



# SLOVENSKI STANDARD

## SIST EN 17652:2022

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### Kulturna dediščina - Ocenjevanje in spremljanje stanja ohranjenosti arheoloških najdišč na kraju samem

Cultural heritage - Assessment and monitoring of archaeological deposits for preservation in situ

Erhaltung des kulturellen Erbes - Anforderungen an die Überwachung und Untersuchung der Umgebung von Lagerstätten des Kulturerbes

Patrimoine culturel - Investigation et suivi de l'état de conservation des couches archéologiques pour la préservation in situ

Ta slovenski standard je istoveten z: **EN 17652:2022**

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#### ICS:

97.195	Umetniški in obrtniški izdelki. Kulturne dobrine in kulturna dediščina	Items of art and handicrafts. Cultural property and heritage
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**en,fr,de**



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## Cultural heritage - Assessment and monitoring of archaeological deposits for preservation in situ

Patrimoine culturel - Investigation et suivi de l'état de conservation des couches archéologiques pour la préservation in situ

Erhaltung des kulturellen Erbes - Anforderungen an die Überwachung und Untersuchung der Umgebung von Lagerstätten des Kulturerbes

This European Standard was approved by CEN on 24 July 2022.

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

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## European foreword

This document (EN 17652:2022) has been prepared by Technical Committee CEN/TC 346 “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of an identical text or by endorsement, at the latest by March 2023, and conflicting national standards shall be withdrawn at the latest by March 2023.

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.

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## Introduction

The principle that *in situ* preservation should be considered as the first option for the conservation of terrestrial, wetland or underwater archaeological sites, before permitting or engaging in any activity directed at these sites, is laid down in the Council of Europe [5] and UNESCO [24] conventions as well as in two ICOMOS charters [8, 9].

This document is designed to assist authorities, archaeological and other consultants, owners, developers, applicants and others responsible for sites of archaeological and historical significance to ensure the best outcome for the preservation of discovered material and can also be helpful in ensuring that relevant legislation and conditions are abided by. It sets out a decision-making framework for the *in situ* preservation of archaeological deposits and identifies mechanisms for assessing and, where appropriate, monitoring of these sites.

Archaeological deposits and the finds they contain have accumulated through human activity over hundreds or thousands of years. They are found in urban and rural areas, in the intertidal zone and underwater, and include evidence of past occupation as well as natural deposits representing past environments. These archaeological deposits and sediments display large variations in their state of preservation, environmental conditions, and vulnerability. If the deposits or the environment around them are altered, their information potential can be reduced or destroyed. Accelerated degradation of archaeological deposits, shrinkage and subsidence of the sediments can also have serious consequences for existing buildings, roads and infrastructure built above them.

Where changes are proposed at an archaeological site, an assessment of the significance (the cultural and other values assigned to the archaeological asset and its surroundings), and an evaluation of the state of preservation and environmental conditions should be conducted to inform decision-making. The changes could be developments in the terrestrial or underwater environments, land-use change or improved conservation management. The objective of these assessments is to balance the long-term preservation and protection of these non-renewable heritage assets with sustainable development.

Preservation assessment is an iterative process, with more detail required for the most complex sites, such as those with waterlogged deposits or a broad range of archaeological materials present. Details of the proposed development or land- and seabed-use change are also required before decisions can be made as to whether such changes can be made in a way that also protects and preserves the archaeological site. In some cases, the significance of the site might be low and the state of preservation poor; at these sites, rapid assessment to conclude no further investigation work is needed, would be sufficient. In some instances, for example at the most significant and complex sites, a monitoring programme can be required to verify that conditions for long-term preservation are maintained. A key part of designing a monitoring programme is defining the monitoring objectives, as well as monitoring parameters and trigger levels. These will differ from site to site.

Monitoring can form an important element for the management of these more complex sites. This document mainly provides information about monitoring the burial environment. Systematic, regular monitoring of selected parameters using recognised methods supports the comparison of data and results over time and between different sites. The use of traceable, reproducible methods and actions will increase the quality and reliability of the data collected. This will ensure that any changes in the archaeological deposits and sediments can be detected and reported to the relevant stakeholders so that decisions about further action can be taken. Increased knowledge gained from these monitoring projects will, over time, provide a better basis for future preservation strategies and decision-making.

## 1 Scope

This document describes assessments recommended for *in situ* preservation and monitoring of archaeological sites. It sets out the main parameters used to assess the state of preservation of archaeological materials and evaluate the environmental conditions of archaeological deposits and provides a framework for monitoring sites. A decision-making framework is included to help readers make appropriate knowledge-based choices.

