
ESTATES STRATEGIES 2005

08 April 2005

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To: Heads of higher education institutions in
Wales

Summary: This circular requests institutions to prepare
new estate strategies for the period 2005-
2015.

Response by: 31 May 2005

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INTRODUCTION

1. This circular sets out the required timescale and minimum specification for the delivery of the next round of estate strategies. It also includes for reference a supplement to the existing estate manual guidance providing an update on the preparation of these documents at **Annex A**.

BACKGROUND

2. All Institutions produced estate strategies in 2000 and have documented progress against those strategies annually within the Strategic Plan. During the intervening five years significant developments in legislation likely to affect the estate have occurred particularly around planning policy, health and safety, and disability legislation. The ongoing development of institutional strategy, evolving changes in pedagogy, and changing student aspirations all require estate strategies to be regularly reappraised. The new round of estate strategies will also need to include sustainability as an underlying value in planning the ongoing development of the estate. The estate strategies should also consider recent guidance around space management, and the use of new analytical tools, which can assist in the measurement of performance in this area.

ESTATE STRATEGY APPROVAL

3. Institutions are reminded that the estate strategy must be a fundamental review of the existing estate. It needs to set out clearly the institutions objectives and state how these objectives are to be achieved. The strategy should cover a time frame of 10 years. The document must clearly state who has been involved in its preparation, its remit, timescale for preparation and reporting structure of that group. In all cases the estates strategy should be approved by the governing body.

MINIMUM SPECIFICATION

4. The approach set out below details the minimum level of information that should be included within the estate strategy. Further information or detail should be included where this is required to explain, justify, or understand the information provided. The strategy should comprise six distinct phases:-

METHODOLOGY

5. The estate strategy should set out the context in which the document is being prepared. This should include a brief review of the main objectives the institution is aiming to achieve, together with the values and vision which it seeks to embody within the estate strategy. This part of the report should also outline all relevant corporate documents referred to and identify where additional areas of policy relevant to the estate need to be prepared.
6. The initial section of the strategy should also identify the members of the group involved in preparing the estates strategy their roles, and the reporting structure of the group to the senior management and governing body. It should also identify the methods used to communicate with both internal and external stakeholders during the development of the strategy. Institutions may wish to consider the inclusion of external stakeholders where their involvement is likely to be fundamental in achieving the strategy. This section should also indicate the time available to the group in preparing the strategy.

THE ACCOMMODATION BASE

7. The accommodation base should provide sufficient information to allow the estate to be assessed in two separate ways both of which should include infrastructure as well as all buildings providing teaching, residential, research office and social facilities. Any unused or derelict accommodation should be separately identified.
8. The two bases of assessment are :-
 - (1) The ability of the estate to meet the foreseeable needs of the institution within the plan period.

The information required to meet base 1 is largely set out in para 4-8 of the Estate Management Manual. The information should be presented in a way that allows performance of individual buildings, and campuses to be considered as well as the overall estate. The data should include measurement of physical condition, future maintenance profile, building performance particularly in relation to statutory compliance, and suitability. The accommodation base should also include any additional data available on energy management. The data collected should also include a recent reinstatement valuation of the estate, together with an open market valuation (where appropriate) and a depreciated replacement cost valuation. Data regarding ownership of the estate together with details of restrictive covenants, or other legal impediments to use should also be included.

- (2) The long term sustainable capacity of the estate

The second base information will together with the information identified above be used to assess the ability of the estate to change to meet future unidentified requirements. The information collected should facilitate the comparison of existing utilisation of the estate, ability to adapt, and total estimated capacity.

Information required to meet this requirement should include the following items:-

- Size, location and topography of the individual campuses.
- The economic life of the main buildings on each campus.
- Assessment of cost in use where critical to continued retention
- Prevailing planning policies for the individual campuses
- Assessment of any known constraints to future development e.g. adverse ground conditions, utilities, or absence of infrastructure. Details of any listed buildings or other development constraints should be included.

The information collected should be sufficient to allow subsequent analysis to assess potential areas for expansion, the ability to replicate or increase the existing density of development (where new capacity can only be achieved by replacing existing buildings)

DRIVERS AND OBJECTIVES PHASE

9. This section should identify the key determinants of change that will shape the future development of the estate. In addition it should also look to identify longer term trends e.g. sustainability, increased aspirations of students, particularly where these may have implications for current decisions. The list should include key sector wide objectives such as moving towards financial sustainability as well as objectives specific to individual institutions. Further advice is contained within the Estates Manual.

ANALYSIS PHASE

10. This element of the strategy should focus on analysing the gap between the existing estate and the additional requirements that the estate is now required to deliver. It should also highlight the sustainable capacity of the estate including identification of possible expansion areas and an assessment of the adaptability of the estate as indicated in paragraph 8(2) above. It should highlight the opportunities, deficiencies, and initial identification of possible options. This gap analysis should include consideration of likely available financial resources to run and maintain the estate, as well as analysing the quality and quantum of the physical estate. Where significant additional capital or running costs are required it an indicative statement should be included to show the source of both revenue and capital. The analysis should specifically consider
 - (1) What contribution improved space utilisation can make to achieving the required facilities. (This should reflect on the recent research and models produced by the Space Management Group)
 - (2) The affordability of the existing and proposed estate having regard to current and future costs in use and maintenance profiles. (Analysis should include an assessment of the cost of the estate per FTE as well as making use of the Model of the Affordable Estate)
 - (3) Whether additional facilities can be obtained on a collaborative or shared basis.

SYNTHESIS/ OPTIONS

11. This part of the strategy should aim at developing a range of options capable of addressing the identified need and consistent with the sustainable capacity of the estate identified above. All appraisals should as a minimum contain three options including a do nothing or do minimum. The option appraisal should be consistent with the guidance attached at **Annex B** (Reproduced and updated from Circular W99/43HE)

IMPLEMENTATION PHASE

12. The estates strategy must include an implementation plan setting out provisional dates for achieving key targets identified within the strategy. The implementation plan should be broken down into discreet projects or components of those projects to reflect the intended pattern of development. The implementation plan should form the basis of annual reporting against progress made or changes introduced to the estate strategy.

