



Guidance

Estate strategy guidance

20 July 2007



Scottish Funding Council
Promoting further and higher education

Comhairle Maoinachaidh na h-Alba
A' brosnachadh foghlam adhartach agus àrd-ìre



Estate strategy guidance

20 July 2007

Contact: Martin Kirkwood, Property and Capital Funding
email: mkirkwood@sfc.ac.uk
Tel: 0131 313 6583

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Executive summary

The Scottish Further and Higher Education Funding Council (SFC) is the funding council for Scotland's colleges and universities. SFC's first Corporate Plan sets out its expectation of high standards of governance, leadership and management and a culture of continuous improvement in colleges and universities. High quality buildings, facilities and equipment are a specific objective. This will be achieved by governing bodies including estate strategies in their institutional strategic planning, linking estates development appropriately with learning, teaching and research strategies.

This revised estate strategy guidance builds on guidance previously issued by the Scottish Higher Education Funding Council (SHEFC) (1999) and the Scottish Further Education Funding Council (SFEFC) (2000) as well as the more recent Higher Education Funding Council for England *Estate Strategies, A Guide to Good Practice* (2004). The guidance reflects current good practice in college and university estate management and underlines the vital role good estate management plays in supporting key government policies and initiatives, such as the Efficient Government Initiative and International Strategy. The guidance is aimed at both the 'informed' and the 'uninformed' client in respect of their knowledge and experience of estate assessment and development. The former will typically be a dedicated estates team including construction professionals, whilst the latter is likely to apply to smaller higher education institutions or colleges who lack the same degree of specialisms in-house and may have to engage external consultants to a greater extent.

Since the previous guidance was issued to principals, there have been developments in legislation that will have an effect on estates development. In addition, as institutional strategy develops, pedagogy evolves and student aspirations change it will be necessary to ensure estates remain fit for purpose. Accordingly estate strategies need to be reviewed regularly.

Although the most helpful estate strategies cover at least a ten-year period this may extend up to 25 years depending on the size and profile of the estate, and SFC is requesting that all colleges and universities provide up to date strategies by the end of 2007. It is also important that the strategy is reviewed regularly at a senior level to keep it up to date, and to this end SFC is further requesting in the circular that all colleges and universities provide a brief annual update and a more detailed review of the developments towards the estate strategy every five years.

This revised guidance is designed to assist colleges and universities to undertake reviews or updates of their strategies to ensure that they meet the

current and future strategic needs in relation to estate size, location, configuration and quality. It also provides guidance in respect of wider procurement issues such as the appointment of consultants, environmental issues and value and risk management.

It is structured to assist colleges and universities through the stages of developing an estate strategy: data collection; performance assessment; the identification of challenges and opportunities; the evaluation of options; and proposals for implementation of the strategy.

A successful estate strategy should seek to ensure that accommodation will be fit for purpose, make efficient use of available space, represent value for money, rationalise or dispose of appropriate inefficient assets, maximise the estate's value and achieve an appropriate level of flexibility for meeting future needs. This guidance should help colleges and universities to achieve this.

The guidance is not intended to be prescriptive, but to provide a framework for the development of estate strategies, ensuring consistency throughout for both Scotland's colleges and universities.

There are references to web sites throughout this document. A full list of the web sites is provided at pages 44-47 of the guidance.

1 Introduction

1.1 Definition of an estate strategy

An estate strategy is a long-term strategic plan for developing and managing the estate to its maximum potential to meet a college or university's key objectives.

Although every estate strategy will differ to reflect the specific and unique needs and characteristics of each institution, in broad terms it should:

- provide data in respect of the existing estate;
- assess the performance of the existing estate;
- identify challenges and opportunities arising from the estate including the use of key performance indicators;
- identify and evaluate options for addressing challenges and opportunities; and
- propose a strategy for implementing the preferred option(s).

An estate strategy will allow colleges and universities to undertake continuous, comprehensive studies of their estates that will provide:

- a framework within which senior management can consider estate priorities in light of their strategic plan and other policy considerations;
- a context within which more detailed capital investment plans and business cases can be developed and implemented; and
- a basis for the day to day management of the estate and allocation of resources.

The compilation of an estate strategy will also assist SFC by providing a coherent and comprehensive picture of Scotland's colleges and universities' estates and assurance that individual colleges and universities are, on an on-going basis:

- considering their estate at a strategic level;
- giving thought to maintenance, health and safety, environmental and other legislative requirements; and

- demonstrating that best value for public investment is being pursued.

Once a copy of the completed estate strategy is received by SFC, an evaluation will be completed by SFC containing high-level information as summarised on the checklist in Appendix A. An example of a completed evaluation summary is also included in the appendix for information.

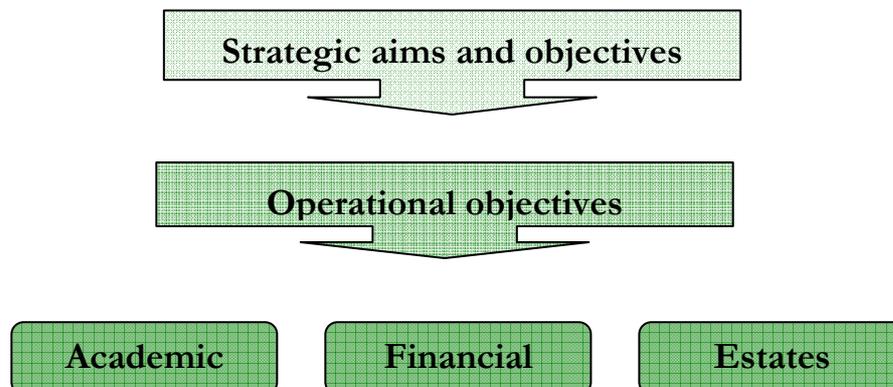
1.2 Aims of an estate strategy

The estate strategy will support the college or university in achieving their strategic objectives and will therefore link to their mission statement. The estate strategy will also support their financial objectives, as well as reflecting the profile of the body it represents, as illustrated in Figure 1.

The aims of an estate strategy are to:

- provide suitable, fit-for-purpose accommodation;
- provide the most efficient use of available space;
- identify the need for rationalisation and disposal of assets which are surplus to requirements;
- maximise the value of the estate, looking at existing and alternative uses; and
- provide flexibility in considering opportunities regarding operational, financial or resource implications, including collaboration and/or co-location.

Figure 1: Aims of an estate strategy



By following this process colleges and universities will ensure that their estates are embedded in the decision making process of the institution. This will allow the estate to be aligned with the overall strategic direction of the college or university.

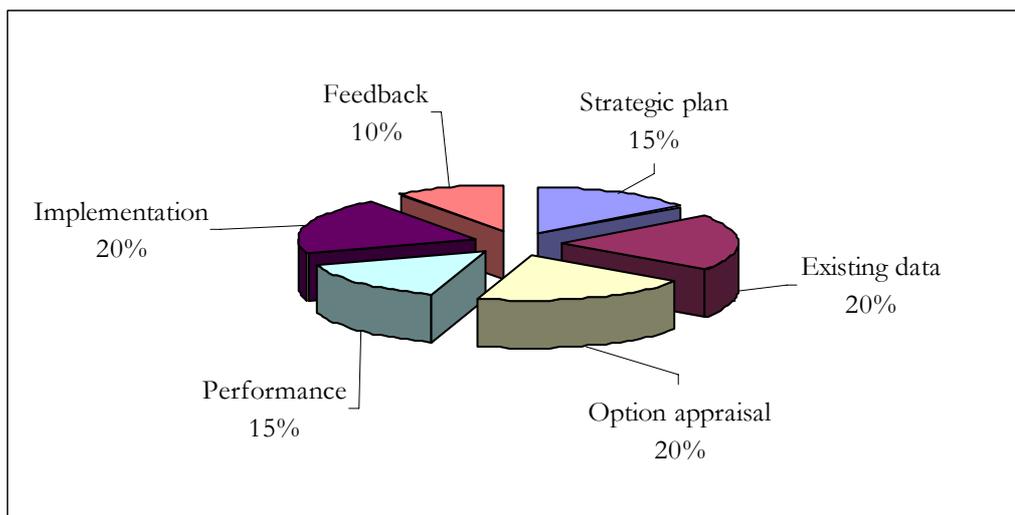
1.3 Foundations for delivery of an estate strategy

The estate strategy should provide evidence that:

- key objectives have been identified and prioritised and there is clear evidence of how these will support strategic objectives;
- a systematic and planned maintenance programme is in place with supporting condition surveys and planned maintenance schedules;
- accommodation utilisation surveys are undertaken on an annual basis;
- running cost analyses for both the existing and planned estate have been calculated to identify cost increases or savings;
- the institution aims to achieve best practice in estate management;
- option appraisals are undertaken in accordance with the *Green Book*; and
- a robust funding framework has been developed, which identifies planned capital schemes, other sources of funding, financial profiles and affordability.

This detail is explained throughout this guidance. Figure 2 illustrates the typical component parts of an estate strategy.

Figure 2: Time input to informing an estate strategy



The most useful estate strategies cover a minimum of a rolling ten-year period, but it is important that the strategy is also reviewed annually to reflect and support the developing strategic and operational objectives of the college or university.

1.4 Management overview

The resource requirement for creating and implementing an estate strategy should not be underestimated.

The Estates Director, Estates Manager or senior manager with responsibility for the estate should be the lead in developing and producing the estate strategy, but it is essential that all members of the senior management team are involved and that the strategy is signed off by Court or Governing Body and the Principal/Vice-Chancellor. External expertise may also need to be contracted in should there not be sufficient resource or expertise in-house.

1.5 Consultation

Consultation has a role to play in raising the profile of the estate strategy and increasing its relevance to both internal and external stakeholders. Open and constructive communication is vital in developing and maintaining the strategy as well as ensuring informed and relevant feedback.

Effective consultation needs to be done in a number of ways to ensure that it reaches as many people as possible. Communication should be structured to encourage participation and feedback, as this provides valuable additional input to the process.

In the estate strategy, the college or university should demonstrate, and provide evidence, that consultation has been undertaken with:

- staff, management, students and other stakeholders;
- the governing body;
- working groups; and
- consultants (when relevant).

