

DŴR CYMRU
WELSH WATER

Environmental Overview

Foreword

Our industry interacts with the environment and community in a way that few others do. By supplying clean water and by collecting and treating wastewater, our role is to help to meet the public health needs of today and, through careful stewardship of the associated infrastructure, for future generations.

Glas Cymru was established to ensure Dwr Cymru Welsh Water (Welsh Water) provides reliable and safe water supplies and sewerage services to customers in a cost effective way. Our provision of these services is underpinned by strong regulation that covers all aspects of our core business; drinking water quality, wastewater quality and price control. However, as well as our legal and licence obligations, Welsh Water has much wider responsibilities to our customers, employees, suppliers and contractors, the community in general, and, crucially, to the environment. Understanding how Welsh Water impacts on the wider environment and the actions we can take to minimise any adverse effects is a key objective for the business.

In winter 2002, we undertook a review of our wider environmental performance as compared with that of our peers in the water and sewerage industry. One of the key issues this identified was a need to further develop our reporting of performance in a wider environmental context, to promote a better understanding of the environmental benefits and impacts associated with our business.

Under Glas Cymru's ownership, we publish considerable information as part of our statutory environmental reporting. This includes compliance with leakage and sludge recycling standards, compliance at our water and wastewater treatment works - and also details of our capital investment programme designed to manage environmental impacts and provide for the long term management of our assets and infrastructure.

This year, we decided to produce two new environment related reports to provide further information on how our business supports the environment in Wales. The first, an Overview on biodiversity was released in the summer. This presents our position on biodiversity, an area in which Welsh Water has a strong reputation. The

report should complement and inform the work being done by other wildlife and governmental organisations with whom we work very closely.

This, the second report, is an Environmental Overview, designed to re-launch reporting on our wider environmental performance. This is something we are correcting, and this overview seeks to set the scene for future years, by stating our position on a wide range of environmental issues and detailing our interim objectives and targets as preparation for our future reporting on our environmental management.

I hope you enjoy reading this document. This work is seen as complementary to our existing standard of reporting of regulatory performance and our focus on providing high standards of service at the best value for money, whilst ensuring the long-term stewardship of our assets for future generations.



Mike Brooker
Managing Director

December 2004

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About us

Our role

Our primary responsibility is to ensure a clean and reliable supply of drinking water and to deal effectively with wastewater so as to protect the natural environment.

Who we are

Dwr Cymru Welsh Water ("Welsh Water") is owned by Glas Cymru: a single purpose company, formed to buy, finance and manage Welsh Water. Glas has no shareholders and is run on a 'not-for-profit' basis. We will not diversify into other unrelated activities and any financial surpluses generated by our business are reinvested in improving services to our customers and lowering bills.

Our business

Welsh Water provides water supply and sewerage services to over three million people living and working in Wales and some adjoining areas of England.

We have 1.2 million household customers and over 110,000 business customers making us the sixth largest of the ten regulated water and sewerage companies in England & Wales.

