



BSI Standards Publication

**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**

**National foreword**

This British Standard is the UK implementation of EN 16141:2012.

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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2012.  
Published by BSI Standards Limited 2012.

ISBN 978 0 580 71703 1

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 31 January 2013.

**Amendments issued since publication**

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

---

EUROPEAN STANDARD

**EN 16141**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2012

ICS 97.195

English Version

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

Conservation des biens culturels - Recommandations pour  
la gestion des conditions d'environnement des biens  
culturels - Pôle de conservation: définitions et  
caractéristiques des espaces permettant la conservation et  
l'exploitation des biens culturels

Erhaltung des kulturellen Erbes - Richtlinien für den  
Umgang mit Umwelt- und Umgebungsbedingungen -  
Schaudepots: Definitionen und Merkmale von  
Sammlungszentren bestimmt für die Bewahrung und Pflege  
des kulturellen Erbes

This European Standard was approved by CEN on 8 September 2012.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

Page

Foreword.....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	5
4 Open storage facilities .....	6
4.1 General organisation .....	6
4.2 Storage.....	6
4.3 Collections management .....	7
4.3.1 General.....	7
4.3.2 Documentation.....	7
4.3.3 Photography.....	7
4.3.4 Study room .....	7
4.3.5 Display .....	7
4.4 Collection services .....	7
4.4.1 General.....	7
4.4.2 Movement .....	8
4.4.3 Treatment.....	8
4.4.4 Storage of packaging materials .....	8
4.4.5 Workshops .....	8
4.4.6 Salvage and recovery storage area .....	9
4.5 Technical services .....	9
4.6 Water .....	9
4.7 Staff and visitor facilities .....	9
5 Distributions and connection between the areas.....	9
5.1 Indoor circulation.....	9
5.2 Outdoor-indoor connection .....	10
5.3 Access control .....	10
6 Security system .....	10
6.1 Fire protection.....	10
6.2 Theft and burglary .....	10
7 Facilities management .....	11
8 Planning of storage facilities: definition of the needs .....	11
9 Sustainability.....	12
Bibliography .....	13

## Foreword

This document (EN 16141:2012) 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 May 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

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

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

The importance of preserving and transmitting cultural heritage under the best conditions is imperative for all, but is of utmost importance for cultural heritage institutions. They have the responsibility of preserving, presenting and developing spaces dedicated to the public or reserved for collections. Stored collections have often remained inaccessible to the public but increasingly there is an expectation that collections should be accessible even when not on display, either for the general viewing public or for controlled research and collection management activities. To meet this demand, dedicated facilities are being developed to allow access and research. These "Open Storage Facilities" or "Collection Centres" place new demands on cultural heritage institutions and this guidance document is intended to assist institutions by describing common best practice in the design and function of such facilities.

Open Storage Facilities have four main purposes:

- to fulfil the requirements of conservation;
- to facilitate access to the collections;
- to allow for the management of collections;
- to provide a secure place for the safekeeping of collections.

This standard may be used for designing new open storage facilities or for the improvement of existing storage facilities.

The concept of open storage facilities is general. It relates to places gathering the functions defined in this standard belonging to any type of institutions (archives, libraries, archaeological deposits, museums,...) dedicated to the safekeeping of any type of collection (archives, books, archaeological items, etc...)

## 1 Scope

This European Standard defines the characteristics of specific areas dedicated to the preservation, storage, management of, and access to collections. It lists the considerations that should be taken into account to achieve optimum storage and accessibility.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15898:2011, *Conservation of cultural property - Main general terms and definitions*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15898:2011 and the following apply.

### 3.1

#### **handling**

method of holding and moving an object according to established procedures in order to limit the risks of damage and deterioration

### 3.2

#### **integrated pest management**

##### **IPM**

established procedure for controlling pests such as insects, rodents

### 3.3

#### **packing**

measures and actions to safeguard objects during movement, transport and for storage

### 3.4

#### **protocol**

agreed procedures defining the progress of an operation

### 3.5

#### **quarantine**

isolation and observation of an object which may present a danger of biological contamination

### 3.6

#### **safety**

pertaining to human health

### 3.7

#### **security**

protection against theft and physical damage

### 3.8

#### **storage**

designated area where objects are housed providing the necessary conditions required for preservation, safety and security while not on display

Note 1 to entry: The term “repository” is used in archives and libraries.

