



Constructing Excellence



# ACBEE

Accelerating Change in Built Environment Education

## PROSPECTUS

and

Outline of requirements for  
successful case studies of high quality

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Built Environment Education**

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# Accelerating Change in Built Environment Education

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## Accelerating Change in Built Environment Education (ACBEE)

### FOREWORD

This prospectus sets out the ACBEE Steering Group's proposals for taking forward the Accelerating Change in Built Environment Education programme. It explains how we intend to build on CITB's Making Connections thinking. It also describes the criteria sought for case studies of high quality and outlines some first thoughts on performance measurement.

I have been much encouraged by the support we have received from industry and academe. There is widespread understanding that good communication between these communities, and with professional institutions, is crucial to the future. We all seek an efficient, client-friendly UK construction sector that embraces Egan thinking, partnership and teamwork.

This prospectus is just the beginning. As you will see we have a good framework within which to operate, although it is clear that there is still much refinement of thinking to be done. Our policy is one of continual improvement, not least in measuring the results of our progress.

We now need to gain practical experience and understanding through the submitted case studies, and to debate with practitioners on the ground. We must also keep the momentum going, towards our major review event next Spring.

From this we should be able to establish quickly some prime examples of good practice which will demonstrate how communication can work well. I hope this will enable the industry and academics to develop their thinking together, and that it will contribute towards the raising of standards generally which is something we all seek.



*John Hobson, Chairman of ACBEE,  
former Director of the DTI Construction Directorate*

# PROSPECTUS

## Improving industry performance

### OVERVIEW

To help improve the recruitment and retention of built environment graduates, ACBEE (Accelerating Change in Built Environment<sup>1</sup> Education) aims to encourage universities, industry and professional institutions to work together to improve dialogue and provide more relevant training and education for the future.

ACBEE will seek to achieve this by:

- Promoting successful case studies of high quality that align with key industry themes
- Encouraging courses that promote an understanding of interdisciplinary team-work
- Identifying the potential benefits they deliver in improving industry performance
- Showing how they can help to bring about rapid and measurable changes and improvements in built environment Higher Education

The first cases studies will be examined and promoted with measurable results being widely disseminated. A major conference on the outcomes will be held in Spring 2004, by which time the aim is to have up to 20 selected and actively monitored case study examples which demonstrate successful application and quality interaction between industry and HE partners.

This document describes ACBEE aims, the criteria for the case studies and the performance indicators expected to provide measurable feedback of the results.

ACBEE is a clear and focused programme that results from the collective views of many leading educational, industry and institutional observers, whose wider issues and opinions will continue to be taken into account.

As part of this process ACBEE will also consider how the approach might be extended to embrace Further Education .

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<sup>1</sup> Where we refer to the built environment we mean it to include architecture and design, engineering, town planning, building and construction, property management and surveying.

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## INTRODUCTION

ACBEE (Accelerating Change in Built Environment Education) was established as a means of focusing on the need for built environment higher education and the industry it serves to attract, recruit and retain sufficient graduates.

ACBEE developed from CITB's seminal 'Making Connections' initiative. It is actively supported by CITB, Constructing Excellence, Construction Industry Council and the two key LTSNs (Learning and Teaching Support Networks) as represented by CEBE (Centre for Education in the Built Environment) and LTSN Engineering which leads on behalf of the engineering disciplines. Professional institutions, trade associations and industry are also represented on the ACBEE steering group (see Appendix One).

ACBEE forms an important part of the accelerating change agenda and has been welcomed by the Strategic Forum which is kept informed of progress.

The ACBEE philosophy is based on encouraging better partnerships between the academic community, industry and professional institutions, with the eventual aim of improving industry output. To this end ACBEE is not a new 'initiative' but rather an immediate and practical agenda for promoting change in higher education.

## THE NEED

It has been recognised that there is a need to raise standards in built environment education and to encourage universities, industry and the professional institutions to:

- Understand and communicate better with each other
- Work together to deliver courses that are more relevant to industry's needs
- Create HE programmes that excite and motivate course applicants
- Give students real experience of multidisciplinary teamwork

In advancing the case for ACBEE we will contribute to four main objectives of the new Sector Skills Councils (SSCs), namely reducing skills gaps and shortages, improving productivity, increasing access to life-long learning and improving the learning supply.

