

2012-2013 DISCRETIONARY REWARD SCHEME SUBMISSION



**WORKING TO KEEP
OUR CUSTOMERS SAFE**

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Transport gas safely to the homes and businesses of 2.5 million consumers.

Serve a population of 7.4 million – 1/6th of the UK.

Owned by a consortium of investors led by Cheung Kong Infrastructure Holdings Limited CKI.

Award winning Gas Distribution Network:

- Utility Industry Company of the Year 2010;
- SBGI Customer Services Awards in 2009, 2010, 2011 and 2012; and
- UK Utilities Award for Customer Service 2013.

Robust investment processes ensure last year's DRS award is spent wisely.

2-6 ENVIRONMENT



Reducing carbon dioxide emissions by 16% over the next 8 years.

Delivering the world's first climate change driven remediation project.

Developing a unique and innovative way to treat and re-use gasholder sludge.

Working with local communities to promote biological and ecological diversity.

Commissioning industry research into biomethane injection. Every £1 spent on this project could result in £5,000 payback in carbon, each year.

7-11 FUEL POVERTY



29% of all WWU connections in 2012-2013 were funded through the Fuel Poor scheme

Working to establish actual savings per property and track financial and health benefits.

Data mapping exercise secures over £2m additional funding to address fuel poverty in Wales.

Developing a UK-wide mapping solution in partnership with DECC and the Centre for Sustainable Energy.

Partnering with care agencies and training staff to provide warm home advice to the vulnerable.

12-16 SAFETY



Continuing our excellent safety performance and first class reputation within the industry.

Arresting the Silent Killer:

- using quality data collected onsite to map and track incidents by locality;
- Engaging a broad range of stakeholders, developing new initiatives to proactively target those most at risk;
- Raising awareness with over 640,000 people at county shows alone, winning Best Stand of Educational Value 2012 for our approach; and
- Working with IGEM and the All Party Group to build a broader response to promoting CO safety amongst stakeholders.

Developing new ways of promoting gas safety awareness of the emergency number.



WWU Chief Executive Graham Edwards said: “This business has come a long way since its launch in June 2005. We have implemented a number of new initiatives in the past twelve months but one thing that has not changed is our commitment to safety both for our own operations and for the people we serve.”

ABOUT US Our core business at Wales & West Utilities (WWU) is the safe and secure transportation of gas across our distribution network throughout Wales and the South West of England. This involves connecting new customers, maintaining and replacing pipework and associated assets, and responding to gas emergencies.

With a network of more than 35,000km mains, we transport gas to the homes and businesses of 2.5 million consumers across a geography covering 1/6th of the UK, serving a population of 7.4 million people.

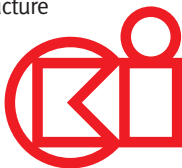
As a highly regulated business our costs are funded through the bills consumers pay. Currently gas distribution charges make up around 16% of a household gas bill – that equates to approximately £126 of an average consumer gas bill each year.

We are one of the largest companies in our region, with revenues of over £400m per year and an asset replacement value of over £8bn. We invest around £2m every week to maintain the condition and performance of our networks.

Wales & West Utilities (WWU) is an award winning gas distributor in the United Kingdom. It was selected as the Utility Industry Company of the Year in 2010, has been named the top performing gas distribution network in customer satisfaction over the last five years. It was also awarded the Customer Services Awards in 2009, 2010, 2011 and 2012 and were winners of the UK Utilities Award for Customer Service in 2013.

WWU is owned by a consortium of investors led by Cheung Kong Infrastructure Holdings Limited CKI.

All companies are part of the Cheung Kong Group CKI, so in reality we are 100% CKI owned.

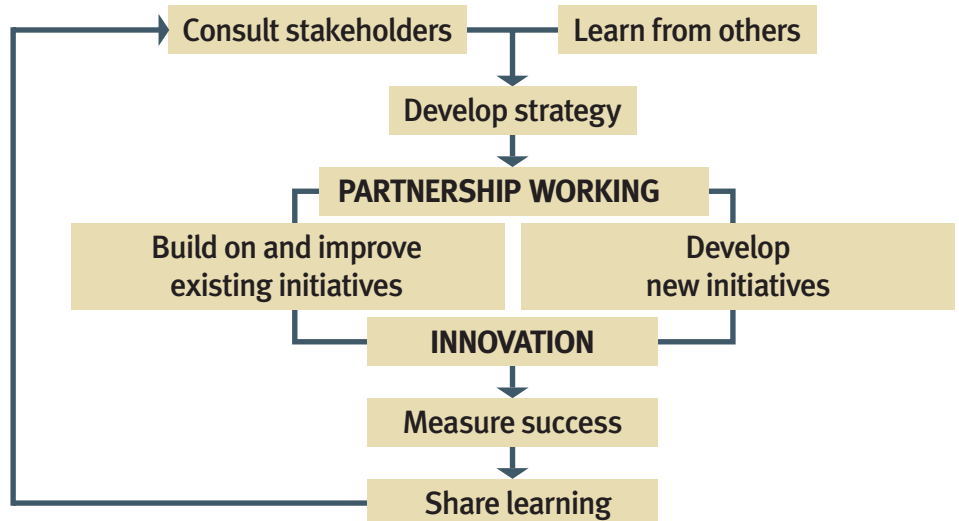
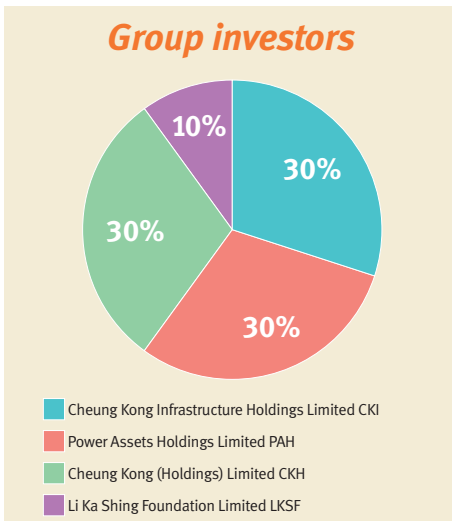


WORKING TO KEEP OUR CUSTOMERS SAFE

We recognise the importance of good corporate citizenship, working in and supporting the communities we serve. We strive to be the best in class and have worked hard to reinvest last year's DRS award wisely. We have taken the opportunity to continue our successful initiatives and develop new innovative ways to support the local environment and community. We have implemented best practice from previous year's submissions and feel we have both learned a lot and shared a lot with the other networks. The partnerships developed as part



part of this process with organisations such as Age Cymru, The Salvation Army, Techniquet and the Royal Welsh College of Music & Drama, have been invaluable to us. Following feedback from stakeholders, both externally and internally about the quality of our campaigns and initiatives. We intend to continue the momentum into 2014 and beyond whilst demonstrating stakeholder value from every pound spent by continuing to use the principles below in developing our campaigns.



ENVIRONMENT

Protecting the environment is a key focus for Wales & West Utilities and we are constantly looking for ways to minimise the environmental impact of our past, present and future activities.

WWU has carried out extensive stakeholder consultation to help shape strategy in all areas of our business.

As a large infrastructure provider, WWU understands delivering a reduction in its environmental impact is expected business practice. However, as a company, WWU is committed to continual improvement, embedding environmental considerations into our day-to-day management going above and beyond stakeholder expectations to reduce the impact of our operations and associated emissions.

By introducing and developing industry-wide best practices, we have reduced our environmental impact significantly year on year. Our work in completing the world's first climate change driven remediation project is testament to our on-going commitment in this crucial area of work, as is our shortlisting by Business in the Community for Welsh Environmental Company of the year 2013.

Following consultation with our stakeholders, WWU's environmental strategy has many strands, including; business carbon footprint, adaptation to climate change and contaminated land management.