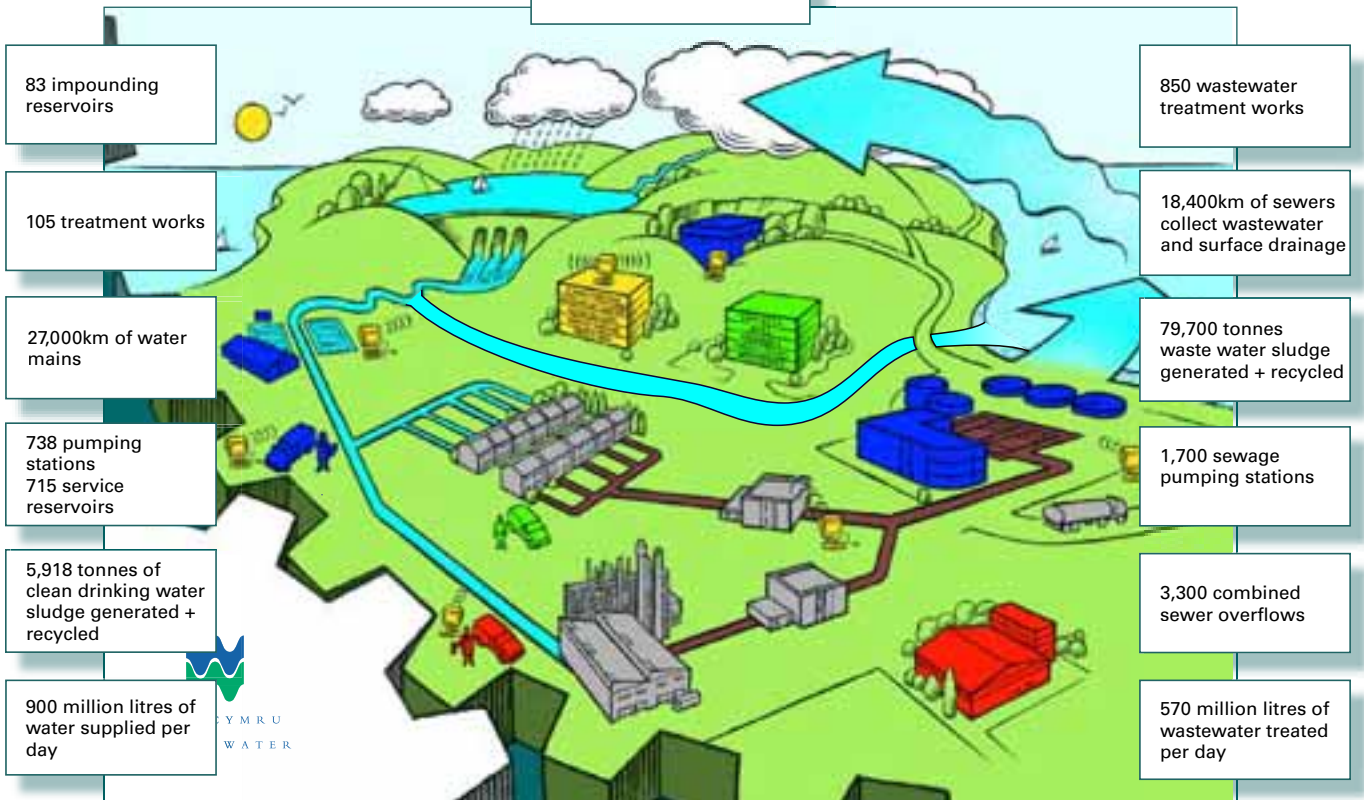


Facts and figures

Water

£14 billion worth of assets

Waste



Our organisation

Our business model

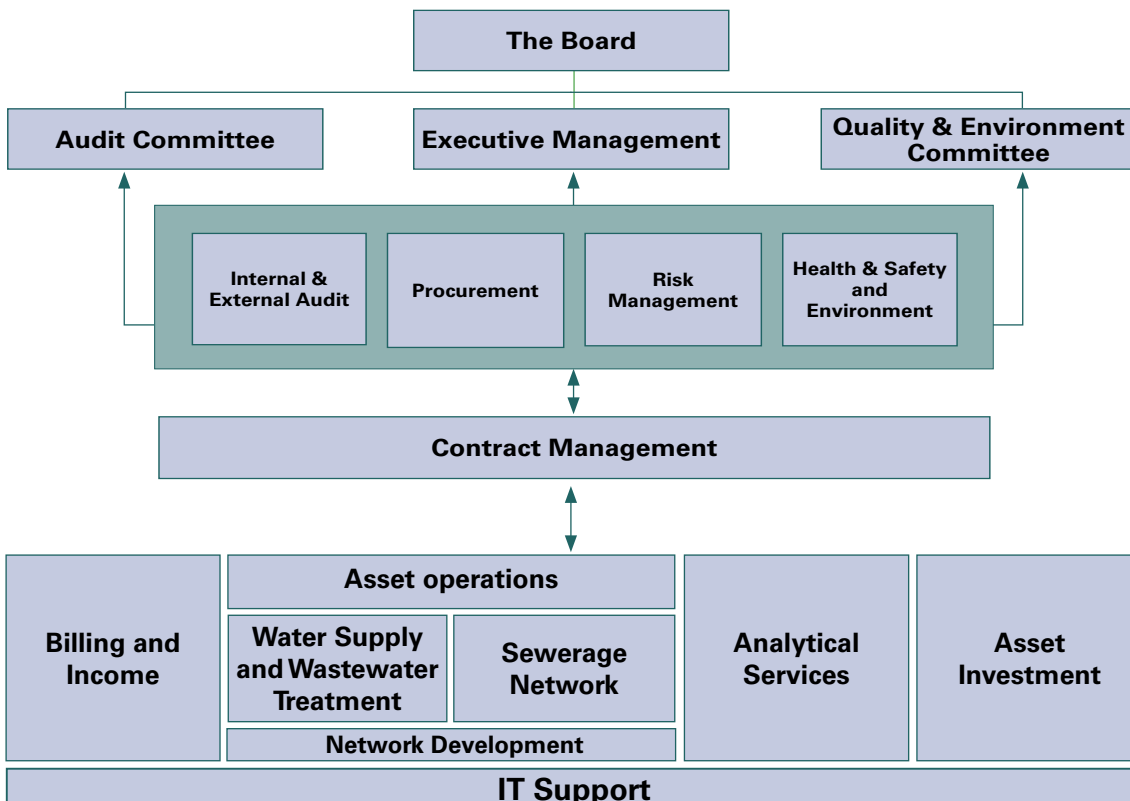
A key feature of Glas Cymru's ownership of Welsh Water has been the outsourcing of, asset investment, asset operations, billing and support activities to a range of contract partners. These arrangements cover around 85% of our annual operating and capital expenditure and were established under our competitive procurement strategy. Welsh Water directly employs 145 staff, with the business as a whole, including partners, employing over 2,300 people.

Environmental management

Directors have overall executive responsibility for our environmental performance and for management reviews. They approve corporate aspects of our environmental management such as the environmental policy and ensure that the operation of all areas of the business is undertaken with adequate environmental considerations.

The Head of Environment and Education has overall responsibility for our environmental systems and approves the content of programmes, environmental reports and statements issued by Welsh Water covering its wider environmental management.

Organisational structure at 2004



Internal accountability

The Quality and Environment Committee of the Board (“QEC”) plays a key role in the system of risk management and governance of the company. QEC was established in recognition that where a large proportion of our services are provided by specialist contractors, then additional attention should be paid to the assessment and handling of hazard and risk. Accordingly QEC plays a key role in monitoring our environmental performance. The Committee produces an annual report to the Board which is a published document. Copies may be obtained on request from the company secretary or from the company’s website. www.dwrcymru.com

External accountability

Most of the significant aspects of our business, including the way in which our business continually interacts with the environment, are tightly regulated with mandatory performance limits and detailed improvements plans set in line with ministerial guidance. The majority of our business operations are therefore regulated by Ofwat, Drinking Water Inspectorate and the Environment Agency. All of our Ofwat and DWI programmes are audited regularly by external independent auditors sent by the regulators. We also have an outsourced programme of internal business audit carried out by an independent service provider.

Environmental management in the supply chain

We outsource all our operational activities and have in 2004, put out to tender contracts worth about £370m a year. Environmental criteria were included as an essential part in selecting the right business partners. We believe that this has provided us with a major opportunity to work with our contract partners to further improve our environmental performance in all of the areas covered by this report.

This process of environmental engagement included:

- 1. An assessment of pre qualification questionnaire.**
- 2. Desktop assessment of responses to invitation to tender.**
- 3. Meetings and site visits to test the robustness of tender submissions.**
- 4. The engagement of a specialist external consultant to assist in the review of the results from 2) and (3) above.**

Our environmental impacts

Our business has an impact on the environment. We treat and supply the water we take from our reservoirs and certain rivers in our region - at which point it is then used by our customers, before it is cleaned and subsequently returned to the environment.

Wales has the highest quality rivers in the UK, a large coastal area, about 70% of which is classed as Special Areas of Conservation. In 2003/04, 77 out of 78 of our designated beaches achieved mandatory standards, with 66 beaches achieving the more stringent guideline standards.

The processes we use to treat water and wastewater have a direct impact on the environment. This can be in terms of the use of primary resources such as energy,

water and chemicals or in terms of the discharges to water (fresh and coastal), generation of waste (particularly sludge), the emissions to air (odours and greenhouse gases) and potential disturbance or harm to biodiversity. Further, through our capital investment programme, we build essential water infrastructure such as treatment works and replace the network of clean water and wastewater pipes and this has the potential to cause at least some environmental damage, which we try to minimise.

We are committed to identifying and accounting for the environmental implications of all of our activities, and for recognising and considering opportunities for economically sustainable environmental benefit.

Environmental facts and figures



Our capital investment programme

2003/04 was year 4 of our 5 year AMP 3 programme of work. We track our entire capital investment programme in terms of projects, costs and progress. This continual investment is an essential part of our stewardship of the water assets and infrastructure as well as contributing to environmental improvements and meeting regulatory requirements. Below are the specific schemes achieved in 2003/04 and the aggregated total for 2000-2004.

Table 1: 2003-2004 programme, (£271 million invested)

	Target	Achieved		Investment
Water supply				
S19 mains refurbishment	607km	610km	✓	£56m
Water treatment schemes	20	20	✓	£6m
Mains maintenance	64km	65km	✓	£5m
Environment				
Wastewater treatment schemes	23	68	✓	£39m
Sewer overflows improved	142	179	✓	£66m
Sewer flooding problems tackled	20	196	✓	£7m
Sewer maintenance	40km	24km	✗	£11m

Over the first four years of the current regulatory period 2000/05, Welsh Water has invested nearly £1 billion in its water supply and sewerage network. This has not only delivered sustained improvements in services to customers, but also enabled a better environmental performance that has led to our region having some of the highest quality rivers and coastal waters, including one third of all the Blue Flag beaches in the UK.

Table 2: 2000-2005 overall programme - (£1,175 million investment)

	Target	Plan	Achieved to date	Investment
Water supply				
S19 mains refurbishment	2,230km	2,230km	✓	£174m
Water treatment schemes	87	89	✓	£42m
Mains maintenance	250km	250km	✓	£25m
Environment				
Wastewater treatment schemes	199	194	✗	£245m
Sewer overflows improved	694	710	✓	£243m
Sewer flooding problems tackled	60	687	✓	£36m
Sewer maintenance	150km	106km	✗	£36m

Our performance

A key business objective for Welsh Water is to be one of the best performing companies in the UK water sector. In this respect we have steadily improved our overall quality of service and customer performance over the past few years, and in 2003/4 we delivered our best ever performance for many of our key performance indicators.

