

Specification for

Environmental management systems

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/50, upon which the following bodies were represented:

- Association of Certification Bodies
- Association of County Councils
- Association of Environmental Consultants
- BEAMA Ltd.
- British Coal Corporation
- British Gas plc
- British Independent Steel Producers' Association
- British Paper and Board Industry Federation
- British Railways Board
- Chemical Industries' Association
- Confederation of British Industry
- Consumer Policy Committee of BSI
- Department of the Environment (Her Majesty's Inspectorate of Pollution)
- Department of Trade and Industry
- Department of Trade and Industry (Laboratory of the Government Chemist)
- Engineering Employers' Federation
- Environment Council
- European Resin Manufacturers' Association
- Health and Safety Executive
- Institute of Environmental Assessment
- Institute of Wastes Management
- Institution of Chemical Engineers
- Institution of Environmental Health Officers
- London Chief Environmental Health Officers' Association
- Loss Prevention Council
- Mechanical and Metal Trades Confederation
- National Accreditation Council of Certification Bodies
- National House-building Council
- Power Generation Contractors Association
- Royal Society of Chemistry
- Society of Chemical Industry
- Society of Motor Manufacturers and Traders Ltd.
- Trades Union Congress
- United Kingdom Petroleum Industry Association Ltd.
- Water Services Association of England and Wales
- Coopted members

Amendments issued since publication

Amd. No.	Date	Text affected

This British Standard, having been prepared under the direction of the Environment and Pollution Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 16 March 1992

© BSI 1992

The following BSI references relate to the work on this standard:
Committee reference EPC/50
Drafts for comment 91 53255 DC, 91 53256 DC, 91 53257 DC

ISBN 0 580 20644 0

Contents

	Page
Committees responsible	Inside front cover
Foreword	2
Specification	
Introduction	3
1 Scope	4
2 Informative references	4
3 Definitions	4
4 Environmental management system requirements	5
4.1 Environmental management system	5
4.2 Environmental policy	5
4.3 Organization and personnel	5
4.4 Environmental effects	5
4.5 Environmental objectives and targets	6
4.6 Environmental management programme	6
4.7 Environmental management manual and documentation	6
4.8 Operational control	7
4.9 Environmental management records	7
4.10 Environmental management audits	7
4.11 Environmental management reviews	8
Annexes	
A Guide to environmental management system requirements	9
A.1 Environmental management system	9
A.2 Environmental policy	10
A.3 Organization and personnel	10
A.4 Environmental effects	11
A.5 Environmental objectives and targets	12
A.6 Environmental management programme	12
A.7 Environmental management manual and documentation	12
A.8 Operational control	13
A.9 Environmental management records	14
A.10 Environmental management audits	14
A.11 Environmental management reviews	14
B Links to BS 5750 'Quality systems'	15
C Links to the draft European Community Eco-Audit Regulation (Version 3, December 1991)	18
D Bibliography of glossaries and other sources of general information on environmental matters	20
Tables	
B.1 Links to BS 5750 : Part 1 : 1987	17
C.2 Links to the draft European Community Eco-Audit Regulation (Version 3, December 1991)	19
Figure	
1 Schematic diagram of the stages in the implementation of an environmental management system	3

Foreword

This British Standard has been prepared under the direction of the Environment and Pollution Standards Policy Committee in response to increasing concerns about environmental protection and environmental performance. It contains a specification for an environmental management system for ensuring and demonstrating compliance with stated environmental policies and objectives. It also provides guidance on the specification and its implementation within the overall management system of an organization.

The standard is designed to enable any organization to establish an effective management system, as a foundation for both sound environmental performance and participation in 'environmental auditing' schemes.

This standard shares common management system principles with BS 5750 (EN 29000, ISO 9000), the European and internationally recognized quality systems standard, and organizations may elect to use an existing management system developed in conformity with BS 5750 as a basis for environmental management. To achieve equivalence with the requirements of this standard by such means could require the application of a suitable sector application guide. Established procedures for the assessment of compliance with BS 5750 should also be capable of extension to deal with the assessment of compliance with this standard, provided that the common assessment team encompasses the appropriate level of environmental expertise and detailed knowledge of this standard.

