



# SLOVENSKI STANDARD

## oSIST prEN 17259:2018

01-september-2018

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### Ohranjanje kulturne dediščine - Obloge in površine gradbene dediščine - Preiskovanje in dokumentiranje (APR)

Conservation of Cultural Heritage - Finishes and surfaces of built heritage - Investigation and documentation (APR)

Erhaltung des kulturellen Erbes - Oberflächen gebauten Kulturerbes - Untersuchung und Dokumentation (APR)

Conservation des biens culturels - Finitions et surfaces du patrimoine bâti - Investigation et documentation

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**Ta slovenski standard je istoveten z: prEN 17259**

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#### **ICS:**

91.040.01	Stavbe na splošno	Buildings in general
97.195	Umetniški in obrtniški izdelki. Kulturne dobrine in kulturna dediščina	Items of art and handicrafts. Cultural property and heritage

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 17259**

June 2018

ICS 97.195

English Version

## Conservation of Cultural Heritage - Finishes and surfaces of built heritage - Investigation and documentation (APR)

Conservation des biens culturels - Finitions et surfaces  
du patrimoine bâti - Investigation et documentation

Erhaltung des kulturellen Erbes - Oberflächen  
gebauten Kulturerbes - Untersuchung und  
Dokumentation (APR)

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 346.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (prEN 17259:2018) has been prepared by Technical Committee CEN/TC 346 “Conservation of Cultural Heritage”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

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## Introduction

Throughout its existence, built heritage has been subjected to continuous change and alteration. The most frequent change being the repeated refurbishing and redecoration of interiors and facades, carried out in response to a wide range of factors, such as developments in decorative fashions, changes in the functions of rooms, changes in the wealth of successive occupants and owners, the need to revive an old and worn painted decoration or simply routine maintenance. The investigation and documentation of built heritage finishes and surfaces, also known as Architectural Paint Research (APR)<sup>1</sup>, provides a systematic method of understanding and documenting such changes. It also offers insights into the appearance of original and later decorative schemes and may provide dates for the application of specific schemes. This research may also provide information about structural alterations made to a building or object, for example, the absence of early decorative layers may indicate that an architectural element was added or replaced at a later stage. The purpose of this kind of investigation is to locate, identify, interpret and date current and historic finishes. These investigations on finishes help to deepen general knowledge of building history, alterations, assess their condition and plan future work.

The focus of this type of investigation is to describe the decorative, protective and other finishes routinely applied to both interior and exterior architectural elements. While every investigation will have its own specific aims and research objectives, most investigations will aim to provide a narrative account of the decorative history of the object of investigation, for example a room or façade, from its original decoration to the most recent decorative scheme. The term finish includes accumulated layers of ordinary industrial or house-paints, but also other finishes, such as decorative and illusionistic paint or tooling effects, such as stencilling, shuttering marks, marbling, wood graining; applications of metal leaf and varnishes, just to mention a few. The recording of the presence of layers of wallpaper, and wall paintings, also fall within the scope and remit of a typical investigation. Finishes are applied to a wide range of substrate materials composed from wood, metal, plaster, natural stone, concrete, paper, textiles, etc. A surface of a raw building material may also be considered as a finish layer.

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<sup>1</sup> The term Architectural Paint Research (APR) is the established term in English speaking and some other European countries. For the purpose of this standard, the abbreviation APR is sometimes used.

## 1 Scope

This document defines core procedures for collecting and processing data and findings when investigating finishes and surfaces of built heritage, establishing original and subsequent colour schemes. It applies mainly to buildings and interiors, but the specified methodology could also be used for other cultural heritage objects.

This document applies to planning, commissioning and executing such investigations – from the initial project brief to the final report, and its dissemination. The document should be used as a process reference for stakeholders involved in investigating finishes and surfaces of built heritage and informed building conservation.

It describes some advantages and limitations of basic investigation techniques. It specifies the structure and content of documentation/reports to be delivered to the commissioning party.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15898, *Conservation of cultural property — Main general terms and definitions*

EN 16085, *Conservation of Cultural property — Methodology for sampling from materials of cultural property — General rules*

## 3 Terms and definitions

For the purposes of this document, the general terms and definitions given in EN 15898 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **architectural element**

part of the design or the construction of a built heritage object

### 3.2

#### **architectural paint research (APR)**

systematic investigation and documentation of finishes and surfaces applied to built heritage

### 3.3

#### **built heritage**

standing structures which have an architectural, cultural or historical value

### 3.4

#### **condition report**

record of condition for a specific purpose, dated and authored

[SOURCE: EN 15898:2011, 3.6.5]

Note 1 to entry: A condition report normally results from a condition survey.

**prEN 17259:2018 (E)****3.5****cross-section**

prepared sample of finishes cut crosswise for observation of the stratigraphy by use of a microscope

Note 1 to entry: The most common cross-section is mounted in resin and cut and polished perpendicularly to examine the accumulated paint layers.

**3.6****exposure**

process or result of removing overlaying layers from surface areas to show the visual aspect of underlying layers

Note 1 to entry: See also 3.17 stratigraphic exposure.

**3.7****feasibility study**

initial general survey of available documentation and onsite assessment of the current visible state of finishes to assess the aims of the investigation

**3.8****finish**

material and/or treatment applied to improve, protect or decorate surfaces of built heritage

EXAMPLES Paints, varnishes, gilding, wood finishes, textiles and/or wallpapers, plasters, renders, stucco.

Note 1 to entry: A finish can be composed of several layers (primer, undercoat, top coat, glazes and varnishes), forming one scheme or an uncoated surface left as built intentionally.

Note 2 to entry: This definition applies to the central element of this standard regardless of translation (architectural finishes, Architekturfassungen and surfaces du bâti /finis architecturaux/surfaces architecturées/surfaces architecturales).

**3.9****investigator**

qualified and experienced professional who performs investigation and documentation of finishes and surfaces of built heritage

Note 1 to entry: Authorization or accreditation of investigators is to be applied in countries where such systems exist.

**3.10****object**

single manifestation of tangible cultural heritage

[SOURCE: EN 15898:2011, 3.1.3]

Note 1 to entry: For the purpose of this standard, the term object is limited to built heritage.

Note 2 to entry: The term "object" is used in this standard for **cultural heritage**, both immovable and movable. In specific professional contexts, other terms are used: e.g. "artefact", "cultural property", "item", "ensemble", "site", "building", "fabric".



**3.11****period chart**

concise time-referenced diagrammatic overview of all the schemes found on architectural elements, e.g. a façade or an interior (also known as explanatory chart or room chart)

Note 1 to entry: See Annex A for an example.

**3.12****photomicrograph**

photograph taken with a camera mounted on a microscope

**3.13****probing cut****sloping cut**

oblique incision from the surface to the substrate made to expose the accumulated layers of several finishes to establish the presence of surviving layers (see example in Annex B)

**3.14****project brief**

initial description of the objective, background and context for the overall project

**3.15****sampling**

process of removing a sample

[SOURCE: EN 16085:2012, 3.3]

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Note 1 to entry: In this standard, sampling refers to the process of collecting material from an object for further examination and recording its location.

**3.16****scheme**

all applied finishes assigned to one particular period in time (also known as colour scheme or decorative scheme)

**3.17****stratigraphic exposure**

process or result of exposure where the colour and texture of successive layers are uncovered stepwise and side-by-side

**3.18****substrate**

material of an object on which finishes are applied

**4 Symbols and abbreviated terms**

For the purposes of this document, the following symbols and abbreviated terms apply.

APR Architectural Paint Research

CIELAB, Lab, L\*a\*b Color space defined by the CIE (Commission Internationale de l'Éclairage), based on one channel for Luminance (lightness) (**L**) and two color channels (**a** and **b**).

## 5 General (pre-commission)

### 5.1 Introduction to investigation and documentation

Investigation and documentation of finishes and surfaces of built heritage combines the study of relevant historic documentation, on-site investigation and the examination of sample material, to place the findings in a historic context. Some investigations may choose to focus on just one particular historic period. Multidisciplinary professionals, drawn from a wide range of backgrounds, such as conservation, painting and decorating, art history, building archaeology, and science, are involved in this field.

Such investigation and documentation can be of help when defining cultural significance of built heritage. These investigations should not be looked upon as isolated events but as part of an ongoing documentation and research to obtain a broader understanding of built heritage.

Using and sharing this information leads to informed consideration of the range of conservation options for the future use and presentation of built heritage to ensure appropriate management for current use and the appreciation and enjoyment of future generations.

Investigation of finishes and surfaces may precede development of conservation plan and implementation of conservation. This underlines the fact that such investigations should be performed before major changes are made to the object.