In response to stakeholder feedback, a set of fundamental principles have been developed which provide the framework to set goals in order to promote continuous improvements in our environmental performance. In relation to those areas outlined within this submission, we:

- help protect the environment for future generations by making our contribution to minimising our emissions that lead to climate change;
- minimise, re-use or recycle waste materials whenever economically feasible; and ensure that any waste generated is managed properly and safely;
- manage the risks associated with sites that have been contaminated from historical gas manufacturing operations and improve these where appropriate by active site management;

- require our contractors to demonstrate the same level of commitment and performance as the company in the management of the environment; and

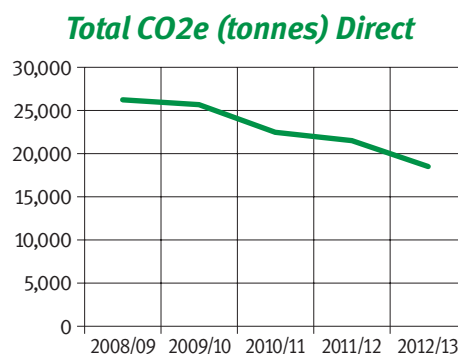
- work closely with our partners to reduce all associated environmental impacts by co-operation, co-ordination, and sharing the benefits of best practice techniques, procurement, and efficient working methods.



Reducing our carbon footprint

Delivering a low carbon, sustainable gas network is a key commitment for WWU.

Our environmental strategy, was developed in close consultation with stakeholders, will deliver a reduction of 16% in carbon dioxide emissions over the next 8 years. We continue to seek less carbon intensive alternatives to our works.



Some examples include:

- ✓ the UK's first pipe coil trailer capable of dispensing 500m coils of pipe which WWU developed in conjunction with Steve Vick, detailed in last year's submission, continues to save us over 1,000 tCO₂e per annum. This has now been shared with the water industry to help save carbon with their work;
- ✓ our 800 strong commercial fleet, and a number of heavy goods vehicles, have been replaced with Euro V compliant alternatives resulting in a reduction of around 400 tCO₂e per annum; and
- ✓ use of vacuum excavation trucks, allow for safe, efficient excavation around buried pipes by literally 'hoovering' material out of the ground. This has contributed to a reduction in waste to landfill and associated import of virgin aggregates equivalent to 600 tCO₂e per annum.

We were the first Welsh business to achieve recognition under the Sustainability Management and Audit Scheme® demonstrating both our commitment to sustainable development and its integration into everyday business practice.

Adapting to climate change

World's first Climate Change Driven Remediation Project

In addition to responding to risk and mitigating the impact of our operations, WWU has completed a comprehensive and independently audited climate change risk assessment. This supports adaptation in response to past global carbon emissions. WWU used a UK Government tool, UK Climate Projections 2009 (UKCP09), to identify applicable climate forecasts and understand associated risks and impacts. Our assessment and reporting processes have been verified by Lord Taylor of Holbeach at the Department of Environment, Food and Rural Affairs (Defra) and Cranfield University.

One of the most significant impacts identified during our assessment of climate change forecasts relates to the deterioration of land asset condition i.e. the risk associated with historical contamination from gas production having a detrimental impact on the environment. WWU has responded to this challenge by initiating the world's first climate change driven remediation project in Wem, Shropshire.

Following investigation, the site was initially concluded to present a borderline statutory risk of harm to the environment, which would not justify investing in environmental betterment. WWU then collated the relevant climate forecasts for the Wem area from UKCP09 (example below). These forecasts indicate that



Onsite with DEFRA at the unique site works in Wem

by 2020 there will be an increase of 20-30% in precipitation volume and the site would then likely cause contamination impact upon groundwater and the adjacent stream. WWU took the decision to future-proof the site and undertake proactive intervention to prevent climate change risks from developing, escalating and causing unacceptable impact to the quality of life of the local community and to wildlife.

No other company has attempted to interpret or consider the risks and impacts of climate change forecasts on contaminated land. Consequently, WWU has coached and inspired behavioural change amongst consultants and contractors working in the gas industry, including Hydrock, AECOM, Grontmij, Capita, Erith and WorleyParsons.

WWU gave a presentation to Dr Russell Thomas on the Wem remediation project. Dr Thomas is a globally recognised expert in former manufactured gas facilities and their associated contamination legacies, risk appraisals and remediation.

“WWU has taken a fresh angle on dealing with historic pollution and gone far beyond the normal requirements for environmental improvement. To initiate such a ground breaking project it has required a high degree of foresight on behalf of WWU and I think this project helps in part to put the gas industry back into its previous position as an innovation leader in the energy and utilities sector.”

Dr Russell Thomas

Contaminated Land Specialist and Member of the IGEM Panel for the History of the Gas Industry

WWU has also presented to the Head of Contaminated Land in UK Government on the subject of climate change driven remediation at Defra's offices in Westminster, followed by a visit to see the unique site works at Wem in progress (above).

“It was very interesting to see Wales & West Utilities taking a proactive and forward-thinking approach to assessing potential statutory risks. We applaud the novel integration of climate change predictions into contaminated land risk assessments.”

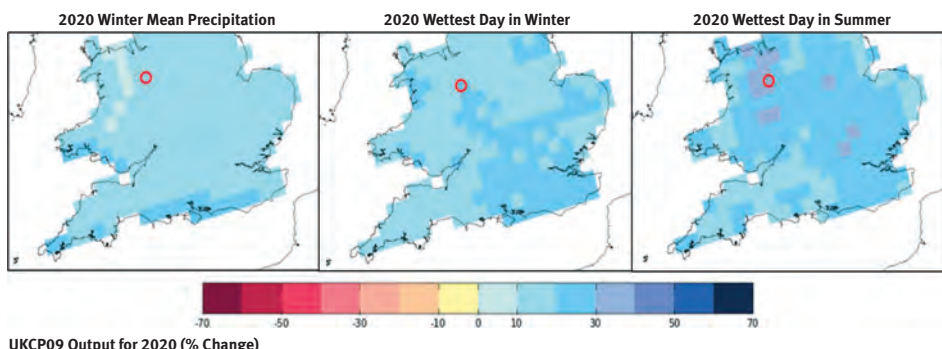
Dr Morwenna Carrington
Defra and her colleagues onsite

Leading the way in Climate Impact Maps

Following our success at Wem, WWU has since gone on to address one of the industry's most significant barriers to mitigating climate change risks – the quality of available data translating forecasts into impacts.

In response to this challenge, WWU has initiated a partnership with a major data mapping provider to develop a range of climate impact maps, based upon the UKCP09 forecasts. This partnership is currently working on a pilot study across four Water Framework Directive river catchments in mid-Wales that will look at climate impacts caused.

Once these UK-wide, local-scale, climate change impact maps have been produced, WWU will be able to understand how these impacts will interact with contaminated land, pressure regulating installations, river crossings and pipes running adjacent to meandering rivers and invest in the most cost effective mitigations. Upon successful application of climate impacts across this trial area, the impact mapping can be extended across the UK and marketed to companies who wish to further understand their climate change risks and justify investment in adaptation. These maps will also offer a clear opportunity for economic growth in the environmental industry. This will support the other networks in further developing their adaptation planning.



Land remediation

The monitoring, maintenance and remediation of statutory contaminated land risks associated with Wales & West Utilities' (WWU) land assets is another key area of our environmental strategy and prevents significant harm to the environment while maintaining the health and safety of the public and of WWU staff.

WWU has continued its industry leading performance in this area. Statutory remediation projects at Milford Haven and Pembroke Dock, both achieved a staggering 100% re-use of materials – including hazardous soils. Having delivered the most sustainable option, whilst saving disposal costs which would have attracted Landfill Tax have been held up as best practice by the industry. Events have been held at these sites inviting other Gas Distribution Networks to share best practice.

The scale of our commitment to mitigating environmental impacts is illustrated by our work at Milland Road, Neath, South Wales (below). Over the one year duration of the project, 50,000t, of soil was excavated. Of this, 51% was treated and re-used onsite. The remaining material was predominately taken to offsite recycling centres allowing for the sustainable re-use of 97% of material excavated. The project also maximised the use of local businesses and services, creating Welsh jobs in a difficult economic climate.



