

Description and measurement of environmental noise —

**Part 2: Guide to the acquisition of data
pertinent to land use**

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Environment and Pollution Standards Policy Committee (EPC/-) to Technical Committee EPC/1, upon which the following bodies were represented:

- Association of Consulting Engineers
- British Broadcasting Corporation
- British Occupational Hygiene Society
- British Telecommunications plc
- Department of Health
- Department of the Environment (Building Research Establishment)
- Department of Trade and Industry (Air Division)
- Department of Trade and Industry (National Physical Laboratory)
- Engineering Equipment and Materials Users' Association
- Health and Safety Executive
- Incorporated Association of Architects and Surveyors
- Institute of Acoustics
- Institute of Occupational Hygienists
- Institute of Physics
- Institute of Sound and Vibration Research
- Institution of Civil Engineers
- Institution of Electrical Engineers
- Royal Institute of British Architects
- Society of Environmental Engineers
- Transmission and Distribution Association (BEAMA Ltd.)

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association of Consulting Scientists
- Association of Metropolitan Authorities
- Association of Noise Consultants
- British Cement Association
- British Coal Corporation
- British Forging Industry Association
- British Gas plc
- British Steel plc
- Department of the Environment
- Electricity Supply Industry in United Kingdom
- Engineering Industries Association
- Federation of Civil Engineering Contractors
- Institution of Environmental Health Officers
- London Regional Transport
- Ministry of Defence
- Petroleum Industry Association
- Royal Automobile Club
- University of Salford

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National foreword

This Part of BS 7445 has been prepared under the direction of the Environment and Pollution Standards Policy Committee and is identical with ISO 1996-2:1987, “Acoustics — Description and measurement of environmental noise — Part 2: Acquisition of data pertinent to land use,” published by the International Organization for Standardization (ISO). ISO 1996-2 was prepared by Subcommittee 1, Noise, of ISO Technical Committee 43, Acoustics, with the active participation and approval of the UK.

BS 7445 at present comprises the following Parts which have been published.

- Part 1: Guide to quantities and procedures;
- Part 2: Guide to the acquisition of data pertinent to land use;
- Part 3: Guide to application to noise limits.

Cross-references

International Standard	Corresponding British Standard
ISO 1996-1:1982	BS 7445 Description and measurement of environmental noise Part 1:1991 Guide to quantities and procedures (Identical)
IEC 651:1979 ^a	BS 5969:1981 Specification for sound level meters (Identical)
IEC 804:1985 ^a	BS 6698:1986 Specification for integrating-averaging sound level meters (Identical)

^a International Electrotechnical Commission.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

0 Introduction

0.1 ISO 1996 comprises the following three parts:

- *Part 1: Basic quantities and procedures;*
- *Part 2: Acquisition of data pertinent to land use;*
- *Part 3: Application to noise limits.*

0.2 This part of ISO 1996 describes methods to be used for measuring and describing environmental noise relevant to general land use.

The use of different measuring methods, such as continuous integration, sampling techniques and measurements under selected meteorological conditions, is considered. Calculation methods or scale model investigations may also be used.

This part of ISO 1996 does not deal in detail with calculation methods. If, however, such methods are used to obtain data pertinent to land use, it is important that the noise be described in a way that is consistent with the requirements of this part of ISO 1996.

The purpose of this part of ISO 1996 is to provide methods for the acquisition of data for describing environmental noise. Using these data as a basis, authorities may establish a system for selecting the appropriate land use, as far as levels of noise are concerned, for a specified area, or the sources of noise — existing or planned — which are acceptable with respect to land use, existing or planned.

This part of ISO 1996 does not give guidance on the estimation of the overall uncertainty of the results, but this should be considered in each specific case, if possible.

It does not specify noise limits.

1 Scope and field of application

This part of ISO 1996 describes methods for the acquisition of data which provide descriptors that enable

- a) a description of the environmental noise in a specified area of land to be made in a uniform way;
- b) the compatibility of any land use activity or projected activity to be assessed with respect to existing or predicted noise.

2 References

ISO 1996-1, *Acoustics — Description and measurement of environmental noise — Part 1: Basic quantities and procedures*¹⁾.

IEC Publication 651, *Sound level meters*.

IEC Publication 804, *Integrating-averaging sound level meters*.

3 Definitions

For the purposes of this part of ISO 1996, the definitions given in ISO 1996-1 together with the following definitions apply.

3.1

land use

an existing or intended use of a delineated area of land

3.2

noise zone

region where the long-term average rating level lies between two specified levels such as, for example, between 65 and 70 dB. The noise zone number for this example is 65–70 dB

3.3

receiver

person or group of persons who are or who are expected to be exposed to environmental noise

4 Acquisition of data

For the purpose of acquisition of data relevant to land use, the following basic information is required:

- a) geographical description of the area under consideration;
- b) description of the main characteristics of the sources of noise pertinent to this area;
- c) description of the situation of the receiver, such as location, occupation, use and features of the immediate surroundings.

NOTE If possible, information on prevailing meteorological conditions in the area under consideration should be given, preferably as statistical information on wind speed and direction, on precipitation and temperature (including the occurrence of temperature inversions) for a typical time interval, such as a year or any other suitable time interval.

4.1 Acoustical data

4.1.1 General

Basic acoustical data are equivalent continuous A-weighted sound pressure levels determined over the reference time intervals and rating levels for the same reference time intervals with additional information on the characteristics of the noise, if required.

4.1.2 Rating level

The rating level shall be determined over reference time intervals related to the characteristics of the source(s) and receiver(s).

¹⁾ Cross-references to specific clauses, sub-clauses, etc. in ISO 1996-1 apply to the first edition published in 1982.