

# IS FACILITIES MANAGEMENT FUNDAMENTAL TO THE CONSERVATION OF HERITAGE BUILDINGS AND THEIR CONTENTS?

Trevor J. Francis<sup>1</sup> Andrew J. Geens<sup>2</sup> and John Littlewood<sup>3</sup>

<sup>1</sup> School of the Built and Natural Environment, Swansea Metropolitan University, Swansea, UK

<sup>2</sup> Faculty of Advanced Technology, University of Glamorgan, Pontypridd, UK

<sup>3</sup> Cardiff School of Art and Design, University of Wales Institute Cardiff, UK

Many irredeemable cultural objects and artefacts are housed and exhibited within historic buildings and estates of outstanding cultural significance. Frequently, these properties were conceived to serve a very different use than act as permanent depositories for the objects, functions and collections, they now house. Sustained performance of fabric, fixtures/fittings and services is essential, given the perceived demands of: climate-change, perils, increasing user expectations e.g. accessibility, environmental quality and legislative demand. As a consequence the cultural significance of both building and collection are tested. The aim is to establish whether a Facilities Management approach offers a solution to mitigating such risks. This research studied 50 'heritage' buildings and utilized a Condition Survey pro-forma approach, to record and evaluate the management and maintenance of the building and contents. Conflicts of: conservation philosophy, accessibility, environmental monitoring, visual display, curator-ship and guardianship; are tested against established methods of building care. Whilst most heritage sites have been modified, updated and repaired, this has been undertaken in a widely, conflicting manner, displaying varying standards of care and exposing the contents to risk. It is concluded that a pro-active 'Facilities Management' approach has scope for effectively sustaining cultural objects, artefacts and iconic buildings, for the benefit of future generations.

Keywords: building care, climate change, cultural significance, facilities management, sustainability.

## INTRODUCTION

This developing study seeks to establish the effectiveness of applying a multi-disciplinary, approach, such as that of Facility Management (FM) to the conservation of Heritage Sites and their contents. As a developing, international business management profession, FM has spread globally at pace. It contains numerous linked specialist areas that differentiate it from more singular, traditional approaches taken towards building care. The approach can be defined in various ways, however; the interpretations of two of the leading professional bodies, within the field retain great similarity:

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<sup>1</sup> trevor.francis@smu.ac.uk

<sup>2</sup> ajgeens@glam.ac.uk

<sup>3</sup> jlittlewood@uwic.ac.uk

FM, according to the International Facilities Management Association (IFMA), is:

*'...a profession that encompasses multiple disciplines to ensure functionality of the built environment by integrating people places, processes and technology.'*

Whilst, the British Institute of Facilities Management (BIFM 1996) define FM as:

*'... the integration of multi-disciplinary activities within the built environment, and the management of their impact upon people and the workplace'*

Concepts of: integration, multi-disciplinary skills, people and places, clearly pervade.

Day to day management of buildings and their contents has challenged succeeding generations for more than five millennia. Yet, it is within a period of rapid societal change, and following the evolution of highly complex, computer controlled and intensely serviced properties that FM has come to the fore. Initially founded within the office, health and defence sectors; it could be argued that this is a profession eminently suited to the care of contents and buildings that could be termed: special, cultural or iconic. Levels of care, environmental control and monitoring utilized within historic facilities; often have to be integrated and delivered to the highest possible standards if degradation of the contents and historic fabric is not to occur.

### **Heritage buildings and estates**

Most outstanding heritage buildings are statutorily protected, with many owned and/or managed by trusts, public or religious institutions and museums. Some are iconic and others of world heritage value. It is often a consequence of their intrinsic or economic value and museum function; that their terms of reference task them with preserving the asset – often in perpetuity.

Curator-ship and conservation disciplines are governed by national and internationally agreed Principles, Charters and Philosophies, applied to an object, building or area. (The National Trust for England and Wales, English Heritage, ICOMOS, 1998, UNESCO etc.