SUBMISSION

13. The new estates strategies should be submitted between 1 October 2005 and 31 March 2006. Institutions are invited to set their own timescale for submission within this period. The proposed submission date should be agreed with the approval of the governing body. The Council will respond to each institution within three months of receipt. Chris Cowburn Head of Estates will be pleased to discuss the development of the document in the interim.
14. Responses from institutions indicating when strategies will be delivered to the Council should be received by 31 May 2005

1 Introduction

- 1.1 The previous HEFCW guidance on estate strategies was published in 2001 and is contained within the Estates Manual¹. The information contained within the manual remains relevant in terms of process as does the guide to good practice issued in 2000 by HEFCE².
- 1.2 Since that guidance was written the context and environment faced by higher education has changed significantly. The ongoing development of policy, evolving changes in pedagogy, and changes in student aspirations and profile all require institutions to reconsider their estate strategies. The last five years has also seen significant legislative developments particularly around the implementation of disability legislation but also in the field of health and safety and planning policy. Further change can also be anticipated particularly in the areas of sustainability³, procurement, and efficiency⁴.

The estate strategy needs to reflect on these and many other factors if it is to remain as a robust strategic document capable of shaping the future development of the institution, and retaining the flexibility to cope with further change.

2. Purpose

- 2.1 This paper is intended to provide additional commentary on issues and techniques for analysis that have developed since the previous guidance was issued. It is intended to be complimentary to the two primary references referred to above, by identifying new issues, and highlighting developments in best practice rather than amending the existing methodology. This paper should be read in conjunction with The Estates Strategy Specification (to be issued separately), which sets out the expected minimum specification for the strategy. It is not intended to provide a pro forma or to indicate a single approach that can work for all institutions, but to provide direction in respect of areas where new issues have developed, or where new techniques should be considered.

3 Preparation

Management of the Process

- 3.1 The importance of having an appropriate management team and the authority/support to develop the estates strategy cannot be under estimated. An effective management team will ensure that it has a clear remit, a realistic timescale, and have established effective ways of reporting and communicating to the senior management team, stakeholders, and the governing body.
- 3.2 The preparation of a successful estates strategy will require a significant input from a variety of representatives throughout the institution and from external stakeholders. It will also need both the endorsement and commitment of the governing body and the senior management team throughout the process.
- 3.3 The starting point of the estate strategy should be to secure two principle requirements:-

¹ ELWA Estate Management Manual 2001

² HEFCE Estate Strategies A Guide to Good Practice 2000

³ Welsh Assembly Government The Sustainable Development Action Plan 2004-2007

⁴ Welsh Assembly Government Making the Connections 2004

At its simplest be to translate the aspirations and proposals of the institution into potential realisable options. To do this effectively estates strategy must draw from and link to the enabling strategies and plans that support the corporate plan.

- 3.4 The estates strategy should bring an extra dimension and challenge to corporate planning in that it should highlight opportunities as well as problems beyond the immediate requirement of meeting the currently identified aspirations of the institution. This requires a focus that extends beyond the immediate and identifies longer- term issues particularly around capacity, or the economic life of the estate. It should also assess the sustainability of existing patterns of capital investment and maintenance.
- 3.5 It is important for the estates function to be able to clearly demonstrate both the existing opportunities and limitations of the existing estate, and longer term issues at an early stage. The core data on the estate in terms of capacity, condition, and fitness for purpose needs to be developed in advance of the management group being formed. This has the advantage of decreasing the time taken to develop the strategy, and ensuring that much of the relevant information is available from the outset. The outcome of previous feasibility studies or investigations also need to be made available where appropriate to inform discussion and avoid abortive work.
- 3.6 The management team needs to include representatives of all relevant interests of sufficient seniority to ensure that it achieves the credibility and the ownership required to become a significant strategic document. Where organisations are looking to secure the use of facilities or services through collaboration or joint ventures it is important to consider how representatives of the relevant external bodies can be integrated within the strategy process. Similarly consideration should be given to student or particular interest groups (particularly disability) being included within the team or at least be included within a structured process of communication. The management team should as a minimum include adequate and balanced representation from academic, finance and estates staff.
- 3.7 The use of consultants can be of assistance both in introducing an element of objectivity and in providing additional skills and resources. Previous strategies produced by consultants were of a high standard. In all cases the consultant had been involved in the process from an early stage and has been fully incorporated within the team producing the strategy. Against this there is a risk that the consultants will not be able to develop sufficient understanding of the institution and the issues it faces given the timescale available. It should be noted that the consultant will need a significant level of support and supervision if he is to produce a detailed and relevant report which accurately reflects the issues faced by the Institution.
- 3.8 The composition of the management team, its remit, timescale, and reporting structure should be clearly set out within the estate strategy.

4. Communication

- 4.1 Appropriate and timely communication is vital in developing the strategy and ensuring informed and relevant feedback. Communication also has a role to play in raising the profile of the estate strategy and increasing its relevance to both internal and external stakeholders. Effective communication will need to be done in a number of ways to ensure that it reaches as many people as possible. Communication should be structured to encourage feedback and participation as this can provide a valuable additional input to the process. Consideration should be given to specific targeted communication (e.g. surveys, or questionnaires) where particular issues are of direct relevance e.g. disability groups being contacted regarding alterations to access arrangements. This could be done either as part of the estates strategy process or as part of the overall corporate communication /consultation strategy.

- 4.2 Communication with external stakeholders also needs to be included within this process. This again will need to cover a variety of circumstance ranging from the occasional users of the Institution through key suppliers, potential partners, local authority, utility providers, and interest groups.
- 4.3 The communication/approval process adopted should be clearly identified within the estates strategy as this is fundamental in establishing strategy as a key strategic document.

5. Values and Vision

- 5.1 The estate should seek to demonstrate the physical manifestation of the values vision and aspirations set out within the strategic planning documents as well as identifying and responding to the many other drivers that influence the estate. These issues need to be carried through the document and reflected both in the development of options and in the appraisal process. The strategy needs to be written in such a way that any value based judgements or aspirations are linked back to corporate plans or policy.
- 5.2 In some instances it is clear that Institutions may not have a fully developed vision as to how they intend to progress, or may be part way through a major programme of change. Where this occurs the estate strategy should acknowledge this and be developed on the basis that a further review will be instigated once the strategic direction becomes clear. Estate Strategies created on this basis should be regarded as an interim measure only and have a lifespan of not more than 2 years. Institutions proposing to proceed on this basis should agree this in advance with HEFCW.
- 5.3 The absence of an agreed clear strategic vision does not automatically preclude the development of the estates strategy. Where the gap analysis and consideration of strategic proposals does not indicate significant remodelling or development the emphasis of the strategy can legitimately consider renewal and incremental improvement of the core estate as the main focus provided there is certainty that this will not subsequently prove abortive. This approach needs to reflect carefully on ongoing changes in expectation, (likely to develop further as fees become the norm in England) standards and legislation if it is to provide an appropriate way forward. Improving disability compliance, or attending to known wants of repair within the core estate, are two possible approaches in these circumstances.
- 5.4 The estates strategy must ensure that the values, vision, and known commitments (where they relate to the built environment) are identified and considered explicitly at the outset not only in formulating options but in the methodology, assessment and priority setting process. The assessment must be carried out within the context of a clear understanding of the long- term capacity and sustainability of individual sites. (See paragraph 6.0 onwards).

