

**HEFCE Strategic Review of Sustainable Development in
Higher Education in England**

Interim Report

THE POLICY STUDIES INSTITUTE (PSI)

PA CONSULTING GROUP (PA)

and the

**CENTRE FOR RESEARCH IN EDUCATION AND THE ENVIRONMENT
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1. INTRODUCTION

This is the Interim Report of the HEFCE Strategic Review of Sustainable Development in Higher Education being carried out by the Policy Studies Institute (PSI), PA Consulting Group (PA) and the Centre for Research in Education and the Environment (CREE), University Of Bath.

The strategic review has the following aims:

- Establish a baseline of sustainable development in the sector, against which HEFCE can measure progress and publicise what the sector is already doing (A1)
- Learn from institutions' experience about the conditions for embedding sustainable development, including barriers and drivers (A2)
- Identify key issues which present opportunities and challenges for the sector and investigate possible policy responses (A3)
- Evaluate HEFCE's approach and refine HEFCE's priorities (A4)
- Raise the profile of sustainable development in the sector (A5).

This Interim Report focuses exclusively on A1, which comprises the essential research of the project. Project output in relation to aims A2-A5 will draw on the findings of the research when this has been completed, although it may be noted that an action that will certainly have helped A5 has already been carried out, viz. the contacting of the Heads of Institutions (Vice Chancellors, or equivalents) of all English higher education institutions (HEIs) with the information that the review was being carried out, and subsequent approaches to the named contacts in their HEIs that the Heads provided.

2. GENERAL APPROACH TO THE REVIEW

The nature of Higher Education Institutions

A review of sustainable development in higher education must proceed from an understanding of the core purpose and functions of HEIs. In the context of this Review, the core purposes of HEIs are taken to be:

- To *generate* advanced knowledge and understanding of the world and of the role of humans and the impacts and implications of human activities within it. HEIs pursue this purpose through
 - *Research*, and
 - *Teaching*

both of which should lead to in-depth *learning*.

- To *certify* advanced knowledge, through decisions about and assessments of
 - *What* is researched, taught and learned (decisions about curricula and research programmes); and
 - *How well* it is researched, taught and learned (assessment of teaching and research).

- In addition, HEIs are
 - Major employers, procurers of goods and services, users/consumers of natural resources and owners of land and buildings, and important local and community institutions.

2.1.1. Organisation of the report

This is the rationale for organising the research carried out for the Review, and this Interim Report, by consideration of HEIs' activities in the fields of Research (Section 3), Teaching (Section 4), and Corporate and Estates Management (Section 5).

A final section (Section 6) draws together the work so far through some very preliminary insights, and outlines how the research will be taken forward over the summer.

2.2. HEIs and sustainable development

In the Tender for this Review, it was proposed to adopt the definition of sustainable development (SD) used by the UK Government in its 2005 SD strategy, namely that the goal of SD is “*to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations*”¹. From this definition it is clear that HEIs potentially have a very important role to play in the achievement of SD, both in terms of their core purposes of knowledge generation and certification (in seeking *inter alia* to answer questions like ‘how can basic needs be satisfied and quality of life improved?’ and ‘how can natural resources and the environment contribute to this without compromising the future?’) and as major organisations themselves.

As our Tender noted, SD is widely recognised to have economic, social and environmental dimensions. Measures to promote SD normally seek to achieve progress across all the dimensions simultaneously, and to minimise the trade-offs between them, in recognition that the benefits arising across the different dimensions are not completely interchangeable. Historically, the term SD was adopted because of a perception that processes of economic and social development were having serious environmental impacts which threatened to undermine the viability of those processes (i.e. they were environmentally unsustainable), and a focus on SD was intended to result in greater attention being paid to the environmental dimension and impacts of development. It is therefore appropriate, in any work on SD, to ensure that consideration of the environmental dimension is at its heart, while giving due weight to the other two dimensions, and this is the approach that we are adopting in this Review.

Our Tender also noted that a conceptualisation of SD, which has been useful in both understanding the idea and in evaluating the extent to which it is being achieved, is in terms of maintenance of the asset base (the ‘capital stock’) of society, where the capital stock has manufactured, environmental, human and social components (sometimes called ‘the four capitals’). In this formulation, sustainable development becomes a process of increasing all four components of the capital stock, and therefore increasing the benefits which flow from it and contribute to quality of life.

¹ UK Government (2005) *Securing the Future: The UK Government Sustainable Development Strategy*. London: HMSO.

HEIs have substantial manufactured capital (e.g. buildings) which needs to be appropriately maintained and replaced; they use and have major impacts on environmental capital (e.g. through their use of energy and water, and their emissions of carbon dioxide). As noted above, one of their core purposes, in relation to their students, their staff and their other employees, is the development of human capital; and the social capital of their staff-student relationships, and links into the wider community, is fundamental to their effective operation and sharing their knowledge with those who can benefit from it. We considered in our Tender, therefore, that the four-capitals approach to assessing contributions to sustainable development provides a rigorous methodology for assessing and integrating all the elements of HEIs' corporate contribution to sustainable development, and we will use this approach to help us draw conclusions about our work.

