

HEFCE 01/72

December

**Report**

# Estates management statistics project

**Annual report 2001**

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## Estates management statistics project: Annual report 2001

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| <b>To</b>                                   | Heads of HEFCE-funded higher education institutions<br>Heads of SHEFC-funded higher education institutions<br>Heads of ELWa-funded higher education institutions<br>Heads of universities in Northern Ireland                                    |
| <b>Of interest to those responsible for</b> | Strategic planning, Finance, Estates   |
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| <b>Enquiries to</b>                         | Adrian Officer<br>tel 0117 931 7322<br>e-mail a.officer@hefce.ac.uk<br><br>Catherine Killin at SHEFC<br>tel 0131 313 6607<br>e-mail ckillin@sfc.ac.uk<br><br>David Green-Morgan at ELWa<br>tel 029 2068 2266<br>e-mail green-morgand@elwa.org.uk |

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### Executive summary

#### Purpose

1. This publication reports on the progress of the estates management statistics (EMS) project during 2001.

#### Key points

2. This report was produced by IPD Occupiers Property Databank in association with GVA Grimley, and was endorsed by the project steering group.

3. EMS is now established as the primary source for central estates information. The initiative has produced two years of results for almost 200 performance ratios.

4. Progress in 2001 has been excellent – with higher participation rates, improvements in data quality and enthusiastic support from higher education institutions (HEIs) – enabling the project team to bring forward the main report by four months.

5. Each of the 155 contributing HEIs has received an interactive report on CD, which allows them to analyse their own results and compare them with those of similar institutions.

6. Institutions agree that EMS is an important and useful resource: around 60 per cent of HEIs consider that the value of the information has improved over the last year from what was already a high base. Most institutions find the ability to compare results against their own selected peer groups the most valuable benefit of EMS.

7. Total (revenue) property costs across the UK HE sector were around £1,250 million in 1999-2000. Therefore, an annual saving of 1 per cent in costs is worth around £13 million.

8. Individual HEIs show some significant changes in the costs, structure and utilisation of estates since 2000. At a sector level, the main results for 2001 are:

- a. 36 per cent of all space still requires major repair expenditure. Maintenance expenditure has increased by around £4 per m<sup>2</sup> but there is still concern at the scale of the repair backlog.
- b. Space provision remains very variable, indicating scope for major rationalisation. In particular, support space and academic office space may be areas for examination by individual HEIs.
- c. Total property costs have risen slightly to around £81 per m<sup>2</sup>, and now typically vary between £66 and £96 per m<sup>2</sup>.
- d. The median cost of property relative to HEI income is 9.7 per cent, although the upper quartile figure is 2.1 percentage points higher than this. HEIs will need to consider what ratio is appropriate to them, given their estate and organisational needs.

9. The accuracy of comparisons within EMS would be considerably improved if financial statements were more consistent, especially in relation to the distinction between capital and revenue expenditure.

10. The project team continues to work with the higher education sector and steering group to develop and increase the value of EMS in meeting institutional needs.

#### Further information

11. HEFCE 99/18 details much of the development work on the project, and HEFCE 01/10 forms the annual report for 2000. There is a dedicated web-site for this project which contains, among other things, the definitions used. The site is at [www.opdems.ac.uk](http://www.opdems.ac.uk).

## Introduction

12. The need for EMS, which was initiated with the support of the sector, was described in HEFCE 99/18 in the following terms:

“Estates information must be taken more seriously by senior managers. Such information is an essential resource in promoting effective management within institutions.”

13. EMS aims to improve estate management in higher education by enabling managers to access and use consistent and appropriate information. The main deliverable, the interactive institution report, was issued on CD in June, four months earlier than in 2000. This enables institutions to analyse the information provided by EMS, and to compare key data and ratios against those for any combination of HEIs in the sector.

14. In 2001, data were collected from 155 institutions,<sup>1</sup> 97 per cent of the total possible. This represents considerable improvement on the 87 per cent response rate in 2000 (142 HEIs). The continued high level of active participation in the initiative aids the development of a robust resource for institutions and the sector.

