



Knowledge transfer between the business and universities worlds?

# A Welsh case study: The WEST Project and its context

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# **A Welsh case study: The WEST Project and its context**

## **Content**

- Case study: WEST project**
- Knowledge transfer initiators**
- Enablers**
  - Cardiff University**
  - Funding strands**
  - Welsh Government**
- Other examples**

# A Welsh case study: The WEST Project and its context

WEST project



**WEST: Welsh Energy Sector Training**

## Main objective:

*to develop skills to aid the utilisation and uptake of new technologies developed through the industrial research projects of the Low Carbon Research Institute Convergence Energy Program (LCRI CEP)*

# A Welsh case study: The WEST Project and its context

WEST project

LCRI research  
outcomes

**WEST**  
Welsh Energy Sector Training  
**TRAINING**

Welsh industry  
skills needs

Themes:

**Large Scale Power Generation**

**Hydrogen Technologies**

**Solar Photovoltaics**

**Marine Energy**

**Low Carbon Built Environment (LCBE)**

Cardiff University – Engineering

University of South Wales

Glyndŵr University

Swansea University

Cardiff University - Architecture

# A Welsh case study: The WEST Project and its context

WEST project

LCRI research  
outcomes

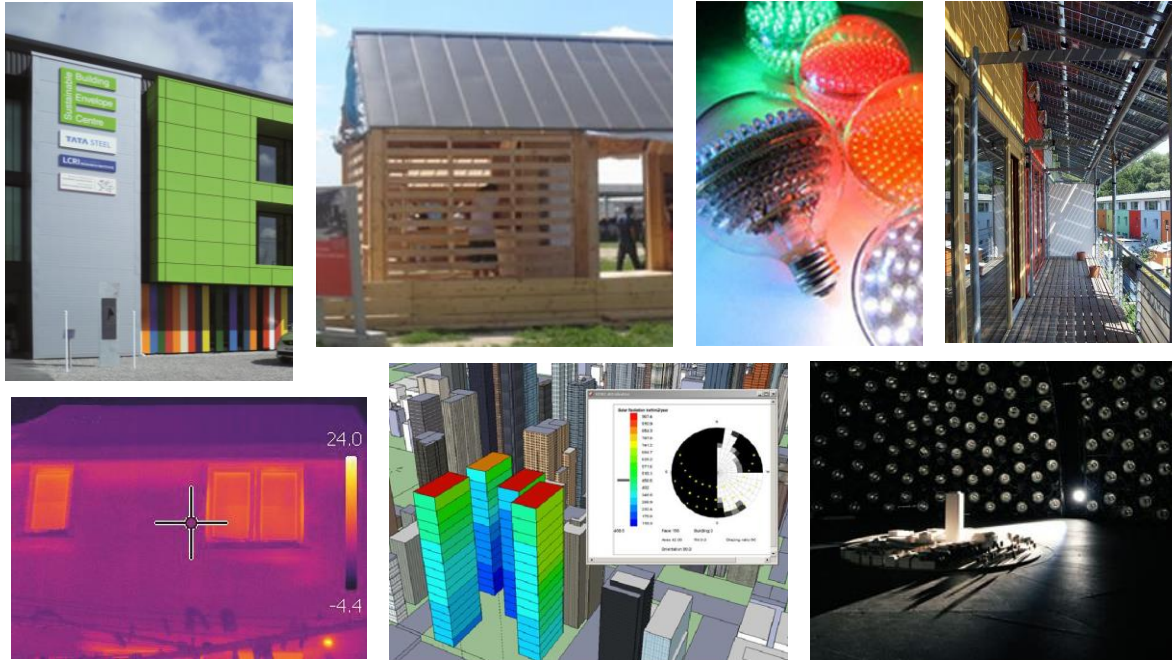
**WEST**  
Welsh Energy Sector Training  
**TRAINING**

Welsh industry  
skills needs

- Develop & pilot training modules
- Engage participants within the Welsh workforce
- Enable achievement of qualifications (CQFW Level 4 and above)
- Continued delivery of modules developed

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## LCRI LCBE Research projects



