European Institute for Construction Labour Research - GB Office

CLR-GB

Newsletter 1/2011

The **CLR-GB** Office is a platform linking CLR activities at EU and GB levels as well as trade union and academic work in GB in the field of Construction Labour Research. It will support related initiatives specific to GB.

Introductory Note:

In the last newsletter (2/2010), we reported on the formation of the Centre for the Production of the Built Environment (ProBE) at the University of Westminster. ProBE has since organised a number of symposiums, two of which are reported in this issue. The first initiated a discussion on the state of play with regards to the skills needs and barriers to zero emissions construction, and the second considered the way forward for developing an integrated education framework for the sustainability of the industry. You are also invited to participate in a forthcoming debate on equality and diversity that will take place at the Association of Researchers in Construction Management (ARCOM) Conference in Bristol in September.

Paul W Chan/CLR-GB August 2011

Skills Needs and Barriers to Zero Emissions Construction

Centre for the Production of the Built Environment (ProBE), University of Westminster, Friday 5 November 2010

The purpose of this symposium is to identify the professional and operative skill and competence requirements and barriers to establishing mass build, low energy construction. The vision is to stimulate a paradigm shift so that 'Green' buildings become considered as standard by the construction industry.

Colin Gleeson opened the symposium by outlining briefly the principles of low emissions construction using the concept of *Passivhaus* and compared this with status-quo construction as an example of what can be achieved. Linda Clarke then argued that a critical hindrance to the adoption of zero emissions construction is the problems associated with vocational education and training (VET) and the framing of skills in UK construction.

In the first session, on Aspirations and Barriers, Robin Nicholson, architect at Edward Cullinan Architects and chair of the Zero Carbon Task Force, outlined a range of ongoing work aimed at tackling zero emissions construction, from legislation to government guidance and strategies, to research and dialogue between various professions. However, he conceded that there remained a fundamental problem of 'silo-working' derived from the way professionals are currently being educated and suggested that there are insufficient numbers of environmental engineers being educated. Tim Fenn, Director of Green Carbon Construction Limited and Vice-chair of Oxfordshire Construction Training Group, then followed by asserting that policy (and practice) often ignores the role constructors play in moving towards zero emissions construction. He argued that whilst buildings may be designed to achieve the aspirations of zero emissions, the promises of the agenda are rarely met because of a dearth of skills provision (and its quality) on the production side. During the discussion following the presentations, a number of issues were covered, including:

- the longstanding problems of disconnections between designers and constructors;
- the need for integrated teams to help builders understand low emissions construction;
- the need for better knowledge of current gaps in the performance of buildings, and;
- the need for Further and Higher Education institutions to be responsive to emergent knowledge around sustainable construction.

In the second session, the focus was on the current response in relation to skills and employment. Pat Bowen, Future Skills Manager at ConstructionSkills, talked about the need to upskill the existing workforce. He noted the plurality of stakeholder interests – derived from the diversity of professions operating in the industry – in skills for decarbonising buildings, and explained that there was an urgent need for a coordinated approach to skills development (through the Built Environment Skills Alliance, BESA, coordinating the various sector skills councils). David Jazani from Bedford College then outlined the challenges faced by FE colleges in providing training for low carbon construction (including e.g. funding and accreditation problems). Richard Clarke, National Apprenticeships Officer at UNITE union, presented a building services perspective on skills and employment. Specifically, he reported on current work by SummitSkills in developing a National Skills Academy on environmental technologies (e.g. CHP, renewable energy, microgeneration etc.) to upskill the workforce on integrating, installing and maintaining sustainable technologies. Richard was concerned about the fragmented nature of current training provision, such that many private training providers and product manufacturers are emerging to simply profit from the low carbon and sustainability rhetoric. The discussion raised the following:

- how extensive layers of supply chains erode the value of building projects to put an emphasis on sustainable construction;
- the absence of a framework to account for skills and competences for low carbon construction;
- the possibilities that multi-skilling (or rather broad-based skilling) can offer in developing more rounded individuals to deliver low carbon construction;
- transnational perspectives of skills and competencies and the effectiveness of STEM (Science, Technology, Engineering and Mathematics) education;
- the need to understand the cost and value of training;
- the role of soft skills in 'low carbon' construction, and;
- the role of capital-rich companies in operating within the 'low carbon construction' market.