As part of our responsibilities, Welsh Water provides a range of mandatory environmental and other performance data to the regulators to demonstrate compliance with set limits (our Monitoring Plan) and provide an assessment of our environmental performance. This is detailed below:

Table 3: our key performance data (extract from our 2003/04 annual report)

	Achieved 2003/04	Monitoring Plan target	At or ahead Of target
Environment			
Leakage (m ³ /km/d)	8.5	8.7	✓
Number of Category 1 and 2 pollution incidents - water (2003)	2	<9	✗
Number of Category 1 and 2 incidents - sewerage (2003)	9		
Number of Category 3 pollution incidents - sewerage (2003)	273	205	✗
Customers served by compliant wastewater treatment works	99.9%	>99%	✓
Wastewater treatment works complying with regulatory standards	99.3%	>99%	✓
Sewage sludge recycled satisfactorily	100%	>99%	✓
Compliance with "mandatory" bathing water quality standard	98.7%	98%	✓
Number of bathing waters achieving "Guideline" water quality standard	83%	60%	✓
Properties at risk of sewage flooding	254	315	✓
Sewage flooding incident, hydraulic overloads ("1 in 10")	42	310	✓
Sewage flooding incidents, other causes	130		
Water Quality			
Overall Water quality compliance at customers' taps	99.7%	99.3%	✓
Bacteriological compliance at customers taps	99.7%	n/a	n/a
Iron compliance at customers' taps	99.1%	97.8%	✓
DWI index of Operational performance	99.8%	n/a	n/a

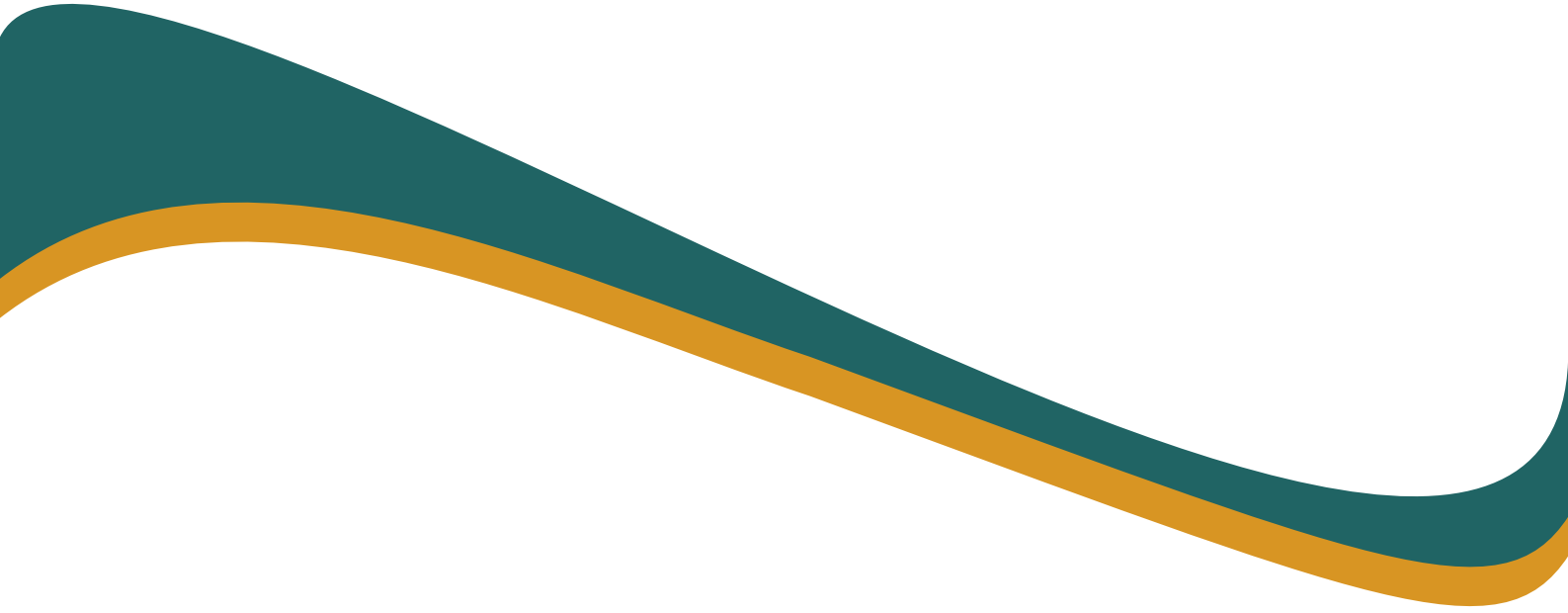
Benchmarking our performance

Welsh Water is a member of Water UK, the trade association representing the water industry in England and Wales. Water UK has made sustainability one of its core policies and Welsh Water contributes to an annual Water UK report describing how water companies have committed to sustainability and detailing performance on a range of sustainability indicators. In the table below, we compare Welsh Water performance with the industry average, for 2002/03. (As this is the most recent water UK report).

Environmental Indicator	Industry Average (totals in brackets) 2002/03
River Water Quality	Rivers with good to fair chemical water quality = 95% Rivers with very good to fair biological water quality = 95%
Volume abstracted in excess of licenced volume	5674 MI
Bathing Water Quality	Designated bathing waters achieving mandatory standards = 97.8% and Achieving guideline standards = 74.9%
Status of SSSIs	20% favourable, 22% recovering 44% stable, 14% declining
Sludge Waste	78% sewage sludge recycled. 36% of water treatment sludge recycled.
Excavated material diverted from landfill	53%
Total amount of excavated material	>3 Million tonnes (total)
Energy used at fixed sites	602 kWh/MI water supply 814 kWh/MI sewage treatment
Use of renewable energy at fixed sites	6.4% (343 GWh)
Emissions of greenhouse gases (CO ₂ equivalent) from fixed sites per customer	0.059

We recognise that benchmarking ourselves with our peers is good practice and believe that it can provide interesting insight into our performance. Whilst there can be important differences and variations between the water companies, we do take note of instances where we might seem to be underperforming and look to review and correct any highlighted deficiencies. In some situations, there can be significant reasons for variation from industry averages.

Welsh Water	Comments
Rivers with good to fair chemical water quality = 98% Rivers with very good to fair biological water quality = 99%	This is an area of strong performance for us.
3087 MI	Minimal exceedances of abstraction licences despite extended dry summer in 2003.
Designated bathing waters achieving mandatory standards = 100% in 2002/03 and Achieving guideline standards = 83% in 2002/03	This is an area of strong performance with 40 Blue Flag awards in 2003/04. There is not an ecological equivalent of the Blue Flag scheme.
Data not available in Wales	CCW have not yet surveyed SSSIs in Wales in the same way as English Nature.
100% approximately 75% in 2002/03	Our sludge recycling has improved over the past few years and we are pleased to be above industry average. We now recycle 100% of our drinking water sludges.
} Data being collated	Our construction projects adopt best practice in diverting waste from landfill.
746 kWh/MI water supply 1449 kWh/ML sewage treatment	Energy use exceeds the industry average however, Welsh Water has significantly more operational assets than many other companies.
We have 3 new combined heat and power schemes that will be on-line in 2004/05	This is an issue we are currently addressing through increased use of process-related energy on our sites and buying process-derived energy from our supplier.
0.064	This reflects historic energy consumption from mainly non-renewable sources.



Improving Our Environmental Performance

Our environmental footprint project

Our regulatory and operational performance over the past few years have steadily improved, both in absolute terms and in comparison with our peers. We now want to turn our focus onto improving our wider environmental performance, to complement our existing business and regulatory performance.

The way we have presented Welsh Water's performance in the past has led some stakeholders, to conclude that while performing well against many of the regulatory measures for a water and sewerage business, Welsh Water did not engage the wider environment in a suitably challenging way.

For the past 2 years, the Environment Footprint Project has been reassessing the operation and impacts of Welsh Water's water and sewerage

activities. We commissioned a report to look at the wider environmental performance of Welsh Water in comparison with our industry peers and the expectations of stakeholders. In some respects, we outperformed our peers; however, there were clearly identified gaps, where we wished to improve. In some areas, robust data was not readily available to allow meaningful comparison, and we have, along with our contract partners, focused attention to remedy this.

More particularly, we have concentrated on refreshing our environment policy, establishing wider environmental targets and have entered into dialogue with our contract partners to improve our gathering of environmental data and use of best practice.