Our aim (A1) is to seek to establish a baseline of HEIs' activity across the three broad areas of research, teaching, and estates and procurement. This baseline will seek to give answers to the following questions:

- To what extent are HEIs aware of, and do they care about, the emerging sustainable development agenda and their own combined environmental, economic and social impacts? This is a question about *awareness* and *values* which is returned to briefly below.
- To what extent do they strive in their work to consider SD issues in an integrated way, with an appreciation of their interaction and inter-connection, rather than their separateness, which is central to the SD concept?
- To what extent do they both generate advanced knowledge (conceptual, theoretical and practical) about the interactions between environmental, economic and social dimensions of humans and human activities in the world, *and* seek to give that knowledge practical effect in their own management and development of the human, social, manufactured and natural capital over which they have influence or control?

Our baseline research will give answers to these questions to which all English HEIs have been given a chance to contribute (because all HEIs were written to about the Review and asked to make a contribution if they wished). There is a further set of questions about the extent to which HEIs *should* pay attention in their work to the SD agenda. It is indisputable that social values are undergoing a profound shift towards a new perception of the importance of SD. HEIs are substantial recipients of public funds and as such might be expected to reflect this shift at least to some extent in their work. Our work on the baseline of HEIs and SD, the early implementation of which is described in the sections that follow, will show how far such an expectation is currently being realised. In the Final Report we will reflect, in the light of our results, on just how responsive HEIs are being to the new public policy priority of SD, how they might be encouraged to be more responsive if this seems desirable, and how such encouragement might be reconciled with traditional and important values of academic independence.

2.3. Initial contact with Institutions

As agreed with HEFCE and the Review Steering Group, initial contact with HEIs was made at the highest level, via a letter to Heads of Institutions from the Steering Group Chair, Dr. Geoffrey Copland. The letter introduced the Review and stressed that there was no expectation - in the commissioning of the Review - 'that institutions have been,

or should have been, active in respect of sustainable development issues'. It was agreed that all HEIs should be given an opportunity to have their activities included in the Review and, as such, letters were sent to the 132 universities and higher education colleges in England for which HEFCE is responsible.

The initial response to the letter to Heads of Institutions was excellent. 93 HEIs returned a completed 'contacts form', providing contact details of individuals with an overall responsibility for sustainable development and, if applicable, details of individuals responsible for sustainable development in the context of teaching, research, and estates and procurement.

At the request of HEFCE, no systematic follow up was made in respect of HEIs that did not provide contact details. However, given that a variety of methodological approaches are being adopted in the Review, it is unlikely that any significant institutional activity will be missed as a result of this.

Preliminary analysis indicates no obvious differences between those HEIs that provided contact details and those that did not. The various ways in which this information has been used by the different fields of research, teaching, and estates management and procurement, are detailed below.

3. TOWARDS A BASELINE OF SD RESEARCH IN ENGLISH HEIs

3.1. Introduction

Research is one of the fundamental activities undertaken by HEIs in their role as knowledge generators. Through the generation of evidence across the whole range of issues in which they conduct research, their research also has an important role to play in the development of public policy. Although the process of research contributes almost by definition to the creation of social and human capital, the knowledge generated by HEIs is vital for the maintenance and development of manufactured and environmental capital as well. In seeking to integrate insights and efforts from different disciplines, SD research has a distinctive contribution to make to knowledge generation.

In recognition of the interdisciplinary nature of sustainable development research, researchers within HEIs are increasingly working both across departments and across institutions in multidisciplinary consortia. This development is supported by a growing number of, and increased funding for, cross-Research Council initiatives. For example, the newly-proposed Living With Environmental Change (LWEC) Initiative, led by the Natural Environment Research Council (NERC), involves over ten different partners (including Research Councils, Government Departments, and the devolved administrations) and, over its proposed 10-year duration, is likely to involve a significant number of HEIs.

In this context, an assessment of SD research within HEIs is complex. SD research centres and groups frequently involve researchers from departments, schools and faculties, and their involvement may be fluid such that their composition changes over time, making the precise collection of information about SD research activity difficult. Nevertheless, significant progress has already been made towards the development of all four elements of the baseline of SD research proposed for the Strategic Review, namely:

1. A list of the major HEI institutions and centres which undertake SD research.
2. Research funding through, and research staff and students engaged in, these institutions for such research.
3. Submissions of SD research to Research Assessment Exercise (RAE) 2001, and the Panels through which it was submitted.
4. Citations of SD research from English HEIs in the major journals that publish such research.

3.2. Progress to date

After consultation with the UK's Research Councils, it was agreed that for the purpose of the Review 'sustainable development research' would be defined as:

'...research which contains a significant element of work related to either or both of the natural environment and natural resources, PLUS a significant element of work related to either or both of economic or social issues'.