In the third session, Camilla Vakgaard from the Danish Federation of Building, Construction and Wood Workers' Unions (BAT Kartellet) presented on progress made in Denmark to integrate 'low carbon' construction within the renovation sector. Initiatives included provision of counselling (by an energy consultant) to house owners to visualise their energy footprint, and legislation to mandate the need for all public buildings to be energy efficient by the end of 2018. A short video presentation by Henrietta Lynch (PhD researcher from UCL) followed Camilla's presentation. Based on interviews with a range of relevant stakeholders, the video reaffirmed some of the critical challenges associated with transitioning towards 'low carbon' construction. These challenges include the increasingly depoliticised governance system where governments move away from direct provision towards an arm's length approach to infrastructure development, which in turn results in a lack of research and development and sound knowledge base for 'low carbon', 'low energy' construction.

Three workshops were also organised to discuss the following:

- ***Workshop 1: Building low energy buildings, led by Cal Bailey.*** This workshop focused particularly on professional skills, and sought to identify the professional knowledge needed for low carbon construction, how professional barriers can be overcome, how effective relationships between design and construction can be established, and future action points.
- ***Workshop 2: Bringing VET into the environmental agenda, led by Paul Chan.*** This workshop explored how the current VET system is adapting to meet the environmental agenda, the mechanisms and challenges of integrating the environmental agenda within the curriculum, and how relevant stakeholders can effectively engage to shape the VET system.
- ***Workshop 3: Performance assurance of low carbon buildings, led by Malcolm Bell.*** The workshop sought to discuss the need for, and the meaning of, performance-assured, low-carbon industry. The objective was to identify key areas of understanding, skills and competency that would be required in such an industry, and what needs to be done to invest in the skills infrastructure.

The plenary discussion centred on the motivation of clients to invest in 'low carbon' construction. Suggestions were made on developing a new 'discipline' that combines building physics and building services engineering within the emerging field of 'low carbon construction. The development of a common first year at university degree level was also suggested so that built environment undergraduates get a broad-based understanding of what 'low carbon', 'low energy', sustainable construction might mean. Other suggestions included legislation and regulation for low-carbon construction, workforce engagement and space for critical expression of the environmental agenda, and the role of governments to regulate requirements through contracts and to build in training requirements across the construction supply chain.

Launch of ProBE and Symposium on Developing an Integrated Education for Construction

Centre for the Production of the Built Environment (ProBE), University of Westminster, Friday 20 May 2011

This symposium coincided with the launch of ProBE (previously reported in CLR-GB newsletter 2/2010), and was the follow-up to the symposium organized in November 2010 (reported above). It sought to identify, with the help and active participation of various industry stakeholders, the elements needed for an integrated system of VET (vocational education and training) for the built environment and to begin to develop a strategy to put this in place. The day consisted of several speakers, from around the world, sharing their experience and knowledge, and was organised into three separate but important areas: an integrated education for construction; cooperation and conflict between built environment occupations and an integrated practice for construction.

Session One: An integrated education for construction

Jeremy Till opened the discussion, emphasising the barriers between professions in the construction industry, and was followed by:

Paolo Tombesi: Paolo Tombesi holds the Chair in Construction at the University of Melbourne, where he teaches construction amongst other subjects. Paolo's presentation discussed the education system in Melbourne University, which contrasts strongly with the British. He explored the difference between obtaining a degree and an education. A degree course taken at the University of Melbourne is five years in length, beginning very broadly in one of six areas (e.g. environment) and then involving gradual specialisation to, for instance, construction management; if the same course is taken at another University, it can be completed within three years.

Anneke Westerhuis: Anneke Westerhuis is involved in research on performance and output of VET systems in the Netherlands. She discussed the illogical range of occupations and professions in the construction industry. In the Netherlands, there is still testing of school children at the age 12. Children of school age leave the school system after Higher Education or VET. There are local schools for VET, which are not separate institutions. It was explained that this was quite a simple infrastructure. There are obligatory subjects for all VET students to study such as English and Maths. Anneke explained that VET schools in the Netherlands are private, not owned by the State, and the major stakeholders are students, the industry and the VET school; this structure allows the aims of VET to be reached. Any negotiation is undertaken at sector level, but there is a requirement to be assessed by the State. All courses have to be validated by the local industries, which are also involved in any exams. There is a great emphasis on VET as it is seen as the most important supply route for qualified workers and an entrance route into the construction industry. In the construction sector 38 qualifications are divided into a total of 75 diplomas between four VET levels. Segments of qualifications (core tasks) are used for lifelong learning and career development. However, there remain challenges for the role of VET in construction in the Dutch system, e.g. the problem of VET as a recruitment agency and the position of the qualification framework.

