

The Concrete Centre resources

Enabling design and construction professionals to realise the structural, aesthetic and sustainability potential of concrete



Published technical guidance

The Concrete Centre publishes technical information in a wide range of formats. From introductory documents on specific engineering systems to comprehensive books on how to interpret the latest codes and standards to assist in the efficient design and use of concrete.

Published guidance broadly covers performance and sustainability; specification and building types and structural design and codes.

Examples of guide types and the topics they cover are on these pages, however, for a comprehensive list of all titles, see www.concretecentre.com/publications

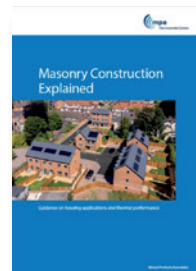
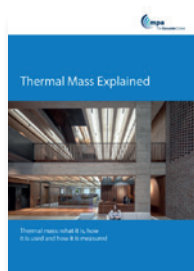
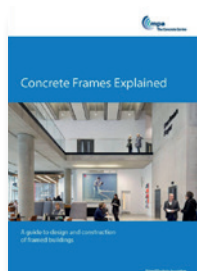


The Concrete Centre technical publication formats

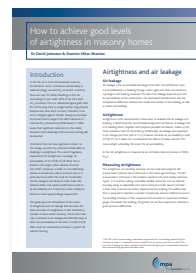
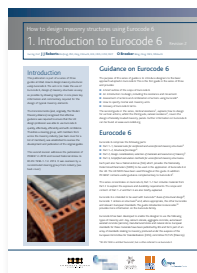
Focus sheets provide guidance on specific topics. Free to download in PDF format.



'Blue Books' provide more extensive essential guidance. Free to download in PDF format.



'How To' guides provide detailed technical guidance, many related to concrete standards. Typically available in hard copy and PDF format. Purchase costs vary between publications.



'Grey Guides' provide more comprehensive, in-depth technical guidance. Typically available in hard copy and PDF format. Purchase costs vary between publications.



Design tools and software

Ease and cost of design are important factors in the choice, efficient design, and buildability of building frames.

The Concrete Centre provides a range of tools with the aim of enabling designers to develop safe, efficient and sustainable designs. The tools cover a range of topics and design stages, assisting users with carrying out design tasks quickly and accurately.

Cost and Carbon: Concept V5

The Concept version 5 spreadsheet compares conceptual designs to Eurocode 2 for a range of forms of reinforced concrete construction, then ranks them in order of cost, programme or embodied carbon. Concept also provides initial element sizes.

A full How To guide, with step-by-step instructions can be freely downloaded to support use of the Concept software.

Structural Design of Concrete: RC Spreadsheets v4D

For the experienced engineer, the spreadsheets allow the rapid production of clear and accurate design calculations.

For post-graduates and new engineers they encourage understanding of concrete design and help the gaining of experience by studying 'what if' scenarios.

Licenses for the spreadsheets are available:

Single user license: £100 plus VAT

Up to 10 user license: £500 plus VAT

Up to 50 user license: £1,000 plus VAT

More information on the spreadsheets, including a link to download a trial version is available at

www.concretecentre.com/rcdesign.

Dynamic Thermal Properties

A free tool for calculating the thermal properties of construction elements has been launched by The Concrete Centre following development by Arup.

Passive Design Assistant

This software tool helps demonstrate the passive design principles of buildings to non-specialists, and enables key design variables such as orientation, ventilation and thermal mass to be more easily understood.

TCC 8500 spreadsheet

BS 8500 is the specification standard for concrete in the UK. Its latest version, published in 2023, allowed for many more cement types to be specified.

TCC 8500 simplifies the specification of concrete to BS 8500 by allowing the user to input the exposure classes, design strength and cover. The spreadsheet then highlights the limiting values required to satisfy the durability requirements for given cement types. All the exposure classes are covered – carbonation, chlorides, sulfates and freeze thaw attack.

Events and training

The Concrete Centre provides a full programme of live seminars, webinars and lectures, as well as training courses.