Key outputs of the environmental footprint project (to date)

- ✓ Updated overall environment policy and formulated an interim policy statement for Energy, Waste, Biodiversity, and Procurement.
- ✓ Produced Interim Environmental Management targets for 2004/05.
- ✓ Established a new Environment Management Group with representation from all key contract partners.
- ✓ Further developed a Conservation Best Practice Group and environmental management tools.
- ✓ 'Green Team' established to raise the profile of environmental management in the office.

Environmental policy



Our primary responsibility is to meet the needs and expectations of our customers by ensuring a clean and reliable supply of drinking water and by dealing effectively with society's wastewater thereby avoiding pollution;

In so doing we will identify and account for the environmental implications of our activities, and recognise and consider opportunities for sustainable environmental benefit; and

We will therefore continuously improve our environmental performance through the setting of objectives and targets that reflect our environmental impacts.

In fulfilling this commitment we will

- ✓ Further the conservation of the environment, considering opportunities to protect and enhance biodiversity where practicable.
- ✓ Make the most efficient use of resources, including energy and water, and manage any waste we produce effectively.
- ✓ Be energy efficient in our operational processes.
- ✓ Integrate environmental considerations into our procurement processes.
- ✓ Comply with all relevant environmental legislation and Codes of Practice.
- ✓ Manage our activities and society's wastewater so as to prevent pollution.
- ✓ Promote better public understanding of the value of water and the role it plays in our everyday lives.

We will achieve this by

- ✓ Basing wider business decisions on sound environmental, social and economic considerations.
- ✓ Taking steps to ensure that all our staff, including those employed by our outsourced contract partners, are aware of, and committed to this Policy.
- ✓ Regularly reviewing our environmental performance and setting improvement targets so as to deliver continuous improvement.
- ✓ Reporting results to the Quality and Environment Committee of the Board, and periodically publishing an overview of performance.

Our policy framework for environmental management

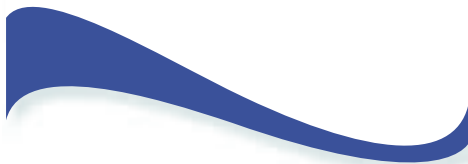
Accountability for environmental management extends throughout Welsh Water and our partners, and across the large and diverse geography of the company's operating area. We recognise that clear and agreed policies are essential if sound environmental practices are to be uniformly applied and achieved.

In 2004 the Board approved a restatement of environmental policy and a suite of statements on key wider issues.

These provide better definition of our interface

with the environment and our core principles and commitments. These have been embedded in new outsourced service contracts which begin in April 2005. The statements complement existing operational policies on wastewater treatment, sludge treatment and disposal, leakage, water resource operation, trade effluent and water regulations.

Our environmental policy is supported by position statements on our key environmental aspects



Waste and Material

We will make the most efficient use of resources and manage any waste we produce effectively.

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Energy

We will manage effectively our energy use and be energy efficient in our operational processes.

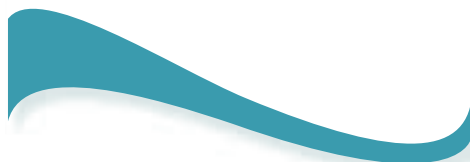
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Biodiversity

We are committed to enhancing biodiversity, protecting our archaeological heritage and promoting access and recreation at our sites.

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Procurement

We will integrate environmental considerations into our procurement strategy and strive to be recognised as environmentally responsible in our purchasing and supply activities.

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Our key environmental challenges

Like many other water companies, we face a number of environmental challenges, some specifically related to our industry sector and others that we share with many other organisations. For example, whilst massive investment in water and wastewater treatment has resulted in major improvements in drinking water and treated effluent quality, the extra treatment processes require a greater use of energy.

In presenting this report, which uses data for the year 2003/04, we wish to highlight key issues already receiving attention, and to indicate our plans and targets for subsequent years to ensure that the required levels of improvement are achieved.

Currently our main challenges can be summarised as follows:

Environmental improvements across the business

- Waste - reducing the waste we generate and managing it more effectively.
- Energy - minimising the unavoidable increases in energy consumption resulting from additional treatment processes. In particular, finding cost-effective alternative energy sources and understanding our role in managing climate change are key challenges for us.
- Biodiversity - maximising biodiversity opportunities and minimising the impacts of our business activities.

Procurement

- Cascading our environmental policies through the supply chain

Specific improvements – Clean Water

- Being more efficient in the use of water, and also to make a greater contribution to the promotion of water efficiency and the value of water.

Specific Improvements – Wastewater

- Improving wastewater treatment – particularly in reducing the negative impacts associated with wastewater treatment such as inadvertent pollution, reducing the number of properties that are damaged by sewer flooding and minimising the effect of odour from our treatment processes.

Stakeholders

- Maintaining and enhancing our engagement with a diverse range of stakeholders.



Waste



Our two biggest solid waste streams are sludge and construction waste, and these are our main focus. We have a duty of care to ensure that our waste is handled by licensed waste carriers. We are also committed to the principles of Reduce – Reuse – Recycle as part of our waste management programme.

The last rung on the waste ladder is landfill – the least sustainable option for waste disposal. However, even opting for the “best practicable environmental option” will often result in an element of waste that cannot be disposed of in any way other than to landfill.

Our challenge

Sludge

Welsh Water generates about 85,000 tonnes of sludge from its clean and wastewater treatment processes, and finding sustainable uses for the sludge rather than taking it to landfill is a priority. Recycling sludge reduces the amount of inorganic fertilisers applied to land and ensures that the waste material is not landfilled. In its 19th report “Sustainable Use of Soil” The Royal Commission on Environmental Pollution concluded that, properly controlled and carried out, the recycling of sewage sludge to agriculture was the ‘best practicable environmental option’. In order to be fit for use for agriculture, the sludge has to meet stringent standards relating to both treatment and land application.

Construction waste

A large volume of, often inert construction waste is generated activities such as building treatment works, renewing pipe networks, upgrading and refurbishing our infrastructure assets.

Other wastes

Improving our knowledge by a monitoring of all the waste streams from our outsourced activities is a key challenge over the next few years.

Our actions

Sludge

- ✓ £20 million pound investment in a wastewater sludge treatment strategy.
- ✓ 80,000 tonnes of treated wastewater sludge are recycled to agriculture or land restoration uses. More than 50% of the wastewater sludge is defined as ‘enhanced treated’ and therefore suitable for wider agricultural use.
- ✓ 100% recycling of drinking water sludges to agriculture has been achieved in 2003/04, totaling 5,918 tonnes a year.

Construction waste

- ✓ In north Wales, we have developed an exemplar scheme to show the importance of waste minimisation and several best practice measures have been rolled out to minimise the volume of waste that goes to landfill.

Other wastes

- ✓ We are working with first tier contract partners to improve the robustness of our data collection systems in 2005 such that we can report more widely on the volume of our waste streams. This is also to be cascaded down the supply chain.

We have produced a Policy on waste which commits us to manage any waste we produce effectively.

In fulfilling this commitment we will:

- Pursue opportunities for waste minimisation (e.g. air emission, wastewater, solid wastes).
- Assess the feasibility of using non-hazardous (e.g. non-toxic, non-flammable) rather than hazardous substances in our operational processes.
- Ensure that environmental impacts are considered in any review of operational processes.
- Give preference to efficient and sustainable waste management options, and reduce, re-use, and recycle with landfill as the last option.

Energy management statement



Energy use is without doubt a significant environmental and economic issue for Welsh Water. Heavy investment in improving discharges from our waste water treatment works now means that 99% of our customers are served by works providing full biological treatment and other processes, with obvious environmental benefits. This has, however, meant increased energy consumption and without a continuous focus on energy management, energy consumption and costs would be even greater.

