Foreword

This Foreword has been adapted from the generic Foreword found in the Structural Eurocodes.

Background to the Eurocode programme

In 1975, the Commission of the European Community decided on an action programme in the field of construction, based on article 95 of the Treaty of Rome. The objective of the action programme was the elimination of technical obstacles to trade, and the harmonization of technical specifications.

Within this action programme, the Commission took the initiative to establish a set of harmonized technical rules for the design of construction works that, in a first stage, would serve as an alternative to the national rules in force in the Member States and, ultimately, would replace them.

In 1989, the Commission and the Member States of the EU (European Union) and EFTA (European Free Trade Association) decided, on the basis of an agreement between the Commission and CEN (Committee for European Standardization), to transfer the preparation and publication of the Eurocodes to CEN through a series of mandates, in order to provide them with a future status of European Standard (EN). This links *de facto* the Eurocodes with the provisions of all the Council's Directives and/or Commission's Decisions dealing with European standards (e.g. the Council Directive 89/106/EEC on construction products – CPD – and Council Directives 93/37/EEC, 92/50/EEC and 89/440/EEC on public works and services and equivalent EFTA Directives initiated in pursuit of setting up the internal market).

The Structural Eurocode programme comprises the following European standards, each generally consisting of a number of parts:

- EN 1990, Eurocode 0: Basis of Structural Design
- EN 1991, Eurocode 1: Actions on structures
- EN 1992, Eurocode 2: Design of concrete structures
- EN 1993, Eurocode 3: Design of steel structures
- EN 1994, Eurocode 4: Design of composite steel and concrete structures
- EN 1995, Eurocode 5: Design of timber structures
- EN 1996, Eurocode 6: Design of masonry structures
- EN 1997, Eurocode 7: Geotechnical design
- EN 1998, Eurocode 8: Design of structures for earthquake resistance
- EN 1999, Eurocode 9: Design of aluminium structures

Eurocode standards-drafting recognizes the responsibility of regulatory authorities in each Member State, and has safeguarded the right of each Member State to determine values related to regulatory safety matters at national level where these continue to vary.

The Eurocodes contain nationally determined parameters in order that specific geographical, geological or climatic conditions as well as specific levels of protection applicable in different Member States may be taken into account. For each nationally determined parameter, the Eurocodes provide a recommended value (a default value). However, Member States may choose a different specific value as the nationally determined parameter, if they consider it necessary in order to ensure that building and civil engineering works are designed and executed in a way that does not endanger safety within that Member State. The values or selections chosen by a Member State are contained within a National Annex. Each Eurocode part has a corresponding National Annex for each state in which it is to be used. In the case of the United Kingdom work on a number of the National Annexes was still underway at the time that the updating of this guide was completed. It is important therefore to recognize that the information contained in the guide should not be used for design without checking the final published versions on the relevant National Annex.

Status and field of application of Eurocodes

The Member States of the EU and EFTA recognize that Eurocodes serve as reference documents for the following purposes:

1) as a means to prove compliance of building and civil engineering works with the essential requirements of Council Directive 89/106/EEC, particularly Essential Requirement N°1: Mechanical resistance and stability, and Essential Requirement N°2: Safety in case of fire;
2) as a basis for specifying contracts for construction works and related engineering services;
3) as a framework for drawing up harmonized technical specifications for construction products (ENs and ETAs (European Technical Agreements)).

The Eurocode standards provide common structural design rules for everyday use for the design of whole structures and component products of both a traditional and an innovative nature. Unusual forms of construction or design conditions are not specifically covered and additional expert consideration will be required by the designer in such cases.

National Standards implementing Eurocodes

The National Standards implementing Eurocodes will comprise the full text of the Eurocode (including any annexes), as published by CEN, which may be preceded by a National title page and National foreword, and may be followed by a National Annex.

The National Annex may only contain information on those parameters that are left open in the Eurocode for national choice, known as Nationally Determined Parameters, to be used for the design of buildings and civil engineering works to be constructed in the country concerned, i.e.:

– values and/or classes where alternatives are given in the Eurocode;
– values to be used where a symbol only is given in the Eurocode;
– country specific data (geographical, climatic, etc.), e.g. snow map;
– the procedure to be used where alternative procedures are given in the Eurocode.

It may also contain:

– decisions on the application of informative annexes;
– references to non-contradictory complementary information to assist the user to apply the Eurocode.

The Eurocodes are European standards that provide a common series of methods for calculating the structural strength of elements used in construction. They enable the structural design of construction works and assessment of stability with a common basis of design, but with approaches that tend to be materials specific. They are supported by European product and test method standards.

The disparities between the various calculation methods referred to in national building regulations may hinder the free circulation of engineering and architectural services within the Community. Eurocodes facilitate the freedom to provide services in the field of structural engineering and architecture by providing a harmonized system of general rules.

In December 2003, the Eurocodes were formally recommended by the European Commission as a suitable tool for designing construction works, checking the mechanical resistance of components and checking the stability of structures. Member States of the European Community have been recommended to promote instruction in the use of the Eurocodes, especially within higher education and as part of continuous professional development courses for engineers and technicians.