

Sustainable Construction and the HE Sector

Draft final report

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Executive Summary

In the Autumn of 2001, the Forum for the Future entered into consultations with its HEPS partners on how best to promote sustainable construction in the UK higher education sector. In particular, the Forum sought to discover whether its HEPS partners thought that:

- the signing of a ‘stakeholder agreement’ between the key players involved – the HEFCS, UUK, AUDE, plus other stakeholders, and
- publication of ‘best practice’ guidance specific to the university sector would accelerate the take-up and effective implementation of sustainable construction. An iterative consultation process was initiated by the Forum, starting with a Consultation Document and supplemented by interviews and sets of inter-active workshops.

The consultation process identified a clear statement of needs and a preferred route forward. It revealed that the HEPS partners who took part in the workshops believe:

- additional actions, structures and mechanisms are required if sustainable construction is to be effectively introduced and implemented in the UK’s higher education sector, because
- the drivers necessary to effectively promote sustainable construction are absent or marginalised in UK universities, their funding agencies and regulators, and
- the required champions, mandated change agents, and incentives have yet to be put in place.

The HEPS participants canvassed called for a clear *framework for change* for implementing sustainable construction to be introduced that will engage with, and assign particular roles to, a wide range of stakeholders to achieve a specific set of outcomes.

Proposed ‘Framework for change’

Roles and outcomes

1. The HEFCs should issue an explicit *statement of intent* about the implementation of sustainable construction in the UK higher education sector.
2. The HEFCs and other relevant bodies (UUK, AUDE, etc.) should issue a joint *mission statement* about the continuous improvement of sustainable construction in the sector, backed (eventually) by sector-specific *targets* and *indicators*.
3. The HEFCs and the HEIs (whether individually or jointly) should develop and adopt (initially voluntary, subsequently formal) *agreements* about the delivery of sustainable construction in the UK higher education sector.
4. The HEIs should develop and adopt (initially voluntary, subsequently formal) *agreements* with their own internal and external stakeholders about the delivery of sustainable construction in their own institutions.

5. An (initially voluntary, subsequently formal) *Benchmarking Club* should be set up by the AUDE (in collaboration with other relevant parties) first to establish a relevant set of sector-based *indicators* and then to share annually reviewed performance results, eventually against appropriate *targets*.
6. The HEFCs, UUK and HEIs should recognise the *resource implications* of implementing the Framework for Change for achieving sustainable construction in the UK higher education sector.
7. Eventually, the HEFCs (and other appropriate funding bodies) should apply sustainable construction *criteria* (perhaps as ‘special factors’ or other forms of incentive) in their relevant *funding regimes* and *initiatives*.
8. Appropriate sector-specific material in the form of ‘*best practice*’ *guidance* and a *code of practice* should be produced and introduced (through training where appropriate) to ensure that the changes sought to sustainable products, services and practices are actually achieved.

Instead of calling for technically-based guidance, the HEPS partners requested process-based information about how to implement ‘best practice’.

Requested process-based information

- integrating sustainability into strategic planning processes
- treating it holistically, systematically
- sequencing and correlating the inter-relationships of issues involved
- prioritising amongst competing issues
- working with the key stakeholders concerned
- practising non-adversarial procurement and partnering
- measuring successful performance
- justifying evaluation criteria
- undertaking cost benefit analyses, and
- capturing educational added value.

Relevant supporting, non-sector specific, guidance from *Rethinking Construction* and the *Construction Best Practice Programme* should be clearly signposted. Technical material should be reserved for a separate but related *Code of Practice*.

For this Framework to be implemented effectively, explicit acceptance of the ‘ownership’ of sustainable construction in the sector will need to be established. In turn, this will require a further, clear and accountable, consultation process to achieve ‘buy-in’ from the wide range of stakeholders involved.

Proposed further consultation process

1. This consultation process should be *owned* and *driven* forward by the *key players* involved (the HEFCs, UUK, AUDE, HEIs, and other relevant parties)
2. In the first instance, Forum for the Future should *facilitate further consultation* between these parties by presenting them with the findings of its work with HEPS partners to date - the proposed *Framework for Change*
3. In addition, the Forum for the Future and its HEPS partners should continue to *provide assistance* to the key players to help them bring *implementation* of the Framework for Change to a successful conclusion.

Introduction

The Forum for the Future has a pioneering collaboration with 18 of the UK's universities. The purpose of the Forum of the Future's Higher Education Partnership is to help these participating universities deliver their own strategic objectives in a way consistent with sustainable development. The HEP initiative is centred on partnership capacity-building activities, for instance, for strategic planning processes and estate management priorities.

In the autumn of 2001, the Forum undertook an extended consultation process on the application of sustainable construction to:

- new-build
- refurbishment and maintenance, and
- the care of historic buildings

in the higher education sector. This process is documented in this report.

During the consultation process, information was collected from the HEPS partners and other stakeholders by three means.

1. A Consultation Document on sustainable construction in the HE sector, circulated initially to all HEPS partners and subsequently beyond to other stakeholders.
2. Interviews with HEFCE and English Heritage, major stakeholders responsible for framing the context in which HEPS partners have to act.
3. Two pairs of interactive workshops, held in southern England and Scotland. The first pair of workshops was attended by HEPS partners only. For the second pair, HEPS partners were invited to choose someone they saw as a significant other stakeholder in their decision-making about sustainable construction to bring to the workshop.

The purpose of this report is collate and synthesise the information collected from HEPS partners and other stakeholders by these three means in order to inform the future actions recommended by participants in the consultation process.

The Consultation Document

The Consultation Document was the first step in the Forum’s engagement with its partners to agree how best to promote the take-up of sustainable construction across the higher education sector. It was circulated, initially to HEPS partners and subsequently more widely, to stimulate first discussion and then hopefully agreement about how best this can be done.

The Consultation Document:

- raised a series of issues, see Table 1, underpinning the successful implementation of sustainable construction in the higher education sector
- asked how these issues can be effectively handled in respondents’ institution, and
- invited them to bring their responses to the follow-up workshops for further discussion and consensus building.

Table 1

Key issues involved in delivering sustainable construction within higher education institutions

- | | |
|--------------------------------------|-----------------------------------|
| • <i>Managing drivers for change</i> | • <i>Achieving design quality</i> |
| • <i>Developing a vision</i> | • <i>Working in partnership</i> |
| • <i>Making a (business) case</i> | • <i>Monitoring progress</i> |
| • <i>Making investment decisions</i> | • <i>Reporting on performance</i> |
| • <i>Capturing best practice</i> | • <i>Achieving agreement</i> |
| • <i>Managing the transition</i> | |

The Consultation Document sought to locate the implementation of sustainable construction in higher education in the context of initiatives that already confront higher education institutions – whether in the form of national government policy, requirements from the HEFCE, or from interest groups such as AUDE or the Higher Education Design Quality Forum (HEQDF). A full copy of the Consultation Document is attached as Appendix 1.