Neath site during works



Neath site after works were completed

Contaminated Land in the Gas Industry

IGEM Wales Section

Thursday 26th January 2012 - 12:00 pm - 3:30 pm
The Towers Hotel & Spa, Swansea
Including site visit to Neath

Speakers

Oliver Lancaster, Wales & West Utilities
RfO: Remediation + Information + Innovation + Outputs

Russell Thomas, Parsons Brinkerhoff
Managing Risks from Gas Industry Construction in Contaminated Land

Martin Holmes, Celtic Technologies
Neath Gasworks Remediation



Programme

12:00pm - Registration & Lunch

12:30pm - Presentation 1

1:00pm - Presentation 2

1:30pm - Presentation 3

2:00pm - Group Air Safety

2:30pm - Site Visit

3:00pm - Welcome to Neath

3:30pm - Arrive back at hotel



For more information or to book your place
Tel: 0844 375 4436 or
Email: events@igem.org.uk

Sharing best practice with the industry

Innovation and efficiency – combined gasholder demolition and statutory remediation gasholder sludge

WWU has also taken the innovative step of undertaking the statutory clean-up of contaminated sites as an integrated part of gasholder demolition. Combining gasholder demolition with remediation presents a one-off opportunity to level a site and use treated soils as engineering material to backfill below ground tank voids rather than importing aggregates. Additionally, removing gasholders affords the space for more efficient on-site treatment and avoids rising landfill disposal costs. This combined programme approach has been undertaken at our Gorse Hill site in Swindon and has not only delivered considerable cost savings, but also saved 745t CO2e compared to delivering the work as two separate projects.

Sharing best practice with the industry

WWU has educated the gas industry and the wider consulting and contracting sectors on the subject of land remediation through hosting of an IGEM national technical visit to the Neath remediation project, which included a number of paper presentations. Furthermore, the ENA Environmental Working Group visited Pembroke Dock and Milford Haven remediation projects to learn from our innovative approach and apply it to their own forthcoming programmes.

Gasholder Demolition: Innovating to reduce cost and improve performance treatment and re-use of gasholder sludge

One of the costliest aspects of a gasholder demolition project is the handling and disposal of gasholder sludge.

WWU, in partnership with a specialist contractor, has developed an unique and innovative way of managing sludge. Using technologies most commonly used in the remediation industry. WWU has developed and is testing a three stage treatment process to enable sludge to be transformed into a material suitable for sustainable re-use.



GDN remediation showcase

Stage 1 – Centrifugal processing of sludge

This stage involves the mobilisation of containerised centrifuging plant (below) to a gasholder site to process the extracted sludge and separate the solid and aqueous constituents. The caked sludge (post-centrifuge treatment) is then stockpiled on site, sampled and made available for bio-treatment. Up until now, this caked sludge has then been and typically sent for incineration, attracting extortionate charges and resulting in significant emissions from the incineration process. This dry waste is unsuitable for disposal to hazardous landfills due to the very high concentrations of contaminants in the material.



Stage 2 – Biological treatment

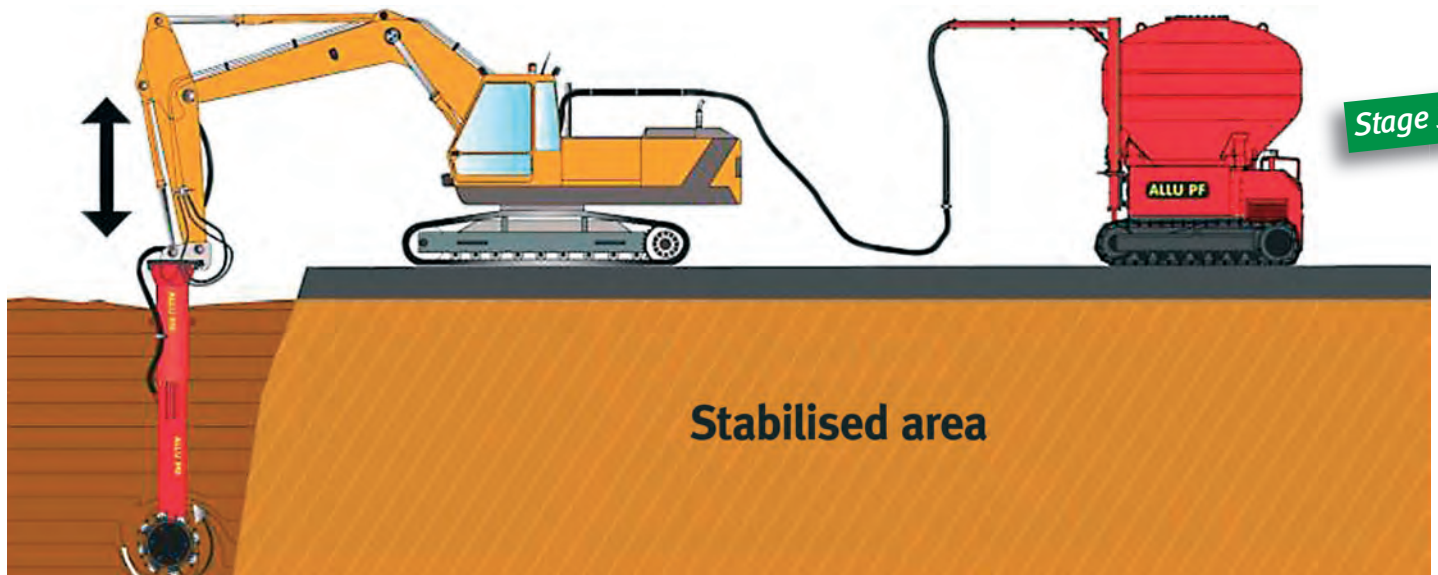
The objective of the bio-treatment stage is to dose the centrifuged sludge cake with additives that are appropriately designed to improve its chemical nature. Typical additives include compost, fertilizer and/or surfactant to reduce the hydrocarbon content over a period of time, as illustrated by the graph to the right.



Tracking biotreatment progress by biopile

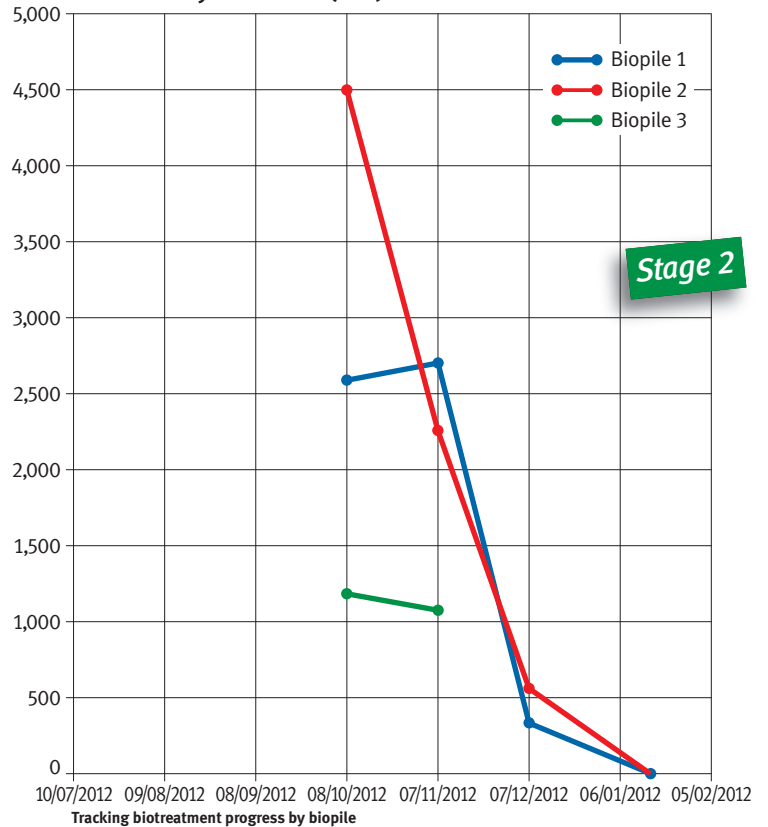
Stage 3 – Chemical stabilisation of the bio-treated sludge cake full scale – in-situ

This has never before been undertaken in the UK and offers sustainable re-use of hazardous material and significant cost and CO2 emission savings compared to the alternative of incineration which has been generally adopted until now. In addition, we are planning to use CO2-free cement in the process of stabilisation, which further reduces the emissions impact.



WWU are currently undertaking a three-stage treatment process at the Grangetown gasworks site in Cardiff Bay. The outcome of this trial will inform the next phase of gasholder demolition. Sludge will be collected from multiple gasholders, centrally treated and placed within the least environmentally sensitive below ground gasholder void. Three-stage treatment of gasholder sludge has never before been undertaken

Total Petroleum Aromatic
Hydrocarbons (PAH) Concentrations



Tracking biotreatment progress by biopile

in the UK. This offers sustainable re-use of hazardous material and significant cost savings. **The technique is projected to save WWU 50t CO2e in next phase of demolition alone (6 gasholders) – a saving of over 50%.**

This innovation will be shared with other GDNs, enabling significant cost savings to consumers across the UK as gasholder demolition work for the current price control commences.