The procedures described are appropriate for terrestrial, wetland or underwater archaeological sites. They will not necessarily be relevant to all archaeological sites, and the level of assessment required and the resources needed are expected to be balanced with and proportionate to the significance and complexity of the site and the scale of any proposed changes.

The informative annexes relate primarily to terrestrial sites; for detailed technical guidance on investigating and monitoring underwater sites, see sasmap.eu [19, 20].

NOTE Underwater sites include all underwater sites and those in the intertidal zone.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

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

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

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

### 3.1

#### **archaeological asset**

archaeological item that has significance because of its contribution to society, knowledge and/or culture

Note 1 to entry: They are usually physical assets, but some countries also use the term in relation to intangible social and spiritual heritage.

### 3.2

#### **archaeological deposit**

deposit accumulated through human activities

Note 1 to entry: Archaeological deposits are found in urban and rural areas, in the intertidal zone and underwater, and include evidence of past occupation as well as natural deposits representing past environments. The archaeological deposits and their content of ecofacts and artefacts reveal past activities at a site.

### 3.3

#### ***in situ* preservation**

conservation of an *archaeological asset* (3.1) in its original location

**EN 17652:2022 (E)****3.4  
monitoring**

collecting and assessing data pertaining to an *archaeological asset* (3.1) or site

Note 1 to entry: Within this document, monitoring applies to systematic data collection after decision-making.

[SOURCE: EN 15898:2019, 3.4.4, modified – “object, ensemble or collection and/or their environment over time” has been changed to “archaeological asset or site” [1]]

**3.5  
significance**

combination of all the values assigned to an *archaeological asset* (3.1) or site

[SOURCE: EN 15898:2019, 3.1.7 modified – “object, ensemble or collection” has been changed to “archaeological asset or site” [1]]

**3.6  
mitigation**

action taken to minimise or eliminate the risk of damage occurring to an *archaeological asset* (3.1) as a result of planned or unplanned events

EXAMPLE 1 Planned events; development; land use change; improved conservation management.

EXAMPLE 2 Unplanned events; climate change; flooding; drought, Cultural Property Theft and damage resulting from Heritage Crime; offshore industry i.e. bottom trawl fishing.

**3.7  
environment**

surroundings of an *archaeological asset* (3.1), some aspects of which can affect its condition

Note 1 to entry: Such aspects could be of human, physical, chemical, biological, geological or climatic origin.

[SOURCE: EN 15898:2019, 3.3.2 modified – “object” is replaced by “archaeological asset” [1]]

**3.8  
state of preservation**

current state of the *archaeological deposits* (3.2), and artefacts and ecofacts that they contain, which will depend on both current and historical *rates of degradation* (3.12)

**3.9  
saturated deposit**

deposit where all pore spaces are filled with water

**3.10  
unsaturated deposit**

deposit where the pores contain both water and air

**3.11  
environmental condition**

physical, chemical and biological conditions within and around the *archaeological deposits* (3.2), which determine their current *rate of degradation* (3.12)



**3.12****rate of degradation**

speed at which an *archaeological asset* (3.1) degrades

**3.13****vulnerability**

characteristic of how an *archaeological asset* (3.1) or material tolerates exposure and its sensitivity to environmental changes

**EXAMPLE** For instance waterlogged organic materials are usually more vulnerable to degradation under oxic conditions than stone artefacts.

**3.14****non-invasive survey**

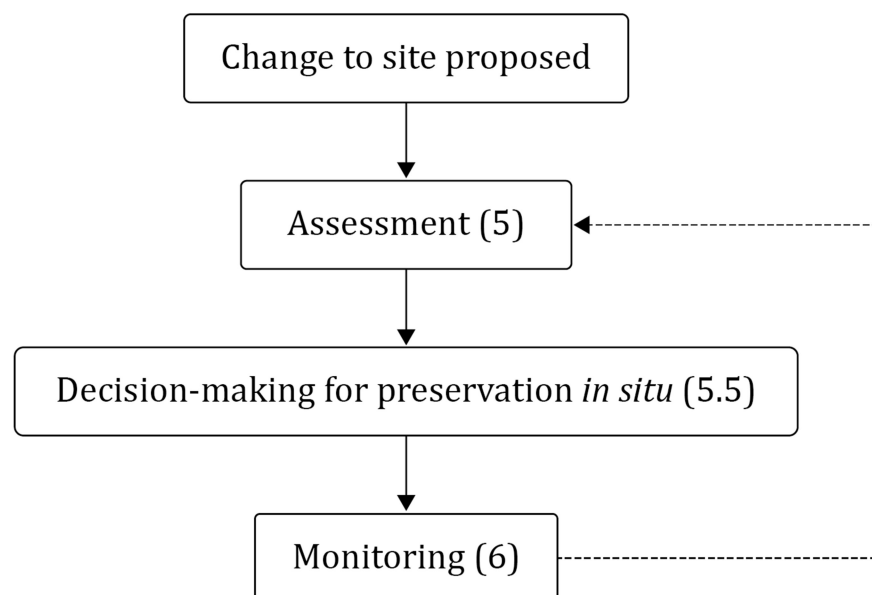
collection of information about an archaeological asset without physical impact