Safe custodianship of the contents and artefacts located within heritage properties is essential, as they are frequently deemed to be of greater cultural or financial worth, than the sometimes, outstanding built environments, within which they are housed.

This need to effectively conserve challenges numerous organizations including: The National Trust, English Heritage, local authorities and similar bodies who run what are now museums and significant visitor attractions but which originally contained a range of other uses, some of which might be retained within their heritage remit.

Fiona Reynolds (2006 p. ix) Director General of The National Trust, refers to the term 'house-keeping' that is utilized by The National Trust, to embrace what Facility Managers might call, 'soft FM services' claiming that it:

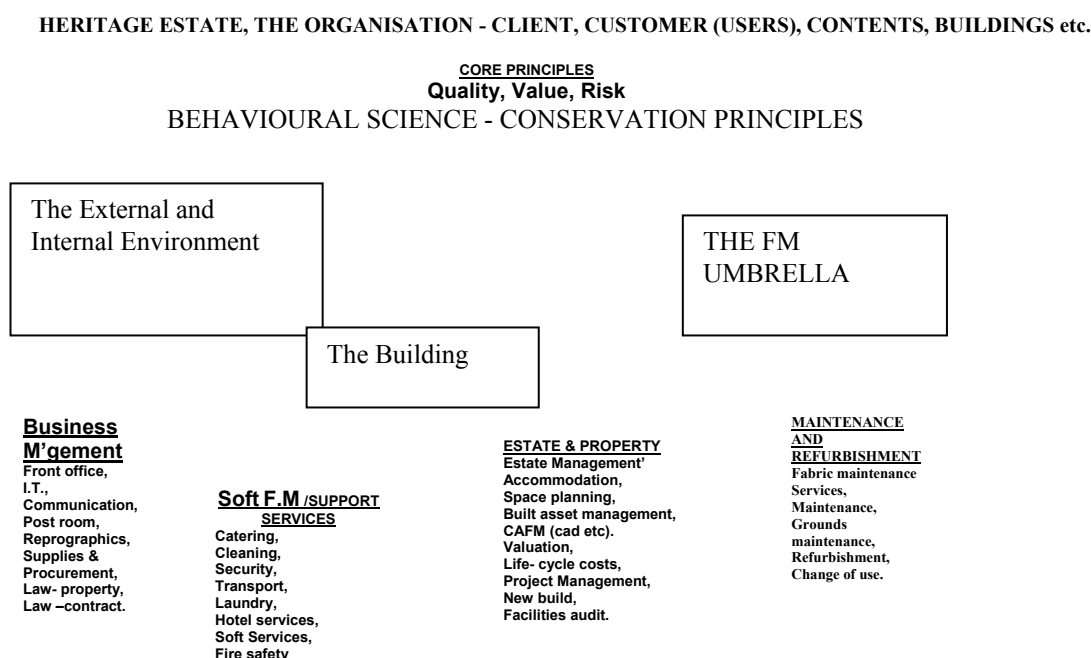
*'...describes the modern practices of house-keeping in an historic context, honouring the long tradition of housekeeping manuals since the sixteenth century. In the National Trust, housekeeping has become an established and essential part of preventive conservation: we are keen advocates of William Morris's principle of 'little and often'.*

Her colleague and former 'Head of Buildings' Sarah Staniforth, (2007) argues:

*'The fact that so much heritage has survived until now is evidence of that. The actions taken under the banner of late-20th-century scientific preventive conservation are reworkings of traditional good housekeeping. And I don't mean just good housekeeping of collections but of building maintenance as well'.*

Building maintenance, although a critical component; is just one facet of FM that has to be addressed if the heritage asset and often fragile contents are to be protected. A number of heritage sites have been seriously damaged and compromised by the failure to maintain effective housekeeping (soft F.M) measures (in recent years) these include: Windsor Castle, York Minster, the Cutty Sark, Uppark House etc. to major fires, but other, often less dramatic incidents, create similar tensions of lost authenticity or irretrievable damage to historic fabric, fixtures and contents.

Clearly, there are numerous factors that impinge upon the successful, sustainable management of a facility and FM's multi-faceted, integrating approach, it is argued, is critical. The scope of FM with regards heritage buildings is illustrated in Figure 1.



*Figure 1: Facilities Management is perceived As: 'a continuous, pro-active, holistic approach to property and associated support services – for the benefit of the: core business/ organizations, customer, building, user and contents.'*

Numerous International Charters, Philosophies and Policies govern the Heritage Management and Conservation of Historic Sites, Buildings and Contents. (Casaar, M.; Taylor, J.; Staniforth, S, UNESCO/ICOMOS British Standards Institute.; have published widely, upon the challenges posed in surveying heritage assets and the risk of perils – such as climate change and the impact on historic sites.

At macro, and micro levels – many potential threats and conflicts, impact upon building and content care. Some are inextricably linked, others: so essential for conserving or maintaining one element or component; seriously threaten another. Compromises and risks have to be carefully considered, balanced judgements made and either accepted – or the cultural artefact isolated from the building or the built and natural environments, in which it is stored. This by either: geographical relocation or making use of display/security cases; with separate mechanical and electrical

servicing system -; in order to create a safer environment. The following, list although far from comprehensive, identifies many of the conflicting factors to be considered in Risk Managing Cultural Heritage facilities:

- Consequences of Climate change:
- War, terrorism, vandalism, etc.
- Disaster recovery systems and contingency procedures.
- Compatibility issues between the design of the building and the requirements and nature of the collection housed.

*Management controls, e.g.*

- Opening hours and impact upon the fabric and contents.
- Policies for what is accepted care. E.g. photography, handling, guarding, limiting visitor numbers, access etc.

*Neighbours and Natural Features*

- Hurricanes, Earthquakes.
- Vehicular impact damage, pollution and vibration.
- Lightning, Flooding.
- Drainage backlog etc.
- Construction Developments affecting the building.

*Visitor/Staff*

- Humidity.
- Wear and tear.
- Accessibility/Inclusiveness
- Visitor Centres, catering and food (leading to bacteria, mould and pests).
- Car Parking
- The impact on the heritage asset. (biological, physical and chemical, aesthetic) the site and its presentation

*Heating and Cooling*

- Relative Humidity (R.H.)
- Conservation
- Space heating and cooling, drying etc.Object

*Environment*

- Water in its many forms, rain, snow, flooding, condensation etc.Archaeology and geology of the site.
- Building environmental performance, thermal mass, acoustic and light filtering capacities.
- Indoor air quality. Dust, pollen, pollution, contaminants,
- Environmental requirements of collections.

*Energy and Carbon Emissions*

- Fuel or emissions, such as carbon particulates, sulphates etc.
- Climate change potential.
- Sustainability.
- Maintenance of heating applications.

*Financial Risk*

- To the Organization or the object or asset.

*Fire and Security Precautions*

- Policies and Procedures.
- Active – Guards and electronic systems
- Passive – Fabric and building hardware.

- Fire fighting.

#### *Legislation and Policy Compliance*

- Numerous, statutory regulatory and ethical requirements.

The Getty Conservation Institute (GCI, 1998) in addressing this dilemma suggested a concept of risk assessment, being undertaken by an integrated team, consisting of: the Collections Conservator, Museum Curator, Building Manager, and Architect. If we substitute the title 'Building Manager' with that of 'Facilities Manager', we potentially have the individual, who, if they possess sufficient competence can make a significant contribution and bring specialist knowledge – to the care of the estate, the building and contents.

## **METHOD**

Following a detailed literature review, the research entailed development of a suitable method, for data collection and analysis. 50 Heritage Sites/Buildings were selected – as initial case-studies for the Phase One field-based, investigative study. These buildings retain a number of different uses and applications, but all are historic buildings that also double, in effect, as museums.

