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## *‘What’s In The Box’*

### **Papers presented at the Biology Curators Group and the Natural Science Conservation Group joint**

**conference**

**16-17 April 1997, Cardiff**

#### **A Cost/Benefit Approach to Collection Care**

Museums and other collecting organisations inhabit a changing socio-economic environment: with rising costs, a sharper competitive environment and a squeeze on funding. A greater diversity of individuals is seeking to use collections in a variety of ways. Increased access to collections can sometimes be promoted as a way of justifying resources to support collection care. So questions of what to do with a collection, which items to preserve, how much and what to do to them, and who is involved in the decision, are not just simple technical matters relating solely to preservation.

- How do we prepare to respond effectively to different demands that the changing priorities of an institution may make on a collection, so that an acceptable balance is maintained between access and care?
- How do we go about ensuring that all the issues which contribute to a balanced decision are being taken on board?

Collection care needs are more likely to be understood and resolved if they are debated and discussed within the context of the institution’s aims and objectives. This broad setting brings together different people with different ideas for collection use and introduces more complex relationships than a simple one-to-one contact between the curator or conservator and the collection.

Given the understandable pre-occupation of museums with issues of survival such as threatened or real funding cuts, management may ignore collection care issues unless they are perceived as integral to the institution’s overall plan. In fact, it is becoming more difficult for museums to commit money to anything that is not a core activity, even when it falls within its plan; this is particularly so for ‘behind-the-scenes’ work.

So it is vital that collection care issues are presented as an unalienable part of this plan. The priorities of collection care - no matter how urgent or important - cannot stand apart from the overall priorities of the museum; if they do, they are unlikely to attract support and may be sidelined indefinitely.

So how can resources for collection care be argued for, on an equal basis and at the same time that collection access is being planned? Prioritising resources involves a wide range of internal and external interests. Care must be taken not to tilt the balance of the argument either too much in favour of access so that collections are exposed to unacceptable risk of damage, or too much in favour of collection care to the exclusion of collection use. The skill is to know when the right balance has been struck.

What arguments are usually employed to convince others of the need for action? We generally use technical arguments to persuade others of our point-of-view; we argue for more equipment, additional space, improved training, more staff etc., maybe ignoring the financial straits in which the institution might be in; we intone dire warnings of deterioration caused by a poor environment; we write condition reports noting the extent of damage and we send them to whoever we think ought to read them. But is this approach convincing? How easy is it to digest and use a detailed technical report? Will it enable the problem to be prioritised? Will whoever receives the report have time to read it?

In order to overcome some of these problems a cost/benefit appraisal method can be used to provide shape and form to our arguments. This is necessary because others must be convinced of the need for investment; others are interested in collection use; others are making decisions on the

allocation of resources; others may end up making collection care decisions and outside pressures may force our hand when we are unprepared.

A cost-benefit appraisal exercise consists of 2 parts: a financial appraisal of capital and revenue costs and a non-quantified assessment of benefits. The financial appraisal involves obtaining estimates for all the options being considered. For example, if options for housing a collection are being considered, these might include cost of design work, surveys, building works, fitting out, consultancy fees, running and maintenance costs. But if only the costs are compared, it is almost inevitable that the option with the lowest price estimate will be selected. After all, why should we spend more than necessary?

There may be times when the benefits could justify a higher expenditure. But how can we tell the difference between justifiable expenditure and unnecessary waste? Some form of comparable measure of the benefits of each option, or options appraisal is needed.

This part of the appraisal enables potential benefits to be measured by assessing the extent to which the options fulfil the aims and objectives of the institution’s plan. The emphasis given by management to individual aims and objectives may change from year to year and this will also affect funding priorities. So the relevant importance of the aims and objectives must be clarified before an options appraisal is carried out.

The different options will have a different scale of benefits for a collection and its host institution. These benefits can be numerically scored. This is the outcome of the discussion on how well each option fulfils the individual aims and objectives of the plan. The exercise of comparing all the options with the museum's plan should involve a multi-disciplinary team including curators, conservators, scientists, researchers, education officers, events managers, marketing personnel and building managers.

By comparing the estimated costs and benefits of each option, the option which appears to deliver the greatest benefit at the lowest cost emerges as the preferred solution. If a costly option emerges as the one likely to deliver the greatest benefit, its acceptance can be argued more convincingly, particularly if sensitivity analysis of the preferred solution has been carried out. This analysis will test the robustness of the proposal compared to other discarded options. The test consists of asking 'what if ....?' questions, to see whether any change of circumstances might produce a change of the preferred option.

#### **Conclusion**

A cost/benefit appraisal method has a number of advantages:

- It can convince others of the need for appropriate levels of investment.
- It involves others who may be more involved with collection use than collection care.

- It involves those making decisions on how resources are allocated.
- It involves others who may not deal with collections on a day to day basis, but whose decisions may affect the survival of a collection.

*May Cassar  
Museums & Galleries Commission*

### **Heating and Humidity Control for Conservation**

At Colebrooke Consulting Ltd I have been helping conservators and conservation-minded organisations to set up and improve preventive conservation measures for the last fifteen years. I am a technical adviser to the National Trust's Conservation Service, and am involved as a Conservation Engineer with museums, galleries, local authority and private historic buildings, auction houses, and others with environmental control problems.

We need to control the environment in stores and display areas, to maintain objects in an unstressed condition and enable long life for them. We cannot get away with doing nothing, but we do not have to do much to maintain benign conditions. If the RH is allowed to remain higher than about 70-75% there is a danger of mould growth. If it is brought down much below 50% there can be permanent

damage by shrinkage beyond the limit of elastic recovery. Most materials in mixed collections (of furniture, paintings, textiles, natural history etc) are altered physically by changes in RH, so that RH cycles stress and age them.

Where conservation is the governing criterion and heating for people can be avoided, then room temperatures can be allowed to fluctuate. Unless we allow temperatures to fall, sometimes to as low as 10°C in cold weather, we shall need to humidify to bring the RH back up to the safe range.

It is possible to control both temperature and RH at the same time - using air conditioning. That option has very high installation costs, high maintenance and running costs, and is often inappropriate in historic buildings because of the disruption involved to the building fabric. Fortunately this solution is rarely necessary. Over the last 10 years the National Trust has pioneered the technique of controlling RH using heating driven by humidity sensors, which we have called Conservation Heating. Since the heating needed to control RH for conservation is very much less than that needed for human comfort, it is often possible to achieve good environmental control using existing heating arrangements - with minor hardware modifications and a new control system.

The alternative to heating is to dry the air with a dehumidifier. This can only work if the amount of incoming air to

be dried is minimised by draught-sealing. Its application has been particularly successful in conservation stores.

Our approach to the specification and design of conservation environmental control systems is to achieve acceptable conditions as gently and unobtrusively as possible, using technology which is understandable and whose sophistication has to be justified in each case. We have commissioned and championed the design and production of appropriate equipment where it was not available.

Good conditions can often be maintained with equipment off the shelf, plugged in or fitted by your electrician. Even where allowances must be made for people, tolerable specifications can be achieved by compromise. Provided that RH values down to say 45 or 40% can be accepted on occasion, and that people can put up with temperatures down to say 15°C in cold weather in rooms with sensitive contents, Conservation Heating can provide an answer - and air conditioning and humidification can still be avoided.

If I can help you with an environmental control problem, please call 01892 750307, fax 01892 750222, or write to Colebrooke Consulting Ltd, Diamonds, Bells Yew Green TN3 9AX.

*Bob Hayes  
Colebrooke Consultancy Ltd*