15. The definitions used and measures reported have been refined during this reporting period, and provide a more reliable insight into the costs and issues which underlie HE estates. Continued development and consultation will help users to understand and feel increasingly confident with the information reported, and its application to support decisions.

## Summary results

### Estates in higher education

16. EMS provides a definitive picture of the size, structure, state and associated costs of the estate currently supporting the sector in the UK. It helps to increase awareness of the scope for improvement in estates performance. The summary information in Table 1 has been derived from the 2001 EMS data set.

### Key ratios and measures

17. A summary of key results is presented in Table 2. The lower and upper quartile results and median figures are shown for each of the selected key estate ratios. The median for 1998-99 is also shown, along with the difference between the median results for the first two years of EMS.

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<sup>1</sup> All data related to the period between 1 August 1999 and 31 July 2000.

**Table 1 Estates in UK higher education**

|  | No. of HEIs with data (out of 158) |     | Total from 2000 EMS data    | Estimated total for UK HE estate 2000 <sup>2</sup> | Method for growing EMS data to total for UK HE estate   |
|--|------------------------------------|-----|-----------------------------|--|---|
|  | No.                                | %   |                             |  |   |
| <b>Estate size</b>                                       |                                    |     |                             |  |   |
| Total gross area of the UK HE estate                     | 147                                | 93% | 22.2 million m <sup>2</sup> | 23.4 million m <sup>2</sup>                        | 7 HEIs do not record a gross area for the entire (incl residential estate); for such HEIs OPD has grossed up net area by 35%. 4 HEIs did not return data in 2000; OPD has adopted 1999 data for these HEIs.   |
| Total net internal area of the UK HE estate              | 141                                | 89% | 15.5 million m <sup>2</sup> | 17.4 million m <sup>2</sup>                        | 13 HEIs do not record a net internal area for the entire (incl residential) estate; for such HEIs OPD has scaled down gross area data by 0.74 (the average NIA:GIA ratio across HEIs in 2000). 4 HEIs did not return data in 2000; OPD has adopted 1999 data for these HEIs.                                |
| Proportion used for: Teaching                            | 140                                | 89% | 38%                         | 38%  | } These data have not been adjusted for non-returning HEIs.   |
| Research   | 135                                | 85% | 9%                          | 9%   |   |
| Support  | 140                                | 89% | 22%                         | 22%  |   |
| Other non-residential                                    | 137                                | 87% | 6%                          | 6%   |   |
| Residential  | 139                                | 88% | 25%                         | 25%  |   |
| <b>Total costs</b>                                       |                                    |     |                             |  |   |
| Total (revenue) property costs                           | 127                                | 80% | £1,050 million              | £1,238 million                                     | 27 HEIs were unable to return a total property cost for the entire estate (incl residential). For these HEIs OPD has estimated 2000 costs by using the 2000 average cost per m <sup>2</sup> NIA of £69.   |
| Maintenance expenditure                                  | 143                                | 91% | £387 million                | £412 million                                       | 15 HEIs did not provide a total maintenance cost for 2000. For these HEIs, OPD has estimated annual expenditure by using the sector average costs per m <sup>2</sup> NIA (£21.65).  |
| Capital expenditure                                      | 109                                | 69% | £537 million                | £792 million                                       | 49 HEIs did not provide a capital expenditure figure for 2000. For these HEIs, OPD has substituted the capital expenditure figure that was returned by the HEI to HESA for the year 2000.   |
| <b>Age and condition</b>                                 |                                    |     |                             |  |   |
| Proportion of non-residential space constructed pre-1940 | 151                                | 96% | 20%                         | 20%  | These data have not been adjusted for non-returning HEIs.   |
| Amount of non-residential space in categories C & D      | 144                                | 91% | 6.2 million m <sup>2</sup>  | 6.5 million m <sup>2</sup>                         | For those HEIs unable to provide an area of gross non-residential space in either condition C or D, OPD has estimated an area by application of the sector average for such categories of space to the gross area. The median proportion of gross non-residential space in condition C and D stands at 37%. |
| Total backlog cost of maintenance (incl residences)      | 85                                 | 54% | £1,994 million              | £3,444 million                                     | 73 HEIs did not provide a cost to upgrade figure for 2000. For these HEIs, OPD has estimated the cost by using the sector average costs per m <sup>2</sup> NIA for each category, non-residential, residential and cost to upgrade from C and D to B.   |

<sup>2</sup> Figures provided are drawn direct from the EMS dataset for 2000. OPD has estimated totals to reflect the entire HE sector where no return was made at individual HEI level. Methods adopted assume that estates with missing information display characteristics reflecting the average for estates where actual 2000 data has been returned.