The Consultation Document was sent electronically to each of the lead contacts in the 18 HEPS partner universities with a request that it should be circulated widely to three sets of recipients - those involved in:

- teaching
- research, or
- operational management

of construction in those institutions. This would have generated an overall population of 54 respondents (18 x 3). They were invited to complete the consultation document – which asked a series of questions against each of the issues raised, see below – and to bring their completed document, for subsequent analysis, to the follow-up workshops. Those unable to attend were asked to send their completed consultation documents to the Forum.

In the event, many of the participants at the follow-up workshops had either not received a copy of the consultation document from their university's lead contact or had not completed it before attending the workshop. At the workshops, additional copies of the consultation document were distributed. Despite this, only seven completed consultation documents were returned for analysis – an overall response rate of just 13%. In the table below, comments are presented to illustrate the range of responses offered to the questions asked.

Table 2

Illustrative responses to the questions raised against key issues

<p>• <i>Managing drivers for change</i></p> <p>How do you think sustainable construction can improve the performance of your organisation?</p> <p>"Economics – leaving money to be spent elsewhere." "Energy conservation; widening access; adaptation of existing buildings/historic conservation; economic regeneration; quality of teaching and learning environment." "Reduced cost in use, with corresponding long term viability." "Potential ability to acquire 'prescriptive' grants or funding." "Improving stakeholder perception and satisfaction." "Feel good factor when using sustainable materials, marketed to internal and external users." "Assist in meeting CO₂ targets." "Demonstrate commitment to environment." "Minimising potential for legal action for environmental non-compliance." "Buildings can be educational!" "Responsibility, directly and to educate."</p>
<p>• <i>Developing a vision</i></p> <p>Do you think that a 'design vision' would assist you in moving your university towards more sustainable practices? If not, what would?</p> <p>"Yes, but intangible." "Yes but time and fee competition mitigate against these aspirations." "Yes, we already have an environmental policy and guides for building design and construction." "No. Financial incentives and penalties would help move the university towards sustainable construction." "Top level commitment and overall culture of the university are critical to the implementation and development of sustainability." "Any vision needs to be jointly adopted by the City Council. The University is closely integrated with the city centre."</p>
<p>• <i>Making a (business) case</i></p> <p>Can you make a case for sustainable construction adding value to your institution's strategic goals? If not what prevents you?</p> <p>"Yes, we already do, but can be influenced by requirements of funding bodies." "Yes, procurement cost savings, reputation, and support of other public bodies." "Possibly but sustainability does not appear in the Strategic Plan – an uphill struggle, and the University has yet to embrace the need for an Environment Officer." "Yes, possibly, but the perceived additional cost of sustainable construction and possible loss of flexibility in use can significantly reduce enthusiasm." "Government/funding bodies should take lead – make sustainable construction attractive/essential, through incentives, not penalties." "Add sustainability to curriculum areas, bringing the issues to a wider population." "Reputation for architectural heritage – huge drawing point for conferences."</p>

Table 2 continued

Illustrative responses to the questions raised against key issues

• *Making investment decisions*

How can sustainability be integrated as an objective in investment decisions when projects are dominated by other priorities?

"By having it registered as a University target."

"By stressing that we need to consider whole life (financial) cost of the building and costs to the environment and society as a whole."

"Bones for performance [measurement] – W/m² for building types."

"Difficult to see 'long term investments' especially when initial cost is generally higher. That's the biggest hurdle for those that sign the cheques. Sustainability must be shown to be the cheapest option."

"Long lasting buildings often very quickly become perceived as unappealing accommodation."

"These objectives tend to be counteracted by drives for 'design and build' and PFI – little or no interest shown by developers for long term economies."

• *Capturing best practice*

Can you already capture the best practice advice on sustainable construction you need? If not what is stopping you?

"Yes, a wealth of information which needs to be tailored to specifics. Little is done at present. Top down commitment would be required."

"Mostly yes but there is a large amount of information produced by different sources which is sometimes contradictory. We need a definitive guide to what constitutes best practice in the HE sector."

"It is no-one's specific role to address this. No one has time except by buck passing to outside consultants – but then HEIs may get less for their money."

"Too little time to research. Too much diverse and dispersed information."

"There is very little best practice advice on sustainable refurbishment of properties compared with new build."

"Difficult to get concrete evidence of benefits of sustainable construction."

• *Managing the transition*

What is the main driver for sustainable construction in your HEI? Who will champion the transition? What are your targets?

"We have an endorsed Environmental Policy backed up by specific technical guidance, championed by technical management staff with Estate Management Dept. Current targets are based loosely on BREEAM 'very good' requirements."

"Needs wide acceptance throughout the University – that's the thinking behind our HEPS 'Awareness raising' event. A broad-based approach, rather than individuals, would bring greater acceptance more quickly."

"I think it is me. There seems to be little else influencing the thought or action process."

"Cost is the main driver. Very little is heard and targets are not widely available but could be found, again cost driven."

"It should be based on optimising the impact on the environment from all points of view (social, economic and environment)."

"Perhaps the Forum and our involvement in this initiative?"

• *Achieving design quality*

Can you use improving 'design quality' to make your buildings more sustainable? If not, what is preventing you?

"We could, especially if the desire was there from our clients or if surveyors/project managers proved that sustainability is the best option incorporated into the design."

"Probably but construction consultants also need to change their culture so that it becomes second nature not a bolt on."

"Generally possible on new, non-scientific type, buildings. More difficult on refurbishment of historical (especially listed) and scientific buildings with specific requirements for ventilation and finishes for H&S reasons."

"Design quality' should refer to all aspects of design and its interaction with social/economic factors in relation to sustainability."

"To attain a good design, you need a good client brief."

"Cost and time mitigate against this."

Table 2 continued

Illustrative responses to the questions raised against key issues

- ***Working in partnership***

Can you use partnership to help you implement sustainable construction practices? In not, what prevents you?

"An integral part of the University's involvement with the City Council – public realm improvements and transport plan. The '24-hour city' initiative. City centre living reduces commuting."

"As most developments have an impact on the surrounding area, such partnerships could provide a product that is acceptable and benefit to the HEI and community."

"Such partnerships have a great potential but the integration of sustainable design and practice is dependent on the commitment and goodwill of all the parties."

"Could be achieved through open and positive approach to T&C planning procedures."