Throughout the remainder of 2003 and early 2004, the intention of ACBEE is to:

- Select a number of successful example case studies for the ACBEE portfolio that demonstrate high quality performance
- Work with the originators of these to measure their performance characteristics
- Write up the case studies as examples of good practice
- Establish a dissemination network through which they can be communicated
- Promote the case studies through an active media and public relations campaign
- Review and discuss the results of the case studies at a conference in Spring 2004 with a view to providing a foundation for achieving future on-going change

It is clear that both Higher and Further Education have vital roles to play in improving built environment education recruitment and retention. Yet to address all the issues at once could complicate matters. So initially ACBEE will focus on improving industry-university dialogue and encouraging more relevant HE delivery. However, we also plan some limited regional activity to assess ACBEE principles in the FE context.

## KEY ISSUES

There are many challenges surrounding the recruitment, training, education and retention of quality graduates. Amongst the issues of direct relevance to the ACBEE agenda for higher education are those about which it may be possible to do something in the more immediate term. The more obvious of these include the following:

### Expectations

Companies want graduates that are appropriately trained and knowledgeable, and who understand and are able to work in interdisciplinary team-working environments. Industry also want to see the benefits and progress that might be possible through closer co-operation with universities.

Graduates want interest, reality and purpose in the courses they undertake. Early and practical engagement with stimulating industry projects and exercises is important.

### Attitudes

To deliver the HE courses that will be essential for the future, we need less emphasis on discipline-led silos and a more flexible approach to interdisciplinary learning and multidisciplinary teamwork. Professional institutions can help these approaches by supporting the accreditation of such courses.

From an industry perspective graduate education and lifelong learning for the future require corporate attention at board level. They are processes that should be seen as an investment in the future rather than a cost overhead without return.

### Communications and dialogue

To change the way that universities, industry and institutions communicate and work together to deliver relevant built environment courses they need to communicate more and understand better the issues and constraints of each other.

Graduate recruitment and retention also needs support from clients whose projects will be affected by the availability and quality of graduates. As construction projects increasingly benefit from teams of designers, contractors and clients working together, active client promotion of interdisciplinary working could encourage more contractors and professionals to engage with ACBEE.

### Course content

To attune graduates to 'real world' construction HE courses need to relate to practical industry matters and current thematic issues. This can be achieved by the use of practical, 'real' projects within built environment courses and the involvement of industry in teaching through visiting lecturers and secondment of students on site.

### Brokering HEI-Industry case studies

Regional engagement will be vital in raising educational standards across the whole of the built environment sector and in engaging smaller companies in the process. To encourage new courses and educational initiatives ACBEE will establish a regional match-making / brokerage service for industry sponsors, HEIs and Institutions. In order to take this forward ACBEE will work with regional CITB offices, Constructing Excellence in the regions, the RDAs, universities and individual firms.

## CASE STUDY CRITERIA

ACBEE will select and promote a number of successful, case studies of high quality that not only tackle these key issues but which also provide measurable results. The criteria for these exemplary case studies can embrace a wide range of options, but typically will include a number of the following characteristics:

- 'Active' partnership / collaboration of industry, HE and / or institutional partners
- Clearly defined objectives and potential benefits for each partner that are clearly defined before commencement and which can be readily measured
- Inclusion of a clear industry subject or theme with wide built environment appeal
- The teaching of interdisciplinary team-work understanding
- Approaches and ideas that are replicable and transferable and which include well-structured modular learning elements
- Relevance and value to students and appropriate to real industry activities
- Inclusion of recognised best practice approaches
- Commitment to the case study being tracked and measured over time

## PROGRESS MEASURES

There are two aspects to the proposed measures to be monitored.

### ***By project outcome***

The first requirement is to measure the response of each case study in meeting its basic objectives and matching as many of the above characteristics as possible. In addition to those indicated above, typical feedback measures may include:

- Student satisfaction at course outcome
- Continuing engagement of industrial partners
- Number of industry-based visiting lecturers
- Number of student hours on site / or involved with 'real' projects

Those submitting case studies will need to state how measures are to be achieved.

### ***Benefits over time***

The second aspect is to track generic benefits. This will include measuring over time:

- Employment rates and the employability of graduates
- Graduate retention in the industry
- Career progress of graduates
- Measurable long-term client benefits
- Reduction in the graduate recruitment budgets of firms involved
- Enhanced business performance (as measured by Constructing Excellence KPIs).

It is also the intention to develop comparative benchmarking techniques within the ACBEE programme.

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## DISSEMINATION

An effective dissemination process will promote successful projects at local and national levels. Existing networks and dissemination routes will be used, including:

- **Universities** - through the LTSN (Learning and Teaching Support Networks), comprising CEBE (Centre for Education in the Built Environment) at Salford and Cardiff Universities and LTSN Engineering hosted by Loughborough University
- **Professional bodies** - via the Construction Industry Council (CIC)
- **Industry** - through the dissemination routes of Constructing Excellence, CITB, Sector Skills Councils, trade associations, professional institutions, regional forums and individual firms

## Promotion

ACBEE will initially write-up and promote through an active public relations and media programme a select number of the best exemplar case studies.