Our challenge

To improve the design, configuration of our assets to manage energy consumption and the emission of greenhouse gases in the most sustainably efficient manner whilst recognising the large and sometimes sparsely populated area we serve; and the above average number of treatment and pumping facilities we operate; and the increased energy consumption demands directly associated with ever higher drinking water and waste water treatment standards we are required to meet

Our actions

- ✓ 70% of the electricity supplied under a contract awarded in 2004 will come from combined heat and power (CHP) sources and is climate change levy exempt.
- ✓ On-line technology extended to monitor energy use across our business.
- ✓ Energy management elevated in key design criteria for new assets: first solar powered storm water overflow installed.
- ✓ Asset rationalisation project has decommissioned many non-operational assets, reducing energy use.
- ✓ Number of CHP projects on Welsh Water assets increased; hydro generation schemes on our assets generated greater than 26 GWh of electricity.

We have recently produced an Energy Policy which has a commitment to manage effectively our energy use and to be energy efficient in our operational processes.

In fulfilling this commitment we will:

- Seek out opportunities for energy efficiency throughout the business and encourage good practice amongst our employees.
- Include energy considerations early in the planning and design stages of new developments and ensure that appropriate energy efficient technologies are evaluated.
- Recognise opportunities from energy recovery through the use of combined heat and power where this is the most effective solution.
- Investigate opportunities to reduce, directly or indirectly, consumption of non-renewable fossil fuels in favour of renewable and/or more environmentally benign sources.
- Understand our role in reducing the threat posed by climate change.

Biodiversity



Our investment in new treatment works and wastewater networks has significantly contributed to 'cleaner' marine and freshwater habitats. Our rivers are generally thought to be the cleanest they have been over the last 200 years. In addition around 70% of the Welsh Coastline now lies within Special Areas of Conservation designated under the EC Habitats Directive.

We have a large, 35,000 hectare, landholding which includes 20 sites of international conservation importance and 76 Sites of Special Scientific Interest which together cover some 21,000 hectares

Our challenge

Biodiversity cannot be measured in the same way as energy consumption or disposal of waste.

Judging success in terms of biodiversity is complex and long term. Our challenge is to:

Deliver the demanding outputs of our capital investment programme on time and within budget, whilst managing the impact of our operations on biodiversity sensitively.

At least maintain the present high performance standards at which we operate in all our activities, recognising that in a high quality environment, adverse impacts are more noticeable.

To continue to manage our land holdings positively so as to support biodiversity.

Our actions

Our investment and operational practices have contributed to:-

- ✓ the cleanest rivers in Wales for over 200 years with 92% of rivers achieving high quality water capable of supporting healthy populations of salmon and trout.
- ✓ high standards of coastal bathing water quality with 99% of designated coastal waters meeting EC mandatory water quality standards with resulting benefits to marine biodiversity.

In 2004 we:

- ✓ published a dedicated Biodiversity Overview.
- ✓ produced site Biodiversity Action Plans for all our major reservoirs.
- ✓ celebrated the success of the Otters and Rivers Project where over twenty five years working in partnership with the Wildlife Trusts, the Countryside Council for Wales and the Environment Agency saw positive signs of otter on 74% of sites surveyed. Thus delivering not only the 2002 but also the 2010 Action Plan target
- ✓ established a Best Practice Group for Nature Conservation and produced a Guidance Manual for our practitioners and partners.
- ✓ further developed a Biodiversity Index Tool for use in Wales

We are committed to enhancing biodiversity, protecting our archaeological heritage and promoting access and recreation at our sites

In fulfilling our commitment we will:

- Encourage best practice and the integration of biodiversity and heritage considerations throughout the business.
- Manage our water and landholdings so as to enhance and actively encourage the public enjoyment of our sites.
- Undertake appropriate consultation, survey and research so as to properly inform our operational and land management decisions.
- Implement site-specific habitat and species plans for our major landholdings and so contribute to the development of a Corporate Biodiversity Action Plan.
- Share appropriate ecological and heritage data with other interested organisations.
- Talk to and develop positive relationships with the public and key stakeholders
- Have the vision to plan around the interests of sensitive areas where necessary.

Procurement



Welsh Water uses specialist contract partners to carry out much of the day-to-day operation of assets and service delivery. Our approach to procurement is a cornerstone of our strategy to deliver high quality water and wastewater services at least cost, whilst protecting the environment.

We accept our responsibility to manage the environmental impacts of our purchasing and supply activities, and recognise the influential role of such activities on the overall environmental performance of Welsh Water. Embedding the Environment into our supply chain is important to us.

Our environmental policy requires Welsh Water and its contract partners to:

- Base wider business decisions on sound environmental, social and economic considerations.
- Take steps to ensure that all are aware of, and committed to the environmental policy.
- Regularly review environmental performance and set targets to promote continuous improvement.
- Report results to the Quality and Environment Committee of the Board, and periodically publish an overview of performance.

Welsh Water has a formalised (but not accredited) management system for its environmental activities. Within the wider enterprise, many of our partners have developed environmental management systems in accordance with ISO 14001.

Our challenge

To ensure that we work with partners who have strong environmental credentials, who are aware of the challenges of our business and can deliver environmental best practice through working with us to deliver our Environmental Policy.

Our actions

- ✓ Environmental assessment developed for 'Prequalification' and 'Invitation to Tender' stages of the Procurement Process
- ✓ All tender submissions examined and objectively assessed, with supporting interviews
- ✓ Training provided for staff undertaking procurement site visits
- ✓ Process informed and monitored by independent specialist consultants to ensure fairness and consistency.
- ✓ Documentation of our Environmental Procurement Policy
- ✓ Appointment in 2004 of a new Procurement Manager with specific responsibility, inter alia, for promoting good environmental practice in the wider supply chain.

We will integrate environmental considerations into our procurement strategy and strive to be recognised as environmentally responsible in our purchasing and supply activities

In fulfilling this commitment we will:

- Promote the use of sustainable resources and discourage wasteful or damaging practices.
- Select contract partners who can demonstrate environmental awareness and responsibility and who embrace our environmental objectives and commitment to work in partnership to protect and nurture the environment.
- Increasingly adopt and promote a 'whole life cost' approach to assessing the environmental impact of the goods and services procured, thereby promoting best practice and value for money decisions throughout our business.

Water

our effective use

Welsh Water's water resource position remains relatively strong overall. In a normal year we abstract about 5% of the annual rainfall in our region to supply about 900 million litres of water per day, using a network of reservoirs for storage.

The autumn of 2003 saw one of the most significant dry spells since the water industry was privatised. Welsh Water is proud that, yet again, there was no need for any hose pipe bans. We have detailed water resource management plans to minimise the impact of low rainfall on our customers and the environment, and we followed specific, localised contingency measures. These included transferring water to areas of most need. As a result, it was only necessary, following approval from Environment Agency Wales, to reduce compensation discharges to two rivers, to conserve water stocks in the driest periods.

Nearly all of the water used for supply is taken from rivers and reservoirs across our region but we also support many of these rivers, especially at times of low flow by releases from Welsh Water's impounding

Reservoirs in line with agreements with the Environment Agency Wales.

After abstraction, the water enters our distribution system where we try to minimise water losses. Although Wales has neither low flow nor sensitive rivers (in terms of flow regime), Welsh Water still needs to use water efficiently so that the environment is protected.

Leakage and distribution input (the amount of water put into supply) are monitored monthly and at the end of the financial year an annual water balance of all the components of customer demand, leakage and minor use is undertaken in all our water resource zones. Both leakage and the total distribution input are affected by seasonal factors. Leakage increases in the autumn due to the effects of ground movement during the make-up of soil moisture deficit after the summer and by reduction in ground temperatures during the winter. Distribution input is affected by variations in leakage and customer demand and is particularly sensitive to temperature and rainfall in summer.



Water

our effective use *continued*

Our challenge

To meet the demands of our customers for water supply whilst sustainably managing the water we abstract from rivers.

