

# Estate management in higher education

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Prepared for the Auditor General for Scotland  
September 2007

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The overall condition of the Scottish estate is improving but the maintenance backlog is almost £0.7 billion and continues to grow.

## Key messages

- 1.** Effective estate management should result in estates which are financially and environmentally sustainable, with buildings that are fit for purpose. Higher education (HE) institutions need to ensure that their estates are used efficiently and effectively to deliver their strategic objectives.
- 2.** The Scottish HE estate is large and diverse with almost 1,000 non-residential buildings across 72 sites. It is valued at almost £5 billion.
- 3.** Just under half of the Scottish HE estate is considered to be in poor condition and it is estimated that it would cost almost £0.7 billion to bring the whole estate up to a good standard.<sup>1</sup> This is referred to as the maintenance backlog. Almost 70 per cent of the backlog is concentrated in the estates of the Universities of Strathclyde, Edinburgh, Glasgow, Heriot-Watt and Dundee, reflecting the size of their estates.
- 4.** In 2001/02, the Scottish Funding Council (SFC) began distributing public sector funds aimed specifically at improving the non-residential estate. By 2005/06, a total of £236 million had been distributed to 20 institutions in Scotland. A further £223 million will be distributed by March 2008. As well as dealing with their maintenance backlog, institutions use capital expenditure to change their estates to meet corporate objectives, deliver new courses and methods of teaching, and comply with new legislation.
- 5.** SFC funding accounts for just under one-third of planned total capital expenditure on the HE estate over the period 2006/07 and 2007/08. The remainder comes from institutions' internal sources (operating surpluses,

disposal of property and fundraising activities); external sources (including trusts, Research Councils and private sector investors); and loans. In 2005/06, Scottish institutions spent £211 million on their estates. Of this total, £74 million was public sector funding.

- 6.** Since public sector capital funding began there has been an improvement in the overall condition of the estate. Around 48 per cent (by area) of the Scottish HE estate was in sound condition or better in 2001/02 and this increased to 55 per cent by 2005/06. In contrast, estimates suggest that the maintenance backlog increased, although comparisons over the period are complicated due to incomplete data.
- 7.** At institutional level, different patterns emerge. Estate condition improved over the period at ten institutions but, at others, less of the estate is now classed as at least sound. Our analysis suggests that some institutions may have difficulty in financing investment in their estates.
- 8.** The phased distribution of funds and the long-term nature of capital investment programmes mean that it is too early to establish the full impact of the funding. Institutions have capital expenditure commitments totalling £589 million over the two-year period ending March 2008. Given this level of investment, we expect to see further progress being made on the quality of the estate in the next few years.
- 9.** The SFC has a duty to ensure that public funding supports Scottish Executive and SFC priorities. Capital funding is allocated largely through a formula which gives a share to each institution. Combined with the use of broad assessment criteria for Science

Research Investment Funding (SRIF) and most Learning and Teaching Infrastructure Funding (LTIF), this makes it difficult to assess whether key national priorities are being met.

- 10.** The SFC does not currently publicly report on the outcome of capital investment activity across the sector or the impact of this expenditure. While some plans are in place to evaluate funding streams, more frequent and comprehensive public reporting of progress is needed so that the SFC can demonstrate the impact of investments on the overall quality of the estate.
- 11.** In its corporate plan, the SFC commits to annually assessing the impact of capital investment in the HE sector using two high-level measures: the total value of the maintenance backlog and the overall condition of the estate. But more can be done to assess estate management performance in the sector and allow benchmarking with other sectors. The Estate Management Statistics (EMS) dataset provides the basis for this type of analysis.<sup>2</sup> The SFC and institutions should agree and use a smaller core set of indicators, including financial indicators, space-use indicators, fit-for-purpose indicators and environmental indicators, to give a more regular and comprehensive picture of performance and publicly report progress on these key indicators.
- 12.** Estate strategies are important documents setting out development plans and providing the basis for SFC funding. Most institutions are currently revising their estate strategies to reflect revised SFC guidance. However, capital development planning is made difficult by uncertainty over long-term public funding.

1 EMS data 2005/06. The figure quoted is the cost to bring all the estate up to at least a good standard as denoted by the Royal Institution of Chartered Surveyors (RICS) condition B. Under this system, RICS condition A is 'as new'; RICS condition B is 'sound, operationally safe, exhibiting only minor deterioration'; RICS condition C is 'operational, but major repair or replacement needed soon'; RICS condition D is 'inoperable or serious risk of failure or breakdown'.

2 The EMS dataset comprises over 200 performance ratios covering various aspects of the estate for the UK HE sector. Separate analysis is available for the Scottish sector. The dataset contains data from 2001/02 onwards. Guidance is issued on how these data should be gathered, but some variation in approach may occur across institutions and this can affect comparability.

**13.** Institutions generally have good systems in place to support effective estate management, but performance information could be used more effectively to support management reporting.

### Recommendations

**14.** The SFC should:

- consider with the Scottish Executive whether a clearer indication of the future public funding for capital programmes could be provided, to help institutions in their strategic planning
- report publicly on capital funding for the HE estate, demonstrating the link between funding and national priorities
- with institutions, agree a small core set of indicators that will be reviewed regularly at an institutional and sector level
- encourage institutions to improve their scrutiny and reporting of estate-related performance.

**15.** The SFC should continue to:

- work with institutions to make greater use of EMS and other data to measure the impact of public sector capital funding on the HE estate and to focus attention on areas for improvement
- promote good practice and provide guidance, and ensure that this is followed
- undertake further research to better understand the role of the estate in influencing outcomes such as student experience or the attraction of international students and research funding

- ensure that SRIF and LTIF programmes work together to maximise the impact of the funding on the estate.

**16.** Higher education institutions should:

- develop realistic financial plans to support their estate strategies
- make use of performance information on the estate and ensure that it is reported to, and scrutinised by, management
- continue to work together to ensure that benchmarking data are relevant, consistent, comprehensive and reliable
- comply with SFC guidance and ensure this is reflected in revised documents and approaches.

# Part 1. Introduction

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The Scottish higher education estate is large and diverse with almost 1,000 non-residential buildings spread across 72 sites. It is valued at almost £5 billion.

## The Scottish higher education sector is large and diverse

**17.** In 2005/06, there were 285,180 students in higher education in Scotland including 65,000 postgraduate students.<sup>3</sup> HE qualifications range from Higher National Certificates (HNC) to honours and post-graduate degrees. The majority (82 per cent) of qualifications are gained in HE institutions.<sup>4</sup>

**18.** There are currently 21 HE institutions in Scotland, including 14 universities, two colleges of higher education, two art schools, The Open University in Scotland, a conservatoire and the Scottish Agricultural College (SAC).<sup>5</sup> These are classified into four groups: ancient institutions; pre-1992 institutions; post-1992 institutions; and small specialist institutions (SSIs) (Appendix 1). They are independent, autonomous bodies, answerable to their governing bodies (often referred to as the court or council).

**19.** Institutions range in size from the Royal Scottish Academy of Music and Drama (RSAMD) with 580 students and 209 staff to the University of Edinburgh, with almost 20,150 students and 6,500 staff (Appendix 2).<sup>6</sup>

**20.** The percentage of income generated by research activities in Scottish institutions ranges from one per cent at Bell College and the RSAMD to 43 per cent at the University of St Andrews. Across the sector as a whole, Scottish institutions generate 30 per cent of their income from research activities compared with a UK average of 26 per cent. This has important implications for the type of estate required and contributes to higher estate maintenance costs in Scotland.

**21.** The Scottish HE estate is large and diverse with almost 1,000 non-residential buildings spread across 72 sites. It is valued at almost £5 billion. Between 2001/02 and 2005/06, the number of non-residential buildings increased slightly to 973 but the number of sites reduced from 82. Within this, the number of non-residential buildings increased at some institutions (for example, the Universities of Edinburgh and St Andrews) but there is consolidation at others, most notably at the University of Glasgow and at Queen Margaret and Robert Gordon Universities (Appendix 2).

**22.** Effective estate management is important to ensure the estate is financially and environmentally sustainable, with buildings that are fit for purpose. HE institutions need to ensure that their estates are used efficiently and effectively to deliver their strategic objectives.

### About the study

**23.** This report examines the impact of public sector capital funding on the HE estate over the period 2001/02 to 2005/06 (Part 2), considers the role of the SFC (Part 3) and looks at how individual institutions manage their estates (Part 4).

**24.** The study covers the 19 institutions with significant estate responsibilities and focuses on the non-residential estate as public sector funding is not available for the residential estate.<sup>7</sup> In carrying out this study we:

- analysed Estate Management Statistics (EMS) data and other data on the quality of the estate, including comparative data for

other parts of the UK.<sup>8</sup> The most recent year for which EMS data are available is 2005/06. Any references in this report to the current quality of the estate relate to this year. By this time, institutions had received £236 million of funding most of which was through SRIF with £25 million from LTIF<sup>9</sup>

- examined estate management at eight institutions in Scotland, selected to represent a mix of different types of institution<sup>10</sup>
- surveyed 19 institutions (including the SAC) to obtain data on spending plans, estate management arrangements and performance reporting
- interviewed staff from the then Scottish Executive Enterprise, Transport and Lifelong Learning Department, the SFC, the Higher Education Funding Council for England (HEFCE), Universities Scotland and the Office of Science and Innovation (OSI)
- held discussions with a study advisory group. Members included representatives from four institutions, the SFC and Universities Scotland (Appendix 3).

<sup>3</sup> *Students in Higher Education at Scottish Institutions 2005-06*, Scottish Executive, May 2007.

<sup>4</sup> *Students in Higher Education at Scottish Institutions 2005-06*, Scottish Executive, May 2007. Around 18 per cent of HE qualifications in Scotland are gained in Further Education Colleges (FECs), almost entirely at the level of HNC/Diplomas (HND).

<sup>5</sup> The Scottish Agricultural College is the responsibility of, and funded by, the Scottish Executive Rural Affairs and the Environment Directorate (SERAED).

<sup>6</sup> Full-time equivalent basis.

<sup>7</sup> The study excludes the University of the Highlands and Islands Millennium Institute (UHI) and The Open University in Scotland (OUS).

<sup>8</sup> Institutions have submitted data on their estate on an annual basis since 2001/02. The collection of these data is part-funded by the SFC. Estate Management Statistics (EMS) are used by the UK sector to help estate managers understand current performance, share best practice and drive improvements. In Scotland, data are collected for 18 institutions (SAC, UHI and The Open University in Scotland are excluded).

<sup>9</sup> Science Research Investment Fund (SRIF) and Learning and Teaching Infrastructure Fund (LTIF).

<sup>10</sup> Universities of Dundee, Edinburgh, Strathclyde and Stirling, Robert Gordon University, Glasgow Caledonian University, Edinburgh College of Art and Queen Margaret University.



# Part 2. The impact of capital funding on the higher education estate

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It is too early to establish the full impact of recent investment in the Scottish HE estate. With the additional investment planned, the effect should be evident in the next few years.

## Key messages

- Higher education institutions spent £211 million on capital and maintenance programmes in 2005/06. Slightly more was spent on maintenance work than in the previous year, but less was spent on new buildings and major refurbishment.
- The phased distribution of public funds and the long-term nature of capital investment programmes means it is too early to establish the full impact of the funding.
- Up to 2005/06, there has been mixed progress. The overall condition of the Scottish estate is improving but the maintenance backlog is almost £0.7 billion and continues to grow.
- Institutions have capital expenditure commitments totalling £589 million over the period 2006/07 and 2007/08. Given this level of investment, the effect should be evident in the next few years.
- A small core set of measures should be developed for public reporting on the performance of the estate and to allow benchmarking.

**25.** This part of the report looks at:

- investment in the Scottish HE estate
- the impact of funding on the quality of the estate
- other measures of performance.

**26.** A range of performance measures for the HE estate are identified in the SFC's corporate plan and other SFC-funded reports. This part of the report uses these measures to review the impact of the funding up to 2005/06, although it is too early to assess fully the impact of the funding. It is important that no single indicator is used in isolation, but is considered in the light of other information about a particular institution's circumstances.

### Capital investment is financed from a range of sources

**27.** In 2005/06, institutions spent a total of £211 million on their estates. Of this total, £145.6 million (69 per cent) was spent on major capital works, including new buildings and refurbishment, and £65.6 million (31 per cent) was spent on planned and reactive maintenance.<sup>11</sup> Maintenance expenditure includes work to comply with new legislation on the quality of the estate (for example, health and safety legislation and disabled access). Almost £17 million was spent on complying with legislation in 2005/06.<sup>12</sup>

**28.** Planned capital expenditure by institutions totalled £314.9 million in 2006/07 but falls to an estimated £274.5 million in 2007/08.<sup>13</sup> Planned capital expenditure in 2006/07 varies among institutions – it is highest for the ancient universities (at £142 per m<sup>2</sup>) and lowest for SSIs (at £60 per m<sup>2</sup>).

**29.** Public sector funding distributed by the SFC accounts for just under a third of planned total capital expenditure on the HE estate in 2006/07 and 2007/08. Public funding is distributed by the SFC through two main funding streams: Science Research Investment Funding (SRIF) – introduced in 2002/03 and aimed specifically at refurbishing the HE research estate in science, engineering and technology; and Learning and Teaching Infrastructure Funding (LTIF) which was introduced in 2005/06 to support projects in the teaching estate (Appendix 4).

In addition to the two main funding streams, the Scottish Executive has made small occasional allocations of funding specifically for capital purposes. This money has sometimes been targeted for specific uses, for example, to help institutions meet disability legislation requirements.

**30.** The remaining two-thirds of planned capital investment comes from institutions' internal sources (operating surpluses, disposal of property and fundraising activities); external sources (including trusts, Research Councils and private sector investors); and loans (Exhibit 1).

**31.** The extent to which different sources of funding are used varies considerably among institutions. Based on capital expenditure plans for 2006/07 and 2007/08, we found:

- SSIs are relying heavily on SFC contributions to fund capital programmes, with these accounting for 91 per cent of the planned spend. However, for some SSIs these plans may be unrealistic as they assume higher contributions from the SFC than have been announced to date.
- Ancient institutions expect to obtain 18 per cent of the funding for their capital programmes from external sources such as research funding from trusts and Research Councils. This is not likely to be a significant source of funds for other institutions.
- Loans will provide a substantial amount of funding for capital programmes in pre and post-1992 institutions.
- Institutions where research income accounts for a high proportion of all income anticipate making more use of external sources of funding.<sup>14</sup> External sources account for 15 per cent of their planned expenditure compared with less than two per cent for other types of institution.

<sup>11</sup> EMS data 2005/06.

<sup>12</sup> Excludes data on legislative spend by the Universities of Aberdeen, Abertay and Glasgow and Queen Margaret University.

<sup>13</sup> Audit Scotland survey. These are predictions based on capital plans in place at the end of 2006. Actual expenditure may differ.

<sup>14</sup> Includes the Universities of Aberdeen, Dundee, Edinburgh, St Andrews and Glasgow whose research income accounts for more than 33 per cent of total income.

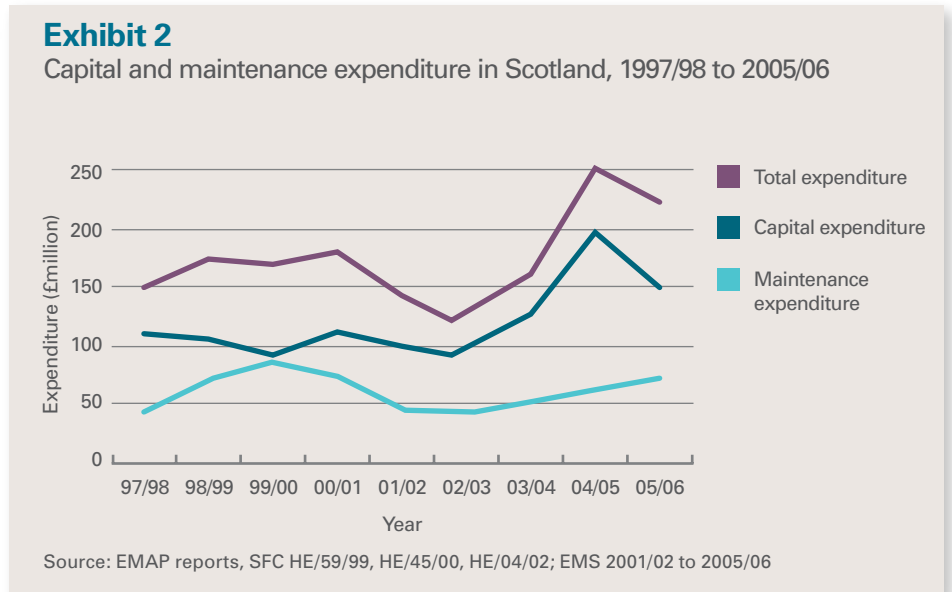
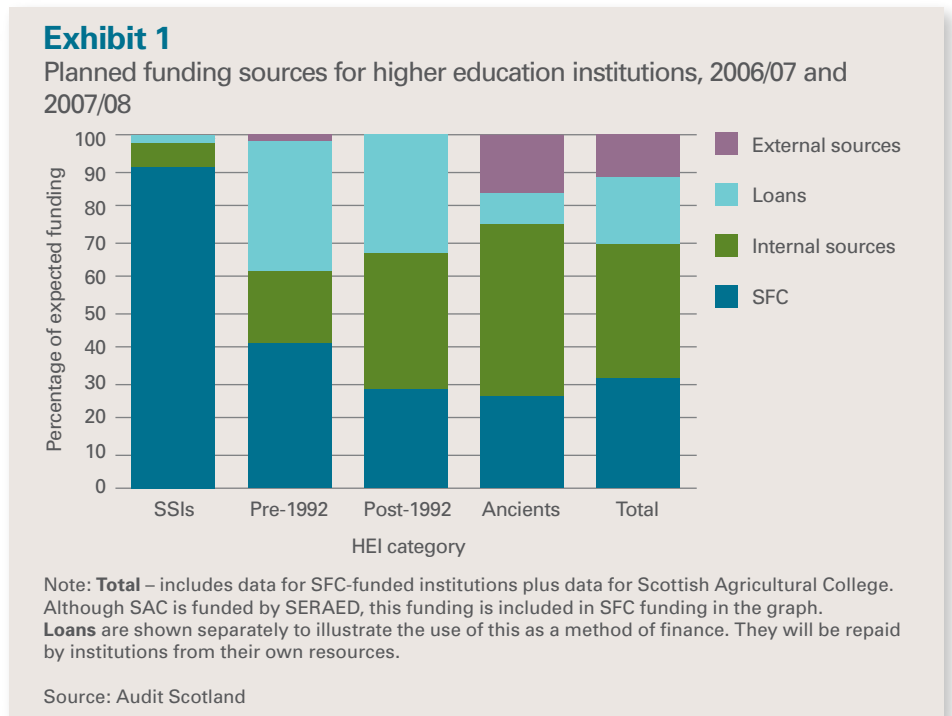
### The pattern of expenditure on the Scottish higher education estate has fluctuated since 2001/02

**32.** Total levels of expenditure on maintenance and major capital works fluctuate from year to year, reflecting the phasing of projects. For example, capital expenditure at Glasgow Caledonian University was almost £18 million in 2004/05 when the Saltire Centre was completed, but decreased to £3 million the following year. Across the sector as a whole, total expenditure in 2005/06 was lower than in 2004/05. Within this total, the 2005/06 data show increased expenditure on maintenance activity with lower spend on major refurbishment and new build projects (Exhibit 2).

**33.** The SFC has become a significant source of capital funding for institutions since dedicated public sector funding for capital projects began in 2001/02. Public sector funds distributed by the SFC represent over a third of capital spending in 2005/06. Public sector funding totalling £459 million has been announced for the period 2001/02 to 2007/08 (Exhibit 3, overleaf). The sums committed have been steadily increasing, with £236 million distributed by March 2006 and a further £223 million to be distributed by March 2008.

### The maintenance backlog for the Scottish higher education estate is almost £0.7 billion and continues to grow

**34.** Just over half (55 per cent) of the Scottish estate is in a sound or new condition (Exhibit 4, page 11).<sup>15</sup> Forty-five per cent of the Scottish estate is classed as Royal Institution of Chartered Surveyors (RICS) condition C or D and the estimated cost of improving it to at least a sound standard (condition B) in 18 institutions is £690 million.<sup>16</sup> This figure is referred to as the 'maintenance backlog' of the estate



and includes expenditure to ensure that estates comply with health and safety and other legislation as well as dealing with general maintenance requirements.

**35.** Almost 70 per cent of the backlog is concentrated in the estates of the Universities of Strathclyde, Edinburgh, Glasgow, Heriot-Watt and Dundee, reflecting the size of their estates (Exhibit 5, page 11).

**36.** Incomplete data over the time period make it difficult to determine how the level of the backlog has changed since 2001/02. Data for 2001/02 show that the maintenance backlog for 14 institutions was £394 million at 2006 prices. The estimated maintenance backlog for the same 14 institutions increased to £453 million in 2005/06, an increase of £59 million (15 per cent).<sup>17</sup>

<sup>15</sup> Building condition is defined by the Royal Institution of Chartered Surveyors (RICS) building maintenance categories. RICS condition A – 'as new'; RICS condition B – 'sound, operationally safe, exhibiting only minor deterioration'; RICS condition C – 'operational, but major repair or replacement needed soon'; RICS condition D – 'inoperable or serious risk of failure or breakdown'.  
<sup>16</sup> EMS data 2005/06 and estimates from two institutions (RICS condition figures are weighted to take account of gross internal area of each HE institution).  
<sup>17</sup> Excludes data from four institutions to ensure comparability; Dundee, Abertay, Strathclyde and St Andrews Universities.

### Exhibit 3

Public sector capital funding for the higher education estate, 2001/02 to 2007/08

Funding type	SRIF	LTIF	Non-recurring	Total	Cumulative total
2001/02	£15m (See note 1)	-	-	£15m	£15m
2002/03	£32.3m	-	£17.5m	£49.8m	£64.8m
2003/04	£32.3m	-	-	£32.3m	£97.1m
2004/05	£49.1m	-	£15.5m	£64.6m	£161.7m
2005/06	£49m	£25m	-	£74.0m	£235.7m
2006/07	£51.5m	£45m	See note 2	£96.5m	£332.2m
2007/08	£51.5m	£75m	Not known	£126.5m	£458.7m
<b>Total</b>	<b>£280.7m</b>	<b>£145m</b>	<b>£33.0m</b>	<b>£458.7m</b>	<b>£458.7m</b>

#### Notes:

1 The 2001/02 SRIF funding was a £10 million payment made by the SFC in advance of SRIF under the funding stream 'Scottish Higher Education Funding Council Research Investment Fund' (SHEFC RIF), and £5 million paid out by SFC as 'additional SRIF'.

2 Additional funding of £6 million was allocated for a range of purposes, one of which was the development of high-quality buildings, facilities and equipment. Institutions will report to the SFC on how these funds were used by October 2007.

Sources: SRIF Funding – SHEFC circulars HE/05/01; HE/12/02; HE/05/03 and HE/02/05; LTIF Funding – SHEFC circular HE/07/05; SFC circular SFC/21/06; Non-recurrent funding – SHEFC circulars HE/37/02; HE/01/03; HE/36/04, HE/06/05 and SFC/08/2007

**37.** As well as dealing with the maintenance backlog, institutions use capital expenditure to change their estates to meet their corporate objectives, deliver new courses and methods of teaching and comply with new legislation. For example, since 2001/02, Scottish institutions spent in excess of £65 million to comply with legislation such as the Disability Discrimination Act. A recent study commissioned by the SFC suggested that, by the end of 2007, Scottish institutions will need around £1 billion to allow them to deal with both maintenance backlogs and changing needs.<sup>18</sup> This figure is based on assessments of the investment needed to:

- reshape the estate
- address maintenance backlogs including legislative compliance

- repay outstanding loans on the non-residential estate.

**38.** The £1 billion estimate is in addition to expenditure already planned by institutions and provides an assessment of the total expenditure needed for Scottish institutions to develop estates that are fit for purpose.

#### The overall condition of the estate is beginning to improve

**39.** Around 48 per cent (by area) of the Scottish non-residential estate was classed as new or sound (RICS condition A or B) in 2001/02, and this increased to 55 per cent by 2005/06.<sup>19</sup> This improved situation masks a variety of changes:

- Overall, the percentage classed 'as new' has increased over the four-year period (from nine per cent to 16 per cent) and less is now classed as, 'operational but in need of major repair soon', (42 per cent compared with 49 per cent previously). There has been no overall change in the percentage classed as 'sound' (39 per cent) or 'inoperable' (3 per cent).
- Different patterns emerge across institutions between 2001/02 and 2005/06. Estate condition has improved in ten institutions. At the University of Aberdeen the improvement is due to the refurbishment of a number of buildings to 'as new' condition while at the University of Edinburgh and Robert Gordon University (RGU) the improvement is due to the construction of new buildings. RGU was the only institution to assess all of its estate as new or sound in 2005/06. In contrast, four institutions have proportionately less of their estate classed as new or sound, although the changes at the Universities of Glasgow and Stirling partly reflect the use of more accurate data on their estate condition (Exhibit 6, page 12).

#### Levels of investment are below those suggested to sustain the estate in many institutions

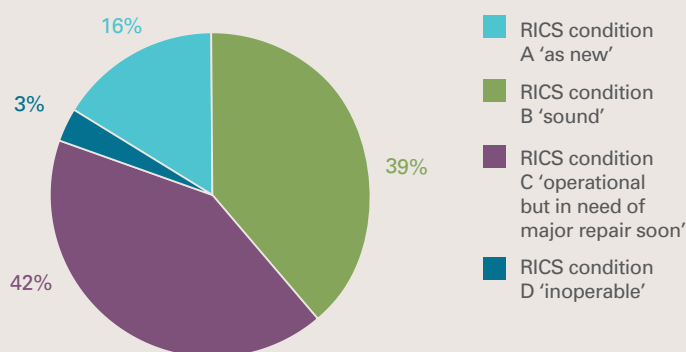
**40.** A recent report suggested that in order to sustain the estate (allowing for ongoing development of the estate and preventing increasing levels of maintenance backlog), institutions should be investing an annual amount equivalent to 4.5 per cent of their insurance replacement

<sup>18</sup> *Future needs for capital funding in higher education*, JM Consulting, September 2006.

<sup>19</sup> Weighted to take account of gross internal area; excludes data for Abertay, St Andrews and Queen Margaret Universities.

**Exhibit 4**

Condition of the higher education estate, 2005/06



Source: EMS data 2005/06, calculated using weighted data for gross internal area (GIA)

prices and replacement building costs, for example. As such, it needs to be considered with other indicators to provide a comprehensive picture of performance.

**42.** For the two years 2004/05 and 2005/06, the average amount invested across the sector as a whole was 4.7 per cent of IRV. But the situation varied among institutions with several investing much less than the recommended figure for these years ([Exhibit 8, page 13](#)):

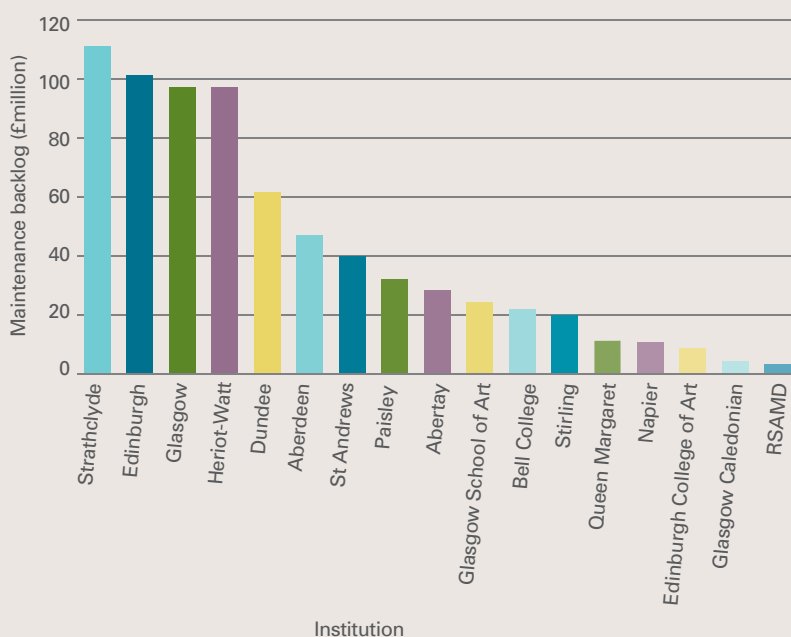
- Expenditure **exceeded** the level required for sustainable purposes in six institutions. This includes two institutions (Robert Gordon and Glasgow Caledonian Universities) with low levels of maintenance backlog and one (Queen Margaret University) where its new campus development will address its backlog. For the other three institutions (Universities of Aberdeen, Glasgow and Dundee), investment plans for 2006/07 and 2007/08 suggest they should make progress in developing the estate and reducing backlogs if these plans are realised.

- Two institutions invested **in line** with the estimated level required for sustainable purposes. At the University of Edinburgh investment plans for 2006/07 and 2007/08 suggest that further progress will be made, with planned investment exceeding £70 million in each year. Although investment levels are expected to rise at the University of Paisley in the short term, it will be 2008/09 before significant levels of investment are made in the estate, with this dependent on substantial financial support from the SFC.

- Expenditure was **lower** than that required for sustainable purposes in ten institutions over the two-year period. Further analysis needs to take account of

**Exhibit 5**

Distribution of maintenance backlog across higher education institutions, 2005/06



Note: Robert Gordon University has no maintenance backlog.

Source: EMS data 2005/06. Data for Dundee are provisional

value (IRV).<sup>20</sup> Analysis of expenditure from 2002/03 to 2005/06 shows that these rates of investment have not been achieved consistently over the period ([Exhibit 7, overleaf](#)).

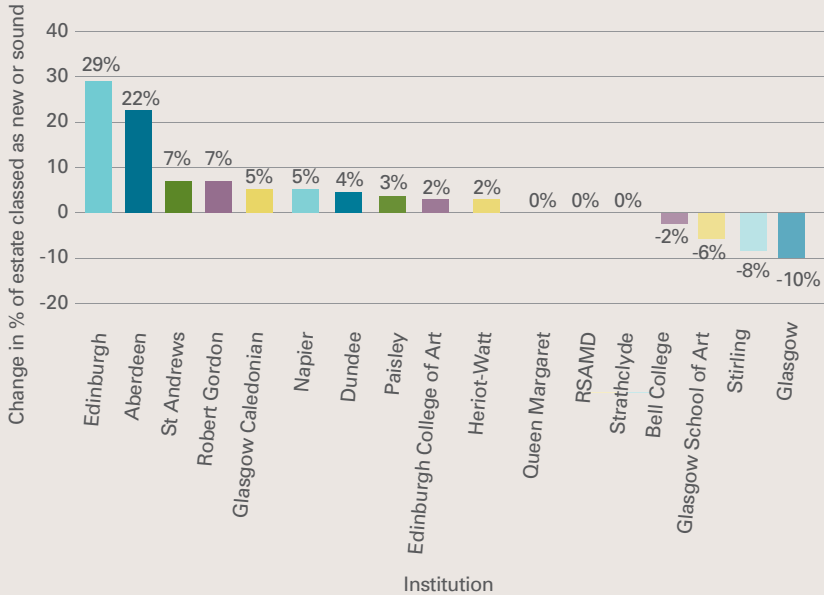
**41.** The 4.5 per cent 'required' level of investment is an average figure and needs to vary to take account of each institution's situation. It is affected by the way institutions value their estates for insurance purposes, the nature of the facilities they have and by regional variations in property

<sup>20</sup> *Future needs for capital funding in higher education*, JM Consulting Report, September 2006. The IRV is the current cost of rebuilding the estate to a similar standard.

### Exhibit 6

#### Change in percentage of estate classed as sound by institution, 2001/02 to 2005/06

Estate condition has improved at some institutions but, at others, less of the estate is now classed as new or sound.



Notes: Figures are 'absolute' change in percentage of GIA classed as sound between 2001/02 and 2005/06. Institutions starting with a high proportion of their estate in sound condition will be limited in the amount of improvement they can make. The change measured for Queen Margaret and St Andrews Universities is from 2001/02 to 2003/04 as recent data are not available.

Source: EMS data; excludes data for Abertay as 2001/02 data are not available

### Exhibit 7

#### Investment in the estate, 2002/03 to 2005/06

Current suggested annual level of investment	4.5%
Level of investment as a % of IRV for Scottish HE institutions	
2001/02	4.1%
2002/03	3.2%
2003/04	4.2%
2004/05	5.4%
2005/06	4.3%

Note: A number of institutions did not provide complete data for each year. They have been excluded from the figures for that year.

Source: Audit Scotland from EMS data

well in excess of the recommended amount which should support continued development of their estates.

- Capital expenditure (for 2006/07 –2007/08) at Heriot-Watt University and Bell College will continue at levels below the annual 'required' levels shown in Exhibit 8. Investment at the current planned level is unlikely to affect the accumulated backlogs of £96.5 million at Heriot-Watt and £19.2 million at Bell College or allow significant estate development. Heriot-Watt has plans to deal with the backlog (Exhibit 16, page 25) and will use the results from a 2006 condition and compliance survey to identify priorities, but funding all of the improvements required is a challenge.

- Three institutions (the University of Strathclyde, Napier University and Glasgow School of Art) will invest less in their estates than the recommended levels until 2008/09, after which increased levels of investment are planned. However, achieving the levels of investment forecast depends on SFC contributions over and above current known allocations of SRIF and formula LTIF. As such, alternative sources of funding will need to be used if plans are to be realised.<sup>21</sup> Edinburgh College of Art may also need to use funding from sources other than the SFC if it is to invest in the estate at the level suggested and to allow it to address its maintenance backlog and develop the estate.

- The University of Abertay did not provide sufficient information about future investment plans to allow us to comment on how its estate and backlog might develop.

43. Using this type of analysis can help institutions identify if their financial strategies will allow them to maintain and develop their

the circumstances of individual institutions and their future investment plans. Of the ten institutions where the average expenditure in 2004/05 and 2005/06 is less than 4.5 per cent of IRV:

- RSAMD's suggested 'required' investment of £3 million is high relative to its maintenance backlog of £400,000.
- Two institutions (the Universities of Stirling and St Andrews) are planning capital expenditure

21 Glasgow School of Art is eligible to apply for selective LTIF assistance which may provide some of the funding needed – see paragraph 87.

**Exhibit 8**

Maintenance backlog compared to average annual investment for 2004/05 and 2005/06

Category	Institution	Maintenance backlog (£m)	Average annual investment in estate 2004/05 to 2005/06 (£m)	Insurance replacement value (IRV) (£m)	Average annual investment as % of IRV	Annual 'required' investment for sustainable purposes (£m)
Actual expenditure exceeds 'required investment'	Queen Margaret	£8.9	£10.5	£57.3	18.2%	£2.6
	Aberdeen	£44.7	£25.0	£278.3	9.0%	£12.5
	Glasgow Caledonian	£1.2	£11.5	£160.0	7.2%	£7.2
	Glasgow	£97.0	£46.2	£725.7	6.4%	£32.7
	Dundee <sup>2</sup>	£60.0	£22.8	£371.3	6.1%	£16.7
	Robert Gordon	£0.0	£10.7	£175.5	6.1%	£7.9
Actual expenditure in line with 'required investment'	Paisley <sup>3</sup>	£29.0	£3.8	£81.0	4.6%	£3.6
	Edinburgh	£102.3	£54.8	£1,253.2	4.4%	£56.4
Actual expenditure less than 'required investment'	St Andrews	£40.0	£10.1	£239.6	4.2%	£10.8
	Stirling	£17.5	£5.5	£139.0	4.0%	£6.3
	Napier	£8.5	£5.7	£144.3	3.9%	£6.5
	Heriot-Watt	£96.5	£5.7	£163.4	3.5%	£7.4
	Strathclyde	£110.8	£14.5	£713.6	2.0%	£32.1
	Bell College	£19.2	£0.9	£45.7	1.9%	£2.1
	Edinburgh College of Art	£6.8	£0.6	£66.2	0.9%	£3.0
	Glasgow School of Art	£20.9	£0.6	£86.3	0.7%	£3.9
	Abertay	£26.2	£0.5	£84.5	0.6%	£3.8
	RSAMD	£0.4	£0.3	£66.2	0.4%	£3.0
<b>Total</b>		<b>£690.1</b>	<b>£229.4</b>	<b>£4,851</b>		<b>£218.3</b>
<b>Average</b>					<b>4.7%</b>	

## Notes:

1 Data are unavailable for SAC.

2 The value of the backlog at the University of Dundee is a provisional figure based on a building condition survey completed in early 2007.

3 The backlog figure quoted for the University of Paisley excludes £45 million replacement cost for one of its campuses deemed 'beyond recovery'.

Source: EMS data 2004/05 and 2005/06

estates and, over a period of years, can identify institutions where the condition of the estate is in danger of deteriorating. Some institutions will need to formulate realistic financial strategies to address the situation and allow them to reshape and develop their estates.

**44.** The data presented in [Exhibit 8](#) represent a snapshot of the situation for two years only. There may be valid reasons such as the phasing of funds and work programmes that cause institutions to underinvest for a short period of time. The 'annual required investment' figure represents the average to be achieved over a number of years if institutions are to be sustainable.

**It is too early to establish the impact of investment in the estate. With the additional investment planned, the effect should be evident in the next few years**

**45.** Together the SFC and institutions expect to invest £589 million on the estate over the two-year period ending March 2008, of which £223 million is from the SFC. Given the long-term nature of capital investment programmes, the impact of this funding is not yet fully reflected in the performance data. However, with the additional investment planned, we expect to see further progress being made on the quality of the estate in the next few years.

**Due to a combination of factors, the condition of the Scottish estate compares unfavourably with the UK estate**

**46.** Just under half (45 per cent) of the Scottish estate is categorised as poor or inoperable compared with 36 per cent in the UK. The situation in Scotland arises from the higher percentage of estate that is classed as condition C (operational, with

major work needed soon) and the lower percentage that is in category B (sound) ([Exhibit 9](#)).

**47.** The situation in Scotland is due to a combination of factors:

- The estate is older, with 29 per cent of internal area built pre-1940 compared to 25 per cent for the UK as a whole.
- A higher proportion of buildings are listed, accounting for a quarter of internal area compared with 15 per cent for the UK. Listed buildings are often less flexible, costly to maintain and difficult to renovate.
- Scottish institutions offer more space per student (an average of 16.0 m<sup>2</sup> per student compared with 12.3 m<sup>2</sup> for the UK). This reflects a range of factors, including the mix of activities carried out. For example, Scottish institutions conduct more research and this requires more space per student. However, it means that the funds available for capital investment are spread more thinly.
- Less income is generated per square metre (£781 per m<sup>2</sup> compared with the UK average of £949 per m<sup>2</sup>). This disparity may increase with the introduction of tuition fees in England, Wales and Northern Ireland.
- Less money is being invested in the estate. Average yearly investment in the Scottish HE estate was equivalent to 3.7 per cent of the estate's IRV between 2001/02 and 2005/06 compared to an average of 4.5 per cent for the UK.<sup>22</sup>
- There is less public sector capital funding. SFC funding

commitments for the period 2004/05 to 2007/08 are equivalent to 7.5 per cent of IRV, compared with an average of 9.7 per cent for all UK funding councils.

**48.** A recent report, commissioned by the SFC, suggests two other potential factors:<sup>23</sup>

- The large number of post-1992 institutions in Scotland which have inherited poor estates (some of which has not been designed for HE).
- The tendency in Scotland for earlier capital grants (such as Joint Research Equipment Initiative, Joint Infrastructure Fund and early SRIF) to be spent on new buildings rather than existing infrastructure, which is less likely to reduce the maintenance backlog.

**A wide range of other measures can be used to benchmark estate management**

**49.** It is important that a range of indicators are used to assess estate performance fully and allow comparison and the identification of good practice. [Part 4](#) of this report details the extent to which institutions currently make use of performance information and [Appendix 2](#) shows how institutions are performing on some measures.

**50.** The five audit bodies in the UK have developed a range of value for money indicators for use by public sector bodies to help assess performance in core business functions, including estates.<sup>24</sup> The intention was to develop a list of common indicators that will allow institutions to benchmark themselves against other sectors. In relation to estates, five primary indicators are identified for use by senior management and 11 secondary

<sup>22</sup> Earlier work in 2001 by JM Consultants calculated the 'required investment' level for the higher education estate to be 5.5 per cent at that time.

<sup>23</sup> *Future needs for capital funding in higher education*, JM Consulting, September 2006.

<sup>24</sup> *Value for money in public sector corporate services*; A joint project by the UK public sector audit agencies, May 2007, <http://www.public-audit-forum.gov.uk/performanceindicators.pdf>



**Exhibit 9**

Comparison of estate condition across the UK, 2005/06

Condition of estate <sup>1</sup>	Scotland %	England %	Wales %	N Ireland %	UK average %
in condition A (as new)	16	14	6	9	14
in condition B (sound)	39	52	54	61	50
in condition C (operational but major repair needed soon)	42	31	39	28	33
in condition D (inoperable or serious risk of failure/breakdown)	3	3	1	2	3
<b>Total A and B</b>	<b>55</b>	<b>66</b>	<b>60</b>	<b>70</b>	<b>64</b>
<b>Total C and D</b>	<b>45</b>	<b>34</b>	<b>40</b>	<b>30</b>	<b>36</b>

Note: 1 Based on Royal Institution of Chartered Surveyors (RICS) classification.

Source: Data from EMS (weighted by Gross Internal Area (GIA)), based on all institutions replying in 2005/06

indicators are identified for use by operational managers (Exhibit 10, overleaf).