In general, the Councils felt that – providing the term 'natural environment' was used loosely enough to include managed landscapes – the definition adequately captured both the environmental and the social/economic dimensions of SD research.

To inform the development of the baseline, a questionnaire was drafted to gauge the level of HEI engagement with SD research. The questionnaire, which was devised with input from HEFCE and HEFCE's RAE manager, requests information on any centres or departments within HEIs in which SD research takes place. The questionnaire's key questions are as follows:

1. Centre / Institute Name
2. Department
3. Contact name (if appropriate)
4. No. of permanent / contract SD research staff
5. No of PhD students
6. No of discrete research projects (2005/06)
7. Approximate total level of external SD research funding *(total for all projects running during the academic year 2005/2006)*
8. Main source(s) of external SD research funding *(e.g. EU, Research Councils, Gov.)*
9. SD research areas
10. 2001 RAE Panel(s) through which SD research was submitted
11. Main journals for publishing SD research *(max. 5)*

HEIs were requested to provide information about the three centres and/or departments in which the most research is taking place, and to name any additional SD research groups or centres. Responses to questions 1 – 9 will provide the majority of the data necessary to generate components one and two of the SD research baseline (list of the major HEI institutions and centres which undertake SD research; research funding through, and research staff and students engaged in, these institutions for such research).

Data generated by questions 9-11 will be used, together with information from other sources, to inform the final two components of the baseline (submissions of SD research to RAE 2001, and the Panels through which it was submitted; citations of SD research from English HEIs in the major journals that publish such research).

Progress towards generating a baseline with these four components is described below.

3.3. Questionnaire responses

Questionnaires to HEIs were sent out from mid-February onwards. In order to keep the Review as inclusive as possible, questionnaires continue to be sent to those HEIs which have not yet responded but for which there is evidence of SD research activity. The contacting of HEIs was coordinated closely between the Teaching and Research strands of the Review.

Questionnaires about research activity were initially sent to individuals whose names were provided by the HEI as a contact for research, as a result of the initial mailing. These questionnaires and requests for teaching information were sent together to individuals named as an overall contact for SD, and to individuals named as joint contacts for teaching and research. As noted above, efforts have also been made to include HEIs that did not provide contact details in response to the initial mailing but where it is known that SD research is taking place. This has been done by contacting all of the Research Centres listed in the Guide to Research Centres and Evidence Providers that has been compiled by the Sustainable Development Research Network (SDRN).

Following an email reminder and the receiving of a second wave of completed questionnaires, 49 completed questionnaires (or alternative responses) have been received to date. In addition, 13 research centres have also returned completed forms, in response to contact that was made via the SDRN Guide to Research Centres. In total, therefore, 62 institutions are currently represented in the data held on SD research.

Only two institutions have found the questionnaire inappropriate to their research and chose instead to provide a written summary of their activities. Very few institutions sought further clarification regarding the definition of SD research that has been used. Several key institutions where it is known that SD research is taking place are still not represented in the responses received and efforts will continue to incorporate these HEIs in the baseline of the Review.

To ensure that as much SD research as possible is captured, the search terms developed by the CREE project team researching SD Teaching (see section 4.3 of this report) will be modified slightly and used to check HEI websites for mentions of relevant research activity.

In addition, once a preliminary list of HEI departments and centres undertaking SD research has been drawn up, further consultation will take place with the Research Councils responsible for funding the majority of SD research (the Engineering and Physical Sciences Research Council (EPSRC), the Economic and Social Research Council (ESRC) and the Natural Environment Research Council (NERC)), who will be asked to suggest any omissions. Full analysis of the data collected will not begin until the research team is satisfied that all major SD research activity within HEIs has been included. It is envisaged that this should be accomplished by mid-June.

3.4. Emerging findings and next steps

Through the questionnaire responses received so far and following a useful meeting with HEFCE's RAE manager, it has already been possible to begin work on the development of the third and fourth components of the SD research baseline.

For example, it is becoming clear which are the main journals that HEIs aim to publish SD research in, although the list is extensive. Once we are satisfied with our level of data collection, this information will inform the following next steps:

- Identify **all** of the journals in which HEIs aim to publish SD research, based on those provided in response to question 11 of the questionnaire and following additional consultation with the Chairs of relevant RAE Panels (see below)
- Carry out a search of the full RAE 2001 database of submissions (to which the team has been given access via CD-ROM) to find all of the SD research submissions to these journals.
- There is then the task of identifying which of these submissions fulfil the Review's criterion of 'SD research'. Ideally, this would involve reviewing all the abstracts of the submitted articles, but this would be too time-consuming to be carried out in this Review. Having generated the database of submissions, the possibility remains of carrying this out in the future.
- For the moment, SD research submissions to the identified main SD journals will be identified using the search terms already developed by CREE, after further testing and revision if necessary.

Together, this information will form the third component of a baseline of SD research:

3. Submissions of SD research to RAE 2001, and the Panels through which it was submitted.

An additional next step in respect of the journals which have the greatest element of SD research will be to:

- Undertake an electronic search of these journals, to compose a citation record of SD research conducted in English HEIs.