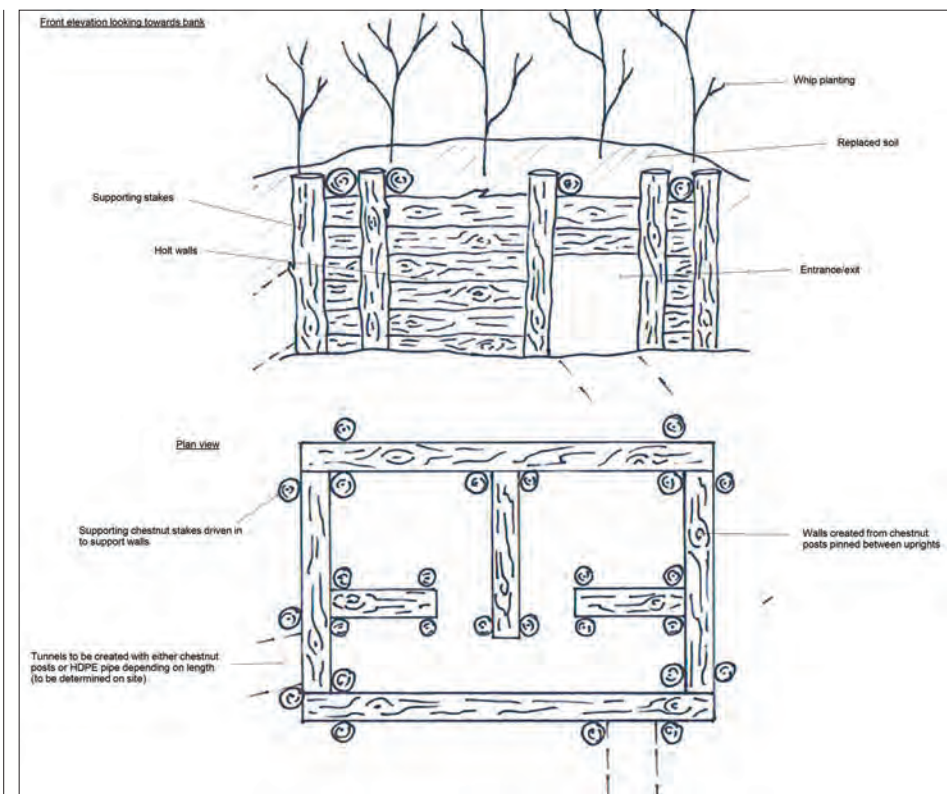
Improving biodiversity

Whilst we are aware of, and continue to deliver our statutory obligations, we are committed to delivering both environmental and community benefits which go above and beyond these requirements. At a former gas holder location in Ammanford in addition to site remediation at what is currently the most complex project licensed by Natural Resources Wales, WWU has worked with the local community to combine riverbank protection with improving the biological and ecological diversity of the site. A range of habitat enhancement features including nest and roost boxes will be installed in addition to an artificial Otter Holt and Kingfisher Tunnel.

WWU engineering expertise beckons new era in UK gas distribution

A major opportunity for the industry to reduce greenhouse gas emissions from the everyday use of gas relates to the injection of gas generated from renewable sources directly into the existing gas distribution network. Currently, the gas quality requirements of the Gas Safety Management Regulations cannot generally be achieved through existing proposals. However, to support this exciting new opportunity, WWU is playing a key role in tackling some of the technical issues surrounding Distributed Gas.

Wales & West Utilities has partnered with GL Denton Noble to complete a detailed two part study into internal corrosion of metal mains – a major concern preventing the widespread use of biomethane. The biomethane that many producers want to inject into gas distribution systems contains more oxygen than is currently allowed by the Gas Safety (Management) Regulations. The study was designed to provide evidence to the Health & Safety Executive that increasing the allowed oxygen limit to 1% from the current 0.2% by volume was safe and satisfied the very strict safety test they have to apply. The report has been accepted by the HSE and builds on the work completed by SGN and Southampton University. By releasing the work early to SGN, we facilitated the HSE to issue an exemption to SGN who are using it at their site in Poundbury. More recently, the HSE, following some further work by WWU have issued a class exemption which will apply to all gas transporters and will enable plants to inject biomethane using this exemption rather than having to seek individual exemptions for each plant which is both time consuming and expensive. This work removes a major obstacle to the development of biomethane injection into gas distribution systems in Great Britain. WWU's investment in this project, enabling full scale biomethane entry into the National Network, has a massive payback in carbon terms. 10% biomethane injection would represent a reduction of 3 million tCO₂e per annum nationally, with an abatement value of £162m pa maximising



Otter holt design



Otter Holt construction

benefits for gas consumers and the wider industry. In carbon payback terms, every £1 spent on this project could result in £5000 payback in carbon, each year!

Our notable disappointment is we are yet to connect a biomethane plant to our own network. That is about to change, with a unique development connection with a farmer in the Cotswolds in the final stages of completion. We have worked hard with many potential connections, but this opportunity is particularly exciting as it potentially opens up a completely new area of feedstock, the farmer using green farm waste to produce the biomethane, and using the waste carbon dioxide produced to enhance the tomatoes in his vast greenhouses. This is a double carbon win as the plants convert the carbon dioxide to oxygen through photosynthesis.



Otter Holt in use

FUEL POVERTY



WALES & WEST
UTILITIES

WORKING TO KEEP
OUR CUSTOMERS SAFE

Causes of fuel poverty and the role of WWU

Whether a household is in fuel poverty or not, is determined by a number of factors including the cost of energy, the energy efficiency of the property and household income.



Community engagement event in Llanerchymedd

People who live in an 'off gas' area are more likely to be in fuel poverty than those who are connected to the gas network as they often need to rely on less efficient and more expensive alternatives.

Following consultation with stakeholders including our fuel poor partners, Local, Regional and National Government charitable organisations such as NEA, and the Energy Savings Trust, Wales & West Utilities have formed a strategy for fuel poverty based upon the following approaches:

Improved data

To identify the proximity of off gas properties to our network and identify concentrations of those in fuel poverty

Proactive partnerships

To assess Social Housing stocks and to identify where gas offers a cost effective solution for households

Community engagement

Canvassing of private households via community events and local information

Communication and knowledge sharing with customers and organisations

To understand the various sources of funding available to tackle fuel poverty, in particular energy efficiency

Whole house solution

To offer customers where gas is not the best option direction for obtaining independent advice on the options available to them

Assisted connections

29% of all WWU connections in 2012-2013 were funded through the Fuel Poor scheme

In 2012-2013 we connected over 2,100 properties and laid over 11km of mains. This is 3km greater than in 2011-2012 and reflects that we have now tackled a large proportion of the qualifying properties close to the gas network and are now moving out into less urban areas.

The 2,104 connections equate to a theoretical like for like energy saving of £1m per annum and 105,000 tonnes of lifetime carbon savings.

As a result of a change in focus of the Government Scheme, we only saw 30 connections under the Warm Front scheme in England. The NEST scheme in Wales only saw 150 connections, much less than the 500 per annum under HEES reflecting the targeting of hard to treat rural properties. Our scheme has delivered over 2,000 new fuel poor connections this year alone, well in excess of the national schemes.

In order to bridge this gap, WWU has maximised our partnerships with other organisations such as Integrated Energy Services and British Gas. This has resulted in the progression of a number of larger schemes.

Network extension scheme in Plymouth delivers huge financial and health benefits to those residents who now have mains natural gas.

In November 2011, we were asked by a resident of Kirkstall Close Plymouth to provide a quote for a single gas connection. This quotation was in excess of £6k as there was no existing gas infrastructure within the area. Even with help from Warm Home Assistance this proved very difficult for the customer to finance. Following local community engagement, which was supported by Mrs Rodd, Kirkstall close Infill went live in September 2012 with over half the residents signing up, 100% of whom benefitted from full funding toward the cost of mains and services through the Warm Home Assistance Scheme.