1.6 Curriculum review

A review of the curriculum should lead any review of the estate and inform it accordingly. This exercise should be conducted prior to the review of the estate strategy.

1.7 Change management

An estate strategy inevitably signals change, and managing this change involves thoughtful planning, sensitive implementation and above all consultation with, and the involvement of, the people affected by change.

If change is forced then personnel problems can occur. Selling change is not a way of accelerating agreement and implementation.

Change needs to be understood and managed in a way that people can cope effectively with it. As change can be unsettling, those managing it need to be a settling influence.

The process will be improved by ensuring people affected by it agree with, or at least understand, the need for change, have a chance to decide how change will be managed, and are involved in its implementation.

1.8 SFC requirements

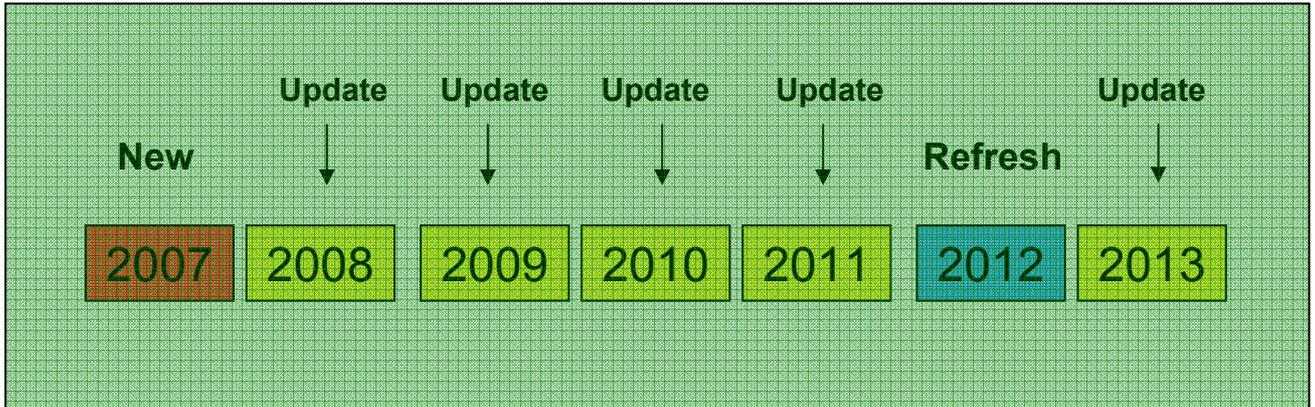
As the existing estate strategies of colleges and universities are at various stages of development and cover differing periods of time, SFC has a requirement that each institution provides an up-to-date estate strategy by the end of 2007, with a brief annual summary update sent to SFC in November each year thereafter. It is expected that this will only be a two page document summarising progress made, along with any key changes to the core document.

In addition, it will be expected that a full refresh to the estate strategy will be carried out every five years, to take account of progress or changes to the core document. This will ensure SFC has an accurate picture of colleges and universities' estates and allow accurate planning for the allocation of funding.

Colleges and universities who have recently submitted updated strategies, say in the last one or two years, will continue to provide annual updates until they provide a refresh in due course.

This timetable is illustrated in Figure 3 below.

Figure 3: Timescale for updating estate strategy information



2 The existing estate

2.1 Type of estates strategy

This revised estate strategy guidance is designed to encompass both colleges and universities and therefore will apply to single and multi-site campuses as well as ancient and modern estates.

The type and size of institution or college will determine the type of estate strategy that will be required.

Type of institution	Type of estate strategy
Single campus – small/medium college	Estate strategy typically covering ten years
Multi-site campus (estate building value below £130 million) – small/medium university	As above
Multi-site campus (estate building value above £130 million) – large university	Masterplan typically covering 10-20 years with an estate strategy updated periodically within that timeframe

2.2 The existing estate

The collation of information on the existing estate is essential to influence and form the foundation to a comprehensive estate strategy.

Statistics on the existing estate

Up-to-date and accurate statistics on estates and facilities activities are important, to ensure effective management and benchmarking against sector norms. These will be vital to feed into the estate strategy.

The focal point for statistics on estate related functions within colleges and universities are colleges' estates management data (eMandate) and universities' estate management statistics (EMS) respectively.

Although the collection and reporting of data may be resource consuming, the outcome is a useful reporting tool that allows institutions to track possibilities for improving performance. Time taken to source and compile data will provide an efficient and useful tool for colleges, universities and SFC to monitor and demonstrate improvements, as well as informing future estate strategies.

Legislative compliance

Colleges and universities have a responsibility to demonstrate that either their estate is meeting fully their legislative requirements, or have identified the actions required to achieve compliance.

Detailed below are examples of recent legislation that are likely to have an impact in some way on college or university estates. Links to the appropriate legislative document or guidance is provided, together with links to relevant stakeholder groups, where appropriate, in Appendix B. This list is not meant to be exhaustive:

- Disability Discrimination Act (DDA) 2005;
- Gender Equality Duty; and
- Race Relations Act.

Condition survey

A condition survey should be carried out to assess the condition of the existing estate in a systematic and consistent way, and to identify priority areas requiring capital investment in order to address breaches of legislation, including health and safety, and other areas requiring urgent repair. This is a detailed exercise covered more fully in Appendix C.

Age

The condition of an estate is linked to its age. It may be helpful to show any correlation between age and condition when compiling information on the existing estate.

Mention should also be made of any Historic Scotland listing of buildings, and the consequent constraints placed on maintenance and development of those properties.

Valuations

It is recommended that valuations of all the institution's buildings are commissioned from a suitably qualified chartered valuation surveyor who is experienced in the type of property and the locality. This will ensure that valuations are provided by appropriately qualified professional advisors.

The basis for asset valuations is set out in the *RICS Appraisal and Valuation Standards (The Red Book)*. Valuers should always be asked, in addition to

value in the current use, to point out additional value that might arise from any potential development opportunity.

Space utilisation survey

Institutions should know how their space is being used. This can be done by conducting a utilisation (headcount) survey, which will assess how effectively colleges and universities use their teaching and learning space during a typical academic week.

It is suggested that a space utilisation exercise is undertaken as detailed in Appendix D.

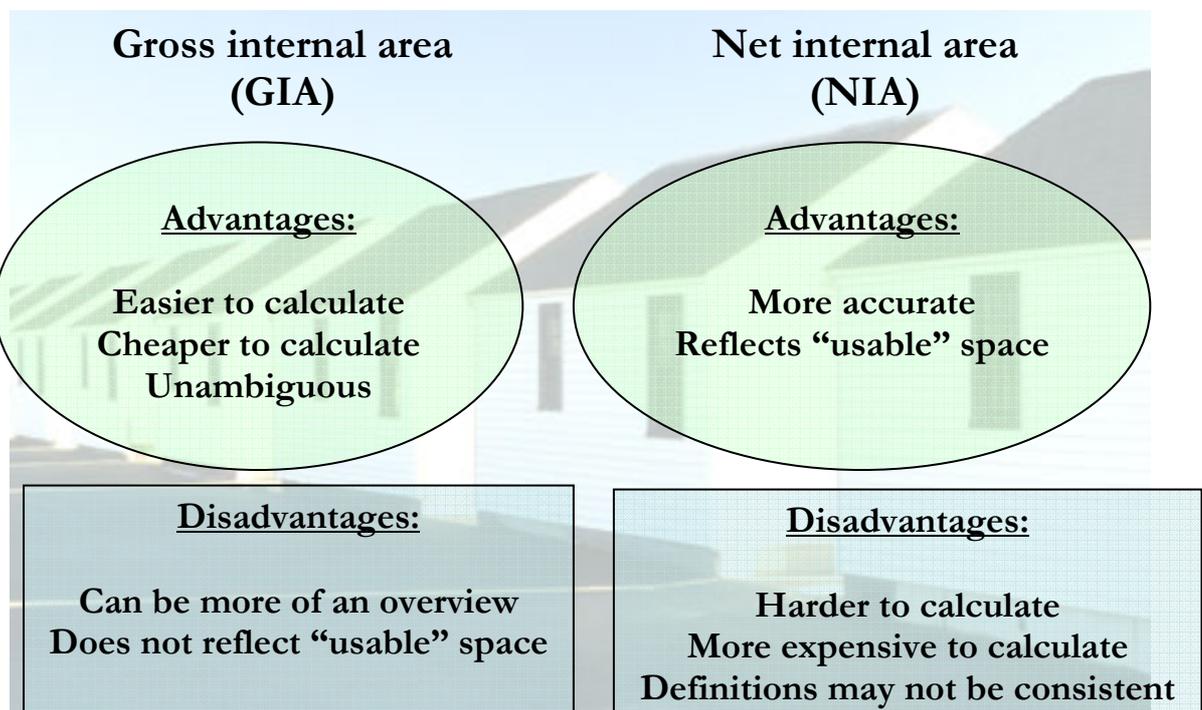
Size

The size of the estate should be measured on a net internal area (NIA) or gross internal area (GIA) basis, in accordance with the ‘Royal Institution of Chartered Surveyors (RICS) Code of Measuring Practice’. Figure 4 gives more information on the advantages and disadvantages of the two methods.

The method used should be consistent throughout. Ideally, space should be measured in each building, distinguishing between teaching, research, support and circulation space.

Details on the code of measuring practice can be found at the RICS web site and other definitions are available on the eMandate and EMS web sites (see page 15).

Figure 4: GIA/NIA advantages and disadvantages



Use

It is important to include the use to which each building is put in an estate strategy. This will help with consideration of efficient government, as it will help identify obsolete or inefficient buildings/space (see also section 4.2).

Functional suitability/fitness for purpose

In identifying the use of buildings, it will also be useful to assess the functional suitability of both sites and buildings. This can be done using the grade 1-4 rating scale developed for the EMS data collection, as set out below.

Grade 1 = Excellent

The room(s)/building(s) fully support current functions. There are no negative impacts upon the functions taking place in the space. (The space is highly suitable for current functions.)

Grade 2 = Good

The room(s)/building(s) provide a good environment for current functions in all or most respects. There may be shortfalls in certain areas, but these have only minor effects upon current functions. (The space is suitable for current functions.)

