

# Skills for the Low-Carbon Economy: Building low-carbon skills capacity and capability in London

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Findings and recommendations from a workshop commissioned by Podium Skills London, designed and facilitated by Think Up and hosted by Eversheds on 29th March 2010.

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## Recommendations

The recommendation to the Low Carbon Skills Forum is that it supports the establishment of a collaborative partnership including employers, training providers, manufacturers, sector skills councils and government agencies. The task of the partnership will be to develop an action plan which shares the risks and benefits in the search to deliver for London the low-carbon skills capacity and capability it requires. The partnership should meet before the summer break with a remit to report back to the Forum in early autumn.

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## Thanks to sponsors

Special thanks to Eversheds for hosting this event in their offices.



Think Up is an educational design consultancy. We are specialists in creating design-led educational programmes and teaching materials for all ages. Whether through workshops, lectures or residential courses, we aim to deliver education that is transformational. Think Up is part of the Useful Simple Trust.

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## Background

A number of reports in the recent months by the New Engineering Foundation<sup>1</sup>, the Aldersgate Group<sup>2</sup> and the House of Commons Environmental Audit Committee<sup>3</sup> all point to the urgent issue of addressing the low-carbon skills deficit in response to the need for the UK to undertake a planned transition to a low-carbon economy. The designation of London as a Low Carbon Economic Area for energy efficient buildings adds to the need for action. London is the seventh area within the UK to be assigned a Low Carbon Economic Area (LCEA) status to promote energy efficient buildings. The preliminary focus is on retrofitting: making buildings more energy efficient. Further Education has a critical role to play in helping to build the skills capacity and capability for designing, managing and installing low-carbon technologies. The workshop was therefore a very timely response, exploring what needs to be done to make sure that London has the skilled workforce it needs to deliver the low-carbon agenda.

## Aims and outcomes

The aim for this workshop was to explore the steps needed to achieve a vision of adequate skills capacity and capability in Greater London so that its communities can make the transition to a low-carbon economy. The outcomes were a list of the key objectives for achieving this vision and the strategies for delivering these objectives. The objectives and strategies are listed in this report together with recommendations, which will be presented to the Low Carbon Forum at the London Development Agency.

## Method

Think Up designed this workshop to both focus the participants' thinking and achieve a high level of participant engagement. The workshop had five stages, as set out in the diagram overleaf. At each stage, debate was stimulated by an introductory presentation from an expert in the field.

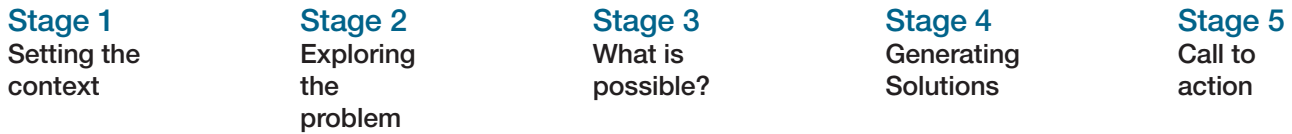
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<sup>1</sup>New Engineering Foundation (UK), 2009. New Technologies, Emerging Markets: Are You Ready for the Opportunities? Available from: <http://www.neweng.org.uk/resources/EmTechReport.pdf> (Accessed 1st March 2010)

<sup>2</sup>Aldersgate Group (UK), 2009. Mind the Gap: Skills for the Transition to a Low Carbon Economy. Available from: [http://www.aldersgategroup.org.uk/public\\_reports/view\\_document/13](http://www.aldersgategroup.org.uk/public_reports/view_document/13) (Accessed 1st March 2010)

<sup>3</sup>House of Commons Environmental Audit Committee (UK), 2009. Green Jobs and Skills – Second Report of Session 2008-09. Available from: <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmenvaud/159/159i.pdf> (Accessed 1st March 2010)

## The Five Workshop Stages



# Stage 1

## Setting the Context

To introduce this stage, Martin Watson, Development Director at the Building Research Establishment provided a practitioner's view of the opportunities and challenges for the construction and building services industries in the transition to a low-carbon economy. From his perspective, whilst there had been the necessary innovation in terms of materials, technologies and processes the challenge the industries face is the change in culture required to achieve the levels of quality needed to meet the stringent regulatory standards.

