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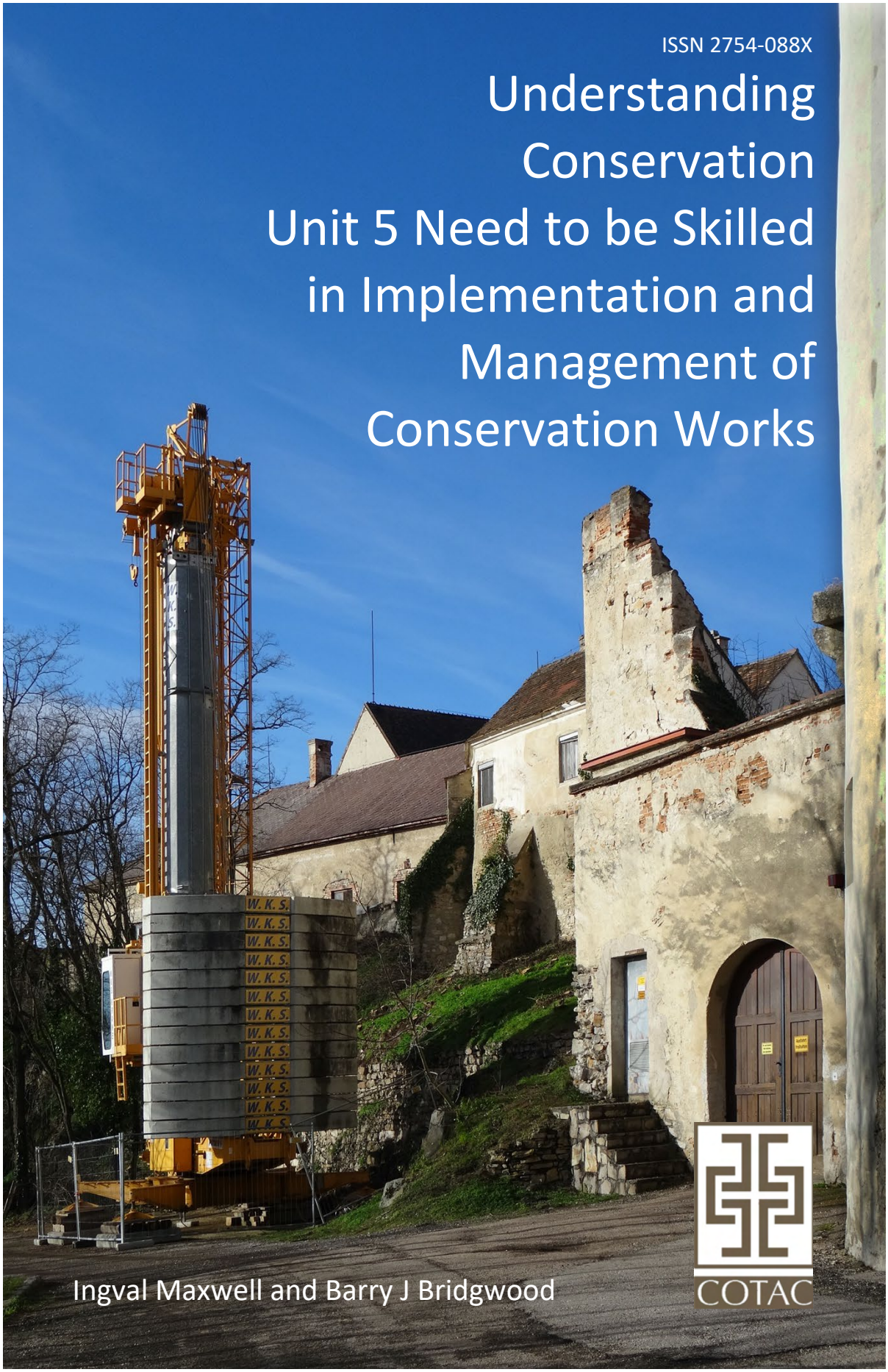
Understanding Conservation Unit 5 Need to be Skilled in Implementation and Management of Conservation Works



Ingval Maxwell and Barry J Bridgwood

COTAC

Understanding Conservation
The Need to be Skilled in the Built Heritage

Council on Training in Architectural Conservation (COTAC)
COTAC originated in 1959 in response to the need for training resources for practitioners in the repair and conservation of historic churches. Since its inception the Charity has consistently worked to lift standards across the UK's conservation, repair and maintenance (CRM) sector. This has involved working in partnership with national agencies, professional and standard setting bodies, educational establishments and vocational training interests.

The Pedigree of Understanding Conservation
The 5 Understanding Conservation Units are based on and created around the 1993 *International Council on Monuments and Sites (ICOMOS) Education and Training Guidelines*. During the late 1990's and early 2000's an analysis of the ICOMOS Guidelines was produced but, at the time, this was considered 'academic' in its translation and a subsequent more pragmatic *'Framework Document'* was produced that distilled the preliminary work into five basic units of understanding. This subsequent document was developed and condensed with the support of the pan-professional Edinburgh Group under the auspices of Historic Scotland from 2003, the results of which created the original www.understandingconservation.org website that was launched during 2007. From 2008 the Edinburgh Group and the understandingconservation.org website has been enabled by COTAC, with the website content being updated in 2015 to incorporate Guidance offered by the revised edition of *BS 7913:2013 Guide to the Conservation of Historic Buildings*

The relevance of the 1993 ICOMOS Guidelines is that they have been adopted by the UK's Conservation Course Directors Forum (CCDF) where all the member courses agreed to observe them in their delivery. In addition, the Guidelines underpin all professional body peer-reviewed Accreditation in Architectural Conservation Schemes currently operated by a pan-professional spread of bodies in the UK and Ireland, and the 2013 ICOMOS CIF International Training Committee *'Principles for Capacity Building through Education and Training in Safeguarding and Integrated Conservation of Cultural Heritage'* intentions.

This new 2021 PDF edition of *Understanding Conservation: The Need to be Skilled in the Built Heritage,* whilst retaining the previous 5 Unit structure, totally revises and updates the previous website content whilst also incorporating a wide range of illustrative examples especially chosen to enhance the text. Across the 5 Units images have been primarily sourced from Ingval Maxwell's © photographic archive, with a small number incorporated from other sources in a manner as fair use educational material under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike (CC-BY-NC-SA) license, identifying and acknowledging the copyright holder wherever that has been possible. Whilst every care has been taken in the preparation of information in the *Understanding Conservation* 5 Units, COTAC and its authors specifically exclude any liability for errors, omissions or otherwise arising from its content.
COTAC acknowledges and is grateful for the help of Stewart Wright and Nicholas Dutton in the preparation of this Unit.

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Cover Image Gottweig Monastery, Austria © Ingval Maxwell

Understanding Conservation
Unit 5 Need to be Skilled in Implementation and Management of Conservation Works

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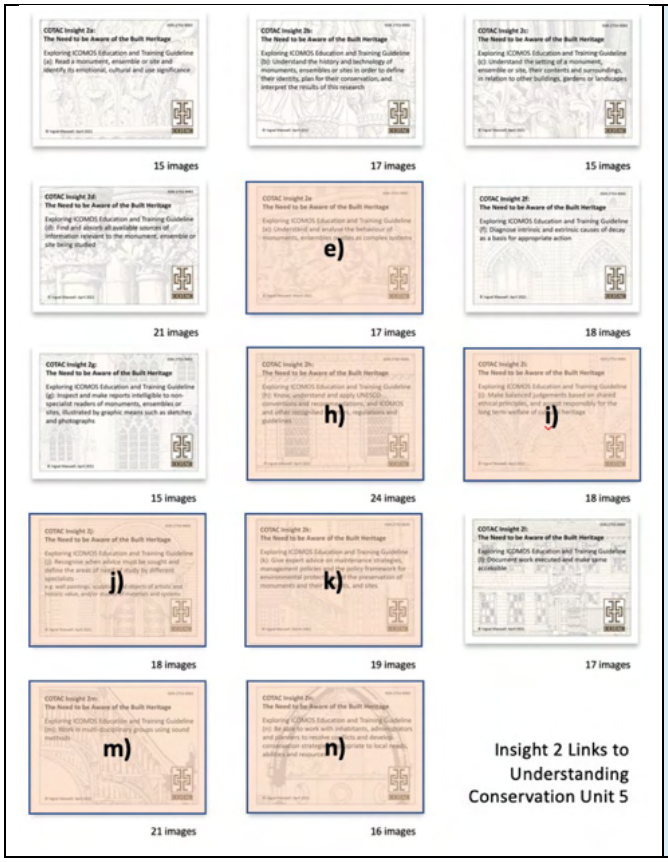
Preamble

Unit 5 Need to be Skilled in Implementation and Management of Conservation Works

Unit 5 restates the importance of operating with a philosophical and ethical understanding of conservation issues, and to be able to advise effectively on relevant current and future needs integrating a detailed consideration across 7 of the 14 ICOMOS guidelines **(5e, 5h, 5i, 5j, 5k, 5m & 5n)** It aims to assist users on how to contextualise their thoughts and approach with a greater understanding of current conservation philosophy and ethics. Each section comprises textual and illustrative information that together with the recommended reading, further reading and web sites to visit will assist you in gaining an understanding of what cultural significance means and how to evaluate it.



Self-assessment Questions will be posed and are rhetorical in nature requiring you to respond in your own way. These in-text questions are progressive in nature. You should respond to them by reference to both the text of this Unit and by reading the material suggested. Omission of these actions may reduce understanding of the Unit's focus; completion of the reading suggested will provide better understanding of the discipline of conservation and how professionals within it function and operate to preserve and protect the historic environment:

For a more detailed illustrative exploration of the 7 relevant ICOMOS Guidelines to this Unit please refer to Insight 2 where each of the seven highlighted guidelines (opposite) can be reviewed

You should consider how the body of conservation knowledge is constantly being questioned, expanded and added to by specialists within the field and how the principles, ethics and philosophy of conservation informs and structures any intervention response: This is particularly relevant when dealing with modern, say, 20thC reinforced concrete structures or buildings adopting contemporary construction methods and materials. A personal acceptance of this fact will help you to understand that you must also continually expand your own knowledge of conservation philosophy – it is subject to continuous change and your understanding of it needs constant updating. The important fact to recognise is that it is a process of personal improvement that needs to be self-generated through enthusiasm for the subject!

5.01 Unit Overview

This Unit and the other four Units in this set offers guidance to assist your own developmental improvement of knowledge. It will be a personal challenge intended to test your knowledge and, hopefully, point you in the direction of where to seek additional knowledge or, improve your understanding and reflect on your own experiences. This Unit provides a framework for you to develop your understanding; it is not intended to provide answers but merely routes to comprehension.

Exeter Cathedral. Work in progress


Dublin. Frieze detail

You should be willing to recognise that, despite your experience gained through practice, there is a more complicated, challenging, and philosophical knowledge base that requires constant updating.

This Unit is designed to stimulate and encourage you to ask yourself some fundamental questions about why and how you intervene in the historic environment. Perhaps an even more fundamental question to address yourself to is: what, why and how is this place or object important enough to make me question my motives for intervention and how shall I plan and execute any works of intervention?

It is intended to challenge your understanding of the skills necessary to act as a conservation practitioner – it is not therefore an easy route to accreditation! Self-assessment questions will make you question your understanding and knowledge.

"Natural abilities are like natural plants; they need pruning by study."
Francis Bacon 1803–1882.

Earlham Hall, Norwich. Work in progress

Earlham Hall is part of the University of East Anglia campus it houses the UEA School of Law, being the subject of a complete refurbishment, investigative and consultation process. Its 2011 Vision and Development Document (VDD) is a good example of how to approach intervention projects. The VDD is available via the Norwich City Council Conservation Department website.

Aim of this Unit

The Unit outlines personal challenges, skills and procedures necessary to enable you to improve your knowledge of cultural assets, their value to society and how this should be protected during intervention works. It will assist you in gaining a better understanding of the impact of the decisions you make when planning, managing and implementing interventions and how these decisions will, or may affect significance. There is a need to prepare specific briefs and scope of services for professional advisers, to clearly define the scope of work for Principal Contractors, contractors and directly employed labour and to ensure that knowledge, skills, and experience are matched to ability to undertake work without placing significance at risk. Clearly defined instructions will be required, and performance specification documentation carefully drawn up to ensure that providers of service, and the required outcomes, achieve the clients' needs alongside the aims of conservation and future use without loss or damage to significance.

"There is a need to impart knowledge of conservation attitudes and approaches to all those who may have a direct or indirect impact on cultural property."

ICOMOS Guidelines for Education and Training

"Work on a place should be preceded by studies to understand the place which should include analysis of physical, documentary, oral and other evidence, drawing on appropriate knowledge, skills and disciplines."

Article 26.1 Burra Charter 2013

Each section comprises textual and illustrative information that together with the recommended reading, further reading and web sites to visit will assist you in gaining an understanding of the importance of the need to investigate and use the products of your investigation to fully understand the potential impact of your decisions and to facilitate a conservation strategy.

