



BSI Standards Publication

Conservation of Cultural Heritage — Waterlogged archaeological wood — Characterization of waterlogged archaeological wood to support decision-making processes for its preservation

National foreword

This British Standard is the UK implementation of EN 18056:2025.

The UK participation in its preparation was entrusted to Technical Committee B/560, Conservation of tangible cultural heritage.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 29119 3

ICS 97.195

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2025.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

English Version

Conservation of Cultural Heritage - Waterlogged
archaeological wood - Characterization of waterlogged
archaeological wood to support decision-making
processes for its preservation

Conservation du patrimoine culturel - Bois
archéologique gorgé d'eau - Caractérisation du bois
archéologique gorgé d'eau dans le but de soutenir les
processus de prise de décision concernant sa
préservation

Erhaltung des kulturellen Erbes - Archäologisches
Nassholz - Charakterisierung von archäologischem
Nassholz zur Unterstützung von
Entscheidungsprozessen für seine Erhaltung

This European Standard was approved by CEN on 2 March 2025.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



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

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

Contents

Page

European foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions.....	5
4 Aim of characterization.....	7
4.1 General	7
4.2 Characterization for preservation by recording.....	8
4.3 Characterization for <i>in situ</i> preservation and reburial	8
4.4 Characterization for remedial conservation	9
4.4.1 General.....	9
4.4.2 On-site characterization	9
4.4.3 In the laboratory.....	9
5 Sampling plans for characterization	9
6 Characterization methods.....	10
6.1 General	10
6.2 Wood species identification.....	10
6.3 Dating and tree ring analyses.....	10
6.4 Degradation profile.....	10
6.4.1 General	10
6.4.2 Physical and mechanical properties	10
6.4.3 Morphological alteration.....	12
6.4.4 Chemical properties	12
7 Data reporting	13
Annex A (informative) Common techniques applied to characterization of chemical properties of waterlogged wood.....	14
Bibliography	15

European foreword

This document (EN 18056:2025) has been prepared by Technical Committee CEN/TC 346 “Conservation of Cultural Heritage”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2025, and conflicting national standards shall be withdrawn at the latest by October 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

Although waterlogged archaeological wood might appear intact or in good condition, upon excavation, its physical state can be extremely unstable. This is due to severe changes in its properties, caused by different deterioration agents during burial. Uncontrolled drying, or even limited exposure to an uncontrolled environment, can cause undesirable permanent deformation of the wooden structure altering the integrity of the wooden find.

Microbial activity is the principal agent of degradation in waterlogged environments, and it usually proceeds inwards from the outer surface of the wood.

It affects the physico-mechanical properties of the material (e.g. strength, hardness, shrinkage and density) and the structural chemical components of the wood cells.

The application of a preservation strategy will only be successful once full knowledge of the material to be preserved has been recorded. Characterization of the wood is carried out by specialists and is essential in order to manage the finds on the site and to aid the implementation of further actions regarding *in situ* preservation, reburial, remedial conservation or preservation by record.

The management of archaeological wood on archaeological terrestrial sites is covered by EN 16873:2016, and *in situ* preservation and monitoring by EN 17652:2022.