"Possibly but not sure what additional benefits this would provide. Could also lead to additional constraints due to partner's requirements."

"Can we afford to pay consultants even to think about these issues?"

"I don't know sufficient about this to comment."

- ***Monitoring progress***

Do you think that regularly monitoring environmental criteria would promote the take up of sustainable construction in your HEI?

"This type of monitoring is essential – if to ensure that design criteria are being met and to improve design and brief."

"If we don't measure it, we can't manage it. Monitoring would be good to identify where there is wastage and thus where improvements could be made."

"An effective programme is underway in the University and aspects are filtering through slowly – on water usage, improving lighting, although it is proving expensive initially but saving over time by cutting down on power usage."

"It is essential to reinforce the benefits but must not be seen as the only measure of success."

"Yes, should be done within the University but in a low key way. The post-occupancy reviews promoted by HEDQF would be too bureaucratic and would lose their impact."

"Yes, it might help to sway the argument in favour of whole life costs vs capital costs."

"When HEFCE demands monitoring data it raises the profile of the subject."

- ***Reporting on performance***

Can you use indicators to report performance on sustainable construction? If not, what is preventing you?

"Universities of all places should be able to measure and report on indicators!"

"In principle yes, providing the parameters are appropriate to HEIs."

"Could be used but need a simple compilation of the targets so that they can be embedded in specifications."

"Again these indicators should help with the brief/design scheme – use as targets."

"Probably yes but what effect would good or bad results have?"

- ***Achieving agreement***

Do you think a stakeholder agreement is a productive way of promoting sustainable construction? And who should be party to it?

"It is essential to have a 'document' that forms the framework for culture change."

"It should have been done years ago. The sharing of experiences is invaluable. Other parties could include LAs, community groups, suppliers, contractors."

"Yes provided the agreement allows sufficient flexibility to accommodate local conditions and requirements and doesn't merely become a bureaucratic checklist exercise."

"It needs the commitment of all parties, e.g. funders, users, design team, Estates, contractors, and planning authorities."

"'Agreement' is too strong and bureaucratic."

"May be but it is difficult to see where the resources would come from to fund the input of monitoring/responding to it, etc."

"Probably but I don't feel knowledgeable enough to contribute yet."

Findings

Caution needs to be applied to interpreting the statements above. The sample is too small, and skewed towards those involved in Estate Management, to be representative. Nevertheless, there are key features that can be drawn out as worth signalling here because they were repeated amongst the larger number of participants attending the workshops.

- Respondents came to the consultation process with widely ranging and conflicting perceptions, preconceptions and levels of previous experience of sustainable construction – these had to be managed subsequently in the workshops in order to move towards agreement amongst HEPS partners.
- Reported best practice was still modelled on the ‘environmental management’ agenda rather than the broader demands of sustainability – although one example was offered a broader, partnership-based approach
- Reducing costs is the main driver for change reported.
- Institutional champions and change agents for sustainable construction do not seem typically to have been identified, mandated or resourced.
- External pressure from the government/funding agencies, especially in the form of incentives, is requested if significant change is to occur.
- Current procurement initiatives such as PFI and Design and Build are not seen as drivers for sustainable construction.
- At present, sources of best practice are seen as too diverse, unspecific to HEIs, or contradictory.
- A definitive guide to best practice on sustainable construction specific to the higher education sector was requested.
- While some form of ‘document’, to act as the framework for change, was requested, a stakeholder agreement was seen as too bureaucratic.

Many of these views were reiterated and refined in the subsequent workshops and so will be re-encountered later in this report.

The Interviews

Only two interviews were undertaken - with HEFCE and English Heritage - as major stakeholders responsible for framing the context in which HEPS partners have to act. The purpose of these interviews was to identify any similarities or differences, compared with those who responded to the consultation document, in views expressed about:

- priority issues, key stakeholders and main drivers involved in sustainable construction in higher education
- the form and content of best practice guidance, and
- the use of a stakeholder agreement for promoting its take up.

Interviews were undertaken with:

- Andrew Smith, Head of Estates, HEFCE, and
 - John Fidler, Head of Building Conservation, English Heritage,
- each identified as the most appropriate person to be questioned about sustainable construction in their respective organisations. The interview schedule employed is presented in Appendix 2. Transcripts of the interviews are included in Appendix 3.

Priority issues

Both interviewees were asked what they thought were the highest priority issues to be taken into account when making decisions about sustainable construction in the HE sector.

HEFCE	<i>First order:</i> Needs of users/occupiers, affordability, value for money, integration of development in overall estate strategy <i>Second order:</i> Value engineering, life cycle costing (may or may not include sustainability)
EH	Unable to comment: EH only involved when designs well advanced.

Neither identified sustainability as belonging in this category.

Relevant stakeholders

Both interviewees were asked who they saw as the key players in decision-making about construction in the higher education sector. They both identified sets of internal and external key players.

HEFCE	<i>Internal:</i> HEI Governing Body (Resources Committee), HE Vice-Chancellor, HE Senior Management Team, Director of Estates, Academics and other users <i>External:</i> Local Planning Authority, Architects, Community and pressure groups, Funding Bodies – HEFCE, Wellcome Trust, Research Councils
EH	<i>Internal:</i> Academic needs <i>External:</i> Government policy, funding and grant giving bodies, planning

These sets of stakeholders map directly on to those proposed by participants in the workshops.

Best practice guidance

Both interviewees were asked how easy they thought it was for key players to access the information or expertise needed to make decisions about construction. Smith gave a detailed response for HEFCE against each of the key players identified, see Appendix 3, most of whom he identified as non-expert and dependent on advice from either Directors of Estates or external consultants. Fidler for EH suggested not only that most stakeholders are poorly informed but that there is poor input into them by EH because of a lack of initiative on both sides.

Main drivers for sustainable construction

Both interviewees were asked what they thought were the main drivers, if any, for moving towards sustainable construction in higher education.

HEFCE	<i>Existing drivers</i> <ul style="list-style-type: none">• Reduced lifecycle or whole life costs• Happy users – feel good factors associated with green buildings• Marketing benefits for institutions• Kudos, reputation• Academic drive for green buildings• Regulation – Environmental Protection Act <i>Potential drivers</i> <ul style="list-style-type: none">• Tax breaks and VAT concessions• Additional funding
EH	<ul style="list-style-type: none">• Economies through reduced running costs• Long life loose fit – durable materials for long life with reduced maintenance burden• Desire for improved working conditions, with more local control• Fringe issues – ‘lead free’ and ‘PVC-free’ construction

Both respondents, like those who returned the consultation document, identified reduced costs as a main driver. They too suggested marketing and kudos benefits plus improved working conditions. And, for HEFCE, Smith also identified the potential for financial incentives to be introduced as drivers for sustainable construction.

