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The development of standards for cultural heritage

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COTAC Conference 2015 - Connecting Conservation



Standards and standardisation

- The original purpose of standards was to ensure that fixtures and fittings were of a consistent size and quality
- Over the past 100 years the purpose of Standards has shifted towards providing a minimum quality and making sure that methods and materials reflect good practice.
- Standards and codes of practice allow specifications to be written in a clear and concise way.
- Standards can also be used to support accreditation schemes for conservators and building conservation craftsmen.



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Standards and Cultural Heritage – 2002

- British Standards and Codes of Practice related to conservation
- Guidance on good practice
 - Code of practice for the cleaning and surface repair of buildings (BS8221 Parts 1 and 2)
 - BS7913:1998 Guide to the principles of the conservation of historic buildings
- Other standards linked to building conservation
 - Testing of natural stone
 - Specification of mortars
 - Not written with conservation in mind.



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Standards and Cultural Heritage – 2002

- European Standards - 'Standardisation in the field of conservation of Cultural Heritage'
- Based on earlier work undertaken by UNESCO.
 - Terminology relevant to movable and immovable artefacts, and to the conservation of the artefacts and the material constituting the artefacts
 - Guidelines for a methodological approach to the knowledge of the artefacts and of the materials constituting the artefacts, of the deterioration processes, and of preservation/conservation work
 - Test and analysis methods for the diagnosis and for the characterisation of the artefacts
 - Tests and analysis methods for the evaluation of the performance of conservation products
 - Test and analysis methods for the evaluation of indoor conservation conditions – particularly transport, packaging and exhibition environments



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Standards and Cultural Heritage – 2002

- European Standards - 'Standardisation in the field of conservation of Cultural Heritage'

".....it seems only sensible that building conservation also should develop standards and codes of practice.

However, there is always a risk of standards being developed internationally that do not reflect local (or regional) good practice and which may also stifle innovation and the development of new skills.

Therefore, the 'industry' must make sure that its views are represented on both national and international standards committees."

Standards and standardisation

- A standard is a published document that contains a technical specification or other precise criteria designed to be used consistently as a rule, guideline, or definition.
- All standards take the form of either:
 - Specifications
 - Methods
 - Vocabularies
 - Codes of practice
 - Guides.
- Steel sections and tram lines

Standards and Cultural Heritage

- Why do we need standards for cultural heritage?
 - Conservation, like many other activities and businesses, has become increasingly global.
 - As a result there was a need for a common set of conservation principles
 - **The Venice Charter** (1966) (which stresses the importance of setting, respect for original fabric, precise documentation of any intervention, the significance of contributions from all periods to the building's character, and the maintenance of historic buildings for a socially useful purpose)
 - **UNESCO Recommendation for the Protection of Moveable Cultural Property** (1978) (which defines the broad range of items that make up moveable cultural property and identifies measures to safeguard property and to indemnify in case of damage, alteration or loss of the property resulting from transport and exhibition, environmental conditions, handling, faulty packaging, and other unfavourable conditions).

Standards and Cultural Heritage

- Why do we need standards for cultural heritage?
 - As the trend towards globalisation has continued a need for a common language and common framework within which to work has become important and it is this that the European Standards are trying to achieve.
 - The intention is not to provide rigid and prescriptive solutions but to provide common questions, and common ways to describe and evaluate cultural heritage.
 - The UK standards take this further on and focus down on the UK's needs but still within the same common framework.

Standards and Cultural Heritage – 2015

- British Standards – Committee B/560 Conservation of Tangible Cultural Heritage
 - BS 7913 *Guide to the principles of the conservation of historic buildings* (2013).
 - BS 8221 Part 1 *Code of practice for the cleaning of natural stones, brick, terracotta and concrete* (2012)
 - BS 8221 Part 2 *Code of practice for the surface repair of natural stones, brick and terracotta* (2000/2012)
 - BS 6270 Part 3 *Code of practice for cleaning and surface repair of buildings -- Metals (cleaning only)* (1991/2013)
 - BS 5454 / PD 5454 *Guide for the storage and exhibition of archival materials* (2000/2012)

Standards and Cultural Heritage – 2015

- European Standards – CEN/TC 346 Cultural Heritage

Working Group Number	Working Group Title
CEN/TC 346/WG 1	General methodologies and terminology
CEN/TC 346/WG 2	Characterisation and analysis of porous inorganic materials constituting cultural heritage
CEN/TC 346/WG 3	Evaluation of methods and products for conservation works on porous inorganic materials constituting cultural heritage
CEN/TC 346/WG 4	Protection of collections
CEN/TC 346/WG 5	Packing and transport
CEN/TC 346/WG 6	Exhibition lighting of cultural heritage - Joint Working Group CEN/TC 346 and CEN/TC 169
CEN/TC 346/WG 7	Specifying and measuring Indoor/outdoor climate
CEN/TC 346/WG 8	Energy efficiency of historic buildings
CEN/TC 346/WG 9	Waterlogged wood
CEN/TC 346/WG 10	Historic timber structures
CEN/TC 346/WG 11	Conservation process
CEN/TC 346/WG 12	Show cases
CEN/TC 346/WG 13	Investigation of architectural finishes – Procedure, methodology and documentation of results