6. Sustainability

- 6.1 Sustainability can be defined as:- “Development which meets the needs of the present without compromising the ability of future generations to meet their own needs”¹. Moving towards sustainability in the widest sense of the word will become an increasingly important objective during the lifespan of the estate strategies. The issue of sustainability will be tested by considering both the use of physical resources and the financial base.
- 6.2 HEFCW are required to ensure that sustainability is enshrined within the corporate planning processes of the sector. The estates strategy is a key strategic document that

¹ HEFCE Sustainable Development in Higher Education 2005

should consider existing sustainability policies relevant to the estate and examine their remit and effectiveness. Where policies are not in place the strategy should identify these areas and include the development of appropriate policy and action plans as part of the performance plan. Financial sustainability which will also assume increasing importance is covered at paragraph 7.0 below.

- 6.3 Sustainability should increasingly be identified as a core theme within the wide range of policy documents produced by the sector. This must be carried through into the estate strategy particularly within the option development and assessment criteria. Clearly it is not appropriate to carry out a detailed design of a project as part of the estate strategy. However the adoption of high level environmental criteria is realistic and should be adopted wherever possible within the strategy. This could include an assessment of transport needs, ecological affect, heating/cooling requirements, aesthetics, affect on the sustainability of the remainder of the estate. Similarly consideration of the affect on the adjacent community will increasingly become a consideration of sustainability and planning particularly on densely developed campuses where close proximity to other uses can create tensions. The built environment has an important role to play in this emerging area and the estates strategy presents a key opportunity for institutions to develop evidence of sustainable practice. Increasingly sustainability is likely to be “encouraged” through legislation particularly through enhanced building regulations. The estates strategy presents an opportunity for institutions to embed sustainability as a core value in the future development of the estate wherever possible. It is likely that sustainability, along side other quality of life issues may well increasingly form part of the marketing mix of the institution. This needs to be thought through as part of the strategic planning process.
- 6.4 Sustainability should be clearly demonstrated within the estate strategy. The development and assessment of options should include sustainable criteria and demonstrate an holistic approach to the estate, its further development, and the wider community.

7. Financial Sustainability

- 7.1 The concept of financial sustainability should be an overriding value throughout the estates strategy . Financial sustainability can be defined as follows:- “ An institution is being managed on a sustainable basis if taking one year with another, it is recovering its full economic cost across its activities as a whole, and is investing in its infrastructure at a rate adequate to maintain its future productive capacity appropriate to the needs of its strategic plan and students, sponsors and other customer requirements.”¹
- 7.2 The move towards financial sustainability and full economic costing via TRAC will have a significant affect on the way costs previously considered as indirect costs are now included within the pricing matrix. The approach to estates pricing within the TRAC documentation effectively brings together the concept of economic life, space usage, and cost. Estates costs incurred in relation to research projects should be assessed on the basis of full economic cost with effect from January 2005. There is a further requirement to have developed a fully robust approach to full economic costing by August 2007.
- 7.3 As a minimum the estates strategy should calculate the sustainable, and full economic cost of the whole of the estate. This should also include the infrastructure adjustment. Details of how the full economic cost and the sustainable cost should be calculated can be found at the JCSPG website.² The Space Management Group will also shortly be releasing an Excel based spreadsheet. The Model of the Affordable Estate³ which can

¹ JCPSG Costing and Pricing Case Study Estates 2004

² www.jcpsg.ac.uk/costingpricing/practice/index.htm

³ www.smg.ac.uk

calculate both the sustainable and full economic cost of the estate. However there are a number of differences in the method of calculation used.

- 7.4 Ideally the analysis should go further and investigate estates costs in relation to specific campuses or individual buildings where these are significant to the overall cost. The findings of this analysis should be appraised within the strategy and where appropriate considered in relation to existing budgets, and the development of options.

8. The Accommodation Base

- 8.1 A reliable and up to date accommodation base forms the starting point of analysis. The scope of information collected should be sufficient to allow the estate to be assessed in two respects:-

- i. Its ability to meet the foreseeable needs of the Institution within the plan period as developed within the option appraisal
- ii. The long term sustainable capacity of the estate

Data and the analysis required to comply with the first objective is set out in Appendices 4-8 of the Estates Management Manual. In essence this requires an audit to be undertaken of the existing performance of the estate in relation to quality performance and amount of accommodation available. Detailed analysis should be provided against individual buildings, sites, and departments. This should assess quantity, quality, and adaptability.

- 8.2 The second base is important for two reasons:

- i. This approach enables the institution to develop a long -term perspective to estates planning.
- ii. This technique assists institutions in avoiding inappropriate incremental development of the estate by identifying in advance the long term capacity and likely cost profile associated with particular buildings or individual sites.

- 8.3 The sustainable capacity of the estate will be largely determined by the size/topography of the campus, its location, the economic life of the existing buildings, and the prevailing planning policy .The sustainable capacity may in practice be further limited by financial viability i.e. additional development can only be achieved at a cost which may render it uneconomic. This may be as a consequence of abnormal ground conditions, demolition costs, or as a direct consequence of the density of development. Where the latter applies it should be identified as an additional component and reflected upon when developing options. The starting point for sustainable capacity planning is to ensure accurate data on the economic life of the main buildings on each campus is available. This assessment should incorporate functional suitability, and physical condition to produce a calculation of remaining economic life having regard to previous pattern of refurbishment. In many cases this information will be available as part of the data required to assess the depreciated replacement cost valuation of buildings. This assessment should also be extended to cover infrastructure where this forms a significant factor in the viability of a particular campus for development. The second component required to develop capacity planning is a clear understanding of the planning policy prevailing on each campus. This in practice will provide a further constraint on what may be viable, and technically feasible.

- 8.4 This initial level of information should be of sufficient detail to enable the identification of areas of potential expansion or redevelopment and to consider the acceptable format massing and type of any such development. This approach will also highlight periods when significant investment in the estate is likely to be required. This form of analysis is

particularly valuable where an institution has an estate that was largely developed or refurbished at particular times rather than by a programme of continuous investment.