**Table 2 Summary of key ratios and measures**

| <b>Key ratio</b>                      |  | <b>Lower quartile</b> | <b>Median</b>    | <b>Upper quartile</b> | <b>Median</b>  | <b>Median difference</b>    |
|---------------------------------------|--|-----------------------|------------------|-----------------------|----------------|-----------------------------|
|                                       |  | <b>1999-2000</b>      | <b>1999-2000</b> | <b>1999-2000</b>      | <b>1998-99</b> | <b>1999-2000 to 1998-99</b> |
| <b>Condition and suitability</b>      |  |                       |                  |                       |                |                             |
| <b>1</b>                              | % of non-residential estate not requiring major repair expenditure     | 45%                   | <b>63%</b>       | 83%                   | 64%            | -1%                         |
| <b>2</b>                              | % of non-residential estate suitable for current functions             | 38%                   | <b>61%</b>       | 78%                   | 55%            | +6%                         |
| <b>Non-residential property costs</b> |  |                       |                  |                       |                |                             |
| <b>3</b>                              | Ratio of total property costs to income                                | 8.4%                  | <b>9.7%</b>      | 12.0%                 | 9.6%           | 0.1%                        |
| <b>4</b>                              | Total property costs/m <sup>2</sup> NIA (excludes capital expenditure) | £66.33                | <b>£81.05</b>    | £96.18                | £78.08         | +£2.97                      |
| <b>5</b>                              | Total property costs per student FTE                                   | £472.99               | <b>£725.54</b>   | £929.15               | £677.00        | +£48.54                     |
| <b>6</b>                              | Capital expenditure/m <sup>2</sup> NIA                                 | £13.37                | <b>£29.77</b>    | £65.94                | £30.00         | -£0.23                      |
| <b>Component property costs</b>       |  |                       |                  |                       |                |                             |
| <b>7</b>                              | Maintenance costs/m <sup>2</sup> GIA                                   | £11.15                | <b>£16.78</b>    | £21.95                | £12.66         | +£4.12                      |
| <b>8</b>                              | Energy costs/m <sup>2</sup> GIA  | £5.49                 | <b>£6.10</b>     | £6.95                 | £6.04          | +£0.06                      |
| <b>9</b>                              | Estate management costs/m <sup>2</sup> NIA                             | £1.87                 | <b>£2.79</b>     | £3.90                 | £2.57          | +£0.22                      |
| <b>Non-residential space ratios</b>   |  |                       |                  |                       |                |                             |
| <b>10</b>                             | Total space NIA per student FTE (m <sup>2</sup> )                      | 5.8                   | <b>8.1</b>       | 11.2                  | 8.0            | +0.1                        |
| <b>11</b>                             | Support space as % of total space                                      | 22%                   | <b>27%</b>       | 34%                   | 26%            | +1%                         |
| <b>Residential ratios</b>             |  |                       |                  |                       |                |                             |
| <b>12</b>                             | Total residential property costs per bedspace                          | £644                  | <b>£786</b>      | £1,069                | £806           | -£20                        |
| <b>13</b>                             | Residential income per bedspace  | £1,761                | <b>£1,987</b>    | £2,358                | £1,874         | +£113                       |
| <b>14</b>                             | Ratio of residential property costs to income                          | 30%                   | <b>41%</b>       | 52%                   | 42%            | -1%                         |
| <b>15</b>                             | Residential occupancy rate   | 95%                   | <b>97%</b>       | 98%                   | 97%            | 0%                          |

NIA: net internal area.

GIA: gross internal area.

## Overview of results

18. The 2001 EMS results are generally consistent with those for the previous year, and improved data availability and accuracy start to allow year-on-year analysis, which is critical to an understanding of estate management performance.