Guidance on acceptable levels of environmental management performance for particular sectors may be given in complementary documents, e.g. sector application guides. These would be produced to explain and amplify the requirements in certain situations. They may be issued as British Standard codes of practice after they have been established and used. It is recognized that in certain industry sectors use of this standard may be delayed until agreed sector application guides are available. Such sector application guides will be particularly relevant to industrial sectors having:

- complex environmental effects
- large numbers of constituent companies
- widely differing, but loosely related, operations and disciplines
- temporary and/or off-site activities
- substantial use of subcontracting

Compliance with a British Standard does not of itself confer immunity from legal obligations.

This British Standard is issued subject to review by the technical committee responsible for drafting no later than 1 September 1993 to facilitate pilot application. At the time of the review, changes will be made where required in the light of the experience gained or to reflect changes to the draft European Community Eco-Audit Regulation (Version 3, December 1991) in the intervening time from publication of this standard.

Specification

Introduction

Organizations of all kinds are increasingly concerned to achieve and demonstrate sound environmental performance. They do so in the context of increasingly stringent legislation, the development of economic and other measures to foster environmental protection, and a general growth of concern about environmental matters.

Many organizations have undertaken environmental 'reviews' or 'audits' to assess their environmental performance. On their own, however, reviews and audits cannot provide an organization with the assurance that its performance not only meets, but will continue to meet, legislative and policy requirements. To be effective, they need to be conducted within a structured management system, integrated with overall management activity and addressing all aspects of desired environmental performance.

This British Standard specifies the elements of such an environmental management system, intended to apply to all types and sizes of organization. The basis of the approach is shown in flow chart form in figure 1. (It should be noted that any of the stages may be revisited at any time.) A system of this kind enables an organization to establish procedures to set an environmental policy and objectives, achieve compliance with them, and demonstrate such compliance to others. The standard is also intended to support certification schemes.

In addition to specifying the requirements for an environmental management system, the standard also provides guidance, in annex A, to implementation and assessment. For ease of use, the principal subclauses of the specification and guide have related numbers; thus, for example, 4.5

and A.5 both deal with environmental objectives and targets, and 4.10 and A.10 both deal with environmental management audits.

NOTE. The initial review is included in the guide, but is not part of the specification, because it is not an assessable element of an established system.

Environmental management audits and environmental management reviews are inherent, but separate, parts of the system. Audits assess both the effectiveness of the environmental management system and the achievement of the environmental objectives. Reviews check the continuing relevance of the environmental policy, update the evaluation of environmental effects, and check the efficacy of audits and follow-up actions.

This British Standard complements BS 5750, as they take parallel approaches to achieving and demonstrating compliance with specified requirements. Annex B explains the links between them. It is expected that organizations operating to BS 5750 will readily be able to extend their management systems in accordance with this standard, but operation to BS 5750 is not a prerequisite for operation to this standard.

This British Standard also complements the draft European Community Eco-Audit Regulation (Version 3, December 1991). The draft Regulation establishes a voluntary scheme, membership of which requires participating companies to have an internal environmental protection system. The standard specifies the elements of such a system. Additionally, the environmental management audits and environmental management reviews together cover the activities of 'environmental auditing' as described by the International Chamber of Commerce, and in the draft Regulation.

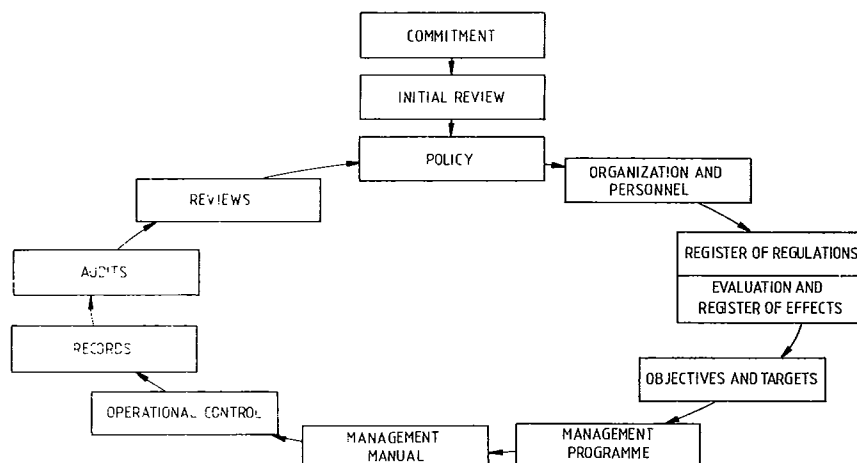


Figure 1. Schematic diagram of the stages in the implementation of an environmental management system

1 Scope

This British Standard specifies requirements for the development, implementation and maintenance of environmental management systems aimed at ensuring compliance with stated environmental policy and objectives. The standard does not itself lay down specific environmental performance criteria.