Main barriers to sustainable construction

Both interviewees were asked what they thought were the main barriers, if any, to moving towards sustainable construction in higher education.

HEFCE	<ul style="list-style-type: none">• Higher initial costs• Innovation requiring extra management input• Long term benefits (longer than VCs’ period of tenure)• Risk taking – trail of innovative failures• Poor status of published standards• Benefits, often invisible and not always accruing to HEIs
EH	<ul style="list-style-type: none">• Lack of agreed definitions of sustainability• Difficulty of valuing Quality of Life factors – e.g. capital value of heritage• Ignorance and apathy – society not ready for change

Most of the barriers listed map directly on to issues already raised by those who completed and returned the consultation document. Smith, for HEFCE, pointed out that the benefits accruing from sustainable construction are typically long term and thus fall outside the period of tenure of most VCs. Fidler, for EH, suggested that in a “throw-away society” there are social barriers to the adoption of sustainable construction.

Guidelines on sustainable construction

Both interviewees were asked

- what form they thought guidelines on sustainable construction should take
- what they thought they should contain, and
- whether their organisation already had best practice guidelines for implementing sustainable construction.

HEFCE	<p><i>Form</i></p> <ul style="list-style-type: none"> • Web-based guidelines • Specific material prepared for HE sector but only where gaps exist <p><i>Content</i></p> <ul style="list-style-type: none"> • Profile of sustainable projects in HE • Environmental checklist <p><i>Own best practice guidance</i></p> <ul style="list-style-type: none"> • None but encourage – Energy Management Value for Money, refurbishment over new build, benchmarking on energy, water and space use.
EH	<p><i>Form</i></p> <ul style="list-style-type: none"> • None specified <p><i>Content</i></p> <ul style="list-style-type: none"> • Financial data • Ecological value of decisions • Whole life costs • Tactical information illustrated by projects • Data not propaganda <p><i>Own best practice guidance</i></p> <ul style="list-style-type: none"> • None but ‘greening’ EH policy is on web-site. ‘Power of Place’ is most recent EH policy statement.

Again most of the issues raised here are prefigured in the responses from those who completed and returned the consultation document. All of them were also identified and discussed further in the subsequent workshops, particularly Fidler’s request for data (evidence-based guidance), see below. Neither the HEFCE nor EH currently have guidelines on sustainable construction.

Exemplary practice

Both interviewees were asked if they could identify any HEIs that were acting as exemplars of inspirational practice for achieving high design quality through sustainable construction.

HEFCE	<p><i>In terms of individual buildings</i></p> <ul style="list-style-type: none"> • UEA – Elizabeth Fry building • Leeds Met – Leslie Silver Building (learning resource) • Coventry University – new library with passive cooling and wind towers • Oxford University – Abraham Building Linacre College (Green Building of the Year) • Surrey Institute of Art and Design – Centre for Sustainable Design • De Montford University – Queens Building • King Alfreds College Winchester – extension to Martial Rose learning resource centre • Nottingham University – Jubilee Campus • Northumbria University – PVC-clad building • Sunderland University – St Peters campus <p><i>In terms or strategies/policies</i></p> <ul style="list-style-type: none"> • Edinburgh University – in fore front of sustainable development • Liverpool John Moores – former VC wrote Toyne Report • Keele University – microclimate and topography fed into Estate Strategy • Surrey Institute – sustainable development well embedded
EH	<ul style="list-style-type: none"> • Not aware of anything top level • Claims made but of doubtful validity • Need for thorough auditing

Fidler, for EH, was unable to identify any exemplary practice and questioned the validity of claims made on this front. Smith offered a long list of examples but those at the building level address the ‘green building’ agenda rather than the broader ramifications of sustainability.

A stakeholder agreement

Both interviewees were asked:

- whether an agreement between the HEFCs, Universities UK, and the regulators would accelerate the introduction of sustainable
- who should be a party to such an agreement
- what should the agreement cover.

HEFCE	<p><i>Accelerate take up</i></p> <ul style="list-style-type: none"> • Yes, it would help. But it would need to be more than motherhood and apple pie. Institutions are independent and autonomous. It could be counter-productive • It would have to show benefits – ‘what’s in it for them’ • A more interesting agreement would be one that had money attached – but sustainability is not <u>currently</u> a strong driver • Permissive approach – ‘special factors’ for abnormal costs <p><i>Parties to agreement</i></p> <ul style="list-style-type: none"> • Universities UK • Standing Conference of Principals (SCOP) • Research Councils • Welcome Trust • Government (Panel for Sustainable Development?) • AUDE <p><i>Coverage</i></p> <ul style="list-style-type: none"> • A statement of intent • Broad energy efficiency targets for new build and refurbishment • Statement that funding bodies would look favourably on sustainable construction in funding programmes • Statement that institutions would consider sustainability formally as part of the design <u>and</u> procurement of capita projects • Possible range of environmental impact targets
EH	<p><i>Accelerate take up</i></p> <ul style="list-style-type: none"> • Possibly but doubtful whether any real drive • Lack of will in government • No design champion for sustainability • Possible ‘green clauses’ in PFI as stimulus <p><i>Parties to agreement</i></p> <ul style="list-style-type: none"> • University Estates • Local authorities • Utilities • Service providers • City infrastructure providers <p><i>Coverage</i></p> <ul style="list-style-type: none"> • Guidelines with set of objectives and targets for variety of sustainability criteria • Internal carbon model for capital works • Question for capital works, ‘Do you actually need this building/’, however efficient.

Between them, these two interviews covered most of the ground explored by the participants at the workshops. Both doubt that the current climate is mature enough for the introduction of a stakeholder agreement, though they point in different directions for this – one back into HEIs, the other to a lack of government will. As a result, both are sceptical about the practical utility of such an agreement. If such an agreement were to be drawn up, between them these two interviewees identify most of the parties involved and contents signalled by the participants in the workshops that followed.

Other comments

Finally, both interviewees were asked whether they had other comments to make or questions to ask.

HEFCE	<i>Comments</i> <ul style="list-style-type: none">• HEFCE role to encourage UUK and SCOP to have specific groups to address sustainability issues• Opportunity to take work forward on sustainability via Fund for the Development of Good Management Practice <i>Questions</i> <p>None</p>
EH	<i>Comments</i> <ul style="list-style-type: none">• Lack of co-ordination is an issue in university planning• New 'tight fit' buildings are a bad idea in the long run• Need for adaptability, even to non-university use <i>Questions</i> <p>None</p>

Smith's responses for HEFCE to the final two questions indicate a clear preference for a non-prescriptive/permissive approach to promoting sustainability based on voluntary action from the main interest groups in the sector, backed perhaps by the use of 'special factors' in funding, leading perhaps to the use of financial incentives for action in this area. Fidler suggests that such an approach would be hampered by the lack of co-ordination in university planning.