- 8.5 Where the majority of the site is already developed it will be necessary to test whether the existing density of development is capable of being replicated or increased in the medium term. Where additional capacity relates to undeveloped land this will need to be assessed against the relevant prevailing planning policies. Increasingly local planning authorities will be seeking to secure wider policy objectives through development control, particularly through the control of car parking facilities. It is important that sustainable capacity of the estate reflects on the likely stance that will be adopted by the LPA.

9. Space Utilisation

- 9.1 Analysis of existing space utilisation should be undertaken to assess space utilisation on the basis of individual buildings, separate sites (where appropriate), as well as against types of space available. Analysis against existing space norms is unlikely to produce a realistic assessment. A more realistic approach is to consider existing space norms and utilisation rates achieved within the Institution and assess if these are sustainable and where possible comparable to other similar institutions. Space utilisation rates will have a significant affect on the overall cost of the estate and must be considered as an initial option where additional space appears to be required. Similarly the affordability of additional space must be reflected in the option appraisals where appropriate (see paragraph 7.0 onwards, above).
- 9.2 The Space Management Group will shortly release details of enhanced guidance in relation to space management This includes a detailed review of the effectiveness of space charging, and central timetabling. The existing approach to space charging and central timetabling should be included within the strategy together with an appraisal of its effectiveness and any proposals for its development.
- 9.3.1 The estates strategy should consider existing space utilisation and capacity critically to establish realistic targets for improvement where practical. An analysis of the effectiveness of existing space management techniques employed within the institution should also be included within the scope of the strategy.

10. Drivers and Objectives

- 10.1 The objectives relevant to the estate must flow from and be explicitly identified against proposals set out within the strategic plan. The drivers for change should as a minimum review the areas set out within paragraph 2.25 of the Estate Manual. This section should include a review of all relevant policy/statutory /best practice developments. The drivers and objectives section should cover a wide scope beyond those issues with immediate impact on the estate. This should include reference to the socio- economic role of the institution and the potential implications on the estate. It may also be relevant to consider the effects of ongoing development on the immediate community and consider how adverse affects can be minimised.

11. Analysis

- 11.1 This section should compare the additional space and property requirements of the institution, with the existing facilities through gap analysis. The performance and capacity of the existing estate as detailed in the accommodation base should highlight the opportunities, problems, and proposals that have been previously identified. Assessment of the gap provides an initial list of requirements. This list should include consideration of financial, and logistical issues as well as physical requirements. The analysis should refer to and be justified by the two bases investigated within the

accommodation base. The analysis should start to develop the basic specification required to resolve the identified objectives i.e. identifying basic parameters does it need to be on site? Does the Institution need to own it? What is the space utilisation /space need? What support facilities are required?

The second role of the analysis is to identify the key strategic priorities. This may for example be the realignment of existing space to meet current teaching requirements or a reduction in the number of sites. It should not be project specific at this stage.

12. Synthesis /Options

Refer to existing guidance

13. Implementation

- 13.1 The provision of a robust implementation plan should be included within the strategy. The plan should be broken down into discreet areas with key stages of the process identified and indicative timescales identified. It is accepted and indeed expected that in many cases these timescales may not prove to be achievable. The implementation plan should however provide a framework for annual reporting of progress within the strategic plan. It is likely that future reports on estates strategy will be incorporated within the overall analysis of strategic plans. The development of a clear implementation plan will provide a framework against which ongoing developments can be considered.

ANNEX B

CAPITAL INVESTMENT APPRAISALS

INTRODUCTION

1. Option appraisal is an analysis of alternative options in order to achieve the institution's property objectives having regard to the available opportunities and constraints presented by the existing estate. Options should be evaluated adopting both financial and non-financial criteria. A financial appraisal should be based upon capital investment methodology, which is discussed later in this annex.
2. A capital investment appraisal is a means of ensuring value for money in relation to developing an estate strategy and capital project. This annex provides guidance for undertaking a capital investment appraisal and should be read in conjunction with the appraisal model (Annex B). This model examines the cash flow implications of alternative options and the calculation of Net Present Values (NPVs). The NPV is the balance of current projected costs and benefits arising from the project, discounted to the present day.
3. A capital investment appraisal is not meant to provide an indication of profit or loss for the institution as a whole, but rather a comparison of costs in relation to those areas of the estate where there is an opportunity or an inclination for change.
4. The inputs therefore only consider situations where the option may increase or decrease cost or value. It is usual to generate a range of options covering the extreme solution (for example, total relocation) to a 'do the minimum' approach.
5. Once the full range of options has been considered, then the most appropriate and realistic of them should be fully appraised. For instance, if an institution's accounts are clearly not sufficient to support a multi-million pound redevelopment then this need not be appraised as one of the options, although it should be considered in the first instance to assess if that is the case. It is important to take into account not only what is preferred but also what is possible.

OPTION APPRAISAL

Context

6. Option appraisal should be seen in the context of developing a business case to meet the needs identified in the estate strategy by identifying and evaluating a range of options. Ideally, it should be carried out in two stages:
 - A: Broad strategic options – relating to estate strategy
 - B: Specific project options – capital project appraisal.
7. At a strategic level, the options should explore different approaches in order to achieve the strategic requirements. The identification and evaluation of a range of options is an important element of an estate strategy and should consider financial and non-financial criteria. The financial aspects should be expressed by means of a capital investment appraisal (Annex B). For guidance purposes, there should be a minimum of three options, including the base case or 'do nothing/do the minimum' option.
8. The implementation of an estate strategy, once adopted, may involve a number of capital projects. For each significant capital project, alternative options should be

appraised in order to ensure that the preferred project represents best value for money. For example, an estate strategy might advocate replacement of temporary classrooms by a new more appropriate educational resource. Before embarking on the design of a new facility, a capital project appraisal should be undertaken considering a range of options covering, for example, alternative sitting, size and usage.