Again, it would be ideal to be able to review all the abstracts in the citation record, in order to identify those that fulfilled the Review's criterion of SD research, but again this would be too time consuming for this Review, but could be carried out thereafter if desired. For the present it is envisaged that SD research articles will be identified by searching each journal's keyword search facility with the trialled search terms, though this is still subject to further development. The output from this activity will form the basis of the fourth component of the SD research baseline:

4. Citations of SD research from English HEIs in the major journals that publish such research.

Finally, it is becoming increasingly clear which Research Panels the majority of SD research was submitted to during the 2001 RAE: Geography; Town and Country Planning; Built Environment; and Civil Engineering. HEFCE's RAE manager suggested the team should analyse the submission criteria and the textual commentaries of Panels

relevant to SD research. RAE submissions aim to meet the criteria of the Panel into which they are submitted, so it will be important to judge the extent to which Panel criteria explicitly or implicitly accommodate SD research. A comparative study of the criteria for different Panels may also raise questions for discussion with 2001 Panel Chairs about the ways in which different Panels treat SD research. Contact details of Chairs have been collected and consultation will begin soon, subject to the collection of further data suggesting additional Panels.

Interviews will also be carried out with the EPSRC, the ESRC and NERC, and four major HEI institutions that carry out SD research, in order to learn from their experience, and identify barriers, drivers, opportunities and challenges in relation to SD research (Aims A2 and A3 of the Strategic Review). This, and the generation of the baseline, will lead to recommendations for HEFCE's approach to this area (Aim A4). Alongside work which has already been undertaken, these final steps will help to raise the profile of SD research in the sector (Aim A5).

4. TOWARDS A BASELINE OF SD TEACHING IN ENGLISH HEIs

4.1. Introduction

Work towards establishing a baseline of SD teaching in English HEIs has focused centrally on the formal curriculum. There is, of course, a significant tacit or 'hidden' curriculum in any educational institution, and where evidence of this has emerged in the course of this project it has not been ignored. Nevertheless, to conduct a comprehensive review of such tacit curricula as they bear on SD would be a vast and methodologically complex task quite beyond the scope of the present project. It may be, however, that enough information is emerging to suggest, in a preliminary way, whether such tacit curricula are significant.

A focus on the formal curriculum entails a review of courses. This has begun broadly in line with the timetable of the original tender. Some minor adjustments to the sequence of enquiries have been made in response to administrative factors and to operational exigencies. Progress so far is summarised in what follows.

Courses in HEIs are being examined in the light of a definition of SD agreed for the project (see Section 3.1). A course is included within the data set if it combines an approach to either natural resource management *or* environmental conservation with content of either a social or an economic nature. The definition is usefully flexible, and provides a means of focusing the research within a manageable and reasonably clearly delineated range. However, we should note that it has the effect of excluding from consideration *as* SD some courses which are clearly important or useful *for* SD. Examples might be mainstream undergraduate courses in chemical engineering or business process management. At the same time, it is accepted within the research that other definitions are possible. Hence, where an HEI itself describes a course as being concerned with 'sustainability' or 'sustainable development' this is taken as sufficient justification for its inclusion in the initial data set, regardless of definitional considerations.

This is an interim report. As a result of the activities undertaken data are accumulating but have only received preliminary and opportunistic analytical attention. This is entirely as expected, but means that it is too early to offer any final conclusions.

4.2. Formal request to HEIs for data

As detailed above, all HEIs were approached by means of a formal letter, approved by HEFCE, to the Heads of Institutions. They were asked to provide details of contacts in relation to teaching. All contacts given were then approached using a standard instrument (see Appendix 1) reflecting the project's operational definition of SD, with the caveats noted above.

To date the instrument has produced 60 responses by email (including some multiple responses from single institutions) and five by telephone. These are, as one would expect, very varied. A majority take advantage of the opportunity simply to provide a list of courses. This is potentially very useful, given the possibility of comparing these lists with data collected from other sources (see below). There have been three nil returns. A number of institutions have asked for an indication of when detailed information should be provided by. The end of May has been suggested to them, and they have usually found this acceptable. Two institutions have made contact to say that the task seems, for them, dauntingly large. These have been offered the opportunity to be interviewed either by telephone or face-to-face, and it is envisaged that these interviews will take place in May and June, along with others indicated by the data collected.

Where HEIs have either not provided a contact, or provided a contact which has proved inoperable, or not responded to the data collection instrument, a further request for data will be made in early June (if possible) to a person identified through other means, and on a personal basis.

4.3. Development of search terms

A set of search terms has been developed which:

- Reflect the project's working definition of SD
- Can be used to search resources of different kinds
- Respect the right of HEIs to define SD in their own preferred ways.

These search terms are shown in Box 1. It will be seen that the use of the terms 'sustainability' or 'sustainable development' by an HEI in describing a course is considered sufficient reason for its inclusion. Though the project's definition of SD is a useful guide to data collection, there is no intention to impose it upon institutions.

These search terms were developed through discussion within CREE and piloted against the University of Bath website. In their initial formulation they failed entirely to pick up one of our own flagship courses, and so were amended accordingly following further discussion. They have been used in all the searches described in sections 4, 5 and 6 below.

4.4. Web searches

HEIs use their websites to make public information about their courses. This information may be entirely factual (such as a list of the content of a particular offering), or may reveal something about the institution's underlying values (as when a course is described in terms of the contribution graduates might be expected to make to solving social problems). The task of searching the website of every HEI in England using the

search terms set out in Box 1 is in hand. Progress was slow to begin with, partly because contractual arrangements for CREE's Research Assistant were delayed, and partly because there is an element of trial and error in establishing a procedure for a task such as this. Maximising consistency of process is clearly important, the more so since it is subject to some unavoidable limitations. Each HEI designs its website in its own way, and provides its own internal search engine.

Each website is searched using the internal search engine, commencing with search terms 1 and 2. Hits under search term set 3 are then re-searched under search terms sets 5 and 6. In some cases this is possible electronically, but in others it must be done manually. Search term set 4 is treated in the same way as search term set 3.

1 only	2 only	3 + 5	3 + 6	4 + 5	4 + 6
Term 1:		Sustainability			
Term 2:		Sustainable development			
Term set 3:		conservation + resources			OR
		conservation + natural + resources			OR
		resource + conservation			OR
		resource + efficiency			
Term set 4:		environment + nature			OR
		natural environment			OR
		conservation + environment			OR
		protection + environment			OR
		biodiversity			OR
		landscape			
Term set 5:		justice + social			OR
		justice + society			OR
		social equality			OR
		human rights			OR
		fair trade			OR
		poverty			OR
		exploitation			
Term set 6:		economic efficiency			OR
		economic development			OR
		trade			OR
		income distribution			OR
		wealth distribution			OR
		micro-credit			OR
		social enterprise			OR
		supply chain			OR
		SME			

There are two kinds of ‘hits’. The majority are references to courses, for which the amount of detail provided may be anything from extremely sketchy to very detailed. At present all information about each course is being electronically archived in preparation for its subsequent analysis. This archive is already very substantial and promises to be very revealing, once properly analysed in conjunction with direct feedback to the project from HEIs.

The second kind of hit occurs where reference is made to principles that guide wider processes of course design, content or pedagogy, such as an institution’s Mission. In keeping with the point made about the ‘tacit curriculum’ in the introduction to this section, these are simply noted.

4.5. Database searches

The following databases have been searched using the search terms of Box 1. Further searches are in hand. The data collected is being electronically archived in the fullest possible form.

- AEI Australian Educational Index
- BEI British Educational Index
- COPAC (academic and national library catalogue)
- ERIC Education Resources Information Center
- IBSS International Bibliography of the Social Sciences
- PSYCINFO (psychological abstracts)
- ESRC society today (ESRC database previously known as REGARD)

AEI, BEI and ERIC have yielded a number of academic papers relevant to SD and higher education. COPAC has been a source of information relating to provision at (particularly) South Bank University and the University of Leeds, which can be triangulated against data from other sources. However, what is perhaps most striking about these searches is that the returns from them are relatively few in number.

4.6. Focused searches

The following URLs have been searched using the search terms of Box 1. Further searches are in hand. As with the results of the database searches, the data collected is being electronically archived in the fullest possible form. Some highlights are mentioned below.

- Campus Ecology < <http://www.nwf.org/campusecology/index.cfm>>
Mostly information about USA
- Copernicus Campus < <http://www.copernicus-campus.org/>>
24 universities in the UK signed for this network. Most projects are related to energy efficiency, management, and procurement in HEIs, rather than teaching.
- Education for a Sustainable Future < <http://www.education.ed.ac.uk/esf/>>
- Concord Consortium < <http://www.concord.org/>>
- Environmental Association for Universities and Colleges (EAUC) <<http://www.eauc.org.uk/>>. Mostly concerned with estates management issues.
- Forum for the Future < <http://www.forumforthefuture.org.uk/>>

Details of masters course “Masters in Leadership for Sustainable Development”. Also document: “Sustainable Development in Higher Education: Current Practice and Future Developments”.