- Sustainable Building Envelope
- Energy Efficient Lighting
- Timber in Building Construction
- Monitoring Energy Performance
- Low Carbon Building Design
- Urban Scale Energy Demand and Supply
- Innovation, Technology Deployment & Market Development

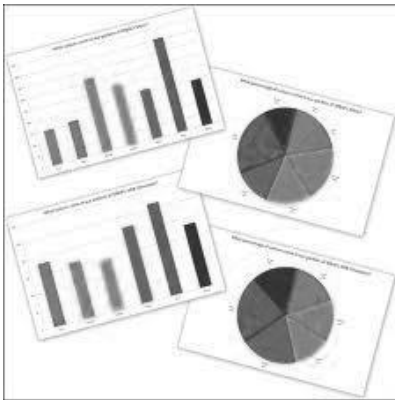
## Academic and Industrial Partners:



# A Welsh case study: The WEST Project and its context

## Understanding the sector's needs

- Drivers for skills demand
- Welsh Built Environment Sector training needs
- Interest of Welsh industry in training arising from LCBE research
- Appropriate training delivery methods



# A Welsh case study: The WEST Project and its context

## WEST Course Suite

*Collaborative module development:*

<i>Low Carbon Economy &amp; Policy</i>	
<i>CPD unit</i>	<i>10 credit module</i>

<i>Enterprise in a Low Carbon Economy</i>	
<i>CPD unit</i>	<i>10 credit module</i>

*Introductory module in each LCRI Theme:*

	<i>10 credit module</i>
	<i>CPD unit</i>

*In depth modules in each LCRI theme:*

			<i>10 credit module</i>
			<i>CPD unit</i>



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## WEST Course Suite

*Collaborative module development:*

<i>Low Carbon Economy &amp; Policy</i>	
<i>CPD unit</i>	<i>10 credit module</i>

<i>Enterprise in a Low Carbon Economy</i>	
<i>CPD unit</i>	<i>10 credit module</i>

*Introductory module in each LCRI Theme:*

<i>Holistic Approach to Low Carbon Buildings</i>	<i>10 credit module</i>
<i>Low Carbon Buildings Principles</i>	<i>CPD unit</i>

*In depth modules in each LCRI theme:*

<i>Active Building Envelopes</i>	<i>Building with Timber in Wales</i>	<i>Energy Simulation: Building &amp; Urban Scale</i>	<i>10 credit module</i>
<i>Transpired Solar Collectors</i>	<i>Welsh Timber in Building Construction.</i>	<i>Energy Simulation: Sketchup plugin</i>	

# A Welsh case study: The WEST Project and its context

Start @ work



Attend Lectures

Continue on the move



Delivery mechanisms

Join Discussions



Finish @ home



# A Welsh case study: The WEST Project and its context

## Delivery mechanisms



# A Welsh case study: The WEST Project and its context

## Delivery mechanisms

The screenshot shows the desktop version of the WEST Learn website. At the top left, it says "WEST Learn" and "You are logged in as Angela Ruiz del Portal (Logout)". Below this is a breadcrumb trail: "My home / Courses / LCBE". A search bar is present with the text "Search courses:" and a "Go" button. A large banner features the "WEST" logo and "Welsh Energy Sector Training" against a blue sky with clouds. On the left is a "NAVIGATION" menu with options like "My home", "Site home", "Site pages", "My profile", "My courses", "Courses", "Miscellaneous", and "LCBE". Under "LCBE", there are sub-items: "Welsh Timber: M&F", "LC Building Design Principles", "Welsh timber in construction 10", and "Simulation at Building & Urban Scale". The main content area shows "Course categories:" with a dropdown menu set to "LCBE". The course title is "Low Carbon Built Environment". Below it, the sub-title is "Welsh Timber in Building" followed by "Construction: Myths & Facts" and "Facts". A paragraph of text describes the course: "This blended learning short course is aimed at individuals who are either currently working or interested in working in the application of timber construction. The course aims to brush away commonly held misconceptions and inform practitioners' perceptions about Welsh timber. It provides evidence based case studies that present local Welsh timber as a viable option for a broad range of construction uses."