The workshop participants were invited to respond to Martin's introduction by identifying the opportunities and concerns associated with a transition to a low-carbon economy. The main themes were:-

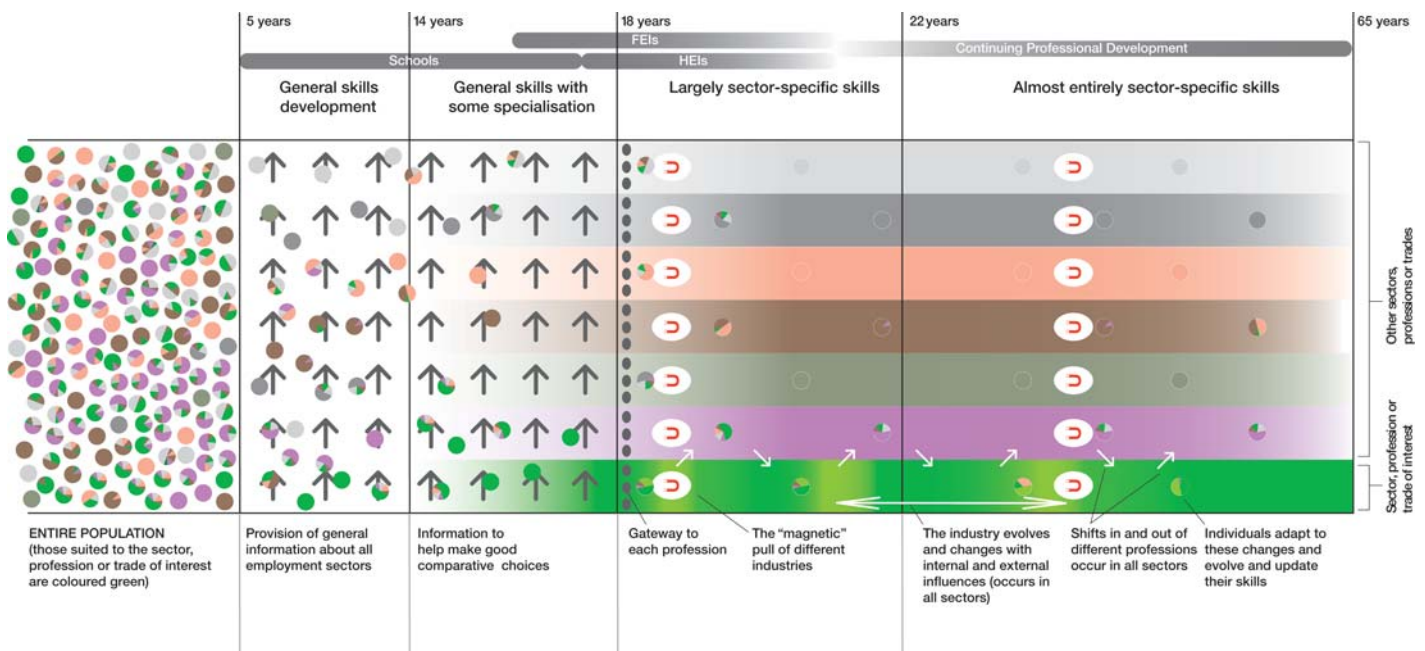
- The huge business opportunities that the transition to a low-carbon economy offers the construction and building services industries and the education and training sector.
- The general lack of awareness about the scope of the challenge we face.
- The need for an integrated approach rather than piecemeal solutions to fabric improvement and the installation of renewable technologies if the targets are to be met.
- The biggest tranche of business is in retrofit
- The exciting opportunities for young people which play to their ethical aspirations. These need to be matched by effective well-informed careers advice.
- The increasing importance of the STEM agenda in educating the general public and providing the foundation of knowledge, skills and understanding on which to build a highly skilled workforce.
- The opportunity to market the construction and building services industries as high tech, requiring high levels of skill and so raising competency levels overall.
- The pace of innovation means that everyone working in the construction and building services industries should embrace the need for continuing professional development. This needs to be met by flexible and up-to-date education and training provision.
- There is a tension between making the gateways sufficiently challenging to set the standard whilst maintaining the attractiveness of a career in this field.

