

Built Environment Sustainability Training Summary Skills Needs Analysis for **Water**





This summary Skills Needs Analysis (SNA) forms part of a suite of SNAs produced by the Built Environment Sustainability Training (BEST) programme.

BEST is a collaborative programme, led by the Welsh School of Architecture at Cardiff University in partnership with Asset Skills (The Building Futures Group), CITB, Constructing Excellence in Wales, the Energy Saving Trust, Proskills, and SummitSkills.

BEST is supported by the European Social Fund through the Welsh Government and works within the specific theme through which it is supported. BEST aims to develop and provide suitable training provision for Wales' built environment workforce to enable them to deliver sustainability through their job roles.

The SNA is based on '*Skills Needs Analysis of the Water Sector in Wales*' Energy Saving Trust. The SNA has made use of existing literature as well as primary research undertaken between January and May 2013 involving experts, policy makers, employers and training providers across Wales.

This report is available as a PDF download from:
www.best.cf.ac.uk

V1.0 Published July 2014

Copyright © 2014 Built Environment Sustainability Training

The shape of the sector

There are around 113,000 people employed in the Construction, Building Services, Engineering & Planning sector in Wales, with 7,080 people directly employed in plumbing and heating roles.

There is some growth in the sector, despite the wider economic problems, and the number of employees is expected to rise to around 7,870 by 2016.

Manual occupations account for almost two-thirds (64%) of the workforce, and only 20% of people employed in the water sector are female.

Most of the women in the sector (60%) work in administrative and secretarial roles - less than 20% of managers and less than 10% of technical professionals in the water sector are female. Almost half (43%) of the people employed in the sector are aged 45 or older.



How can water management improve sustainability?

Water management: its capture, retention, treatment and disposal – needs to be a prime consideration for any built environment project.

Better water management can lead to greater energy efficiency, reduced risks of flooding, and lower costs to business and individuals.

Its use can be managed in urban areas through:

- Rainwater harvesting, green and blue roofs
- Sustainable Urban Drainage Systems and water neutrality
- Grey water recovery
- Retrofitting of water efficient features and smart meters
- Efficiency in domestic hot and cold water systems
- Efficiency in non-domestic building water systems
- Behaviour change

Wider sustainability can be improved through:

- Water catchment management to avoid urban flood risk
- More efficient and effective leak detection and repair
- Changing individual and corporate behaviour and social approaches to water use

What are the policy drivers?

The Welsh Government has introduced a number of policies that will impact on water use in the built environment.

- The preferred methods for accrediting new-build Sustainable Buildings are BREEAM (for non-residential properties) and Code for Sustainable Homes (for residential; and incorporated in Government Policy and Regulation) both of which lay down clear guidelines for sustainable water use.
- Water Strategy for Wales is an evolving strategy that will influence policy in the future. Proposals include:
 - Land use and the environment
 - Water for nature, people and business
 - Taking action to reduce pollution
 - Improving the way we plan and manage our water services
 - Water affordability and delivering excellent services to customers
 - Protecting and improving drinking water quality
 - A new approach for drainage
 - Supporting delivery



At a UK level, there are several further policies and regulations that impact on water use in the built environment.

- The Flood and Water Management Act 2010, which makes Sustainable Drainage Systems (SuDS) a requirement in new developments.
- DEFRA's 2011 Water for Life white paper, which lays out the plans to improve water efficiency through the Green Deal and describes how the UK Government intends to encourage the retrofitting of SuDS.
- The Environment Agency's Water Resources Strategy (for England and Wales), which recognises that water capture and recycling technologies will have an increasingly important role to play in the future and suggests that a more skilled workforce will be essential to meet this need. This is now managed by Natural Resources Wales.
- UK Water Bill introduced (2013): aiming to increase drought resilience, drive growth and employment, as well as give businesses more choice and flexibility through the reform of the water industry.

NB. TAN 22: Planning for Sustainable Buildings will be withdrawn at the end of July 2014, when the changes to Part L (relating to energy efficiency) of the Building Regulations come into force.