The screenshot shows the mobile app version of the WEST Learn website on a Samsung smartphone. The top status bar shows the time as 12:03. The app header includes the "WEST Learn" logo and a hamburger menu icon. Below the header is a breadcrumb trail: "Home / Courses / LCBE / Welsh Timber: Myths & Facts". A large banner features the "WEST" logo and "Welsh Energy Sector Training" with a "Your progress" indicator. Below the banner are two icons: "News forum" and "Glossary". The main content area displays "Session 1".

# A Welsh case study: The WEST Project and its context

## Delivery mechanisms

WEST Learn

You are logged in as Angela Ruiz del Portal: Participant(Return to my normal role)

NAVIGATION

- My home
  - Site home
  - Site pages
  - My profile
- Current course
  - Welsh Timber: M&F**
    - Participants
    - Badges
    - Welsh Timber: M&F
    - Section 2: Timber as Building Material
    - Section 3: Welsh Timber
    - Section 5: Case Studies
- My courses

UPCOMING EVENTS

There are no upcoming events

Go to calendar...  
New event...

ONLINE USERS

(last 5 minutes)

- Angela Ruiz del Portal
- Amalia Banteli

**Welsh Timber: M&F**

Your progress

- Navigation Guide
- Course Overview
- Choose your Face to Face Session

**Section 2: Timber as Building Material**

- Section 2: Introduction
- Benefits of timber as a building material
- Forum: Design Benefits
- Considerations
- Why Local Timber
- Sustainable Lifecycle
- References Section 2

Further Reading

- Additional Video: Wood at the heart of the local economy. Vorarlberg, Austria
- Further Reading: Benefits of Using Wood
- Further Reading: Sustainable Construction with Timber in Wales
- Further Reading: Integrated Strategies for Welsh Timber Industry, Forests

**Section 3: Welsh Timber**

- Section 3: Introduction
- Welsh Species
- Supply Chain


Further Reading

- Further Reading: Integrated Strategies for Welsh Timber Industry, Supply Chain
- Further Reading: Good Wood Guide

UPLOADS FROM WESTTIMBERTRAINING

Mix 15

westtimbertraining posted a photo:




Credits:  
Wood Knowledge Wales: WSW

24 April 2014  
Thursday





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## Delivery mechanisms



### Environmental

### Benefits



**Wood has the lowest carbon footprint of any commonly used building material. (Forestry Commission 2014 (1))**

**...is less energy intensive**

Materials frequently used as alternatives to timber in construction such as steel and concrete imply highly energy intensive processing methods in order to turn their constituent raw materials into usable construction products.

In comparison, timber is only affected by primary processing (harvesting and initial lumber conversion), secondary processing (into required products) and drying (Jones et al. 2010; Dean 2010; Forestry Commission 2014 (1)).

**...means less waste**

**...is a renewable resource**

**...reduces energy use thanks to an Energy efficient fabric**

Click on the blue titles above to reveal the content

Quit   Switch to Environmental   Switch to Economic   Switch to Indoor Comfort

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**email:**        **WEST@cf.ac.uk**