The standard is applicable to any organization which wishes to:

- a) assure itself of compliance with a stated environmental policy, and
- b) demonstrate such compliance to others.

All the elements specified in the standard are intended to be incorporated into any environmental management system, but the extent of the application of any one element will depend on such factors as the environmental policy of the organization, the nature of its activities and the conditions in which it operates.

2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this British Standard the following definitions apply.

3.1 environment

The surroundings and conditions in which an organization operates, including living systems (human and other) therein. As the environmental effects (see 3.2) of the organization may reach all parts of the world, the environment in this context extends from within the workplace to the global system.

3.2 environmental effect

Any direct or indirect impingement of the activities, products and services of the organization upon the environment, whether adverse or beneficial.

3.3 environmental effects evaluation

A documented evaluation of the environmental significance of the effects of the organization's activities, products and services (existing and planned) upon the environment.

3.4 environmental effects register

A list of the significant environmental effects, known or suspected, of the activities, products and services of the organization upon the environment.

3.5 environmental management

Those aspects of the overall management function (including planning) that determine and implement the environmental policy.

3.6 environmental management audit

A systematic evaluation to determine whether or not the environmental management system and environmental performance comply with planned arrangements, and whether or not the system is implemented effectively, and is suitable to fulfil the organization's environmental policy.

3.7 environmental management manual

The documentation describing the procedures for implementing the organization's environmental programme.

3.8 environmental management programme

A description of the means of achieving environmental objectives and targets.

3.9 environmental management review

The formal evaluation by management of the status and adequacy of systems and procedures in relation to environmental issues, policy and regulations as well as new objectives resulting from changing circumstances.

3.10 environmental management system

The organizational structure, responsibilities, practices, procedures, processes and resources for implementing environmental management.

3.11 environmental objectives

The goals, in terms of environmental performance, which an organization sets itself to achieve and which should be quantified wherever practicable.

3.12 environmental policy

A public statement of the intentions and principles of action of the organization regarding its environmental effects, giving rise to its objectives and targets.

3.13 environmental targets

Detailed performance requirements, quantified wherever practicable, applicable to the organization or parts thereof, which arise from the environmental objectives and which need to be met in order to achieve those objectives.

3.14 interested parties

Those with an interest in the environmental effects of an organization's activities, products and services. These include those exercising statutory environmental control over the organization, local residents, the organization's investors, insurers and workforce, customers and consumers, environmental interest groups and the general public.

3.15 organization

Any organized body or establishment, for example, a business, company, government department, charity or society. For bodies or establishments with more than one site, a single site may be defined as an organization.

3.16 verification activities

All inspection, test and monitoring work related to environmental management.



4 Environmental management system requirements

4.1 Environmental management system

The organization shall establish and maintain an environmental management system as a means of ensuring that the effects of the activities of the organization conform to its environmental policy and associated objectives and targets. This shall include:

- a) the preparation of documented system procedures and instructions in accordance with the requirements of this standard;
- b) the effective implementation of the system procedures and instructions.

In implementing the environmental management system, the organization shall take account of any pertinent code of practice to which it subscribes.

4.2 Environmental policy

The organization's management shall define and document its environmental policy. The management shall ensure that this policy:

- a) is relevant to its activities, products and services, and their environmental effects;
- b) is understood, implemented and maintained at all levels in the organization;
- c) is publicly available;
- d) includes a commitment to continual improvement of environmental performance;
- e) provides for the setting and publication of environmental objectives.

4.3 Organization and personnel

4.3.1 Responsibility, authority and resources

The organization shall define and document the responsibility, authority and interrelations of key personnel who manage, perform and verify work affecting the environment, including those who need the organizational freedom and authority to:

- a) provide sufficient resources and personnel for implementation;
- b) initiate action to ensure compliance with environmental policy;
- c) identify and record any environmental problems;
- d) initiate, recommend or provide solutions to those problems through designated channels;
- e) verify the implementation of such solutions;
- f) control further activities until any environmental deficiency or unsatisfactory condition has been corrected;
- g) act in emergency situations.

4.3.2 Verification resources and personnel

The organization shall identify in-house verification requirements and procedures, provide adequate resources and assign trained personnel for verification activities (see also 4.3.4).