It is also proposed to promote ACBEE principles and case studies during National Construction Week and at the Daily Telegraph National Construction Recruitment Exhibition to be held at the NEC in Birmingham in November 2003 and May 2004.

A major conference will be held early in 2004 to review and discuss progress and lay the foundations for the future.

## HOW TO GET INVOLVED

Exemplar case studies of high quality are sought which fit the characteristics identified. If you have any project that is currently or recently active or you are planning courses which you wish to be included later, please contact ACBEE at the address below. Active industry involvement is encouraged so if you have an idea for an industry project that needs to be matched with a university please let us know.

Participating in ACBEE will benefit everyone in different ways:

- Universities will gain a leading edge insight into the industry and a better understanding of its needs
- Companies or trade associations will get better access to good graduates and have an opportunity to contribute to the way they are educated
- Professional institutions will be able to demonstrate a real brokering and accrediting role in improving standards within their profession.

**Contact ACBEE** c/o CEBE at:

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## Appendix One

### ACBEE STEERING GROUP MEMBERS

#### CHAIRMAN

- John Hobson, former Director of the DTI Construction Directorate

#### HEI REPRESENTATION

- John Dickens - LTSN Engineering (Learning and Teaching Support Network)
- Professor George Henderson, Cardiff University - CEBE (LTSN)
- Mel Lees, University of Salford - CEBE (Centre for Education in the Built Environment), a centre of the LTSN (Learning and Teaching Support Network)
- Professor Chris Webster, Cardiff University - CEBE (LTSN)
- Sarah Williamson - LTSN Engineering

#### INDUSTRY

- Sheila Hoile, Director of Training Strategy, CITB
- Stef Stefanou, Chairman, John Doyle plc
- Adrian Terry, Project Director, Constructing Excellence
- Oliver Whitehead, Chief Executive, Alfred McAlpine plc

#### PROFESSIONAL AND TRADE BODIES

- Mike Ankers, Chief Executive, Construction Products Alliance
- Paul Hyett, Chairman of Ryders and past President, RIBA
- Graham Watts, Chief Executive, Construction Industry Council

#### ORGANISATION AND ADMINISTRATION

- Ian Cooper, Eclipse Research Consultants - adviser / workshop facilitator
- Eddie Coulter, Eddie Coulter & Associates – communications strategy and PR
- Pam Lowe, ACBEE, c/o CEBE, University of Salford

## Appendix Two

### SOME EXAMPLE CASE STUDIES

#### Collaborative education and training

To support the extended education and training of their project managers **British Aerospace** Systems Infrastructure Solutions have teamed up with the **University of Salford** and the **Centre for Construction Innovation (CCI)**. The arrangement provides students with access to a distance-learning MSc programme run by the School of Construction and Property Management (SCPM) at Salford. The programme is based on the Rethinking Construction agenda and is delivered via the Internet, supported by a series of three-day residential case study workshops provided by CCI.

*Measures might include the advantages gained by BAe internal clients as well as feedback on student satisfaction with on-line learning.*

#### Forging greater understanding

**Cambridge University's** IDBE (Interdisciplinary Design for the Built Environment) course, started with initial funding from the **Ove Arup** Foundation. It offers a Masters course specifically designed to forge greater understanding between the professions, and between the professions, the industry and the wider world. Participants include engineers (approx. 60%), architects (20%), and Qs, project managers, planners and lawyers (20%). The course has been running since 1994.

*Typical measures might include the opportunity to track member's experience in terms of career progression and retention.*

#### Providing site experience

The 'Constructionarium' exercise run by **John Doyle Construction** and **Imperial College** gives students an opportunity to work together under site conditions to apply their theoretical knowledge of design and construction on a scaled-down version of a real construction project (such as a dam or bridge). The exercise provides practical experience of site safety and construction decision-making, requiring students to define and agree the scope of work, establish a project structure and division of skills, plan and work to a budget, and agree, schedule and monitor the programme of work.

*Measures might include longer-term student awareness and affinity with the company.*

#### Reality teamwork

Originated in 1998, **Leeds Metropolitan University** 'TIME IT Project' brought together - one day a week for five weeks - students from architecture, civil engineering, quantity surveying and construction management. Working together on reality-based projects devised by external advisers including architects, project managers and contractors, each team had to prepare a scheme, cost plan, design and construction schedule and structural and environmental calculations. They were asked to forget traditional professional roles, to use IT as much as possible and to record and evaluate the process. In 2000 'TIME-IT' became an M4I demonstration project.

*Typical measures could include increased student awareness of practical IT use:*