Basic steps

9. The following steps should be undertaken in the appraisal process:
 - a) define the objectives
 - b) consider the options
 - c) identify, quantify and, where possible, value the costs, benefits, risks and uncertainties associated with each option
 - d) analyse the information (for example, compare the relative merits and demerits of options), and
 - e) present the results.
10. The options should be appraised adopting both qualitative and capital investment criteria. Appraisals are concerned with obtaining the best use of resources. Consideration should be given to the costs, benefits and uncertainties attributable to each option. Care needs to be taken to avoid *double counting* - including what is a cost in one option as a benefit in another. The Base Case option provides a common benchmark to avoid this sort of mistake, since each option in the appraisal should represent a change from the Base Case. For example, if the Base Case assumes retention and repair of a building which is otherwise disposed of in Option1, the cost of repair may either be included in the capital investment appraisal as a cost in the Base Case, or, alternatively, as a saving in Option 1.
11. Costs and benefits covered by an option appraisal will often include:
 - a) initial capital costs including buildings, equipment and land (note that initial capital costs may not be relevant to the Base Case)
 - b) capital cost of any buildings or equipment which need to be replaced over the appraisal period
 - c) residual values of the capital assets at the end of the appraisal period
 - d) operating costs for the whole term of the appraisal
 - e) other costs or benefits which can be valued in money terms, in the form of revenue, cost savings or known marketed outputs, and
 - f) measures or descriptions of those costs or benefits which cannot be valued in money terms.

Initial assessment of affordability

12. When the options have been appraised, an initial assessment should be made of the procurement options available and how they can be financed. This might demonstrate that the preferred solution is unaffordable, even though it may appear to provide the best value for money. Under these circumstances, the institution may have to consider the next best option, or look again at how the option might be funded.

Consideration of procurement routes

13. The institution should consider and, if necessary, take advice on the suitability of different procurement routes. For example, for a building procurement these might include a traditional route, design and build (D & B) or potentially a PFI/PPP solution based on service delivery.

CAPITAL INVESTMENT APPRAISAL MODEL

14. Attached at the end is a capital investment model. The model can be provided by the Council in Microsoft Excel 95 format. Institutions may wish to adapt the model to suit particular project requirements by changing the input titles. Institutions are asked to supply a narrative explaining the inputs for each option.
15. The example gives an appraisal period of 20 years for capital projects, although other appraisal periods can be used, typically 25 years.
16. Where an investment uses public money, the Treasury discount rate of 6% should be adopted. If an institution is funding an investment without public funds, the discount rate could be one which reflects the institution's real long term cost of borrowing.
17. The normal practice is to ignore inflation in so far as the NPV is calculated by expressing all costs and benefits in present value terms, and applying a discount rate. This approach is valid so long as the factors included in the calculation are affected equally by inflation. However, if there are grounds for expecting some prices to increase at a significantly faster or slower rate than inflation, then these should be taken into account in the calculation. For example, construction costs are currently increasing at a higher rate than inflation.
18. Estimates of costs and benefits always involve assumptions about the future. Changes in assumptions can seriously affect the balance or advantage between options and the cost effectiveness of the preferred solution. As a result, the preferred option should include a sensitivity analysis, which examines the impact of changes to key variable inputs in the appraisal.

GLOSSARY OF TERMS

19. The following represent a glossary of inputs to the capital investment model at Annex B. The model is not prescriptive and it may be adapted to suit particular circumstances.

Project Costs

Building Works

The total estimated cost of construction and refurbishment including external works, professional fees and VAT.

Value of land/buildings purchased

This will equal the price paid by the institution for land or buildings purchased which form part of the project. Where the project is on land owned by the institution, consideration should be given to the opportunity cost or alternative use value. This may or may not be measured in purely monetary terms.

Furniture and equipment

The total fitting out costs for the new or purchased building relating to loose furniture and equipment, including any telecommunications, computing and associated equipment.

Other capital costs

Other capital costs, such as demolition/decanting.

Additional staff

Pay costs associated with additional teaching and non-teaching posts directly attributable to the project.

Additional premises running costs

The total non-pay costs attributable to the new premises under consideration, that is, over and above current costs. For example, additional utility costs, cleaning and routine maintenance.

Rents

For leasehold premises, consideration should be given to uplift at rent review.

Other revenue costs

Other revenue costs might include non-pay costs associated with additional students arising from the project.

Project Income

The following represent typical benefits, which are directly attributable to the project.

The following represent typical benefits, which are directly attributable to the project.

Residual value

The residual value is the expected value of the capital asset at the end of the appraisal period. There are various methods for calculating the residual value. A commonly used approach is the *straight line* method which depreciates the capital cost equally over the estimated life of the asset.

For example, for a project in Year 2 with a total capital cost of £1,000,000 and an estimated life of the asset being 50 years, the residual value at Year 20 would be $£1,000,000 \times 32/50 = £640,000$.

Sale of land and buildings

The estimated Open Market Value (OMV) of land or buildings, making appropriate assumptions with regard to planning and timing.

Savings in running costs

Savings resulting from the disposal or closure of existing buildings, that is, year on year savings directly resulting from the project.

One-off savings

One-off savings, such as savings in immediate repairs which would need to be undertaken in the absence of the project.

Additional student income

This should relate to additional student income directly attributable to the project.

Commercial income

Commercial income derived from other sources such as, leasing of surplus accommodation.

Other

Other sources of income might relate to benefits which are levered in by the project.

APPRAISING NON-FINANCIAL ASPECTS

20. Whilst the capital investment appraisal represents a useful tool in assessing value for money, option appraisals should also include a non-financial or qualitative appraisal. This recognises that many of the benefits in an investment decision cannot be evaluated in a cash flow. Some benefits cannot be expressed in financial terms and as a result need to be appraised on a qualitative basis.
21. Options can be appraised against certain qualitative criteria. For an estate strategy, they might include:
 - the extent to which the option contributes towards the institution's strategic plan
 - enhancement of education resources;
 - enhancement of non-academic student facilities
 - flexibility for the future, or
 - protecting an institution's market position
22. Each of the options can be appraised against the qualitative criteria, adopting a matrix or impact statement approach. The various stages are summarised as follows:
 - a) identify the relevant outputs which cannot be valued in money terms
 - b) define the scoring scales. For example, minus 5 to plus 5 on the basis:
 - very much worse (- 5)
 - no change (0)
 - very much better (+5)
 - c) score the options accordingly for each qualitative criteria
 - d) decide on the relative importance of each criterion and weight them accordingly, and
 - e) the final step is to combine weights and scores to give an overall score for each option.