Roger Howard Taylor: Roger Taylor is employed by the Danish timber export industry. He explained that education is free for all Danish and EU students, and in fact 40% of students come from the EU. There are also national students who may be on an exchange programme with Danish students and the cost of studying for them is also free. There are two intakes every year, totalling about 1,200 students. The Danish government has invested in education. Every course is run on the basis that it is an applied course, meaning it allows students to be employed from day one. Courses are based upon the ECTS (European Credit and Transfer Education System) credits, which is not really popular. Roger spoke about groups working together from different backgrounds.

Session Two: Cooperation and conflict between built environment occupations

Tony Burke: Tony Burke is the Construction Studies Undergraduate Programme Leader at the University of Westminster. Tony began by discussing the barriers within the built profession and the built environment. Construction is very fragmented, particularly amongst the professional bodies which can lead to a 'silo mentality', whereby people do not want to share information or knowledge with one another. The barriers to more integration were explained, for example, professional bodies not imposing specific requirements on courses whilst, given the choice, employers would prefer to recruit graduates from professionally accredited courses. Tony argued for a new culture in teaching students to actively engage with problems and issues.

Milinda Pathiraja: Milinda Pathiraja from the University of Moratuwa, Sri Lanka, gave a fascinating account of designing for on-site labour training in Colombo, seeking to build up the knowledge, skills and competences of workers in the course of developing particular construction projects.

Tom Hardacre: Tom Hardacre was the National Officer of Unite Union until his retirement in

February 2011. He talked about the difference between engineering and construction. Both, engineering and construction can be a volatile environment but construction tends not to be an industry for people to consider. He believes that what is important in construction is securing jobs through having a working rule agreement. The issue with construction is that the client is at the top whilst the worker is at the bottom, and different stakeholders having different priorities.

Session Three: Integrated practice for construction

Fran Bradshaw: Fran Bradshaw is a partner at ATAP and discussed her work on the project 'Retrofit for the Future', which demonstrates 80% reduction in CO2 emissions, her involvement with the London Borough of Lewisham, the management of contractors, and how problems on site are addressed.

Tim Fenn: Tim Fenn runs his family construction business, Oakwood Builders and Joinery Ltd., and believes in low energy buildings as the way forward for the construction industry. Tim is very much interested in construction training in the UK and is concerned that there is not a good link between training and the construction industry. The QCF (Qualifications and Credit Framework) has recently been introduced; there are 240 awarding bodies and a variety of organisations involved in construction such as Sector skills, ConstructionSkills and SummitSkills. He pointed out that clarification is sometimes required around these organisations. Tim also discussed how training could be delivered and whether there is a difference between learning and training. He also discussed crucial implications such as the difficulties of securing trainers in FE colleges, and the disconnected agendas in educational funding (e.g. getting 'bums on seats' versus engaging with builders and manufacturers).

Platform Discussion

Don Ward, Chief Executive of Constructing Excellence led the platform discussion and argued for the need for collaborative working in construction. Suggestions for ProBE research include:

- innovative ways to fund training;
- the institutional bridge between education and the labour market;
- the legal and institutional basis of the professions;
- the role of insurers, and;
- ethics and the built environment.

Aletha Holborough and Professor Linda Clarke

University of Westminster

Forthcoming Event: Equality and Diversity Debate at ARCOM 27

University of West of England, Bristol, Tuesday 6 September 2011

The 27th Association of Researchers in Construction Management (ARCOM) conference will take place at the University of West of England in Bristol from 5-7 September 2011 (see http://www.arcom.ac.uk). As part of this, there will be a thematic lecture and debate in memory of the late Professor Dave Langford. The theme is "Equality and Diversity", and will take place on 6 September. Five distinguished panellists will engage in critical debate about equality and diversity in the construction sector, including:

- Dr. Catherine Hakim (London School of Economics and Political Science)
- Michel Brown (The Chartered Institute of Building)
- Dr. Paul Chan (University of Manchester)
- Fred Rawlinson (University of Bolton), and;
- Professor Christian Koch (Institute of Business and Technology, Aarhus University, Denmark).

For more information, please contact Dr. Ani Raidén at Nottingham Trent University (email ani.raiden@ntu.ac.uk).

To Our Readers:

The CLR-GB Newsletter is the organ of exchange for CLR in Great Britain. This function depends on the co-operation of its readers. The editors ask everybody who is interested in construction labour to contribute with information and commentaries.

Please send your suggestions, articles, information, letters, etc. to

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