Where are the skill gaps?



Employers in the sector report known skill gaps in the following areas:

- Managing sustainable practices and low carbon/green issues
- Keeping up to date with environmental legislation and the Green Deal
- An understanding of the importance and implication of green issues
- Water efficiency
- Affordability and metering
- Competency in applying water efficiency strategies
- Communication with the public about options for water management
- Rainwater harvesting in Wales
- Train the trainer
- Sustainable Drainage Systems: SuDs & WSuDs



Additional UK provision

There are opportunities for training in water-related subjects from other parts of the UK to be expanded into Wales. These courses include:

- SUDs foundation
- Designing SUDs
- SUDs and SABs Facilitation
- Green roofs – basic principles and design
- Regulatory activity in the water sector

Current provision in Wales

Some of the skill gaps can be met by promoting training that is already available. Qualifications in plumbing are readily available across Wales at Level 2 and Level 3, and a number of providers offer some content in grey water recovery. More specialised training is often more difficult to source but there are courses running in:

- Sustainable sewage treatment
- Carbon saving
- Solar thermal
- Monitoring systems and performance monitoring
- Rain gardens
- Zero-carbon technologies
- Behaviour change
- Global water issues

New BEST training programmes



New BEST Training Programmes



Major employer drivers

- Updating employee knowledge to match new products and technologies
- Keeping up with legislative and policy changes
- Competitiveness and other market drivers
- Customer preferences and awareness
- Personal interest in the topic



Policy Drivers

- Green Deal
- Sustainable buildings
- SuDS
- National water strategies



Delivery methods

- Workshops and lectures are the most popular delivery methods.
- A blend of face-face and e-learning was also popular.
- Use of phones and/or tablets was not popular.



Barriers

- The cost of training was the biggest deterrent for employers.
- A lack of time due to a busy schedule and geographical accessibility were also an issue for many companies and individuals.

Priority area for training	Potential audience
<p>Policy and regulation</p> <ul style="list-style-type: none"> • The Green Deal / new Water Strategy for Wales / UK Water Bill 	<p>All relevant professionals and Green Deal assessors and Advisors.</p> <p>➔ Opportunities for Train the Trainer activity with new and existing providers</p>
<p>Land use and environment</p> <ul style="list-style-type: none"> • Sustainable Urban Drainage; • Concept and design and Water Sensitive Urban Design • Integrated Catchment Management; • Green Roofs concept and Design 	<p>Architects, Catchment officers, Civil Engineers, Contractors, Designers, Ecologists, Environmental NGOs and Government bodies, Estate Managers, Land Owners, Landscape Architects,</p> <p>➔ Opportunities for Train the Trainer activity with new and existing providers</p>
<p>Water resource management and value of water</p> <ul style="list-style-type: none"> • Climate change and water resources in Wales 	<p>All professionals working in the water sector</p> <p>➔ Opportunities for Train the Trainer activity with new and existing providers</p>
<p>Water efficiency</p> <ul style="list-style-type: none"> • Behaviour change • Retrofitting water efficient Technologies • Rainwater harvesting (both new and retrofit) 	<p>Arbed/ Nest etc installers, Building Services Engineers, Civil Engineers, Contractors, Estate Managers, Green Deal providers, Housing Associations, Plumbers, Other Water Professionals, planners, Building Control Officers</p> <p>➔ Opportunities for Train the Trainer activity with new and existing providers</p>
<p>Affordability and metering</p> <ul style="list-style-type: none"> • Smart Metering 	<p>Building Services Engineers, Contractors Estate Managers, Housing Associations, Landlords, Plumbers, Retailers of smart technologies, Other consultants.</p> <p>➔ Opportunities for Train the Trainer activity with new and existing providers</p>

Better water management can lead to greater energy efficiency, reduced risks of flooding, and lower costs to business and individuals.



029 2087 0990
best@cf.ac.uk
www.best.cf.ac.uk

 @best_wales

best
Built Environment
Sustainability Training

Designed at Creative Loop www.creative-loop.co.uk