WORKED EXAMPLE OF ESTATE STRATEGY CAPITAL INVESTMENT APPRAISALS

23. Attached is an example of estate strategy capital investment appraisals. It is for illustrative purposes only and is not intended to be prescriptive. Institutions may require external professional advice in respect of some of the inputs. The options are measured against the base case.
24. In the attached example, the option to relocate is not appraised since it is seen neither as necessary nor viable. The majority of the buildings in the estate are identified as being at a reasonable standard and condition, and functionally suitable. The exception is teaching block D which provides unsatisfactory accommodation.
25. Building maintenance and health and safety reports have identified a requirement to undertake extensive works in order to continue occupation of the building, and historical evidence provides an indication of the likely continued running costs associated with the building in the event that it is retained.
26. The appraisal considers a range of options. The Base Case retains block D and undertakes essential maintenance and health & safety works. These works are treated as savings in the other options and, as a result, are excluded from the Base Case capital investment appraisal. It is considered that the building will not have an economic life beyond Year 20. The residual value is restricted to land only.
27. The other options considered look at alternative solutions to providing accommodation (options 1 – 3), each of which should be compared against the Base Case described above. Option 1 considers the demolition of the block and sale of vacant land within the estate. The proceeds are put towards the cost of developing a new facility, procured in a conventional manner.
28. Option 2 also considers demolition and replacement of the building, but in this case, it is assumed that the new accommodation is developed off-site and that the additional land release within the campus is also sold. 'Additional premises costs' relate to the new building, whilst 'Savings in running costs' relates to block D, which is sold.
29. Option 3 considers the alternative of leasing accommodation in a town centre location, in contrast to owner occupation.
30. It is important that each of the options considers not only the cost of undertaking the work identified, but also the value of assets released and the residual value of assets retained, together with any other income streams generated as a result of the choice of option.
31. This example is not intended to be exhaustive and provides an indication of the method of approach that could be adopted and some of the factors that should be taken into account. Circumstances from one institution to the next will vary and the inputs will be different. The principle behind option appraisal and value for money comparison will, however, remain the same.

FURTHER INFORMATION

Economic Appraisal in Central Government. A Technical Guide for Government Departments – H M Treasury April 2003 ('The Green Book').

WORKED EXAMPLE OF ESTATE STRATEGY CAPITAL INVESTMENT APPRAISALS

ASSUMPTIONS FOR CASHFLOW INPUTS

| | | |
|--|---|------------|
| Teaching block size | 1,000m ² | |
| Current running costs | £45 per m ² | £45,000 |
| Replacement size purpose built | 800 m ² | |
| Replacement cost | £900 per m ² | £720,000 |
| Running costs on new building | £35 per m ² | £28,000 |
| Office building available to buy on Open Market Value (OMV) basis @ £750 per m ² | 1,200 m ² | £900,000 |
| Office building available to rent on OMV basis @ £90 per m ² | 1,200 m ² | £108,000 |
| Running costs on spec building | £40 per m ² | £48,000 |
| Demolition costs | £20 per m ² | £20,000 |
| Residual Value | Existing teaching block – residual value restricted to land only | £100,000 |
| | New teaching block residual value calculated on Depreciated Replacement Cost (DRC) of 32/50 | £460,800 |
| | Town centre space residual value calculated on DRC of 32/50 | £576,000 |
| Land sales | Vacant land with permission for housing - 4 acres (1.62 hectares) @ £250,000 per acre | £1,000,000 |
| Other income | Additional income derived from extra students | £1,000 |
| Boiler replacement | | £300,000 |
| Estimated Cost of Replacing Roof | | £75,000 |
| Estimated Cost of Upgrading Fire Protection System | | £100,000 |
| Estimated Cost of Other Backlog Maintenance | | £100,000 |

Please note: THESE ASSUMPTIONS ARE FOR EXAMPLE PURPOSES ONLY

BASE CASE: £31,180 NPV

Retain teaching block D, undertake backlog maintenance and bring up to present health & safety standards

Project Costs

- 1) Building works - backlog maintenance is treated as a cost saving in the other options and therefore excluded from the base case
- 2) Value of land/buildings purchased: N/A
- 3) Furniture and equipment: N/A
- 4) Other capital costs: N/A
- 5) Additional staff: N/A
- 6) Additional premises running costs: N/A
- 7) Rents: N/A
- 8) Other revenue costs: N/A

Project Income

- 1) Residual value (at Year 20) – it is assumed that the building will not have an economic life beyond 20 years. The residual value is restricted to land only
- 2) Sale of land: N/A
- 3) Sale of buildings: N/A
- 4) Savings in running costs: N/A
- 5) One-off savings: N/A
- 6) Additional student income: N/A
- 7) Commercial income: N/A
- 8) Other: N/A

BASE CASE:RETAIN TEACHING BLOCK D, UNDERTAKE BACKLOG MAINTENANCE AND BRING UP TO PRESENT HEALTH AND SAFETY STANDARDS

| | |
|------------------|------------|
| Institution name | |
| Discount | Rate 6% |
| | NPV 31,180 |
| Prepared by | ABC |
| Prepared on | 01/03/1999 |

Input Section

| | Year 1 £ | Year 2 £ | Year 3 £ | Year 4 £ | Year 5 £ | Year 6 £ | Year 7 £ | Year 8 £ | Year 9 £ | Year 10 £ | Year 11 £ | Year 12 £ | Year 13 £ | Year 14 £ | Year 15 £ | Year 16 £ | Year 17 £ | Year 18 £ | Year 19 £ | Year 20 £ | Total Years 1 yr-20 yr £ | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------------------|---------|
| 1) Project Costs | | | | | | | | | | | | | | | | | | | | | | 0 |
| 2) Building works | | | | | | | | | | | | | | | | | | | | | | 0 |
| 3) Value of land/buildings purchased | | | | | | | | | | | | | | | | | | | | | | 0 |
| 4) Furniture and equipment | | | | | | | | | | | | | | | | | | | | | | 0 |
| 5) Other capital costs | | | | | | | | | | | | | | | | | | | | | | 0 |
| 6) Additional premises running costs | | | | | | | | | | | | | | | | | | | | | | 0 |
| 7) Rents | | | | | | | | | | | | | | | | | | | | | | 0 |
| 8) Other revenue costs | | | | | | | | | | | | | | | | | | | | | | 0 |
| Expenditure sub-total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project Income | | | | | | | | | | | | | | | | | | | | | | |
| 1) Residential value (at Year 20) | | | | | | | | | | | | | | | | | | | | | 100,000 | 100,000 |
| 2) Sale of Land | | | | | | | | | | | | | | | | | | | | | | |
| 3) Sale of Buildings | | | | | | | | | | | | | | | | | | | | | | |
| 4) Savings in running costs | | | | | | | | | | | | | | | | | | | | | | |
| 5) One-off savings | | | | | | | | | | | | | | | | | | | | | | |
| 6) Additional student income | | | | | | | | | | | | | | | | | | | | | | |
| 7) Commercial income | | | | | | | | | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | | | | | | | | | |
| Income sub-total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 | 100,000 |
| Project Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 | 100,000 |
| NPV | | | | | | | | | | | | | | | | | | | | | 33,051 | 33,051 |

OPTION 1: £608,057 NPV

Demolish teaching block D, sell vacant land, use disposal proceeds towards cost of developing new block

Project Costs

- 1) Building works - construction of new purpose-built teaching block, inclusive of furniture and equipment: £720,000
- 2) Value of land/buildings purchased: new block built on existing campus
- 3) Furniture and equipment: included in 1) above
- 4) Other capital costs - demolish teaching block D: £20,000
- 5) Additional staff: N/A
- 6) Additional premises running costs: $800 \text{ m}^2 \times £35 \text{ per m}^2 = £28,000$
- 7) Rents: N/A
- 8) Other revenue costs: N/A

Project Income

- 1) Residual value (at Year 20): residual value is calculated based on remaining economic life at year 20, that is, constructed in year 2, economic life 50 years, residual value is $£720,000 \times 32/50 = £460,800$
- 2) Sale of land - sell 2 acres surplus land: £500,000
- 3) Sale of buildings: N/A
- 4) Savings on running costs: block D $1,000 \text{ m}^2 \times £45 \text{ per m}^2 = £45,000$
- 5) One-off savings: these comprise essential works on block D which would be saved under this option, namely

| | |
|--|------------|
| Health and safety works year 3: | £100,000 |
| Re-roof in years 6 and 20: | £75,000 x2 |
| Replace heating system in year 5: | £300,000 |
| Other backlog maintenance years 4 and 7: | £50,000 x2 |
- 6) Additional student income: £10,000 p/a
- 7) Commercial income: £1,000 p/a
- 8) Other: N/A

OPTION 1 - DEMOLISH TEACHING BLOCK D, SELL VACANT LAND, USE DISPOSAL PROCEEDS TOWARDS COST OF DEVELOPING NEW BLOCK

| | | |
|------------------|------------|---------|
| Institution name | | |
| Discount | Rate | 6% |
| | NPV | 608,057 |
| Prepared by | ABC | |
| Prepared on | 01/03/1999 | |

| Input section | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 | Total Years 1 yr-20 yr | |
|--------------------------------------|--------|----------|---------|---------|---------|---------|---------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------------------|------------|
| | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | |
| 1) Project Costs | | | | | | | | | | | | | | | | | | | | | 0 | |
| 2) Building works | | 720,000 | | | | | | | | | | | | | | | | | | | 720,000 | |
| 3) Value of land/buildings purchased | | | | | | | | | | | | | | | | | | | | | 0 | |
| 4) Furniture and equipment | | | | | | | | | | | | | | | | | | | | | 0 | |
| 5) Other capital costs | | | | | | | | | | | | | | | | | | | | | 20,000 | |
| 6) Additional premises running costs | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 532,000 |
| 7) Rents | | | | | | | | | | | | | | | | | | | | | | 0 |
| 8) Other revenue costs | | | | | | | | | | | | | | | | | | | | | | 0 |
| Expenditure sub-total | 0 | 748,000 | 48,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 1,272,000 |
| Project Income | | | | | | | | | | | | | | | | | | | | | | |
| 1) Residential value (at Year 20) | | | | | | | | | | | | | | | | | | | | | 460,800 | 460,800 |
| 2) Sale of Land | | | 500,000 | | | | | | | | | | | | | | | | | | | 500,000 |
| 3) Sale of Buildings | | | | | | | | | | | | | | | | | | | | | | |
| 4) Savings in running costs | | | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 810,000 |
| 5) One-off savings | | | 100,000 | 50,000 | 300,000 | 75,000 | 50,000 | | | | | | | | | | | | | | 75,000 | 650,000 |
| 6) Additional student income | | | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 180,000 |
| 7) Commercial income | | | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 18,000 |
| Other | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Income sub-total | 0 | 0 | 656,000 | 106,000 | 356,000 | 131,000 | 106,000 | 56,000 | 0 | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 | 591,800 | 2,618,800 |
| Project Total | 0 | -748,000 | 608,000 | 78,000 | 328,000 | 103,000 | 78,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 5,638,000 | 13,468,000 |
| NPV | | -665,717 | 510,489 | 61,783 | 245,101 | 72,611 | 51,874 | 17,568 | 16,573 | 15,635 | 14,750 | 13,915 | 13,127 | 12,384 | 11,683 | 11,022 | 10,398 | 9,810 | 9,254 | 175,796 | 608,057 | |

OPTION 2: £678,602 NPV

Demolish teaching block D, sell vacant land, use disposal proceeds towards purchasing and altering town centre accommodation

Project Costs

- 1) Building works: included in 2) below
- 2) Value of land/buildings purchased - purchase and remodel town centre office block: £900,000
- 3) Furniture and equipment: included in 2) above
- 4) Other capital costs - demolish teaching block D: £20,000
- 5) Additional staff: N/A
- 6) Additional premises running costs: 1,200 m² x £40 per m² = £48,000
- 7) Rents: N/A
- 8) Other revenue costs: N/A

Project Income

- 1) Residual value (at Year 20) - residual value is calculated based on remaining economic life at year 20 that is, constructed in year 2, economic life 50 years, residual value is: £900,000 x 32/50 = £576,000
- 2) Sale of land - sell 4 acres surplus land: £1,000,000
- 3) Sale of buildings: N/A
- 4) Savings on running costs: block D 1,000 m² x £45 per m² = £45,000
- 5) One-off savings: these comprise essential works on block D which would be saved under this option, namely:

| | |
|--|------------|
| Health and safety works year 3: | £100,000 |
| Re-roof in years 6 and 20: | £75,000 x2 |
| Replace heating system in year 5: | £300,000 |
| Other backlog maintenance years 4 and 7: | £50,000 x2 |
- 6) Additional student income: £7,500 p/a
- 7) Commercial income: £2,000 p/a
- 8) Other: N/A