Self-assessment/reflective questions will be posed and will be indicated like this in the text. They are designed to test your understanding and comprehension of each section and the overall need to establish facts about an asset's context, use and history and develop this knowledge in order to formulate a strategic approach to intervention and conservation management.

Cost planning and controls associated with maintenance and intervention work will be looked at within this Unit. It will consider the effect of and management of visitors and the impact that they may have on an asset, including managing visitor attractions and tourist numbers to limit loss of, or pose a threat to, significance. This Unit will also investigate measures to identify threats to fabric and significance stemming from intensification of use and offers a strategy for evaluation of an increase in use against the additional revenue which might be generated.

5.02 Implementation and Management of Conservation Work

This Unit seeks to demonstrate the importance of combining understanding (gained by investigation into significance) with the aims of intervention work and how that understanding assists management and implementation of works without compromising those aims. It offers a structured approach to conservation planning, strategy and management and strives to guarantee that whenever implementing historic environment works you are aware of the need to protect significance and can put in place measures to ensure an asset's authenticity is preserved and protected for future generations.

Tynemouth. The passage of time

The Unit will also look at condition and planning for maintenance that might be recommended or identified by such reviews and how maintenance might be facilitated, including financial planning and fund sourcing. The issue of health and safety will be addressed in respect of planned intervention work and an asset's future use. This will include reference to the Construction (Design and Management) Regulations 2015 and their effect on proposed interventions. The Unit will also look at Building Information Modelling and how its structure needs to be modified to suit work on heritage (HBIM).

Dundee. Dockside buildings redevelopment

"Conservation is… a process which seeks both to question change and to reconcile modern needs with the significance of what we have inherited in order to safeguard the interests of future generations."

Clark, K. *Informed Conservation: Understanding Historic Buildings and their landscapes for conservation.* English Heritage 2001

"Although many aspects relating to the implementation and management of conservation works are similar to those of normal construction work, there are a number of essential differences which require special attention. Significant problems are created by the fact that the site itself is sensitive in historical, architectural or archaeological terms. This will have a fundamental influence on the way in which [any] *work should proceed and in the use of the most appropriate type of contract, contractor or directly employed labour… Those involved should have expertise in the type of work envisaged and a proper appreciation of the architectural, historic or archaeological significance of the site."*

Stirling, S. Bolling, C. (2002)

"Competent person: person with expertise and the ability to undertake work in an appropriate manner."

BS 7913: 2013. Annex A - Conservation accreditation schemes

5.03 Conservation Strategy

There is no shortage of guidance on how to prepare a conservation strategy and undertake CRM [conservation, repair and maintenance] *projects, but perhaps the most important factor to bear in mind is that in this sector the building already exists, so response to client brief and how design might evolve should, principally, be outside intervener's influence until a detailed understanding of the asset is achieved.*

In new-build work in response to client brief, design, materials choice and construction method have yet to be determined. In new-build work nothing exists other than client's requirements and then designer's thoughts. New work is a blank pristine canvass; in CRM projects the canvass is old and created by others whose work needs to be recognised and protected.

In the CRM sector that process is absent and is replaced by the practicalities of response to what already exists. This alongside addressing what makes the building important and how to protect significance against damage, decay, deterioration and what we might do to it.

Work within the Heritage sector places a range of different impositions and responsibilities on those who intervene.

RIBA Plan of Work: 2017 Conservation Overlay

Building upon the 2013 *RIBA Plan of Work*, the *2017 Conservation Overlay* aims to map the approach a conservation architect and the design team, might take when dealing with historic buildings. An emphasis is placed on dealing with designated listed buildings, buildings in conservation areas and scheduled ancient monuments, and how good conservation practice derives from a flexible and progressive approach based on an informed understanding of site and buildings: Its eight stages highlight:

1 Strategic Definition

- *Identify the spirit of the place*
- *Scope the heritage assets on and around the site*
- *Advise on the project programme and risk implications if assets are present*
- *Advise on possible sources of grant aid and the potential consequences of using this type of funding*

2 Preparation of Brief

- *Identify heritage receptors* [sic: those sensitive to
- *Build an understanding of the site and buildings from readily available sources*
- *Draft a statement of significance for discussion*
- *Identify surveys and research likely to be needed*
- *Initial advice on procurement route*
- *Measured survey of site and buildings*

3 Concept Design

- *Draft heritage statement and decide whether this will be developed into a conservation plan*
- *Draft an impact assessment*
- *Carry out non-intrusive surveys and undertake research*
- *Advise on the specialist involvement and input*
- *Build and populate a* [H]*BIM model if required*
- *Identify hazardous materials*

4 Develop Design

- *Complete the heritage statement/conservation plan*
- *Heritage impact assessment for planning/listed buildings/scheduled ancient monument consents*
- *Review specialist reports and input*
- *Write a design and access statement based on the above*
- *Applications for listed building consent are normally made at the end of the stage*
- *Advise on design detailing and specification*
- *Identify relevant specialist suppliers and supply chain*

5 Technical Design

- *Assess planning and listed building consent conditions and programme their clearance*
- *Clear conditions identified as pre-commencement of works*
- *Detailed design and specification, working with specialist suppliers and supply chain*
- *Procurement of specialist input*
- *Salvage and protection packages*
- *Set up recording protocols and agree level of detail*

6 Construction

- *Update the heritage statement/conservation plan as the building is opened up*
- *Check compliance with listed building consent conditions*
- *Respond to discoveries on site*
- *Engage with specialist suppliers and supply chain*
- *Monitor salvage and protection*
- *Record site and discoveries*

7 Handover and Close out

- *Complete the heritage statement/conservation plan for handover to client/users*
- *Lodge completed statement/plan in a public record*
- *Confirm compliance with listed building consent conditions*
- *Record discoveries and any hazardous materials found*
- *Advise on stocking of spares and maintenance items*
- *Check reinstatement after removal of protection measures*
- *Complete the record of the works*

8 In use

- *Develop the conservation plan into a conservation management plan*
- *Review the conservation plan every five years*
- *Carry out quadrennial/quinquennial inspections of listed buildings*

- *Advise on maintenance and repair*
- *Advise on heritage protection agreements*
- *Review effects of changes in legislation*
- *Record the building and works carried out as the opportunity arises*
- *Be a 'friend to the building'*
- *Maintain the spirit of the place*

Consider how you might be guided by the bulleted points of the eight Plan of Work Conservation Overlay stages.

York. A variety of historic assets

Underpinning any conservation intervention or strategy is the need to accurately determine what the historical asset is, why it is and how it is significant. Such assessment must always be the primary action when planning an approach. There is a fundamental need to understand significance, via study of detailed physical and available documentary evidence. This in order to inform or help to develop an intervention policy prior to planning physical work – the historical physical record offered by an asset to future generations may be damaged and even destroyed if intervention policy does not take account of the reasons why and how it is significant and/or, vulnerable. All who have an impact on or use an

asset need to be consulted in order to canvass views and encourage understanding through involvement. Assessment of significance will become more important with recent changes to the UK's planning and listed building legislation, particularly in respect of proposals put forward for relaxation of the planning process across England, Wales and Scotland

High Wycombe. Brunel Railway Shed

"...a historic building cannot be protected through management without a thorough understanding of what it is that is important and why…Wide ranging consultation and engagement should take place in preparing [a] *conservation management plan, as the same historic building can be valued by different groups and individuals for different reasons."*

BS 7913: 2013: and para 5.5 Conservation management plans.

"When managing historic buildings, significance should be taken into account at every stage from the business strategy of the organisation that owns it or occupies the historic building to physical work involved."

BS 7913: 2013 Section 6 Significance as part of care or other interventions.

To these views must be added, *consultation with society (the public) who also retain an interest where heritage is a shared resource and everyone should be able to participate in sustaining it.*

Conservation Plans and their Implementation

Conservation planning is a fundamental, pre-intervention and forward-looking management process and will identify issues that are of importance when assessing an historical asset and should include: understanding the asset, gaining an understanding of its significance, identifying vulnerabilities, assessing the impact of any proposals and formulating management policies for protection of significance during future use and during proposed intervention work.

Once a need for intervention has been identified, or is required, such prior assessment is vital if the impact of any/the proposals are to be fully understood and implemented without compromising archaeological, architectural/artistic or historical significance.

"…[conservation] *management plans… provide a framework for discussion, consultation and agreed action, and try to set out what the objectives and priorities are for conservation."*

English Heritage (1996) A Future for Our Past

"A conservation plan is a document which sets out the significance of a site and explains how that significance will be retained in any future use, repair, alteration, development or management… Conservation plans are based on a common intellectual process which covers the following concepts..."

- *Understanding*
- *Assessment of significance*
- *Identification of conservation issues (including conflicts and how significance is vulnerable)*
- *Policies for retention of significance*

…in order to succeed, the process must be creative, analytical, participatory and synthetic"

Clark, K. (2001). Informed Conservation: Understanding Historic Buildings and their landscapes for conservation. English Heritage

"A conservation management plan is simply a document that helps you look after the heritage. It explains why the heritage matters to people and sets out what you can do to look after it in any future use, alteration, development, management or repair. … Conserving heritage means looking after it, both for ourselves and for future generations. This does not mean freezing it, but it does mean caring for it, using it, enjoying it and making it accessible to others in a way that does not damage what is important about it. "

Heritage Lottery Fund. Conservation Management Plans

"The organisation and individuals responsible for management decisions should be named and specific responsibility taken for each such decision."

Burra Charter 2013 Article 29

High Wycombe. Eroded masonry repair philosophy and technique

In the above illustration look at what may have influence the adopted repair approach, consider what the alternatives might have been and determine your view on the relevance of what was carried out.

Taking account of opinions outside the focused field of conservation facilitates a more balanced view and understanding of significance and perceived value. In that process Conservation Plans:

- Are a vehicle for identifying and agreeing capacity for change that, in turn guide actions and interventions. The process must look not only at immediate plans for work on or within an historical asset but should also address future plans for it including repair, maintenance, alteration, development and on-going use. The plan will require updating from time to time and adopting a four/five yearly process of review is probably a reasonable starting point for regular evaluation.
- Should always be considered a fluid strategy as many factors influence the use and management of the historic environment and may be subject to continual change; the need to respond to threats will be on-going and any plan should reflect patterns of change. The plan should be considered as the master strategic document influencing all actions of intervention and use. Reference to it must be a primary action prior to consideration of any intervention process. Its use will assist in re-establishing and reinforcing what is significant about SMEs and this must been seen as an essential process when considering intervention and determining future policy.
- Should also establish recommended routes of communication and establish guidelines for reference back to those who have ‘stakeholder’ interests in the asset and to the wider public

who will also have a view and may have concerns about its continuity. Involvement of all interested groups will assist in encouraging support for conservation and promotion of the historic environment.

Lincluden Abbey. Retaining the status quo

Consider the erosion damage to the left hand 'springer' of the pointed arch and determine what five options might be thought relevant to deal with the condition.

"Heritage assets play an important role in terms of our prosperity, our health, our education and our civic pride. For these reasons alone they deserve a critical focus of attention. "

Managing Local Authority Heritage Assets – Historic England (2017)

"The strategic plan should drive all the organisations by articulating its basic concept of vision, mission, goals, objectives and activities."

BS 7913: 2013 para 5.4 Strategic plans.

Implementing a conservation plan will assist in:

- Formulating an overall view and strategy including methods of recording change
- Facilitating an overview of the asset and its contents, condition and vulnerabilities
- Prediction of long and short term requirements
- Planning for long term maintenance including sourcing and allocation of funds
- Assessing impact of proposals and prediction of long-term effect of change
- Structuring on-going management planning
- Facilitating strategies for communication and promotion

During implementation the plan should be used:

- As a management tool for controlling works.
- To monitored the works
- Be reviewed on completion for future reference and feedback.

All this whilst judging and avoiding any detrimental effect on significance and the narrative value offered by an asset and whilst maintaining its full authenticity for future generations.

User Responsibility

The conservation plan should become a document for structuring a strategic response to all aspect of management and functioning of the historic environment, including all factors that will impact on its use and longevity and should include staffing policy and responsibility determination.

Communication of the information used in the conservation plan to assess significance must be firmly relayed to all staff involved with intervention work and asset management. It is essential that those concerned with and involved in the asset should be clear about why and how it is important. Staff must be clear about their role in the management and use of an asset such that significance is not placed at risk by inappropriate action by poorly informed staff.

Lynn Building, Belfast. Creation of a DDA compliant access landscape

Staffing structure should be identified and an appropriate management strategy put in place defining individuals' roles and responsibilities: such role definitions being part of the nexus of response to the future management of an asset. Staff need to be sure of who is responsible for what and to whom they should refer prior to making any decisions. The impact of ill-considered interventions may have a damaging if not catastrophic effect on significance and therefore any action must be preceded by evaluation and determination of impact.

Consider how the absence of staffing structure and methods of communication might impact on the significance of an asset.

Impact of Interventions

All proposals for intervention will have an impact on the historic environment; it is incumbent upon you, the conservation practitioner, to evaluate that impact against the conservation strategy of the asset for which you have responsibility.