WWU employees showing Mrs Rodd our appreciation for her assistance in promoting this scheme to her neighbours

Year	Number of Fuel Poor services	Percentage of overall connections	Distance of mains laid (km)
2009-2010	187	3	0.2
2010-2011	1,779	20	5.2
2011-2012	2,205	27	8.3
2012-2013	2,104	29	11.4



"I suffer from ME, which gives me muscle pains and chronic fatigue, and having to use alternative fuels to gas has proved a real inconvenience. After trying and failing for 12 years to try and be able to afford gas, I am delighted that it has now become a reality thanks to the Warm Home Assistance scheme."

Ms Roberts

"I contacted WWU for a quotation to supply my property with gas. I was informed about the Warm Home Assistance scheme and that my area could qualify for a grant. I thought this would be beneficial to me and my neighbours. I was using Economy 7 heaters in my property and these were proving to be very expensive. Having previously lived in a property with mains gas, I knew that it would be financially beneficial to make the switch and this scheme has allowed me to do so. I am really pleased with the decision I made."

Mrs Rodd

"I wouldn't have been able to afford mains gas, had it not been for the Warm Home Assistance scheme so I am very grateful."

Ms Goodall

We have remained in touch with the residents to track the benefits of the scheme. Mrs Rodd has now halved her monthly bills and Ms Roberts has seen her health improve.

"Last year I was receiving a bill for £120 per month for electricity, I am now paying £60 per month for gas and electricity combined. I am glad myself and neighbours had the gas installed as it's much better than the Economy7, both financially and practically."

Mrs Rodd

"The gas installation has undoubtedly improved my quality of health. Having instant hot water rather than having to wait for it to heat up helps to ease my muscle pain."

Mrs Roberts

Whole house solutions

Establishing the actual savings per property

We recognise that the actual savings that a customer sees when they switch to gas central heating is dependent on a number of factors. Some households may have only been heating in one room via an electric fire but with a gas heating system they can benefit from the whole house being warm. This can lead to an overall improvement in health as well as social benefits that cannot be financially quantified. We are currently working with our fuel poor partners to undertake customer surveys following the installation of gas heating which will enable us to more accurately quantify some of the non-monetary benefits of our schemes, thus demonstrating the full range of positive impacts of our investment.

Quality data brings strategy to life and secures over £2m funding for fuel poor

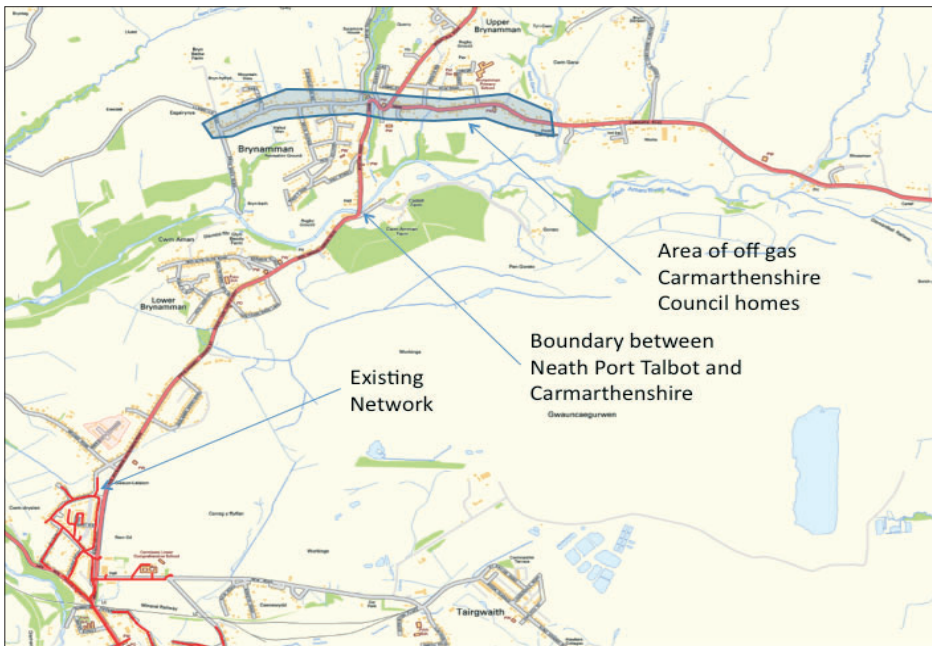
Last year's submission outlined how the data mapping exercise we had undertaken. This used Geographic Information System mapping to overlay our network with Meter Point Reference Number data, identifying properties with live gas supplies. Following which, statistical data was used to display these properties within the geographical boundaries used by Government to rank areas of deprivation – their Lower Super Output Areas (LSOAs). This allowed us to identify the proximity of the off gas fuel poor properties to our network.

In the 2012 DRS submission, we discussed how data from the mapping exercises we had undertaken with Welsh Government had been shared with Local Authorities who were submitting

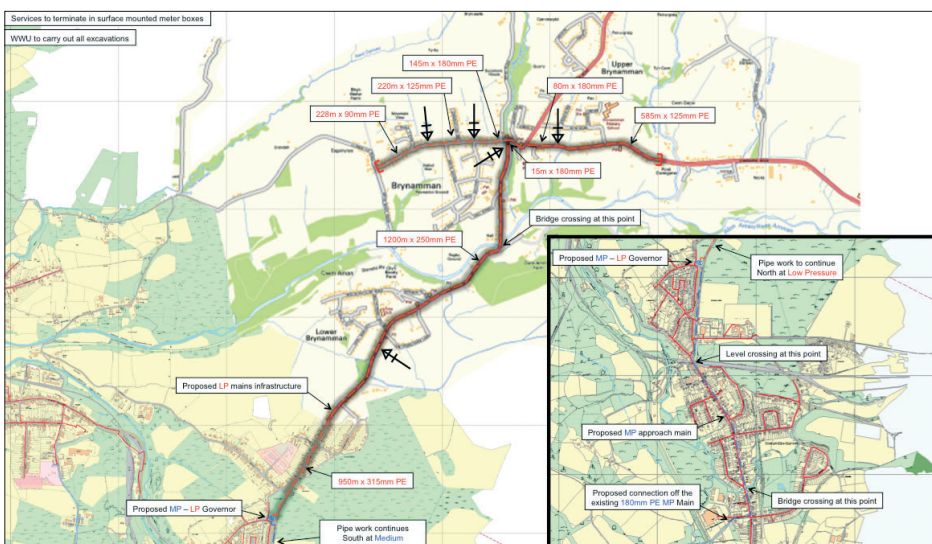
bids for the ARBED Phase 2 scheme in Wales, a community based energy efficiency scheme backed by 50m euros of European grant aid.

We provided maps identifying off gas areas, and then supported Local Authorities by putting together initial costs for schemes. We are pleased to now be asked to deliver three significant infill schemes during 2013 at Trelewis for Merthyr Council, Hollybush for Caerphilly Council and Upper Brynamman for Carmarthenshire Council with a total investment of £2.1m.

Since WWU came into being in 2006, we have looked at over 1,200 infill schemes with less than 20 progressing to constructed schemes. Working with the British Gas Energy Solutions team, we have been successful in getting six significant infill schemes progressed this year alone. In each case the initial driver has been the social housing provider but we have also focussed on connecting private households through our Warm Home Assistance funding. A proven success, we have shared our mapping approach with NGN and SGN and are currently discussing the development of a UK-wide mapping solution in partnership with DECC and the Centre for Sustainable Energy.

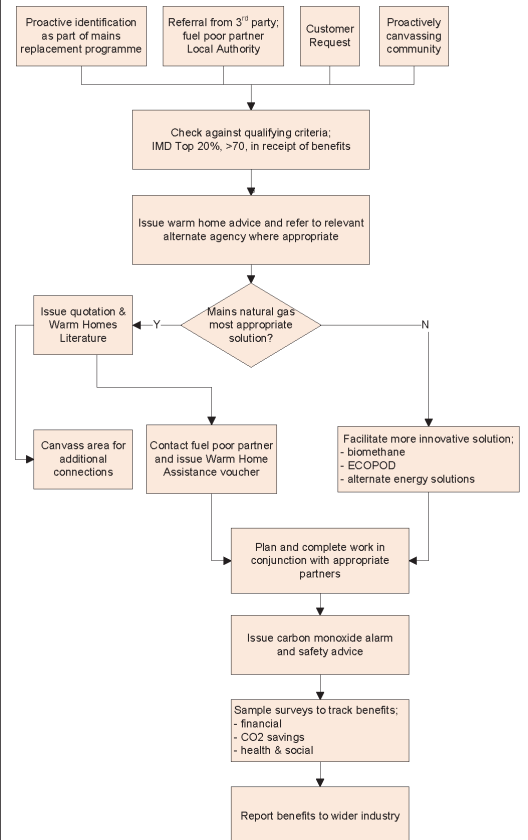


Identification of off-gas properties at Upper Brynamman



Design plan showing 4.5km of mains laid at Upper Brynamman

Routes to a warmer home with WWU



Working beyond traditional infills and assisted connections

Welsh forum

In December, WWU ran a conference which was attended by our fuel poor scheme partners, NEST scheme administrators, Gas Suppliers, Ofgem and Councils. This first meeting was used to discuss the funding streams available and to bring everyone up to speed on the Green Deal and ECO as well as understanding the projected number of properties a year in Wales that each of the funding measures would support.

