1 or 2) Energy and other | t CO2e | 292,767 | B2 |
| 7 | | Gross Operational Emissions | t CO2e | 294,800 | B2 |
| **B** | **NET ANNUAL OPERATIONAL GHG EMISSIONS** | | | | |
| 8 | Emissions reductions / accounting | Exported renewables (generated onsite and exported) | t CO2e | -631 | A1 |
| 9 | | Green Tariff electricity purchased | t CO2e | 0 | n/a |
| 10 | | Net Operational Emissions | t CO2e | 294,169 | B2 |
| **C** | **ANNUAL OPERATIONAL GHG EMISSION ACCORDING TO CRC DEFINITION** | | | | |
| 11 | | Operational Emissions According to CRC Definition | t CO2e | 263,235 | B2 |
| **D** | **ANNUAL OPERATIONAL GHG INTENSITY RATIO VALUES** | | | | |
| 12 | Water Service | Operational GHG emissions per Ml of treated water | kgCO2e/Ml | 381 | B2 |
| 13 | Sewerage Service | Operational GHG emissions per Ml of sewage treated | kgCO2e/Ml | 778 | B2 |
| **E** | **RENEWABLE ENERGY GENERATED** | | | | |
| 14 | | Total energy generated from sludge processing (both used onsite and exported) | kWh | 37,479,682 | B3 |
| 15 | | Total renewable energy generated from other sources (both used onsite and exported) | kWh | 742,552 | A1 |
| **F** | **RENEWABLE OBLIGATION CERTIFICATES** | | | | |
| 16 | | Revenue from claimed ROCs (from renewables both used and exported) and Feed In Tariffs | £000 | 489 | A1 |

Dŵr Cymru
Welsh Water