Assessment of impact of intervention must be undertaken before any physical work on site. The proposals must be analysed and effects assessed against loss of fabric, authenticity and dignity. If a proposal is likely to have an adverse impact on significance then an alternative proposal must be investigated, mitigation considered and the least damaging alternative adopted.

"Once a conservation adviser has defined the significance of the fabric or aspect affected, they will need to look more closely at the impact of the proposals. … in effect, risk assessment for historic buildings and their landscape.
The process of finding ways of minimising or avoiding damage … is known as mitigation. Indeed, mitigation is probably the principle aim of the impact assessment process."

Informed Conservation: Understanding Historic Buildings and their landscapes. Clark, K. English Heritage (2001)

Newtownards, Northern Ireland. Communal use landscaping

In respect of an asset for which you are responsible determine, by reference to the preceding text and recommended reading, how your management strategy compares with the general consensus of what is considered an appropriate structure for historic asset management. Reference to Heritage Lottery Fund Guidance on how to prepare a Conservation Plan may provide you with an understanding of what needs to be considered as part of the process.

Conservation Statement

A conservation statement is, in simple terms, an abbreviated or shorthand version of a conservation plan and identifies and lists factors important to an understanding of a SME, its history, significance and vulnerabilities. It may also outline future policies and gaps in knowledge or understanding of a SME. The conservation statement may form an armature for a full conservation and management plan and may be a precursor to it. A conservation plan will address issues more relevant to 'running' a SME and may refer to cost planning, fund sourcing and income generation; it is more of a management

device than a conservation statement but the two may be combined on smaller sites. A complex site will generate the need for a separation of these two documents as the issues will be considerably more complicated, interconnected and interactive and may require co-ordination and synthesis of a great deal more information.

Business Plan

A business plan may be a tertiary response in the management process (also known as the *"Strategy plan*" see BS 7913: 2013 para 5.4 Strategic plans), being influenced by its precursors the conservation plan and conservation statement. A business plan for a heritage asset is separate from a conservation plan as the issues covered by it will address subjects more applicable to financial issues associated with the business needs of a site, rather than be solely focused on conservation matters. It is not to say, however, that the two should not at some point cross relate. The business plan will be influenced by an understanding of the significance of the site and its structure and will be in response to and rely on its conservation plan.

Culross, Fife. Applying foresight and planning: the corner building houses an electricity sub-station

Pre-intervention Planning

The need for pre-intervention planning should by now be self-evident: if you are to intervene in or have an impact upon the historic environment you have a duty to assess that impact and how it might affect importance and significance. You must adopt conservation principles and minimally intervene and therefore have a minimum effect on significance. Your work must involve no or minimum loss of fabric and, as a consequence authenticity and your intervention must, ideally, be reversible and respect all previous periods of intervention in order to protect an asset's historic narrative – a complex but manageable process supported by information gleaned from the site, stakeholders and documentary evidence determining significance.

Record Keeping

The products of any investigation work, the recording and storage of methodologies and justifications defining intervention work, must form part of the overall strategy for on-going management of a SME. The provision of documentary evidence of intervention will assist future generations gain a reason and understanding of the motivation behind the work. Such information must be carefully archived and stored in suitable and easily accessible form for future use in line with conservation principles.

"The keeping of proper records is a fundamental principle of conservation."

The Care of Historic Buildings and Ancient Monuments by Government Departments in Scotland. Conservation Unit Department of National Heritage. Historic Scotland.

Principle 6 – Documenting and learning from decisions is essential."

Conservation Principles, Policies and Guidance. English Heritage, (2008)

"We may make mistakes – in fact as humans we are bound to – but future generations are unlikely to blame us as long as we tell them what we did and why."

Jackson-Stops.

Identify what sort of documents might constitute records of intervention and where these might be stored.

Size of a Conservation Plan

The Conservation Plan wording and content needs to be tailored to suit the asset scale and use. Small-scale assets need to be provided with a plan that is easy to use and implement. Larger sites will, of necessity, generate more complex plans. But a full conservation plan may be too unwieldy a document to refer to on a daily basis, the use of an abbreviated form of the master strategy document will assist in the management and understanding of an asset, particularly in respect of smaller site and assets. Conservation, strategic and business plans may be combined on smaller sites into a single document or report. Depending upon its intended audience it may also take a different form and purpose.

Home Information Pack

Similarly, owners, users or tenants of an asset need to be aware of how their use might be a threat to it and its significance. They need to be made aware of why and how it is significant; thus they are informed and educated in order to realise how their use of an asset may place it at risk. They should be able (via their advisers, or by themselves through enlightened and improved awareness) to make value judgements about the asset and how they might best protect and maintain authenticity by future careful use of it.


Dublin. Surface growth and damage

At a domestic level the provision of a Home Information Pack for owners and tenants of an historic asset will assist in ensuring that users and occupiers are as aware as possible of what is significant and may be vulnerable about their home; thus helping to ensure that their use of it does not put significance at risk.

Portobello, Edinburgh. Cast iron railings of a residential property

5.04 Identification and Selection of Advisers and Contractors

> *"There is hardly anything in this world that some men cannot sell a little cheaper and make a little worse. Those who consider price only are this man's lawful prey. It's unwise to pay too much, but it's worse to pay too little. When you pay too much, you lose a little money – that is all"*
>
> [attributed to] John Ruskin

This is a useful quotation here, but whilst it is uncertain around its origin, John Ruskin has been identified as its possible source. This quotation encapsulates a philosophy that is apposite to the conservation process. Good quality intervention work is usually executed by people with good skills and with extensive knowledge in their field. Such ability, gained through experience, is not usually cheap to source, but it is essential to tap that expertise if the historic environment is not to be damaged by inexpert professional advice and by the use of inexperienced and low skilled contractors.

This is not to imply that only the most expensive firm or individual is likely to achieve the best results, far from it, but it is incumbent on you to adequately assess the ability of professional advisers and building contractors to achieve the best result possible without loss or damage to the historic environment. There must be a process in place on any heritage project to ensure that all those working on it are aware of the significance and vulnerabilities of that building.

Exeter Cathedral Close, has a variety of buildings of different periods

You will need to demonstrate via your evidence that you have undertaken such assessment of contributors' skills and abilities and have structured an appropriate response to the selection of

advisers and contractors whilst measuring experience and cost against project budget. Contractors and professional advisers should be chosen because they have the core knowledge, skills and expertise focused by experience in the heritage sector of the construction industry. They should understand the importance of the historic built environment and the need to protect its significance. They should also have clear understanding of and be able to implement works and use methods and materials that are contemporary/compatible with the original fabric on which you are asking them to work: You need to develop the ability to identify, assess and recognise those third party skills, but there are significant challenges to be faced in doing so.

Royal High School, Edinburgh. Specialist slating and sheet lead roofing work

> *"Value for money will not necessarily be secured by competition for lowest bid price alone"…*
> Cox, A and Townsend, M. Thomas Telford (1998) Towards better practice in the management of construction supply chains Strategic Procurement in Construction

The 1994 Atkins Report on the European Building industry suggested that poor quality is one of its major problems, exacerbated by low skills and poor reputation. The heritage must not be damaged by using poorly trained and low skilled contractors with limited experience, such contractors should not be considered appropriate for work within the heritage sector: Such work requires a commitment to understanding of the specific factors affecting the protection of heritage and an ability to translate that knowledge into skills applicable to work within the historic environment.

Industry Realities that Need to be Faced in Decision-making

Maintenance and rehabilitation work within the construction industry (some of which involves the historic environment) represents between 40% and 50% of total output, so is not a small proportion of the industry's workload and profit potential. However, anecdotally, there may well be far less than a 50% proportion of contractors skilled in conservation work.

> *"Research commissioned by the NHTG* [National Heritage Training Group] *Traditional Building Crafts Skills NHTG Research Report, England (2008), UK Built Heritage Sector Professionals NHTG Report (2008) has shown that there are declining skills in the heritage sector and the age of the workforce is increasing. This could lead to an inadequate level of labour and skill in the traditional craft trades."*
>
> BS 7913: 2013 para 5.3.1 Sustainability.

From analysis of various sources for numbers of people working with special heritage skills the above reports speculate that of the total 1.4 million people working in the building industry only some 36,500 [<3%] work within the heritage sector specifically. There is therefore a theoretical skills shortage of work people with genuine understanding focused on the conservation sector. Training for built environment professional qualifications at undergraduate level within the UK does not contain an element covering conservation philosophy and practice. This does rather beg the question about early professional life and ability to interact effectively with heritage assets.

> *"… there are few specific details about heritage building supply characteristics or its labour market. … There are, therefore, major obstacles in determining the exact size of the workforce engaged in heritage building work.…we believe these* [skills shortages] *add up to a sector failure in developing and sustaining… and a serious capacity constraint to the preservation and promotion of heritage in the UK."*
>
> Crafts in the English Countryside (2004)

A series of publications under the title "*The Building Craft Skills*" and the theme *"Skills needs analysis of the built heritage sector"* were published by the National Heritage Training Group (NHTG). In a country by country detailed assessment, the needs in England were published in 2005 and updated in 2008; Wales and Scotland in 2007; and Ireland 2009. These studies clearly identified the make-up and shortfall in skilled building craft personnel employed across the sector. In the later (2013) *Traditional Building's Skills Report, needs analysis report on England*, it was noted that £3.8 billion was spent on the conservation and restoration of historic buildings in 2012, with half on listed buildings and that the total spend on listed buildings was set to rise by 4%. This Historic England report concluded that:

- There is a shortage of labour, skills and experience
- 6,590 new crafts persons would be required in the next 12 months
- The age profile of persons employed in the heritage building skills sector is rising, with few young person's taking up training in the sector.

- Across all four countries studied, the report notes similar concerns.
- Reference to the 10 key recommendations suggests how the identified labour shortfall might be addressed.

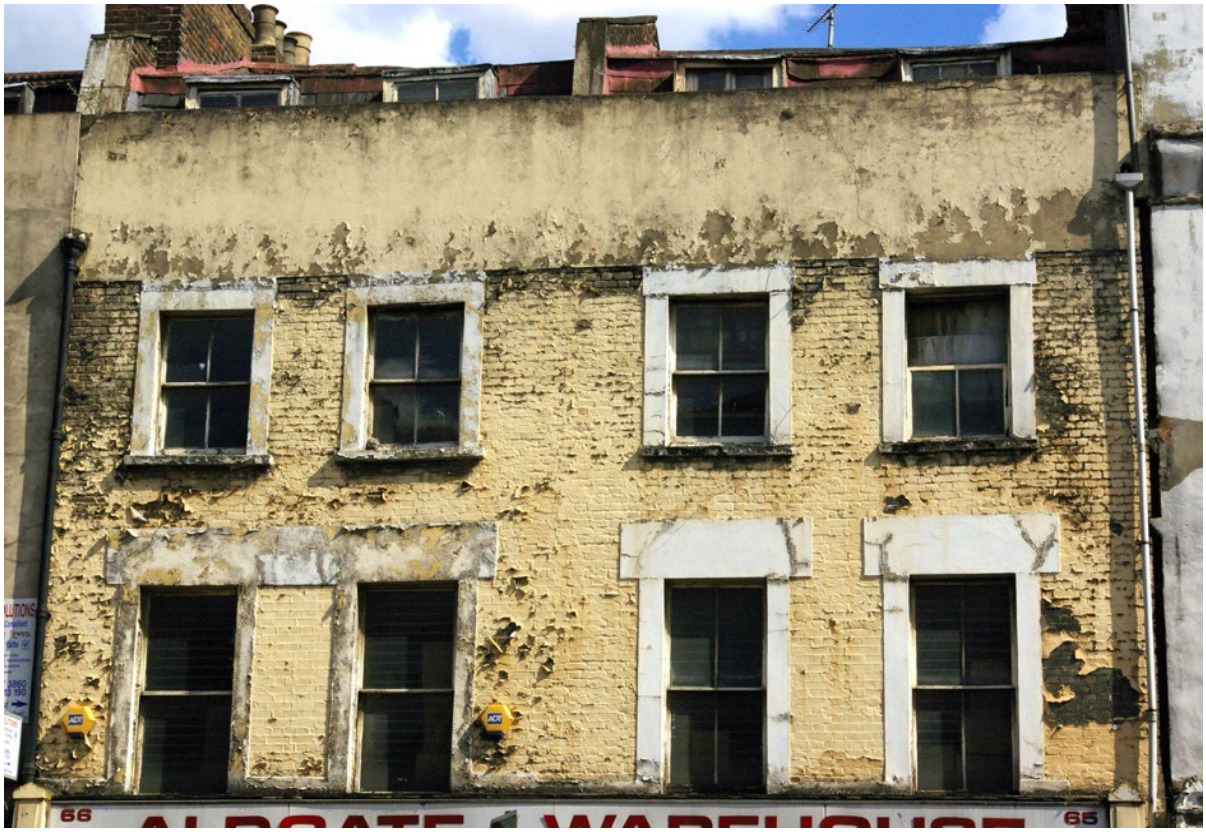
The (2019) *National Heritage and the Economy Report* identified the value of the heritage sector at £31.0bn, equivalent to 1.9% of GVA. The heritage sector employs, in England over 464,000 people. In 2018 heritage related construction activities generated £7.1bn in GVA in England, employing over 100,000 people. It estimates 10% of construction firms operating in the heritage sector have a skill gap in their workforce, and 5% had at least one skills shortage vacancy. In all, it is estimated that approximately £140 million worth of potential GVA was 'lost' in the Heritage Sector due to skills shortages in 2016.