19. Our approach is to emphasise the quartile and median results. In this way, results in the top and bottom 5 or 10 per cent of institutional measures, which may indicate unusual circumstances, do not impact on reported results. There are still some data inconsistencies but these have been substantially reduced since last year.

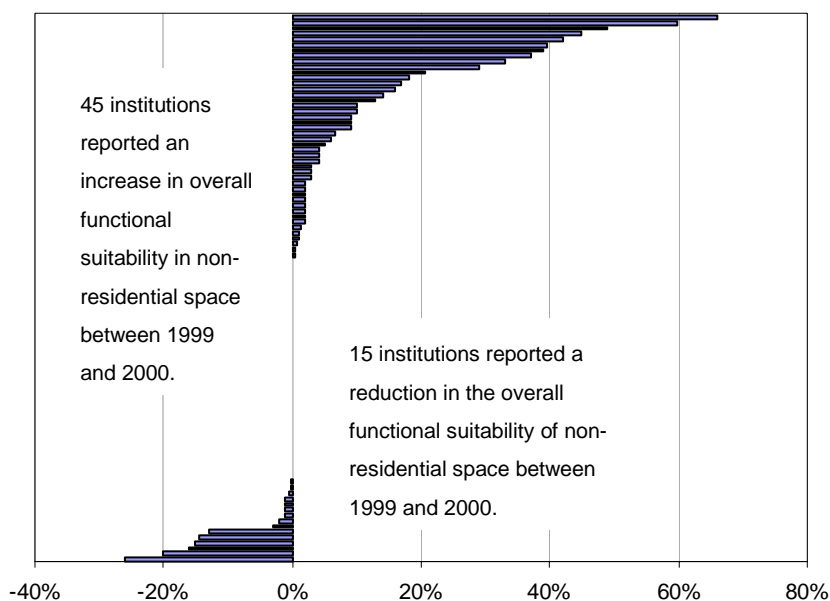
20. An overview of some key results is presented below. Where ranges are given these indicate the lower and upper quartile results. The word 'typical' refers to the median.

### Condition, maintenance and functional suitability

21. Given the size and maturity of most HE estates, significant changes in the overall condition of premises take some time to effect. The proportion of non-residential space considered to be in at least reasonable condition for the typical institution continues to stand at 64 per cent. Of greater concern is the finding that a quarter of HEIs need to make major repairs on over half their space.

22. Nevertheless, the sector has recognised the need to spend more on maintenance: spending is up by almost 20 per cent, and the median now stands at £23 per m<sup>2</sup>. Almost 60 per cent of HEIs have raised their annual maintenance expenditure per m<sup>2</sup> by more than 5 per cent since 1999, while just a quarter have seen a fall by a similar amount.