Standards and Cultural Heritage – 2015

- European Standards – CEN/TC 346 Cultural Heritage

Standard Number	Standard Title
BS EN 15757:2010	Conservation of Cultural Property - Specifications for temperature and relative humidity to limit climate-induced mechanical damage in organic hygroscopic materials
BS EN 15758:2010	Conservation of Cultural Property - Procedures and instruments for measuring temperatures of the air and the surfaces of objects
BS EN 15759-1:2011	Conservation of cultural property - Indoor climate - Part 1: Guidelines for heating churches, chapels and other places of worship
BS EN 15801:2009	Conservation of cultural property - Test methods - Determination of water absorption by capillarity
BS EN 15802:2009	Conservation of cultural property - Test methods - Determination of static contact angle
BS EN 15803:2009	Conservation of cultural property - Test methods - Determination of water vapour permeability (dp)
BS EN 15886:2010	Conservation of cultural property - Test methods - Colour measurement of surfaces
BS EN 15898:2011	Conservation of cultural property - Main general terms and definitions
BS EN 15946:2011	Conservation of cultural property - Packing principles for transport

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Standards and Cultural Heritage – 2015

- European Standards – CEN/TC 346 Cultural Heritage

Standard Number	Standard Title
BS EN 15999-1:2014	Conservation of Cultural property - Guidelines for design of showcases for exhibition and preservation of objects - Part 1: General requirements
BS EN 16085:2012	Conservation of Cultural property - Methodology for sampling from materials of cultural property - General rules
BS EN 16095:2012	Conservation of cultural property - Condition recording for movable cultural heritage
BS EN 16096:2012	Conservation of cultural property - Condition survey and report of built cultural heritage
BS EN 16141:2012	Conservation of cultural heritage - Guidelines for management of environmental conditions - Open storage facilities: definitions and characteristics of collection centres dedicated to the preservation and management of cultural heritage
BS/TS 16163:2014	Conservation of Cultural Heritage - Guidelines and procedures for choosing appropriate lighting for indoor exhibitions
BS EN 16242:2012	Conservation of cultural heritage - Procedures and instruments for measuring humidity in the air and moisture exchanges between air and cultural property
BS EN 16302:2013	Conservation of cultural heritage - Test methods - Measurement of water absorption by pipe method
BS EN 16322:2013	Conservation of Cultural Heritage - Test methods - Determination of drying properties

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Standards and Cultural Heritage – 2015


- European Standards – CEN/TC 346 Cultural Heritage

Standard Number	Standard Title
BS EN 16455:2014	Conservation of cultural heritage - Extraction and determination of soluble salts in natural stone and related materials used in and from cultural heritage
BS EN 16515:2015	Conservation of Cultural Heritage - Guidelines to characterize natural stone used in cultural heritage
BS EN 16572:2015	Conservation of cultural heritage - Glossary of technical terms concerning mortars for masonry, renders and plasters used in cultural heritage
BS EN 16581:2014	Conservation of Cultural Heritage - Surface protection for porous inorganic materials - Laboratory test methods for the evaluation of the performance of water repellent products
BS EN 16648:2015	Conservation of cultural heritage - Transport methods

Standards and Cultural Heritage – standards in preparation

00346003 PRE-WI ▶ WG1	Conservation of cultural property - Glossary of damage
00346018 – FprEN 16648 ▶ WG5	Conservation of cultural property - Transport methods
00346024 – FprEN 16572 WG2	Conservation of Cultural Heritage - Glossary of technical terms concerning mortars for masonry, renders and plasters used in cultural heritage
00346025 PRE-WI ▶ WG2	Conservation of Cultural Property - Characterization of mortars found in cultural heritage
00347028 – prEN 16790 ▶ WG4	Conservation of cultural heritage - Integrated pest management (IPM) for protection of cultural heritage
00346029 ▶ WG4	 Conservation of cultural heritage - New sites and buildings intended for the storage and use of collections
00346030 – prEN 15759-2 PRE-WI ▶ WG7	Conservation of cultural property - Indoor climate - Part 2: Ventilation
00346031 PRE-WI ▶ WG4	Conservation of cultural property - Risk assessment methodology for movable cultural heritage