The forum also discussed in detail the data available for Wales and it was agreed that this should be shared under licence with all relevant parties. Data Protection was discussed but as the data does not include any occupant's names or contact details, it was concluded there were no issues with the sharing exercise.

The forum will now meet every six months with invites extended to more Councils as well as private landlords associations. The need to develop an approach for assessing and identifying measures for communities was also identified as a key future action.

As a spin off from this event, we presented at the Welsh rural planning day in Brecon on the 23rd May. Whilst our network is sparse in these areas, the data mapping exercise offers clear information to interested parties on their options and allows the forming of future strategies for tackling fuel poverty issues in these areas. The workshop was also used as a platform to explain how biomethane generated locally from suitable feed stocks could be used

to feed a discrete local network of gas pipes to feed a village that would be uneconomical to connect to the existing gas network.

Care agencies

We have established contacts with a number of Care Agencies and Community Groups. These include Care and Repair Cymru and Age Cymru as well as local groups in Newport and Cardiff. These groups have direct contact with vulnerable customers on a daily basis and by raising awareness of our scheme they can direct customers to us either directly, or via the EST and British Gas were they are in areas remote from the gas network.

We have funded and supplied over 30,000 wall thermometers to Age Cymru this year. These have been distributed via their representatives to households to ensure pensioners are keeping their main living rooms at a suitable temperature.

Private landlords

We have also had a number of discussions this year with private landlords associations including the Welsh Chair and the Wales Accreditation Body. This is an area we will be building upon during 2013 and beyond as there is a large potential for connections, especially with landlords facing new legislation to ensure the properties they are renting have a minimum energy efficiency rating before they can be let.

Reducing the cost burden of connecting to the network

Our two part study into internal corrosion of metal mains mentioned in our Environmental submission which was designed to provide evidence to the Health and Safety Executive that increasing the allowed oxygen limit to 1% from the current 0.2% by volume was safe and satisfied the very strict safety test they have to apply. This removes a major obstacle to the development of biomethane injection into gas distribution systems in Great Britain. John Baldwin of CNG said: "the outcome represents in excess of £100k benefit to the biomethane producer in terms of cost reduction." This will represent a significant benefit to consumers as less financial support will be required for biomethane projects going forward and we are scoping projects where this could facilitate the connection of rural Welsh communities.

Into the next price control

Our commitments into the next price control 2013-2021 include:

- minimum of 10,800 connections over the 8-year period;
- working to identify opportunities for the supply of Distributed Gas to communities;
- establishing the real benefits in terms of energy bills savings and carbon savings per household;
- cross checking of mains replacement schemes against IMD Top 20% areas to identify cost effective opportunities to deliver new connections; and
- looking at new innovative solutions including eco-pod and the facilitation of broader solutions where gas may not be the best option for the consumer.
- continue to promote the scheme at relevant stakeholder events in partnership with Social Housing providers, Care Agencies and the Landlords Association.



Welsh Fuel Poverty Forum meeting - chaired by Nigel Winnan, Connections Manager, WWU



Nigel Winnan, Connections Manager, sharing our data mapping work with the industry at the NEA conference

SAFETY

At WWU our commitment to safety, both for our own operations and for the people we serve, is central to everything we do as a business.

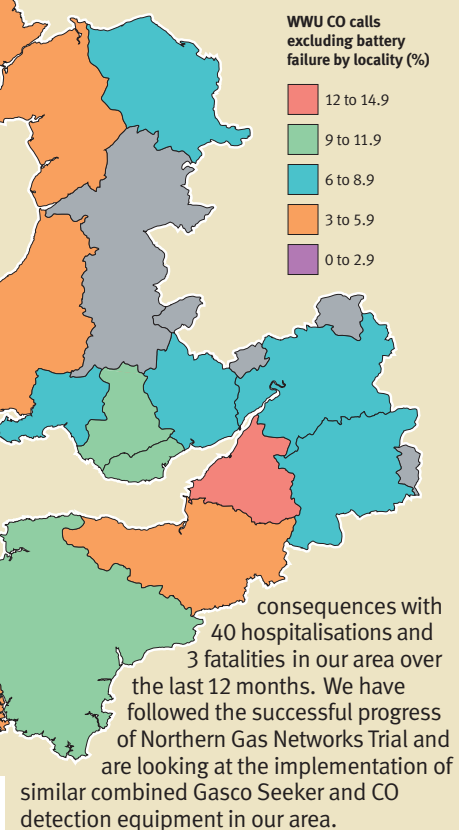
Our comprehensive stakeholder engagement process which includes regular consultation with the Health & Safety Executive, consumers, safety organisations and special interest safety groups, helps us to shape our strategy across all areas of our business. Gas safety is high on the agenda of stakeholder interest.

Above and beyond the business as usual activities in which we lead the field for safety performance, we have consulted our stakeholders. From our discussions and feedback, key areas of concern include increased promotion of the 0800 111 999 number and working toward a broad and inclusive approach to raising awareness of Carbon Monoxide poisoning. These stakeholder-driven activities have been embedded into Wales & West Utilities' strategy resulting in a series of initiatives with measurable benefits to be developed.

Prioritising 'at risk' areas

By using the quality data our Emergency engineers collect onsite to map our incidents geographically, producing a 'hotspot' analysis, we were the first Gas Distribution Network to proactively target our initiatives to those area's most at risk.

In 2012, Wales & West Utilities' first call operatives attended nearly 7,000 emergency visits relating to suspected Carbon Monoxide incidents, or where the engineer visiting the property suspected the occupants were at risk from Carbon Monoxide. This represents around 7% of our emergency calls last year. On inspection, just under half of these were found to be battery failures of audible Carbon Monoxide alarms, however, this still leaves a high level of likely incidents a number of which have resulted in tragic



Carbon Monoxide – 'Arresting' the Silent Killer

Following consultation with our stakeholders around the measures they would like to see implemented in this area.

WWU has developed a strategy, recognising that CO is not solely a gas issue, which delivers a diverse programme of initiatives both to our staff and more widely, the 7.5 million people who live and work within our network. Thus far, over one million people have benefitted from our campaign, with vulnerable groups

including children, students and older people specifically targeted.

Building upon our strategy over the last 12 months, WWU has:

- used better data and developed new partnerships to deliver new campaigns in 'hotspot' areas targeting at risk areas;
- continued those successful initiatives highlighted within our 2011-2012 DRS submission;
- shared learning with other networks and the wider industry at best practice events; and
- improved our quality data capture process.

Additionally, the support and advice which was offered as a matter of course to those consumers who experienced a CO related call has since been extended to neighbouring properties in order to mitigate the risk that they are adversely affected by a fault in a neighbouring property. Our back office continues to follow up 100% of incident reports received within one working day of their occurrence. This allows us to confirm the consumer has improved their awareness of CO as a direct result of our visit, and in over 80% of instances this is confirmed to be the case. The process also allows us to identify those consumers who are particularly vulnerable and provide discretionary financial support toward the purchase of new appliances. In addition, for tenants, we obtain the Landlords details and provide information to them, the impact potentially being felt more widely than individual households.

Building upon success...

We have continued to promote our educational film 'Carbon Monoxide' The Silent Killer.

Unveiled last year by Baroness Finlay of Llandaff, Co-Chair of the All Party Parliamentary Carbon Monoxide Group, who 'gave (the film) five stars,' a number of partner organisations including: Age Cymru, and The Salvation Army now use the film to help raise awareness of CO poisoning.

