



Building Today
for the Wales we want Tomorrow

Annual Report 2016

What is CEW?

Constructing Excellence in Wales (CEW) is the only cross-sector, cross-portfolio organisation serving the Welsh construction industry. Funded by Welsh Government, we are independent, a critical friend of Government and industry, charged with improving the construction process in Wales.

We ensure that the principles of collaborative working, as outlined by the Egan and Latham reports, become mainstream industry practice. Since 2002, we have guided clients and the supply chain, through teamwork and collaborative procurement, to meet government targets on sustainable development, waste management, carbon reduction and community benefits. From the outset the work of CEW has been in line with the principles set out in the Well-being of Future Generations (Wales) Act and we are in a strong and central position to assist government and industry to achieve the goals set for the built environment sector.

Results are excellent; the CEW Awards programme points to year-on-year improvements through a vast array of projects, outperforming those managed through dated adversarial and price managed schemes. We work with the

Welsh Government, local government, health authorities and private sector to turn good policy into even better practice. Our work influences, educates and drives change in Welsh construction.

- CEW reach out to 6,000 stakeholders every month
- 1,942 delegates attended over 50 events last year
- 20,542 people have attended over 700 events since 2006
- Secured in excess of a million man-hours of industry support
- CEW Exemplar projects have generated over £1bn of value for Wales

Contents

- 4 Key Achievements 2002-2016
- 6 Integration & Collaborative Working
- 8 Procurement & Frameworks
- 10 Constructing Excellence Awards Programme
- 12 Waste
- 14 Community Benefits
- 16 Zero Carbon
- 18 BIM & Government Soft Landings (GSL)
- 21 Building the Wales We Want?
- 22 Governance & Finance

The Wales we want?

Fourteen years ago, Wales embarked on a construction change agenda to improve the 70% of projects being late or over budget.



Milica Kitson OBE
Richard Wilson OBE

Welsh Government committed to Rethinking principles to address the failings of Welsh construction; and since then, CEW has advocated initiatives such as collaborative working and a dynamic approach to waste management.

Our new evidence based format for the 2016 Annual Report highlights our impact since 2002 on both projects and policy with real case study examples – demonstrating CEW's work that has helped transform Welsh construction.

Many concepts that were paid lip service are now common practice in procurement processes and on-site behaviours, thanks to the actions and advice of CEW. Most construction projects pursue a range of objectives alongside the end goal of excellent project delivery and superb build quality. It is clear that Welsh construction is moving in the right direction and the performance of CEW projects and programmes demonstrates how best practice delivers value.

- Of the £4.5bn of CEW Award winning projects, £1bn is spent within 20 miles of their sites
- 350 Welsh SMEs have been employed
- 78% of the spend remains in Wales
- CEW's waste programme has diverted 374,836 tonnes of waste from landfill 2008-2016
- The Green Compass Scheme has saved more than £17m.

The challenge remains. The task facing CEW is ongoing as there is pressure to return to adversarial working practices and an emphasis on cost – not value. CEW drives a sustainable Welsh built environment that benefits local people. On top of that, CEW's goals and ambitions reflect those of the Well-being of Future Generations (Wales) Act.

Wales needs an organisation with the respect, credibility and expertise of CEW as much now as it did when it started. The timeline and case study examples in this 2016 report, point to CEW's impact on Welsh construction and its delivery against the Future Generations Act. CEW offers a roadmap for Welsh Government and the construction supply chain; follow it and core objectives will be reached and future generations rewarded.

Key Achievements 2002-2016

**ADEILADU
ARBENIGRWYDD**
YNG NGHYMURU



**CONSTRUCTING
EXCELLENCE**
IN WALES



Key to publications

- 1 BIM Task Group Working Paper
- 2 Annual Award Winners Brochures 2007-2016
- 3 Managing Waste from Welsh Housing
- 4 Construction in the UK – The Benefits of Investment
- 5 No Turning Back
- 6 In Shape for Success
- 7 Welsh LAs Capital Programme 2014/15-2017/18
- 8 Modern Methods of Construction
- 9 Improving the Performance of Welsh Public Sector Construction Frameworks
- 10 21st Century Schools - Project Update (Jan 2015)
- 11 No Turning Back – Review
- 12 Welsh LAs Capital Programme 2015/16-2018/19
- 13 Government Construction Strategy 2016-2020
- 14 Constructing the Team
- 15 Rethinking Construction
- 16 Never Waste a Good Crisis
- 17 Integration Case Studies
- 18 Welsh Stock Transfer – Case Studies
- 19 Exemplar Case Studies
- 20 Industrial Strategy: Government and Industry in Partnership – Construction 2025
- 21 PAS402: 2009 Waste Resource Management – Specification for Performance Reporting
- 22 PAS402: 2013 Waste Resource Management – Specification for Performance Reporting
- 23 Construction Waste Case Studies
- 24 Design for Deconstruction (D4D) – Feasibility Study
- 25 Enabling Zero Waste – Millbank Primary School
- 26 Construction and Demolition Sector Plan
- 27 Towards Zero Waste – One Wales: One Planet
- 28 Community Benefits – Delivering Maximum Value for the Welsh Pound



**GREEN
COMPASS**
Giving Waste Direction
**CWMPAWD
GWYRDD**
Cyfeirio Gwastraff



28



BIM & GOVERNMENT SOFT LANDINGS



CEW AWARDS PROGRAMME



PROCUREMENT & FRAMEWORKS



INTEGRATION & COLLABORATIVE WORKING

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020



WASTE



COMMUNITY BENEFITS



ZERO CARBON



- 29 Community Benefits Policies in Construction
- 30 Community Benefits Case Studies
- 31 Climate Change and the Built Environment
- 32 EPCs and Mortgages
- 33 Zero Carbon Hub – Reports
- 34 Environment (Wales) Act 2016
- 35 Well-being of Future Generations (Wales) Act 2015



Integration & Collaborative Working



Supported every LA in Wales

Collaboration is at the heart of best practice. Advocating cooperation and integration engaging the client, contractor, supply chain and surrounding stakeholders are central to CEW's work. The results add value; saving time, money and delivering multiple benefits for communities.

CASE STUDY

The Welsh Government identified an 8km upgrade of the A465 in Blaenau Gwent as a major opportunity to deliver regeneration to the Heads of the Valleys: Wales' first strategic regeneration area.

Engineered by Carillion and completed in 2015, the A465 delivered an estimated £180m of value. Early contractor involvement (ECI) and the choice of a collaborative NEC target cost contract allowed time for consultation with local people, which helped secure £82m of European Regional Development Funding.

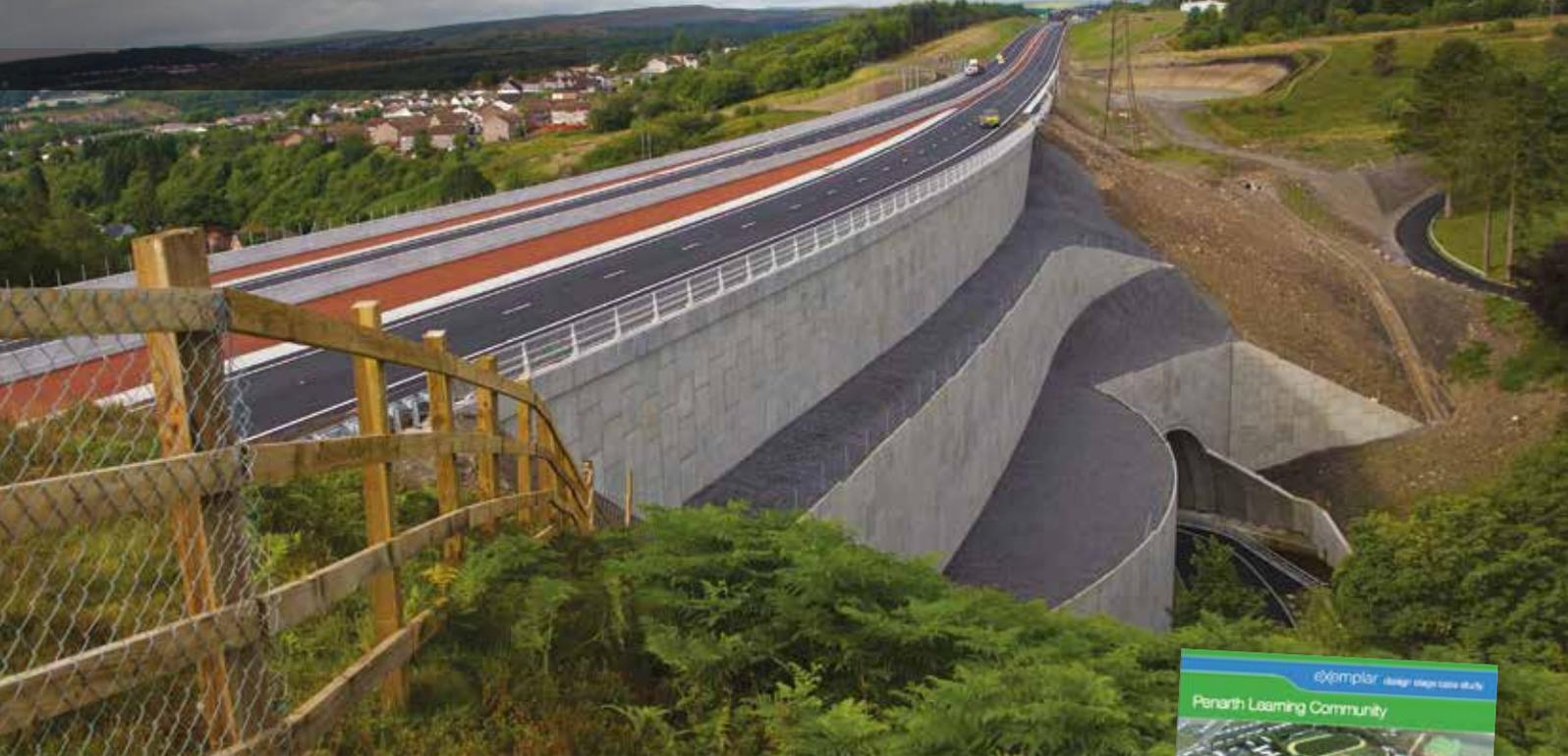
Positive project outcomes included:

- 25,000 weeks of Welsh employment
- £75m invested in Welsh business – of which 45% was spent in the Heads of Valleys
- engagement of 3,500 young people
- 100% of site waste diverted from landfill.

The Well-being of Future Generations (Wales) Act 2015 – Principles



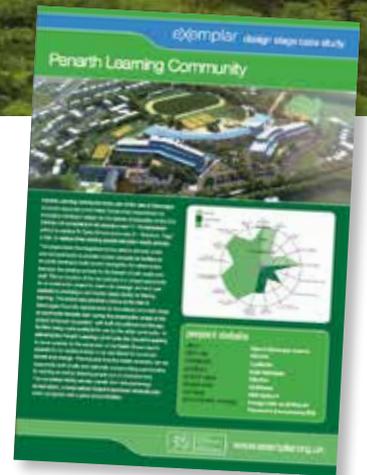
44,000 hours of industry contribution over 10 years supporting integration



POLICY IN ACTION

Only collaborative working allows for results such as on the A465. Prior to the early 2000s, adversarial working in construction was common. Concepts such as community benefits, low carbon, resource efficiency and hiring local people were alien. CEW has demonstrated that earlier involvement from all sides of a project delivers savings and is the best method of achieving Welsh Government policies.

CEW Awards projects succeed because enlightened clients, contractors and suppliers all work together and reach out to stakeholders. Contention, delays and disputes have almost entirely been eliminated in CEW exemplar projects, chasing out waste and driving up value. If collaborative working and integration are the heart of best value, then the muscle and fibre is comprised of procurement, BIM, frameworks, community benefits and resource efficiency. This is how construction can deliver the aims of the Future Generations Act.

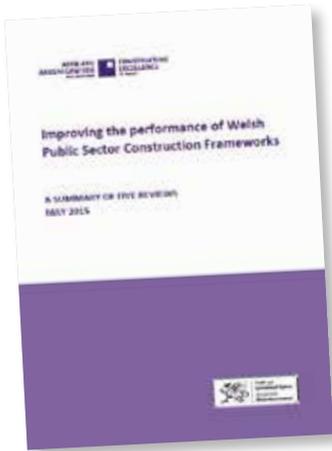


Well-being goals contributed towards



Procurement & Frameworks

Frameworks are a central policy of Welsh public sector construction. Audited, monitored and managed well, they are able to deliver benefits to the wider community, driving out waste, saving money and improving customer satisfaction. CEW has championed and enabled frameworks across Wales.