Standards and Cultural Heritage – standards in preparation

00346033 – prEN 16883 ▶ WG8		Conservation of Cultural Heritage - Guidelines for improving energy performance of historically, architecturally or culturally valuable buildings
00346034 – prEN 16682 ▶ WG7		Conservation of Cultural Heritage - Guide to the measurements of moisture content in materials constituting movable and immovable cultural heritage
00346036 – prEN 15999-2 PRE-WI ▶ WG4		Conservation of cultural property - Guidelines for management of environmental conditions - Recommendation for showcases used for exhibition and preservation of cultural heritage - Part 2: Technical requirements
00346037 PRE-WI ▶ WG9		Conservation of cultural property - Waterlogged archaeological wood - Guidelines for characterization
00346038 – prEN 16873 ▶ WG9		Conservation of cultural heritage - Guidelines for management of waterlogged wood on terrestrial sites of archaeological significance
00346039 PRE-WI ▶ WG10		Conservation of cultural heritage - Historic Timber Structures - Guidelines for the On Site Assessment
00346040 PRE-WI ▶ WG4		Conservation of cultural heritage - Emergency and Contingency Plan
00346041 – prEN 16853 ▶ WG11		Conservation of cultural heritage - Conservation process - Decision making, planning and implementation

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Standards and Cultural Heritage – standards in preparation

00346042 – prEN 16782 ▶ WG3		Conservation of cultural heritage - Cleaning of porous inorganic materials - Laser cleaning techniques for cultural heritage
00346043 PRE-WI ▶ WG3		Cleaning of porous inorganic materials-Methodology for evaluation (in laboratory and in situ) of methods and materials used to clean porous inorganic materials
00346044 PRE-WI ▶ WG3		Conservation of cultural heritage - Artificial ageing for evaluation of treatments applied on porous inorganic materials: exposure to solar light, salt crystallization, freeze-thaw cycles, wet and dry conditions

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Standards and Cultural Heritage – use in conservation



- Describing
 - EN 15898 - Main general terms and definitions
 - EN 16096 - Condition survey and report of built cultural heritage
 - EN 16752 - Glossary of technical terms concerning mortars for masonry, renders and plasters used in cultural heritage
- Sampling
 - EN 16085 - Methodology for sampling from materials of cultural property - General rules

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Standards and Cultural Heritage – use in conservation



- Describing
 - EN 15898 - Main general terms and definitions
 - EN 16096 - Condition survey and report of built cultural heritage
 - EN 16752 - Glossary of technical terms concerning mortars for masonry, renders and plasters used in cultural heritage
- Sampling
 - EN 16085 - Methodology for sampling from materials of cultural property - General rules

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Standards and Cultural Heritage – use in conservation



- Characterising
 - EN 16302 Test methods - Measurement of water absorption by pipe method
 - EN 15886 Test methods - Colour measurement of surfaces
 - EN 16515 Guidelines to characterize natural stone used in cultural heritage
 - EN xxxxx Guidelines to characterize mortar used in cultural heritage
 - EN 16455 Extraction and determination of soluble salts in natural stone and related materials used in and from cultural heritage

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Standards and Cultural Heritage – use in conservation



- Conserving
 - EN 16581 - Surface protection for porous inorganic materials - Laboratory test methods for the evaluation of the performance of water repellent products
 - prEN 16872 – Cleaning of porous inorganic materials – Laser cleaning techniques for cultural heritage
 - EN xxxxx – Cleaning of porous inorganic materials – methodology for evaluation of methods (in laboratory and in situ) and materials used to clean porous inorganic materials
 - EN xxxxx- Artificial ageing for evaluation of treatments applied on porous inorganic materials: exposure to solar light, salt crystallization, freeze-thaw cycles, wet and dry conditions

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Standards and Cultural Heritage – use in conservation



- **Conserving**

- EN 16581 - Surface protection for porous inorganic materials - Laboratory test methods for the evaluation of the performance of water repellent products
- prEN 16872 – Cleaning of porous inorganic materials – Laser cleaning techniques for cultural heritage
- EN xxxxx – Cleaning of porous inorganic materials – methodology for evaluation of methods (in laboratory and in situ) and materials used to clean porous inorganic materials
- EN xxxxx- Artificial ageing for evaluation of treatments applied on porous inorganic materials: exposure to solar light, salt crystallization, freeze-thaw cycles, wet and dry conditions
- BS 7913 Guide to the principles of the conservation of historic buildings
- BS 8221 Parts 1 and 2 Cleaning and Surface Repair of Buildings

Standards and Cultural Heritage – Looking to the future

- The development of standards is set to continue for the foreseeable future
- The work programme for CEN TC346 was reviewed in 2015 but there doesn't seem to be any shortage of topics for the committee to work on.
- The continuing interest in museum collections and exhibitions means that there is a continuing need to develop and apply standards to assess and protect them.
- There are also new challenges for the cultural heritage
 - Concerns over climate change and the need to make buildings (including museums and collections)
 - The challenge of new materials and new styles of building to conserve and protect for future generations.