OPTION 2: DEMOLISH TEACHING BLOCK D. SELL VACANT LAND. USE DISPOSAL PROCEEDS TOWARDS PURCHASING AND ALTERING TOWN CENTRE ACCOMMODATION

| | | |
|------------------|------|---------|
| Institution name | | |
| Discount | Rate | 6% |
| | NPV | 678,602 |
| Prepared by | ABC | |
| Prepared on | 1999 | |

| Input section | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 | Total Years 1 yr-20 yr | |
|--------------------------------------|---------|----------|-----------|---------|---------|---------|---------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------------------|-----------|
| | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | |
| 1) Project Costs | | | | | | | | | | | | | | | | | | | | | | |
| 2) Building works | | | | | | | | | | | | | | | | | | | | | | |
| 3) Value of land/buildings purchased | 900,000 | | | | | | | | | | | | | | | | | | | | | 900,000 |
| 4) Furniture and equipment | | | | | | | | | | | | | | | | | | | | | | |
| 5) Other capital costs | | | 20,000 | | | | | | | | | | | | | | | | | | | 20,000 |
| 6) Additional premises running costs | | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 912,000 |
| 7) Rents | | | | | | | | | | | | | | | | | | | | | | |
| 8) Other revenue costs | | | | | | | | | | | | | | | | | | | | | | |
| Expenditure sub-total | | 948,000 | 68,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 1,832,000 |
| Project Income | | | | | | | | | | | | | | | | | | | | | | |
| 1) Residential value (at Year 20) | | | | | | | | | | | | | | | | | | | | | 576,000 | 576,000 |
| 2) Sale of Land | | | | | | | | | | | | | | | | | | | | | | |
| 3) Sale of Buildings | | | 1,000,000 | | | | | | | | | | | | | | | | | | | 1,000,000 |
| 4) Savings in running costs | | | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 810,000 |
| 5) One-off savings | | | 100,000 | 50,000 | 300,000 | 75,000 | 50,000 | | | | | | | | | | | | | | 75,000 | 650,000 |
| 6) Additional student income | | | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 135,000 |
| 7) Commercial income | | | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 36,000 |
| Other | | | | | | | | | | | | | | | | | | | | | | |
| Income sub-total | | | ##### | 104,500 | 354,500 | 129,500 | 104,500 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 705,500 | 3,207,000 |
| Project Total | 0 | -948,000 | 1,086,500 | 56,500 | 306,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 657,500 | 1,375,000 |
| NPV | 0 | -843,717 | 912,246 | 44,753 | 229,035 | 57,454 | 37,576 | 4,078 | 3,847 | 3,630 | 3,424 | 3,230 | 3,047 | 2,875 | 2,712 | 2,559 | 2,414 | 2,227 | 2,148 | 205,012 | 678,602 | |

OPTION 3: £139,749 NPV

Demolish teaching block D, sell vacant land, lease town centre accommodation

Project Costs

- 1) Building works: N/A
- 2) Value of land/buildings purchased: N/A
- 3) Furniture and equipment: included in 7)
- 4) Other capital costs - demolish teaching block D : £20,000
- 5) Additional staff: N/A
- 6) Additional premises running costs: $1,200 \text{ m}^2 \times £40 \text{ per m}^2 = £48,000$
- 7) Rents - commencing rental of: £108,000 p/a
- 8) Other revenue costs: N/A

Project Income

- 1) Residual value (at Year 20) - there is no residual value for an occupational lease
- 2) Sale of land- sell 4 acres surplus land: £1,000,000
- 3) Sale of buildings: N/A
- 4) Savings in running costs - block D: $1,000 \text{ m}^2 \times £45 \text{ per m}^2 = £45,000$
- 5) One-off savings - these comprise essential works on block D which would be saved under this option, namely:

| | |
|--|------------|
| Health and safety works year 3: | £100,000 |
| Re-roof in years 6 and 20: | £75,000 x2 |
| Replace heating system in year 5: | £300,000 |
| Other backlog maintenance years 4 and 7: | £50,000 x2 |
- 6) Additional student income: £7,500 p/a
- 7) Commercial income: £2,000 p/a
- 8) Other: N/A

OPTION 3: DEMOLISH TEACHING BLOCK D. SELL VACANT LAND. LEASE TOWN CENTRE ACCOMMODATION

Institution name
 Discount Rate 6%
 NPV 139,749
 Prepared by ABC
 Prepared on 01/03/1999

| Input section | Year 1 £ | Year 2 £ | Year 3 £ | Year 4 £ | Year 5 £ | Year 6 £ | Year 7 £ | Year 8 £ | Year 9 £ | Year 10 £ | Year 11 £ | Year 12 £ | Year 13 £ | Year 14 £ | Year 15 £ | Year 16 £ | Year 17 £ | Year 18 £ | Year 19 £ | Year 20 £ | Total Years 1 yr-20 yr £ | |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------------------|-----------|
| Project Costs | | | | | | | | | | | | | | | | | | | | | | |
| Building works | | | | | | | | | | | | | | | | | | | | | | |
| Value of land/buildings purchased | | | | | | | | | | | | | | | | | | | | | | |
| Furniture and equipment | | | | | | | | | | | | | | | | | | | | | | |
| Other capital costs | | | 20,000 | | | | | | | | | | | | | | | | | | | 20,000 |
| Additional staff | | | | | | | | | | | | | | | | | | | | | | |
| Additional premises running costs | | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 48,000 | 912,000 |
| Rents | | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 108,000 | 2,052,000 |
| Other revenue costs | | | | | | | | | | | | | | | | | | | | | | |
| Expenditure sub-total | 0 | 156,000 | 176,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 156,000 | 2,984,000 |
| Project Income | | | | | | | | | | | | | | | | | | | | | | |
| Residential value (at Year 20) | | | | | | | | | | | | | | | | | | | | | | |
| Sale of Land | | | 1,000,000 | | | | | | | | | | | | | | | | | | | 1,000,000 |
| Sale of Buildings | | | | | | | | | | | | | | | | | | | | | | |
| Savings in running costs | | | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 | 810,000 |
| One-off savings | | | 100,000 | 50,000 | 300,000 | 75,000 | 50,000 | | | | | | | | | | | | | | | 575,000 |
| Additional student income | | | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 135,000 |
| Commercial income | | | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 36,000 |
| Other | | | | | | | | | | | | | | | | | | | | | | |
| Income sub-total | | | 1,154,500 | 104,500 | 354,500 | 129,500 | 104,500 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 54,000 | 2,556,000 |
| Project Total | 0 | -156,000 | 978,500 | -51,500 | 198,500 | -26,500 | 51,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -101,500 | -428,000 |
| NPV | 0 | -138,839 | 821,567 | -40,793 | 148,331 | -18,681 | -34,250 | 63,682 | -60,078 | -56,677 | -53,469 | -50,442 | -47,587 | -44,894 | -42,352 | -39,995 | -37,693 | -35,560 | -33,547 | -31,648 | | 139,749 |