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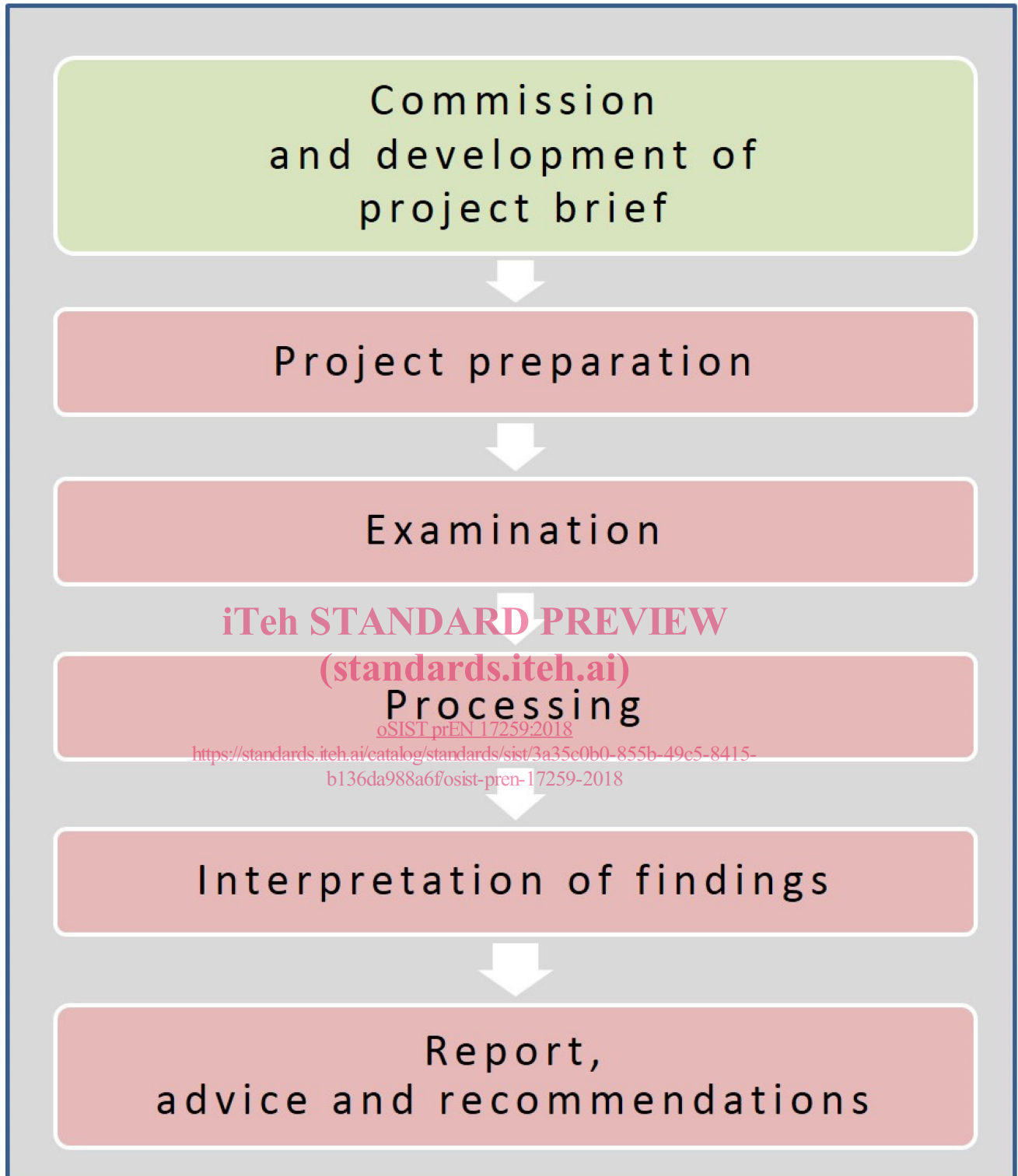


Figure 1 — Flowchart of the process of investigation and documentation, green is pre-commission, red is post-commission

## 5.2 Purpose of investigation

Investigation of finishes and surfaces provides valuable contributions when it comes to understanding the development of built heritage, with respect to the original and later appearances, their significance,

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and to the assessment of further alteration measures. The scope of such an investigation shall be proportional to the project brief and based on a feasibility study.

In consequence, the level of investigation shall be determined in close collaboration with the commissioning party to be able to answer the case specific requirements. Depending on the objectives, a preliminary investigation, survey, in depth survey or material analysis can be offered to gain necessary insight and produce possible solutions (see Table 1).

Investigations of finishes and surfaces shall be initiated during the early stages of major building or refurbishment projects. It can be executed at different phases depending on the nature and scale of the project. This can facilitate funding and give a reasonable timetable for the fieldwork and research, preferably before any intervention (reconstruction, modernisation, demolition, etc.) starts.

A project brief should define the purpose of the investigation and contain a detailed description of the following subjects: the project objective, research questions, time frame, budget, initial checklist, flowchart of the proposed working method to address the request, and a list of expected deliverables. During investigations of finishes and surfaces, observations concerning architectural elements, substrates and their condition will be made. Findings may lead to proposals to treat both structure and/or surfaces. However, both the assessment of condition and of structural aspects of a building are dealt with in other standards and do not lie within the scope of this document.

Determining the appropriate level of investigation at an early stage of the project will optimize time and costs of the investigation of the object. The existence of historical layers and schemes can be established by means of a feasibility study, thereby reducing the level of uncertainty for the commissioning party. Unexpected discoveries during investigation may entail additional work.

**Table 1 — Objectives for investigation of finishes and surfaces of built heritage**

	Pre-commission		Post-commission		
Type	Feasibility study	Preliminary investigation (defining the project)	Survey	In depth survey	Material analysis
Level	0	1	2	3	4
Objective	Identification of objectives. First, non-binding, onsite assessment of the current visible state of finishes. Most often during first contact between commissioning party and investigator. Assessment of feasibility for level 1-4	Development of project brief Develop a project plan for level 2 or 3. First contact with and general impression of the finishes.	Basic knowledge of finishes and surfaces of built heritage specified in project brief. Develop a project plan for level 3 and 4. Recommendations for future management.	Complete knowledge of finishes and surfaces of built heritage specified in project brief Develop project plan for level 4. Recommendations for future management.	In depth knowledge about finishes and surfaces of built heritage, identification of (material) elements Recommendations for future management.
Expected	Decision on	Assessment of	Essential overview	Establishing the	Detailed