**51.** These indicators provide a core set of measures that could be used for benchmarking across the sector, although some may need to be developed to reflect the specific requirements of the HE sector. The EMS dataset has over 200 performance indicators and this could provide the basis for developing a smaller core set of indicators for the HE sector which should cover:

- financial indicators
- space-use indicators
- fit-for-purpose indicators
- environmental indicators.

**52.** In the remainder of this section, we consider some further indicators that might merit inclusion in the core set of indicators.

Some institutions may have difficulties in financing investment in their estates

**53.** Some of the financial indicators already used by institutions include (see Appendix 2 for full details):

- property costs per square metre: this ranges from £44 per m<sup>2</sup> at Edinburgh College of Art to £123 per m<sup>2</sup> at the University of Edinburgh
- property costs per student: this ranges from £530 per full-time equivalent (FTE) student at Glasgow Caledonian University to £3,129 per FTE student at the University of Edinburgh
- capital expenditure as a percentage of income: this ranges from under one per cent at Abertay to 42 per cent at Queen Margaret University (QMU). If QMU is excluded, the maximum figure is 16 per cent at the University of Glasgow.

**54.** Further indicators currently being considered by the SFC include the 'CE/CP ratio' (cost of equity to the cost of production) (see below). This compares the IRV of the estate (cost of equity) with the level of income (cost of production).

$$\text{CE/CP ratio} = \frac{\text{Insured replacement value of the estate (IRV)}}{\text{Level of income}}$$

**55.** The resulting figure gives an indication of how efficiently the estate is used, although other factors must also be considered. For example, IRV will be affected by the presence of listed buildings, by property prices and by the method used to determine IRV.

**56.** A high CE/CP ratio could indicate that an institution might not have sufficient capacity to maintain its infrastructure as the value of the estate is high relative to income. In general, a low CE/CP ratio will indicate more efficient use of assets, although institutions with low CE/CP ratios may need to consider whether they are investing enough in their estates. Individual circumstances must be taken into account.

## Exhibit 10

### Suggested value for money indicators for the estates function

Primary indicators	
1	Total property costs (occupancy, operational and management) per square metre.
2	Total accommodation (square metre) per staff (FTE).
3	Total property maintenance backlog as a percentage of average annual maintenance spend for the last three years.
4	<p>Commissioner and user satisfaction index – a composite indicator compiled from the responses to a set of statements by commissioners and users.</p> <p><b>Commissioner statements:</b></p> <ul style="list-style-type: none"> <li>• <i>The property management function supports the overall objectives of the organisation.</i></li> <li>• <i>The property management function manages maintenance and capital programmes effectively (on time, budget and specification).</i></li> <li>• <i>The property management function helps the organisation to make best use of its accommodation.</i></li> <li>• <i>The property management function helps the organisation to reduce energy and water consumption.</i></li> <li>• <i>The property management function provides value for money.</i></li> </ul> <p><b>User statements:</b></p> <ul style="list-style-type: none"> <li>• <i>The buildings/offices are easily accessible for staff, service users and visitors.</i></li> <li>• <i>The buildings/offices are appropriate for my needs.</i></li> <li>• <i>The buildings/offices are appropriate for service users'/visitors' needs.</i></li> <li>• <i>The buildings/offices are appropriately secured to protect people and property.</i></li> <li>• <i>There is a clear point of contact for any building or accommodation-related queries.</i></li> </ul>
5	<p>Management practice indicator – the number of practices that have been adopted by the organisation out of a possible total of ten.</p> <p><i>For the last financial year, planned property maintenance costs equate to 60 per cent or more of total property maintenance costs.</i></p> <p><i>There is a formal environmental management system in place covering all significant administrative buildings.</i></p> <p><i>The organisation has the ability to 'zone' buildings in terms of heating to reduce energy consumption.</i></p> <p><i>A comprehensive professional development programme is in place for professionally qualified property management staff which ensures that they receive at least five days of continuing professional development (relevant accredited training) per annum.</i></p> <p><i>The officer responsible for Property Services reports directly to a member of the Executive/Corporate Management Team and there is an identified individual at board/cabinet level with responsibility for the estate.</i></p> <p><i>The organisation has clear and well-publicised arrangements for staff who have property-related queries, and all queries are logged and monitored.</i></p> <p><i>Staff and user 'built environment' satisfaction surveys are undertaken at least annually and the results published and developed into an action plan which is monitored and regularly reviewed.</i></p> <p><i>Surveys of the estate in relation to sufficiency, suitability, condition and costs have been carried out in the last five years and inform the capital strategy and plan, and these are updated according to risk.</i></p> <p><i>The organisation does not allocate individual 'owned' desks to staff who work in the office less than 50 per cent of their time, and regularly monitors workstation utilisation.</i></p> <p><i>The organisation has undertaken an assessment of property requirements across the organisation within the last three years and has identified property that is either currently surplus to requirements or will become surplus within the next three years, and has a plan agreed by the board/cabinet to address this surplus.</i></p>

**Exhibit 10 continued**

Secondary indicators	
1	Cost of the organisation's estate management function <i>a) per square metre</i> <i>b) as a percentage of organisational running costs.</i>
2	Total property occupancy/ownership costs (revenue) per square metre.
3	Total building operation (revenue) costs per square metre.
4	Percentage of property-related capital projects completed within the last three years <i>a) within the project budget</i> <i>b) within the timetable</i> <i>c) within project budget and timetable.</i>
5	Space use efficiency: <i>a) workstations per full-time equivalent staff (FTE)</i> <i>b) area (square metres) per workstation.</i>
6	Average annual property capital expenditure over the last five years per square metre (GIA).
7	Total annual energy consumption (kw/h) per square metre.
8	Total annual water consumption (cubic metre) per square metre.
9	Net internal area (square metre) of accommodation over gross internal (square metre).
10	Percentage of solid waste that is recycled.
11	The percentage of buildings which are used by the public in which all public areas are suitable for, and accessible to, disabled people.

Source: *Value for money in public sector corporate services*; A joint project by the UK public sector audit agencies, May 2007

**57.** For the Scottish estate as a whole, the CE/CP ratio is 2.6, but there is considerable variation across the sector ([Exhibit 11, overleaf](#)). A recent report suggested that a CE/CP ratio of 2.0 to 2.5 is appropriate, with research-intensive institutions expected to be at the higher end of this range.<sup>25</sup>

**58.** Our analysis identifies five institutions with CE/CP ratios well in excess of the recommended range, indicating that they might have difficulties in financing investment in their estates. All three SSIs are included in this category. They tend to have higher ratios because of their small size and the specialist nature of their premises. For the University of Edinburgh the ratio is likely to reflect

the high value of their assets resulting from a combination of high-quality research facilities and a significant number of listed buildings. For the University of Strathclyde, the insured value of the estate is high compared with other city centre institutions, but the university's plans to reshape and rationalise the estate should help address this.

**59.** At the other end of the scale, institutions with very low CE/CP ratios may not be investing enough in their estate. Intensive use of capital may indicate good estate management, but can also be an indicator of a poor-quality estate.

**60.** Poor-quality estates may affect student experiences and the quality of teaching and research. However,

there is a lack of substantive evidence on the impact that estate quality has on student and staff experiences and the quality of learning in Scotland. The SFC has commissioned some research on this, for example the Spaces for Learning report, and post-project evaluations planned by the SFC will provide further insight, but this is an important area for potential future research.

Space use varies significantly across institutions and the Scottish average of 24 per cent is slightly lower than the UK average of 26 per cent

**61.** Over the past few years, institutions have focused on use of space (referred to as space utilisation within the sector) as an important efficiency indicator, with support from various initiatives undertaken through

## Exhibit 11

CE/CP ratios for institutions, 2005/06

Institution	CE/CP ratio (non-residential estate)
Royal Scottish Academy of Music & Drama	6.6
Glasgow School of Art	5.6
Edinburgh College of Art	4.6
University of Strathclyde	3.9
University of Edinburgh	3.1
University of Abertay	2.7
University of St Andrews	2.5
Robert Gordon University	2.4
University of Glasgow	2.4
Bell College of Higher Education	2.4
University of Dundee	2.3
Queen Margaret University College	2.3
Napier University	1.9
University of Aberdeen	1.9
University of Stirling	1.9
Heriot-Watt University	1.8
Glasgow Caledonian University	1.7
University of Paisley	1.4
<b>Scottish Average</b>	<b>2.6</b>
<b>UK Average</b>	<b>2.2</b>

Note: Scotland figure excludes Glasgow Caledonian University for which data are unavailable.

Source: Audit Scotland, based on EMS data

the Space Management Group.<sup>26</sup> The 2006 EMS report states that: *'The most effective way of reducing environmental impact per student is through improved space efficiency, space being probably the biggest environmental driver of all.'*

**62.** Good estate management helps improve space use by creating more flexible teaching spaces and identifying inefficiently used space for disposal or refurbishment. Space use is calculated by taking into account

how frequently a teaching space is used and the occupancy level of that space when it is in use. For example, if a room is used for half the amount of time that it could be used it will have a frequency rate of 50 per cent. If the room is used at half its capacity it would have an occupancy rate of 50 per cent. Together this results in space use of 25 per cent.

**63.** Various space use targets have been suggested in the past for institutions – typically in the range of 30 per cent or more. Space use in Scottish institutions has increased from 21 per cent in 2001/02 to 24 per cent in 2005/06 but it is still slightly lower than the UK average of 26 per cent.<sup>27</sup> Space use varies considerably between institutions (Exhibit 12).

**64.** The SFC is encouraging institutions to identify space efficiency targets within their estate strategies and expects better use of space to help deliver the savings required through the Efficient Government initiative.

**65.** Institutions can use space charging schemes to encourage departments to consider their space needs. Seven Scottish institutions use a space charging scheme at present to try and encourage better space use. Details for two of these schemes are provided in the good practice box on page 19.

Seventy-three per cent of the Scottish estate is rated as being suitable for its current purpose

**66.** Fit-for-purpose indicators are useful in assessing the effectiveness of existing assets. A building may have no maintenance backlog but still be unsuitable for its current use. Again, this reinforces the need to consider a range of indicators when assessing estate performance.

<sup>26</sup> The Space Management Group offers a range of support to estate directors to manage their space efficiently and sustainably. The SFC is involved in and part funds this group.

<sup>27</sup> IPD data from EMS. This is an average for core teaching space only using weighted data for NIA, based on 16 institutions in Scotland and 122 UK institutions (excludes Abertay and Heriot-Watt in Scotland).

**67.** The EMS dataset contains a measure of fit for purpose referred to as 'functional suitability', which is defined using a 1-4 grading scale, with 1 being excellent and 4 being poor.<sup>28</sup> This is based on self-assessment so is a rather subjective measure. The amount of space rated as excellent or good across the Scottish estate was 73 per cent in 2005/06 compared to 70 per cent in 2001/02.<sup>29</sup> There is considerable variation among Scottish institutions although, overall, the Scottish sector performs similarly to the UK sector, with 74 per cent rated as excellent or good for the UK as a whole.

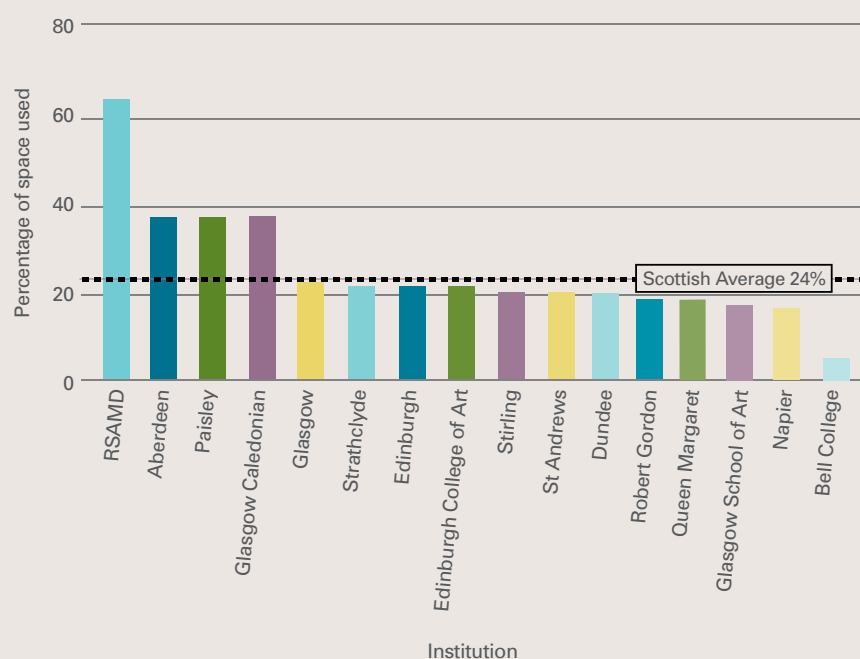
**68.** Five per cent of the Scottish estate is classed as poor, meaning it is unsuitable for its current function (Exhibit 13, overleaf).<sup>30</sup> However, this average figure is affected by the very high level of poor space identified at Glasgow School of Art (34 per cent). Excluding this institution reduces the overall figure to four per cent, but there is scope to improve performance on this measure, especially in some SSIs where 18 per cent of the estate overall is classed as poor.

#### Progress towards environmental sustainability is mixed

**69.** Environmental sustainability is an increasingly important aspect in assessing estate performance. The Scottish Executive announced in February 2007 that it was extending its Central Energy Efficiency Fund to cover higher and further education, making £4 million available to support the sector in improving energy efficiency. A range of measures for environmental monitoring was recently introduced into the EMS dataset covering water and energy consumption, energy emissions and recycling.

### Exhibit 12

#### Space use across institutions, 2005/06



Source: EMS data on core teaching space for 2005/06. Comparable data unavailable for Abertay and Heriot-Watt, but partial audits at Heriot-Watt suggest utilisation rates of 22-26 per cent.

### Good practice examples of space-charging schemes

#### University of Edinburgh

A space trading scheme has been in place since 2002.

The scheme is based on an annual space audit. Departments receive payment if they give up space and are charged for having extra space. Reports are sent to schools on their space use to reinforce the importance of the issue. Bookings for centrally bookable space are monitored and, (although this sanction is not currently used), schools can be fined for booking space that is not used.

From 2001/02 to 2005/06, space use increased from 17 per cent to 22 per cent.