CEW supported
10+ frameworks

CEW framework
projects are
worth £2.45bn

CASE STUDY

Designed for Life (D4L) the construction delivery framework for NHS Wales began in 2006 and is now in its third generation for schemes from £4m - £10m+. The D4L team believes that procurement is about early integrated working – a holistic approach to planning, design and construction, bringing partners on board and satisfying stakeholders' requirements.

For the D4L team, signing up to the Construction Commitment Charter was a key achievement and something many other public sector bodies were slower to do.

CEW contributed to the Welsh action plan created by the Construction Procurement Strategy Steering Group that has driven and informed the wide spread adoption

of collaborative and quality based procurement with CEW supporting D4L, CLAW and all the Welsh local authorities.

A number of the integrated frameworks in Wales are now in their third and fourth generations and CEW provides strategic support and acid tests of value delivered. D4L value assessments show savings and improvements in quality, more recently, the adoption of BIM as an integrated design and improvement tool.

D4L's defined rigorous processes, best value delivery and regime of continual improvement provides a best practice model for the Welsh Government in the development of other collaborative procurements and frameworks, including the 21st Century Schools framework.

The Well-being of Future Generations (Wales) Act 2015 – Principles





Four housing consortia improve over 55,000 homes with CEW's help

POLICY IN ACTION

CEW has consistently raised initial awareness about the positive impacts of collaborative quality based procurements and frameworks via the Clients Group, coverage in Welsh media, a series of events attracting over 1,000 delegates and over 5,000 online interventions.

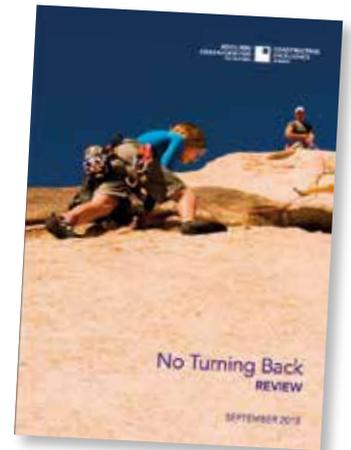
- Wales leads the UK in embedding social value as a procurement criteria
- CEW is helping four housing consortia improve over 55,000 homes
- CEW has had direct involvement with over ten frameworks in Wales.

Sell2Wales continued and developed much of CEW's early procurement work through implementing an E-Govt portal approach. Collaborative procurement led by clients

consistently delivered great projects, whilst allowing client and contracting teams to meet Welsh Government objectives. CEW has supported the adoption of integrated working and quality procurement since they became Welsh Government policy; whilst embracing EU procurement directives and UK methodologies. Authorities and groups of authorities have drawn on CEW to ensure compliance and test value delivered – no matter the political and EU landscape, the future is rosy for continuing to use procurement as a driver for policy.

CEW continue to be on the boards of many of Wales' frameworks ensuring there are ongoing improvements, providing appraisal of value and as a conduit for shared best practice.

CEW's influence has ensured that the three measures of environmental, social and economic benefits are embedded into construction projects.



Well-being goals contributed towards



Constructing Excellence Awards Programme

Awards
2016
 Celebrating
 10 Years

CEW has run
 1,500 hours of
 change events



One of the core actions for CEW is sharing best practice. The best method for this is the CEW Awards – in their tenth year and the industry showcase for celebrating excellence in Welsh construction.

The CEW Awards captures evidence demonstrating the progress made by Welsh construction towards the performance targets set by Welsh Government and directly influenced by CEW. Since the CEW Awards began in 2006 projects and organisations taking part have delivered community benefits ranging from support for more than 300 charities, to 1,500 school placements and coordinating around 10,000 hours of volunteering. Key economic figures are

- Over 70% of all spend has remained inside Wales
- £1bn spent within 20 miles of CEW projects

This is cumulative data proving that the best practice adhered to by following advice, influence and discussion with CEW and its stakeholders has delivered huge benefits economically, environmentally and locally.

POLICY IN ACTION

Examining the evidence from the 2015 CEW Awards demonstrates the impact that the change agenda is having, proving that a consistent emphasis placed on value over cost and low carbon over short term budget concerns is winning hearts and minds around waste concerns.