The Centre for Economics and Business Research (Cebr) Skills gap/needs in the Heritage Sector report of April (2019) provided further good evidence of the nature and effect of the skills shortage in the heritage sector.

In 2019, there were some 6m pre-1919 buildings in the UK, including circa 500,000 list entries, of which circa 92% are Grade II, 5.5% are Grade II*, and 2.5% Grade I in England and Wales and Scotland (NB: Scottish grading system adopts a different nomenclature, as does Northern Ireland), noting that the list entries often contained numerous properties and the actual number of individual buildings is therefore well be over half a million within listed categories.

Wood Green Estate, London

In addition there are some 6 million traditional buildings across the UK built before 1919. Many of these were constructed of the same materials and display the same skill requirements and conservation needs as those that are listed. Collectively, significant challenges remain to be addressed in bringing that building stock back into full health. Here, of course the issue of retro-fitted 'improved' insulation to counter climate change and reduce carbon emissions is raised as an issue and is discussed in Unit 4 Section 4.06.



London. Aggregating effects of a lack of maintenance and inappropriate surface coating

> *"The conservation professional is responsible for work delegated to other professionals, students, interns, volunteers, subordinates, or agents and assignees. Work should not be delegated or subcontracted unless the conservation professional can supervise the work directly, can ensure proper supervision, or has sufficient knowledge of the practitioner to be confident of the quality of the work. When appropriate, the owner, custodian, or agent should be informed if such delegation is to occur."*
>
> Guideline 8 – The Guidelines for the Practice of the American Institute for Conservation of Historic & Artistic Works

Specialist Conservators

The choice of skilled and knowledgeable specialist conservators in the focused field of historic detailed art and decorative conservation may sometimes be difficult to make and you will need to demonstrate that you have carried out investigations into sourcing the services of such expert advice. Clients' choice of professional adviser should reflect the needs of the intervention project and match those needs

against the ability of the advisers and operatives to provide expertise and experience to achieving the aims of the many and varied projects that are likely to be encountered within the heritage sector .

Reading. Church tomb

Mansfield Place Church, Edinburgh

Define a methodology for investigating the suitability of an adviser for work on specific decorative, or specialised finishes and fine art within the historic environment.

Recent ecclesiastical changes in England to which professionals might be appointed as *"Quinquennial Inspectors"* has increased the range of accredited professionals accepted for undertaking appointments as *"Surveyors or Inspectors"*. This includes those individuals with relevant experience who have been peer-review accredited as conservation specialists by their professional institute.

"Under the provisions of the Ecclesiastical Jurisdiction and Care of Churches Measure 2018, as amended by the Church of England (Miscellaneous Provisions) Measure 2020, referred to hereafter as "the Measure", all parish churches in the Diocese, all other consecrated churches and chapels including licenced places of worship opted in under paras 38 to 44 of the Measure (previously the Care of Places of Worship Measure 1999), and buildings licensed for public worship, must be inspected at least once in any five-year period."

Quinquennial Inspection CBC (Church of England) Guidance.(2020)

Accredited Professionals

In respect of professional advisers: individual professions do not specifically offer courses for conservation skills as part of their basic training and education for qualification; such ability that a practitioner might acquire tends to be serendipitous and gained through experience. In some professions, conservation is seen as an optional choice.

Paisley. Location and setting of what has been handed down from the past requires consideration

The choice of professional advisers might become something of a bagatelle or lottery when deciding who or which is most suitable for work within the historic environment. There are, already in place or are being developed, various postgraduate courses for the acquisition of conservation skills and there has been developed an accreditation process that these CPD Units support. See COTAC Study 4 *"Conservation Courses"* covering undergraduate courses, postgraduate courses, crafts and short courses across the UK and the Republic of Ireland

Practitioners accredited and recognised for skills gained through previous work on the historic environment must be a preferred choice when considering appointments. This will be particularly relevant where grant assistance is being sought from such bodies as Historic Scotland, Historic England and Cadw. Therefore, early/newly qualified professionals with no or very limited (experience acquired) skills in working with historical buildings may well not be an appropriate choice for heritage projects. This until undergraduate/professional qualification courses contain an element of conservation philosophy and practice training. You, as a conservation practitioner, must recognise the cardinal understanding offered by the preceding discussion. Careful consideration must, therefore, be given to the choice of both professional advisers and contractors when deciding on whose advice and expertise to use well before contemplating intervention work. In addition a fuller understanding of what traditional and recent materials are to be specified and used is equally essential. Modern materials and construction methods are usually incompatible with traditional materials and methods; so clarity of understanding about this 'conflict' is an essential skill of the conservation practitioner.

"Professionals and contractors working on heritage assets need specialist skills to ensure that proposals for work undertaken on the asset are not detrimental. This is true of all stages in the process, from conservation statements, condition surveys and feasibility studies to specifying and executing alterations, repairs or routine maintenance."

Managing Local Authority Assets (2003)

"Where skill is lacking, exploitation will reign supreme."

Earl, J.

Edinburgh brick addition to a rear elevation

Chester. Utilitarian fire escape solution

In respect of the Chester image above, consider where the risk might be in using it as a fire escape.

"Conservation expertise is acquired from life-long experience. There never seems to be any practical aspect where a long-standing and definitive position is maintained. The more one knows the more one realises one doesn't know."

Kindred, R. Context Magazine No. 88. March 2005

5.05 Contracts and Procurement

"Only certain forms of contract will be appropriate for use under some specific conditions, according to the goals of the works that are to be procured."

Cox, A & Thompson, I (1998) Contracting for Business Success Thomas Telford

…what is best will always be that which is the most appropriate under the particular circumstances facing us… …The choice of 'appropriate' contractual forms relates directly to the need for the arrangements between client and supplier of services to be 'fit for purpose'…"

Cox, A and Townsend, M. (1998) Strategic Procurement in Construction: Towards better practice in the Management of construction supply chains.

York Minster East Front major work scaffolding

Forms of Contract and Contract Strategy

In simple terms it might be said that there are four types of contractual methods as follows:

- Sequential contracting (traditional method)
- Design & Build Contracting
- Minor works contracting
- Other contracting arrangements such as: Partnering, Management Contracting, Construction Management, etc.

Within the four main categories defined above there are many standard contractual forms available and which are used on a regular basis: JCT, NEC, FIDIC or other arrangements.

By reference to Cox & Thompson's Chapter 15 *Fit-for-Purpose Contractual Relations* (or other sources), define the standard forms available within the four listed categories of contractual arrangements. The ability to decide upon the most appropriate form of contract to adopt is referred to by Cox & Thompson as '*contracting or procurement competence'*.

Consider where a fixed term fixed price, form of contract might be of use when undertaking work to the historic environment.

Edinburgh. Taped joint protection for re-pointing ashlar

Dublin. Challenges for steeplejacks

"Procurement competence is the ability to know, not just one, but the full range of relationship management approaches available… and when it is appropriate to use these under specific circumstances."

Cox, A & Townsend, M. (1998) Strategic Procurement in Construction: Towards better practice in the management of construction supply chains. Thomas Telford

Contract strategy might be defined as deciding upon an optimum contractual arrangement to best facilitate the procurement of services, measured against client's requirements and project aims. Procurement might be defined as: the careful appraisal of the client's needs and identifying and acquiring the necessary resources needed to carry out the whole or part of a project and the integration of these services with the internal resources of the client. (after, Wallace, W. A.)

Current thinking on procurement practice, contractual arrangements advice and guidance can be

sourced via the JCT Tendering Practice Note 2017. Tendering and contractual procedure for work involving heritage projects will require a different and possibly specialised or bespoke approach when compared to conventional contractual practices.

Relationship between Client and Services Supplier

The relationship between client and supplier of services might be defined as a power construct between the contracting parties. Choosing the appropriate form of contract in order to retain optimum control over the way that work is to be carried out is an essential skill of any conservation practitioner. This skill is paramount if the influence necessary to control the works on an historic asset project is to remain firmly with the client and his contractual professional advisers.

Maintenance and Direct Labour

Maintenance work undertaken as part of long and short term management of the historic built environment covers works of preservation against decay and for rectification of defects created by on-going use – normal wear and tear. Continuity of work force used to maintain the fabric and structure is a preferred component of conservation and provides for improvement of understanding through continual contact with the asset and its needs. It also facilitates an attachment to the asset and its requirements both long and short term. Knowledge gained through continuity of work on and within a particular asset cannot be bettered. Directly employed labour force is an ideal situation facilitating an optimum relationship between an asset and its maintenance team. Not all historical assets can afford to employ full time maintenance teams; many assets are not sufficiently large to warrant such staffing arrangements.

Partnering

Partnering as a form of procurement might offer a possible solution providing a 'halfway house' arrangement between directly employed labour and the use of outside contractors. Commitment to partnering requires the establishment of mutuality of interest where both parties (employer and contractor) work together for joint interest (user and supplier) with an, 'open book' arrangement as regards costs. This form of arrangement on large and small assets presents a potential for a symbiosis that benefits both parties as well as the asset: Somewhat different to the normally '*adversarial*' relationships that are defined by more 'usual' contractual interactions. The use of service supply 'partnering' arrangement requires an approach that is more philosophical than contractual; nonetheless, the industry has responded by formulating forms of contract to cover such arrangements – PPC 2000 & TPC 2005 or the NEC Partnering Agreement. A review could be made of them at: *"Choosing the right form of JCT Contract"*

Dealing with Risk

The fact that interventive work is to be carried out on a site of significance imposes a responsibility to procure services and implement a contractual form that permits a client and their professional advisers to have optimum control over how, and by what means, work is implemented and controlled. Unit 1 of this series emphasises the importance of determining cultural significance and accentuates the need to understand the differences that pertain when working on or within the historic environment. It is essential in those circumstances to clarify the methods and manner of working and clearly define, via accurate drawn and written work and description documentation, exactly how the works shall be

executed and, most importantly, how the historic fabric will be protected during undertaking. It is critical to ensure that there are no ambiguities in the terms, conditions and associated contractual documentation. The historic environment is sensitive in ways that 'normal' buildings are not and you need to be fully aware of this fact and implement arrangements that present minimum threat and risk to significance.

Special Measures

The use of 'standard' specification clauses, for instance: National Building Specification should be avoided. Any project involving intervention work to the historic environment must adopt a bespoke approach to the preparation of contract documentation. Some standardisation of descriptions can be used to good effect, but this should not be seen as the norm!

> *"Careful thought should be given to protection from weather, fire and mechanical damage, vandalism and theft. The additional cost of temporary roofs, good ventilation, hot work procedure, the special protection of vulnerable areas, and the maintenance of security will often be justified."*
>
> Historic Scotland The Care of Historic Buildings and Ancient Monuments by Government Departments in Scotland

It is not always sensible to adopt normal working practices, as might be observed at St. George's Hall Windsor and at Uppark where both structures were severely damaged by fire occurring during building works: hot work during roof lead work in the case of Uppark and proximity of temporary lighting to curtains and drapes in the case of Windsor. It may be necessary therefore to limit or curtail certain operations that may present as risk to the historic environment; contractual arrangements and work definitions must clearly define how hazardous operations are to be executed and significant fabric protected. The acronym ERIC, (Eliminate, Reduce, Isolate, Control), should be adopted whenever managing risk.

London. A range of specialist skill sets would be required to undertake work

Special measures to be adopted in respect of a project involving the historic environment are far too complex and faceted a subject to be covered by this section; suffice to say that you will need to be aware of the sensitive nature of the historic environment and the need for special measures and consideration of this sensitivity when planning, defining and designing intervention work. These special measures will be necessary to ensure that historic fabric is not damaged by working methods adopted: Scaffolding, as an example, may not be secured in the normal way by contact or connection to historic structures. Careful thought will therefore need to given to scaffolding measures and safety. See Hume, I (1997) Scaffolding and Temporary Works for Historic Buildings.

Insurance cover and liability may need to be looked at as a special case and the normal interaction between employer and contractor may need to be modified to accommodate the peculiarities of working on and within the historic environment.

Chester. Work in progress risks creating further damage

Dust protection, use of hand operated tools, avoidance of power tools, implementation of authority to work procedure, humidity control and temporary weathering structures and measures are also examples where special consideration is necessary. Protection against dust and potential for weathering damage to exposed fabric during work will have an effect on methods and manner of working and need clear and concise definition within work description documentation. Temporary protection measures may be a contractual arrangement in themselves, separate from the principle

contractual arrangements for intervention work. The need for such protection can often be overlooked to the detriment of historic fabric.

From your own experiences identify at least 10 examples of situations where special measures might become necessary.