#### Glasgow Caledonian University

The scheme has been in place since 1998. The university calculates the amount of space owned by each department using a room management system and this is then used to identify the proportion of the accommodation overhead that is charged to departments. The overhead includes utility costs, cleaning and maintenance costs. Shared teaching facilities are also charged for, with the amount charged based on measured use.

Space use over the period 2001/02 to 2005/06 is well above the average for the sector – averaging 35 per cent for Glasgow Caledonian.

28 1 = excellent. The space fully supports its current function.

2 = good. The space provides a good environment for current function in all or most respects.

3 = fair. The space provides a reasonable environment for current functions in many respects, but has a number of shortfalls.

4 = poor. The space fails to support current functions and/or is unsuitable for current use.

29 Data for QMU and Bell College are not available.

30 Weighted data to take account of GIA.

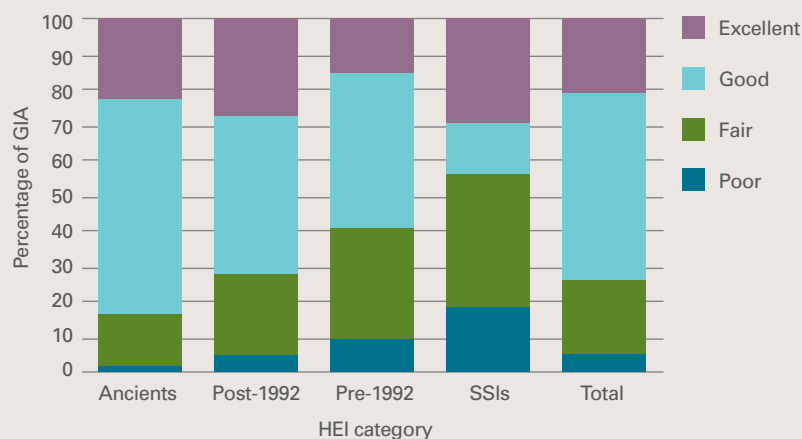
**70.** The data show considerable variation in performance across institutions. Some of the variation is explained by the different types of courses offered, with science courses requiring much higher energy use. The data also currently include the residential estate on some measures, which complicates comparisons among institutions.

**71.** The evidence collected during our survey of institutions suggests that progress towards environmental sustainability is mixed across institutions. Some institutions are clearly in the very early stages of developing approaches to improve environmental sustainability; one institution stated *“our environmental sustainability programme is limited to general energy management and waste paper recycling at each campus”* while another stated *“we have not yet done anything that I would consider to be leading edge.”* Others have identified projects to improve environmental sustainability. Green transport policies are common, but there are fewer mentions across the sector of building designs that include features such as rainwater reclamation, maintenance-free and recyclable building materials or energy-efficient heating systems. However, the new campus for QMU at Musselburgh will be one of the most environmentally-sustainable developments of its kind as well as providing quality facilities for teaching, learning and research. It has received a BREEAM excellent rating (Exhibit 16, page 25).<sup>31</sup>

**72.** At this stage it is too early to comment on performance of environmental sustainability but, given the importance of the issue, measures for environmental sustainability should be developed further and used to benchmark performance across the sector.

### Exhibit 13

#### Functional suitability across institutions, 2005/06



Source: EMS data 2005/06. QMU and Bell College are excluded from the total and pre-1992 groups

### Recommendations

**73.** The SFC should undertake further research to better understand the role of the estate in influencing outcomes such as student experience or the attraction of international students and research funding.

**74.** The SFC and institutions should work together to:

- make greater use of EMS and other data to measure the impact of public sector capital funding on the HE estate and to focus attention on areas for improvement
- agree a small core set of indicators that will be reviewed regularly at an institutional and sector level.

**75.** Institutions should develop realistic financial plans to support their estate strategies.

# Part 3. The role of the Scottish Funding Council

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The SFC has an important role to play in ensuring that public funds are used to meet key national priorities.

## Key messages

- The SFC has an important role to play in ensuring that public funds are used to meet key national priorities.
- The majority of funding for capital expenditure is distributed using a formula. Combined with the use of broad assessment criteria for SRIF and LTIF, this means that it is difficult to assess whether key national priorities are being met.
- The SFC should carry out a comprehensive evaluation of estate management performance across the sector and report this publicly.
- Recent SFC initiatives will add to the strategic support it provides for estate management.

### The SFC sets the overall strategy for the HE sector

**76.** The Scottish Executive sets the overall policy direction for the HE sector and provides funding to support its priorities. The SFC distributes public sector funds to institutions and sets out the strategy to implement this policy in its corporate plan ([Exhibit 14](#)).<sup>32</sup> Institutions combine public sector funding and funds from other sources to deliver higher education.

**77.** Individual institutions are responsible for the delivery of the strategy as detailed in the Financial Memorandum between the SFC and each institution. This Financial Memorandum also requires the governing bodies of institutions to ensure that funding is used for its intended purpose. Failure to comply with these terms can, in principle, lead to funding being withheld.

**78.** Although institutions are autonomous bodies, the SFC is accountable for the public funding that it distributes and has a duty to ensure that this funding supports Scottish Executive and SFC priorities.

**79.** In its corporate plan for 2006-2009, the SFC outlines its aims and objectives for the higher education sector ([Exhibit 15, overleaf](#)).

**80.** Objectives relating to the HE estate are covered by the seventh aim. Five objectives support this aim, two of which relate specifically to the higher and further education estate. The objectives for the HE estate identify the need for:

- high-quality buildings, facilities and equipment
- sustainable investment and development.

**81.** In support of its estate development objectives, the SFC:

- offers funding through SRIF and LTIF. Conditions are attached to the funding and the SFC can reclaim funding if institutions do not comply with the conditions set
- provides guidance to support estate management.

### Most of the funds available for developing estates are allocated on the basis of a formula

**82.** SRIF funding is allocated to institutions using a formula which takes account of the external research income of the institution and its research grant from the SFC. Most LTIF funding (with exception of selective LTIF - see paragraph 87) is also allocated using a formula, based on the main teaching grant received by institutions. Institutions provide details to the SFC of how they intend to use their funding allocations and the SFC assesses these proposals against set criteria.

**83.** The formula funding approach has a number of benefits. The allocation process is easily understood and encourages individual institutions to take responsibility for managing their estates effectively. It also ensures that all institutions will receive some capital funding and allows institutions to predict with some certainty the amount that they will receive. This helps with forward planning over the Executive's three-year spending review cycle and allows institutions to plan more strategically rather than on a project-by-project basis. It can also improve value for money by allowing institutions to take forward related projects at the same time.

### The formula approach, combined with broad criteria for SRIF and LTIF funding, makes it difficult to assess whether key national priorities are being met

**84.** Institutions must spend their SRIF allocations in accordance with criteria set by the OSI. LTIF criteria are developed by the SFC. The criteria attached to both SRIF and LTIF funding by the SFC and OSI allow a wide range of uses ([Appendix 5](#)).

**85.** The criteria for SRIF and LTIF funding reflect OSI and Scottish Executive priorities and the funding can be used for a wide range of purposes. However, the formula approach, combined with broad criteria for SRIF and LTIF funding, means it is difficult to assess whether national priorities are being met. For example:

- Collaborating to jointly develop facilities is one way by which the sector could support the delivery of the Efficient Government initiative.<sup>33</sup> Promoting collaborative partnerships between institutions leading to shared use of buildings, facilities or major items of capital equipment is an aim of SRIF funding, with incentives offered in the form of reduced institutional contributions. In

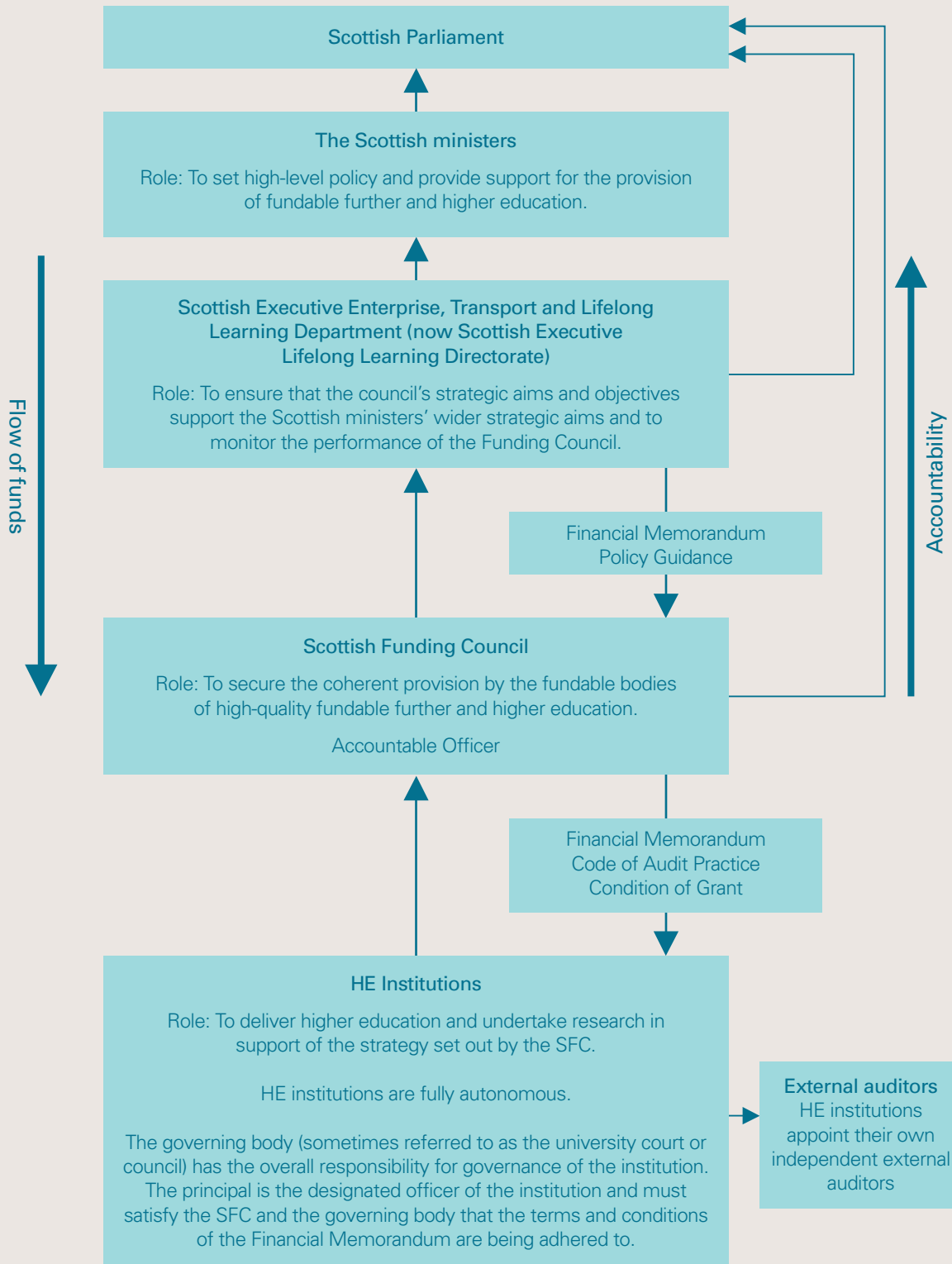
<sup>32</sup> [http://www.sfc.ac.uk/publications/SFC\\_Corporate\\_Plan\\_2006-09.pdf](http://www.sfc.ac.uk/publications/SFC_Corporate_Plan_2006-09.pdf)

<sup>33</sup> By 2007-08, annual savings of £10 million are planned through better use of the FE and HE estates.



**Exhibit 14**

Accountability in higher education, 2005/06



## Exhibit 15

### SFC corporate plan aims:

- 1 Scotland's colleges and universities to offer – within the total volume of learning set by Scottish ministers – fair access to a diverse range of learning programmes suited to individual learners' circumstances.
- 2 Learning provision and programmes offered by Scotland's colleges and universities to be relevant to students' lives and careers, society and the economy.
- 3 All learning provision and programmes offered by colleges and universities to be of a high-quality.
- 4 Scotland's universities to provide a high-quality and internationally competitive research base.
- 5 Scotland's colleges and universities to generate effective knowledge exchange that stimulates innovation and development in public and private sector organisations and enterprises.
- 6 Colleges and universities to support Scotland's international ambitions.
- 7 Scotland's colleges, universities and Funding Council to be highly effective, world-class organisations.

### Corporate plan cross-cutting themes

Developing the economy.

Contributing to the development of communities, cities and regions.

Promoting excellence and international competitiveness.

Promoting greater coherence.

Listening to the views of learners.

Promoting equality of opportunity.

Encouraging sustainability and sustainable development.

Source: SFC corporate plan 2006-09

## Good practice: Community use and access

### Robert Gordon University

The Garthdee campus contains a health centre and nursery both of which allow community and university use. The health centre is leased by the university to NHS Grampian and the nursery is leased to a commercial provider.

### University of Strathclyde

The Centre for Lifelong Learning is available to the community at weekends and in the evening, providing a range of learning opportunities.

### University of Aberdeen

The university is jointly developing a regional sports centre with sportscotland and Aberdeen City Council to provide facilities for the north of Scotland. Funding is being provided by all three partners and the council has provided the land for the development.

a sample of over 100 projects receiving SRIF funding since 2002, less than two per cent involve collaboration with a partner in developing joint facilities. However, once completed, many of the facilities may be used collaboratively. An evaluation of 15 Scottish projects in receipt of SRIF funding between 2002 and 2004 suggests that the SRIF funding promoted subsequent collaboration or strengthened existing collaborations but there is little evidence that the funding was awarded to projects where other organisations were involved in the project during development.<sup>34</sup> Development is almost always led by a single institution. Joint procurement of equipment is more common. Based on information provided by HEFCE, it is estimated that around £10 million of the SRIF money coming to Scotland each year is used for equipment which is procured on a collaborative basis.

- Capital funding for higher education also contributes to the delivery of a number of other cross-cutting Executive priorities such as community use and access. Allowing the community access to HE facilities ensures better use of these facilities and contributes to the development of communities, cities and regions – one of the cross-cutting themes identified in the SFC's corporate plan. Where institutions report some community use of their facilities, this is often in terms of general public access for social, sport or other recreational use. There are fewer instances of shared use of other facilities by the local community and students and staff (see good practice example, left).

**86.** A more rigorous assessment process with tighter criteria would allow the SFC to ensure its funding meets key national priorities and that benefits from the investment are maximised.

### Selective LTIF funding more clearly demonstrates collaboration, sustainability and improved capital efficiency

**87.** After consultation with the HE sector, the SFC decided to retain a small proportion of its LTIF allocation (£20 million for the period 2006/07 to 2007/08) for selective allocation to institutions to support strategically important projects. Seven institutions are eligible to apply for this selective assistance.<sup>35</sup> To access the funding, institutions must submit a detailed business case for scrutiny by the SFC's Capital Investment Committee. The projects supported by selective (non-formula) LTIF show a clearer link to SFC priorities and this funding has been used to facilitate collaboration between the higher and further education sectors.

**88.** Up to March 2007, three projects were allocated funding of £18.7 million from the total allocation of £20 million. These projects will deliver key benefits for the sector in line with the SFC's priorities to improve capital efficiency and sustainability or promote collaborative investment. [Exhibit 16](#) gives details about two of the projects, one of which demonstrates collaboration between the higher and further education sectors.

### There is no publicly reported comprehensive evaluation of the impact of capital funding on the HE estate

**89.** The SFC collects information that could be used to assess expenditure by institutions across key priorities

## Exhibit 16

### Expected benefits arising from two projects approved for selective LTIF funding

Projects	Benefits expected:
<p>Development of a new campus for Queen Margaret University.</p> <p>Cost = £75 million</p> <p>Contribution from selective LTIF = £7.5 million</p>	<p>Campus size will reduce from the current 33,000 square metres to 23,700 square metres – a saving of 28 per cent.</p> <p>Space use is expected to increase from the current 18 per cent to 40-50 per cent for general teaching space and around 35 per cent for specialist spaces such as laboratories.</p> <p>Maintenance costs are expected to reduce by £230,000 per year (16 per cent).</p> <p>Utility costs are expected to reduce by £240,000 per year (44 per cent).</p> <p>Overall annual savings of just under £500,000 are anticipated.</p>
<p>Development of a joint campus in the Borders between Heriot-Watt University and Borders College.</p> <p>Cost = £31 million</p> <p>Contribution from selective LTIF = £5.2 million</p> <p>Other SFC contributions = £16.2 million</p>	<p>The development will allow cost-effective delivery of tertiary education in a rural location. Operating costs are expected to reduce and space use to increase. A feasibility study is being carried out to identify the likely impact on costs and space use.</p>

Source: The SFC and institutions

and cross-cutting themes. The SFC collates and analyses this information for internal purposes, but there is no public reporting of capital investment activity across the sector or its impact. This makes it difficult to assess the extent to which public sector funds are supporting key national priorities or achieving the outcomes intended.

**90.** In part this is due to the relatively recent introduction of SRIF and LTIF funding. A review of SRIF funding from 2004/05 to 2005/06 will be published later in 2007 and evaluations of selective LTIF projects will also be produced after their

completion. More frequent public reporting of progress is needed so that the SFC can demonstrate the impact of its investment on the quality of the estate. This information could also help inform the future delivery of capital funding by allowing the funding to be channelled to where it has most potential impact.

<sup>35</sup> There are seven projects eligible for selective LTIF; the two identified at Exhibit 16 and projects at the Glasgow School of Art, Paisley University Ayr campus, Bell College Hamilton campus, Crichton Campus in Dumfries and the University of Abertay. Criteria were set out in Annex A of a letter originating from the SFC dated 12 July 2006.

### The SFC has committed to assessing the impact of capital investment in its corporate plan, but more can be done to assess estate management performance

**91.** In its corporate plan, the SFC identifies two high-level measures it will use to assess the impact of capital investment on the HE estate:

- **The overall condition of the estate** in Scotland's institutions showing the percentage of gross internal area which falls under the headings of 'as new' (RICS condition A) and 'sound' (RICS condition B).
- **The total value of the backlog in estates maintenance** across all institutions compared to the value of annual investment and the level of investment required for sustainable purposes.

**92.** An evaluation of progress will be published annually from 2007 onwards by the SFC for these and other measures in its performance management framework.

**93.** The commitments given in the corporate plan are a useful starting point for monitoring the sustainability of Scotland's HE estate. However, the SFC has yet to decide how it will evaluate performance on the total value of the backlog maintenance and this is subject to further discussion.

**94.** Other measures are also used or planned. The SFC already reports progress on the financial sustainability of the estate to the Funders Forum and to institutions and makes certain information available on its website.<sup>36</sup> However, this analysis comments on the sustainability of the whole estate, and so will need to be further developed if it is to show the impact of public funding which is targeted solely at the non-residential estate. The SFC periodically

reviews the condition of the estate when preparing Spending Review submissions and used this approach, for example, when developing the case for selective LTIF funding. The JM Consulting report referred to earlier was commissioned as part of this process and offers an insight into the condition of the Scottish estate. However, further reporting of project-based data and EMS data should be undertaken to outline progress for the sector as a whole to a wider audience than the SFC itself.

**95.** The SFC could develop a small core set of indicators from EMS that includes:

- financial indicators to demonstrate the efficient use of assets
- space-use indicators to identify how efficiently space is used
- fit-for-purpose indicators to demonstrate the effectiveness of assets
- environmental indicators, such as water and energy use, to reflect green issues.

**96.** The indicators included in [Part 2](#) cover all of these areas and would provide a useful starting point for regular and comprehensive reporting of performance across the sector. As the analysis will rely heavily on EMS data, it is vital that the EMS dataset is complete, accurate and timely.

### The SFC is providing more strategic support

The SFC has recently issued revised guidance on estate strategies

**97.** When dedicated capital funding was introduced in 2001/02, the SFC asked institutions to submit applications for funding in line with their estate strategies. Where estate strategies are available to the SFC, they are now reviewed to ensure that

the funding provided will be used to meet the institutions key objectives. However, not all institutions have kept their estate strategies up to date. In its newly revised guidance on developing estate strategies for the further and higher education sectors, the SFC states that it will adopt a more rigorous approach to reviewing estate strategies.<sup>37</sup> For example:

- all institutions are asked to update their estate strategies by the end of 2007, unless they have submitted an updated strategy in the last two years
- institutions are to submit a brief summary update to the SFC by November each year and to refresh their strategy every five years
- the new guidance includes an estate strategy evaluation summary which the SFC will use to review updated estate strategies.

**98.** By adopting a more rigorous approach to reviewing estate management strategies, the SFC will be in a better position to monitor progress and identify opportunities for collaboration and sharing between institutions and other partners.

**99.** It is important when evaluating estate strategies that the SFC identifies areas for improvement in estate management at individual institutions. For example, the SFC is keen to encourage institutions to improve their scrutiny of estate management through the use of performance information and the revised estate strategy guidance recommends the inclusion of a range of key performance indicators in institutions' estate strategies.

<sup>36</sup> The Funders Forum includes representatives from the HE sector, government departments, funding councils, charities, industry, Research Councils and Regional Development Agencies.

<sup>37</sup> At [www.sfc.ac.uk/information/info\\_funding.htm](http://www.sfc.ac.uk/information/info_funding.htm). The SFC plans to run workshop sessions in 2007 to support the new guidelines.

### The SFC supports good practice

**100.** The SFC supplements the work undertaken by organisations such as the Scottish Association of University Directors of Estates (SAUDE) to ensure that innovative and good practice is publicised and implemented across the sector as quickly as possible. Approaches used include the annual spring conference for the further and higher education sector; involvement in groups such as the Space Management Group; and funding the EMS dataset. Looking to the future, the SFC intends to conduct a project evaluation of the Borders joint campus co-location project ([Exhibit 16, page 25](#)). These all represent useful initiatives to allow the SFC to evaluate the outcomes of its activities and share them with the sector.

**101.** The SFC can also play an important role by supporting the HE sector to deal with emerging issues. Compliance with legislation is one recent issue where the SFC has sought to help institutions understand their responsibilities.

### Recommendations

**102.** The SFC should:

- report publicly on capital funding for the higher education estate, demonstrating the link between funding and national priorities
- continue to ensure that SRIF and LTIF programmes work together to maximise the impact of the funding on the estate
- continue to promote good practice and provide guidance and ensure that this is followed
- encourage institutions to improve their scrutiny and reporting of estate-related performance.

# Part 4. Estate management in higher education institutions

PHOTO REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES

Some institutions have systems in place to support effective estate management, but good practice needs to be adopted across the sector as a whole.

PHOTO REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES

## Key messages

- Most institutions are currently reviewing their estate strategies to submit revised strategies to the SFC by the end of 2007. However, capital development planning is made difficult by uncertainty over long-term public funding.
- Although extensive information on the HE estate is available, it is not used effectively in management reporting.
- Some institutions have systems in place to support effective estate management, but good practice needs to be adopted across the sector as a whole.

**103.** This part of the report reviews estate management in institutions. It examines the:

- use of estate strategies and capital development plans
- use of information on the estate
- systems in place to deliver estate management in institutions.

**104.** Institutions are fully autonomous, answerable to their governing body for all decisions affecting the institution. Decisions on estate management are subject to approval by the governing body and Senior Management Team (SMT). The principal and other members of the SMT are often represented on the governing body.

## Most institutions are in the process of revising their estate strategies

**105.** Three institutions have already submitted estate strategies to the SFC in line with the latest guidance. Another 14 intend to revise their strategies and submit them to the SFC during 2007, but two institutions have indicated that their revised strategy will not be complete before 2008 (Exhibit 17).

## Exhibit 17

### Institutions' estate strategies

Two institutions will not submit a revised estate strategy before 2008

Institution	Current estate strategy ends in...	New estate strategy will be available in...
<b>Heriot-Watt University</b>	<b>Not provided</b>	<b>2008</b>
University of Stirling	2005	2007
Edinburgh College of Art	2006	2007
University of Aberdeen	2007	2007
Bell College	2007	2007
University of Glasgow	2007	Masterplan submitted and evaluated in 2007
RSAMD	2007	2007
Glasgow School of Art	2009	Under development
University of Dundee	2009	2007
University of Abertay	2010	2007
<b>University of Paisley</b>	<b>2014</b>	<b>2008</b>
Robert Gordon University	2014	Masterplan submitted and evaluated in 2006
University of Strathclyde	2014	Annual updates
University of Edinburgh	2015	Strategy submitted and evaluated in 2006
Glasgow Caledonian University	2015	2007
Napier University	2016	2007
Queen Margaret University	2007	2007
University of St Andrews	2027	Annual updates with full review as needed

Note: The Relocate project was the working estate strategy for QMU. SAC is not included as it is not SFC-funded.

Source: Audit Scotland

**106.** Estate strategies are designed to be flexible to allow institutions to adapt their plans in line with changing conditions and opportunities. They are supported by capital development plans which show how building and maintenance projects will be taken forward and financed. Capital

development plans are complex documents. For example, the capital development programmes at:

- the University of Stirling identifies 54 projects currently underway or planned, with budget figures totalling £74.5 million up to 2013

- the University of Edinburgh contains details of investments to a total value of £326 million, covering 79 current and future projects for the period 2004/05 to 2008/09
- the University of Dundee has a value of £242 million covering 85 projects for completion by 2013, with a further 37 awaiting approval.

### Capital development planning is made difficult by uncertainty over long-term public funding

**107.** The provision of funds specifically for capital investment allows institutions to focus on their infrastructure requirements. However, long-term financial planning is made difficult by three-year public spending commitments as capital projects often have significantly longer lead times (see case study below for the Jordanhill campus).

**108.** Institutions deal with the uncertainty created by the three-year spending cycle in different ways. Some have assumed that funding will be available from the public sector beyond 2008, when the current programme ends; others assume no future public sector funding. There are risks in both approaches:

- When funding is assumed to continue, projects may be developed through the design and approval stage. This initial expenditure may be wasted if the funding does not materialise.
- When funding is assumed to cease, preparatory work on new projects is not undertaken. This delays progress if the funding then becomes available.

**109.** A clearer indication of future public funding for capital programmes for a longer period would reduce the risks and the inefficiencies

that result and help institutions with their strategic planning. For example, through the Strategic Waste Fund, indicative funding has been allocated for distribution to Scottish local authorities up to 2020 for infrastructure investments, providing assurance about the future availability of funds to support planned waste management projects in an area where long-term strategic planning is critical.<sup>38</sup>

### Good estate management requires detailed information about the estate

**110.** Most estates departments use performance information to monitor the quality of the estate. The EMS dataset is one of the key sources used. In 2005/06 it covered 18 Scottish institutions (SAC is excluded). However, coverage was less comprehensive for earlier years, making it difficult to monitor patterns over time. Also, although all SFC-funded institutions submitted data in 2005/06, there are some important gaps in coverage for certain indicators and some differences in the ways that institutions define and measure certain data. It is important that this dataset is well maintained and accurate to ensure that it can be used effectively in the future.

**111.** Building condition surveys are another important source of information on the quality of the estate and help ensure that data submitted to EMS are accurate. Both Bell College and the University of Stirling conducted surveys in 2006, updating their assessment of their maintenance backlogs and highlighting the value of such information in providing an accurate assessment of estate condition. Guidance from the SFC suggests that building condition surveys are kept up to date.<sup>39</sup> Most institutions (11) completed a building condition survey on at least part of their estate in the last five years, and six others

### Case study – development of the Jordanhill campus by the University of Strathclyde

The University of Strathclyde acquired the Jordanhill College of Education in 1993, which then became the Faculty of Education. It was decided to move to a single campus in 2004. The process will be completed in 2010 when the Faculty relocates to a new building on the John Anderson campus.

Date	Event
2004	Decision made to consider move to a single campus.
2005	Options considered by University Steering Group.
2006	Court agrees in principle to relocate to a single campus and to dispose of Jordanhill campus.
2007	Glasgow City Council approved plans for Jordanhill campus. Building size and detailed specification agreed for new site.
2008	Sale and development of Jordanhill campus. Planning construction procurement for new site.
2009	Construction and fit out of new building.
2010	Vacation of Jordanhill campus and occupation of new building.