Considering our unique geography and topography, recognising the large number of rural communities in Wales, we have worked in partnership with Techniquet, a local science discovery centre, to develop an interactive learning environment for families. Our bespoke campaign has gone on to target major agricultural shows including the Royal Welsh Show, National Eisteddfod and Royal Bath and West.

"Very Informative – with life saving information – all done in a lively, fun way."
Mrs Bowditch, Frome

"Having seen your display & with the excellent advice from your staff. Will be installing a detector into my motor home and bungalow."
Mr Newton, Dorset

With a population of 3 million and a footfall of over 241,000 we were able to engage directly with 8% of the Welsh population at one event alone. Last summer, we directly interacted with over 5,000 families providing each of them with safety advice and an opportunity to test their improved knowledge to win a CO alarm, winning WWU the coveted 'Best Stand of Educational Value 2012' for our approach at the Royal Welsh Show. The exhibition has already saved one family from potential injury. After receiving and using their free audible CO alarm at the Eisteddfod, a family was immediately alerted to a CO problem at home. The boiler was found to be faulty, and the family returned the following day to thank WWU 'for potentially saving our lives'.



Lee Jefferies being presented with stand of 'Best Educational Value' at the Royal Welsh Show



Carbon Monoxide 'What you should know' at the Royal Welsh Show

Stakeholder feedback collated from more than 5,000 respondents at these events have proven the approach to be both popular and successful in raising awareness with **over 90% citing an improvement in awareness, and over 85% committing to pass the message onto a friend or family member.** We have built upon this success and will this summer have a presence at the Royal Cornwall Show in addition to the Royal Welsh, National Eisteddfod and Royal Bath & West Show – increasing our reach at these events alone to over 640,000 people. Recognising that CO is not only a danger in buildings, WWU has also used the opportunity to target the campers and caravanners at these events through safety advertisements on admission tickets and camping passes.

Sharing learning

We wish to maximise any and every opportunity to raise awareness of this silent killer in a cost effective manner. WWU has participated in best practice events with the other networks and the wider industry through our work with the All Party Parliamentary Gas Safety Group to whom we have extended financial support this year. Our 600 commercial vehicles continue to display the CO warning message. Additionally, we combine this important safety message with our work in other areas and have successfully exhibited at Landlords events promoting Green Deal uptake in order to raise awareness of the increased CO risks associated with improved insulation.

One of our employees won the Wales Section of the Institute of Gas Engineers and Manager's Young Person's Paper Competition. The paper, which debated the current and potential future CO safety challenges, went onto place third in the National Final and will be published in Gas International magazine later this year providing a platform for discussion and to raise awareness.

Mark Oliver, Director of Business Services, spoke at CO-Gas Safety's Poster Competition Awards held at House of Lords in January and highlighted the proactive work we are doing in this important area.

We were able to use this opportunity to share our data collection and mapping work which allows us to proactively target our campaigns to those areas most at risk.

Other Gas Distribution networks have been in contact with us to discuss how we can extend this mapping into their areas and we are working to facilitate this.

WWU is also working to build a broader response to promoting CO safety, inclusive of shippers, suppliers and other fuel groups, acknowledging stakeholder feedback that CO is not solely a mains gas issue. In order to promote innovation and identify suitable research projects WWU is working with the Institute of Gas Engineers and Managers, and the All Party Parliamentary Carbon Monoxide Group to hold an industry conference on CO safety in July 2013. The conference, sponsored entirely by WWU, will enable interested parties to share best practice and innovative thinking, with a goal of developing a UK-wide roadmap to address the risk of CO poisoning.

WWU is constantly looking for new and innovative ways of spreading the message to vulnerable groups across the gas network and in addition to building upon successful projects this year has seen a number of CO initiatives being developed. Targeting schoolchildren, students, community groups and older people through partnerships with: the Royal Welsh College of Music & Drama; Theatr Na'Nog; The Salvation Army; and Age Cymru. Each campaign is tailored to the target group and uses our 'hotspot' data set to target an initial trial in areas at most risk from CO prior to rolling our successful campaigns across our geography. Success is measured using surveys and participant feedback. We ask participants to rate their awareness on a scale of one to ten. A minimum step change of two points between awareness rating prior to and post participation is required in order to justify further investment.



Supporting the school poster competition

New initiatives are a breath of fresh air

A theatre performance commissioned and sponsored by WWU in partnership with Arts & Business Cymru ensured over 1,300 children and their grandparents across one of our hotspots, South West Wales, learned about the serious dangers of Carbon Monoxide (CO) poisoning.

Working with a local theatre company, Theatr Na n'Og, WWU has also produced a 45-minute play highlighting the dangers of CO. Workshops involve WWU's emergency engineers and local schoolchildren to shape, produce and take part in the play. 'A Breath of Fresh Air' was specially designed to engage children in an equally funny and tragic tale. It is based on the tale of a grandson who spends a weekend camping with his grandmother after the loss of her husband

through CO poisoning. Sara Lewis, production script writer, said: "Anyone can be affected by CO poisoning, though young children, students and the older generation are most at risk. This drama was created to target pupils in years five and six as well as their grandparents, who were invited to the performance. The response from the pupils, teachers, parents and grandparents has been overwhelming. Boilers are being serviced, audible CO alarms purchased and the CO safety message shared via the rather unconventional method of a CO Hakka developed especially for the children to perform. By gathering CO data from the business we were able to target performances of the production in South West Wales – a hotspot for CO incidents."

At the end of every performance the actors held a question and answer session with the audience to reinforce the CO safety messages. Everyone was provided with CO related materials to take home and distribute to family and friends. The project was such a success an additional 10 schools in Bristol and Cornwall, two of our other high risk areas will benefit from this campaign in 2013-2014.

Create a campaign

Our 'Create a Campaign' competition, in partnership with Swansea Sound and the Wave was initially borne out of the receipt of a cost prohibitive quotation for radio advertisements. This focused on one of our key 'hotspot' areas and asked children to write and star in their own radio commercial to raise awareness of CO poisoning. The competition was promoted and winning ads played on air for over 6 weeks reaching more than 300,000 listeners at a fraction of the cost of traditional advertisements.



One of the schoolteachers involved in the project from Penyrheol Comprehensive School said: ***"It was a great project for the children. They learnt a lot about CO poisoning and I know that they have taken the warning messages home to their families – I certainly have! Their imagination is incredible and they seemed to hit the nail on the head when it came to pushing home the key messages."***

Working in communities – CO zone hits the road

WWU have been talking with Carmarthenshire County Council about the possibility of taking our carbon monoxide zone on the road. The council was extremely impressed with what we had to offer at the recent Eisteddfod and approached us about a partnership to highlight to council tenants the importance of providing access to carry out their annual boiler servicing. Our portable safety zone which will highlight not only the dangers of CO poisoning but also raise awareness of the National Gas Emergency Service is currently being developed and a tour of supermarkets and community centres is planned for the next 12 months.



Performances keep audiences on the end of their seats...



Theatr Na'nOg SAY NO TO CO

Raising awareness with the elderly

Working with Age Cymru, WWU is continuing its efforts to raise awareness of CO poisoning among the over 65s – a group identified as vulnerable to the dangers presented by badly maintained boilers and fires. At Age Cymru's Afan Nedd Day Centre in Port Talbot, during CO Awareness Week, visitors saw WWU's CO film – The Silent Killer – and were each given free audible carbon monoxide alarms and safety packs including our Keep Well this Winter Thermometers which also carry the CO message.

After seeing the film and hearing more about the dangers of CO poisoning, one of the older visitors to the day centre said: ***"I really didn't know anything about this. I thought it was gas poisoning so, as I haven't got gas in my house, I didn't think it was important, but when they told me that it can be caused by any fuel that burns, including coal, oil and wood, I was amazed. I have a coal fire and you can bet that I'll be getting the chimney swept now. I've also got the free alarm and I'll make sure I use it."***

"WWU's campaign highlights in very simple terms the steps we can all take to ensure safety."

Michael Phillips, Age Cymru

Fresher's

WWU has also taken the message to fresher's fairs across our region providing information around the dangers of Carbon Monoxide poisoning. The Royal Welsh College of Music & Drama with whom we work on our outreach projects has also displayed this important advice in the Student Union. Information and a link are also displayed on the Student Union website, available to all 700 students that study at the College.

"Over the past three years, we have worked closely in partnership with Wales & West Utilities to deliver key CO safety and awareness messages, as part of their CO campaign, to our students and other groups at high risk in communities across Wales."