# Stage 2

## Exploring the Problem

In order to help explore the problem Ed McCann, Director of Think Up, placed the FE sector within the context of a whole-life learning continuum from childhood learning through to continuing professional development (CPD) training. The challenge he set the participants was to consider the interventions that need to be made at each stage in the continuum in order to achieve this vision of adequate skills capacity and capability in the low-carbon sector. The intention here was not only to help explore the problem but to also identify opportunities for the FE sector for working in partnership with other stakeholders in the educational continuum.

### Think Up's whole-life skills diagram



For this second stage, the participants were split into five themed working groups:-

- Materials and Technologies
- Qualifications and Standards
- Engaging Employers
- Labour Market Intelligence
- Subject Knowledge and Competence

Each group was asked to consider: what is working and can be built on; what is not working; and what is missing? The key responses were as follows.

## What is working?

- Good courses for traditional crafts – good take-up by business.
- Evidence of employer involvement in curriculum development.
- Encouragement of shared costs between employers, colleges and students.
- Examples of employer networking events and CPD workshops.
- Increasing collaboration between Sector Skills Councils (SSCs) in the built environment sector.
- The current National Vocational Qualification (NVQ) system is understood and on the whole delivers.
- The introduction of the Qualifications and Credit Framework (QCF): the structure will provide a more flexible basis for funding units of training to achieve competence.
- There are a number of manufacturer courses already in place and manufacturers are also talking to colleges about sourcing equipment for training purposes.



- Opportunities offered by the 2011/2013 round of European Social Fund (ESF) grants linked to regional priorities.
- The levy system in construction which provides grants for training.

## What is not working?

- The industry culture of self-employment works against the need for an integrated approach.
- Under-representation of small and medium enterprises (SMEs) in SSC employer forums.
- The co-ordination of funding 'pots' and the alignment between funding strategies and business and economic needs.
- There may be a need for greater discrimination in favour of skills associated with the low-carbon agenda.
- Sustainability is a broad overarching theme which doesn't match with any particular funding 'pots' and so is often overlooked.
- The shift in funding strategies from 'Train to Gain' to 'Modern Apprenticeships' will be detrimental to the need to up-skill significant numbers the existing workforce.
- The FE sector business model does not make clear who the customer is in this market.
- The micro-management of the FE sector when macro-management and leadership is what is needed to make the most of the opportunities offered.



## What is missing?

- As the low-carbon market is still emerging there is a lack of clarity as to exactly what is needed from FE and a lack of demand from employers.
- Labour market intelligence (LMI) from SSCs to provide a convincing case to put to employers.
- User-friendly, accessible information on environmental technologies.
- A shared definition of “skills” – does it include knowledge and understanding?
- A clear route to progressing to qualification.
- An acknowledgement that the change is more about knowledge than practical skills which are often transferable.
- Promotion of technician-level occupations.
- Sharing of best practice amongst all stakeholders.
- Consistently strong working relationship between the FE sector, construction and building services employers and manufacturers.
- Lecturers with knowledge and skills to deliver necessary education and training.
- Clarity as to whether the FE sector is seeking to raise the bar of best practice or whether it is trying to innovate (no evidence of best practice yet).
- Resources to support the significant level of employer engagement that will be required to generate demand.
- An appropriate funding strategy including capital funding for upgraded/additional facilities.