A condition based, Building and Facilities Survey Pro-forma was pilot trialled, further developed and weighted. Consideration was given to the use of alpha or numeric condition rating scales – to attempt to generate quantitative data from qualitative judgements. Numerous precedents and published guidance documents exist, for this, as 'Condition Surveys' have been widely used as key components in the asset management of large, estate portfolios, for more than thirty years. Within the United Kingdom, many large property management organizations including: Local Authorities, Defence Estates, the National Health Service (NHS Estates) the Higher Education Funding Councils for England and Wales and others, recommend and utilize such methods.

The rating system selected, made use of a numeric scale with a rating of 0-5, equating with the 'Likert' scale research method. (0) refers to an item being not applicable, (1) being considered to be in very poor repair with (5) rated as being in an excellent state of care/conservation. Space was provided within the pro-forma for additional comments, open questions and so forth. Thus both quantitative and qualitative data could be recorded with reasonable pace. Following pilot testing on a 'Scheduled Ancient Monument' and refinement of the pro-forma it was applied to the sample.

Each of these sites; was inspected by the researcher (a Chartered Building Surveyor – experienced in surveying historic buildings) digitally photographed and assessed and scored by direct observation. The Pro-forma was completed (against formally set condition criteria). This, it was considered, would afford greater consistency and help reduce bias. The completed Survey, recorded the condition rating of many of the major components and elements, but focussed primarily upon the visual physical condition of the principal buildings, their elevations, accessible surface and service areas, contents and building services.

Buildings and Historic Estates – used for this study, were categorized, sampled and researched – within distinct typological 'use' groupings (e.g. Castles, Country Houses, Ecclesiastical buildings (the latter included: Churches, Abbeys and Cathedrals).

The study was limited (due to resource implications) to sites predominantly located within Wales and South of England, but in order to attempt address distortions this might raise a small control sample of case-study buildings was included, of structures

from other regions and countries, of the United Kingdom. Building uses vary, as do scale, ownership and detail. From the completed pro-forma generated of each building – a Case-study asset record (containing performance in-use data) has resulted. Data gathered has been collated and analysed. From the results forthcoming preliminary comments and recommendations are drawn.

Following completion of Phase One the methodology is being refined to identify and select a limited sample of appropriate Historic Estates/Buildings, for a more detailed Phase Two qualitative analysis, including ascertaining the views of key players in their care, repair and guardianship via structured interviews.

## RESULTS AND DISCUSSION

A brief synopsis, summarizing a small portion of principal data gleaned, for a reduced sample (embracing just three facets) is presented in Figures 2, 3 and 4.

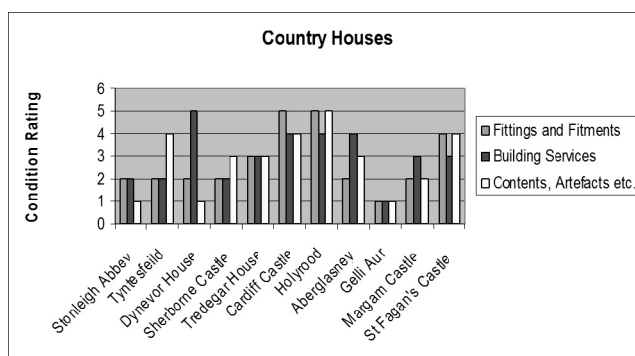


Figure 2: Country Houses

Note: Although the term Castle is the title given to certain properties used in the above example, this refers to a building that remains, potentially habitable and which is fitted out as a 'house' – as opposed to that of a standing ruin). Only three of the fifteen elements and components evaluated are reported above, due to space constraints.

Within this the country house sector the results might appear distorted, however, this is partly explained by the fact that 'Tyntesfield' although in very poor fabric repair and highly susceptible to risk, retains extremely finely catalogued and comprehensive contents. The anomaly is that unless the fabric is repaired as a matter of urgency the contents are at serious risk from perils. Fortunately 'The National Trust' is now addressing this matter.

The house at Cardiff Castle contains a magnificent collection which is matched by the fabric which has recently benefited from an exemplary £14 million pounds conservation project.

Holyrood Palace (historically the house of the former Scottish Monarchy) houses many fine contents within a carefully managed environment.