Fire Loss to the Built Heritage

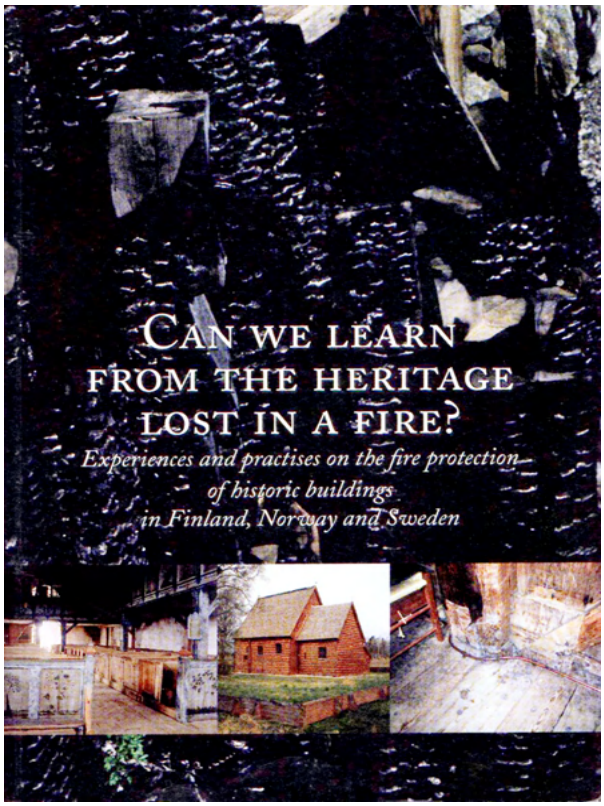
Historically fire has always threatened culturally valuable buildings and surroundings. Construction work, especially the use of hot work, portable lighting and temporary heating, day to day activities, events and variable usage all create different degrees of risks. Human factors, lit candles, open fires and chimneys in poor condition are also responsible for starting many incidents.

Glasgow School of Art. Fire 2014. © HES

Rodents chewing cables and out-dated equipment, or poorly earthed electrical systems have also triggered fires, as have vandals and arsonists. Similarly, naturally occurring lightning strikes is an ever present hazard. Historic buildings are often built from easily-ignited materials and whilst timber's charring feature and the fire integrity of lath and lime plastered partitions and ceilings offer some protection, roof and floor voids can facilitate rapid fire spread. Other aspects and materials such as pugging, furniture and contents can add to the fuel load.

Historic buildings are often located remote from fire stations, this factor can increase travel time in the

deployment of fire and rescue services. Availability of water for fire fighting operations can be limited especially in remote locations so alternative provisions will need to be planned. Alternative sources such as swimming pools, ponds and ornamental lakes and rivers can be useful sources for fire fighters to use and should be identified in emergency planning.



Fire loss is an international concern

Working with Fire and Rescue Services is essential

Given the special nature of historic buildings, their economic and cultural relevance, and the need for measures to prevent fires from taking hold, such a strategic approach requires greater consideration of a range of factors such as:

- Vulnerability to fire in their construction and use
- Appropriate risk assessment methodologies relevant to heritage
- Location and possible access restrictions
- Availability and location of water resources
- Protection of fabric and content
- Establishing safe contents salvage evacuation procedures
- Prevention of fire and fire spread
- Potential for compartmentation
- Detection and suppression requirements
- Training and management of staff
- Heritage status recognition by the fire and rescue services
- Working in advance with the Fire and Rescue Service so they understand the building
- Ensuring the alarm system can notify the brigade directly
- Absence of over-night staff or occupants
- Insurance considerations

- Prevention of security arrangements hindering Fire and Rescue Service activities – especially 'after hours' in un-occupied buildings.
- Key personnel contact information and security access out-of-hours

Edinburgh: Post-fire site clearance

Recording and documentation of building and contents is best carried out in advance of any incident and should, ideally, be undertaken for all historic buildings. Giving due regard to security related consideration, any such pre-fire records should form an accessible part of a Fire Action Plan. That Plan should also identify a priority 'snatch list' of important contents and artefacts targeted for early salvage removal in the event of fire. A sobering thought is that a post-fire 'archaeological' survey of charred remains might be the only chance to record the remnant evidence of original historic interiors.

Temporary Protection Measures

Post the 1986 fire at Hampton Court Palace scaffolding and temporary weather protection measures were in place for a period of four years and were purchased by the estates department as it offered a less expensive solution to hire because of its likely period of use. The scaffolding was commenced only 18 days after the fire was put out and offered temporary support to the unstable structure. It was not until the scaffolding was in place that salvage work could be safely commenced. The scaffolding was later sold back to the main contractors, providing additional (reclamation) funds. The temporary structure and its covering allowed the fabric of the building to dry-out for a period of two years before main works were commenced in 1988.

Post the 1989 fire at Uppark the temporary scaffolding and roofing was severely damaged in high winds and resulted in collapse, loss of life and injury to work persons. The ability to specify or even design, temporary structure methodologies must form part of your knowledge when working within the historic environment. If there is any doubt, independent specialist advice should be sought. At Clandon Park, following the fire which occurred in 2015, a decision was taken to purchase the access scaffolding and temporary roof for similar reasons to those adopted at Hampton Court Palace.

Uppark House © National Trust

Hampton Court Palace fire 1986

Clandon Park, post-fire in 2015 © National Trust

The amount of water used during fire dousing operations at a major fire site can involve introducing millions of gallons into a structure; that water will need time to properly dry out if fungal infection is to be avoided. Using these examples, it is hoped to demonstrate the need for a bespoke approach to pre-event interventions, taking account of situation, circumstances, and individual project requirements. The integration of a holistic package of measures will require integrated project management skills that are comprehensive and tailored to each project.

Flooding

The risk of flooding is likely to increase in consequence of climate change and increased urbanisation. Many properties at a high risk are historic buildings of traditional construction requiring particular care if damage is to be minimised from inappropriate protection measures, the flood event itself, and subsequent recovery and repair work.

Emerging areas of expertise are focussing on flood risk and methods to mitigate damage, whilst Government policy is increasingly emphasising individual and community responsibility, alongside engineered flood alleviation schemes to effect property protection levels. Three key areas need to be considered:

- resilience

- recovery and repair in respect of the risks
- vulnerabilities of historic buildings and their contents.

Belief and disbelief © K Lithgow

St Michael and All Angels Church, Tirley, Gloucestershire. 2007. ©SWNS.com

Offering future guidance and best practice advice the *Property Care Association Code of Practice for the Recovery of Flood Damaged Buildings* encourages a focus on the building, its characteristics, underlying condition, and how best to affect recovery, describing how to approach an initial assessment, effecting appropriate drying out, and the importance of a considered approach to refit.

Project Management

The role of the project manager within the historic environment should not be a barrier to effective communications between project team members. The remit of the project manager should always be to facilitate best response and the protection of significance. A project manager must always ensure that authenticity is preserved within an environment of protection as a primary response with other issues being secondary: This particularly if cost control and project programme is seen as the primary function of the project manager. These two criteria, whilst being part of the normal project manager's remit must not overrule the principles, philosophies and ethics of conservation. The ability to manage a project either in house or via external consultants will be an essential conservation practitioner skill.

> *"Effective project management requires a command of organisational, time, cost and quality management. …The object of project management may be defined as the successful completion of the project, on time, within cost and to the required standard of performance. …All project managers have to be good leaders. They have to be able to build a team and make it work."*
>
> Wallace, W. A.

The effective management of a heritage project will involve the following areas of expertise:

- Good communication skills
- Project planning and control Cost planning and control
- Quality management and control of works
- Clear and sound understanding of the importance and significance of the asset
- A good knowledge of conservation philosophy and practice

Normal sequential contracting methods might not always be appropriate for use within the historic environment. There may be a need for a greater number of specialists to be employed directly by client where the normal contractor and sub-contractor arrangements may not be relevant or applicable. Specialists and artists may need to be used and cannot be subject to the usual sub-contractor and contractor relationships. Investigative work may need to be undertaken before finalised scope of work documentation is prepared.

Some works may need to be subject to two-stage contracting – investigation followed by preparation of work description documentation and the eventual implementation of work. The issue of '*ownership of the site'* during heritage work contract period is an issue that conventional contractual arrangements will not be familiar with and will require considerable thought and negotiations.

> From your own experience identify where directly employed specialists had to be used on a project, how they were used and how their work was facilitated. You should be able to provide examples of the adopted choice criteria in determining the contractual and procurement methods when working on and within the historic environment. See Hughes, N (1996) Tenders for Conservation Work.

5.06 Cost Planning and Control

Unforeseen eventualities are inevitable when working on the historic environment and sensible contingency planning and budget allocation is essential. Contingency fund allocation should not be allowed to become excessive and used as an excuse for proper investigation and works definition prior to intervention works commencing but it will be a necessary part of the budgeting system.

Lady Victoria Mining Museum, Midlothian. A variety of heritage assets exist, each with varying needs

The preparation of comprehensive pre-contract information in the form of drawings, specifications,

schedules and general work definitions is essential if accurate cost prediction and expenditure control is to be effective. There is no substitute for clear definition of extent, quantification and quality of work when intervening in the historic built environment. All proposed work must be fully investigated, defined and costed if efficient cost control is to be achieved.

"There is no limit to the resources which could be applied to heritage conservation if they were available, but in reality they are always limited. Setting priorities means that resources can be targeted and their use justified."

English Heritage (1996) A Future for Our Past

"Although cost effectiveness should never be viewed as the most important or central determinant in conservation work, it must be borne in mind that efficient cost planning and control make scarce resources go further."

Stirling, S. (2000)

There must be no or minimal doubt as to extent of the required works. Agreed measurable rates must be negotiated in preference to use of day work rates and methods. The role of the quantity surveyor in this regard is paramount as close cost control is vital if excessive cost overruns are to be avoided. A closely controlled and monitored cost variation and control system should be implemented if cost escalation is to be avoided. Hazardous site operations must be adequately controlled to reduce risk to vulnerable fabric and increasing cost.

"Uncertainty can be minimised in any project by careful survey, investigation and pre-contract preparation, by the production of good documentation and choice of appropriate form of contract and appropriately skilled and experienced contractors and tradesmen. It is, however, in the nature of historic buildings work that unexpected things may happen."

The Care of Historic Buildings and Ancient Monuments.

Consider how to facilitate a more accurate approach to budgeting and cost identification and allocation, an initial cost feasibility study is a very useful precursor to full cost study and analysis. The benefits of this initial process may be identified as follows:

- Assessing if the work can be afforded
- Focuses attention on cost structure and if linked to prioritisation for expenditure, can assist in identifying an urgency response
- Can facilitate a better initial overall picture by identifying elemental costs, thus assisting in a cost breakdown structure and costs impact
- Assists in identifying funding sources

5.07 Management of Works

As noted previously, the RIBA Plan of Work 2017 Conservation Overlay offers an effective framework within which to manage conservation projects. In a well-established approach the Plan stages are logically and sequentially laid out which, in the case of heritage assets, can become cyclical in nature.

> *"The historic building's significance should be the basis of the management and planning of its continued well-being. Its specific value and attributes, its setting and inter-relationships should be taken into account in management planning."*
>
> BS 7913: 2013 para 5.2 Heritage management principles."
>
> *"These old buildings do not belong to us only; … they have belonged to our forefathers and they will belong to our descendants unless we play them false. They are not … our property, to do as we like with. We are only trustees for those that come after us."*
>
> William Morris (1889)
>
> *"What you cannot make You should not break."*
>
> Anon, cited by Earl, J. Building Conservation Philosophy