Findings

Again caution is needed when interpreting the responses above from HEFCE and EH. Neither represent formal policy statements from the organisations involved. Indeed the position outlined by Smith for HEFCE is more positive and pro-active than that adopted by other HEFCE representatives who attended the workshops. One of these maintained that HEFCE's position on sustainable construction is "to have no position". Nevertheless, there are again key features worth drawing out because they either re-inforce issues raised by responses to the consultation document or because they prefigure discussion at the workshops.

- The views expressed by these two members of HEFCE and EH staff are broadly similar and compatible with those in the HEPS partners who responded to the consultation document.
- Neither interviewee saw sustainability as a high priority in HEI planning where cost is a main driver.
- Both pointed to the lack of a strong driver for sustainable construction – either within HEIs or outside from government or funding sources.
- Sustainable construction was presented as lacking champions and mandated change agents both in higher education and in government agencies.
- Attention was drawn to the long-term nature of benefits arising from sustainable construction as falling outside the period of tenure of VCs.
- Key decision-makers on construction in HEIs were presented as non-expert and hence dependent on third party advice.
- Neither HEFCE or EH currently have guidelines on sustainable construction. EH was reported as having shown a lack of initiative on this front.
- The exemplary practice cited on behalf of HEFCE was largely at the level of 'green buildings' rather than the broader remit of sustainable construction. Doubts were raised on behalf of EH about the validity of such claims.
- The two interviewees largely prefigured the output of the workshops in the parties and the contents they identified for any stakeholder agreement on sustainable construction.
- However they were sceptical about the value of such an agreement, doubting whether the climate is sufficiently mature inside HEIs or whether outside the necessary government will is currently available.
- The response proposed for HEFCE indicates a preference for a non-prescriptive approach to promoting sustainable construction.
- This approach features voluntary action from interested parties in the sector, backed up by the use of 'special factors' and perhaps financial incentives by HEFCE's funding regime.

This approach, which was also typically favoured by those who participated in the workshops, was not endorsed by the HEFCE staff that attended them who were more non-committal, see below.

The Workshops

Workshops 1 & 2

Two, first round, workshops were held for the HEPS partners focused on implementing sustainable construction in the higher education sector. The first was held in Peterhouse College, Cambridge, on 19/10/01 and the second in Aberdeen University on 26/10/01. This report only documents the exercises undertaken at the workshops using the Participants' Workbook, see Appendix 4. For a record of the workshop presentations, see the separate notes produced by Forum for the Future. Before the workshops, HEPS partners were sent a Consultation Document identifying key issues involved in delivering sustainable construction within higher education institutions.

Table 1

Key issues involved in delivering sustainable construction within higher education institutions

- | | |
|--------------------------------------|-----------------------------------|
| • <i>Managing drivers for change</i> | • <i>Achieving design quality</i> |
| • <i>Developing a vision</i> | • <i>Working in partnership</i> |
| • <i>Making a (business) case</i> | • <i>Monitoring progress</i> |
| • <i>Making investment decisions</i> | • <i>Reporting on performance</i> |
| • <i>Capturing best practice</i> | • <i>Achieving agreement</i> |
| • <i>Managing the transition</i> | |

At the workshops, delegates drawn from the 18 universities participating in HEPS were asked to focus through breakout and plenary sessions on:

1. What they saw as the most important issues covered in the Consultation Document?
2. Whether they already had access to the information and support on sustainable construction they needed? If not, what form this should take and what it should contain?
3. How a stakeholder agreement on sustainable construction could improve performance in the higher education sector? Who should be party to it? And what should it cover?

Priority issues

Strong similarities emerged from the two workshops about the high priority issues for implementing sustainable construction effectively. Both attached importance to developing a vision, capturing best practice, achieving design quality, and managing drivers for change.

Cambridge Workshop			
• <i>Developing a vision</i>	1	• <i>Making a case</i>	6=
• <i>Managing drivers for change</i>	2	• <i>Making investment decisions</i>	6=
• <i>Capturing best practice</i>	3=	• <i>Monitoring progress</i>	6=
• <i>Achieving design quality</i>	3=	• <i>Managing the transition</i>	9=
• <i>Working in partnership</i>	3=	• <i>Achieving agreement</i>	9=
		• <i>Reporting on performance</i>	11

Aberdeen Workshop					
•	<i>Developing a vision</i>	1	•	<i>Managing the transition</i>	6
•	<i>Capturing best practice</i>	2	•	<i>Working in partnership</i>	7
•	<i>Achieving design quality</i>	3	•	<i>Achieving agreement</i>	8
•	<i>Managing drivers for change</i>	4=	•	<i>Monitoring progress</i>	9=
•	<i>Making investment decisions</i>	4=	•	<i>Reporting on performance</i>	9=
			•	<i>Making a case</i>	11

The widest discrepancy between the workshops was over whether there is a need to make a business case for sustainable construction in higher education. In Cambridge, this was seen as moderately important but, in Aberdeen, received no votes at all. Both workshops attributed low importance to achieving agreement, monitoring progress, and reporting on performance. The latter two were described as tail-end activities, best tackled when the other, more important, issues had been put in place. One of the few delegates who voted for achieving agreement commented that, without this, the other issues could not be delivered effectively.

Need for information and support

Participants in both workshops agreed that there was a need for better signposting, collation and vetting of information already available, along with monitoring of resultant practice.

- There is a wealth of information internally and externally, however this is ‘sporadic’, ‘scattered and ad hoc’, ‘non-standard’ and needs to be drawn together.
- Reliable, relevant and accessible advice is needed to weave through this abundance of existing information.
- An agreed set of principles and terms is required.
- Any guidance must pull together the core roles of the institution (campus, curriculum, community).
- Commitment needs to be driven from the top down, through an institution’s mission statement.
- A well-developed estates strategy may help achieve senior level support.
- Internal communication mechanisms need to be developed, particularly to facilitate dialogue between the estates and academic arms of an institution.
- Sustainable development could be incorporated into the induction of staff and co-ordinated through the Institute of Learning and Teaching (ILT).
- On-line dialogue between practitioners in other institutions would be useful.
- Good practice examples should be generic and transferable.
- Developers, designers, contractors, and users all need to have a basic understanding of the principles of sustainable development.
- Information on the value of interaction between people and buildings would be useful.
- Communication mechanisms between institutions and the community would also be beneficial.
- Although wide consultation is not always possible, due to time/financial constraints, involving local representatives in decisions might overcome their existing poor perceptions of universities (e.g. noise, traffic, security, litter, light pollution).