In the 2015 CEW Awards it is estimated that the shortlisted schemes had a total value of £230 million and benefited around 195,000 people, in addition:

- Supported 30 charities
- Delivered 150 sessions at local schools and colleges
- 1,125 volunteering hours
- Facilitated 130 International Baccalaureate qualifications.

The Well-being of Future Generations (Wales) Act 2015 – Principles



Over forty events per year,
4,500 interventions with
22,000 people in last ten years



Less easy to benchmark, but no less important to the communities involved, are the reports of project staff picking up litter, donating materials and equipment or helping to set up social enterprises – even establishing an angling club.

What's important to note is that the £4.5bn of award winning projects judged from over 1,000 entries abide by strict criteria that has become tougher to meet as the CEW Awards have matured. The CEW Award Judges critically deconstruct the award entries; quiz the people responsible

and often undertake a review close to an initial tender process. The CEW Awards are more than a celebration of the successes of Welsh construction as an industry. The awards point to the success of the change agenda and the requirement for the work of CEW to continue that drive onwards.



Well-being goals contributed towards



Waste

£17million
savings



Construction is the largest consumer of raw materials and producer of waste in Wales (EAW Survey, 2005). Publicly Available Specification (PAS) 402, provides a standardised methodology for waste management companies to report their performance, supporting the delivery of waste services and resource efficiency demonstrated with data on waste performance from PAS 402 methodology.

CASE STUDY

The Green Compass Scheme (inspection accredited by United Kingdom Accreditation Service – (UKAS) was developed by CEW in 2009 as part of its specific waste programme to provide a mechanism for waste management companies to independently verify their performance using the PAS 402 methodology.

Using validated data Green Compass increases material recovery and tonnes of waste diverted from landfill – improving the performance of the waste industry, driving efficiency and customer confidence.

Derwen Aggregates, a Green Compass company won the 2012 CEW Award SME category reporting reduced operating costs, improved processes, better profits and efficiency and more business – particularly from the public sector.

POLICY IN ACTION

PAS 402 and the Green Compass Scheme improve the waste management service and reduce Wales' dependence on landfill. They help meet the ambition of the Environment Strategy One Wales: One Planet for no additional landfill by 2026.

The Well-being of Future Generations (Wales) Act 2015 – Principles





Verification
of 2,081,566
tonnes of waste
throughput

Eighty waste management companies have been independently UKAS inspected, verifying the diversion of 2,081,566 tonnes of waste. Since 2009, Green Compass firms diverted an additional 148,358 tonnes of waste from landfill – saving more than £17 million.

CEW has promoted the benefits of specifying PAS 402 for waste management services particularly in the public sector. It is now a requirement for PAS 402 waste management companies to be included within the public procurement process. The success of PAS 402 and Green Compass has led to United Kingdom Major Contractors Group (UKCG) members requesting that all their waste management services be independently accredited to PAS 402.

Key achievements include:

- 80 accredited Green Compass waste handlers
- Verification of 2,081,566 tonnes of waste throughput
- £17m worth of savings
- Reducing Welsh dependence on landfill as per 'Towards Zero Waste'.

The overall CEW Waste programme meets the goals set out by the Well-being of Future Generations (Wales) Act. Its ongoing delivery, research and advice is central to creating a resilient, prosperous and responsible Wales: as relevant now as in 2009.



PAS 402

**GREEN
COMPASS**
Giving Waste Direction
**CWMPAWD
GWYRDD**
Cyfeirio Gwastraff

**Diversion of
additional
148,358 tonnes
of waste from
landfill**

Well-being goals contributed towards



Community Benefits

Social responsibilities have not always sat comfortably with construction. CEW has worked to educate and inform clients, contractors and the Welsh supply chain about its ability to be an enabler for Wales and demonstrated best practice delivers tangible community outcomes.



Value Wales
Community
Benefits toolkit
impacts over
21,000 people

CASE STUDY

Penarth Learning Community was the largest project delivered by Vale of Glamorgan County Council. It won two CEW Awards in 2015 with community involvement and school engagement as stand out criteria. The council, and its contractor Leadbitters, involved the teaching staff as equals, leading to the inclusion of impressive facilities such as therapy support rooms with advanced sensory equipment.

The new schools give local people access to sports halls and performance spaces. Local trees have been propagated by the children, with cuttings planted in the new school.