- Global Learning, Inc. < <http://www.globallearningnj.org/>>
-mostly info about schools and local communities in the US
- HEPS < http://www.forumforthefuture.org.uk/education/heps_page107.aspx>
Contains the document “Learning and Skills for Sustainable Development: Guidance for Higher Education Institutions”. This includes examples of: MSc in Responsibility and Business Practice at the University of Bath; BSc in Interdisciplinary Technologies and BA in Arts and Humanities and Technology at the University of Birmingham; Undergraduate module in Citizenship at the University of Brighton, and many more.
- International Association of Universities < <http://www.unesco.org/iau/>>
Little information about England.
- IUCN < <http://www.iucn.org> >
Describes a “Green MBA” in Dominican University of California < <http://www.greenmba.com/> >. Little about England.
- Learning for a Sustainable Future < <http://www.lsf-lst.ca/>>
- The Royal Academy of Engineering < <http://www.raeng.org.uk>>
Rich source of data.
- Second Nature < <http://www.secondnature.org/index.htm> >
“Transforming higher education” is an objective.
- Sustainable development research network
< <http://www.sd-research.org.uk/index.php>

4.7. Personal approaches

Personal approaches have been made to 39 individuals known to have particular experience or expertise in relation to SD teaching in HEIs. These have taken the form of a standard letter and attachment. Responses are being received at a steady rate and are being archived electronically. It is likely that some of these individuals will also be interviewed.

4.8. Towards a database

It is envisaged that the baseline for teaching will take the form of a database. Given the diversity of formats and degrees of detail in which data are being collected, and the mixture of qualitative and quantitative information they represent, the design of this database in the most useful form seems likely to present a considerable challenge. Alternative software packages are being considered in a preliminary way, although any firm decision must sensibly wait until the data set is more complete.

4.9. Towards analysis and wider conclusions

As noted in the introduction to this Interim Report, the focus at present in relation to teaching is predominantly Aim A1, that of establishing a baseline. It has always been clear that this baseline, however complete, will be subject to interpretation and amendment. Definitions of SD vary and evolve. The extent of SD teaching within a programme or a module may vary according to the preferences of students, the availability of particular staff, and other factors. The ‘tacit curriculum’ may influence student learning one way or the other. Some teaching in some HEIs may work *against*

SD, by, for example, encouraging unsustainable business or engineering practices. Perhaps most fundamentally, the nature of the baseline depends on whether one sees the proper role of HEIs as *responding* to a wider social concern for SD, or *driving* that concern forward. This distinction is already evident in some of the offerings reviewed.

The focus of analysis of the final data set will be the project definition of SD together with the outline categories suggested in the original tender. These are shown in Box 2.

BOX 2. Review framework and analytic focus.

A review framework will be established. This is likely to focus on, *inter alia*:

- Context / location
- Subject / area
- Teaching context (e.g., unit, project, etc), point, and level (e.g. H / M)
- No. of staff involved
- No. of students involved
- Date established
- Aims
- Key concepts
- Theoretical / conceptual frame for sustainable development assumed
- Theoretical / conceptual frame for learning assumed
- Theoretical / conceptual frame for ESD assumed
- Links with (and informed by) campus / other research
- Links to (and informed by) campus / other environmental management
- Links to HEI aims / mission
- Links with (and informed by) other organisations
- Desired student learning outcomes (e.g. knowledge / understanding / skills / attitudes)
- Pedagogical approaches
- Assessment schema employed
- Evaluation protocols used (and other means to access student views)

These reviews will lead to an analysis which identifies and explicates:

- Noteworthy features
- Links to other examples
- Clear strengths
- Obvious weaknesses
- Transferable techniques / activities embedding considerations of sustainable development within disciplinary practice
- Significant possible core elements
- The identification / development of key skills

The review framework is already in use as a loose template to consider and compare the widely varying forms of data obtained. Interim analysis is underway, and will inform further data collection through methods not yet employed, such as personal interviews. At present, it seems reasonable to expect that the outcomes of the project will provide a

reasonable quantitative indication of the extent of SD teaching in HEIs in England, and a basis of qualitative understanding of what that teaching entails

5. TOWARDS A BASELINE OF SD CORPORATE AND ESTATES MANAGEMENT IN ENGLISH HEIs

5.1. Benchmarking corporate and estates activities

5.1.1. Activities so far

In the first stage of the study, we have accessed EMS data, read the diverse literature and discussed benchmarking with approximately 40 people drawn from the sector or involved with different areas of SD. We have also contacted key associations but only EAUC have responded and this led to PSI presenting at their recent conference. Discussions took place with AUDE about attending their conference but no invitation was issued. Further efforts are being made to discuss the review with key bodies but this will be more meaningful to them once we have outlined possible options for benchmarking consideration.

These activities suggest that most HEIs are increasingly concerned about their energy use and their broader impact on sustainability in relation to their use of resources. This has moved up the agenda quite rapidly in many HEIs. The recent EAUC conference attracted nearly 200 delegates from HEIs in the UK, a considerable increase over last year. However, the extent to which this concern has translated into effective action or a more comprehensive systematic approach within the corporate and estates arena is difficult to gauge. There is no systematic evidence on the number of HEIs which have agreed a policy, let alone a strategy and plan. Many universities are participating in a variety of initiatives aimed at assessing and improving performance. Notably, some 25 institutions are participating in the BITE Corporate Social Responsibility or Environmental Benchmarking programmes and 19 are participating in the Defra supported sustainable procurement initiative. Many others are involved with initiatives addressing specific areas of sustainable development. Only a small number of universities appear to be developing an integrated approach to SD across estates, teaching and research.