- Advice is required on how conservation and planning constraints can be overcome.
- The funding councils should monitor the sustainability of development in institutions.
- Existing structures should be used to encourage sustainable development (e.g. ILT, Quality Assurance Agency, annual departmental reporting, staff appraisals).

A stakeholder agreement

The two workshops disagreed about the value of a stakeholder agreement. Cambridge participants favoured one and recommended:

- A progression - from a voluntary agreement amongst HEPS partners, through a HEFCE-led funding-based mechanism, to a final mandatory requirement - should be used to motivate institutions to engage with sustainable development.
- Coherence across the sector would accelerate the rate of improvement and institutions would be able to learn from each other's successes and failures, with competition stimulating further progress.
- Policies on sustainable construction should be included in all existing evaluation mechanisms (e.g. Research Assessment Exercise, Quality Assurance Assessment, Financial Performance targets)
- A clear framework for sustainability would help communicate and manage expectations about project delivery and needs to be in place from the beginning of the procurement process.
- Key stakeholders are: clients, users, construction industry, the design chain, service providers (electricity/water), regulators, and the local and regional communities.
- Stakeholders should be divided into a) those an institution *has* to deal with (regulatory bodies, government, etc) and b) those that it *wants* to deal with (students, staff, service providers, and local communities).
- A two tier approach is needed to target a) financial decision-making bodies and b) everyone else involved in the development (student and staff unions, local authorities, local environmental bodies, residential groups, cleaners and other users)
- The framework should cover environmental, social and economic issues with specific targets agreed.
- Performance indicators need to be progressive, allowing for a ladder of achievement.
- There should be flexibility in any consensus mechanisms to allow for the scope of, and discretion, on individual projects.
- There need to be mechanisms for a) encompassing institutional aspirations, b) resolving conflicts, c) promoting good practice, and d) highlighting the social, environmental and economic benefits of involving large institutions in regenerating their local environment and region.

Aberdeen participants were sceptical about the value of an agreement which they saw as too bureaucratic and legalistic. Instead they recommended:

- A generic charter or statement of intent, offering a broad template for a strategy on sustainable construction, that each institution can adapt to its own circumstances would be useful
- This charter should be supplemented by a practical guide for implementing the strategy.
- A common language and indicators should underpin both of these documents.
- Both should avoid legalistic terminology and keep the message clear and simple.
- The indicators should help to broaden the scope of how to measure the performance of universities.
- Internal consultation, including students, should be the first step towards any form of Charter.
- Students, through concern about energy costs, should be used as a driving force for change – for instance, landlords should only be approved if they supply information about the energy rating of their accommodation.
- The post of sustainability champion needs to be embedded into the management system of universities to ensure it lasts.
- The practical guide should demonstrate the tangible benefits of improved community relations and funding opportunities.

Findings

From the plenary discussions at the two workshops, three separate options for moving forward were identified:

1. A **formal** *stakeholder agreement* between funding agencies, regulators and Universities UK covering an agreed set of principles and objectives for implementing sustainable construction
2. An **informal** shared *statement of intent* between HEPS partners (and perhaps other stakeholders) covering the same issues, and
3. A **voluntary generic charter**, covering these issues that could be adopted and tailored by individual HEIs to suit their own circumstances.

Next steps

These three options were taken forward to the second round of workshops for further discussion and development. At these second stage workshops, HEPS partners were invited to bring other stakeholders (e.g. from funding agencies, regulators, local planning authorities, etc.). HEPS partners were invited to bring whichever stakeholders they saw as most relevant to this next stage in the consultation process.

Workshops 3 & 4

Two further, second round, workshops were held in Regents College, London, on 16/11/01 and in Edinburgh University on 23/11/01. This report only documents the exercises undertaken at the workshops using the Stakeholders' Workbook, see Appendix 5. For a record of the workshop presentations, see the separate notes produced by Forum for the Future. HEPS partners had been invited to bring other significant stakeholders to these workshops with them. None chose to do so. Nor was there a large overlap between those who attended the first round of workshops and those who attended the second. As a result, the baton from the first two workshops – containing the options identified below in Table 3 - was passed on into the hands of participants who were not up and running.

Support for a stakeholder agreement

In the first half of the workshops, participants were exposed to the three options for an 'agreement' for improving sustainable construction in higher education, generated from the previous workshops. Working in groups, they were asked through breakout and plenary sessions:

1. what form they thought any 'agreement' for improving sustainable construction across the higher education sector should take?
2. what they thought it should cover?

To aid their decision-making, the participants were offered the set of options, contents and coverage distilled from the previous round of workshops to draw on, see Table 3

Table 3

Proposed form, contents and coverage of 'agreement'

Form

1. A **formal stakeholder agreement** between funding agencies, regulators and Universities UK covering an agreed set of principles and objectives for implementing sustainable construction
2. An **informal** shared *statement of intent* between HEPS partners (and perhaps other stakeholders) covering the same issues, and
3. A **voluntary generic charter**, covering these issues that could be adopted and tailored by individual HEIs to suit their own circumstances.

Content

- Simple and aspirational statement of purpose
- Commitment to open-ended continuous improvement
- Scoping statement
- Objectives and/or targets
- Performance indicators
- Review and reporting process
- Dispute resolution
- Definition of terms

Coverage

- Social, environmental and economic impacts
- Regional development and local community impacts
- Health and welfare impacts
- 'Sustainable' education
- Primary and secondary signatories

Ambivalence about a ‘stakeholder agreement’

No overall consensus emerged either within or between workshops:

- at the level of principle about what form an ‘agreement’ should take, or
- at the level of detail, about what its contents or coverage should be.

Group votes on the form that the ‘agreement’ should take were fairly evenly split three ways between

1. voluntary
2. formal, or
3. a transition from the former to the latter.

Votes on contents ranged from generic and non-prescriptive to an all-embracing from inception to occupancy. Votes on coverage ran from KISS – Keep It Simple Stupid, through guidance on management systems and reporting, to the all inclusive HEPS bottom line – social, economic, environmental/curriculum, campus, community.