**twitter:**     **@LCRI\_WEST**

**web:**         **[www.westproject.org.uk](http://www.westproject.org.uk)**



**WSa**

**WEST**

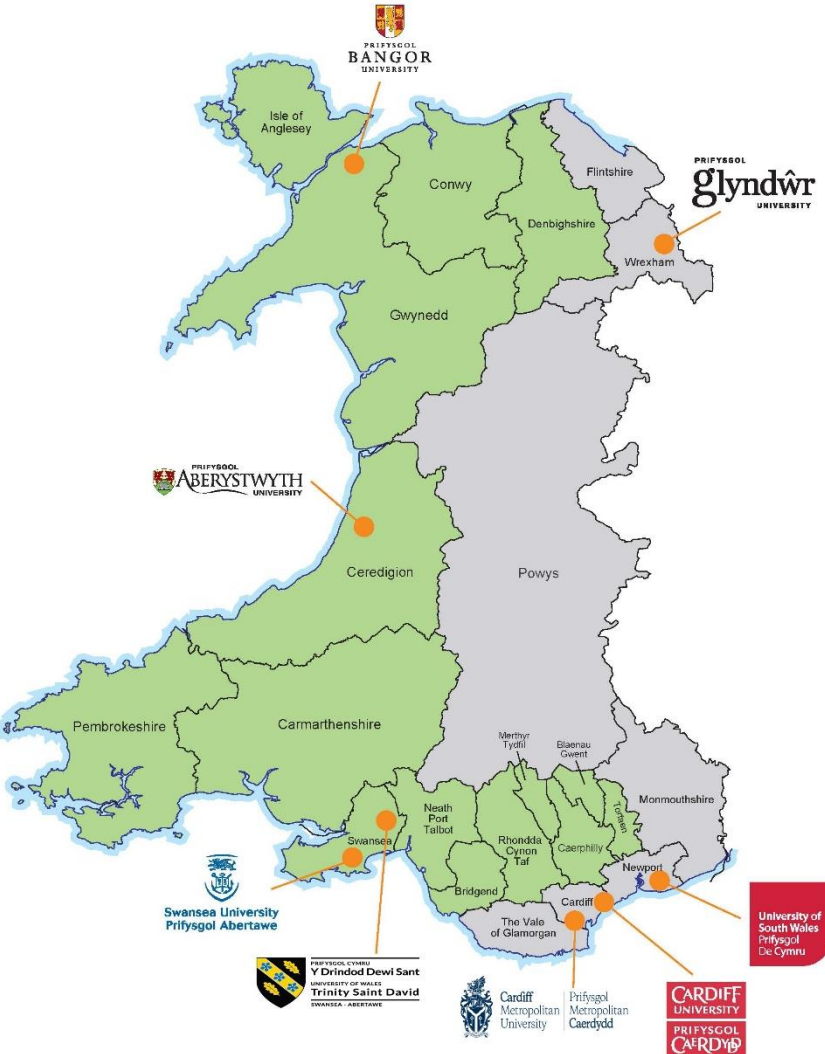
Welsh Energy Sector Training

**LCRI** LOW CARBON  
RESEARCH INSTITUTE



# A Welsh case study: The WEST Project and its context

## Knowledge transfer initiators



Un o fentrau  
**Llywodraeth Cymru**  
**Welsh Government**  
 Initiative





# A Welsh case study: The WEST Project and its context



The Way Forward 2012-2017  
*Our focus*



## Research and innovation

We will be firmly positioned in the top ten UK universities in REF terms with success judged by the effect on our reputation.



## Education

We will educate our students to the very highest standards and support them through the transition to independent learning.



## International

We will form a tight-knit collaboration with two other outstanding international universities.



## Engagement

We will demonstrate our commitment to the communities of Cardiff and Wales through knowledge exchange projects.

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## Knowledge transfer enablers



The screenshot shows the Cardiff University Research & Innovation Services website. The header includes the university logo and the text 'Research & Innovation Services'. A navigation menu on the left lists various services. The main content area is titled 'Business Development' and describes the team's role as the central point of contact for business development enquiries. It lists several services: Knowledge Transfer Partnerships, Strategic Insight Programme, Cardiff University Innovation Network, Consultancy, Training and Development, and Access to Specialised Facilities. A 'Related Resources' section includes a link to an 'Open for Leaflet' document.

**Research & Innovation Services**

**Business Development**

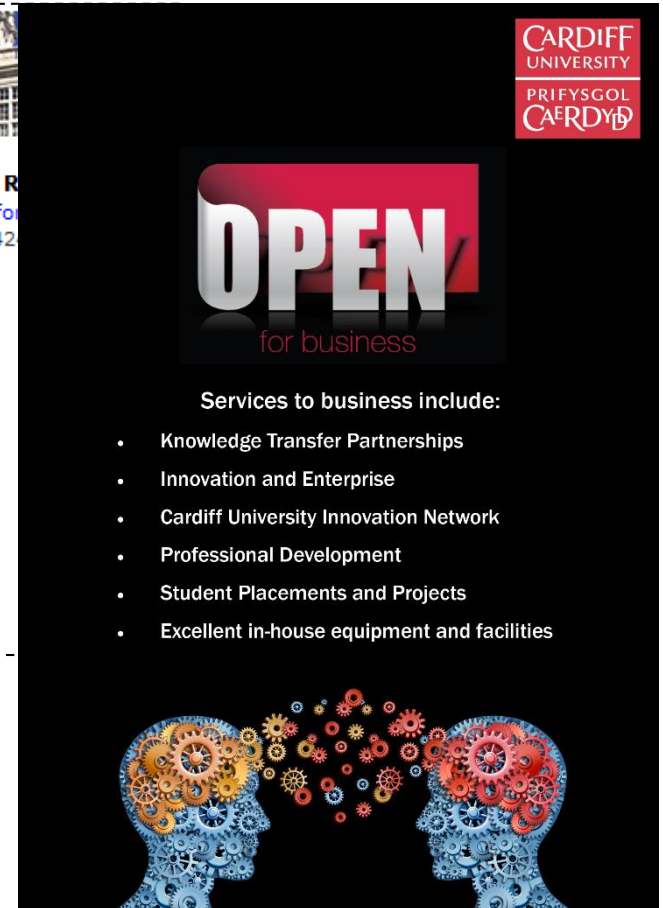
The Business Development team is the University's central point of contact for any business development enquiries, providing expert advice and guidance on the various business-facing activities that Cardiff has to offer, including:

- Knowledge Transfer Partnerships
- Strategic Insight Programme
- Cardiff University Innovation Network
- Consultancy
- Training and Development
- Access to Specialised Facilities

For any enquiries, whether large or small, the team are on hand to advise you further.

**Related Resources**

Open for Leaflet [42]



The graphic features the word 'OPEN' in large, bold, white letters on a red background, with 'for business' in smaller red text below it. Below this, it lists 'Services to business include:' followed by a bulleted list of services. At the bottom, there is an illustration of two human heads in profile, facing each other, with their interiors filled with colorful gears of various sizes and colors (blue, orange, red, yellow). The background is black.

**OPEN**  
for business

Services to business include:

- Knowledge Transfer Partnerships
- Innovation and Enterprise
- Cardiff University Innovation Network
- Professional Development
- Student Placements and Projects
- Excellent in-house equipment and facilities

RIS enables links with businesses in different ways:

- Consultancy
- Training: CPD
- Placements
- Innovation meetings
- ...

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## Knowledge transfer enablers: EU funding



**European Regional Development Fund**  
Investing in your Future







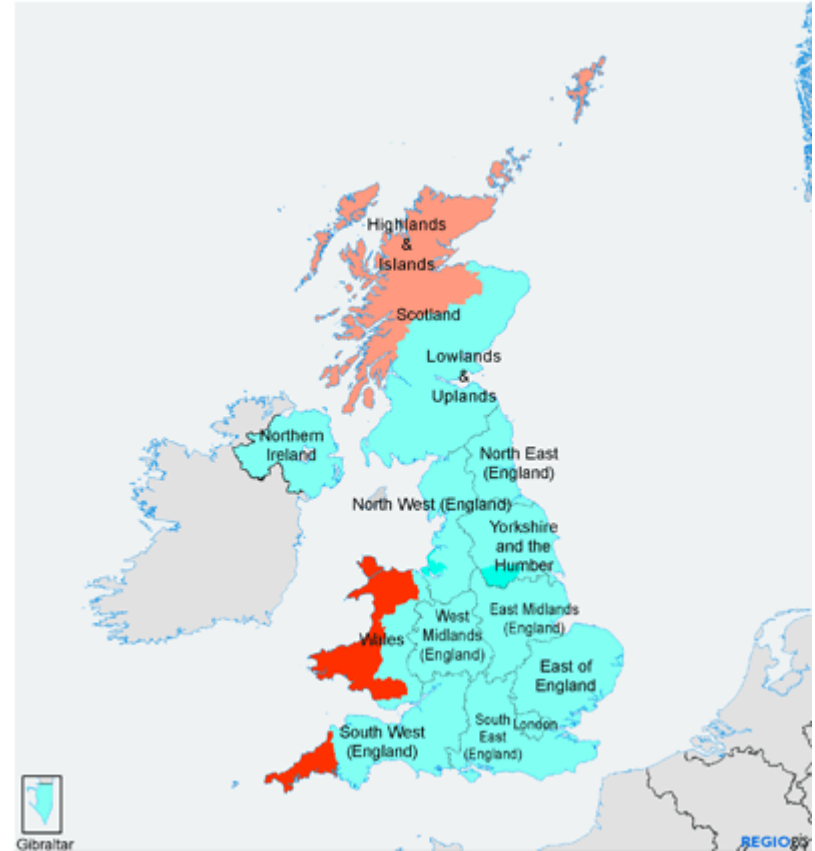
**European Union**  
**European Social Fund**  
Investing in jobs and skills