**3.9 open storage facilities**  
places dedicated to housing collections, and to activities relating to their management providing the necessary conditions required for preservation, safety and security and public access

## 4 Open storage facilities

### 4.1 General organisation

Open storage facilities are part of the general organisation of a cultural heritage institution. Such premises constitute a set of areas isolated from each other but interdependent and organised according to use.

Open storage facilities have four principal functions:

- a) permanent and temporary storage of objects;
- b) collection management: study of the collections, display, consultation, and scientific examination; some of these functions require areas dedicated to public access;
- c) collection services: movement, packing/unpacking, workshops, and sometimes treatment of the collection;
- d) facilities management (e.g. security system, alarm control unit, and plant room).

The purpose is to offer the best conditions of collections conservation and management. However, all functions of an open storage facility do not necessarily require their own specific area.

### 4.2 Storage

A clear and rational organisation of the collections is important as well as policies and procedures for managing operations. A balance should be maintained between security of collections and access.

Collections are arranged in spaces which are exclusively devoted to them. These areas constitute the central and vital core of the open storage facilities. Safety and security, climate control, fire prevention and other preventive measures require attention. Storage areas should be protected from risks of natural disasters. They should be kept dark, except when lighting is required for access. They should be equipped with fire detectors, sensors reacting to dampness and pest monitors.

The distribution of the collections in storage areas should follow these principles:

- stable environmental conditions adapted to the requirements of the various collections;
- the placement of storage units such as shelves, cabinets, etc., should be appropriate to the collections, ensuring easy and effective access to objects and secure handling of artefacts.

Storage furniture should be designed according to the characteristics and conservation requirements of the collections and the activities of the institution. It should be designed to allow easy maintenance of the area and facilitate the movement of people and collections without risk. The furniture arrangement should facilitate cleaning of the floor.

Storage areas and furniture should be able to adapt to the growth of the collections without risks to safety and security.



## **4.3 Collections management**

### **4.3.1 General**

Collections management areas fulfil the missions of study, consultation and preparation for display. These functions should be carried out in protected spaces and with preservation conditions appropriate to the collections and similar to those in the storage areas. If collections require particular conservation conditions (e.g. cold storage), the relevant acclimatisation measures should be applied.

### **4.3.2 Documentation**

The documentation process includes e.g. identification, description, location, measurement, data entry, labelling of objects. This work should take place in an area close to the storage area and allow the handling and temporary movement of the objects to be inventoried. During the documentation process, no other activity should be carried out in the vicinity of the objects.

### **4.3.3 Photography**

Photography, which may be for documentation, exhibition, scholarly, promotional or conservation purposes, must be carried out in a designated area, if possible, facilitating and limiting the movement of people and objects. Objects to be photographed shall be kept in the area during the shooting process only.

### **4.3.4 Study room**

In the study room, objects are made available for study and research. This area is close to the storage areas and allows the safe examination and easy handling of the objects, as well as access to documentation, such as files, data base and internet connections. It contains only the objects for consultation.

In archives, documents under consultation on several days are stored in a specific place.

### **4.3.5 Display**

If the storage facilities are connected to public exhibition areas, handling, packing, moving and conditioning of the objects meet the same protocols as all other objects in transit. This also applies to loaned objects. Public entry to the exhibition areas is separate from any access to other activities in the storage facilities.

## **4.4 Collection services**

### **4.4.1 General**

Collection services include all operations relating to the circulation and well-being of objects, especially those related to exit or entry to the open storage facility. They enable accessibility to the objects. Service areas are located in separate areas, connected on one hand with the functions of storage, on the other hand with the functions of collections management.