## Stage 3

## What is possible?

Having explored the problem, the next stage in the workshop was to shape the solution. As an inspirational starting point, Prof Sa’ad Medhat, Chief Executive of the New Engineering Foundation (NEF), described some of the ground-breaking work being undertaken by his organisation. The NEF was established in 2004 as a grant-awarding charity and a think-tank that supports vocational further education in applied science, engineering and technology through: research, policy and advocacy; programmes and resources; and knowledge and technology transfer. The themes to emerge from the presentation were:

- The essential nature of collaboration and partnership to bring about change.
- The breadth of opportunities that the FE sector has to contribute to the low-carbon agenda.
- The practical steps that can be taken to optimise those opportunities exemplified by innovative projects initiated by the NEF.



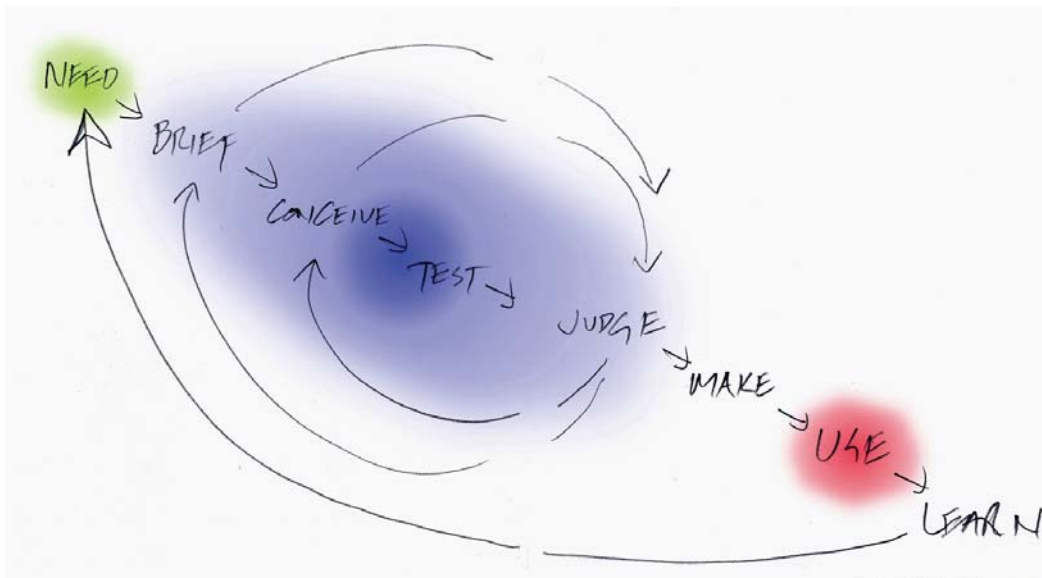
# Stage 4

## Generating Solutions

Ed McCann returned to the lectern to present problem-solving as a design process. He described how the key stages in the creative process can be used as a framework for generating solutions. Working in their five themed working groups the participants used this framework to generate solutions to the problems explored in Stage 2.

These solutions have been summarised as a series of objectives and strategies for achieving the vision of adequate low-carbon skills capacity and capability in Greater London.

### Problem-solving as a design process



### Objective

Adequate information for businesses, colleges, schools and the workforce

### Strategy

Provide improved and consistent labour market intelligence on which to build a convincing business case for employers to invest in training as a means to achieving competitive advantage.

Present information on each modern construction method and environmental technology in clear, easy to understand terms.

Develop a shared definition of skills: what is included and what is not included?

Develop and deliver a series of targeted, awareness-raising campaigns.

Improve the careers advice and guidance given in schools and to adults.