Grade 3 = Fair

The room(s)/building(s) provide a reasonable environment for current functions in many respects, but have a number of shortfalls. These shortfalls may be causing mismatches between space and function that are having a more significant effect upon current functions than Grade 2 rooms. (The space is generally unsuitable for current functions.)

Grade 4 = Poor

The room(s)/building(s) fail to support current functions and/or are unsuitable for current use. The operational problems associated with such space are major, and are constraining current functions in the space. Space in this grade may require alternative solutions, rather than straightforward improvements in particular features of this space. (The space is very unsuitable for current functions.)

When considering fitness for purpose as well as buildings and their alternative uses, it is worth considering infrastructure capacity such as roads, substation mains and drainage and whether these can support new developments.

Ownership

Information on the tenure of buildings and any title restrictions should be included to inform the decision making process. Details of covenants, mortgages, grants, any listed buildings (see *Age* section above), and the length of any leases may affect decisions on whether to retain, develop or dispose of a property. Leased property should also be included in the overall gross internal area of the estate.

Some buildings may have title restrictions placed on them, for example, if they are listed and this may be a relevant factor in deciding on the future of the building.

As far as possible, colleges and universities should hold data on the title, plans and covenants of buildings.

It is useful to undertake a full review of adjacent and other suitable sites when fully considering challenges and opportunities.

Running costs

The costs to maintain buildings and provide services should be recorded and shown separately for each building in the estate. Running costs include routine maintenance, energy usage, cleaning, security, water, waste and sewerage as well as other facilities management services. Colleges and universities are advised to look to reducing running costs and make cost comparisons across the estate to maximise its effectiveness as well as inform the strategic planning process.

Performance

Co-ordinating all of this data on the estate will provide an overall indication of the performance or contribution of buildings towards the achievement of estate objectives and enable informed decisions to be made about the future of the estate.

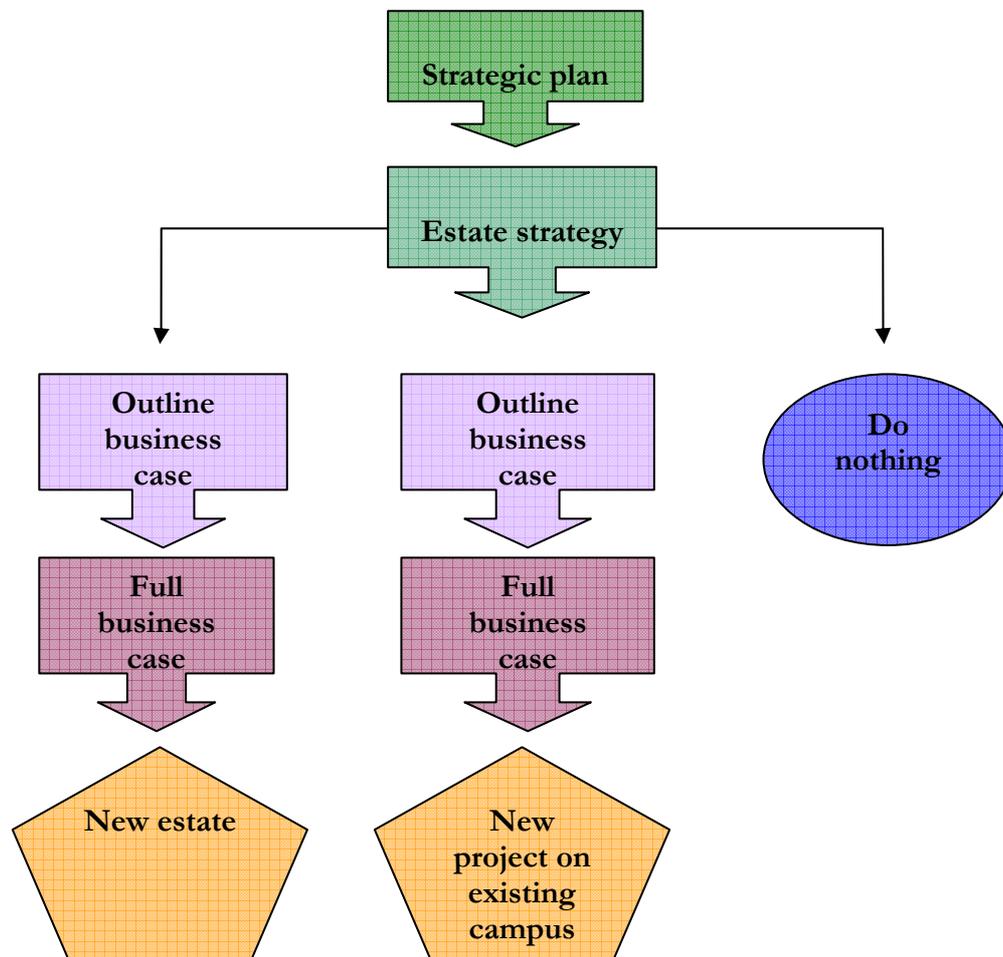
3 Options for meeting challenges identified

3.1 Ensuring the estate strategy is meaningful

Evaluation of options

Options appraisal is a key part of developing the estate strategy as it provides the college or institution with an appraisal of high-level options to inform the decision making process to meet its estate objectives. Appraisals should provide an assessment of the extent to which a proposal is viable. This is illustrated in Figure 5. The options appraisal process will often, but not always, require the involvement of external consultants who are familiar with the appraisal process.

Figure 5: Options appraisal process



The range of options likely to emerge from an estate strategy will range from 'do nothing' to a completely new estate developed on a new site.

3.2 Methods of evaluating options

In evaluating options, it is important to take into account Treasury guidance (as set out in the *Green Book*) and the Scottish Executive's *Value for Money* guidance. Further information on these areas is set out below.

The Green Book: Appraisal and Evaluation in Central Government

Clear guidance on how to undertake an option appraisal is set out in the HM Treasury guidance the *Green Book: Appraisal and Evaluation in Central Government*.

The *Green Book* describes how the economic, financial, social and environmental assessments of a proposal should be combined.

To perform an effective *Green Book* appraisal, it is vital that all the costs and benefits are measured consistently across the options. Valuations should be based on the definition set out in the *RICS Appraisal and Valuations Standards (The Red Book)* for 'market value' and 'market rent'. Similarly, different options should provide the same facilities in terms of floor areas, so measurements should be done in accordance with the *RICS Code of Measuring Practice*. This will ensure that the same convention, usually 'net internal area' (NIA) is used throughout (see Figure 4 for more information). Further information is provided at the RICS web site.

Scottish Executive 'Value for Money' (VFM) guidance

The Scottish Executive has recently published *VFM Assessment Guidance – at Programme Level and for PPP Projects*, for projects to be delivered via Public Private Partnerships (PPP). Whilst it considers the guidance is likely to be most relevant to projects procured under the Private Finance Initiative (PFI), it will generally apply to any project involving the procurement of public services using private funding over the longer term.

The aim of this guidance is to provide an approach for determining whether PPP, as opposed to conventional procurement, will deliver value for money, and when it is appropriate to be considered.

Further information can be found at the Scottish Executive web site.

Considering PFI and PPP in Scottish colleges and universities

SFC has recently published a study regarding this issue. The report from this study is available on the SFC web site. Following the change in

administration guidance on the Government's revised policy in this area will be published separately when this becomes available.

3.3 Delivering the preferred option

Once the options have been evaluated, the preferred option should be developed further to increase its robustness and ensure it is viable as a project. Where colleges or universities are seeking external funding to implement their preferred option, including SFC funding, the process will involve the development of outline and full business cases, as described below (although colleges or universities could adopt this process internally as well). Risk management and sensitivity analysis must be considered at this point, to ensure that there is an awareness of the risks associated with the preferred option, and of other sensitivities involved. Value management must also be considered, to ensure that costs are not allowed to escalate.

Outline business case (OBC) and full business case (FBC) guidance

To deliver the preferred option a process of outline and full business case should be progressed. When seeking SFC funding support, the existing *Business Planning Guidance* can be found at the SFC web site. SFC will be reviewing its business case guidance during 2007.

SFC will also be publishing, following the outcome of 2007 Spending Review, a revised capital funding policy for colleges and universities, which will clarify our position regarding the funding of capital projects in future.

Risk management and sensitivity analysis

Key questions in a business case include those relating to risk. A risk management strategy will identify:

- what the risks are and who will own them;
- early warning indicators that will identify when things are going wrong;
- how early warning indicators will be spotted; and
- action to be taken to minimise the impact of changes to the assumptions.

This is discussed briefly below and is detailed in Appendix E.

Sensitivity analysis will highlight how susceptible the options are to changes in the underlying assumptions that have been made in a business case. Demonstrating the risks and sensitivities relating to an estate and its development will form an integral part of the estate strategy.

Sensitivity analysis is a tool for assessment of models. It is a technique for determining the outcome of a decision if a key prediction turns out to be wrong and involves speculation on alternative scenarios and estimating the accuracy of data.

Value management

Value management (VM) is a framework within which proven methods are systematically brought together to achieve better value from projects, products and services, based on the concept of value and a functional approach.

VM is a structured approach to defining what value means in the process of achieving the specified project requirements. This is undertaken by confirming the project objectives and how these will be achieved. The process is strategic and involves challenging the requirements and confirming project objectives.

The VM approach involves three key principles:

- a continuous awareness of value for the project, establishing measures or estimates of value, monitoring and controlling them;
- a focus on the project objectives and targets before seeking solutions; and
- a focus on function.

The benefits of this approach are:

- a sound basis of choice for project managers and decision makers, resulting in better project decisions;
- improvements for stakeholders achieved through a clearer understanding and prioritisation of their needs;
- an enhanced competitiveness through technical and management innovation;

- an enhanced understanding of the project's goals by each member of the team achieved through the implementation of value cultures; and
- greater understanding and knowledge of the main project success factors.

Key performance indicators

We expect estate strategies to have embedded within them a range of key performance indicators (KPIs), which are measurable and aim to identify and track improvements to the estate.

SFC will periodically update the KPIs we recommend colleges and universities should use. However, as a minimum, good practice would suggest that these would cover:

- estate condition (defined under RICS conditions A to D);
- space efficiency; and
- fitness for purpose.