Aberglasney (Wales) is an unusual case-study – in that the fabric has been extensively repaired following substantial reconstruction within the past decade (having been almost lost as an abandoned ruin) yet now remains as a partial reconstruction). Whilst the contents are minimal (in relation to the magnificent restored grounds) the building works display exemplary, if pragmatic building methods that challenge some accepted conservation philosophies.

Much of the interior of Margam Castle was effectively lost to fire damage and neglect during initial restoration works by the local authority. What remains is only partially

watertight and is crudely patch repaired. The original exterior fabric, remaining poorly maintained by its local authority landlord, who have outsourced the building to an ill equipped tenant and constructed at a cost of four million pounds, a modern facility within the grounds. Fixtures, finishing's and contents are minimal and ill presented for display.

Unfortunately, similar observations could be made for many other historic buildings studied within the control sample.

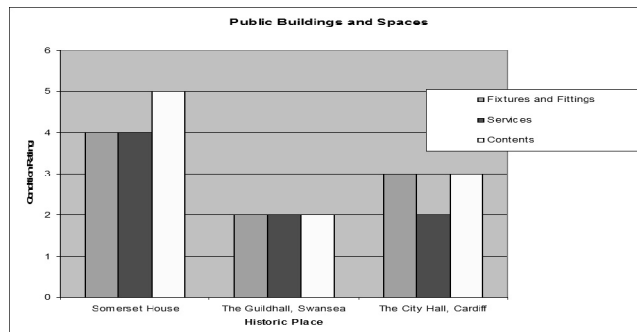


Figure 3: Refers to the plight of just a few of the public buildings studied:

The City Hall in Cardiff, retains magnificent fixtures and some very fine contents, but is very poorly maintained, despite hosting the G7 Summit for European Political Leaders, in recent years.

The Guildhall in Swansea (another Grade I Listed Structure) and built in a 'Art Deco /early modernist style' is home to the Brangwyn Hall and Panels. This facility is in very poor repair and requires urgent structural, fabric and building services renewal. At present, it affords little protection to its fixtures, fittings or contents. Whilst currently in the midst of a £35 million pound refurbishment, it is likely to require expenditure of double this amount, if it is to be put into first class order and a sustainable state. Had a more balanced, integrated approach been taken to its management and maintenance in past years this colossal expenditure could have been significantly reduced.

Conservation works completed at St. Paul's Cathedral, recently won the Tercentenary Project Award, as granted by the Royal Institution of Chartered Surveyors (November 2009). The Project lasted eight years and incorporated many innovative and exemplary features. Certain elements of the fabric fixtures and contents having been carefully conserved to the highest standards. Yet ironically and despite the major external cleaning and extensive repairs made to the aesthetic finishes; obvious and significant maintenance defects have been overlooked, that seriously compromise the fabric of the building. There remain gaping cracks within the asphalt roof coverings set over iconic decorative interiors. This completed project leaves historic contents at grave risk from rainwater penetration and moisture related decay. Had a more balanced integrated approach been taken to repair and maintenance this risk could have been avoided.

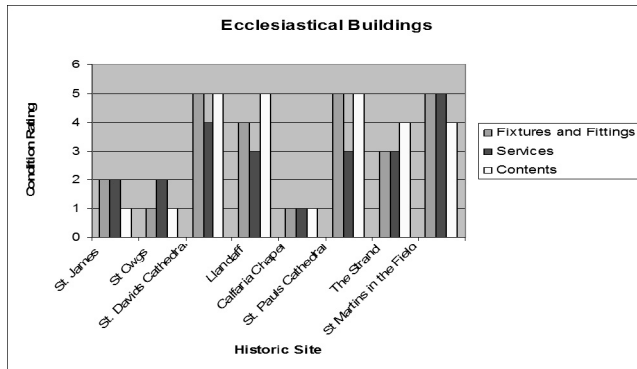


Figure 4. With regards to the Ecclesiastical buildings, some of the major Churches and Cathedrals (generally) have well maintained fabric with modern services that protect ancient fittings and content, whilst many of the lesser buildings are in a desperate state.