Objective	Strategy
Collaboration between training providers, employers, manufacturers and funding agencies	<p>Build a network of education and training providers, employers, manufacturers and funding agencies.</p> <p>Develop with potential partners a shared understanding of benefit and risk.</p> <p>Build a pan-London approach with specialist centres of excellence for each environmental technology.</p> <p>Explore the value of Knowledge Transfer Partnerships as a framework for collaboration.</p> <p>Celebrate success as a means of challenging the resistance to change.</p> <p>Share good practice internally and externally.</p>
Qualifications	<p>Include appropriate qualifications on the Qualifications and Credit Framework (QCF) as soon as possible.</p> <p>Develop a qualifications structure that helps companies measure performance</p> <p>Synchronise regulatory and QCF frameworks.</p> <p>Extend licence to operate, such as the Microgeneration Certification Scheme. Legislation should require people working in the sector to be qualified.</p> <p>Add environmental technologies to Construction Skills Certification Scheme (CSCS) qualification structure.</p>
Flexible and responsive provision	<p>Develop a range of blended learning solutions at FE level.</p> <p>Develop a prospectus based on a core-plus-options model.</p> <p>Develop a bank of suitably qualified lecturers and trainers to respond to emerging needs.</p> <p>Work with manufacturers to support accreditation of existing courses.</p> <p>Adopt a 'whole house' approach to the delivery of design and operative skills training.</p>
Appropriate funding strategy	<p>Improve the co-ordination of funding 'pots' and better align funding strategies, business and economic need.</p> <p>Explore the need for greater discrimination in favour of skills associated with the low-carbon agenda especially as the most urgent need is to improve the knowledge and skills of the existing workforce.</p>

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# Stage 5

## Call to Action

Frank Horan from the College of North West London set out the urgent need for action by all parties in order to achieve the vision of sufficient low-carbon skills capacity and capability in Greater London. He stressed the need to grasp the opportunities offered. His word of caution was that this could only happen through genuine collaboration and partnership.

The discussion which followed endorsed Frank Horan's view and concluded that next step should be the establishment of a collaborative partnership in London of all those with a vested interest in low-carbon skills development. Once established the partnership could usefully refer to the strategies listed in this report as a starting point for a plan of action.

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### Recommendations

The recommendation to the Low-Carbon Skills Forum is that it supports the establishment of a collaborative partnership including employers, training providers, manufacturers, sector skills councils and government agencies. The task of the partnership will be to develop an action plan which shares the risks and benefits in the search to deliver to London the low-carbon skills capacity and capability it requires. The partnership should meet before the summer break with a remit to report back to the Forum in early autumn.

### Workshop feedback

The general feedback was that this was a stimulating and productive workshop assisted by the structured process and well thought through inputs. The discussion was lively and highly participative and there was a genuine desire to continue working together to meet the challenges faced in London over the coming months and years.

## List of delegates

**Bob Williams**  
Assistant Principal, Vocational Skills and Qualifications  
Barking & Dagenham College

**Roger Clarke**  
Construction and the Built Environment Sector  
Barking & Dagenham College

**Martin Watson**  
Development Director, Construction Lean Improvement  
Programme (CLIP) Building Research Establishment

**David Lambert**  
Head of Construction and the Built Environment Sector  
College of Haringey, Enfield and North East London

**Matthew Travell**  
Curriculum Manager Building Services  
College of Haringey, Enfield and North East London

**Jamie White**  
Head of National Skills Academy for Construction Unit  
ConstructionSkills

**Verna Lyus**  
Community Regeneration DM  
Kensington and Chelsea College

**Mark Waterman**  
Skills Development Manager – Regional Sectors  
Learning and Skills Council

**Ralph Cook**  
Deputy Head of Construction & Technical Services  
Lewisham College

**Frank Horan**  
Chair  
London Construction Providers Partnership

**Jacqui Wordsworth**  
Senior Project Manager, Skills Development  
London Development Agency

**Sam Cosserat**  
Project Development Manager  
London Development Agency

**Dr John Hampson**  
London South Bank University

**Prof Sa'ad Medhat**  
Chief Executive  
New Engineering Foundation

**Sital Punja**  
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**Jas Singh**  
CIPS Project Manager  
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**Lou Houghton**  
South Thames College

**David Knowles**  
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**Uhuru Tyrie-Socha**  
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**Matt Parker**  
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