**EXAMPLE** For instance remote sensing.

**4 Objective and procedure**

The objective of the activities governed by this document is to provide cultural heritage managers and other stakeholders with procedures to investigate whether it is possible to preserve an archaeological asset (on land, wetland or underwater) *in situ* (see Clause 5). Figure 1 shows a flowchart of the process.

The document also provides procedures for designing a monitoring programme (Clause 6) and reporting on the different steps of both the assessment and the monitoring programme (Clause 7). Information is given on how to establish the assets' current state of preservation (Annex A) and rate of degradation on site (Annex B). An example of a system to classify of state of preservation, environmental conditions and risks is provided in Annex C. The state of preservation of archaeological materials and environmental conditions of deposits should be considered as a common element of any archaeological investigation. The detail needed about the state of preservation and the environmental conditions will however depend on the significance and complexity of the site and the scale of any proposed changes.



**Figure 1 — Flowchart of the procedure of assessment and monitoring of archaeological sites**

**EN 17652:2022 (E)**

Where a change to a site is proposed and decisions about preservation *in situ* need to be made, it is advisable for a project team to be established, and a project design and timetable produced that provides clarity on roles, timescales and outputs. A project team should comprise a range of experts, for example a project leader, main project group, relevant public/private stakeholders, expert groups and local heritage professionals.

**5 Assessment****5.1 General**

To enable decisions to be taken about preservation *in situ* of archaeological sites, for example in response to development plans, information should be gathered about the significance of the site, the state of preservation and environmental conditions, the rate of degradation expected lifespan of the heritage assets and the feasibility of alternative approaches. The level of information gathered should be proportionate to the significance and complexity of the site and the scale of the change proposed.

The process of documenting the values assigned to archaeological assets on a site, their state of preservation and environmental conditions is separated into the following phases: desktop study (5.2), preliminary assessment (5.3), detailed assessment (5.4) and conclusions and decision-making (5.5). This process can be iterative.

Figure 2 shows the usual stages of assessment that it would be advisable to follow when considering preservation *in situ* as a result of a proposed development change. Similar steps would be followed in relation to the management of archaeological sites subject to changes as a result of natural processes.