5.1.2. Benchmarking requirements

Ideally it might be argued, benchmarking should provide an analysis of and a rationale for priorities, targets or at least objective actions taken, and evidence of and commentary on performance over time and in relation to other bodies/sectors, plus targets or objectives for the future. For a sector, however, what is required is a small number of key indicators that 'capture' performance. A key indicator may be the sum of a number of quantitative measures or a scale or set of hierarchical categories representing performance in that area. Typically, scales or hierarchical categories are based on self-assessment or on an assessment of actions taken/milestones reached. Ideally such assessments should be underpinned by robust evidence that is available for scrutiny

We are currently compiling examples of the various approaches being used in HEIs to tackle SD in different categories of environmental performance. This will enable us to identify and assess what sector benchmarking measures are in use and might be acceptable and fit for purpose.

Given that the key purpose of this benchmarking exercise is to report on sector progress within a public sector framework, the benchmark measures, wherever possible, should map to government reporting specifications or guidelines. At aggregate level, differences in the circumstances or priorities of individual HEIs are not important when comparing the sector with other sectors. What may be important or sensitive is that HE is a growth sector with a government target for greater participation rates whilst other parts of the public sector are expected to shrink. Quantitative measures selected need to provide both totals and appropriate ratios in order to control for sector growth/change over time. The most relevant measure of HEI size is the number of Full Time Equivalent students. Factors such as the amount of research and the composition of courses impact individual HEIs but the core activity driving space requirement is the number of students.

The EMS data provide a focal point for the management of estates costs, inputs and outputs. Data collection and analysis has recently been extended to cover energy emissions. This data illustrates that cost reduction and improved environmental performance are driven primarily by improvements in space utilisation whether through space reduction or through growth in student numbers. Energy and emissions are the main areas where there is a broad consensus about metrics. There are substantial variations in energy performance at institute level. Some of these are accounted for by variations in age/condition of building stock, course composition, size, residential space, priority balancing, etc. but there are also large differences in performance which appear to be associated with management practices.

Benchmarking other areas is more problematic at sector level. Benchmarks need to be valid (accurately measure what they supposed to measure), reliable (consistent over time) and sustainable (relevant over time). They also need to be acceptable to stakeholders and be perceived to be helpful if possible.

5.2. Categories being considered for benchmarking

The broad scope of corporate sustainability issues fall under the headings below. Examples of possible measures:

- Key resources used (energy and water)
- Carbon Emissions
- Construction, refurbishment & maintenance
- Waste and recycling
- Procurement & supply chain
- Ethical Investment
- Biodiversity
- Travel management
- Community engagement

We have included ethical investment in the list because it is perceived to be important, although it is not an issue of relevance to most of the public sector.

We are currently identifying possible benchmarks under each heading and will then assess their strengths and weaknesses in the context of the sector and in relation to the broader public sector agenda. We will also review the main pilot schemes, such as the BITC benchmarking project in HE, and other systematic (e.g. GRI) and accreditation approaches (e.g. ISO14001 and Energy Accreditation) in order to assess what role they

might play in supporting the sector. We then propose to consult with key players about these benchmarks before making our recommendations.

6. PRELIMINARY INSIGHTS AND CONCLUSIONS FROM THE REVIEW

6.1. Introduction

As noted in the introductory chapter our Interim Report focuses on progress to date in establishing a baseline of sustainable development in the sector, against which HEFCE can measure progress and publicise what the sector is already doing (A1).

Working to plan our early research has initially taken a predominately granular approach to establishing a baseline, as reported in the preceding chapters, looking separately and successively at SD research, teaching, and estate management and procurement.

6.2. Initial conclusions

Our work from here on will adopt an appropriately integrated approach to SD but it is already possible to draw some wider, more holistic conclusions.

These relate to:

- **Institutional engagement.** The speed and enthusiasm with which HEIs have responded to our approaches have varied enormously. While some are very supportive of HEFCE's work in this area, others have expressed concern at being asked again about SD related activity². To some extent, these variations are themselves early indications of varying levels of engagement with SD across the sector.
- **Ownership.** Whilst these behaviours may be partly explained by (understandable) survey fatigue, the underlying and more fundamental explanation has to do, we suspect, with the fact that it is often individuals (particularly individual academics or groups thereof) rather than corporate entities who are currently the real owners of the SD agenda. Institutional responses to our survey have, accordingly, inevitably varied depending, in part, on the level of overall ownership and relevant corporate knowledge of the actual responder(s). There is therefore a key set of issues, which will receive a strong focus in our subsequent work and in the Final Report, about locus of ownership within HEIs of the SD agenda.
- **Reporting.** Related to the wider issue of engagement, we have been struck by the multiple differences in HEI reporting of their SD activities. In relation to both teaching and research, some HEIs have been extremely thorough on reporting a range of the SD work which we independently know is in fact being conducted at individual institutions, while other corporate-level responses to our survey have omitted to report, or inadequately reported, what team members

² Question 4 of the Consultation on HEFCE's SD Action Plan asked HEIs about activity related to SD, although the consultation took place in 2005 and was not answered comprehensively by all HEIs.

consider significant work, or failed to report altogether. In extremis, institutions with a strong SD story to tell have even failed to respond to the survey.