It may be appropriate for colleges and universities to set and measure KPIs within defined parts of the estate to reflect the differing nature of use of the estate (such as teaching accommodation, research laboratories or office space).

Specifically for Scotland's universities, the Funders' Forum (a group of governmental and non-governmental funders of public good research) has developed trigger metrics which include key performance indicators (KPIs) relating specifically to the estate. Circulars HE/31/05, HE/39/05 and SFC/43/06 refer. Universities should use these as an initial point of reference when setting themselves specific KPIs.

Further initiatives are detailed in Appendix G.

3.4 Procurement of consultants

As mentioned elsewhere, some colleges or universities may have to obtain specialist advice to help them develop their estate strategies. Such consultants must provide a technical assessment which is both appropriate and affordable, and ensures that the process remains in the control of the college or university. Relevant reference material can be found in the Scottish Executive's *Construction Procurement Manual* which gives guidance on

roles and responsibilities, value for money, procurement strategies, the appointment of consultants, financial aspects, and health and safety as well as some helpful advice on further reading.

The *Green Book: Appraisal and Evaluation in Central Government* also covers the appointment of consultants while following the *Gateway Review Framework*, designed mainly for projects and programmes.

Gateway Review Framework publications can be found at the OGC web site.

Tendering process

Colleges and universities should adhere to their own tendering process, which should also be compliant with the Official Journal of the European Union (OJEU) and Office of Government Commerce (OGC) framework when necessary.

4 Key considerations to influence an estate strategy

4.1 Business objectives

As set out in section 1.7, the initial process for the development of an estate strategy is a business-led curriculum review to ensure that the estate strategy is fully aligned with, and supports, the key business objectives.

4.2 Sustainable development

In line with *Choosing our future – Scotland's Sustainable Development Strategy*, launched by Scottish Ministers in December 2005, SFC has published its own *Sustainable Development Guidance*, which has particular relevance to estate strategies and capital projects.

SFC is looking to colleges and universities to embed this guidance within their estate strategies so that each institution will develop its own sustainable development guidance policy. This is detailed in Figure 6 on page 28.

The Scottish Executive's document *Choosing Our Future – Scotland's Sustainable Development Strategy* can be found at the Scottish Executive web site.

SFC's *Sustainable Development Guidance* can be found at the SFC web site and is due to be re-issued during 2007 to incorporate updated information and advice, for example on recycled content in construction projects. See Appendix F for more information.

4.3 Space management and space utilisation

Property costs are usually the second highest costs after salaries for colleges and universities, so it is important to ensure that they are efficiently used, and that this is taken into account in an estate strategy. The estate is the core component of the further and higher education infrastructure, and the cost of providing and maintaining a sustainable estate is high. It needs to cover operating costs, ongoing maintenance, and provision for periodic upgrading and eventual replacement.

Space management is a key factor in delivering an estate, which needs to be an appropriate size and quality for the institution's activities. Therefore, the effective allocation, configuration and use of space in any education institution can bring benefits that extend way beyond cost efficiencies.

Effective space management techniques and tools can help institutions make more informed choices and budgeting decisions regarding the size of

their estates. Understanding costs, what drives cost and how it can be measured is an important element in the decision making process.

In addition to cost, institutions need to consider the drivers of the size of their estate. These may include:

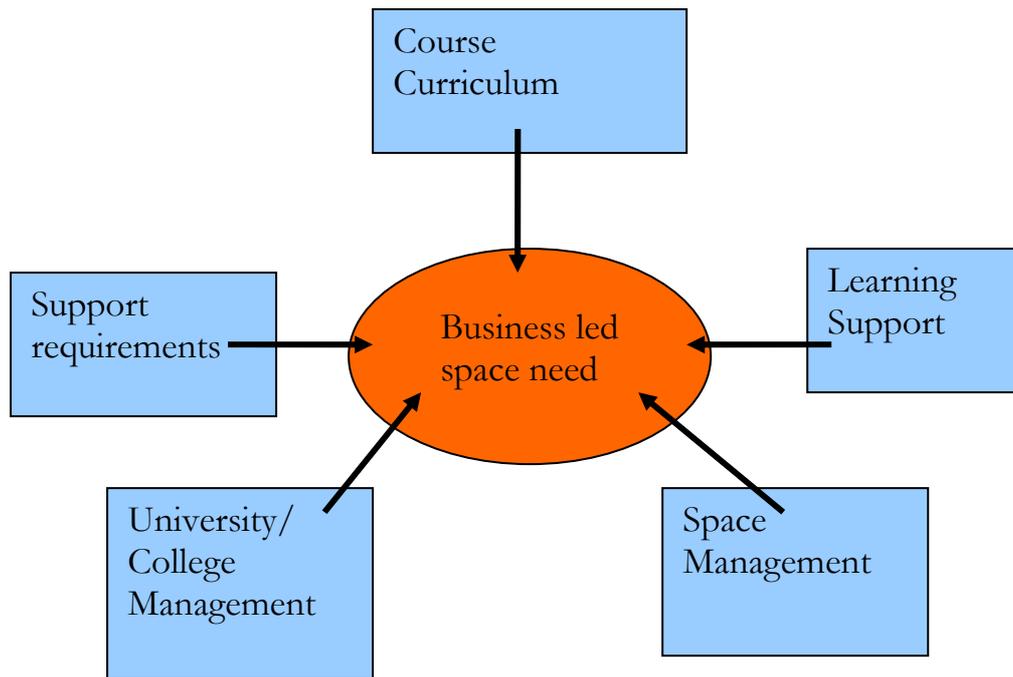
- income;
- urban or rural location;
- space charging;
- central timetabling of teaching space;
- composition of student body by student type and by subject;
- estate characteristics, for example age of buildings, their functionality and suitability;
- number of sites;
- TRAC* full economic costing model; and
- fEC** full economic costing model

*Transparent Approach to Costing (TRAC). Since 2000, TRAC has been the standard methodology used by higher education institutions in the UK for costing their main activities (teaching, research and other core activity) and it is increasingly informing the public funding of higher education. Further information can be found at the Joint Costing and Pricing Steering Group web site.

** Full Economic Costing (fEC) is the forecasting and accounting for full economic costs at a project level. It is the basis of a government directive to recover the full costs of research, and to put costing and pricing activity on a stable footing. From 1 September 2005, all HEI's must subscribe to fEC when submitting research grant applications. The framework is consistent across the sector.

Further information can be found at the Full Economic Costing web site.

Figure 6: Identifying space needs.



Universities

The Space Management Group was commissioned by the four funding bodies in the UK for higher education to develop space management tools. This included ‘A Review of Space Norms’ to research the scope for providing updated space norms for the higher education sector.

Space norms are usually expressed as an allowance of non-residential space per student. The allowance is made of different types of space, such as general purpose and specialist facilities and other non-teaching facilities, such as offices. It varies according to academic disciplines.

The study concluded that the concepts underlying the development of norms should be retained, because the principles of basing an assessment of capacity or space need on the activities to be delivered and how that might be done are still relevant. Without an assessment of this type, it is difficult to know whether a university, or any organisation, has broadly the right amount and type of space.

The Space Management Group web site link is provided in the list of references at the end of this document.

Colleges

Both SFC and the Learning and Skills Council (LSC) are undertaking a review of new estates and required space, and will be producing revised guidance on this during 2007, which will be available at the appropriate web sites.

In the meantime, for overall planning purposes, SFC continues to use a broad space benchmark for colleges of three WSUMS per m². This needs to be refined to reflect different curriculum areas and associated space needs and this will be reflected in the SFC revised guidance.

4.4 Spaces for effective learning

A significant amount of estates development is underway in colleges and universities, at a time of major change in educational technology and learning and teaching modes.

The *Spaces for Learning* report published in 2006 by SFC, is intended to encourage discussion between estate management and academic staff on the best form of campus developments, in light of emerging learning and teaching trends.

It summarises a five-month programme of research which included a literature review, interviews with representatives of national educational organisations, four cases studies of new learning environments in colleges and universities, and an online survey on educational trends.

The report identifies several ideas that would help encourage more experimentation and the development of effective learning spaces. It is available on the SFC web site.

4.5 Collaboration and co-location

Strategic plans should include consideration of the Scottish Executive's *Efficient Government Initiative*. This states that institutions should plan for "proper asset management, including arrangements to ensure there are strategies to reduce maintenance costs, active disposal policies, long term planning and robust management information. The management of public assets is typically the second highest cost on the revenue budgets of public sector bodies after employee costs. And the right assets in the right place can make the difference between good and poor service delivery".

The efficient government initiative is now in place. It is a mechanism for identifying and capturing efficiencies which will be generated by investment.

In the case of capital investment these efficiencies will be expected to be realised through collaboration, improved space efficiencies, lower utility costs and similar measures.

Following on from this, we encourage institutions to consider collaboration and co-location opportunities in their strategic plans and estate strategies. Collaboration and co-location opportunities are often successful because they can promote:

- networking;
- best practice;
- innovation;
- economies of scale;
- localisation;
- interconnection;
- related business;
- co-operation; and
- interdependence.

These development opportunities require that all of these elements become 'real' in a building and this needs to be supported by a commitment and a clear strategy.

4.6 Managing the new estate

A further key consideration when setting out an estate strategy concerns maintenance, asset and budget management, facilities management, life cycle costing and whole life costing. These are considered in further detail below.

Maintenance

Significant investment is being put into estates of colleges and universities. Maintenance needs to be a priority for the future to achieve and keep high quality buildings and environments.

Maintenance can be defined as work undertaken to maintain or restore premises, facilities and contents to a good state of repair and efficient

working order, all to an agreed standard. This is a substantial responsibility for any college or university.

Maintenance operations are divided into three types:

- breakdown maintenance;
- planned preventative maintenance; and
- major replacements.

The key issue in terms of maintenance is the preparation, development and regular review of a planned preventative maintenance programme. This should incorporate the three elements noted above, and other issues such as energy management, asset management and resource allocation.

Asset and budget management

An effective maintenance strategy will also include management of assets. This will include recording the assets, and the requirement for maintenance and upkeep of the assets.

The strategy should consider the control of materials, regular stock-taking and should have an effective policy for re-ordering and supplier management and review.