Concrete Futures

Concrete Futures is a lecture and magazine series which is dedicated to exploring the innovation, research, progress and new developments in concrete. These innovations have the potential to change the properties and performance of concrete and create opportunities to develop how we use concrete in the future.

www.concretecentre.com/concretefutures

Fresh Concrete

Fresh Concrete, produced in partnership with The Building Centre, is a series of talks which showcase some of the innovative practices and emerging concretes which address climate mitigation and adaptation. Fresh Concrete is intended to be a platform for knowledge-sharing for all construction professionals, bringing a fresh approach and fresh thinking for concrete.

www.concretecentre.com/freshconcrete

Sustainability Series

The Sustainability Series is an annual set of events and resources that cover the latest and emerging thinking on the sustainable specification, design and construction of concrete and masonry. The series includes live events, guest speakers, webinars and links to the latest guidance as well as providing insights into the innovation and research that will shape the future of concrete.

www.concretecentre.com/sustainabilityseries

Technical webinars

Held on Monday lunchtimes, these webinars focus on technical topics related to design and construction using concrete.

Along with the live events, there is an extensive library of on-demand webinars, which are free-to-view and can be watched at any time.

For a full calendar of forthcoming events, see

www.concretecentre.com/events

Training Courses

Two on-demand courses for structural engineers are currently available. 'Design and Detailing to Eurocode 2' is intended for those new to designing concrete structures and covers the design of common concrete elements. 'Advanced Design to Eurocode 2' covers a wide range of topics and is intended for more experienced designers. For both courses, delegates will have 12 weeks to complete the course via an online portal. The course is to be completed in your own time and comprises recorded lectures and questions to test your understanding.

For more details and booking see

www.concretecentre.com/events



Topical and technical magazines



Concrete Quarterly

Concrete Quarterly (CQ) magazine shares topical design guidance and the latest inspirational projects. It is aimed at all members of the project team and demonstrates the potential of concrete in terms of architectural vision, structural solutions, best practice and performance.

The Concrete Quarterly magazine is a huge source of inspirational case studies, which are available both through the CQ archive which dates back to 1947, and the case study library, which is available at

www.concretecentre.com/casestudies

CQ is available to view online, via a website or enhanced digital PDF. Also available are compendiums of articles to group together content on particular topics. Concrete Quarterly Focus magazines group CQ case studies and technical guidance into themes - net-zero, reuse and housing issues are available to download.

For more information visit www.concretecentre.com/cq

Concrete Futures

Concrete Futures is a lecture and magazine series which is dedicated to exploring the innovation, research and new developments in concrete. Recent and evolving concrete innovations, including the use of alternative constituent materials and digital technology, is fundamental to improving the efficiency of manufacturing, design and construction processes. These innovations have the potential to change the properties and performance of concrete and create opportunities to develop how we use concrete in the future.

For more information see www.concretecentre.com/concretefutures

Resources for students and lecturers

The Concrete Centre offers best practice guidance and resources for students and lecturers of structural engineering and architecture.

Access to guidance

As listed earlier in this booklet, The Concrete Centre publishes a wealth of design guidance including concrete specification, framed buildings, methods of construction, performance and sustainability. Many of the guides are free, however soft copies of both free and paid-for resources can be made available to be hosted on central university library hubs.

Bespoke webinars have been created which offer an introduction to concrete design and are therefore particularly useful for students. These webinars can be found in the on-demand area of www.concretecentre.com.

Student competitions

The Concrete Centre runs two student competitions 'Structural Concrete' which is designed for students studying engineering disciplines and 'Design and Sustainability competition' for architecture students.

These demanding student competitions aim to encourage interest and raise competence in designing with concrete. The competitions offer a stimulating and fun challenge to students, while supporting the curricula of UK engineering and architecture schools.

For more information on the resources available for students and lectures visit:

www.concretecentre.com/students



www.concretecentre.com

The Concrete Centre provides material, design and construction guidance. Our aim is to enable all those involved in the design, use and performance of concrete and masonry to realise the potential of these materials.

All of the resources detailed in this booklet are available at **www.concretecentre.com**.

Guidance on some of the most popular topics are available via the online Concrete Compass series - with dedicated webpages of latest information and resources, including guidance documents and case studies, that can assist in making informed design decisions. Visit **www.concretecentre.com/concretecompass**.

The Concrete Centre is part of the Mineral Products Association, the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and industrial sand industries.
www.mineralproducts.org

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