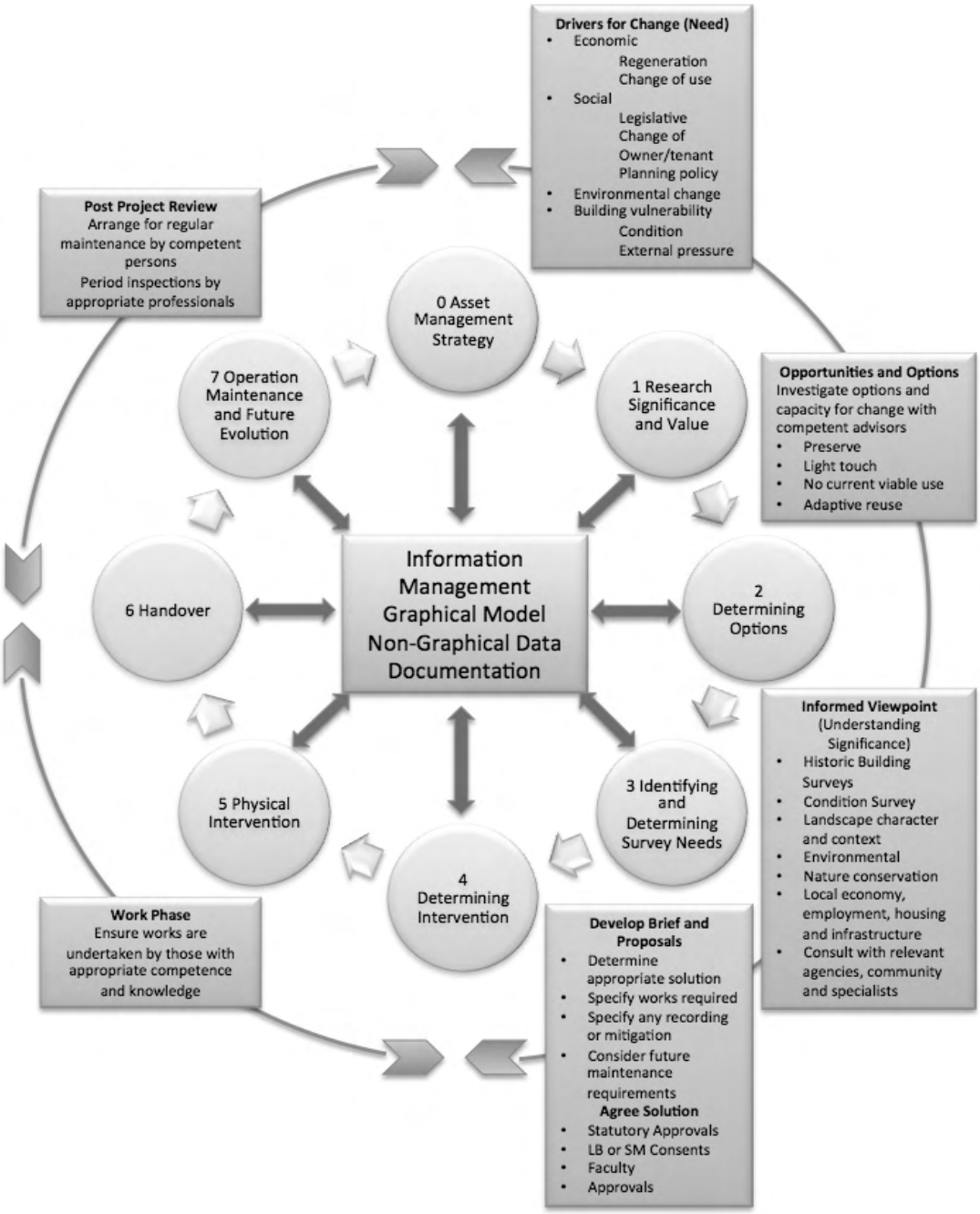
Intervention work on and within the historic environment imposes a special responsibility on all those who undertake to intervene. The risks of irreplaceable loss are ever present and practitioners and workers involved in the process must be as aware as possible of their responsibilities and the hazards involved. Without commitment to the principles, philosophical understanding and accepted good practice of conservation work the historic environment may be placed at risk.

Historic Building Information Modelling (HBIM)

It is increasingly recognised that the built heritage is under threat from a variety of influences, including a lack of training, knowledge and understanding of conservation issues within the professions, as well as the 'mainstream' construction sector. To commonly define what is meant by 'mainstream', it is generally considered to be the industry sector that deals with new build. The related sector, being conservation, repair, and maintenance, holds little recognition in comparison. But, in 2008 a *"National Heritage Training Group Skills Needs Analysis of the UK Built Heritage Sector"* report projected that this supplementary element of construction activity deals with almost 40% of the total workload across the entire industry, a subdivision that has remained static to present times. With the impact and needs of this split generally going unrecognised, the main emphasis continues to be new build led. For example, the *Farrell Review* of April 2014 observed that:

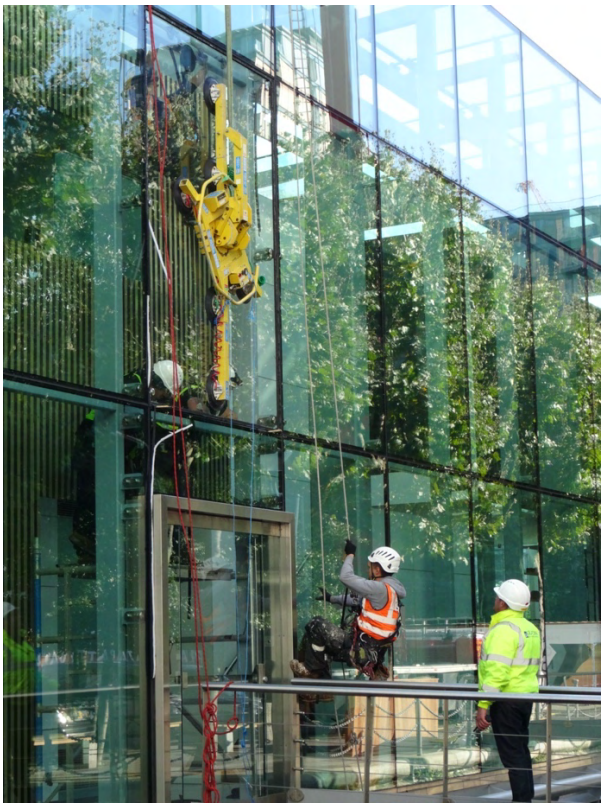
> *Today, most architecture is subject to the design of components by others …... The trusses, cladding systems, windows and doors and the kitchens, wardrobes and bathroom elements all the way down to the door handles have already been "pre-designed", so what is it that the architect does? As Farrell Review Expert Panel member Sunand Prasad has said, the role of the architect today is increasingly about selecting, synthesising and integrating, and they are well placed to do this.*

Whilst adopting and incorporating a catalogued selection process from a developing BIM framework of library components within the new-build sector, it is certainly not appropriate when dealing with the existing built heritage stock. This is especially so in pre-1919 buildings where, along with the craft skills used to create them, all the selecting, synthesising and integrating has already been pre-determined from a portfolio of parts and elements that are generally no longer available. Here, the approach calls for a level of professional and industry expertise that is somewhat different to the 'mainstream' norm. Inevitably, this creates the need for greater considerations to be put in place during the earlier stages of a heritage project in leu of the Strategy, Brief, Concept, Definition and Design stages of a new-build project.



The application of BS7913:2013 Flow Chart weighting guidance to the early stages of an HBIM project © IM

Resolving this potential imbalance in approach will be at the heart of any successful BIM framework that might be applied to the existing built heritage. To do so will require a considerable effort given the scale, promotion and new-build bias of BIM developments to date. The challenge will be to integrate relevant BIM developments from the new-build sector, along with key aspects, guidance and principles that are common-place within the conservation, repair and maintenance (CRM) element of the industry. Yet, the differences, clearly spelt out in BS7913: 2013 *Guide to the conservation of historic buildings',* go totally unrecognised in the newbuild *'Publicly Available Specification'* (PAS) driven approach as it will have a considerable bearing on future conservation activities and preparatory works.



Canary Wharf, London

Haddington, E Lothian

Consider the differences between adopting the promoted product library-based selection/choice method of pre-made elements and details under BIM project initiatives, and the need to fully comprehend the physical state, detail, significance, and value of a heritage asset before starting to consider project options that may be relevant.

Pre-contract Work

Accurate pre-contract definition of works and clearly defined methods, standards and quality of working, along with clarity of understanding of the significance of a site are probably the most important precursor to any works involving intervention on and within the historic environment. The removal of doubt about the content, process and procedure during execution of the works and clear delineation of roles and responsibilities will allow the work force to undertake their appointed tasks with clarity of knowledge of what they are doing and why they are doing it. This removal of doubt is probably the most effective defence against inadvertent damage to the historic environment. Pre-

contract investigation and planning and documentation clearly defining significance, risk and methods to be adopted is, therefore, an essential precursor to all projects involving the Heritage

Edinburgh. Planning for and managing access arrangements can involve specialist equipment

When working on pre-intervention planning and anticipatory structuring of possible works, the simple option of not undertaking works should always be a considered alternative to intervention. Sometimes, in conservation work, the option of no action may provide the conservation practitioner with best choice!

In Contract Communications

Efficient methods of communication and clearly defined decision processes and controls, together with definitive definitions of individuals' responsibilities, are of paramount importance during the contract phase and will assist in reinforcing the strict controls that must be implemented in order to protect significance and authenticity.

Lincoln: It can be difficult for clients to appreciate the full extent of work until access is available

A system of communicating discoveries made on site during works execution will provide a method of control targeted on ensuring that all persons are as aware as possible that the building and fabric on which they are working must be subject to the closest possible scrutiny and protection. An ability to promote the necessary knowledge relating to significance to those persons undertaking work is an essential skill of the conservation practitioner. This knowledge needs to be transferred through contractual documentation, communication methods, education of site staff and appropriate site procedures, including informing client interests.

Identify at least 10 site operations that pose risk to sensitive material and fabric and define methods that you might adopt to reduce, control and monitor hazards

In summary, the following are suggested as good management targets and strategies when working on and within the historic environment:

- Understand significance and vulnerabilities
- Identify the purpose of and need for the work
- Assess the impact of the work

- Plan strategy including timing, content and financing
- Communicate findings and report.
- Monitoring and notification procedure for discoveries on site
- Assess suitable specialists and contractors
- Define extent of works by very detailed documentation and work definitions,
- Identification of risks and hazard
- Appoint suitably qualified and experienced contractors/specialist
- Agree programme of works and assess patterns of disruption and plan for same
- Agree communication procedure
- Monitor costs and extras
- Closely monitor works during execution
- Compile reports and record findings for archiving – see below
- Monitor health and safety
- Monitor and review works methods and progress and storage for future reference
- On completion lodge all documents of recordings and findings in a publically accessible archive. This project archive should allow future generations to understand what, why and how work was undertaken and how decisions were made

"When it is not necessary to change, it is necessary not to change."
Lucius Cary 1610 – 1643

"… give us the serenity to accept what cannot be changed; Give us the courage to change what should be changed; Give us the wisdom to distinguish one from the other."
Reinhold Niebuhr 1892-1971

Cesky Krumlov, Czech Republic. Wall face mural

5.08 Maintenance Approach

It is worth bearing in mind that there will be considerable differences in maintenance requirements and planning between an historic domestic dwelling and a large Country House its estate and similar large heritage assets. Although both are similarly constrained by the need to protect heritage and significance, the way that each is managed will have considerable differences in approach.

Duddington. A small stone-built cottage

Somerleighton Hall, Norfolk © Mike Page

Consider the way in which the above two examples might differ in the way in which their maintenance is managed and planned.

The regime of maintenance management might be planned for in most of the following ways:

- Daily, weekly or monthly checks and inspections
- Reactive maintenance: responding to problems as they arise and before they become major
- Annual, bi-annual and four or five year checks
- Planned preventative maintenance
- Planned maintenance, including replacement of life-limited components

Newcastle. Basic maintenance needs

William Morris, within the 1877 SPAB Manifesto, urged: *"Staving off decay by daily care."*

See Articles 9 – 13 of the Venice Charter and Definitions 1.7 and Articles 18 and 19 of The Burra Charter 2013 which define *Restoration*, *Restoration and Reconstruction* and *Restoration* respectively

"The intention on conserving and restoring monuments is to safeguard them no less as works of art than as historical evidence." [maintaining authenticity and record].

Venice Charter Article 3.

"It is essential to the conservation of monuments that they be maintained on a permanent basis."

Venice Charter. Article 4

"Maintenance is fundamental to conservation. Maintenance should be undertaken where fabric is of cultural significance and its maintenance is necessary to retain that cultural significance."

Burra Charter 2013 Article 16

The Burra Charter defines preservation as: *"...maintaining a place in its existing state and retarding deterioration.*

Burra Charter 2013 Article 1. Definitions 1.6

Maintenance is defined by

- BS 3811: 1984 as *"The organisation of maintenance within an agreed policy."* And a maintenance plan is: *"Deciding in advance the jobs, materials, tools, machinery, labour, time required and timing of maintenance actions."*
- BS 3811: 1993 as *"The combination of all technical and associated administrative actions intended to retain an* [asset] *in or bring it to a state in which it can perform its required function."* Which, to be applicable to a conservation asset, might also read [*in order to protect significance and be able to pass the asset on, in its full authenticity, to future generations*].
- BS 8210: 1996 as: *"A strategy within which decisions on maintenance are taken"* and *"…actions organised and carried out with forethought, control and use of records, to a predetermined plan based on the results of previous condition surveys."*
- BS 7913;2013 Section 7:
    - 7.1 *Maintenance guidance*,
    - 7.2 *Maintenance strategy*,
    - 7.3 *Maintenance management* and
    - 7.4. *Maintenance in practice.*

"Asset maintenance management attempts to maximise the use of an asset by keeping them in good order."

Menzies, Dr. G. F. (2000)

The principle of maintenance in preserving and protecting the historic environment is clearly established by convention and consensus. Well-planned, regular and expertly achieved maintenance will protect an asset against decay, wear and tear and deterioration. The process of maintenance strategy and planning might be identified as asset maintenance management. Asset maintenance management might be used as a 'generic' term when dealing with conservation statements, plans and management plans, and may be used to define a process of intervention methods necessary to preserve authenticity and maintain and protect significance.