<sup>38</sup> *Building a Better Scotland – Infrastructure Investment Plan: Investing in the Future of Scotland*, Scottish Executive, 2005.

<sup>39</sup> [www.sfc.ac.uk/information/info\\_funding.htm](http://www.sfc.ac.uk/information/info_funding.htm)



are currently carrying one out or plan to do so in 2008 (Appendix 2). QMU is likely to formalise plans for survey work after its move to the new campus in 2007 and RGU will undertake a rolling programme of updated building condition surveys as part of its Masterplan programme.

**112.** In general, institutions with plans to repeat building condition surveys state they will repeat them every seven to eight years.

### Institutions could make better use of information about the condition of the estate

**113.** A few institutions are already making use of performance indicators to monitor the performance of their estates. The University of Edinburgh has a section on performance assessment in its current estate strategy and a few others publish information about their estate on their websites (Exhibit 18).

**114.** Most estates departments (18) already make some use of a range of indicators about the quality of the estate. This could form a basis for better performance reporting to their SMT and governing bodies. Appendix 6 identifies the number of institutions currently using each of the core indicators identified in the EMS dataset. Exhibit 19, overleaf, shows the five indicators used most commonly by estates departments and reported at least occasionally to the governing body. In most cases, it is not clear why certain measures are used by estates departments and how relevant they are to the overall aims of the institution.

**115.** Management scrutiny of the performance of the estate could be better. At two institutions (Napier University and RSAMD) the estates departments do not provide regular performance reports to the full SMT or governing body. In six others, regular reports are provided but they do not contain quantitative data on the

## Exhibit 18

### Examples of performance measures used at the Universities of Edinburgh and Stirling

The University of Edinburgh identified targets to support the goals and priorities of its Strategic Plan and will measure progress on these on an annual basis. Six estate indicators are included on its balanced scorecard:

1. Total income per square metre of gross internal area.
2. Capital expenditure and planned maintenance as a percentage of estate value.
3. Total property cost as a percentage of university total income.
4. Backlog maintenance spend required to meet Disability Discrimination Act requirements.
5. Room utilisation.
6. Utilities, servicing and maintenance costs per square metre of gross internal area.

In addition the university uses:

- a building performance assessment to look at the performance of each individual building
- sustainability and environmental impact measures for the campus.

The university is currently working towards set targets for space performance and business measures.

The University of Stirling reports details on performance for three non-residential measures in its management handbook, showing progress since 2000/01:

1. Estates costs:
  - maintenance cost per square metre of gross internal area
  - energy costs per square metre of gross internal area.
2. Total non-residential net internal area per student FTE.
3. Use of teaching rooms (percentage)

Source: [www.planning.ed.ac.uk/bsc.htm](http://www.planning.ed.ac.uk/bsc.htm) and University of Stirling Management Information Handbook, March 2006

overall performance of the estate (for example, on the overall condition or suitability of the buildings, operating costs or space use).<sup>40</sup>

**116.** By contrast, progress on individual projects is more frequently reported to management, particularly when major new build or refurbishment projects are underway. This suggests a focus on detailed project management, rather than a strategic approach to estate management.

### Good practice is evident in a number of the systems and procedures used to deliver estate management

**117.** The structures used to deliver estate management vary among institutions reflecting the complexity of the estate and the resources available. Appendix 2 includes detail on the internal structures and resources in place to deliver estate management activity.

**118.** Our study identified a number of important strengths in the systems and procedures in place for delivering estate management:

### Exhibit 19

Key indicators used by institutions

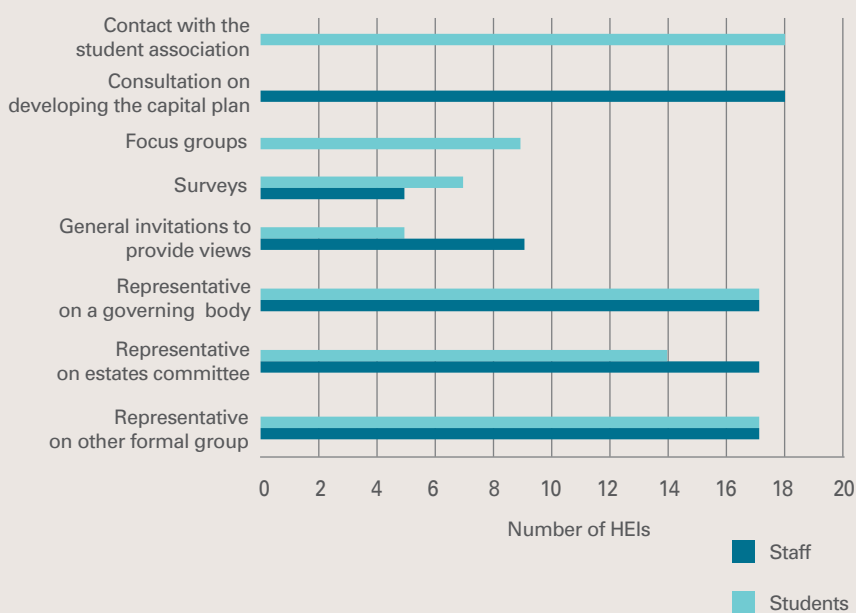
Performance indicators	Number of estates departments using indicator	Number of estates departments reporting indicator to governing body
Percentage of GIA in RICS condition A and B <i>For the non-residential estate</i>	14	10
Space use – teaching space	14	10
Cost to upgrade estate in RICS condition C and D to RICS condition B as a percentage of IRV <i>For the non-residential estate</i>	12	8
Total property costs per square metre of net internal area (NIA) <i>For the whole estate</i>	13	7
IRV per square metre of GIA <i>For the non-residential estate</i>	11	6

Source: Audit Scotland

- Lines of accountability are clear. Directors of estates (or their equivalent) report directly to a member of the SMT – usually the university secretary although, in six institutions, they report to the principal, vice principal or director of another department.
- There are good strategic and operational links between the estate and finance departments. In 16 institutions the director of finance and director of estates (or equivalent) meet at Policy and Resources; Estates; or Financial Planning Committees. A number of institutions also have members of the finance department within the estates department (for example at the Universities of Glasgow, Edinburgh and Heriot-Watt) or a specific point of contact for estates business within the finance department (as at the Universities of Dundee and Paisley). The procedures followed for tendering and procurement suggest there is regular contact between the estates functions and finance and close monitoring of expenditure.

### Exhibit 20

Methods used to collect views on the estate



Source: Audit Scotland

- Most institutions consult with staff and students when planning the estate. Formal involvement, through membership of the governing body and estates committee (or its equivalent) occurs in most institutions for both staff and students. In addition, student views are sought from representatives of the student association in the majority of institutions (Exhibit 20). Some institutions, such as the University of Stirling and RGU operate groups combining staff and students to help with estates issues. In all institutions except the University of Abertay, where other means are used, staff views are captured during the annual consultation which takes place to establish priorities for the capital development plan (see good practice examples opposite).

- There are clear links between the estate strategy and the corporate aims and objectives of the institution reflecting the high level of management involvement in the development of the estate strategy. These are subject to final approval by the governing body or board in all Scottish institutions. In practice the SMT is also heavily involved in developing the estate strategy through its draft stages.
- Although institutions are autonomous bodies competing to attract students and investment, there is a culture of sharing within the Scottish sector. For example, the joint venture between the Universities of St Andrews and Edinburgh to create a chemistry research school (known as EaStCHEM) and through the joint procurement approaches for equipment described earlier. In the context of estates activity, there is evidence of widespread information sharing. Examples include the use of comparative data for peer groups from the EMS dataset; fact-finding visits to explore better ways of delivering services; and membership of specialist groups such as the Space Management Group, the Association of University Directors of Estates (AUDE) and its Scottish arm (SAUDE).

### Good practice: Approaches used to gather views on estate needs

Robert Gordon University's Estates Department manages an annual consultation process with key staff in each school to gather views on their specific estate needs over the next five years. These views are then merged with projects identified by the Estates Department. The resulting list is then prioritised by the Executive Group who submit them to the Estates and Buildings Committee (for programme approval) and the Finance Committee (for budget approval). The proposals cover both capital and long-term maintenance works. The board of governors has the final right of approval.

At the University of Stirling a 'learning spaces group', comprising staff and students, meets every few months to consider changes to the inside of the teaching areas and help set priorities for the use of LTIF funding. The work of this group is used to prioritise capital expenditure on teaching and learning spaces and is reported as part of a regular report on the Capital Development Plan at each meeting of the Finance and Infrastructure Committee.

Source: Audit Scotland

### Recommendations

**119.** The SFC should consider with the Scottish Executive whether a clearer indication of the future public funding for capital programmes could be provided, to help institutions in their strategic planning.

**120.** Institutions should:

- comply with SFC guidance and ensure this is reflected in revised documents and approaches
- continue to work together to ensure that benchmarking data are relevant, consistent, comprehensive and reliable
- make use of performance information on the estate and ensure that it is reported to, and scrutinised by, management.

# Appendix 1.

## Categories of Scottish HE institutions

Category	Name of Institution	Institution type
Ancient	University of Aberdeen	University
	University of Edinburgh	University
	University of Glasgow	University
	University of St Andrews	University
Pre-1992	University of Dundee	University
	Heriot-Watt University	University
	University of Stirling	University
	University of Strathclyde	University
Post-1992	University of Abertay	University
	Glasgow Caledonian University	University
	Napier University	University
	University of Paisley	University
	Queen Margaret University	University
	Robert Gordon University	University
	Bell College	College of Higher Education
SSIs	Edinburgh College of Art	Art School
	Glasgow School of Art	Art School
	Royal Scottish Academy of Music and Drama	Conservatoire
	UHI Millennium Institute	College of Higher Education
	The Open University in Scotland	-
	Scottish Agricultural College	-

Note: Bell College and the University of Paisley are merging and will become known as the University of the West of Scotland by the end of 2007. UHI Millennium Institute and The Open University in Scotland are not included in this study.

### Categories:

**Ancient Institutions** – The oldest institutions in Scotland. Governed by the Universities (Scotland) Acts 1858-1966.

**Pre-1992 Institutions** – Established in the 1960s and earned their university status through Royal Charter.

**Post-1992 Institutions** – Designated Higher Education (HE) status under the provisions of the Further and Higher Education (Scotland) Act 1992.

**Small Specialist Institutions (SSIs)** – These institutions have their status awarded by the SFC. To achieve this status they must meet strict criteria set by the SFC.

The UHI Millennium Institute, The Open University in Scotland and the Scottish Agricultural College are not categorised.

# Appendix 2.

## Profile of the Scottish HE sector on key dimensions

	Ancient Institutions			
	University of Aberdeen	University of Edinburgh	University of Glasgow	University of St Andrews
<b>Estate dimensions and trends</b>				
Number of buildings				
2001/02	57	165	300	60
2005/06	61	237	262	72
Number of sites				
2001/02	3	5	16	3
2005/06	3	5	16	3
GIA (non-residential) (m <sup>2</sup> )				
2001/02	153,300	527,100	312,700	107,000
2005/06	164,500	513,400	356,700	119,300
Space per student FTE (m <sup>2</sup> ) - non-residential GIA	15.41	25.50	19.19	16.81
Age of estate (percentage of GIA)				
Pre-1840	5%	19%	0%	18%
1840-1959	23%	22%	50%	34%
1960-1979	48%	51%	37%	37%
Post-1980	24%	8%	13%	11%
<b>Students and staff</b>				
Total students (FTE)	10,676	20,136	18,589	7,097
Total staff (FTE) (includes residential)	3,086	6,494	4,749	1,700
Most senior member of staff in estates department	Director of estates	Director of estates and buildings	Director of estates and buildings	Acting director of estates
Property management staff (FTE)	22.17	72	52.7	18.5
Property management staff (As a percentage of FTE staff (non-residential))	0.72%	1.18%	1.13%	1.13%
<b>Financial data</b>				
Insurance replacement value (£m)	£278.3	£1,253.2	£725.7	£239.6
Property costs per student	£1,200	£3,129	£1,635	£1,178
Property costs per m <sup>2</sup>	£78	£123	£85	£70
Capital expenditure (£m)	£23.0	£18.1	£28.7	£8.1
Maintenance expenditure (£m)	£2.5	£31.7	£11.0	£1.4
Income (£m)	£147.7	£409.1	£298.3	£94.5
Capital expenditure as a percentage of income (average over 2 years)	17.4%	14.0%	16.0%	6.9%
Income per sqm	897.81	796.87	836.41	791.55
<b>Condition/sustainability of the estate</b>				
% of GIA in RICS condition A & B	68%	70%	43%	data not available
% of GIA in RICS condition C & D	32%	30%	57%	data not available
Listed buildings as a percentage of GIA	15%	45%	42%	35%
Functional suitability (excellent or good)	88%	83%	81%	95%
Building condition survey last completed	2000	2002	2005	2006
Next building condition survey	2007	2010	no plans	no plans