Good management methods for controlling the spend on the maintenance budget will be required, as the maintenance requirements of the estate will vary based on the time of year and on the demands placed on the estate by the users. Estate managers should also be aware of events in the college or university calendar, which may affect their planned programmes. As a general principle, monthly reports should be prepared for analysis and budget monitoring.

Control of purchasing will apply to services and goods, and should be in line with the college or university's procurement policy. Clear responsibility for purchasing, aligned with defined limits, will assist with control of expenditure.

In general, there should be a written strategy for ensuring that all service provision, whether in-house or external, is delivering the best value at all times.

Measuring and reporting asset management also assists SFC to determine financial requirements and to demonstrate the need for sustainable levels of funding. The analysis of asset management data will also allow colleges and universities to measure correlations between building condition, use, functional suitability, and design decisions with associated maintenance and facilities costs.

Facilities management

Facilities management (FM) encompasses multi-disciplinary activities within the built environment and the management of their impact upon people and the workplace. Effective FM, combining resources and activities, is vital to the success of any organisation. At a corporate level, it contributes to the delivery of strategic and operational objectives. On a day-to-day level, effective facilities management provides a safe and efficient working environment, which is essential to the performance of any business – whatever its size and scope.

The FM strategy may act as, or as a minimum seek to support, the estate strategy and its underlying strategic objectives. Normally the strategy would include the following key areas:

- resourcing and procurement;
- standard setting;
- budgeting; and
- performance monitoring.

College or university strategic plans set out, at a high level, their objectives for maintenance. The FM strategy sits with and supports the estate strategy, and incorporates a range of best practice aspirations for maintenance, operation and service delivery throughout the estate.

It might be helpful to consider the following processes when developing an FM strategy:

- map the key organisational needs and objectives;
- identify key stakeholders at financial, organisational and user level;
- quantify the buildings under management and their condition – linked to condition surveys;

- establish the scope of the services;
- establish service quality aspirations through stakeholder consultation;
- establish the operating economy, those services directly delivered and those to be outsourced;
- establish the cost of services;
- establish performance monitoring requirements;
- establish the resource; and
- define procurement requirements.

Life cycle costing

Life cycle costing is the process of identifying the timing and cost of planned maintenance and facilities management expenditure and is developed, in the case of a mature estate, from the wide range of condition surveys and annual inspections carried out. In a new build this will be developed from the construction cost plan.

During the life of any facility, a considerable amount of the fabric and equipment will require repair, refurbishment or replacement. In order to allow for the capital expenditure that will be involved, a life cycle plan should be established for the facility or facilities. This life cycle plan may also be known as cyclical maintenance planning.

It is suggested that the life cycle plan identify replacement requirements over a period of 40 years. This will provide for replacement items which are identified as having a life expectancy of less than the facility's operational span, thus requiring partial, full, or multiple replacements to satisfy continued occupation. It should be recognised that reviewing the life cycle requirements over longer periods will necessitate the replacement of major infrastructure items, such as electrical and mechanical distribution systems, heating and ventilation systems, and major fabric elements such as windows and roofs which may present significant funding issues. Therefore, life cycle planning should complement the capital planning programmes for projects such as complete building refurbishment/replacement.

It is important to ensure that life cycle planning and annual maintenance are considered together. All life expectancies will be developed based on the fundamental premise that the assets are receiving at least the minimum

maintenance necessary to reach that life expectancy. Therefore, it is essential to ensure that the two plans are complementary. This approach can also reduce cost by ensuring that assets due for replacement do not receive any unnecessary major annual maintenance planned for the same period.

In order to avoid developing a backlog of maintenance, it is recommended that all three-or five-year plans follow the life cycle model developed, and that no cyclical maintenance funds are diverted to dealing with reactive problems.

Whole life costing

Whole life costing (WLC) is a technique to establish the whole cost of ownership, defining the life, in years, of the equipment or construction elements to be used. It is a structured approach that addresses all the elements of this cost, which include:

- design life;
- service life;
- economic life;
- useful life; and
- technological life.

WLC can be used to calculate operating and maintenance costs and produce a spend profile of the product or service over its anticipated life span. The result of a WLC analysis can assist in the decision-making process where there is a choice of options. The accuracy of WLC diminishes as it projects further into the future, so it is most valuable as a comparative tool when long-term assumptions apply to all the options and consequently have the same impact.

There are four major benefits of WLC:

- evaluation of competing options in purchasing;
- improved awareness of total costs;
- more accurate forecasting of cost profiles; and
- performance trade-off against cost.

A WLC *Successful Delivery Toolkit* can be found at the Office of Government Commerce web site.

5 Financial considerations

5.1 Financial strategy

An estate strategy should, above all, be viable and affordable. Given that an estate strategy will typically cover a ten to fifteen year planning period, the financial strategy underpinning this is likely to have the following features:

- a robust assessment of sources of funding for the short-term objectives within the estate strategy, including internal resources, borrowing and SFC funding (formula and specific (if relevant)); and
- an indicative assessment of sources of funding for longer-term aspirations.

5.2 Key items to consider

SFC Financial Memorandum

The *Financial Memorandum* between the Scottish Executive and SFC requires SFC to devise its own arrangements for the effective and efficient control of universities and college property disposals. This requirement extends to the arrangements for allowing them to retain and reinvest some or all of the sale proceeds.

Any college or university considering disposing of, or acquiring, an asset should refer to the *Financial Memorandum between Scottish Funding Council and FE colleges and HEIs* (effective from 1 January 2006), which can be accessed at the SFC web site, and which was originally issued under cover of letter (10 October 2005).

Disposal of exchequer funded assets (colleges)

SFC circular FE/48/00, *Procedure Notes for the Disposal of Exchequer-Funded Assets and the Retention of Proceeds by FE Colleges*, describe the arrangements which should be followed by colleges in obtaining SFC approval when seeking to dispose of surplus exchequer-funded assets and retaining and reinvesting any proceeds from such disposals.

Disposal of exchequer funded assets (universities)

Procedure Notes for the Disposal of Exchequer-Funded Assets and the Retention of Proceeds for universities describes the arrangements which should be followed by institutions when seeking to dispose of surplus

exchequer-funded assets and to retain the proceeds from such disposals. The notes should be read in conjunction with the *Financial Memorandum* (effective from 1 January 2006) and are available on request from SFC.

Current procedure notes were originally produced in 1997 and are due to be revised in the near future. Once updated, the notes will be issued and be made available on the SFC web site.

SFC requires universities to keep their holdings of exchequer-funded land and buildings under review, with the objective of rationalising and disposing of those which universities consider, in light of their estate strategies, to be no longer needed.

Acquisitions

Under the terms of our Financial Memorandum, SFC is required to provide procedure notes and guidance on good practice in estate matters – including the acquisition of assets for which there is intention to seek financial assistance from SFC, disposals and reinvestments.

Where any college or university may be considering entering into an agreement under the private finance initiative or a public/private partnership, SFC will require the college or university to consult it at an early stage.

Borrowing

SFC will make provision for the monitoring and control of borrowing by colleges and universities to protect the public investment and to maintain accountability for the use of exchequer funds.

Further information can be found in the *Financial Memorandum* (effective from 1 January 2006).

6 Informing future estate strategies

6.1 Post occupancy evaluation

Post occupancy evaluation (POE) is used as an umbrella term that includes a review of the process of planning, delivering and completing a project, as well as a review of the technical and functional performance of the building during occupation. This includes user views and experience.

POE is a way of providing feedback throughout a project's lifecycle, from initial concept through to occupation. The information from feedback can be used for informing future projects, whether it is on the process of delivery or technical performance of the building. The project plan should include planning and budgeting for POE.

When a programme or project (perhaps over the value of £250,000) is completed it should undergo a comprehensive POE. Evaluation and feedback are the cornerstones for the continuous improvement in building procurement sought by colleges and universities. Good feedback is also an intrinsic part of successful briefing and design of buildings. A recent report produced by the Commission for Architecture and the Built Environment (CABE), called *Design with Distinction*, shows also that well-designed buildings are a significant factor in the recruitment of staff and students in higher education.

To be most effective, performance evaluation must happen with the existing environment and continue throughout the lifecycle of a new environment.

POE involves staff and students, who should be consulted regarding operational issues and be encouraged to contribute to the process.

SFC has compiled POE guidance, which includes a review of the process of delivering a project, as well as a review of the technical and functional performance of the building. This will be available on the SFC web site from summer 2007.

7 Conclusion

This guide has been developed to assist those within colleges and universities with responsibility for estate management to understand the need for, and the purpose of, an estate strategy for their institution. The preparation of an estate strategy will help both the institution and SFC to understand the estate needs of individual colleges and universities, and the sector as a whole.

It will also assist in understanding issues of implementation and procurement, which are necessary for the successful realisation of the outputs from an estate strategy.

The sector will benefit if a greater understanding of the concepts of best value and continuous improvement are understood, implemented and disseminated through the application of best practice.