"Maintenance is recognised as by far the best way to look after historic buildings.
Yet in practice little maintenance is done. Many owners wait for things to go wrong. The value of systematic maintenance is not widely appreciated. This…calls for a change in approach from passive to pro-active encouragement of maintenance."

Maintain our Heritage (2004) Putting it off: How Lack of Maintenance Fails our Heritage

"Maintenance is subject to a strategic plan. Planned preventative maintenance is the process of using a strategic plan to replace [or repair/stabilise] *things before they have failed."*

Menzies, Dr. G. F (2000)

To which might be added a clear assessment of what is authentic about an historic asset, what is vulnerable and how significance must be evaluated prior to work and measures taken to protected and preserve it.

By reference to The Burra Charter define *adaptation*. See Article 1. Definitions 1.9.

By reference to BS 7913: 2013 define the difference between, maintenance and repair. Is BS 7913 the only definition source for these differences when working on conservation projects?

The lesson to be observed from all this should be that planning for maintenance and intervention must form part of an integrated strategy taking into account many factors to ensure that the significance of an asset is preserved and is not compromised by intervention designed to counteract deterioration and decay.

Scheduled and Conditioned Maintenance

Maintenance might be sub divided into both planned and unplanned requirements. Unplanned speaks for itself and is simply a response to problems that had not previously been identified or could not have been foreseen – vandal damage for instance. Planned maintenance however may be further sub divided as follows into:

- Preventative maintenance and Corrective maintenance.
- Preventative maintenance may be further split into
- Schedule based and Condition based

The rubric or headline being to ensure that, as far as possible, maintenance is carried out to and within a planned and analytical structure, considering an asset's needs and its vulnerabilities, within a cost plan nexus that considers funding availability, urgency and convenience. Fundamental to the process in regard to a SME is the need to underpin any strategy with a clear understanding of significance, vulnerability and perpetuation of authenticity; with minimum damage to fabric and with reversibility considered as part of the process.

"Historic buildings are invariably diverse structures, essentially composites of materials illustrating an accretion of skills over time. The organic nature of such buildings needs to be understood so that repairs do not erase important clues relating to phasing and development."

Crafts in the English Countryside (2004)

"Planned maintenance and repair programmes, based on regular, detailed inspections and condition reports, are essential for all heritage assets."

ODPM, DCMS and English Heritage (2003) Managing local authority heritage assets

Edinburgh. Monitoring a fracture caused by underlying rusting structural steelwork

Maintenance plans must synthesise a whole raft of information analysed to determine intervention policy and strategy: not least of which should be a requirement to understand and clarify significance and identify vulnerabilities that might be threatening significance and historical record. It is also vitally

important to be clear that, in some instances, no intervention is sometimes the best conservation option. Before maintenance or repair can be planned areas of vulnerability need to be identified and assessed as to their threat level.

- Priority 1: Immediate
- Priority 2: Urgent
- Priority 3: Necessary
- Priority 4: Desirable

BS 7913: 2013 Annex B recommends that periodic inspections should be undertaken on a regular four or five-yearly basis. Other periods of time between inspections may also be appropriate: But why four/five yearly intervals? The choice of a five-year cycle of condition reviews was originally determined by church surveyors and directly related to the need to re-paint at regular intervals [the *"Quinquennial Review"*]. It has been generally adopted by the industry as an appropriate maximum period of review.

Identify situations where periods of inspection review might appropriately be less than five years and more than five years. Consider a situation where work might be carried out fortuitously but outside a pre-planned strategy.

It will be necessary for any maintenance plan to have an element of flexibility; this in order to be able to respond to unforeseen but opportunistic events that might allow maintenance to be undertaken out of sequence taking advantage of say, works being implemented and offering the opportunity of completing other work at the same time - for example, works to investigate a potential infestation of dry rot in a building with hidden voids behind timber panelling. During which improvements in service installation might usefully be carried out at the same time as the investigative work to determine extent of infestation. Such opportunities should be taken, in order to minimally affect existing fabric avoiding duplication of disruptive measures necessary to facilitate a response to problems identified.

"Thus the process aims to provide for a learning cycle for those involved, so that conservation can be continually improved by experience."

A Future for Our Past

Maintenance strategy should retain flexibility to take advantage of situations as defined above. It should also be regularly reviewed in order to make use of the experiences gained through implementation of the plan and the carrying out of works. Such experience will inform future plans or even influence current strategy. Recording of decision processes will assist in informing future generations of the decision routes adopted during choice. An essential part of the process of maintenance and repair is the need to assess and record all intervention work. The preparation and maintenance of a log book recording all intervention work is essential if proper assessment, recording and archiving is to be achieve; this in order not only to make and maintain records but also to refer to in the future facilitating an understanding of what was affected, why it was necessary and the reasons and motivation behind decisions to intervene. See Ashley, M (1998) Programming Church Repairs.

Lincoln. A previous and abandoned addition leaves an indelible mark

Maintain our Heritage in their report: *Putting it off,* conclude that maintenance:

- Keeps up appearance
- Reduces or eliminates cost and disruption
- Is sustainable
- Retains historic fabric provides business activity
- It also suggests that maintenance should be systematic rather than reactive
- But the UK current VAT regulations and structure does not encourage a systematic maintenance culture in respect of the historic environment.

By reference to UK VAT regulations define what the last bullet point might also imply.

With reference to the above sources determine what systems and procedures are adopted for VAT reclaims. You may also wish to refer to HMRC VAT guidance Buildings and Construction. Suffice to say that the processes of VAT, in so far as they relate to Heritage buildings is both complex and specific to individual projects.

It is advisable to seek good and sound advice about the impact of VAT on any Heritage project involving intervention work.

5.09 Health and Safety

Reading: Temporary and permanent health and safety solutions

Health and safety legislation has developed considerably over the last few years and anyone involved in the historic environment must be aware of the impositions and implications for their work on and within the historic environment. The need to plan for and be aware of the impact of the legislation is a fundamental and vital skill for you the conservation practitioner. You must be able to brief clients and co-ordinate the efforts of other professionals and workers and define and co-ordinate their roles and responsibilities under health and safety legislation. You must have a good working knowledge of how such legislation affects the historic environment and how you and others working within it and will be affected by it.

List the principle health and safety legislation and regulations that impact on and influence the undertaking of work on and within the historic environment.

You may wish to visit the Health & Safety Executive website for guidance on and understanding of the complexities of regulatory imposition on places of work and on building operations. Current Health and Safety regulations focus is not only on the work as it is being carried out but also in respect of how the asset will be safely used once works are completed. Health and Safety law is not just about an individual project of work but how the use to which an historical asset is to be put can also be safely maintained/operated. Within the collective historic environment, it is likely that original and subsequent construction methods made use of some material, components and working methods that are now considered health hazards and, therefore, work on and within that environment may pose a risk or health threat to those persons working within it or using it.

Identify at least ten materials or situations that may pose a health hazard when working on the historic environment. Also identify at least ten operations that may pose a risk to workers when working in the historic environment. Think also about the complete panoply of H+S legislation that impacts on building work and buildings' use/occupation.

The use of asbestos in older heating installations is certainly likely to be a hazard that you will come across and you should be aware of it and how it should be assessed and managed. To assist, the Health & Safety Executive has issued many guidance leaflets and these may be accessed via their website. The Control of Asbestos at Work Regulations imposes a responsibility to undertake a survey of premises to assess for the presence of Asbestos Containing Materials. This legislation requires that all owners and managers of premises where staffs are employed or the public have access shall undertake a survey of and carry out a risk assessment of ACMs contained within premises. The legislation outlines three levels of survey.

With reference to H+S legislation, define the three levels of survey and how their undertaking and investigation methods adopted might impact on or present risk to the historic environment. Assess how investigative work to determine presence of ACMs might result in damage to historic fabric.

The use of lead-based paints and coating was prevalent up until the 1960s so work to decorated surfaces will need careful planning and reference to COSHH regulation [Control of Substances Hazardous to Health] will be necessary. The Construction (Design and Management) Regulations 2015 imposes certain criteria when determining when or if the regulations might apply to construction work. It also defines the roles and responsibilities of those who have to operate under its aegis. There is a need to ensure the focus on the Management part of CDM is properly addressed and the importance of being able to safely care for a building after works are completed such as cleaning and maintenance will also need to be addressed. This is often an area where value engineering takes place without consideration that the Designer remains responsible for after-care and use of the building.

Define the roles and responsibilities of the principle actors set out in the current Construction (Design and Management) Regulations 2015, alongside when and how the criteria of the CDM regulations apply to construction work

The plethora of health and safety legislation will certainly impact on any use of, management of and work to the historic environment and will impose a requirement on anyone working within it to clearly understand the regulatory imposition and its impact on all operations as well as use of an asset.

5.10 Tourism Management

The UK's built heritage continues to be a strong driver in attracting visitors, with historic buildings and monuments, castles and stately homes, churches and cathedrals all well regarded. The tourism economy was estimated to be worth some £113bn in 2013, and is projected to have an industry value over £257bn by 2025, although this may be proven to be too optimistic following the consequences of the Covid Pandemic of 2020-21.

Overall, heritage led tourism contributes more to the UK economy than the advertising, car manufacturing or film industries. Consequently, it is critical that the significance and value of the heritage is properly secured and safeguarded.

> *"There is no part of* [the UK] *that has not been shaped by human activity over thousands of years. The historic environment is all around us, ubiquitous and inescapable. It consists of a multitude of places, each with its own character, history and significance, that are the common inheritance of everyone…"*
>
> English Heritage (2002) State of the Historic Environment Report

Edinburgh. Heritage was often created to keep people out and has to be repurposed

With reference to England, the following figures are quoted from the English Heritage (2002) State of the Historic Environment Report

- Tourism is one of England's most important industries.

- It represents 4.9% of GDP and generated 7.6% of employment in 1996,
- 37% of overseas visitors referred to visits to heritage sites as of particular importance
- In 1998 there were 1,253 million day visits to the English countryside spending £11.5bn.
- 24% of visits were to heritage sites.

In the above Report the following figures are also quoted: 95% of people think that the historic environment is important because it gives them places to visit. In 2001 (in England) there were 57.7 million recorded visits to 983 leading historic sites, an average of 58,700 to each site. The Urban Parks Forum estimates that between 300 and 400 million visits are made annually. Although the above figures relate to statistics in England a similar proportion is likely to be typical in Scotland, Wales and Northern Ireland. By comparison with the above figures, NHTG recorded 74.5 million visits to heritage assets in 2019.

> *"The historic environment lies at the heart of England's £22 billion tourism industry … Sustainable tourism is tourism that does not degrade the asset on which it depends."*
>
> English Heritage (2000) Power of Place

Tourism Employment, Necessities and Accommodating Disabilities

Heritage Counts 2014 Indicated that researched findings in 2011 suggested that there were 134,000 direct jobs in UK's built heritage tourism sector, rising to 253,000 jobs when natural heritage tourism (such as visits to parks and gardens) was included. The research also estimated that built heritage tourism contributed £5.1bn in terms of economic output or GDP. In support of this activity, in twenty years of operation, the HLF had allocated more than £6bn of funding support for heritage projects across the UK by 2014, with 550 public parks revitalised and 16,000 historic buildings conserved. An analysis of the figures demonstrates that the historic environment is a major tourist attraction, and provides a great deal of income and employment to the sector as a whole. The worth of visiting heritage in England was estimated at £1,646 per person per year in 2014, with built heritage tourism in the UK providing 134,000 direct jobs and £5.1 billion of economic output.

> *"What is heritage? How much of it should be protected or exploited. What methods are appropriate to safeguarding heritage while making it accessible to the public?…incautious or ill-informed promotion of tourism development … can destroy the very features that tourists have come to see."*
>
> Brisbane and Wood A: *Future for our Past*. English Heritage
>
> *"Its* [the heritage] *potential for enjoyment must be maintained, its educational value… must be enriched and its economic value in attracting tourists… must be developed."*
>
> National Heritage Memorial Fund (1981)

The sort of numbers of visitors attracted and defined above may, whilst providing useful income, result

in increased wear patterns. Such numbers also require the provision of additional facilities, staff rooms, toilet accommodation, refectories/cafeteria/souvenir and book shops, etc in addition to the provision of service utilities.

In 2013, the number of visits to historic visitor attractions in England stood at a total of 58.6 million, including 1.96 million school visits (an increase of 17% on the academic year ending in 2003). The 2014 Heritage Counts report recorded 3.8 million National Trust members, 886,000 English Heritage members in the year 2013/14 (almost double the 445,000 members in 2001/02), and 37,000 Historic House Association Friends Members.

An asset's setting, or context may be affected by the siting and construction of new facilities needed to cater for visitors such as foundations and service-way tracks. Careful thought must be given to planning for facilities such as Car and Coach Parking, Visitor Centres, Café facilities, Toilets and Shops considering the need to protect significance, have minimum effect on the location but still provide easy access and use. This is particularly relevant in respect of disabled access. See also The Disability Discrimination Act (DDA) for guidance and requirements. See also Equality Act 2010.

Newgrange, Visitor Centre. Internal display panels

Gurness Broch. Direction and information point.

Stockholm City Hall. Wheelchair access ramp

Schönbrunn Palace. Wheelchair access ramp and steps

Chiswick House, London. Piano nobile and external access steps

Access to some historic sites can be particularly problematic as to how the current legislation of disabled person access can be achieved without damaging authenticity, significance, and appearance. Many large Country Houses have designs that require access to principal rooms with an elevated first floor (piano nobile) with access gained via extensive external steps. Disability Discrimination Act (DDA) defines whether the building or its occupiers as a service provider is liable for compliance. See also accessibility guidance from English Heritage and Cadw.

Consider/define how compliance with the DDA Act and access to a site such as Chiswick House might be achieved.

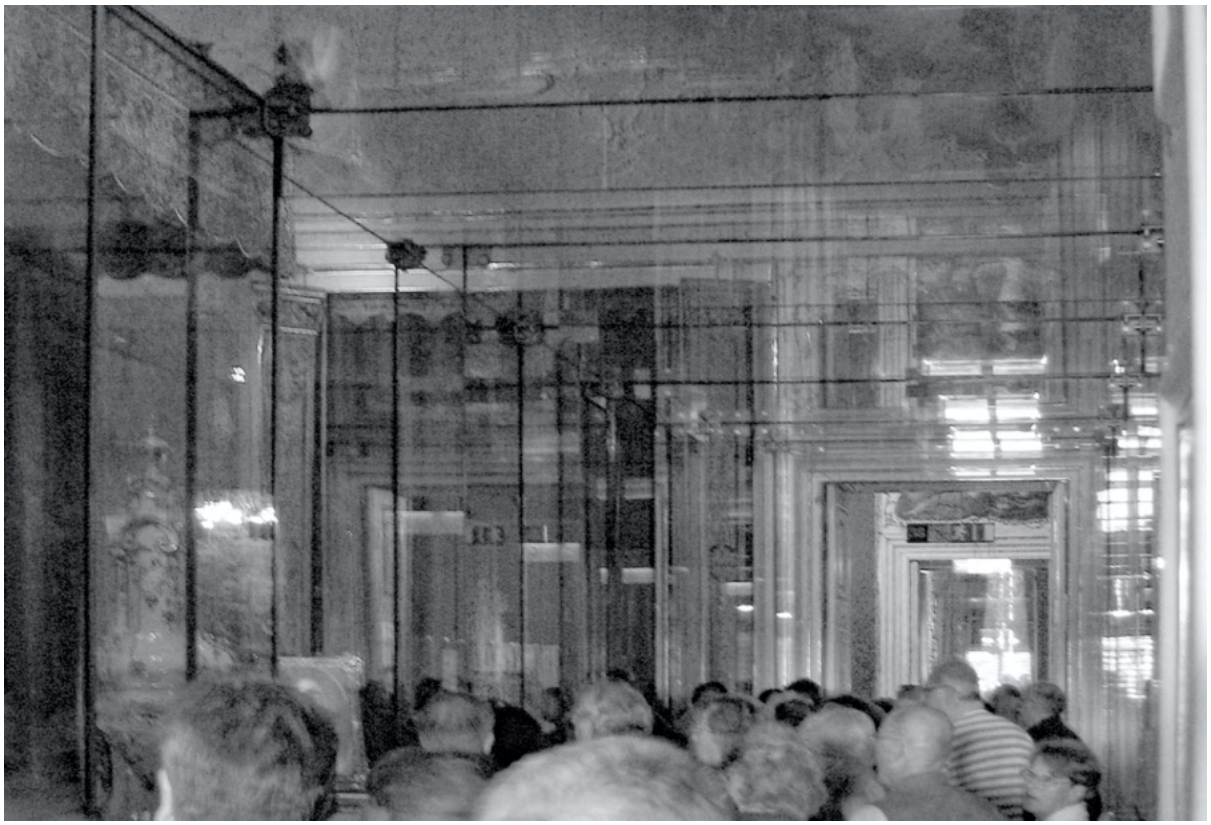
Norwich Castle and a discrete disabled access lift with glass surround, right of image

Exeter. Steep pedestrian access street, virtually impossible access for disabled persons without special access equipment – certainly a hazard in icy weather conditions even to able-bodied people!

Choose an historic asset in your locality and analyse how the DDA might be complied with, how it might have affected significance and how access measures might have been achieved differently.

Internal Environmental Consequences

The numbers of visitors may need to be controlled in order to protect an asset against the adverse effects of them. Whilst providing additional income, increased visitor numbers may generate costs created by the need for additional protection or repair, which costs may exceed the new income generated. It is an essential operation to anticipate such effect and, if necessary, make suitable management plans focused on reducing impact.



Schönbrunn Palace. Glazed visitor corridor extending through an environmentally sensitive apartment

The process must be part of an overall and holistic approach to management and will synthesise complex and disparate data. An example might be that a requirement to maintain constant moisture levels via an installed climate control system will dictate that internal visitor numbers have to be limited.

Consider what materials might be affected by adverse humidity and how you might look at controlling visitor numbers and how this can be integrated with internal environmental control measures.

5.11 Monitoring and Review

The value that may be placed upon the historic environment as record is priceless in presenting an opportunity to gain understanding of the procession of history. The fact that its value as a palimpsest is there for all to recognise and pick up knowledge and understanding from is undisputed. We can add to that library of knowledge and understanding increasing the value of that palimpsest by providing records of why we have intervened, how we have intervened and had an impact with our own period of history.

Dublin. An immediate requirement for monitoring and protection

There is no past that cannot be clarified by study. The present generations use that knowledge for its own purposes in understanding the pageant of history. Future generations will also use and interpret what we have done; always provided that we establish an ethos of recording our interventions now and for future reference. The need to document and record is a fundamental principle of conservation; it is incumbent on you to ensure that records are made and stored for future access and dissemination. The process of review of what we were trying to achieve by intervention and how that purpose and intent was achieved, and what results obtained, must be part of a monitoring and review process that you should set up as part of your work as a conservation practitioner.

Such review and recording should not only address the philosophical considerations underscoring the need for intervention it should also encompass a general reassessment of the aims of intervention and how such aims performed in practical terms at the end of the project when works might be assessed against performance criteria. Thus is the process of monitoring and review, we must analyse our motives for intervention together with a self searching understanding of why we are intervening and then look at the manner in which we propose to intervene, finally to critically assess the results of our

interventions including how they might have been done better; this need applies to buildings of all ages

London South Bank. Weathering staining

Consider Earl, J summing up the philosophical background to conservation, as follows:

- *Motive – why do we wish to conserve*
- *Monument – what are we trying to conserve*
- *Manner and means – how should it be done.*

To which might be added:

- Monitor - assessment of what is being achieved
- Review, what has been achieved and
- How it might have been done better.

5.12 Conclusions

This Unit has addressed the issues that need to be confronted when organising intervention works to or managing the historic built environment. It has, hopefully, provided you with guidance by example of how you might best implement and control the procurement of services and undertake work to an asset; how to implement a conservation action plan and manage a site of significance. It has, hopefully, managed to get you to question your established understanding of how conservation thinking impacts on intervention strategy.

St. Pancras Station, London. Observation is an essential route to understanding

There will be many disciplines involved in an asset's conservation, one person cannot combine all, but you must have knowledge of the way in which each discipline works and produces results. Subsumed within each independent discipline is the knowledge that other professions and workers may have evolved different ways of dealing with the same subject. Some clarity of understanding of how other disciplines operate is essential if work within the building industry is to be properly structured and managed to respond to the need to supply services and product to users of that composite service. This fact is of particular relevance to work within the historic environment. A closer relationship and understanding of this symbiotic process and how it might affect significance forms essential data when intervening on or within the historic environment. This co-ordination of purpose is the remit of built environment professional institutes' conservation accreditation process achieved via the forum of the Edinburgh Group facilitated by COTAC and structured around the ICOMOS Education and Training Guidelines 1993.

Edinburgh. The enjoyment of heritage

The aim of this Unit and the other four Units in this series has been to clarify the specific factors influencing all who work within the historic environment. Not only to alert you to the focus, philosophies and ethical principles that are accepted by consensus, but also those factors that are more secular in nature but wield an influence over conservation: How the composite operates and how the

whole should be incorporated to protect the historic environment and facilitate its ability to respond to decay and deterioration as well as the need for change and modernisation in order to survive in a rapidly changing world. This in order, and at the same time, to preserve and protect the narrative that the historical environment offers to this and future generations in gaining an understanding of history and the factors that have shaped our society.

If there is one lesson to be learned from absorbing the contents of these 5 Units it is hoped that you will have gained an ability to recognise that the historic environment is not just about the built form of it. The built form is only a manifestation of and a complex of human interaction and the process of events that we identify as history. It is a symbiotic process reliant on the interaction and interchange of events and human development. The built environment can only be a reflection of and present as a palimpsest of events and actions that have shaped history. History can only be assessed in retrospective analysis; the future is open to speculation. It is your role to allow the future to judge what is important and why; this without imposing your own, possibly subjective values. It is the retention and protection of the historic environment as a record that is the raison d'être behind conservation. You must, right now, take responsibility for this for the benefit and enlightenment of future generations.

"There is a need to develop an holistic approach to our heritage on the basis of cultural pluralism and diversity, respected by professionals, crafts persons and administrators. Conservation requires the ability to observe, analyse and synthesize. The conservationist should have a flexible yet pragmatic approach based on cultural consciousness which should penetrate all practical work, proper education and training, sound judgement and a sense of proportion with an understanding of the community's needs. Many professional and craft skills are involved in this interdisciplinary activity."

ICOMOS Guidelines introduction

"The conservation of historical structures is not a mechanical activity controlled by hard and fast formulae which, correctly applied, will produce demonstrably correct solutions. The decisions which have to be made daily by the practitioner raise philosophical questions at every turn."

A thought from John Earl,

Preceded in 1926 by Powys, A. R. in Repair of Ancient Buildings:
"I have found that it is not wise to lay down dogmatic rules, for when they are made one is often confronted by a case where they do not work."

"We shape our buildings and afterwards our buildings shape us."

Winston S, Churchill

And finally, from John Earl:
"… whatever your personal role in the conservation process, remember that, for the time being, the building, the ensemble, the street or the town is under your protection. It is a heavy responsibility and one which had better be faced philosophically."

Earl J (1997) Building Conservation Philosophy Reading, College of Estate Management.

5.13 Reading List

Recommended reading

BS 7913 2013 references and Unit sections to which they relate:

5.01 Unit Overview

Section 4: *Heritage values and significance*

Section 5: *Using significance as a framework for managing the historic environment*

Section 6: *Significance as part of operational care and other interventions*

Section 7: *Maintenance*

Section 8: *Heritage and project management*

Annex B: *Conservation manuals, logbooks and four/five yearly inspections*

5.02 Implementation and Management of Conservation Works

Para 8.3: *Project records*.

Annex A - *Conservation accreditation schemes*

5.03 Conservation Strategy

Para 5.5: *Conservation management plans*.

Section 6: *Significance as part of care or other interventions*.

Para 5.4: *Strategic plans.*

Para 8.3: *Project records.*

5.04 Identification and Selection of Advisers and Contractors

Para 5.3.1: *Sustainability.*

5.07 Management of Works

Para 5.2: *Heritage management principles*

5.08 Maintenance of Works

Section 7: *Maintenance*

Annex B

Australia ICOMOS (2013) The Burra Charter Australia ICOMOS

BSI Standards Publications BS 7913: 2013. Guide to the conservation of historic buildings BSI, London

Brisbane, M and Wood, J (1996) A Future for Our Past? An introduction to heritage studies English Heritage, London

Clark, K. (2001) Informed Conservation English Heritage, London

Earl, J. (2013) Building Conservation Philosophy Donhead/College of Estate Management, Shaftesbury

Heritage Lottery Fund. (2012) Conservation Plan Guidance

RIBA Plan of Work Conservation 2017

Further reading

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Cox, A & Thompson, I (1998) Contracting for Business Success Thomas Telford, London

Cox, A & Townsend, M (1998) Strategic Procurement in Construction Thomas Telford, London English Heritage (2003)

Managing Local Authority Heritage Assets EH, London

English Heritage (2000) Power of Place: The future of the historic environment English Heritage,

London Heritage Lottery Fund (2013) Project Business Plan Guidance HLF, London

Heritage Alliance (2004), The Heritage Dynamo THA, London

Historic Scotland (1992), The Care of Historic Buildings & Ancient Monuments by Government Departments in Scotland HS, Edinburgh

Historic Scotland (1997) Access to the Built Heritage Technical Advice Note 7

Bell, D. (1998) The Historic Scotland Guide to International Convention Charters and Conservation Areas Technical Advice Note 8, Historic Scotland, Edinburgh.

Historic Scotland (2002) Passed to the Future

ISO 15686-1: 2000(E) Statement for Requirements: Terminology - Preliminary

Murdoch, J & Hughes, W (2008 4th Edn) Construction Contract: Law and Management Taylor & Francis

Guidance to the Listed Places of Worship Grant Scheme. CLA. How to Pay Less or no VAT on Work to Heritage and Other Existing Buildings.