**Figure 1 Change in functional suitability between 1999 and 2000**

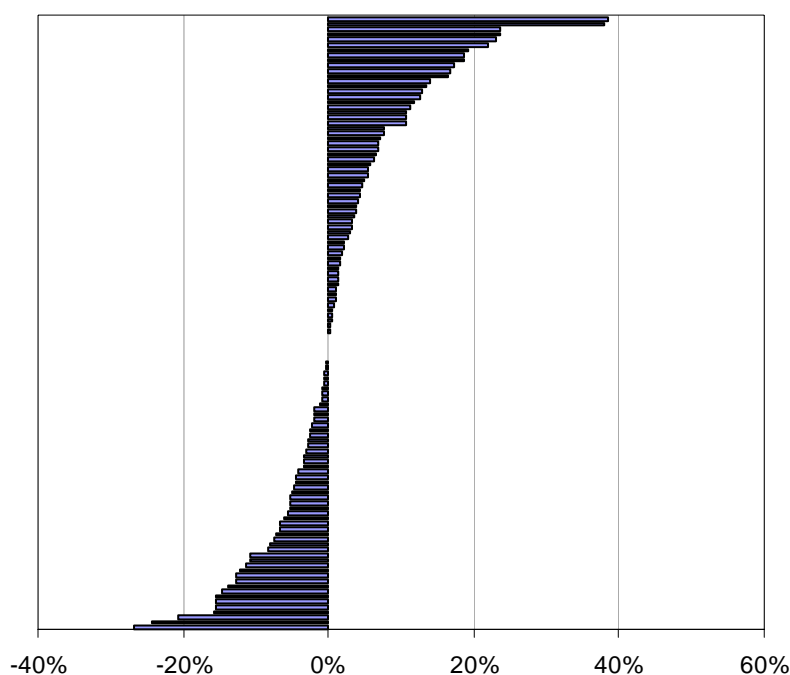


## Total property costs

23. Despite increased maintenance expenditure, total property costs per FTE student rose by only 2 per cent to £726; the upper quartile result is about £1,000. Higher spending institutions are often in more expensive locations, or offer courses in disciplines that require more space, or have fewer students per m<sup>2</sup>. All HEIs can use the EMS data as a basis to examine their total property costs in the context of their range of courses.

24. The typical cost of property relative to HEI income is 9.7 per cent, although the upper quartile figure is about 12 per cent. HEIs will need to consider what ratio is appropriate to them, in view of estate and organisational needs.

**Figure 2 Institutional changes to total property costs per m<sup>2</sup>, 1999 to 2000**



25. Energy consumption per student varies considerably: the upper quartile is over two and a half times the lower quartile. Some of this will undoubtedly be due to differing needs. Similarly, the price paid per unit of energy varies by over 30 per cent between the upper and lower quartile. This indicates potential for significant economies in the procurement process.

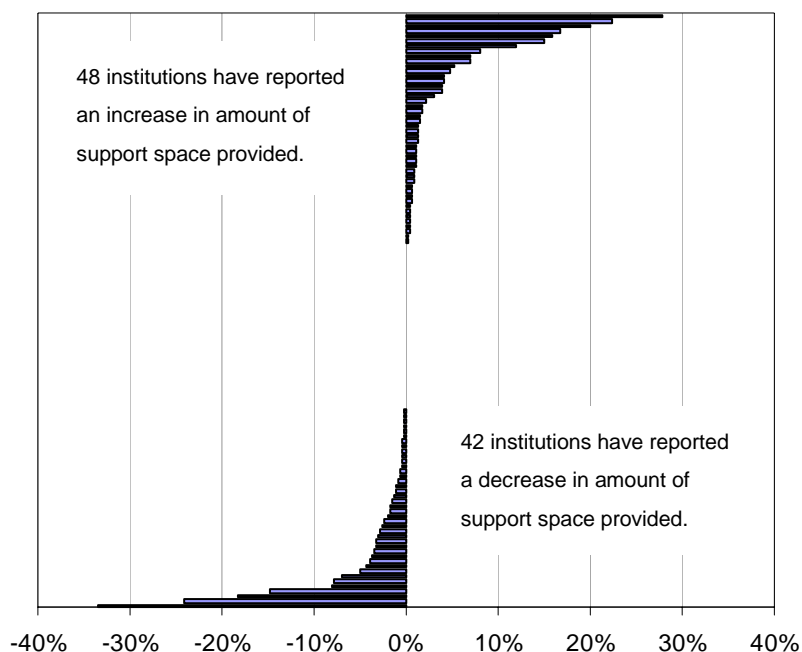
26. The insurance replacement value for the estate is typically worth about two years of HEI income. Eight HEIs had ratios equivalent to over four and a half years' income. A handful of institutions clearly do not have sufficient insurance provision to cover rebuilding costs.

## Space provision

27. Median space provision per student FTE has remained constant at 8 m<sup>2</sup>, and support space continues to represent 26 per cent of the total non-residential estate. However, the upper quartile of support space per student FTE (3.4 m<sup>2</sup>) is over twice that of the lower quartile figure. This appears to be an area where performance can be markedly improved.

28. Around 25 per cent of HEIs have reduced space per student FTE over the year, while another 25 per cent now provide over 5 per cent more space per student FTE than in 1999. Annual fluctuations in student numbers will clearly influence this ratio, so space management objectives should be set on longer-term targets.