To minimise the occasions on which we exceed our abstraction licenses, and then only to main water supply to customers or to meet the needs of the emergency fire service.

To minimise the number of water mains bursts we experience, which due to the age and quality of our water network, occur more frequently than in many other companies.

Our actions

- ✓ In 2003/04 we invested £6 million in leakage reduction, and repaired on average 50 bursts and leaks every day.
- ✓ Improve water supply network to more effectively move water around the network.
- ✓ Keep abstraction exceedences to a minimum. In 2003/04 we exceeded 1 abstraction licence for annual limits and exceeded 5 licences for daily limits, which represented less than 0.01% of our total abstraction volumes.
- ✓ Improved management of our network and water resources means that water supplied has fallen by 15% over the last 10 years.
- ✓ In the last five years we have reduced leakage by more than a third and completed a reappraisal of the economic level of leakage in all 25 water resource zones.
- ✓ Investment to assist in lifting planning constraints where water supply is limiting factor.

Policy - We have a responsibility to abstract water and manage supply networks in ways that society's reasonable demands can be met, within acceptable environmental limits, i.e. manage water resources sustainability. Our water resource strategy states:

The Company has a legal duty to under the Water Act 1989 to ensure that it has sufficient water to supply the demands of its customers. We satisfy this requirement by our actions in a number of areas which collectively are reflected in the company's water resource plans. These plans are underpinned by the following premises that:

- we routinely monitor the state of our water resource reserves and the rate of customer demands;
- we take water from the natural environment in compliance with the statutory requirements appropriate to the operation of our resource systems which includes reservoir construction authorised under separate Acts of Parliament and the abstraction licensing provisions within the Water Resources Act 1991;
- we discuss with the Environment Agency and have prepared a Drought Contingency Plan to agree a series of actions we would pursue during both the development phase and the onset of critical drought conditions;
- we provide the Environment Agency with an annual update of our water resource performance during the previous year and proposals for future years; and
- we reassess and revise the detailed operation of our resource systems to develop an optimal approach to overall resource management which will reflect natural resource availability, environmental impact, and cost efficiency of operation.

In addition, we have a specific leakage policy as part of our suite of operational guidelines and policies.

Water

society's efficient use

Efficient use of water is important because it is a natural resource, that can be in short supply in certain situations, and there are environmental and economical costs associated with its abstraction, process, treatment, supply, removal and final discharge. We have an important part to play in promoting water efficiency messages.

Our challenge

In British society, water is generally taken for granted and it is often difficult to promote water efficiency messages generally. Quantifying the environmental and cost savings associated with water efficiency has also often proven difficult to demonstrate, particularly in terms of significant or noticeable reductions of actual water abstraction volumes.

Our actions

Children & Schools

- ✓ In 2003 we developed and launched our new education strategy 'Living and Learning with Water'. This provides a coherent framework to help pupils, parents and the public at large to learn about water and the essential role of the water industry in its sustainable management and use. We have 4 educational centres and approximately 10,000 children attended our educational centres in 2003/04. For more information go to our educational website at www.livingandlearningwithwater.com.
- ✓ We are continuing to work with primary and secondary schools in Mid and South Ceredigion, an area of potential water shortage, to promote water efficiency, resulting in an average saving of 16% in water use.

Public

- ✓ Welsh Water provides a number of guidance documents and the offer of free hippo bags (to place in older cisterns to reduce water use).
- ✓ Welsh Water offers free repairs for leaks (one repair every 3 years) on domestic properties to minimise any loss of water from untimely repairs of leaks.
- ✓ We also provide free water meters so that customers only pay for the water they use. This can result in reduction in bills for low users of water.

Industry

- ✓ There are a number of advisory organisations who provide a range of guidance and advice on water efficiency and we believe that we have a role in sign posting our business customers to useful guidance and organisations.

Policy - We believe that water is vital for life, and every school, business and household should have an appreciation of its value. Our water efficiency strategy states:

The Company has a legal duty under the Environment Act 1995 (amending section 93 of The Water Industry Act 1991), to promote the efficient use of water in a number of ways. The more important of these are detailed in the Company's Water Efficiency plan. The plan is based on a number of premises:

- plans to promote the efficient use of water, taking into account the impact abstraction activities have on the natural environment;
- the views of customers towards water conservation; and
- the costs and benefits of various actions aimed at conserving water.

Improving wastewater treatment

Our discharges of treated wastewater into receiving waters such as rivers and seas are heavily regulated through discharge consents, with strict operational controls to comply with limits on both the quality and quantity of discharges. Discharging treated wastewater into the rivers and seas is the mechanism by which abstracted water is finally returned to the environment and completes the water cycle.

Our challenge

The quality of rivers and coastal waters in Wales is among the best in the UK. It is important to safeguard this environment from pollution incidents, recognising that Welsh Water has 850 wastewater treatment works, 1,600 sewage-pumping stations and 18,500km of sewers with the potential to discharge to the environment.

Our actions

- ✓ As recently as 1996 only 57% of the wastewater we collected received full treatment. Now it is over 99%.
- ✓ Since 1995 over £1 billion has been invested in our wastewater network. Today over 99% of our customers are served by treatment works providing full treatment by biological and other processes.
- ✓ 100% of our wastewater treatment works employing uv disinfection complied with their stringent monitoring and maintenance standards
- ✓ In 2003, 66 beaches (83%) also achieved the much higher "Guideline" standard required for European Blue Flag Awards. This represents a net increase of 4 beaches from 2002. Wales now has 40 Blue Flag Awards nearly a third of the UK total. We also have 40 equivalent Green Coast Awards which recognise the need in certain areas for exceptional water quality without the facilities generally associated with more traditional resorts.

Prosecutions

Sometimes things do go wrong and whilst we are dedicated to avoiding such incidents we will transparently report any such failures. In 2003, Environment Agency Wales prosecuted Welsh Water in relation to 4 pollution events and one breach of consent. We pleaded guilty in all cases, and were fined a total of £9,750. This is a significant improvement on 2002, when Welsh Water was prosecuted for 8 events totaling £24,000

Improving wastewater treatment



We are committed to managing our activities and society's wastewater so as to prevent pollution. Our wastewater strategy states:

We recognise the importance of its wastewater treatment activities in relation to the protection of public health and the environment. For the purposes of this policy the term wastewaters includes wastewaters arising from potable and industrial water treatment plants. In all areas of its wastewater operations Welsh Water will take, and where necessary introduce, appropriate measures to:

- comply with its statutory obligations;
- safeguard public health, the environment and promote sustainable treatment and disposal practices based on economic and environmental considerations;
- reduce the unnecessary consumption of natural resources; conduct our sewerage and wastewater treatment operations in such a manner as to protect the health and safety of our employees, service providers, customers and the public;
- ensure as far as possible the continued operation of our sewerage network and sewage treatment facilities in an emergency and minimise the effect on public health, our customers and the environment;
- encourage our service providers to work with together to support and deliver the aims of this policy;
- educate and motivate all our employees to seek ways to continuously improve environmental and operational performance; and
- audit, review and report on this policy in an appropriate and timely manner.

Pollution incidents

Accidental releases to the environment are termed pollution incidents. We are aware that there are a relatively large number of such incidents in our area and we are determined to improve our performance. We are now starting to see the benefits of our Pollution Incident Reduction Strategy activity but there is much still to be done. Sewage flooding is also a major issue for us and we recognise the hardship caused to those customers who suffer from it.

Our challenge

Pollution incidents

To continuously improve our performance and reduce the number of pollution incidents we cause, and when these do occur, to respond promptly and effectively, minimising any resulting damage to the environment.

In 2003, Welsh Water was responsible for 11 confirmed pollution incidents in Environment Agency Categories 1 and 2 and a further 284 minor incidents (EA Category 3). Major causes are sewer blockages, CSO discharges (due to incapacity of the sewer, whether hydraulic overload or blockage) and problems at pumping stations.