Collection service activities should be carried out in areas separate from those for storing the collections. Objects should be here only on a temporary basis and should be subject to the same environmental and security conditions as in the storage areas. National standards for health and safety and for operating equipment shall be adhered to.

## **4.4.2 Movement**

### **4.4.2.1 Transit and transport**

Movements within facility (transit) and movements to and from the facility (transport) are subject to a protocol, listing rules of protection and handling of the objects. Equipment and materials required for this activity, for example work tables and trolleys, are located in a defined area.

### **4.4.2.2 Packing and unpacking**

Packing and unpacking relate to the operations necessary for the protection of objects during movement and transport and for storage. A designated area reserved for packing and unpacking shall be well equipped and provide all technical means for packing and unpacking. Safety requirements are heightened as packing materials (for example cardboard, wood, synthetic materials) can represent an increased risk of fire or contamination. Materials should be stored in the packaging store.

## **4.4.3 Treatment**

### **4.4.3.1 Conservation**

Separate areas are available for dealing directly with objects including preparation, examination, condition reporting and conservation according to requirements. All these tasks take place in designated areas, if possible.

Areas requiring humidity or water shall be separated from the areas for dry treatment.

Flammable and hazardous materials and products should be kept in special fireproof cabinets and in small quantities. When in large quantities, storage should be outside or in separate specially designed secure areas. Conditions shall conform to national rules and regulations for handling and use.

### **4.4.3.2 Quarantine**

Quarantine takes place in a designated sealed area where objects are placed to be observed and checked for signs of pest infestation. A specific area shall be located close the arrival of the objects in order to avoid contaminants. Badly soiled or contaminated objects should be treated in a separate area, with the necessary equipment. The area should be well ventilated and will be cleaned afterwards. Ventilation shall be separate from the rest of the ventilation system. Any infested material or object should be treated prior to return to storage.

## **4.4.4 Storage of packaging materials**

The materials and equipment used for packing, protection, handling and transport are stored in a specific room, accessible only from the transit area. They have to be acclimatised before packing at the temperature and relative humidity conditions of the objects to be packed. Safety requirements are heightened as packing materials (for example cardboard, wood, synthetic materials) can represent an increased risk of fire or contamination. No object shall enter this area.

## **4.4.5 Workshops**

Workshops are specially designated areas, designed to create or adapt crates, exhibition and storage furniture, mountings, etc. Dust movement shall be controlled, and ventilation shall be separated from the rest of the ventilation system. It is necessary to reinforce conditions of fire protection in this zone. Fire separation of the workshops is imperative. Sprinklers should be considered.

Flammable and hazardous materials and products should be kept in special fireproof cabinets and in small quantities. National standards and legislation for working conditions, hot work permits, health and safety, etc., shall be adhered to. No object shall stay there, even provisionally.

#### **4.4.6 Salvage and recovery storage area**

A storage area should be set aside for use in emergencies, for example fire or flood. It should be used exclusively for storing first aid equipment, reviewed and updated information on the building, local services and emergency call-out list, and material for collections emergency response, for example water vacuums, absorbent paper, bubble wrap, etc.

#### **4.5 Technical services**

Technical services relate to all the elements concerned with the operation of the building, such as plant room and alarm control unit.

These areas are distinct from storage and exhibition areas. They have different access from areas where objects are stored and handled.

Maintenance, regulation and monitoring devices specific to the storage area, such as climate control, should be positioned and accessible outside these areas.

Objects should not be placed in these areas.

#### **4.6 Water**

Storage areas do not contain any water point nor water pipes or distribution network with the exception of a sprinkler system. Shelving is elevated from the ground and moved back from the walls to avoid running water from the walls and condensation. Objects shall not be put directly on the floor or against walls. Flood risks are fully assessed and suitable alarm systems installed.

#### **4.7 Staff and visitor facilities**

Staff and visitors may require special facilities such as reception area, information desk, cafes, canteen, cloakrooms and toilets which should be separate from activities relating to storage and collections management.

### **5 Distributions and connection between the areas**

#### **5.1 Indoor circulation**

The arrangement of areas and the connections between them could be described in a functional diagram, identifying activity and use. They are based on optimising the management of collections and equipment, and on ease of access.

Movement of collections and people complies with principles that guarantee the preservation and the safety of the objects.

Corridors serving the technical and management areas shall be obstacle free or adapted for unobstructed use with, for example, lifts and ramps.

The location and arrangement of such areas shall facilitate the movement of the collections: heights and widths are calculated and clearances are configured according to the characteristics of the collections and the traffic flow.

Duration and distance of movement of objects should be kept as short as possible, and changes in floor levels kept to a minimum.

## 5.2 Outdoor-indoor connection

Specific access is provided for dispatch and delivery of objects.

If possible, there should be a loading bay, or an arrangement to allow easy vehicle access or lifting-platform to allow the safe loading of objects onto vehicles. The loading bay should be secured. It should be covered to allow protection from bad weather, and should be equipped, if possible with the necessary equipment.

## 5.3 Access control

All access points are specially designed or adapted to provide access for staff and visitors, and are strictly controlled by the institution.

Access to collections management areas, such as study rooms or exhibitions, is managed distinctly from the other areas of the storage facility.

# 6 Security system

## 6.1 Fire protection

The fire safety system is subject to national regulations specifically for establishments receiving members of the public.

Open Storage facilities are classified according to risk with specific and reinforced protection. All areas are to be equipped with automatic fire detection and alarm systems. The entire open storage area should be protected by a sprinkler system.

Fire detectors shall alert an intervention and be linked to the fire brigade. Storage areas shall be compartmentalised with firebreak doors and walls.

All areas shall be equipped with portable extinguishers. In storage, the type of extinguishers is selected according to the conservation requirements of collections. Equipped fire valves should be located outside the storage areas.

Preventive measures are prioritised, for example, regular maintenance of the buildings and technical system, security instructions, staff training and emergency planning.

## 6.2 Theft and burglary

Open Storage facilities should be equipped with the least possible direct openings to the outside. They are equipped with mechanical and conventional means of delaying forced entry. There should be safe areas between public access, services and storage.

All zones should be equipped with security devices for access. They are closed and alarmed during non-business hours. During business hours, access to collections is strictly controlled. A system of access control, such as locks with key, electronic chip card based control or CCTV is in place.

Open Storage facilities should be equipped with an intruder detector system with detection of opening and vibrations of doors and all other openings, e.g. windows, roof windows, etc. The system shall be linked to the police or a main control centre. The system shall be maintained and tested regularly. Installation of the system and control of monitoring shall be undertaken by approved companies only. The presence of internal guards provides a higher level of security.

The risk of theft by staff and visitors shall be managed by an appropriate security protocol.

## 7 Facilities management

For the best possible organisation and management of open storage facilities and collections, a users' handbook or operations manual should be compiled describing all operating rules and best practice for working and using the open storage facility.

When hiring staff, a background check is routinely made. There is a job description and guidelines for each member of staff, listing responsibilities. Training and supervision are part of management policy.

Facilities management includes building and its contents maintenance, alarm system maintenance, access control (badges or similar), and access authorisation, emergency and contingency plan, key control and regular fire and emergency practice and evacuation plan, energy supplies, power, grounds and perimeter maintenance.

External contractors are selected according to an agreed protocol (e.g. checks on criminal records, training in the handling of objects) and are supervised when working within the storage facility. They shall sign a "user's contract", listing code of practice, conservation requirements and emergency procedures, before starting work.

A regular inventory of the collections in the storage facility is completed and kept up to date.

Written rules clearly state regulations and conservation requirements for visitors, researchers and staff. Protocols should be in place to see that these regulations and requirements are carried out and reviewed regularly.

All areas are maintained regularly. Cleaning products and materials are chosen to not have any adverse effect on the conservation environment.

## 8 Planning of storage facilities: definition of the needs

The design and planning of open storage facilities shall be done methodically and with attention to detail and involving all interested parties. Sustainability and energy efficiency should be considered when constructing open storage facilities in a way compatible with the conservation of cultural property.

Design of construction should take into account any risks from natural, technological and industrial disasters.

Class of construction shall follow national standards, using inert building materials such as plastered brick walls, chemically inert and dust free paints and easy to clean, inert floors.

Objects should be introduced in a new site only if the relevant drying periods of materials have been respected and controlled and if the air treatment equipment has been tested.

All doors have to be designed to allow all objects to be brought in without any problems.

Adequate water and sewage systems shall be installed, with no water and waste water pipes in storage areas, except a sprinkler system.

Rainwater sewers shall be situated outside the building. Their dimensions shall be defined by the quantity of rainwater to be drained away in order to avoid any infiltration in the walls.

The ventilation and/or climate control system shall follow requirements mentioned in this standard and also any other conservation requirement.

Adequate mechanical security, electronic alarm system fire and flood detection system with links to a monitoring centre, police and fire brigade shall be installed. Separate fire safety zones and reduction of electronic devices and cables, fire doors, fire protection partitions and smoke ejection ducts can minimize fire risk. See national standards for buildings. All security systems require regular maintenance.

The type, nature and quantity of the collections shall be thoroughly documented in order to determine the conditions required for long-term preservation.

It is advisable to consult an expert for fire protection or burglar alarm (e.g. police, insurance).

Areas and equipment for work within the storage areas are made with materials compatible with conditions for preservation (avoiding dust, off-gassing, volatile organic compounds, etc.). These materials should contribute to preserving a stable climate.

For each aspect of design of the facility and activities carried out inside, preservation of collections should be taken into account.

## **9 Sustainability**

Sustainability shall be taken into account, both in the construction and use of the facility.

The materials and cost of building are a factor, as well as how well the building is constructed or adapted to operate with minimal calls on energy.

New construction and adaptation should take account of the latest practice and research in the design of cultural property facilities.

## Bibliography

- [1] EN 15946, *Conservation of cultural property — Packing principles for transport*
- [2] EN 16095:2012, *Conservation of cultural property — Condition recording for movable cultural heritage*
- [3] ISO 11799, *Information and documentation — Document storage requirements for archive and library materials*
- [4] Règles de base pour la construction et l'aménagement d'un bâtiment d'archives — Direction des archives de France – 3<sup>e</sup> révision, octobre 2009
- [5] R. May : « Les réserves de musée : nouvelles missions, nouvelles fonctions, nouvelles applications » *Techné*, 21, 2005, pp.109-122
- [6] BS 5454, "Recommendations for the storage and exhibition of archival documents"







# British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

## About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

## Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at [bsigroup.com/standards](http://bsigroup.com/standards) or contacting our Customer Services team or Knowledge Centre.

## Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at [bsigroup.com/shop](http://bsigroup.com/shop), where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

## Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to [bsigroup.com/subscriptions](http://bsigroup.com/subscriptions).

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

**PLUS** is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit [bsigroup.com/shop](http://bsigroup.com/shop).

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email [bsmusales@bsigroup.com](mailto:bsmusales@bsigroup.com).

## BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

## Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

## Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

## Useful Contacts:

### Customer Services

**Tel:** +44 845 086 9001

**Email (orders):** [orders@bsigroup.com](mailto:orders@bsigroup.com)

**Email (enquiries):** [cservices@bsigroup.com](mailto:cservices@bsigroup.com)

### Subscriptions

**Tel:** +44 845 086 9001

**Email:** [subscriptions@bsigroup.com](mailto:subscriptions@bsigroup.com)

### Knowledge Centre

**Tel:** +44 20 8996 7004

**Email:** [knowledgecentre@bsigroup.com](mailto:knowledgecentre@bsigroup.com)

### Copyright & Licensing

**Tel:** +44 20 8996 7070

**Email:** [copyright@bsigroup.com](mailto:copyright@bsigroup.com)



...making excellence a habit.™