Glossary

A+DS	Architecture and Design Scotland
APM	Association for Project Management
APS	Association for Project Safety (Planning Supervisors)
AUDE	Association of University Directors of Estates
BIFM	British Institute of Facilities Management
BRE	Building Research and Consultancy
CABE	Commission for Architecture and the Built Environment
CaSpr	Campus Sustainability Programme
CFSD	Centre for Sustainable Design
CIBSE	Chartered Institution of Building Service Engineers
CIOB	Chartered Institute of Building
DIAG	Directive Implementation Advisory Group
EAUC	Environmental Association for Universities and Colleges
EMS	Estate Management Statistics is now established as the primary source for central estates information in the Higher Education sector.
EPBD	European Union Energy Performance of Buildings Directive
FBC	Full Business Case
fEC	Full Economic Costing model is the forecasting and accounting for full economic costs at a project level, which all HEI's must subscribe to when submitting research grant applications.
FM	Financial Memorandum between Scottish Funding Council and colleges and HEIs
FMA	Facilities Management Association
FMGC	Facilities Management Graduate Centre, Sheffield Hallam University
GED	Gender Equality Duty
GIA	Gross Internal Area
HEDQF	Higher Education Design Quality Forum
HEEPI	Higher Education Environmental Performance Improvement
HEPS	Higher Education Partnership for Sustainability
HESA	Higher Education Statistics Agency
IMBM	Institute of Maintenance and Building Management
JCPSTG	Joint Costing and Pricing Steering Group
JISC	Joint Information Systems Committee
KPIs	Key Performance Indicators
JANET	Joint Academic Network
LCC	Life Cycle Costing
LSC	Learning Skills Council
LTIF	Learning and Teaching Infrastructure Funding
NIA	Net Internal Area
OBC	Outline Business Case

OGC	Office of Government Commerce
OJEU	Official Journal of the European Union
PFI	Private Finance Initiative
POE	Post Occupancy Evaluation
PPP	Public Private Partnerships
RIAS	Royal Incorporation of Architects in Scotland
RIBA	Royal Institute of British Architects
RICS	Royal Institution of Chartered Surveyors
RICSPM	Royal Institution of Chartered Surveyors Project Management
RM	Risk management covers all the processes involved in identifying, assessing and judging risks, assigning ownership, taking actions to mitigate or anticipate them, and monitoring and reviewing progress.
SAUDE	Scottish Association of University Directors of Estates
SDC	Sustainable Development Commission (Scotland)
SEPA	Scottish Environmental Protection Agency
SMG	Space Management Group
SPFM	Scottish Public Finance Manual
SPPM	Scottish Procurement Policy Manual
SRIF	Science and Research Investment Funding
TRAC	Transparent Approach to Costing is the full economic costing model used by higher education institutions in the UK for costing their main activities (teaching, research and other core activity)
VM	Value management is a framework within which proven methods are systematically brought together to achieve better value from projects, products and services, based on the concept of value and functional approach.
WRAP	Waste and Resources Action Programme

Other definitions

Construction Procurement Manual (Scottish Executive) gives guidance on roles and responsibilities, value for money, procurement strategies and the appointment of consultants and contractors, financial aspects, health and safety as well as some helpful advice on further reading regarding procurement.

Construction Works Procurement Guidance provides the Scottish Executive's Departments, Associated Departments, Executive Agencies and most sponsored bodies with mandatory policy and procedures for understanding construction works projects.

eMandate is the data collection tool for the further education sector

Functional Suitability is a measurement of the fitness for purpose of both sites and buildings assessed utilising the Grade 1-4 rating scale developed for Estate Management Statistics (EMS) data collection.

McClelland Report: Review of public procurement in Scotland provides a detailed review of Public Sector Procurement in Scotland.

Procedure Notes for the Disposal of Exchequer-Funded Assets and the Retention of Proceeds by FE Colleges describe the arrangements which should be followed by colleges in obtaining the approval of the SFC when seeking to dispose of surplus Exchequer-funded assets and retaining any proceeds from such disposals.

Procedure Notes for the Disposal of Exchequer-Funded Assets and the Retention of Proceeds for HEI's describe the arrangements which should be followed by institutions when seeking to dispose of surplus Exchequer-funded assets and to retain the proceeds from such disposals.

REMADE Scotland – a major initiative which seeks to stimulate develop and strengthen all recycled material markets in Scotland.

Royal Institution of Chartered Surveyors Appraisal and Valuation Standards (The Red Book) provides the basis of valuation for asset valuation.

Royal Institution of Chartered Surveyors Code of Measuring Practice building size should be measured on a net internal and gross internal basis or as appropriate, in accordance with this code.

Sensitivity analysis is a tool for model assessment and a technique for determining the outcome of a decision if a key prediction turns out to be wrong and involves speculation on alternative scenarios and estimating the accuracy of data.

The *Green Book* – Appraisal and Evaluation in Central Government produced by HM Treasury provides clear guidance on how to undertake an option appraisal and describes how the economic, financial, social and environmental assessments of a proposal should be combined.

The Red Book is another name for the Royal Institution of Chartered Surveyors (RICS) Appraisal and Valuation Standards (see above) which provides the basis of valuation for asset valuation.

UK Space Management Project has commissioned *A Review of Space Norms* to research the scope for providing updated space norms for the higher education sector and is managed by the Space Management Group.

Value For Money Assessment Guidance – at Programme Level and for Public Private Partnerships (PPP) Projects is produced by the Scottish Executive for projects to be delivered via PPPs and it will generally apply to any project involving the procurement of public services using private funding over the longer term.

Further guidance in this area will be published in due course, following the change in administration.

References

Annual TRAC and TRAC FEC

<http://www.jcpsg.ac.uk>

Architecture+Design Scotland

<http://www.ads.org.uk>

Association of Project Management

<http://www.apm.org.uk>

Association of Project Safety

<http://www.associationforprojectsafety.co.uk>

Association of University Directors of Estates

<http://www.aude.ac.uk>

British Institute of Facilities Management

<http://www.bifm.org.uk>

Campus Sustainability Programme

http://www.eauc.org.uk/campus_sustainability_project

Chartered Institute of Building

<http://www.ciob.org.uk/home>

Chartered Institution of Building Service Engineers

<http://www.cibse.org>

Construction Industry Research and Information Association

<http://www.ciria.org.uk>

Commission for Architecture and the Built Environment

<http://www.cabe.org.uk>

Commission for Racial Equality

<http://www.cre.gov.uk>

Constructing Excellence

<http://www.constructingexcellence.org.uk>

Disability Rights Commission

<http://www.drc-gb.org>

Environmental Association for Universities and Colleges
<http://www.eauc.org.uk>

Envirowise
www.envirowise.gov.uk

European Union Energy Performance Buildings Directive
http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_001/l_00120030104en00650071.pdf

Facilities Management Association
<http://www.fmassociation.org.uk>

Facilities Management Graduate Centre
<http://www.shu.ac.uk/fmgc/>

Gender Equality Duty (Equal Opportunities Commission)
<http://www.eoc.org.uk>

Greenspec
www.greenspec.co.uk

Higher Education Design Quality Forum
<http://www.architecture.com>

Higher Education Statistics Agency
<http://www.hesa.ac.uk>

Holyrood Building Project
<http://www.holyroodinquiry.org>

Institution of Civil Engineers
www.ice.org.uk

Institute of Clerk of Works
<http://www.icwgb.org>

Institute of Maintenance and Building Management
<http://www.imbm.org.uk>

Learning Skills Council
<http://www.lsc.gov.uk>

National Industry Symbiosis Programme
www.nisp.org.uk

Office of Government Commerce
<http://www.ogc.gov.uk>

OPD (EMS and eMandate)
<http://www.opdems.ac.uk>

Recycled Materials for Construction
www.ecoconstruction.org

REMADE Scotland
www.remade.org.uk

Royal Incorporation of Architects in Scotland
<http://www.rias.org.uk>

Royal Institute of British Architects
<http://www.riba.org>

Royal Institution of Chartered Surveyors
<http://www.rics.org>

Scottish Funding Council
<http://www.sfc.ac.uk>

Scottish Executive
<http://www.scotland.gov.uk/Home>

Scottish Disability Team
<http://www.sdt.ac.uk>

Scottish Ecological Design Association
www.seda2.org

Scottish Sustainable Construction Forum
www.sscforum.org.uk

Smarter Scotland
<http://www.infoscotland.com>

Space Management Group
<http://www.smg.ac.uk>

Sust (sustainable design in architecture and the built environment)
www.sust.org

The *Green Book* HM Treasury Guidance
www.hm-treasury.gov.uk

Waste Aware Scotland
www.wascot.org.uk

Waste and Resources Action Programme (WRAP)
www.wrap.org.uk

Appendix A: Estate strategy: SFC evaluation summary

The evaluation contains high-level information and is summarised on the checklist below. An example of a completed evaluation summary is shown next.

Institution	
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Check ✓	Item	Detail
	Timescale:	
	Strategic link:	
	Consultation:	
	Size:	
	Condition survey:	
	Age:	
	Valuation:	
	Use:	
	Fitness for purpose:	
	Ownership:	
	Running costs:	
	Performance:	
	Backlog maintenance:	
	Space management:	
	Disposals:	
	Acquisitions:	
	Collaboration:	
	Option appraisal:	
	Funding/finance:	
	Risk:	
	Procurement:	
	Sustainability:	
	POE:	

Example of a complete evaluation summary

Institution/college	University of Anytown
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Check	Item	Detail
✓		
✓	Timescale:	10 years 2007-2017
✓	Strategic link:	Strategic Plan 2005-2009
✓	Consultation:	Undertaken and demonstrated (pg a)
✓	Size:	Gross area 224,250 m2 (excl residential) Residential 90,200 m2 (for 3,608 stud) 1996 GIA 198,995 m2 Increase of 11% 25,255 m2
✓	Condition survey:	Updated 2005
✓	Age:	Various – information provided (pg b)
✓	Valuation:	Insurance Replacement Cost £500m
✓	Use:	Details provided (pg c)
✓	Fitness for purpose:	Assessed with user involvement (pg d)
✓	Ownership:	No tenures
✓	Running costs:	£12 million per annum (8% of income)
✓	Performance:	Summary and comparison to previous provided (pg e) General improvement due to new build and refurbishment
✓	Backlog maintenance:	2006 £53 million Previous 1996 £30 million
✓	Space management:	Annual audit taken in October Utilisation at 25% Centrally controlled teaching space at 30% with further rollout anticipated Space Management Group meet monthly to control accommodation issues
✓	Disposals:	Anticipated income from disposal of property 2007-12 is £5.2 million
✓	Acquisitions:	Scheme progressing to purchase land adjacent to existing campus for planned new build to accommodate School of Business
✓	Collaboration:	Demonstrated on-going discussions with Anytown College regarding collaboration and possible co-location
✓	Option appraisal:	Aligned with strategic plan

		Detail of potential options Cost benefit analysis
✓	Funding/finance:	Projection of 2 year capital spend provided (Appendix 5)
✓	Risk:	Risk register held for each project Risk Management Group formed for Business School Project
✓	Procurement:	Options considered (pg f)
✓	Sustainability:	Key performance targets included (pg g)
✓	POE:	Demonstrated (Appendix 7)

Appendix B: Relevant legislation and further information

Relevant legislation

Disability Discrimination Act (DDA) 2005

In recognition of this new requirement and to help institutions in their planning processes prior to implementation date, SFC has developed, with its partners, a detailed self-evaluation toolkit. This, together with some background information, was published on the SFC web site in circular SFC/17/2005 on 16 December 2005.