4.3.3 Management representative

The organization shall appoint a management representative who, irrespective of other responsibilities, shall have defined authority and responsibility for ensuring that the requirements of this standard are implemented and maintained.

4.3.4 Personnel, communication and training

The organization shall establish and maintain procedures to ensure that its employees or members, at all levels, are aware of:

- a) the importance of compliance with the environmental policy and objectives, and with the requirements of this standard;
- b) the potential environmental effects of their work activities and the environmental benefits of improved performance;
- c) their roles and responsibilities in achieving compliance with the environmental policy and objectives, and with the requirements of this standard;
- d) the potential consequences of departure from agreed operating procedures.

The organization shall establish and maintain procedures for identifying training needs, and for providing appropriate training for all personnel whose work may have a significant effect upon the environment. Appropriate records of training shall be maintained (see also 4.9).

Personnel performing specific assigned tasks shall be qualified on the basis of appropriate education, training and/or experience, as required.

4.4 Environmental effects

4.4.1 Register of legislative, regulatory and other policy requirements

The organization shall establish and maintain procedures to record all legislative, regulatory and other policy requirements pertaining to the environmental aspects of its activities, products and services.

4.4.2 Communications

The organization shall establish and maintain procedures for receiving, documenting and responding to communications (internal and external) from relevant interested parties concerning its environmental effects and management (see also 4.9).

4.4.3 *Environmental effects evaluation and register*

The organization shall establish and maintain procedures for examining and assessing the environmental effects, both direct and indirect, of its activities, products and services, and for compiling a register of those identified as significant. The procedures shall include, where appropriate, consideration of:

- a) controlled and uncontrolled emissions to atmosphere;
- b) controlled and uncontrolled discharges to water;
- c) solid and other wastes;
- d) contamination of land;
- e) use of land, water, fuels and energy, and other natural resources;
- f) noise, odour, dust, vibration and visual impact;
- g) effects on specific parts of the environment and ecosystems.

The procedures shall include effects arising, or likely to arise, as consequences of:

- 1) normal operating conditions;
- 2) abnormal operating conditions;
- 3) incidents, accidents and potential emergency situations;
- 4) past activities, current activities and planned activities.

4.5 *Environmental objectives and targets*

The organization shall establish and maintain procedures to specify its environmental objectives, and consequent targets at all relevant levels within the organization.

In addition to compliance with all legislative and regulatory requirements, other objectives and targets shall be identified after consideration of the environmental effects register and the financial, operational and business requirements of the organization, in conjunction with the views of interested parties.

The objectives and targets shall be consistent with the environmental policy, and shall quantify wherever practicable the commitment to continual improvement in environmental performance over defined time-scales.

4.6 *Environmental management programme*

The organization shall establish and maintain a programme for achieving the objectives and targets. It shall include:

- a) designation of responsibility for targets at each function and level of the organization;
- b) the means by which they are to be achieved.

Separate programmes shall be established in respect of the environmental management of projects relating to new developments, or to new or modified products, services or processes, to define:

- 1) the environmental objectives to be attained;
- 2) the mechanisms for their achievement;
- 3) the procedures for dealing with changes and modifications as projects proceed;
- 4) the corrective mechanisms which shall be employed should the need arise, how they shall be activated and how their adequacy shall be measured in any particular situation in which they are applied.

NOTE. The phrase 'environmental assessment' is widely used to mean a study required by planning authorities for certain types of development.

4.7 *Environmental management manual and documentation*

4.7.1 *Manual*

The organization shall establish and maintain a manual or manuals to:

- a) collate the environmental policy, objectives and targets, and programme;
- b) document the key roles and responsibilities;
- c) describe the interactions of system elements;
- d) provide direction to related documentation and describe other aspects of the management system, where appropriate.

In addition to dealing with the normal activities of the organization, the manual (or related documentation) shall cover abnormal operating conditions, and incidents, accidents and potential emergency situations. Emergency plans shall, where appropriate, contain relevant environmental information and instructions.

4.7.2 *Documentation*

The organization shall establish and maintain procedures for controlling all documents required by this standard to ensure that:

- a) they can be identified with the appropriate organization, division, function or activity;
- b) they are periodically reviewed, revised as necessary and approved for adequacy by authorized personnel prior to issue;
- c) the current versions of relevant documents are available at all locations where operations essential to the effective functioning of the system are performed;
- d) obsolete documents are promptly removed from all points of issue and points of use.