Llywodraeth Cymru  
Welsh Government



-  Convergence Regions
-  Phasing-out Regions
-  Phasing-in Regions
-  Competitiveness and Employment Regions





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## EU funded Examples

Llywodraeth Cymru  
Welsh Government  
www.cymru.gov.uk

### Academic Expertise for Business Project Directory

September 2012

Directory of projects supported through  
the Welsh Government's European funded  
Academic Expertise for Business (A4B) programme,  
2008-2012.

ERDF  
Llywodraeth Cymru  
Welsh Government  
Ewrop & Chymru: Buddsoddi yn eich dyfodol  
Cronfa Datblygu Rhanbarthol Ewrop  
Europe & Wales: Investing in your future  
European Regional Development Fund

best  
Built Environment  
Sustainability Training

ESF  
Llywodraeth Cymru  
Welsh Government  
Ewrop & Chymru: Buddsoddi yn eich dyfodol  
Cronfa Gymerthasol Ewrop  
Europe & Wales: Investing in your future  
European Social Fund

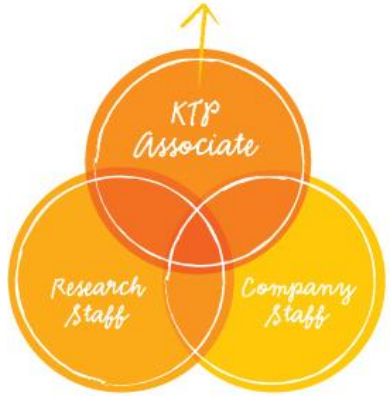
WEST  
Welsh Energy Sector Training

LCRI LOW CARBON  
RESEARCH INSTITUTE

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Cronfa Datblygu Rhanbarthol Ewrop  
Europe & Wales: Investing in your future  
European Regional Development Fund

# A Welsh case study: The WEST Project and its context

*Strategic Innovation*



Knowledge  
Transfer  
Partnerships

UK gov. / Company

## Government and Industry funded programmes

# SIP

Strategic Insight Programme

WG through HEFCW  
(Higher Education  
Funding Council of Wales)

# EngD

## Engineering Doctorate

Sponsoring company

- In place for almost 40 years
- Managed by TSB  
(Technology Strategy Board)

- Short-term placements
- Cross-sector relationships
- Collaborative projects

- PhD w strong industrial focus
- Based on sponsoring company
- Efficient technology transfer

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## Knowledge transfer enablers: Welsh Government

### 'Science for Wales: A strategic agenda for science and innovation in Wales'

- To build upon Wales' scientific strengths "...support a better economic future..."
- Three Grand Challenge priority areas:
  - Life science and health
  - **Low carbon, energy and environment**
  - **Advanced engineering and materials**
- Commitment
  - ***"...work to deepen academic-business partnerships and encourage collaboration..."*** including consideration of proposals for:
    - closer integration of the research
    - innovation
    - commercial development

# A Welsh case study: The WEST Project and its context

**email:      [ruizdelportala@cardiff.ac.uk](mailto:ruizdelportala@cardiff.ac.uk)**

**Thank you!**