**Figure 3 Institutional changes in percentage of support space, 1999 to 2000**



29. Office provision shows wide variation as well. Office floorspace for both academic and support staff is typically provided at a rate of 13-14 m<sup>2</sup> per member of staff. The range is high in both cases but particularly for support staff offices. There would appear to be significant scope for the rationalisation of office space in some HEIs.

30. The amount of vacant space in the sector is very low: less than a quarter of HEIs have vacant space that is more than 2 per cent of total non-residential space.

#### Residential estate

31. Property costs as a proportion of income are far higher for residential space – with 41 per cent of income attributable to the estate. This is to be expected, although nearly 30 per cent of HEIs incurred property costs of more than 50 per cent of residential income.

32. Typical spending on the repair of residential space is some 40 per cent lower per m<sup>2</sup> than for non-residential space, despite the fact that the condition of residences is only slightly better.

33. Insurance replacement value per m<sup>2</sup> is 21 per cent lower than for non-residential space. This may not be justified by the difference in rebuilding cost and may indicate under-insurance of the residential estate.

## Methodology

34. EMS is based upon user consultation and engagement, and the project continues to incorporate input by HEIs wherever possible. Table 3 outlines the methods employed during 2001 to sustain the active involvement of the sector.

**Table 3 Involvement of the HE sector in the EMS project**

|                                 |  |
|---------------------------------|--|
| <b>Steering group</b>           | The EMS steering group met three times during the year; its role is to ensure that the initiative meets the needs of institutions.   |
| <b>Pathfinder group</b>         | This group has continued to refine and test definitions used in collecting data, adding clarity and providing guidance to the project team.  |
| <b>Client survey</b>            | A survey was conducted early in 2001 to identify issues for the 2001 data assembly and reporting phase.  |
| <b>Workshops</b>                | Five half-day meetings were held around the country during the 2001 data assembly phase. These events encouraged feedback from and discussion with HEIs, and provided an opportunity to look at results and applications for the 2000 report.<br><br>Three additional workshops took place in autumn 2001 to address the further practical application of EMS. |
| <b>Satisfaction survey 2001</b> | A satisfaction survey was issued to all HEIs (see overview in paragraphs 57-58).   |
| <b>EMS project team</b>         | The project team provides support and guidance to all HEIs as well as maintaining a web-site with news and relevant material ( <a href="http://www.opdems.ac.uk">www.opdems.ac.uk</a> )  |

35. As a result of institutional feedback and in the interests of earlier reporting, EMS data were assembled during March and April 2001. It is hoped that this phase of the annual process can gradually be moved forward. This principle is supported by HEIs.

36. Validation of HEI-specific data has been developed during the past year to check for consistency of results. The EMS 2000 results have been used to highlight particularly high or low results at an earlier stage. This has undoubtedly helped to raise the quality of information for all users.

## The 2001 institution report

37. The institution report remains interactive and flexible, so that institutions can conduct their own analyses. A number of improvements have been made in response to suggestions from users, including the following:

- a. Users can select up to 15 ratios from the 198 available, and can compare their own results with those from any other institution or group of institutions.
- b. Up to 20 different groups of HEIs can be selected and saved for comparison.
- c. All measures are categorised to assist navigation and selection of ratios.
- d. Users can undertake more detailed analysis of space utilisation. Results for both frequency and occupancy measures were presented, and broken down by method and the time of year when the survey/calculation was performed.
- e. Guidance notes explain the changes, and a manual with data definitions was also incorporated.

38. The 2001 satisfaction survey confirmed that most users considered the 2001 report an improvement on the previous one, and all found it straightforward to use.

### **Data availability and quality**

39. The response rate has improved considerably: from 87 per cent in the first year to 97 per cent in 2001.

40. The quantity and quality of data submitted varied between institutions, depending on the technology and resources they had available. During 2000, the typical institution was able to submit 60 per cent of all requested data items; in 2001, this increased to 77 per cent.

41. EMS and the release of the first institution report in October 2000 have undoubtedly raised the profile of estates information within HEIs, and highlighted the value of comprehensive and accurate data. Several HEIs have now begun to introduce systems and processes to improve their own data.