- **Commitment.** There is a significant distinction to be made between universities that are responding to SD as a trend in society more widely, and those (likely to be much smaller in number) who see it as part of their role to drive SD forwards.
- **Approach and implementation.** In corporate and estates there appear to be complex interactions between proactive and reactive approaches, implementation planning, and the extent to which managers are empowered and resourced to deliver.
- **Conceptualisation.** We have been pleased at the general acceptance of our definition of SD research and teaching. This suggests that, contrary to some impressions from elsewhere, in the HEI community at least, a shared understanding of what SD means is beginning to coalesce. This is obviously important in relation to the fundamental rationale of the HEFCE project.
- **Breadth/depth of activity.** Another issue which we will explore when the data is available is whether SD activity in institutions tends to be spread across all the areas of our research (research/teaching/estates & procurement), or whether depth in one area can exist with almost complete lack of activity in others, and whether there are 'lead' areas of initial involvement, which then lead to activity in other areas.

6.3. Next Stage of the Review

6.3.1. Introduction

Clearly our immediate priority in each area is to generate the SD baseline for which our data gathering is now advanced.

More generally, going forwards we will focus increasingly on understanding the pre-conditions for success in taking an integrated approach to the three pillars (or four capitals) of SD. Within the temporal and budgetary constraints of the current project we will examine in particular (through the use of case studies) the relevance and interdependency within institutions of:

- Overall mission and vision, and values
- The type of organisational model and key governance arrangements adopted
- The key operating procedures employed
- The practical mechanisms (or the absence thereof) for encouraging change initiatives – or blocking them.

We do not expect to find a single model for success, but rather a range of emergent approaches depending on *how* - and the institutional reasons *why* - the above interdependencies are actually played out in different universities and colleges. The identification of these models will in turn enable us to define levers which may be used to encourage and prioritise SD across the sector.

6.3.2. An illustration

It may be useful to illustrate our proposed approach through reference to the earlier point about ownership of SD. It seems likely – subject to more fine-grained

confirmation through our subsequent work – that in many cases ownership currently resides principally with individuals and groups within institutions.

Our experience elsewhere of managing change initiatives suggests that, particularly in the earlier years, it is indeed individual enthusiasts who (wittingly or not) act as change agents, and potential role models.

Such ways of working are characteristic of the early phases of most change initiatives. They represent an important developmental stage in securing change, but one which carries a high level of risk since effective ownership is inevitably highly portable. Whilst to the sector as a whole the departure of a key change agent to a new institution may represent a relatively zero-sum gain, it potentially represents a significant loss to an institution at a relatively immature point on the change trajectory.

Effective and sustained change of optimal benefit to the sector therefore requires institutional embedding.

There is no uniquely successful formula for achieving this, and much will depend on the prevailing institutional culture, on specific ways of working, and ultimately on the extent to which there is external market intervention.

6.3.3. The role of the case studies

We will, accordingly, try to select our case studies to reflect both a range of different types of SD implementations (with different emphases across the four pillars) and, equally, a number of different organisational models for success.

For many institutions having high-level relatively hands-on sponsorship of SD at a PVC level may prove to be a very important variable. Our experience of managing change suggests, however, that this is likely to prove neither a necessary nor a sufficient condition.

Our work will test this out. We will determine as far as possible what indeed are the different sets of conditions for success, and which sets are appropriate under which circumstances.

The key outputs from our analysis will include a range of institutional profiles and associated change models, together with a tailored set of proposed interventions which may potentially be profile-sensitive.

Appendix 1: Data Collection Instrument Sent to HEI Contacts

Sustainable Development in Higher Education

We have been asked by HEFCE to undertake a strategic review of sustainable development in higher education and as part of this review we are collecting information on teaching in English universities that relates in any way to sustainable development.

We see this as an opportunity for universities to report the good work they are doing.

It should be stressed that the remit of the review is to establish a baseline of sustainable development activity in the sector. There is no expectation that institutions have been, or should have been, active in respect of sustainable development issues. In addition, every effort has been made to reduce the administrative burden of this Review on the Institutions involved.

However much, or however little, you can tell us please do contact us. Even if all you can send us is a URL, the name of someone we should contact, or a course name, we'll be pleased to hear from you.

We would like to hear about courses in your university that concern any one of the following.

1. Environmental, social, or economic sustainability

2. Sustainable development, or education for sustainable development (ESD)

3. Natural resources conservation and management
AND EITHER
(a) social justice OR (b) economic development

4. The natural and/or built environment
AND EITHER
(a) social justice OR (b) economic development

Please simply email: S.R.Gough@bath.ac.uk

*Or write to: Stephen Gough; Dept of Education; University of Bath; Bath; BA2
7AY*

THANK YOU VERY MUCH FOR YOUR HELP