London Workshop

Group 1	<p><i>Form</i></p> <ul style="list-style-type: none"> • A voluntary agreement linked to a best practice guide would be ideal <p><i>Content</i></p> <ul style="list-style-type: none"> • Agreement needs to be embedded in the organisation and should contain all elements proposed except dispute resolution and definitions of terms <p><i>Coverage</i></p> <ul style="list-style-type: none"> • KISS – Keep it Simple Stupid • A shopping list for dipping into • The HEDQF Post Occupancy Review document to be used as a precedent for the guide, although with a more practical and flexible focus • Guidance to cover a wide range of issues from energy management to maintenance
Group 2	<p><i>Form</i></p> <ul style="list-style-type: none"> • A formal agreement is needed to drive change • The agreement should be a staggered process, initially with a simple mission statement agreed by the key relevant bodies and gradually becoming more detailed • Formal ‘agreement’ involving UUK would require sector targets <p><i>Content</i></p> <ul style="list-style-type: none"> • All elements from an initial brief to the post occupancy evaluation <p><i>Coverage</i></p> <ul style="list-style-type: none"> • Targets linked to funding (e.g. emissions reduction) • HEFCE need to be able to measure progress uniformly as is done with the Investment Appraisal process
Group 3	<p><i>Form</i></p> <ul style="list-style-type: none"> • Divided between preference for a formal agreement backed by HEFCE and a voluntary agreement • A step by step approach moving from an informal to formal agreement would be more appropriate <p><i>Content</i></p> <ul style="list-style-type: none"> • A broad framework needed, with vision is the key • An open-ended agreement to improve linked to indicators and targets • Dispute resolution advice <p><i>Coverage</i></p> <ul style="list-style-type: none"> • Guidance on management systems, monitoring and reporting • Internal communication and involvement of the whole institution’s community

Edinburgh Workshop

Group 1	<p><i>Form</i></p> <ul style="list-style-type: none">• A formal agreement between the funding councils and institutions• Formal statement from funding councils with obligations for institutions to produce a sustainability policy, allowing for each institution to implement this according to their individual circumstances• Mechanisms to avoid institutions just playing lip service to this are needed <p><i>Content</i></p> <ul style="list-style-type: none">• There should be two levels of agreement• Agreement between funding councils and the institution (although the funding councils do not have resources to monitor performance)• Agreement between the institution and its stakeholders (monitoring should be an internal process) <p><i>Coverage</i></p> <ul style="list-style-type: none">• Health and welfare should be excluded as this is already covered by legislation• Ensure reference is made in the mission statement but no specific monitoring process• Leave out signatories and aim towards broad mission statements
Group 2	<p><i>Form</i></p> <ul style="list-style-type: none">• A formal requirement on the sector (with funding implications) pre-empted by ministerial instruction• A statement of key principles and underlying objectives that can be updated as regulation evolves• Targets should contain core mandatory public sector targets for key issues, and HEI specific targets• Flexibility in delivery to reflect where the institution is at in the cycle <p><i>Content</i></p> <ul style="list-style-type: none">• A statement of purpose and principles• A commitment to continuous improvement• Language needs to be meaningful to policy makers and operational staff• Recognition of resource implications <p><i>Coverage</i></p> <ul style="list-style-type: none">• Social, environmental, economic impacts and focus on the links between them• Links with local community• Use the implications of health on productivity as a lever for getting people involved in energy and waste
Group 3	<p><i>Form</i></p> <ul style="list-style-type: none">• A progression from a voluntary agreement, working towards a formal agreement with the funding agencies (in time the funding councils will be looking for sustainability criteria in funding)• The idea of progression should be clearly stated at the outset• Opportunities to show leadership should be harnessed• The funding councils were the only external body mentioned <p><i>Content</i></p> <ul style="list-style-type: none">• This should be generic allowing for local control over the detail• An overview within which individual institutions can slot in their requirements <p><i>Coverage</i></p> <ul style="list-style-type: none">• The HEPS bottom line – social, economic, environmental/curriculum, campus, community - says it all• Communication is a key issue (internally and externally)• Academics and services should sign up• Health aspects need as much attention as safety

Working towards an incrementalist consensus

Despite the disagreement recorded above, it is possible – drawing on discussions in the follow-up plenary sessions - to plot an emergent consensus about how a ‘framework for change’ on sustainable construction in the higher education sector could be taken forward that would be likely to satisfy most of those participating in the workshops. This involves a progression from an initial voluntary agreement towards a subsequent formal agreement with the funding agencies.

Emergent incremental approach

- Movement from voluntary to formally required action on sustainable construction over (an as yet unspecified period of) time
- Publication of an initial formal statement intent about implementation of sustainable construction issued by the HEFCs to drive change
- Adoption of a simple mission statement on sustainable construction agreed between the HEFCs and other relevant key bodies
- Adoption of an open-ended voluntary agreement on sustainable construction between the HEFCs and UUK on continuous performance improvement linked to indicators and targets
- Development of sector-specific objectives and targets by UUK and the HEFCs
- Adoption of voluntary and non-prescriptive agreement on sustainable construction between the HEFCs and individual institutions, potentially leading to a later, more formal agreement
- Adoption of voluntary and non-prescriptive agreement on sustainable construction between individual institutions and their stakeholders, potentially leading to a later, more formal agreement
- Monitoring of performance to start initially as an internal process, but leading later to a benchmarking club embracing those will to share results
- Recognition by the HEFCs, UUK and individual institutions of the resource implications of the implementation of sustainable construction in higher education
- Eventual application by the HEFCs of sustainable construction criteria in their funding regimes.

There would, however, remain dissenting voices to adoption of this evolutionary approach. These would come particularly from those who warned, at the Edinburgh workshop, against the inadequacies of such incrementalism, pointing instead to the urgency of sustainable development as a social imperative – posing it, in the words of Tony Blair, as ‘the greatest challenge facing society in the 21st century’.

Best practice guidance

In the second half of the workshops, participants were asked what they thought ‘best practice’ guidelines on sustainable construction should contain. To aid their decision-making, the participants were again offered options distilled from the previous round of workshops to draw on, see Table 4.

Table 4

Proposed contents of ‘best practice’ guidance

- ‘best practice’ examples and case studies
- cost data/cost benefit analyses
- post-occupancy evaluation
- working with students
- working with academic/support staff
- working with the local community
- working with other stakeholders (e.g. funders, developers, planners, architects)
- (signposting to) government policy
- writing an Estates Strategy
- decision-making processes for individual components/materials
- national and local guidance contacts
- (signposting to) organisational development/change management approaches
- a standard ‘best practice’ template
- (signposting to) on-line communications facilities

Preference for process over technical guidance

As with the ‘stakeholder agreement’, no overall consensus emerged either within or between workshops about what ‘best practice’ guidance should contain. Some groups adopted an *exclusive* position – there should be no replication in the guidance of material to be found, or actions to be taken, elsewhere. This meant, for example, excluding guidance on the Estates Strategy on the basis that it should already cover sustainability. However other groups espoused an *inclusive* position, wanting, for example, the guidance document to step down sequentially through strategic planning, estate strategies, master planning and briefing to case studies and evaluation criteria. As a result, few of the content categories proposed in the first round of workshops were mentioned by many of the groups at the second round. For instance, a ‘best practice’ template, although the most frequently cited category at the second round of workshops – was only mentioned by three out of the five groups involved.