	Pre-1992 Institutions			
	University of Dundee	Heriot-Watt University	University of Stirling	University of Strathclyde
<b>Estate dimensions and trends</b>				
Number of buildings				
2001/02	55	72	14	46
2005/06	52	72	16	43
Number of sites				
2001/02	3	3	1	4
2005/06	3	3	1	4
GIA (non-residential) (m <sup>2</sup> )				
2001/02	187,200	122,600	85,300	294,600
2005/06	211,100	127,500	87,400	293,800
Space per student FTE (m <sup>2</sup> ) - non-residential GIA	18.48	19.67	12.28	20.19
Age of estate (percentage of GIA)				
Pre-1840	3%	1%	3%	1%
1840-1959	37%	3%	1%	30%
1960-1979	44%	46%	86%	50%
Post-1980	16%	50%	10%	19%
<b>Students and staff</b>				
Total students (FTE)	11,420	6,480	7,121	14,550
Total staff (FTE) (includes residential)	2,892	1,510	1,587	2,926
Most senior member of staff in estates department	Director of campus services	Director of estates	Director of estates and campus services	Director of estates management
Property management staff (FTE)	29.75	7	23.8	41
Property management staff (As a percentage of FTE staff (non-residential))	Data not available	0.48%	1.59%	1.41%
<b>Financial data</b>				
Insurance replacement value (£m)	£371.3	£163.4	£139.0	£713.6
Property costs per student	£1,346	£1,526	£897	£1,415
Property costs per m <sup>2</sup>	£73	£78	£73	£70
Capital expenditure (£m)	£15.6	£3.8	£5.0	£13.4
Maintenance expenditure (£m)	£3.2	£2.0	£1.1	£4.8
Income (£m)	£160.1	£88.7	£74.8	£182.8
Capital expenditure as a percentage of income (average over 2 years)	14.6%	6.6%	4.2%	8.2%
Income per sqm	758.33	695.88	855.93	622.25
<b>Condition/sustainability of the estate</b>				
% of GIA in RICS condition A & B	34%	34%	70%	32%
% of GIA in RICS condition C & D	66%	66%	30%	68%
Listed buildings as a percentage of GIA	14%	3%	3%	20%
Functional suitability (excellent or good)	78%	56%	36%	55%
Building condition survey last completed	1992	1998	2006	2004
Next building condition survey	2007	under way	2011	updated regularly internally

Source: EMS data and Audit Scotland survey

	Post-1992 Institutions			
	University of Abertay	Bell College of Higher Education	Glasgow Caledonian University	Napier University
<b>Estate dimensions and trends</b>				
Number of buildings				
2001/02	not available	4	13	21
2005/06	9	6	15	20
Number of sites				
2001/02	1	1	1	13
2005/06	1	2	1	10
GIA (non-residential) (m <sup>2</sup> )				
2001/02	not available	27,100	86,400	80,000
2005/06	39,500	29,100	99,850	82,200
Space per student FTE (m <sup>2</sup> ) - non-residential GIA	10.60	9.41	7.08	8.77
Age of estate (percentage of GIA)				
Pre-1840	0%	0%	0%	1%
1840-1959	36%	5%	0%	36%
1960-1979	48%	77%	43%	53%
Post-1980	16%	18%	57%	10%
<b>Students and staff</b>				
Total students (FTE)	3,731	3,091	14,097	9,369
Total staff (FTE) (includes residential)	577	379	1,604	1,454
Most senior member of staff in estates department	Head of estates and campus services	Director of estates	Acting head of facilities management	Director of facilities services
Property management staff (FTE)	14	4.25	27	7
Property management staff (As a percentage of FTE staff (non-residential))	2.47%	1.13%	1.71%	0.48%
<b>Financial data</b>				
Insurance replacement value (£m)	£84.5	£45.7	£160.0	£144.3
Property costs per student	£625	£538	£530	£704
Property costs per m <sup>2</sup>	£59	£57	£75	£80
Capital expenditure (£m)	£0.1	£0.7	£3.1	data not available
Maintenance expenditure (£m)	£0.4	£0.2	£1.0	£2.0
Income (£m)	£31.2	£19.2	£94.6	£76.5
Capital expenditure as a percentage of income (average over 2 years)	1.5%	4.7%	12.5%	5.7%
Income per sqm	790.04	660.00	947.63	930.51
<b>Condition/sustainability of the estate</b>				
% of GIA in RICS condition A & B	46%	68%	93%	50%
% of GIA in RICS condition C & D	54%	32%	7%	50%
Listed buildings as a percentage of GIA	22%	5%	0%	19%
Functional suitability (excellent or good)	56%	not available	97%	80%
Building condition survey last completed	2006	2006	1993	2004
Next building condition survey	2011	no plans	2007	2007

Source: EMS data and Audit Scotland survey

	Post-1992 Institutions (continued)		
	University of Paisley	Queen Margaret University	Robert Gordon University
<b>Estate dimensions and trends</b>			
Number of buildings			
	2001/02	51	29
	2005/06	49	18
Number of sites			
	2001/02	4	4
	2005/06	4	3
GIA (non-residential) (m <sup>2</sup> )			
	2001/02	75,800	33,000
	2005/06	75,450	33,000
Space per student FTE (m <sup>2</sup> ) - non-residential GIA		9.91	8.97
Age of estate (percentage of GIA)			
	Pre-1840	2%	0%
	1840-1959	10%	29%
	1960-1979	66%	68%
	Post-1980	22%	3%
			51%
<b>Students and staff</b>			
Total students (FTE)	7,614	3,678	8,077
Total staff (FTE) (includes residential)	1,159	504	1,306
Most senior member of staff in estates department	Director of estates	Director of estates and facilities	Director of estates
Property management staff (FTE)	5.65	9	27.17
Property management staff (As a percentage of FTE staff (non-residential))	0.50%	1.82%	2.11%
<b>Financial data</b>			
Insurance replacement value (£m)	£81.0	£57.3	£175.5
Property costs per student	£743	£594	£835
Property costs per m <sup>2</sup>	£75	£66	£84
Capital expenditure (£m)	£0.7	£16.1	£5.8
Maintenance expenditure (£m)	£1.1	£0.6	£1.8
Income (£m)	£56.5	£25.2	£72.0
Capital expenditure as a percentage of income (average over 2 years)	6.7%	42.0%	15.2%
Income per sqm	748.37	764.95	898.17
<b>Condition/sustainability of the estate</b>			
% of GIA in RICS condition A & B	45%	Data not available	100%
% of GIA in RICS condition C & D	55%		0%
Listed buildings as a percentage of GIA	9%	22%	6%
Functional suitability (excellent or good)	60%	0%	50%
Building condition survey last completed	2001	2001	1995
Next building condition survey	2008	to be decided after relocation complete	rolling programme under their Masterplan

Source: EMS data and Audit Scotland survey



	Small Specialist Institutions (SSIs)		
	Edinburgh College of Art	Glasgow School of Art	Royal Scottish Academy of Music and Drama
<b>Estate dimensions and trends</b>			
Number of buildings			
2001/02	11	10	2
2005/06	10	10	2
Number of sites			
2001/02	5	2	1
2005/06	4	2	1
GIA (non-residential) (m <sup>2</sup> )			
2001/02	33,100	31,400	17,800
2005/06	32,450	31,950	17,750
Space per student FTE (m <sup>2</sup> ) - non-residential GIA	20.02	21.55	30.62
Age of estate (percentage of GIA)			
Pre-1840	0%	0%	0%
1840-1959	60%	48%	0%
1960-1979	40%	46%	0%
Post-1980	0%	6%	100%
<b>Students and staff</b>			
Total students (FTE)	1,620	1,482	580
Total staff (FTE) (includes residential)	279	265	209
Most senior member of staff in estates department	Buildings officer	Director of estate development	Director of finance
Property management staff (FTE)	2	3	3.4
Property management staff (As a percentage of FTE staff (non-residential))	0.72%	1.14%	1.63%
<b>Financial data</b>			
Insurance replacement value (£m)	£66.2	£86.3	£66.2
Property costs per student	£888	£1,268	£2,435
Property costs per m <sup>2</sup>	£44	£59	£80
Capital expenditure (£m)	£0.3	£0.2	£0.0
Maintenance expenditure (£m)	£0.2	£0.4	£0.4
Income (£m)	£14.5	£15.3	£10.0
Capital expenditure as a percentage of income (average over 2 years)	4.4%	3.8%	3.0%
Income per sqm	447.12	478.62	563.59
<b>Condition/sustainability of the estate</b>			
% of GIA in RICS condition A & B	73%	27%	90%
% of GIA in RICS condition C & D	27%	73%	10%
Listed buildings as a percentage of GIA	34%	23%	0%
Functional suitability (excellent or good)	29%	28%	100%
Building condition survey last completed	2005	2003	1993
Next building condition survey	2012	no plans	2007

Source: EMS data and Audit Scotland survey

# Appendix 3.

## Members of the study advisory group

Member	Organisation
Dr Peter West	Secretary, University of Strathclyde
Graham Roddick	Director of Estates, University of Strathclyde
Angus Currie	Director of Estates, University of Edinburgh
Angus Donaldson	Director of Estates, University of Aberdeen
Liam McCabe	Director of Strategic Financial Management and Business Services, Queen Margaret University
Martin Kirkwood	Deputy Director of Property & Capital Funding, Scottish Funding Council
Margaret MacLeod	Senior Policy Officer, Universities Scotland

Note: The Study Advisory Group was consulted by Audit Scotland several times throughout the project; when scoping the initial project and developing the project brief, after the pilot stage and when the key messages and report were at draft stages.

Members of the group sat in an advisory capacity only. The content and conclusions of this report are the sole responsibility of Audit Scotland.

# Appendix 4.

## Public sector capital funding streams

### Science Research Investment Funding (SRIF)

This is the largest of the funding streams and accounts for over 60 per cent of the total capital funding available up to 2007/08. SRIF is a UK-wide fund and was introduced in 2002/03 by the Office of Science and Technology, now known as the Office of Science and Innovation (OSI). The SFC supplements the OSI funding and made two initial payments in 2001/02 in advance of SRIF. The funding is aimed specifically at refurbishing the UK higher education research estate in science, engineering and technology.

The SFC distributes the funds on behalf of OSI which sets the criteria for the funding. The funding is distributed by a formula which takes account of the external research income of the institution and its research grant from the SFC. Institutions receive a minimum SRIF allocation of £25,000. There have been three rounds of SRIF with the latest covering the period 2006/07 to 2007/08.

SRIF funds have been used primarily for new build projects (these account for 48 per cent of funding over the three SRIF allocations). Major refurbishment projects account for a further 22 per cent of SRIF funding and equipment purchases account for around seven per cent of all SRIF spend. The rest is used for professional fees and VAT payments.

### Learning and Teaching Infrastructure Funding (LTIF)

This was introduced in 2005/06 by the Scottish Executive and is aimed at supporting capital projects that are not eligible for SRIF funding, for example, facilities that are used for teaching rather than research purposes. However, it can be used alongside SRIF for multi-purpose projects.

There are two types of LTIF – formula LTIF and selective LTIF. The majority of this funding stream is allocated as formula LTIF with distribution based on the main teaching grant received by institutions. To help support cross-sectoral projects and other projects of strategic importance, the SFC has set aside £20 million as selective LTIF. This is allocated to institutions submitting bids that obtain SFC approval.<sup>41</sup>

# Appendix 5.

## Extract from circulars on SRIF 2006/07 and 2007/08 (3rd round) and LTIF showing how the funding can be used

### SRIF third round

Institutions are encouraged to take account of the Efficient Government initiative; to consider how they can secure quantifiable efficiencies through collaboration between institutions, consider activities such as shared support services, new approaches to estate development and management, improved procurement and pooling of research capacity.

The aims of SRIF 3 are to:

- contribute to the long-term financial sustainability of institutions, research activities and the physical infrastructure that supports them
- address past under-investment in physical infrastructure for research
- promote collaborative partnerships between institutions, industry, charities, Government and NHS Trusts (sic)
- promote high-quality research capability in areas of strategic national priority.

Priorities for the use of funds are to:

- maintain the productive capacity of the existing infrastructure in a fit state
- invest so that existing capacity is used more productively or efficiently
- enable institutions to develop proposals to enhance the public and private use of higher education's research expertise and facilities.

Funds can be used for:

- refurbishment of premises for research or supporting infrastructure
- replacement, renewal or upgrading of equipment including IT networks
- replacement of premises or infrastructure by new build or acquisitions but only where this is a better value solution than refurbishment.

In addition, institutions are required to demonstrate in their submissions that proposals fit strategic aims and objectives and research and IT strategies; for example, they represent value for money, they are affordable and they deal with issues of environmental sustainability.

### LTIF 2006/07 and 2007/08 – for formula LTIF

Proposals should fall into one of the following broad purposes:

- major teaching infrastructure projects – strategic projects to address backlog maintenance and obsolete/poor-quality estate
- teaching facilities including laboratories aligned with parallel projects funded through SRIF
- major items of capital equipment
- student support and learning facilities
- projects for e-learning and facilities for students with special needs
- student learning support services
- collaborative projects involving, for example, the shared use of buildings, facilities or major items of capital equipment.

Institutions are required to demonstrate that their proposals demonstrate efficient outcomes, strategic fit with plans and estate strategies, collaborative and cross-sector solutions and they improve inclusive practice by ensuring legislative compliance.

# Appendix 6.

## Use of performance information by HE institutions

Performance indicators	Used by the estates department	Reported to governing body
<b>Financial indicators</b>		
Total property costs per square metre of net internal area (NIA) <i>For the whole estate</i>	13	7
Total property costs per student (full-time equivalent) <i>For the whole estate</i>	12	2
Non-residential operating costs per student (full-time equivalent)	12	1
Insurance replacement value (IRV) per square metre of gross internal area (GIA) <i>For the non-residential estate</i>	11	6
Ratio of maintenance costs and capital expenditure to insurance replacement value (IRV) <i>For the non-residential estate</i>	10	5
HEI income per square metre of net internal area (NIA) <i>For the whole estate</i>	9	3
<b>Estate dimensions and quality</b>		
Total net internal area per student (full-time equivalent) <i>For the non-residential estate</i>	14	4
Percentage of gross internal area (GIA) in RICS condition A and B <i>For the non-residential estate</i>	14	10
Cost to upgrade estate in RICS condition C and D to RICS condition B as a percentage of insurance replacement value (IRV) <i>For the non-residential estate</i>	12	8
Non-residential backlog affordability score <i>(Ratio of the cost to upgrade estate in RICS condition C and D to condition B to the non-residential income)</i>	3	1
Core teaching space per taught student (full-time equivalent)	11	3
Space use – teaching space	14	10
<b>Environmental indicators</b>		
Energy consumption kW/h per student (full-time equivalent) <i>For the non-residential estate</i>	13	0
Water consumption m <sup>3</sup> per student (full-time equivalent) <i>For the whole estate</i>	12	1
Average energy costs per 100 kW/h consumption <i>For the non-residential estate</i>	9	3
Recycled waste proportion	7	2

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ISBN 978 1 905634 73 6      AGS/2007/6

This publication is printed on uncoated paper, made from 100% post consumer reclaimed material.