Similarly, the conservation/refurbishment and remodelling scheme undertaken at ‘St. Martin’s in the Field’ (the Prince of Wales, Parish Church) completed in 2008 is another landmark project. Costing circa 35 million pounds it has created within the Crypt, one of London’s finest interior public spaces. It contains a number of historic artefacts that are now carefully and subtly displayed. The building is now a multi-use facility with a sustainable range of uses including that of a: church, a concert hall, retail unit and restaurants as well as offering a number of public and private meeting spaces that are available for letting purposes and retaining the world recognized shelter for the homeless. Despite this, some of the work undertaken remains poorly executed with the project being one of rehabilitation and restoration as opposed to a conservation repair.

Many, lesser, small churches and chapels are at even greater risk to decay, but their contribution to the heritage of Britain, its spirit and place are undeniable. Many of these dilapidated and impoverished buildings offer protection to highly valuable monuments and cultural objects that are irretrievable and retain for posterity, intrinsic components of local history. Unless a coordinated approach is taken to their care, many will be lost within a few decades.

Ironically, some, conserved, former industrial heritage sites, contributed significantly to the development of technologies that form or are perceived as contributing to the threat of climate change.

For society to conserve priceless artefacts inalienably; whilst, sensitively conserving and finding new uses and modes of operation, for many of the fine traditional buildings that house them, demands very careful consideration and allocation of finite resources.

Ongoing care and repair has to be sensitively coordinated, utilizing the combined endeavours of an integrated team consisting of informed diligent professionals, educated clients and visitors. Guardianship largely remains with the buildings patrons, managers and users – for it is they, who must be carefully nurtured and stewarded – to ensure they make the best decisions for the protection of the cultural object and built asset. Without sensitive care, the asset is potentially lost.



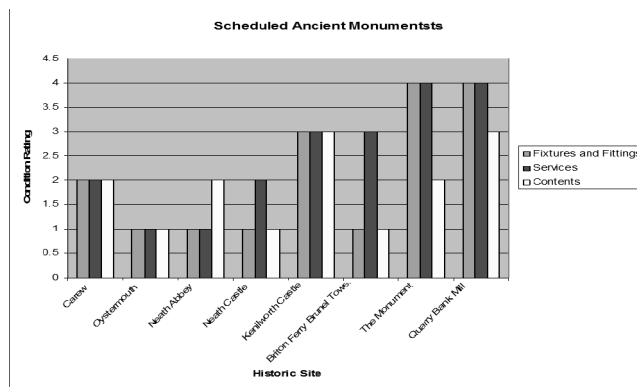


Figure 5. Whilst many Scheduled Ancient Monuments will not contain large numbers of contents; however, our more recent industrial heritage sites will hold quantities of 'day to day' objects that are tomorrow's antiques and artefacts.

## CONCLUSIONS

This study has revealed wide disparities and anomalies in the care of heritage sites, both large and small. Whilst there are exemplars many heritage sites remain threatened and at serious risk of loss. They are not capable of being maintained inalienably unless an integrated approach – as considered by Facilities Management is taken to the care of the fabric, services and contents.

Limited funding, resources and taking a singular approach to each specialism involved in their care, challenges ongoing use, conservation and custodianship for the benefit of future generations.

Whilst accepting that the study has limitations (in that it only examines fifty of the approaching five million buildings listed within the U.K.) and could be perceived to retain a limited bias as the data has been collated by a single surveyor, it reveals that organizations might need to revisit their approaches to building care. Facilities management offers flexibility, in that it allows for informed, educated and balanced judgements to be made, that regulation, legislation and single methodologies to care.

For Facility Managers this has to be combined with pragmatism and technical research and understanding of the requirements, competencies and philosophies that underpin the heritage and conservation field.

Services and cleaning regimes and building methods and techniques are critical. Those that have not served us well should be re-evaluated and if found incapable of resolution, discarded or used only in areas where the contents can accept them – without damage.

It is hoped that this study is demonstrating, considerable opportunities to apply FM principles in the present, in order to protect the future of the past.

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