42. About half the participating institutions reported that data collection took less time in 2001 than in 2000. The project team expects that this trend will continue with improvements in internal systems and the extended use of EMS information.

43. The quality of information provided has improved for several reasons. This year institutions were able to check their data more rigorously before submission. They were also able to make more informed decisions about the consistency of their data, by comparing it with data previously submitted and with sector norms. Draft results exhibited fewer extreme outliers, and thus more attention could be focused on specific issues, results and implications.

### **Definitions**

44. At the outset of the EMS project it was accepted that some of the definitions would need to be reviewed periodically or refined. Changes would only be made if absolutely necessary, and the focus was to be upon a priority list of topics. In many instances, guidance has been developed to aid interpretation.

45. A key principle of the project is to minimise the burden of data collection and demands upon institutions. Accordingly, a pathfinder group was charged with reviewing certain definitions.

#### Review of definitions in 2000

46. On the recommendation of the pathfinder group, changes were made to the 2001 data collection in the following areas:

- measurement of net internal area
- space utilisation
- building condition
- functional suitability
- maintenance and capital expenditure.

#### Future issues

47. The topics examined by the pathfinder group in 2001, and for consideration in the 2002 EMS return, include:

- legislative compliance
- facilities costs
- catering, conference and residential space.

48. Definitions for facilities costs have been developed and tested with the group. These will be used as part of the data collection exercise for 2002, subject to further validation and refinement.

49. The definition of catering, conference and residential space is still being considered by the group and through discussion with organisations such as the Conference of University Business Officers (CUBO).

50. A major issue for EMS is that some significant costs are still collected on a very different basis by different HEIs. Items of concern include the distinction between capital and revenue expenditure, especially with regard to repair and capital improvements. Asset value is another variable, which cannot be used within EMS due to differing interpretations by individual finance directors.

51. The project team has worked closely with the team dealing with the implementation of a more transparent approach to costing in HEIs, to ensure maximum consistency and minimum duplication of effort between the two projects.

#### **Other developments during 2001**

##### Training

52. The steering group and project team remain committed to providing support and training in the use of EMS statistics. Training workshops were held early in 2001 to coincide with the data assembly process. These were well attended and provided an overview of some key results, guidance in using the institution report and an opportunity to raise issues of concern.

53. A second series of seminars took place during October. These were attended by 90 representatives from 70 institutions. These meetings were directed at estates managers and focused on the practical applications of EMS data.

#### Analysis by building

54. A number of HEIs expressed interest in being able to compare data and improve performance more directly by using data that are specific to individual buildings.

55. The EMS building-level project is being conducted as a pilot study during 2001, by a volunteer group of HEIs, in order to reduce the burden on the sector during the development phase. Interactive reports, similar in functionality and format to the institution reports, have been issued to participants.

#### Survey of space in medical schools

56. Embedded space within NHS Trust managed properties used for medical education and training represents a significant component of the UK higher education sector estate. A survey has been commissioned by the EMS steering group and UK Funding Councils, to capture information on the magnitude, cost and practices associated with embedded space. At the same time, the project team will record overall levels of satisfaction with the costs, levels of service and nature of agreements between HEIs and trusts.

#### **Institutional feedback**

57. Following the release of 2001 results, a sector satisfaction survey was again issued to all HEIs that had returned data.

58. The main findings were:

- a. All respondents were at least satisfied with the project, and 87 per cent of HEIs now consider it to be good or excellent.
- b. 60 per cent of participating HEIs felt that the project and its use to them had improved this year. Institutions continue to value the ability to compare their own statistics against the same measures for other groups of HEIs. The need for reliable management information for estates has encouraged many HEIs to focus on improving their own data; many highlighted this as an indirect benefit of the EMS initiative.
- c. Definitions and the clarity of explanations could still be improved; just 55 per cent of HEIs regarded them as good or excellent. However, 39 per cent of respondents felt that refinements to definitions made during 2001 had helped to improve clarity.
- d. 93 per cent of participating HEIs felt that changes made to the 2001 institution report had improved its functionality. All respondents felt the report was straightforward to use, which is particularly important if it is to be adopted throughout the sector.