Gender Equality Duty

The *Gender Equality Duty* (GED) came into force in April 2007 and it requires public authorities to promote gender equality and eliminate sex discrimination. Instead of relying on individuals making complaints about sex discrimination, the duty places the legal responsibility on public authorities to demonstrate that they treat men and women fairly. The duty will affect policy-making, public services such as education, and employment practices such as recruitment and flexible working.

Further information can be found at the Equal Opportunities Commission web site.

Race Relations Act

The *Race Relations Act 1976* defines direct and indirect discrimination, and victimisation. It outlaws racial discrimination in employment, training, education, housing, public appointments, and the provision of goods, facilities and services. The *Race Relations (Amendment) Act 2000* came into force on 2 April 2001 and since then the *Race Relations Act* has covered all the functions of public authorities (with a few exceptions).

Whilst there is no specific direction given in relation to the estate, universities and colleges will need to be aware of this legislation, their own *Race Relations Policy*, and any impact that may have in relation to estates, particularly with regard to international students.

Information and the code of practice referred to above can be found at the Commission for Racial Equality web site.

Further information

International students

International student recruitment has received increased attention from the government in Scotland. It was mentioned in the Scottish Executive *HE Review Phase Two Report*. The Scottish Ministers' Letters of Guidance to SFC's predecessor organisations (SFEFC and SHEFC) in January 2005, specifically highlighted the importance of overseas student recruitment and support.

The Scottish Executive international strategy was launched in October 2004, and its aims are:

- promoting Scotland overseas as a good place to live, work and study;
- encouraging students who are able to do so to stay in Scotland after graduation;
- promoting Scotland as a destination for people taking up work permits; and
- improving first impressions of Scotland on arrival.

It is anticipated that the final report from the AUDE working group on HEI international activity will soon be available on the AUDE web site, which looks at internationalisation issues affecting the estate.

It involves:

- having cultural awareness and sensitivity among those working with international students;
- being aware of own and other cultures;
- being aware of cultural requirements (eg a place to pray or a place not to drink); and
- avoiding stereotyping or generalisation.

Smarter Scotland

Smarter Scotland aims to raise awareness of initiatives to create a smarter Scotland, supporting sustained productivity growth, competitiveness and prosperity. This information can be found at the *Smarter Scotland* web site.

Building our future: Scotland's school estate

Although this publication is related to the school estate, it is a useful reference tool that links national priorities in education with the development of this strategy.

The school environment is central to ensuring that every young person has the best possible start in life. The Scottish Executive wants to create schools which support learning and teaching, and which are an integral part of the community – both for today and for coming decades. A school estate needs to be developed with a built-in capacity for flexibility so that we can respond effectively to the challenges of tomorrow.

The strategy is to develop a school estate that helps every school be a centre of excellence. This extends to the built environment, as well as learning and teaching, and means not just more investment, but smarter investment.

The Scottish Executive school estate vision is for:

Well designed, well built and well managed schools that:

- support national and local priorities; and
- inspire children, young people and communities.

A future school estate that:

- meets our aspirations;
- responds to evolving needs; and
- is effectively managed and maintained over the long term.

Information is available at the Scottish Executive web site.

Appendix C: Condition surveys

Issues to consider in preparing condition surveys:

- select suitably qualified people to be responsible for the inspections and collation of data, capable of making accurate judgements of present condition, period to next maintenance, life expectancy, and cost of works;
- adequately resource the individual specialisms of building fabric, mechanical and electrical services;
- ensure all surveyors and engineers fully understand the institution's maintenance policy in respect of its impact on standards, periods between maintenance, etc;
- ensure access is provided to all areas and where necessary provide special facilities for inspection purposes;
- ascertain the likely effect on the use of buildings during any investigative work;
- identify any testing or opening-up to be carried out as part of the survey at an early date;
- capture information on building services in an identical (or at least similar) format;
- design the pro-forma with the performance measurement point (PMP) database in mind to minimise inputting time and likelihood of errors;
- ensure the pro-forma contains a list of elemental headings to allow consistency across all properties and minimise the chances of sections being overlooked;
- ensure the pro-forma identifies the life expectancy of each element; and
- include foreseeable issues such as disabled access, fire precautions, health and safety measures, etc, within the data capture.

The methodology for undertaking a building stock condition survey is well established. Comprehensive guidance has been published by the Royal Institution of Chartered Surveyors (RICS).

The condition for each building should be shown using one of the two following methods:

(1) RICS Building maintenance indicators

A = new or as new;

B = sound, operationally safe, exhibiting only minor deterioration;

C = operational but major repair or replacement needed soon; and

D = inoperable or serious risk of failure or breakdown.

(2) Association of University Directors of Estates (AUDE) study group model

An AUDE study group was established to consider building condition measures. The resulting report reviews the methods currently used and proposes a method of comparison between buildings and estates. This review can be found on the AUDE web site.

An analysis of the whole estate by category can then be undertaken.

Institutions should keep the condition survey up to date. Outdated surveys will not provide an accurate picture of the condition of any institution and are likely to significantly understate the amount of work required to remedy faults.

Mention should also be made of the annual and total budgets required to bring the institution's estate to the desired condition.

Appendix D: Space utilisation process

Space utilisation surveys are ideally carried out during October, as this is generally the period of greatest demand. Although there may be significant demand at other times of the year, October is considered to offer the best opportunity for a “level playing field” approach, after the initial increased numbers have levelled out.

Each surveyor will be allocated a proportion of teaching and library/learning resource spaces to survey during the whole week. A single surveyor can usually cover between thirty and forty separate rooms or spaces depending on the layout of the building. Individual rooms or spaces should be surveyed hourly between 9.00am and 5.00pm for the full week.

An introductory session outlining what is required of surveyors should be carried out, as well as familiarisation with the geography of the rooms to be surveyed. This should be carried out prior to the survey week.

Surveyors will visit each room/space hourly to count the number of students in the room or space, and record the number on a survey record sheet. Members of staff should not be included.

Surveyors should visit each room between ten and fifty minutes past each hour. Untutored groups or students using the room for recreation or private study should not be counted, except where the latter is carried out in a library or learning resource centre.

No allowance should be made for groups or students that are missing because they are out of the college or university, or for statements such as “normally more students are present” or “someone has just left the room”. If a group is apparently, or reported as, on a break, then the surveyor should if possible return later, otherwise no count should be recorded.

It is important that surveyors only count and record what they see.

At some point during the week, surveyors will count the number of actual workplaces in each room or space surveyed and record them on the survey record sheet. This is usually the number of seats present but may also relate to bench workspaces or hair salon workstations. Where a room has no obvious seats such as a dance studio or sports hall, the surveyor should ascertain, if possible, the average maximum number of students in a typical group. This should exclude schools link students, where typically large numbers work in reduced space standards. If this is not possible to exclude school link students, leave the workplace space blank.

It is important that surveyors hand each completed survey record sheet to a designated co-ordinator for all sites at the end of each day. This is to ensure continuity in case of illness or non-availability of the surveyor on the following day or days.

The survey data (student count and actual number of workplaces) should then be recorded, including if possible the following data for each room or space surveyed:

- site, block, or building name or reference;
- room number and room name or description;
- room type; and
- floor area.

The information gathered will provide space occupancy data so that an overall utilisation rate can be calculated.

SFC encourages colleges and universities to review their space under the funding model provided by the space management group. More information, including access to tools and publications on space management, which are regularly updated, can be found at the space management group web site.

Appendix E: Risk management

Definition of risk

Risk is most commonly meant as a hazard and something to be avoided, but it can also present an opportunity. Improving public services requires innovation - seizing new opportunities and managing the risks involved. In this context risk is defined as uncertainty of outcome, whether positive opportunity or negative threat, of actions and events. It is the combination of likelihood and impact, including perceived importance.

Risk management covers all the processes involved in identifying, assessing and judging risks, assigning ownership, taking actions to mitigate or anticipate them, and monitoring and reviewing progress. Good risk management helps reduce hazard, and builds confidence to innovate. The definitions of risk and uncertainty can be summarised as:

Risk: exists when potential events are expressed as having possible impacts and when probabilities of their occurrence can be assessed.

Uncertainty: exists when there is more than one possible effect to an event, but the probability of each effect is not known.

Risk management strategy

A risk management strategy outlines how risks will be managed during the lifecycle of a project and is used to plan the way risks are managed within the programme.

The risk strategy and its supporting plan must acknowledge real and potential threats to the successful delivery of a project. It will also determine the actions required to mitigate, minimise or eliminate these threats.

Further details on the development of a risk management strategy can be found in the *Successful Delivery Toolkit* at the Office of Government Commerce web site.

Risk register

The assessment and management of risk are recorded and monitored in a risk register respectively, which is developed at an early stage in any project.

The risk register records identified risks according to the probability of the risk occurring and its likely impact on the programme, cost and/or quality

of the project. Counter-measures will also need to be identified for each risk to show what is in place or being considered to minimise the risk occurring.

The register will also identify timescales and the effect on the risk of activating the counter-measure. Appropriate owners should be identified to manage each risk.

The risk register should contain, as a minimum:

- risk reference;
- description;
- date identified;
- risk owner;
- assessment ratings;
- timing/proximity;
- cost, programme and/or quality implications;
- counter measures;
- target date/trigger;
- contingencies;
- status;
- links to other risks; and
- date risk closed.

The formation of a risk management steering group is recommended, to compile the risk register and ensure it is updated on a six monthly basis while the project is under development and more frequently during the project's implementation.

Guidance on how to manage risk is included in the *Green Book* and the Scottish Executive's *Construction Works Procurement Guidance*.

Appendix F: Sustainable development

Key initiatives and organisations

Various organisations and resources are available regarding sustainable development. Links to some of these are set out below.