We have a relatively large number of pollution incidents in our area, partly because we have a very large number of treatment works and combined sewer overflows (CSOs) and partly because much of our sewer network is very old. Also, the rivers of Wales are very clean and any pollution tends to be noticed.

Sewer Flooding

To continuously improve our performance by reducing the number of customers who experience, or are at risk of experiencing, sewer flooding.

Customers can make matters worse by using the toilet as a dustbin and flushing inappropriate items down the toilet and/or by pouring fats and greases down the sink.

There are currently 254 properties 'at risk' of sewage flooding compared with 297 at the same time last year. In 2003/04, a total of 212 properties were actually flooded by sewage, a slight improvement on the figure of 226 in 2002/03.

Our actions

Pollution incidents

Our £3m Pollution Incident Reduction Strategy and Action Plan led to the appointment of a dedicated Incidents Officer and:

- ✓ A major sewer de-silting programme,
- ✓ Dedicated maintenance teams,
- ✓ Additional investment in telemetry,
- ✓ An Incident Review Panel,
- ✓ Workshops to share best practice in incident prevention,
- ✓ Assessment of risk at treatment works and sewage pumping stations resulting in 25 sites identified for additional investment
- ✓ Improved surveys and data capture.

Improved management practices as a result of:

- ✓ Full implementation of the Quality Management System approach throughout the wastewater business,
- ✓ Introduction of the standard ISO 9000 at WWTWs,
- ✓ Prioritised AMP4 investment plans for 2005-2010.

Sewer Flooding

Many of these actions will also combat the risk of sewer flooding, but where necessary other actions will be taken to address this problem. We have also taken action to work with our industrial and domestic customers. For example, we have:

- ✓ Raised awareness through a Bag It and Bin It leaflet produced by UK Ceed, an independent charitable organisation founded and supported by a number of water companies, including Welsh Water,
- ✓ Put the 'Bag It and Bin It' message on the bills we issue to all of our domestic customers,
- ✓ Provided information on grease traps to environmental health officers,
- ✓ Produced a Guidance Note on Good Practice in maintaining grease traps.

Discharge Point	Date of Incident	Nature of Offence	Date of Prosecution	Fine
Afon Goch, Tumble	August 2003	Sewage Discharge	October 2003	£750
Llanfaethlu WWTW	April 2003	Sewage Overflow	August 2003	£1,500
Killay SPS	August 2002	Sewage Discharge	August 2003	£5,000
Leeswood SPS	April 2002	Commissioned-No Telemetry	May 2003	£1,000
Amroth Beach	July 2002	Sewage Overflow	February 2003	£1,500
Total				£9,750

Odour management

A £3m Odour Strategy and Action Plan, has been developed in recognition that the public perception that mal-odour from Welsh Water’s operations is a growing problem. Initial work has focused on improving our understanding the causes of odour problems.

Work to date has confirmed 3 main operational causes of odour at treatment works:

- On site sludge processing.
- High trade effluent flows.
- Pumped sewerage catchments.

In 2003/04 we received 62 written complaints and a further 80 telephone complaints regarding odour.

Our challenge

Odour issues affect relatively few people, but can be distressing to those affected and are expensive to resolve compared with other environmental challenges. Perception of odour is variable and individuals can react quite differently to the same odour. The growing pressure to find more locations for houses means that large buffer zones between treatment works and residential areas are diminishing. Simply, houses are now being built much closer to our operational sites and our processes are having an impact on neighbours that would not have been there 5-10 years ago. Our challenge is to be a good neighbour, regardless of who was there first.

Our actions

- ✓ We have completed odour surveys at 21 critical works and air quality management plans have been developed.
- ✓ We have made capital improvements at 24 assets, judged to deliver the greatest risk assessed benefit in reducing odour problems.
- ✓ We have identified and shared best practice in pro active maintenance and design of works/sewerage schemes, community liaison and complaints management.
- ✓ We have developed prioritised investment plans for implementation between 2005-2010.

Odour mapping



Our responsibility is to manage our activities and society’s wastewater so as to prevent pollution.

Stakeholders

We have a wide range of stakeholders, from our customers, employees and our business partners and supply chain to the regulators (Environment Agency, Ofwat, Drinking Water Inspectorate, Countryside Council for Wales, English Nature) to local and national government, the communities in which we work and to society in general. Dialogue with all of our stakeholders allows us to learn and share that learning throughout the company. We take all of our communications seriously and make great effort to take into account expressed views.

Our challenge

We have many stakeholders, all with different expectations of us, so we must be careful to ensure that our policies are clear, simple, transparent, and balanced such that they address the breadth of our stakeholder interests, and that our goals and priorities are suitably explained and communicated.

Our actions

- ✓ In 2003/04 we issued over 200 press releases about our ongoing work and provided public exhibitions to explain the major investment schemes begun in the year
- ✓ Provided regular briefings for customers affected by ongoing work, particularly when work temporarily affects the water supply.
- ✓ Carried out research to find out how customers perceive our service.
- ✓ Consulted with our regulators and Water Voice Wales – who represent the interests of water customers.
- ✓ Conducted our major customer survey programme
- ✓ Consulted widely on our 5 year business plan 2005-2010
- ✓ Establish a common commitment with the Environment Agency. “promote a sustainable environment that meets the needs of the people we serve”. This resulted from a continuing series of joint workshops to discuss and develop better ways of working together.
- ✓ We hold 6 monthly meetings at which our Members can meet the Board and receive feedback on our activities, performance and future plans; with environment and social responsibility being amongst topics generating most interest.
- ✓ We hold 6 monthly Employee Forums, to which all staff are invited, at which the environmental agenda features prominently.

We are committed to listening to the needs and expectations of all of our stakeholders and recognise the need to maintain good working relationships.

Our stakeholders

Whilst we operate mainly in Wales, our operations do extend into parts of England. For some regulators, we are therefore covered by both the English and Welsh counterparts. Below is a list of key regulators, industry sector bodies and influencing organisations and a description of their key roles and responsibilities. Contact details are given as these organisations might be useful links for further information on environmental performance of Welsh Water, the water industry and our shared environmental challenges. In addition to those below, we view all local authorities and our National Parks as important stakeholders.

Regulator	Role/Scope of Regulation	Contact details
Office of Water Services (Ofwat).	Sets customer and output levels, price control and value for money. It ensures that the water companies define the environmental (and other) outputs in our plans. The financial controls set by Ofwat affects the levels of investment we make.	www.ofwat.gov.uk
Drinking Water Inspectorate (DWI)	Regulates drinking water quality, monitors compliance and audits us.	www.dwi.gov.uk
Environment Agency (in particular Environment Agency Wales)	Licences and audits the quantities and sources of water abstraction. Licences and monitors the quality and quantity of effluent discharged from wastewater treatment works. Regulates recycling of sludge to land, waste management and Duty of Care.	www.environment-agency.gov.uk
Countryside Council for Wales	Protects sites and species of national and international nature conservation importance. Issues consents and licences for works that could affect these.	www.ccw.gov.uk
English Nature	Protect heritage and archaeological sites.	www.english-nature.org.uk
CADW English Heritage	Welsh Assembly Government sponsors bodies that protect the Welsh environment and conserve wildlife and natural habitats. The National Assembly of Wales is responsible for establishing and implementing environmental policy and the framework for sustainable development.	www.cadw.wales.gov.uk www.english-heritage.org.uk
Welsh Assembly Government	DEFRA (The Department for Environment, Food and Rural Affairs) is the overarching governmental department – weaving together economic, social and environmental concerns.	www.wales.gov.uk
DEFRA	Water UK is the industry association for all the water companies. Water UK publishes annual Sustainability Reports on how the water industry is performing.	www.defra.gov.uk
Water UK	Water Voice operates through nine regional in England and Wales. They represent the interests of customers in respect of price, service and value for money; they also investigate complaints from customers about their water company.	Via ofwat www.ofwat.gov.uk
Water Voice	The Water UK and The Wildlife Trust's Otters and Rivers Project has been a great success in delivering significant results for wetland conservation.	www.waterpolicyteam.org.uk
Water for Wildlife		

Going forward

Like most organisations, Welsh Water has adopted the concept of continual improvement throughout the organisation. It allows us to set specific goals and then measures ourselves against those goals in a transparent manner. As part of our Footprint Project, we have established a number of environmental objectives and targets that reflect the areas of priority for this coming year.

	Objectives
Government and management	
Governance of business	To have an effectively run water and sewerage company, whereby environmental risks are understood and managed, and integrity and ethical business practice are central business principles.
Strategic planning of our business	To identify and manage environmental challenges in a timely and co-ordinated manner. To work with partners and stakeholders to ensure that new regulations, standards and performance are sustainable.
Management of our business	To adopt management systems, procedures and controls that encourage environmentally, socially and economically sound ways of working.
Wider environmental improvements	
Waste & materials	Use safe, secure and sustainable methods for dealing with sludge, increasing the proportion that is put to beneficial use. Minimise the amount & proportion of material that is sent to landfill. Minimise the unnecessary use of chemicals harmful to the environment. Efficiently use materials.
Energy and greenhouse gas emissions	To use energy efficiently in line with the best available economic techniques and where possible reduce energy consumption and resultant greenhouse gas emissions. To steadily increase the proportion of renewable energy in the total energy use. To better understand the carbon balance of the company, with a view to reducing the carbon footprint.
Biodiversity	To help protect and enhance biodiversity on land owned, used, or affected by our water management activities.
Procurement - management of supply chain	To work with the Partners in a responsible manner, to encourage environmental best practice and ensure that operational performance is sustainable. To manage the supply chain in a responsible manner, through active engagement of our direct suppliers and contractors.
Operational improvements	
Water - our efficient use	Abstract water and manage supply networks in ways that society's reasonable demands, (including economic development) can be met within environmental limits, i.e. manage water resources sustainability.
Water - society's efficient use	To demonstrate Welsh Water's commitment to sustaining and supporting the communities in which it operates. To promote recognition of the essential role Welsh Water plays in sustainably managing resources through the provision of industry related educational material. To generate opportunities from our strategic partnerships which enhance the unique status of Glas Cymru within Wales and the Water Industry.
Reducing pollution incidents	To prevent pollution
Odour management	To prevent pollution

Target 2004/05

Further update Environmental Policy to reflect changes in business, legislation, environmental impacts, and public and stakeholder expectations.

Review outcomes of Strategic Business Plan (environmental elements) and assess implications for environmental strategy.

Invite key Stakeholders to Best Practice Nature Conservation Meeting.

Evaluate cost benefit of establishing an accredited environmental management system for Welsh Water.

Report on the success of the sludge strategy to reduce sludge to landfill.

Establish environmental management within the office at Nelson and the education facility at Cilfynydd.

3 new CHP to be fully operational 2004/05.

Energy efficient criteria to be assessed in the selection of motors/pumps (part of the pumping cost reduction programme). Abandoned sites 'switched off' campaign to continue.

Undertake a project to review greenhouse gas generation. Understand work-related mileage by Welsh Water.

Issue first Biodiversity Overview. Implement elements of site specific Biodiversity Action Plans, leading to the development of a corporate Biodiversity Action Plan. Investigate and select biodiversity tool to benchmark long-term improvements in the biodiversity value of sites. Refresh best practice guidance for assessing impacts to biodiversity during construction and refurbishment of Welsh Water sites.

Develop Best Practice group on Environmental Management (building on the success of the Nature Conservation Best Practice Group). Review environmental credentials of all successful partners for 2005-2010 and agree appropriately focused and challenging objectives with each contract partner. Develop procurement policy and procedures for sustainable procurement.

Further develop 'Libra' system so that advance warning is given of potential exceedances of abstraction licence conditions. Update relevant Drought Plans and associated environmental data for high-risk areas.

Update Water Efficiency Promotion Strategy. Developing a new Living and Learning with Water website.

Produce a new water education website for water in the home and garden in collaboration with other Water Companies. Develop the Alwen education centre in conjunction with the Mynydd Hiraethog Objective 1 Initiative. Working with WAG to supply over 300 water coolers to schools within the Community First areas as a health education initiative to provide and promote the drinking of good quality tap water. Further enhancing existing Education Partnerships including the development of a water efficiency display at Techniquest.

Deliver improved performance in pollution prevention. Target set for total number of category 1 and 2 incidents at not more than 10. Target set for total number of category 3 incidents at not more than 230.

Implement odour strategy

And finally

In this document we have tried to set out our position on a wide range of environmental issues that are facing us and the water industry generally.

One of our most important successes has been the improving quality of drinking and bathing waters, and particularly the general improvements in river and marine water quality as a result of investment in our treatment works and network infrastructure. This last year has seen a big effort to reduce the number of pollution incidents and prosecutions.

We continue to build upon the success of our regulatory performance refreshing our key wider environmental policies and procedures and corporate documentation to communicate as widely as we can our views and interface with the wider environment. We have set interim targets for 2005, as part of a developing environmental management programme, aimed at improving the framework for environmental management with greater emphasis on monitoring, measurement and reporting of the wider environment.

Initially, we are concentrating on 4 main areas; biodiversity, waste, energy and procurement, in addition to the recognised priorities of water cycle management. We have also scrutinised in particular our contributions and impacts in relation to biodiversity and produced a publicly available report, giving an Overview of our long track record, policies and aims in this respect.

www.dwrcymru.com/biodiversity.

This year, I was pleased to participate in the launch of the Otters Survey Report (2002), where the results of the long-running monitoring of otter populations in the UK were announced. The results were impressive – with otter numbers clearly increasing significantly as a result of cleaner river environments. In Wales, the otter populations have exceeded the UK Otter Biodiversity Action Plan target of 65% of positive sites in the national survey by 2002 and also the 70% target for 2010. This is measurable biodiversity success, easily understood by us all. There is not a 'biodiversity' award for marine environments but the fact that 75 out of 76 bathing waters achieved the EC standards and 40 of them gained the Blue Flag award does reflect the effort that we have made on treating wastewater in coastal areas.

In the past, our waste management strategy has focused on sludge management as this is the largest volume of waste we produce. We recycle the sludge, under strict controls, so that the nutrient loading and structure can be captured and used rather than wasted. The recent success this year was in finding agricultural uses for our drinking water treatment

sludges (which had been previously landfilled). In the coming years, we will want to expand this best practice for other wastes. Our construction wastes are very often recycled, but there is much we can do to improve our performance in this key area.

We recognise that we must address the increase in energy use resulting from the extra drinking water and wastewater processes we have installed. We are pleased that we have managed to stabilise our energy consumption for the last 2 years through a range of energy reduction projects and pro-active energy management. In addition, the impact of climate change on our operations is recognised as a major issue and we also must better understand our own contribution to this global issue. In the next year, we therefore intend to develop an overall strategic understanding of climate change and its risks to Welsh Water, including the establishment of a more detailed picture of our company wide greenhouse gas emissions.

We outsource all our operational activities and during 2004 we put most of our major contracts to tender with improved focus on environmental criteria as an essential part of the selection process. We believe that this provides us with a major opportunity to work with our existing and new partners to further improve our environmental performance in all of the areas covered by this report.

Partnership and teamwork are key to our achievements both past, present and future and in closing I would like to thank all those who contribute to delivering continual improvements in our environmental performance.

If you wish to comment on this report, please do not hesitate to contact me.

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