London Workshop		
Group 1	<p><i>Items included</i></p> <ul style="list-style-type: none"> • Good practice examples • Tools to undertake a cost benefit analysis • Stakeholders checklist • Good practice template with a user friendly toolkit • Success criteria and guidance on how to measure 	<p><i>Items excluded</i></p> <ul style="list-style-type: none"> • Post occupancy evaluation guidance (already exists) • Advice on writing an estates strategy (should already include sustainability elements)
Group 2	<p><i>Items included</i></p> <ul style="list-style-type: none"> • Guidance on the pathway from Strategic Plan to Estates Strategy to Master Plan to Best Practice Guidance • Guidance on the brief and consultation process (wide to begin with, then more focused) • Template for standard good practice • Case studies, including examples from other sectors, evaluation criteria (justifying their inclusion and guidance on capturing their educational value) • Stakeholders checklist (suppliers and consultants to be included) 	
Edinburgh Workshop		
Group 1	<p><i>Items included</i></p> <ul style="list-style-type: none"> • Support in areas of limited knowledge and experience (through gap analysis) • Mind map of inter relationships, sequencing and correlation • Guidance on prioritising (to minimise the risk of institutions cherry picking) • Different sections for estates, academics, strategic planners 	
Group 2	<p><i>Items included</i></p> <ul style="list-style-type: none"> • Sustainability as systems issue requiring a holistic (difficult to be systemic or strategic about estates planning due to the bidding process)s • Guidance integrated into strategic planning processes • Complementary, clear and self explanatory action orientated guidelines • Signpost to existing technical guidance 	

Group 3	<p><i>Items included</i></p> <ul style="list-style-type: none"> • High level documentation for senior management on details of ‘agreement’ • Customer Focus, guidance on working with key stakeholders (e.g. academics, support staff, students) • Estates Strategy guidance • Standard good practice templates (e.g. non-adversarial procurement and partnering) 	<p><i>Items excluded</i></p> <ul style="list-style-type: none"> • Remainder of contents should go into practical ‘code of practice’
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In the plenary discussions that followed at each workshop, this *exclusive v inclusive* divide was not resolved. Instead, at the Edinburgh workshop, further negotiations and consultation were called for. These were presented as necessary to ensure that any strategic level documents produced are correctly targeted and that any detailed ‘best practice’ documents prepared capture the expertise that already exists within the higher education sector.

Another highly significant characteristic of the contents chosen by the workshop participants show no ambiguity, however. Typically, they did not request technical information. Instead they primarily called for the guidance document to contain process-based information about how to implement ‘best practice’.

Requested process-based guidance

- integrating sustainability into strategic planning processes
- treating it holistically, systematically
- sequencing and correlating the inter-relationships of issues involved
- prioritising amongst competing issues
- working with the key stakeholders concerned
- practising non-adversarial procurement and partnering
- measuring successful performance
- justifying evaluation criteria
- undertaking cost benefit analyses, and
- capturing educational added value.

As the length of this list indicates, this preference for process-based material, over technical content, was extremely marked. Relevant supporting, non-sector specific, guidance from *Rethinking Construction* and the *Construction Best Practice Programme* should be clearly signposted. Technical material should be reserved for a separate but related *Code of Practice*.

Proposed way forward

The consultation process set up by the Forum for the Future with its HEPS partners has identified a clear statement of needs and a preferred route forward. The consultation conducted to date has indicated that the HEPS partners who took part in the workshops believe:

- additional actions, structures and mechanisms are required if sustainable construction is to be effectively introduced and implemented in the UK's higher education sector, because
- the drivers necessary to effectively promote sustainable construction are absent or marginalised in UK universities, their funding agencies and regulators, and
- the required champions, mandated change agents, and incentives have yet to be put in place.

HEPS participants have called for a clear 'framework for change' for implementing sustainable construction to be introduced that will engage with, and assign particular roles to, a wide range of stakeholders to achieve a specified set of outcomes.

Proposed 'Framework for change'

Roles and outcomes

1. The HEFCs should issue an explicit *statement of intent* about the implementation of sustainable construction in the UK higher education sector.
2. The HEFCs and other relevant bodies (UUK, AUDE, etc.) should issue a joint *mission statement* about the continuous improvement of sustainable construction in the sector, backed (eventually) by sector-specific *targets* and *indicators*.
3. The HEFCs and the HEIs (whether individually or jointly) should develop and adopt (initially voluntary, subsequently formal) *agreements* about the delivery of sustainable construction in the UK higher education sector.
4. The HEIs should develop and adopt (initially voluntary, subsequently formal) *agreements* with their own internal and external stakeholders about the delivery of sustainable construction in their own institutions.
5. An (initially voluntary, subsequently formal) *Benchmarking Club* should be set up by the AUDE (in collaboration with other relevant parties) first to establish a relevant set of sector-based *indicators* and then to share annually reviewed performance results, eventually against appropriate *targets*.
6. The HEFCs, UUK and HEIs should recognise the *resource implications* of implementing the Framework for Change for achieving sustainable construction in the UK higher education sector.
7. Eventually, the HEFCs (and other appropriate funding bodies) should apply sustainable construction *criteria* (perhaps as 'special factors' or other forms of incentive) in their relevant *funding regimes* and *initiatives*.
8. Appropriate sector-specific material in the form of '*best practice*' *guidance* and a *code of practice* should be produced and introduced (through training where appropriate) to ensure that the changes sought to sustainable products, services and practices are actually achieved.

For this Framework to be implemented effectively, explicit acceptance of ‘ownership’ of sustainable construction in the sector will need to be established. In turn, this will require a further, clear and accountable, consultation process to achieve ‘buy-in’ from the wide range of stakeholders involved.

Proposed further consultation process

4. This consultation process should be *owned* and *driven* forward by the *key players* involved (the HEFCs, UUK, AUDE, HEIs, and other relevant parties).
5. In the first instance, Forum for the Future should *facilitate further consultation* between these parties by presenting them with the findings of its work with HEPS partners to date - the proposed *Framework for Change*.
6. In addition, the Forum for the Future and its HEPS partners should continue to *provide assistance* to the key players to help them bring *implementation* of the Framework for Change to a successful conclusion.