Building Research and Consultancy (BRE)

<http://www.bre.co.uk>

Built Environment Forum Scotland (BEFS)

<http://www.befs.org.uk/>

Campus Sustainability Programmes (CaSPr)

http://www.eauc.org.uk/campus_sustainability_project

Centre for Sustainable Design (CFSD)

<http://www.cfsd.org.uk>

Directive Implementation Advisory Group (DIAG)

<http://www.ncm.bre.co.uk>

Environmental Association for Universities and Colleges (EAUC)

<http://www.eauc.org.uk>

EU Energy Performance of Buildings Directive (EPBD)

http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/1_001/1_00120030104en00650071.pdf

Higher Education Environmental Performance Improvement (HEEPI)

<http://www.heepi.org.uk>

Higher Education Partnership for Sustainability (HEPS)

<http://www.forumforthefuture.org.uk/docs/publications/237/On%20course%20for%20sustainability.pdf>

http://www.forumforthefuture.org.uk/education/heps_page107.aspx

Paper Recycling – Waste Online

<http://www.wasteonline.org.uk/resources/InformationSheets/paper.htm>

The Carbon Trust

<http://www.thecarbontrust.co.uk/carbontrust/>

The Chartered Institution of Building Service Engineers (CIBSE)
<http://www.cibse.org/index.cfm?go=home.show&pageid=313&topsecid=19>

Scottish Environmental Protection Agency (SEPA)
<http://www.sepa.org.uk/>

Scottish Sustainable Development Forum (SSDF)
<http://www.ssdforum.org.uk/>

SUST: Sustainable design in architecture and the built environment
<http://www.sust.org/>

Sustainable Development Commission (Scotland)
<http://www.sd-commission.org.uk/scotland.php>

Waste and Resources Action Programme (WRAP)
<http://www.wrap.org.uk>

Appendix G: Procurement

Key initiatives and organisations

Construction Procurement Manual

The Scottish Executive aims to promote best value and quality in the delivery of its public buildings and programmes. It provides construction procurement guidance and technical advice on procedures and best practice.

The Scottish Executive works alongside many sections of the construction industry, seeking to promote best practice in a wide spectrum of areas including the implementation of new legislation and new governmental initiatives.

The *Construction Procurement Manual* provides mandatory policies and procedures for construction works projects for the Scottish Executive's departments, executive agencies and most sponsored bodies.

This manual aims to disseminate best practice in public sector procurement, to deliver value for money (VFM), and to achieve compliance with international obligations including EU procurement directives, which ensure fair and open competition in the procurement of works and services. Further information on the directives, and their associated UK statutory instruments, can be provided by the Scottish procurement directorate.

The *Construction Procurement Manual* draws together key policy principles, procedures and guidance from several areas of the Scottish Executive, namely finance, general procurement and construction-specific procurement. Its contents are reviewed continuously to take account of changes in legislation, rules, procedures or industry developments.

The *Construction Procurement Manual* can be found at <http://www.scotland.gov.uk/Topics/Planning/Building/procurement-manual>. It contains links to the Appraisal and Evaluation, Major Investment and other sections of the *Scottish Public Finance Manual* as well as the Scottish Executive's *Construction Works Procurement Guidance*.

Framework agreements

The Office of Government Commerce (OGC) provides guidance on the conclusion of contracts under multiple framework agreements and this can be found at the OGC web site.

McLelland Report: Review of Public Procurement in Scotland

This report provides a detailed review of public sector procurement in Scotland. The remit of the review was to report on status and provide recommendations in the following areas.

- current structure and organisation;
- current skills and capability;
- current practices and procedures;
- performance indicators and targets; and
- opportunity for improvements and new techniques.

The review was conducted within the efficient government agenda and, in particular, a focus on procurement such as that referred to in the Scottish Executive's *Building a Better Scotland* publication. The report covers the public sector in its widest possible context therefore includes a wide range of Scottish Executive-funded organisations including health, local authorities, tertiary education, agencies, departments, non-departmental public bodies and other publicly-funded or owned bodies.

<http://www.scotland.gov.uk/Publications/2006/03/14105448/0>

Scottish Procurement Policy Manual

A high and growing proportion of the resources available to the Scottish Executive is used to procure requirements from third parties. Procurement – the ‘cradle to grave’ process of acquisition and not simply the price – and its disciplines, is at the heart of the way that we run much of our day to day business, whether it is setting up framework agreements for buying a range of IT services, commissioning a consultancy, or establishing multi-million pound contracts. It is an integral part of resource and budget management, and its importance to Government and departments responding to resource pressures, is stated fully in the 1995 White Paper *Setting New Standards*.

The *Procurement Policy Manual* sets out the Scottish Executive's procurement policy. It applies to all procurements, eg goods, services (including consultancies and research) and works/construction. The policy applies to procurements funded from both programmes and running costs. It is intended for the information of everyone in the Scottish Executive who is involved in procurement whether as budget holder/customer, purchaser, expenditure authoriser, or contract manager/project sponsor.

The key elements of the policy reflect essential values set out in the Scottish Executive mission statement, ie to act with integrity and honesty, to pursue value for money, and to encourage continuous improvement and innovation. In this context it is worth pointing out that such key elements as use of competition and separation of duties help to protect the individuals involved in procurement, in addition to value for money and openness.

It is the responsibility of line managers to ensure that staff involved in the procurement process adhere to the policies outlined in this manual, which can be found at:

<http://www.scotland.gov.uk/Topics/Government/SPD/19468/19099>

Scottish Public Finance Manual

The Scottish Public Finance Manual (SPFM) is issued by Scottish Ministers to provide guidance to the Scottish Executive, its agencies and non-departmental public bodies. It has useful guidelines on the acquisition and disposal of property, and can be found at the Scottish Executive web site.

<http://www.scotland.gov.uk/Topics/Government/Finance/spfm/Intro>

Design and construction

Architecture + Design Scotland

Architecture and Design Scotland (A+DS) is a non departmental public body established by the Scottish Executive in April 2005, as the national champion for good architecture, design and planning in the built environment.

A+DS has taken over the independent design review and advisory roles of the Royal Fine Art Commission for Scotland, and has a wider and more proactive role in advocating the benefits of good design through enabling, advocacy, research and communications activities. A+DS works with a wide range of organisations at national, regional and local level.

A+DS acts as a key delivery mechanism for the Scottish Executive's policy on architecture for Scotland. Their main aim is to inspire better quality in design and architecture in the public and private sectors so that Scotland's built environment contributes in a positive way to our quality of life and our built heritage.

<http://www.ads.org.uk/>

Commission for Architecture and the Built Environment

Commission for Architecture and the Built Environment (CABE) is funded by the government through the Department of Culture, Media and Sport and the office of the Deputy Prime Minister.

The Commission champions well designed buildings and public space, running public campaigns and providing practical advice. It works with planners, designers, clients and architects offering guidance on projects that will shape our lives.

CABE advises central, regional and local government on architecture and urban design and helps to formulate planning policy and systems that can deliver the best design in public buildings and spaces, and assists to commission new buildings and spaces that provide best value for money.

<http://www.cabe.org.uk/>

CABE has a web site for education, detailing examples of new colleges and universities, together with those being planned.

<http://www.cabe.org.uk/default.aspx?contentitemid=37>

CABE has also produced a study: *Measuring the Impact of Architecture and Design on the Performance of Higher Educational Institutions*, which was funded jointly by the HE Funding Councils and can be found at:

<http://www.aude.ac.uk/uploads/Final%20-%20Design%20with%20Distinction.pdf>

Constructing Excellence

The vision of *Constructing Excellence* is for the UK construction industry to realise maximum value to all clients, end users and stakeholders and exceed their expectations through the consistent delivery of world-class products and services.

Constructing Excellence aims to deliver improved industry performance resulting in a demonstrably better built environment. It acts as a unique bridge between industry, clients, government and the research community. It is a new single organisation governed by members with the involvement of other customers and stakeholders. It also delivers three major business streams: major government programmes (principally under a contract with the DTI); membership programmes; and other commercial contracts.

Its web site includes *an Achieving Business Excellence Frameworking Toolkit* and is at: <http://www.constructingexcellence.org.uk/default.jsp>.

Higher Education Design Quality Forum

The Higher Education Design Quality Forum (HEDQF) aims to improve the performance of buildings and estates in universities and higher education colleges. It was formed in 1995 to provide a long-term forum for discussions between procurers in the higher education sector and the architectural profession.

The forum's activities are intended to help the sector achieve buildings that demonstrate quality, improve the performance of both clients and design teams, and to promote a climate where the value of well-designed buildings is recognised. HEDQF is supported by Universities UK, the Association of University Directors of Estates (AUDE), and the Standing Conference of Principals (SCOP). Each of the supporting organisations has representatives on the group. The HEDQF web site is:

http://www.architecture.com/go/Architecture/Debate/Forums_2066.html

Holyrood building project

Another useful reference document is Lord Fraser's *Report on the Management of the Holyrood Building Project*, which can be found at:

http://www.holyroodinquiry.org/FINAL_report/report.htm

Additional resource information

Association for Project Management (APM)

<http://www.apm.org.uk/>

Association for Project Safety (Planning Supervisors)

<http://www.associationforprojectsafety.co.uk/headlines.php>

British Institute of Facilities Management (BIFM)

<http://www.bifm.org.uk/bifm/home>

Chartered Institute of Building (CIOB)

<http://www.ciob.org.uk/home>

Chartered Institution of Buildings Service Engineers (CIBSE)

<http://www.cibse.org/>

Facilities Management Association (FMA)

<http://www.fmassociation.org.uk/>

Facilities Management Graduate Centre (FMGC), Sheffield Hallam University

<http://www.shu.ac.uk/fmgc/>

Institute of Clerk of Works

<http://www.icwgb.org/>

Institute of Maintenance and Building Management (IMBM)

<http://www.imbm.org.uk/>

Royal Incorporation of Architects in Scotland (RIAS)

<http://www.rias.org.uk>

Royal Institute of British Architects (RIBA)

<http://www.riba.org>

Royal Institution of Chartered Surveyors (RICS)

<http://www.rics.org>

Royal Institution of Chartered Surveyors Project Management (RICSPM)

<http://www.rics.org/Management/Projectmanagement/>

The Law Society of Scotland

<http://www.lawscot.org.uk>



Scottish Funding Council
Donaldson House
97 Haymarket Terrace
Edinburgh EH12 5HD

t 0131 313 6500
f 0131 313 6501
www.sfc.ac.uk