Hilary Boulding, Principal

Royal Welsh College of Music & Drama

Gas Giants are out of this world...

An opportunity has arisen with Techniquet through which the gasses which make up the planets in the solar system can be used to raise awareness of gas in pipelines here on earth and the dangers associated with Carbon Monoxide. Digital reworking of the already successful 20 minute planetarium display has allowed for the inclusion of these important safety messages. Following a one-off investment, the programme will run continually with a minimum of four performances per week and a capacity of 30 pupils, a further 6,000 children a year will benefit from this initiative.

In summary, WWU has continued to use quality datasets and consider our geography, engaging a broad range of stakeholders in areas at most risk – maximizing partnership working opportunities. We want to ensure that messages are delivered effectively, by trusted people within local communities and at a minimum cost to the consumer.



Danielle Royce provides advice and CO alarm to an elderly couple at Age Cymru's Afan Nedd Day Centre in Port Talbot. No longer free in Wales, the shopping bags will save the couple money whilst acting as posters for the awareness campaign.



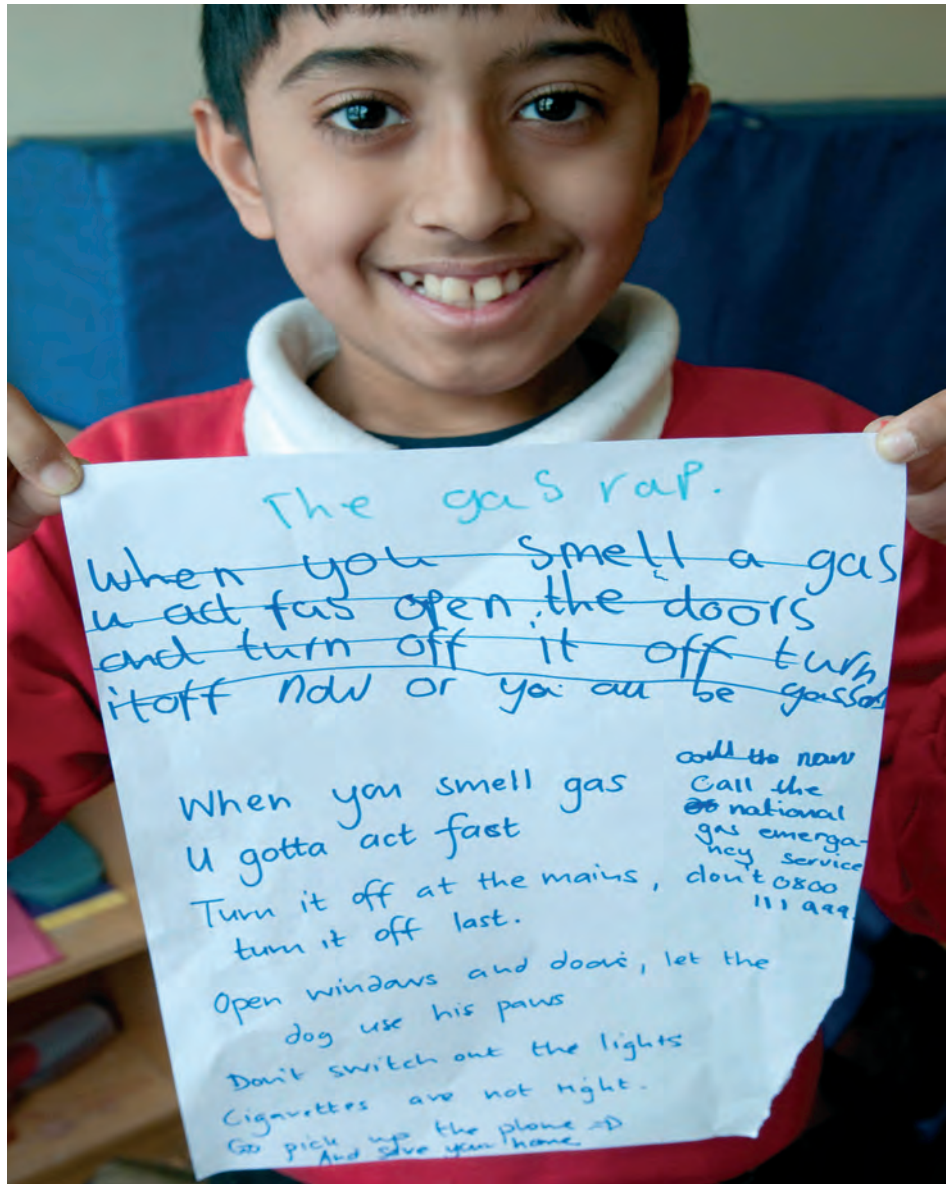
Lee Jefferies and Stuart Neil give advice and alarms to students in privately rented properties

Gas Rap is a real hit

More broadly than our CO response, WWU has, in partnership with the Royal Welsh College of Music & Drama (RWCMD), come up with a unique way of promoting the importance of gas safety at home – with song-writing workshops!

The one-day workshops, designed with Key Stage 2 (aged 7 - 11) pupils in mind, have proved very popular with the initial ten sessions booked up within days. With the help of a RWCMD Tutor and composition undergraduates, the 300 children involved were asked to write, perform and record a song highlighting the key steps to safety in a gas emergency and perform this to the rest of their classmates.

Sian James, who teaches at Trinant Primary School, was one of many who were delighted with the workshop: ***"Your visit was crucial in our efforts to raise levels of self-esteem, confidence, subject skills and aspiration. The pupils loved your visit; they were totally engaged throughout and were able to relate to the youthfulness of the group whilst learning a vital gas safety message."***



2,500 new Gas Detectives hit the streets

We are also using the county shows as an opportunity to raise awareness of the Smell Gas campaign – commissioning 2,000 'Gas Detectives' and 500 'Dditectif Nwy' equipped with the knowledge to raise the alarm in an emergency.



Newly appointed Gas Detective in action



Children workshop gas themed songs

The future

There is, however, always more which can be done and modern house design brings its own problems. With the Government keen to promote initiatives to seal homes and prevent heat loss, comes the inevitable consequence that any Carbon Monoxide will also be sealed in. More research is needed in this area to determine the full effects of reduced airflow on CO concentration levels in homes and WWU is committed to working with the All Party Parliamentary Group and the wider industry to fully understand these risks.

Working in Wales brings its own costs and challenges with the need to raise awareness bilingually. However, following the excellent feedback from those involved and having proven to have saved at least one family from potential injury, WWU is committed to continuing our broad range of safety campaigns.

**11th
July
2013**
08:30 - 16:30

Carbon Monoxide

**Ignorance can
be fatal**

Pride Park Stadium, Derbyshire, DE24 8XL

IGEM in partnership with Wales and the West Utilities and the Carbon Monoxide All Fuels Action Forum are holding a joint one-day event on the fight against unnecessary deaths, injuries and suffering caused by carbon monoxide (CO) poisoning.

Who should attend?

Any organisations interested in mitigating the risk of further injuries and death as a result of Carbon Monoxide poisoning.

Not limited to but including

Social housing groups, Local authorities, Camping and caravanning clubs, Private Landlords, Fire & Rescue Services, Paramedics, Coroners, Hoteliers, Architects and Installation and Maintenance Engineers.

What's happening?

The format of the conference will consist of keynote speakers presenting the latest developments to raise awareness, improve detection and develop regulation to further eradicate this silent killer. Presentations will be followed by interactive sessions led by *Baroness Finlay*, *Barry Sheerman MP* and *David Kidney*, Chair of Carbon Monoxide All Forum Fuels Forum.

To book your free place contact Julie Adcock
at julie@igem.org.uk or call **01509 678161**

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SMELL GAS?

WALES & WEST UTILITIES
WORKING TO KEEP OUR CUSTOMERS SAFE

Clive says... Follow these 5 steps to safety:

- 1 Switch off all gas appliances, and if possible turn off gas at the mains
- 2 Open windows and doors to ventilate
- 3 Don't use electrical appliances or switch lights on or off
- 4 Don't smoke or use any naked flames
- 5 Remember to call the National Gas Emergency Service on **0800 111 999**
Lines are open 24 hours a day, 365 days a year

For more information, log on to: wwutilities.co.uk

[@WWUtilities](https://twitter.com/WWUtilities) facebook.com/wwutilities



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