Key achievements:

- £32m of the £39m project budget was spent in Wales
- 1,422 people were employed from within a 25-mile radius
- 100 new-entrant person weeks generated for every £1m spent

The Well-being of Future Generations (Wales) Act 2015 – Principles



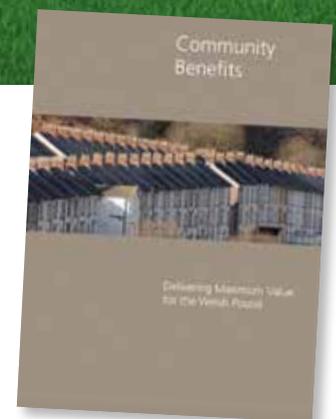
1,422 people were employed
from within a 25-mile radius of
Penarth Learning Community



POLICY IN ACTION

Community Benefits has been a constant feature of CEW work since it became a Welsh Government policy in 2006. It was relaunched in 2010, owned by Value Wales and championed by CEW who supported the development of the All Wales Community Benefit toolkit for construction, which measures the benefits as well as being a project management tool. These benchmarks are used in the CEW Exemplar Programme and the toolkit has been emulated across the UK.

It is a key requirement for future generations to ensure contractors and suppliers are fully engaged with community benefits. CEW Award projects demonstrate 90% of direct labour from Wales, over 2,000 apprentices employed, 78% of project spend is in Wales, around £1bn spent within 20 miles of project sites, SMEs make up 80-90% of the supply chain and feedback from people affected by schools, roads and hospitals created has been overwhelmingly positive.

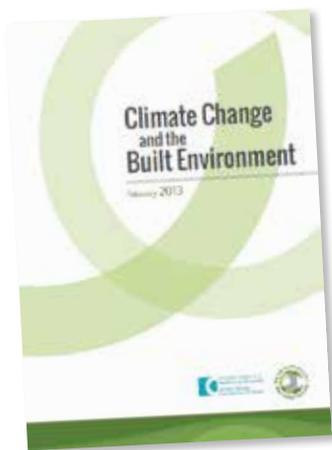


Well-being goals contributed towards



Zero Carbon

CEW has been working to demonstrate if there is a link between the energy performance of homes and their value. In collaboration with a number of partners, our projects are building a body of evidence to show that energy efficient buildings make economic gains.



Year on year carbon footprint reductions in the sector

CASE STUDY

CEW's report, "Energy Performance Certificates & Mortgages", assessed more than one hundred properties. The report found that fuel bills incurred by similar sized properties can vary by more than £90 per month, due to their energy efficiency. This is the first time that a link has been demonstrated between real energy bills and a property's "Energy Performance Certificate" (EPC).

It could have a huge impact on the mortgage market – £90 per month equates to £15,000 difference in the maximum mortgage amount over 25 years. EPCs are required by law on every property in England & Wales when it is sold or rented. Demonstrating that EPCs can help predict

a property's annual energy bill and has potential to impact on responsible lending. At present, most mortgage lending institutions use an estimation of fuel costs that are averaged across UK homes as part of their calculations for mortgage "affordability".

POLICY IN ACTION

CEW is part of an Innovate UK project team to evidence a stronger correlation between EPCs and anticipated homeowners' fuel bills: LENDERS – Levering Economics for New Drivers to Energy Reduction and Sustainability. By demonstrating a link, the project can develop evidence and an argument to replace the existing methods

The Well-being of Future Generations (Wales) Act 2015 – Principles



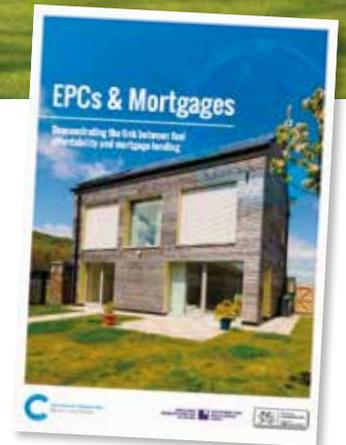
Green mortgage initiatives – saving Welsh people money and carbon



used by financial institutions' mortgage affordability calculations with "green mortgages". Recognition that lower bills affect affordability could impact on house prices.

- £15k saving on mortgages
- 10% of Welsh homes upgraded privately
- A positive step towards a low carbon wales
- Year on year carbon footprint reductions

Approximately one million homes are bought and sold each year in the UK. The demonstration of increased home value with energy efficiency could drive the retrofit market, as home owners are more likely to undertake improvements in the first year following sale. It is realistic to hope that 10% of home owners will upgrade their home's thermal performance to achieve a reduction in carbon emissions beyond that currently being achieved with government subsidy, without the need for financial intervention from Government.



Well-being goals contributed towards



BIM & Government Soft Landings

Building Information Modelling (BIM) uses IT tools to model a virtual structure, accurately predicting a building's performance and consumption and informing decisions to be made – avoiding expensive mistakes, saving time, reducing waste and ensuring the building is right first time.



Level 2 BIM
achieved

CASE STUDY

Working with Read Construction, Flintshire County Council trialled using BIM on a £3m school project. They engaged the supply chain, set up a BIM execution plan, virtually modelled the school and identified a clash of steelwork to allow an alternate design to be delivered, saving time and money.

Flintshire worked with Read Construction developing Employer Information Requirements. The BIM model was used to engage the head teacher and facilities management (FM) team into the design – delivering the scheme on time, in budget and with FM information and maintenance

regimes. Building on this work a third Flintshire school project, this time with Galliford Try, is on site embedding data to achieve BIM Level 2. Across the three schools:

- BIM saved the council around £134k
- Saved time and assisted in a carbon reduction
- Achieved Level 2 BIM
- Avoided over 200 clashes and risks worth £300k by using BIM.

The Well-being of Future Generations (Wales) Act 2015 – Principles





Using BIM helped create two extra teaching spaces

Helped avoid risks worth £300k

POLICY IN ACTION

CEW set up ground breaking BIM courses in 2011 and 2012 and promoted the concept in the Welsh media informing its stakeholders and provoking debate. CEW has informed around 1,000 delegates at over 35 BIM themed events targeting the whole supply chain and discussing BIM 4 Civils and Government Soft Landings (GSL). CEW led a working group within CLAW that delivered the UK's first coordinated BIM toolkit for clients – now integrated into the UK National Framework group BIM model, it is replicated across

the UK. Working with Welsh Government, CEW has developed the BIM specific funding conditions on future 21st Century Schools projects.

CEW BIM work includes ensuring the models predict the project performance, minimising the FM and operational costs. CEW BIM enabled projects point the way for future construction – outperforming non BIM projects in the exemplar programme.



Well-being goals contributed towards



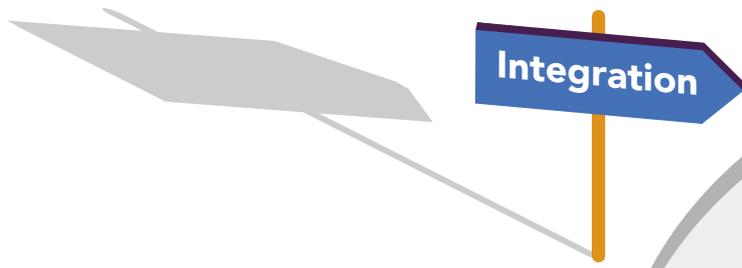


Developing and informing policy

CEW is independent. It speaks with authority and credibility on construction issues the Welsh Government cannot. It acts as a critical friend – educating, informing and influencing decision makers. Wales needs an organisation that knows what’s happening in construction and speaks openly and constructively.

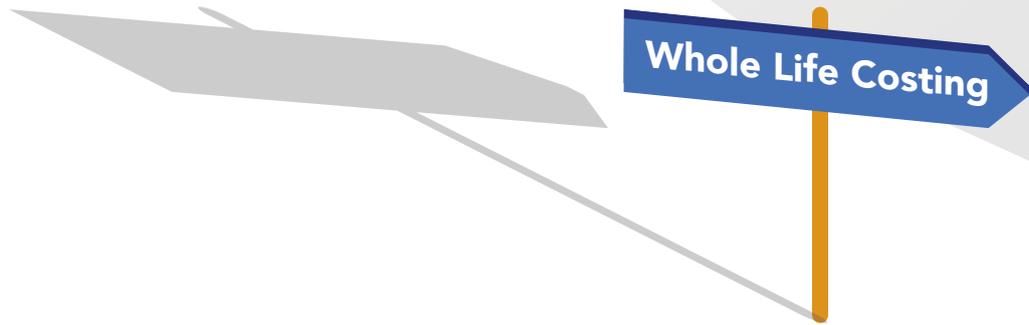
Supporting development and engagement

Collaboration and integration are central elements of delivering Welsh Government objectives and creating a resilient, prosperous and responsible Wales. Client and contractor engagement with supply chain and stakeholders is the only way to build a sustainable, low carbon Wales benefitting all Welsh people.



Measuring outputs and success

Welsh Government targets on waste, low carbon and community benefits are tough. But CEW projects are achieving these goals because of a collaborative process. We know this because of the rigour and discipline of KPIs and benchmarking in Welsh construction. Measurement is critical to gauging success for future generations.





Building the Wales We Want?

Innovation

Collaboration

Encouraging and enabling implementation

A focus on value, whole life costs and building a Wales for future generations needs an independent CEW influencing and educating government and industry. CEW must reach out further to educate and involve all groups to maximise social and economic benefits of construction and cut waste in product, process, and materials and pursue a low carbon agenda.

Recognising excellence in awards

The CEW Awards promotes brilliance, encouraging others to adopt best practice. Projects and organisations are peer reviewed, vetted and data audited – proving a focus on best value aligns with government policy and provides a framework for building a better Wales.

Awards
2016
Celebrating

10 Years

**THE WALES
WE WANT**

Governance & Finance

Board members

Chris Gray
CD Gray & Associates

Leigh Hughes
Bouygues UK

Iwan Jenkins
Hugh James

Keith Jones
ICE Cymru Wales

Rhodri-Gwynn Jones
Recently retired Director
CECA Wales Ltd

Tony Norris
Geldards LLP

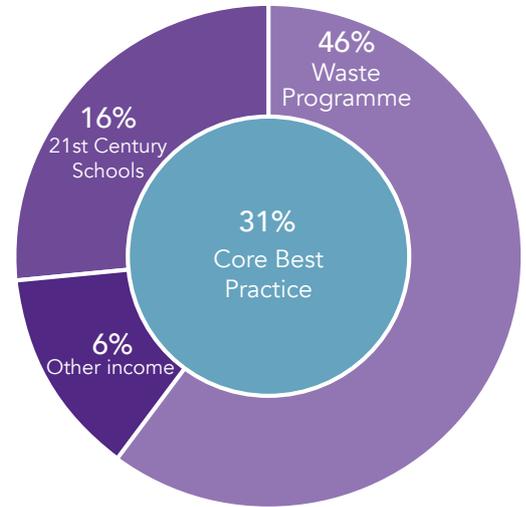
Stella Saunders
The City of Cardiff Council

Andrew Wedlake
Contract Services
(South Wales) Ltd

Richard Wilson (chair)
Welsh Government

Constructing Excellence in Wales is grant funded by the Welsh Government. Its role, actions and outputs are monitored and reviewed by Lesley Griffiths AM, Cabinet Secretary for Environment and Rural Affairs.

CEW is a limited company with a Board of Directors chaired by Richard Wilson OBE, Deputy Director, Finance and Corporate Services Directorate. It is led by its Chief Executive, Milica Kitson OBE, and an operational team of directors: Gordon Brown, Paul Jennings, and Emma Thomas. CEW engages with and has the support of a range of stakeholders from across the Welsh built environment. These include clients in the public and private sectors as well as industry representative bodies and individual companies from the industry supply chain.



The grant breaks down as follows:

Category	Percentage	Value (£)
Core Best Practice – Demonstrations, Exemplar Best Practice, Clubs and Industry Task Groups	31%	£333,000
Waste Programme	46%	£492,000
21st Century Schools	16%	£174,000
Award Sponsorship and other income	6%	£67,000

Key to icons and colours

The Well-being of Future Generations (Wales) Act 2015 – Principles

- Long term
- Prevention
- Integration
- Collaboration
- Involvement

Well-being goals

- A prosperous Wales
- A resilient Wales
- A healthier Wales
- A more equal Wales
- A Wales of cohesive communities
- A Wales of vibrant culture and thriving Welsh language
- A globally responsible Wales

Constructing Excellence in Wales
2nd Floor East, Longcross Court
47 Newport Road, Cardiff
CF24 0AD

T: 029 2049 3322
F: 029 2049 3233
E: info@cewales.org.uk
www.cewales.org.uk

@CEWales
 Constructing Excellence in Wales
 CEinWales