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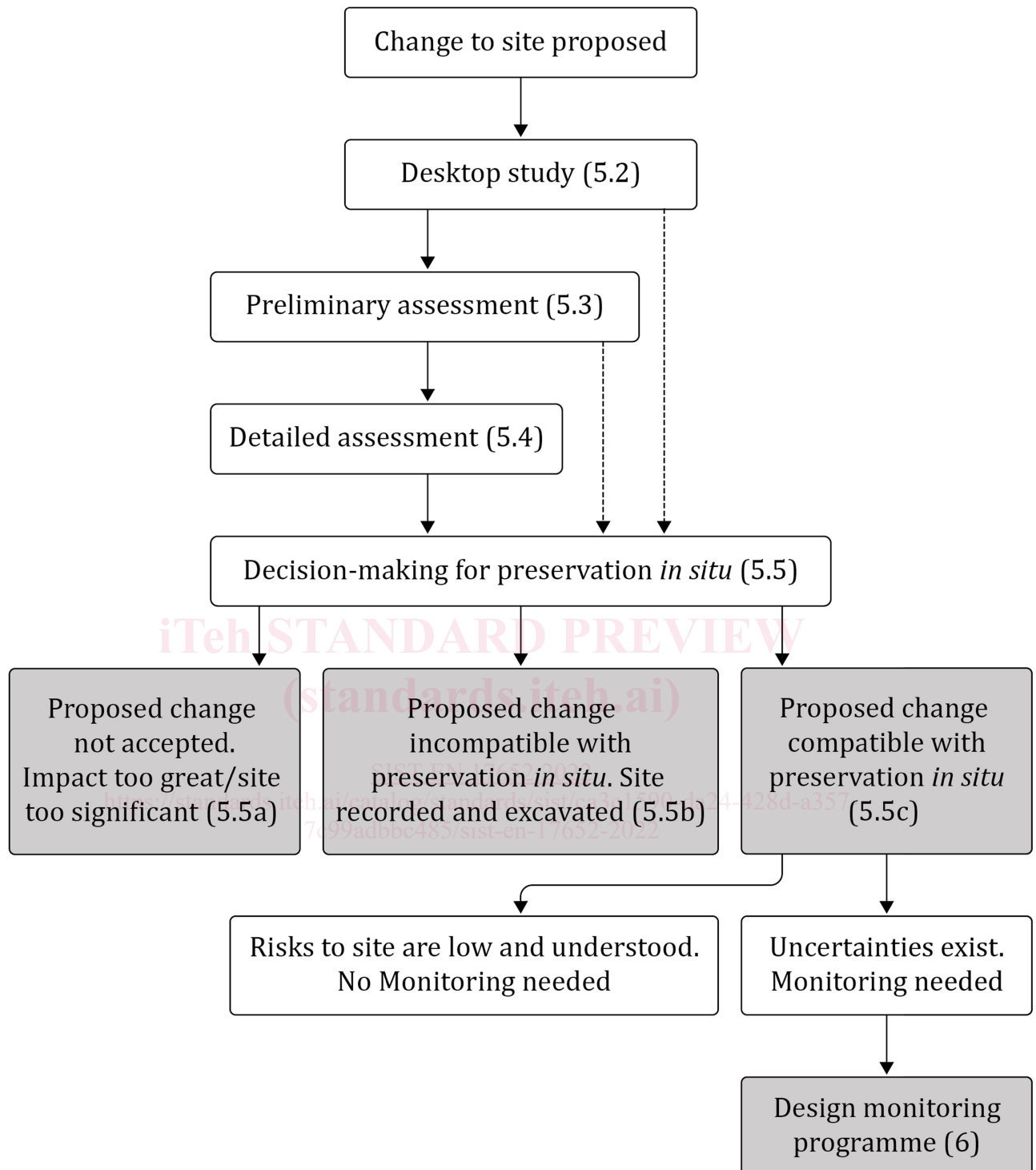


Figure 2 — Flowchart of assessment

**EN 17652:2022 (E)****5.2 Desktop study**

Desktop study is a non-intrusive stage carried out to collect relevant information about the scale and significance of the site, with reference to how it will respond to proposed changes. It is often the first stage in the assessment and decision-making process, see Figure 2.

To give a general overview of the conditions at the site the desktop study should, where feasible, include at least the following:

- the legal status of the site;
- a review of archives and archaeological sources of information from the area, as well as other relevant data for example records held by State Hydrographic / Geological Survey agencies;
- a review of any relevant monitoring data for the site or others in the surrounding area;
- an assessment of the overall cultural heritage value of the site;
- a review of other relevant investigations, such as non-invasive survey, hydrogeological, physical ground properties, geochemical conditions, hydrodynamics, etc.;
- Information about the direct and possible indirect impacts of any proposed development or other current threats in relation to human factors, such as proximity to shipping channels, nearby dredging activities, salvage, accessibility to divers and frequency of visiting divers, fishing, invasive species, etc.;
- an initial assessment of the potential state of preservation, environmental conditions, rate of degradation and expected lifespan of the heritage assets if any information exists and assessment of any risks to long-term preservation;
- a site visit, site walkover, remotely operated vehicle (ROV) or diver survey.

The desktop study shall be summarised in a short report in accordance with 7.2 that includes recommendations for next steps. In most cases the desktop study is part of a staged process. In some instances, for example where the desktop study has identified assets which can be avoided by development, or where it is clear that development would have too great an impact on the significance of the site and it should not progress, or the expected lifespan of the heritage asset is too short, further investigation might not be needed. This would be a decision agreed by relevant stakeholders and heritage managers.

**5.3 Preliminary assessment**

If the desktop study concludes that there is a need for more information to inform decision-making, a preliminary assessment should be carried out. The preliminary assessment should provide a simple rapid assessment and give basic information for designing a more detailed assessment or monitoring programme. Non-invasive methods should be used wherever possible. If the desktop study could not draw on evidence from non-invasive surveys, the preliminary assessment should design a more detailed assessment with non-invasive techniques to prevent irreversible impact on archaeological sites as much as possible. All invasive works should be undertaken within the legislative system for the country in which the site is located and designed to minimise their impact on archaeological materials and deposits. In some cases, there can be physical, environmental or legal constraints that restrict opportunities for site-based investigation. Relevant regional and national heritage bodies in each country will be well-placed to advise on specific cases and identify which of the procedures outlined below and in 5.4 are relevant. The types of information to be collected in the preliminary assessments stage may include: