Publications catalogue
2016–2017

Building and construction technology
Building and facilities management
Civil and ground engineering
Coastal and marine
Construction materials and products
Construction process and management
Construction resources and waste management
Environmental management
Flood risk management and surface water drainage
Health and safety
Infrastructure asset management
Regeneration and contaminated land
Sustainable water management
Sustainability and the built environment

infrastructure
productivity
sustainability
technology
water
Established in 1960, CIRIA is a highly regarded, industry-responsive, not for profit research and information association, which encompasses the construction and built environment industries.

CIRIA operates across a range of market sectors and disciplines, providing a platform for collaborative projects and dissemination by enhancing industry performance, and sharing knowledge and innovation across the built environment.

As an authoritative provider of good practice guidance, solutions and information, CIRIA operates as a knowledge-base for disseminating and delivering a comprehensive range of business improvement services and research products for public and private sector organisations, as well as academia.

How to get involved

CIRIA manage or actively participate in several topic-specific learning and business networks and clubs:

- **Core membership**
  Allows your employees to assist with the development of and access to good practice guidance, formal networks, facilitation, conferences, workshops and training.

- **Associate membership**
  Allows your employees to access CIRIA's services. Members are able to access exclusive content via the CIRIA website.

- **The CIRIA Network**
  A member-based community where clients and professionals meet, develop and share knowledge about specific topics relevant to construction and the built environment.

- **CIRIA Books Club**
  Members can buy most CIRIA publications at half price and can attend a range of CIRIA conferences at reduced rates.

- **Project funding**
  Project funders influence the direction of the research and gain early access to the results.

- **LACL (Local Authority Contaminated Land Network)**
  LACL helps local authorities address responsibilities under Part IIA of the Environmental Protection Act 1990.

- **EMSAGG (European Marine Sand and Gravel Group)**
  CIRIA provides secretariat support to EMSAGG, including management of the Group's conferences, workshops and website and producing its newsletter.

- **BRMF (Brownfield Risk Management Forum)**
  Promoting sustainable and good practice in brownfield projects in the UK.

Where we are

Discover how your organisation can benefit from CIRIA's authoritative and practical guidance – contact us by:

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Top 10

1 Environmental good practice on site guide (fourth edition) (C741) p18
2 Setting-out procedures for the modern built environment (C709) p13
3 Assessment and management of unexploded ordnance (UXO) risk in the marine environment (C754) p26
4 Asbestos in soil and made ground: a guide to understanding and managing risks (C733) p26
5 Early-age thermal crack control in concrete (C660) p10
6 Site safety handbook (fourth edition) (C669) p23
7 The SuDS Manual (C753) p20
8 Good practice on the testing and verification of protection systems for buildings against hazardous ground gases (C735) p26
9 Environmental good practice on site pocket book (C762) p18
10 CDM 2015 – construction work sector guidance for designers, fourth edition (C755) p23

Buy online at: www.ciria.org
CIRIA members lead the industry in raising professional standards through collaboration, sharing knowledge and promoting good practice. Recognised as leaders in industry improvement, CIRIA’s members represent all construction stakeholder groups including clients, contractors, consultants, public sector champions, regulators and academia.

CIRIA membership provides organisations with a unique range of business development and improvement services, focused on sharing and embedding research, knowledge and good practice. In addition to the many direct benefits, membership provides a wealth of opportunities for organisations to engage in shaping, informing and delivering industry solutions focused on innovation and improvement.

In addition to representing excellent value for money in terms of direct benefits, CIRIA membership delivers significant returns for organisational investment in business improvement and development, CPD, industry engagement, profile enhancement and collaborative research.

CIRIA membership allows your employees to access the full breadth of CIRIA resources and services, creating valuable networking, performance improvement and leadership opportunities.

In addition to CIRIA membership, there is a range of specialist community of practice memberships available:

- **CIRIA book club**
  The CIRIA book club allows you to buy CIRIA publications at half price – plus free copies of all new guidance for Gold subscribers.

- **Local Authority Contaminated Land (LACL) network**
  LACL helps local authority officers to address responsibilities and duties involving land contamination and redevelopment.

- **Brownfield Risk Management Forum (BRMF)**
  BRMF provides comprehensive support to all construction, environmental, financial and legal professionals working on brownfield projects.

- **European Marine Sand And Gravel Group (EMSAGG)**
  EMSAGG provides a forum for the marine aggregate industry across Europe to discuss sector issues and exchange ideas and learning.

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**Get in touch**

For more information about membership options and how to get involved:

E: membership@ciria.org
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CIRIA book club

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* Note that VAT applies within the UK only

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£245 +VAT*

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Join CIRIA book club

For more information and to join contact membership@ciria.org
New and forthcoming titles

Published (2015–2016)

Coastal and marine environmental site guide, second edition (C744)
Coastal and marine environmental pocket book (second edition) (C745)
The SuDS Manual (C753)
Assessment and management of UXO risk in nearshore and offshore environments (C754)
CDM 2015 – construction work sector guidance for designers, fourth edition (C755)
CDM 2015 – workplace ‘in-use’ guidance for designers, second edition (C756)
Fit-out environmental good practice on site guide (C757)
Livestock manure and silage storage infrastructure for agriculture (C759)
Environmental good practice on site pocket book (fourth edition) (C762)

Forthcoming (2016–2017)

Early-age thermal crack control in concrete (C660-V2)
Starting on site (C739) (PDF download)
Structural stability during refurbishment (C740) (PDF download)
Abandoned mine workings manual (C758)
Guidance on embedded retaining wall design (C760)
Guide to tower crane foundation and tie design (C761)
River weirs, Design, maintenance, modification and removal (C763) (PDF download)
Rock slope netting (RP1021)
Minimising risk through responsible sourcing (RP1027)
Guidance on construction of SuDS (RP1028)
Responding to lessons learnt from flooding (RP1031)
Design for movement in buildings
S J Alexander
This publication is an update of the original technical note (TN107) published in 1981 on the topic. It aims to provide guidance to explain the importance of considering movement in the early stages of design, which can have a major effect on basic conceptual decisions. Most building materials used in above-ground applications are included. Low-rise domestic buildings are not covered, and only straightforward applications to basements and specialist buildings such as grandstands and factories with cranes are considered. The guide is aimed at all designers of buildings, including structural, civil, façade and geotechnical engineers, mainly in the UK – although the principles are universal.
C734 │ 978-0-86017-738-8 │ PB │ 2014
£50 +VAT (£25 members)

Buildings for all to use 2
K Bright, S Flanagan, J Embleton, L Selbekk, G Cook
This CD provides guidance for designers and others, particularly building owners and managers, on altering and adapting existing non-residential buildings to provide better access for disabled people, which can also benefit all those who need to use the building. This is a special edition for the blind or partially-sighted to be used in association with special reading software.
C706CD │ 978-0-86017-706-7 │ CD │ 2004
£120 +VAT (£60 members)

The offsite project toolkit
A Gibb, M Pendlebury
This toolkit can help organisations achieve the benefits of offsite. It provides guidance on the concept and how to realise the benefits through appropriate application. This version supersedes C593 CD, and has been revised to provide improved functionality. It also includes 150 examples as a starting point for those new to offsite production for construction.
C579CD │ 978-0-86017-631-2 │ CD │ 2005
£70 +VAT (£35 +VAT members)

Standards for the repair of buildings following flooding
S Garvin, J Reid, M Scott
Flooding is a major problem for many people in the UK, posing a risk to health, safety and well-being, and resulting in widespread damage to property. This guide contains illustrations of damage, surveys, drying and decontamination, and repair work to buildings. The appendices include guidance to homeowners, technical information and organisations which can advise on flooding and insurance.
C623D │ 978-0-86017-623-7 │ PDF │ 2005
£110 +VAT (£55 +VAT members)

Buildings for all to use 2 – improving the accessibility of public buildings and environments
K Bright, S Flanagan, J Embleton, L Selbekk, G Cook
There is a changing attitude to accessibility, and it is important that guidance on altering and adapting existing non-residential buildings to provide improved access for disabled people is up-to-date. This design guidance is arranged in chapters that relate to a sequential journey into, around and out of a building. It will enable owners, designers and managers of environments to make well-informed decisions about improving the inclusiveness and accessibility of their buildings.
C610 │ 978-0-86017-610-7 │ PB │ 2004
£120 (£60 members)

Retention of masonry façades – best practice site handbook
D Lazarus, M Bussell, P Ross
This handbook offers guidance for site work in connection with the safe, economic and practical retention of existing façades. More comprehensive guidance for the overall process of façade retention is contained in the companion guide CIRIA C579.
C589 │ 978-0-86017-589-6 │ PDF │ 2003
£60 +VAT (£30 +VAT members)

Retention of masonry façades – best practice guide
D Lazarus, M Bussell, P Ross
This publication provides guidance for the safe, economic and practical retention of existing façades. It covers both load-bearing masonry and masonry façades with embedded steel or reinforced concrete frames, generally constructed in the 18th to early 20th centuries, and of varying size and complexity. See also CIRIA C579.
C579D │ 978-0-86017-579-7 │ PDF │ 2003
£120 +VAT (£60 +VAT members)

Cladding fixings
P Harrison, J Masat, A Peric-Matthews
This is the ‘how-to-fix-claddings’ bible. Comprehensive examination of curtain walling, pre-cast concrete, stone, brickwork/blockwork, sheet metal, and rainscreen overcladding, using brackets, anchors, bolts, fasteners and washers. It covers problems, design, installation, testing and maintenance, leaving no stone (or any other cladding) unixed.
C524 │ 978-0-86017-524-7 │ PB │ 2000
£100 (£50 members)

Sealant joints in the external envelope of buildings: a guide to design, specification and construction
S R Ledbetter, S Hurley, A Sheehan
Today, most new buildings often depend on sealant joints to prevent air and water from getting inside. This comprehensive guide aims to promote good practice and better understanding for the use of sealants in the building envelope.
R178 │ 978-0-86017-480-6 │ PB │ 1998
£90 (£45 members)

Water-resistant basement construction – a guide. Safeguarding new and existing basements against water and dampness. Summary report – guide to the full report (factors which most influence preliminary appraisal)
R A Johnson
This publication gives guidance on the construction and improvement of new and existing water-resisting basements. It covers all viable construction methods, and active and passive precautions available to achieve the most appropriate and economic environmental control system.
R140 │ 978-0-86017-427-1 │ PB │ 1995
£60 (£30 members)

Water resisting basements – a guide. Safeguarding new and existing basements against water and dampness
R A Johnson
This guide examines water and vapour protection of new and existing basements, both deep (commercial) and shallow (residential and non-residential). It covers diaphragm and secant walls, contiguous bored piles for the former and concrete, masonry or steel sheet piling for the latter. See also CIRIA R140.
R139D │ 978-0-86017-426-4 │ PDF │ 1995
£80 +VAT (£40 +VAT members)

A guide to the management of building refurbishment
J G Perry
This guide addresses the problems of the inception and overall management of building refurbishment projects, including construction work to update or change the facilities of an existing building, or in connection with new-build extensions. It is for those who may be responsible for a building refurbishment project on behalf of an owner or lessee and who need to take a strategic view.
R133 │ 978-0-86017-394-6 │ PB │ 1994
£80 (£40 members)
Design for inherent security: guidance for non-residential buildings
B Poyner, W Fawcett
Should architects pass on the challenge of security in buildings to specialists or manufacturers? Security depends on site layout and design detail such as location of doors and windows, control of movement and access, and exploitation of natural human surveillance. Consider it early and it costs little or nothing to introduce.
SP115 | 978-0-86017-416-5 | PB | 1995
£80 (£40 members)

Dealing with vandalism – a guide to the control of vandalism
D W Cheetham (ed)
This guide provides a set of pragmatic solutions for good management practices, use of appropriate material and design, prevention programmes, and surveillance systems for tackling graffiti.
SP91 | 978-0-86017-375-5 | PB | 1994
£55 (£28 members)

Photocopies of out of print titles
The following titles are now out of print but bound photocopies of these can still be purchased.
Full details can be found in the CIRIA bookshop via the website: www.ciria.org

Design for deconstruction. Principles of design to facilitate reuse and recycling
C607 | 978-0-86017-607-7
£110 +VAT (£55 +VAT members)

Bridge detailing guide
C543 | 978-0-86017-543-8
£83 +VAT (£78 +VAT members)

A review of testing for moisture in building elements
C538 | 978-0-86017-538-4
£54 +VAT (£49 +VAT members)

Design and construction of joints in concrete structures
R146 | 978-0-86017-429-5
£30 +VAT (£25 +VAT members)

The connection of precast concrete structural members 1971
R28 | 978-0-901208-57-6
£23 +VAT (£18 +VAT members)

Designs for openings in the webs of composite beams
SP51 | 978-0-86017-283-3
£20 +VAT (£15 +VAT members)

Buildability: an assessment 1983
SP26 | 978-0-86017-202-4
£16 +VAT (£11 +VAT members)

Guidelines for checking computer analysis of building structures
TN133 | 978-0-86017-294-9
£60 +VAT (£30 +VAT members)

Design for movement in buildings
TN107 | 978-0-86017-169-0
£25 +VAT (£20 +VAT members)
Guidance on designing for crowds – an integrated approach
I Rowe, S Ancliffe

This publication contains details of what is considered good practice and has been developed to assist designers in minimising the risk of crowd accidents within their design. The guidance applies to sports stadia, music venues, arenas, theatres, railway stations, shopping malls, religious venues and any other environment where crowds are expected such as public events, state funerals, or royal events.

C675 | 978-0-86017-675-6 | PB | 2008
£60 (£30 members)

Good practice guidance for refurbishing occupied buildings
W Fawcett, J Palmer

This good practice guide has been written for those involved in refurbishing occupied buildings. The principles should help to ensure an efficient refurbishment with minimum disruption to business continuity. Here, business continuity means continuing activities of any organisation occupying a building under refurbishment, including institutions such as schools and hospitals as well as commercial companies.

C621 | 978-0-86017-621-3 | PB | 2004
£60 (£30 members)

Facilities management manuals – a best practice guide
J Armstrong

One of the recurrent themes in facilities management is the failure of the design team to understand the needs of the building users, which is the main focus of this guide. It brings a clear understanding of the capabilities of premises, performance limits, costs, servicing, maintenance and breakdown procedures, and the long-term management strategy. It will give facility managers and other property operators an improved understanding of the information required to successfully operate and maintain their facilities.

C581 | 978-0-86017-581-0 | PB | 2002
£120 (£60 members)

Operation and maintenance manuals for buildings – a guide to procurement and preparation
CIRIA

Owners, occupiers or maintainers should keep accurate records as they are needed to comply with a growing body of health, safety and environmental legislation and to limit use costs.

This user-friendly guide looks at the benefits of operation and maintenance (O&M) manuals, indicates the likely readership and provides advice on how to specify, procure, use and maintain a manual. It gives guidance on structure, format and content, provides checklists and investigates the options for applying IT to the production, maintenance and use of these manuals.

C507 | 978-0-86017-507-0 | PB | 1999
£85 (£45 members)

Bridges – design for improved buildability
S Ray, J Barr, L Clark

This book guides bridge designers, working for either the owner or a constructor, on how to improve the buildability of common highway bridge structures. Checklists of actions provide a useful reminder of conceptual and specific issues related to design for buildability and can be extended to suit individual projects.

R155 | 978-0-86017-440-0 | PB | 1996
£80 (£40 members)

Structural renovation of traditional buildings
CIRIA

This guide examines the structural aspects in renovating traditional buildings of the late 18th to early 20th centuries. Detailed sections describe the assessment, repair, and upgrading of structures built of masonry, timber, cast and wrought iron, and mild steel. It also covers the design and construction aspects of foundation strengthening and retention of the façades of buildings and includes sources of further information.

R111 | 978-0-86017-257-4 | PB | 1986
£60 (£30 members)

Photocopies of out of print titles
The following titles are now out of print but bound photocopies of these can still be purchased.

Full details can be found in the CIRIA bookshop via the website: www.ciria.org

A client’s guide to quality assurance in construction
SP55 | 978-0-86017-287-1
£15 +VAT (£10 +VAT members)

Graffiti removal and control
SP71 | 978-0-86017-307-6
£20 +VAT (£15 +VAT members)

Value management in construction: a client’s guide
SP129 | 978-0-86017-452-3
£30 +VAT (£25 +VAT members)

Buy online at: www.ciria.org
Groundwater control: design and practice, second edition
M Preene, T Roberts, W Powrie
Whenever an excavation is made below the water table there is a risk that it will become unstable or flood unless measures are taken to control the groundwater in the surrounding soil. This guide, which supersedes CIRIA CS15, provides information and guidance on dewatering methods used to control groundwater as part of the temporary works for construction projects. It guide explains the principles and gives practical information for the effective and safe design, installation and operation of such works.

Application of Eurocode 7 to the design of flood embankments
A Pickles, R Sandham, B Simpson, A Bond
This guide provides national guidance for practitioners in the UK and Ireland on the design of flood embankments to BS EN 1997 (EC7). The aim is to improve clarity on key issues relating to the design of flood embankments, which are not addressed in detail by the current standard. During preparation of this guide several opportunities for further research development were identified and the guide concludes with recommendations for more work to improve the design of flood embankments to BS EN 1997.
C749D [978-0-86017-751-8] PDF 2014
Available to download from: www.ciria.org/freepublications

Lessons from incidents at dams and reservoirs – an engineering guide
J A Charles, P Tedd, A L Warren
The focus of the guide is on failures and incidents at dams in Britain that have occurred between 1800 and 2012, but limited to water-retaining structures. It will be of use to reservoir panel engineers, dam designers and consultants, reservoir owners and operators, government agencies and regulators in the UK, as well as international professionals and managers involved in reservoir operation and safety worldwide.
SP167 [978-0-86017-735-7] PB 2014 £120 (£60 members)

Geotechnical issues in construction: short paper series and fourth conference held on 7 November 2011 at CIRIA, London
C Robinson, Q Spear, C Harding, A El-Hamalawi, Y Hsu, A O’Brien, K Higgins, P Scott, F Thomson, V Troughton, M Preene, S Rohs
CIRIA’s Ground Engineering Advisory Panel (GEAP) is made up of engineers and consultants with a wealth of knowledge and experience in geotechnical issues. These papers have been developed by the members following presentations that they gave at the panel’s mini-conference held in November 2011.
X526 [978-0-86017-926-9] PB 2013 £10 (£5 members)

Geotechnical issues in construction: short paper series and third conference held on 22 November 2010 at CIRIA, London
P Phipps, A O’Brien, W Zhao, M Griffin, T Chapman, J Johnson, S Lightbody, V Troughton, C Hartley, P Smith, P Witherington, D Cox
CIRIA’s Ground Engineering Advisory Panel (GEAP) is made up of engineers and consultants with a wealth of knowledge and experience in geotechnical issues. These papers have been developed by the members following presentations that they gave at the panel’s mini-conference held in November 2010.
X525 [978-0-86017-925-2] PB 2012 £10 (£5 members)

J Perry, F Loveridge, S Jefferis, V Troughton, C Lam, P Bourne-Webb, D Cox, R Coo, E Booth
CIRIA’s Ground Engineering Advisory Panel (GEAP) is made up of engineers and consultants with a wealth of knowledge and experience in geotechnical issues. These papers have been developed by the members following presentations that they gave at the panel’s mini-conference in November 2009.
X513 [978-0-86017-923-8] PB 2011 £10 (£5 members)

Geotechnical issues in construction: short paper series and first conference held on 10 November 2008, at CIRIA, London
T Chapman, J Perry, N O’Riordan, M Preene, C Power, D Patterson, D Cox, A El-Hamalawi
CIRIA’s Ground Engineering Advisory Panel (GEAP) is made up of engineers and consultants with a wealth of knowledge and experience in geotechnical issues. These papers have been developed by the members following presentations that they gave at the panel’s mini-conference held in November 2008.
X512 [978-0-86017-922-1] PB 2011 £10 (£5 members)

Drystone retaining walls and their modifications: condition appraisal and remedial treatment
M O’Reilly, J Perry
Drystone retaining walls are commonplace on the UK’s transport infrastructure in areas where building stone is available. Over the years many drystone retaining walls have been modified by various measures to increase their lives. There is now the need to promote and develop methods of preserving this valuable stock of retaining structures. The process involved and the basic information needed in achieving this desirable state of affairs is the subject of this guide.
C676 [978-0-86017-676-3] PB 2008 £110 (£55 members)

Reuse of foundations
T Chapman, S Anderson, J Windle
The reuse of foundations for a second superstructure is technically feasible and is increasingly becoming part of standard practice. This guide sets out the background and provides guidance on the key issues for foundation reuse. It is aimed at developers, funders and technical professionals who are interested in an overview of the principal issues relating to reuse of existing foundations for new structures.
C653 [978-0-86017-653-4] PB 2007 £80 (£40 members)

EC7 – Implications for UK practice
R Driscoll, P Scott, J Powell
The development of the structural Eurocodes has been in progress for many years. However, a recent report from the ISE has highlighted the challenges facing engineers in adapting to the Eurocodes and has advocated the preparation of guidance to help. This publication aims to assist in this process by indicating the most important differences that geotechnical engineers will encounter when implementing the new suite of Eurocodes.
C641D [978-0-86017-641-1] PDF 2008 £130 +VAT (£65 +VAT members)

Soil nailing – best practice guidance
A Phear, C Dew, B Oxsos, N J Wharmby, J Judge, A D Barley
Soil nailing is a technique where either natural ground or fill material is reinforced by the insertion of slender tension-carrying elements called soil nails. Based on a detailed review of published literature, consultation with industry experts and practitioners, case studies, and existing codes and standards, this guide sets out best practice for soil nailing. It provides information for routine use of the technique for developers, infrastructure and property-owners, designers, suppliers, contractors and maintenance managers.
C637 [978-0-86017-637-4] PB 2005 £130 (£65 members)

Engineering in the Lambeth Group
D W Hight, R A Elison, D P Page
The Lambeth Group underlies the London and Hampshire Basins. While of limited outcrop, it is of considerable relevance to infrastructure developments in central London, particularly those of tunnelling and deep foundations. This guide combines new information with a review of case histories of construction in the Lambeth Group. It provides guidance about the relation between engineering properties and the group’s widely different lithologies, about the hazards they pose for construction, and appropriate ways to overcome them.
C583 [978-0-86017-583-4] PB 2003 £130 (£65 members)

Civil and ground engineering

Buy online at: www.ciria.org
Engineering in chalk
J A Lord, C R I Clayton, R N Mortimore
This book describes the chalk’s geological setting, its origins, occurrence, stratigraphy, weathering and geomorphological situations, and the material and mechanical properties. It explains recommended schemes for the engineering description and classification of chalk, building on work presented in CIRIA PR11.
C574 | 978-0-86017-574-2 | PB | 2002
£140 (£70 members)

Treated ground – engineering properties and performance
J A Charles, K S Watts
This guide focuses on the properties of treated ground, where the objective of treatment has been the improvement of the load-carrying characteristics of the ground. The only ground treatment methods included are those that are used, or are suitable for use, in the UK.
The book establishes the best assessments and measurements of engineering properties and performance of treated ground, and how to carry out these assessments and measurements. See also CIRIA C573.
C572 | 978-0-86017-572-8 | PB | 2002
£120 (£60 members)

Modular gravity retaining walls – design guidance
T Chapman
This publication sets out good practice in the planning, selection, design, installation and maintenance of low-height modular retaining walls, composed of different modular units. It will be valuable for specifiers, designers, manufacturers, installers and owners.
C516 | 978-0-86017-516-2 | PB | 2000
£120 (£60 members)

Grouting for ground engineering
C G Rawlings, E E Hellowell, W M Kilkenny
This publication provides guidance, primarily for the non-specialist, on all aspects of grouting to help improve the understanding and proper use of grouting as a technique for ground treatment. Six main techniques are discussed (permeation, rock grouting, hydrofracture, ground compaction, jet grouting and compensation grouting), and case studies, contractual relationships, responsibilities and recommendations are given. The guide is aimed at all involved in the procurement and use of grouting in ground engineering.
C514 | 978-0-86017-514-8 | PB | 2000
£110 (£55 members)

Engineering in glacial tills
N A Trenter
This book demystifies glacial tills – their origins, land systems and distribution within the UK glacial stratigraphy and classification. The guidance included here covers site investigation, earthworks, shallow and piled foundations, dewatering, tunnelling and landslides.
C504 | 978-0-86017-504-9 | PB | 1999
£110 (£55 members)

Shaft friction of CFA piles in chalk
A Lord, T Hayward, C R I Clayton
This book makes recommendations for the design of shaft resistance of CFA piles in low and medium-density chalk. It is not appropriate to the design of piles constructed by any other method. It contains the graphical plots and analyses of pile test data and reviews some design aspects of continuous flight augered piles in chalk.
PR86 | 978-0-86017-887-3 | PB | 2003
£60 (£30 members)

Bioengineering – the Longham Wood Cutting field trial
J R Greenwood, A W Vickers, R P C Morgan, N J Coppin, J E Norris
This publication examines how the effects of vegetation on the stability of slopes could be demonstrated for the benefit of the engineering community and its clients. It is supported by numerical data, collected during the monitoring periods, which is presented on an accompanying CD.
PR81 | 978-0-86017-881-1 | PB | 2001
£60 (£30 members)
Civil and ground engineering

Prop loads in large braced excavations
W Powrie, M Batten
Embedded walls retaining the sides of large excavations are often supported at some stage in the construction process by temporary props at one or more levels. This publication presents the findings of a research project that measured and analysed the loads in the temporary props at the Canada Water and Canary Wharf station excavations. It will be a help to temporary works designers and geotechnical engineers. See also CIRIA C517.
PR77 | 978-0-86017-877-4 | PB | £60 (£30 members)

Trenchless and minimum excavation techniques – literature review. Annex to Special Publication 147
J Grimes, P Martin
Trenchless and minimum excavation (TME) technology offers the opportunity to install, replace and renovate underground services with the minimum of disturbance to the surface environment and to other utilities. This book describes the TME techniques available and provides guidance on their use and investigation for their use.
PR630 | 978-0-86017-863-7 | PDF | 1999
£60 + VAT (£30 + VAT members)

Piled foundations in weak rocks
J Gannon, G Masterton, W Wallace, D Muir Wood
This guide provides a definition of weak rock, and considers the nature of the material and the best ways of investigating, characterising and classifying weak rock for the purpose of pile design. This is a valuable reference for geotechnical and structural engineers working in investigation, design and construction, and research.
R181 | 978-0-86017-494-3 | PB | 1999
£110 (£55 members)

Ground engineering spoil: good management practice
J Kwan, J Sceal, F Bryson, J Stanbury, J Bickerdike, F Jardine
A large proportion of the waste generated in the UK is surplus spoil arising from excavation on construction sites. This guide is a result of a research study about design and construction practice in the management of spoil. It includes surveys of 40 construction projects, detailed case studies and reviews of both the legal requirements of disposal of spoil and of current emerging practices in the recycling or reuse and minimisation of surplus spoil.
R179 | 978-0-86017-484-4 | PB | 1997
£80 (£40 members)

Integrity testing in piling practice
M J Turner
This publication is for use by a range of professionals with differing responsibilities and interests in the satisfactory installation of pile and piled foundations. It provides information at all levels, from a generalised overview of the subject to detailed descriptions of the theory and practice of the various techniques that can be employed.
R144 | 978-0-86017-473-8 | PB | 1997
£120 (£60 members)

The standard penetration test (SPT): methods and use
C R I Clayton
This publication provides guidance on the use of the standard penetration test (SPT) in geotechnical engineering. Used worldwide in a variety of ground conditions, this simple test is relied upon to provide information about the properties of soils and weak rocks and as a basis for design. The guide brings together the many observations of causes of variability in SPT results, and recommends practices to achieve better workmanship and interpretation.
R143 | 978-0-86017-419-6 | PB | 1995
£110 (£55 members)

Trenching practice (second edition)
D J Irvine, R J Smith
Trench collapses cause many deaths and injuries every year in the UK. The recommendations made in this guide apply to the design and use of temporary support for trenches up to six metres deep. It advises the user of a wide range of problems in the variety of site and soil conditions that are likely to be met in practice. The emphasis is on safe design and methods of work and particular dangers are highlighted. All clients, designers and contractors concerned with trenching work should read this guide on safe practice and follow its advice.
R97 | 978-0-86017-192-8 | PB | 1983
£60 (£30 members)

CIRIA
This conference brought together experts on the subject from all parts of the world. The diversity of experience is reflected in the contributions, which range from basement excavation at the British Museum in London and compensation grouting at Antwerp Central Station to the monitoring of structures in Moscow and pipe-jacking below a railway in Hong Kong.
SP201 | 978-0-86017-577-3 | PB | 2003
£110

A guide to British stratigraphical nomenclature
J H Powell (ed)
Collaboration with the British Geological Survey – one of the world’s leading geoscience organisations – has produced this guide to the names of rock units. Its comprehensive stratigraphical tables and colour maps are vital references in today’s construction environment, as incorrect identification and classification can lead to poor costly design and construction errors.
SP149 | 978-0-86017-489-9 | PB | 1998
£110 (£55 members)

Trenchless and minimum excavation techniques: planning and selection
J F Grimes, P Martin
Trenchless and minimum excavation (TME) technology offers the opportunity to install, replace and renovate underground services with the minimum of disturbance to the surface environment and other utilities. This book describes the TME techniques available and provides guidance on the planning and investigation for their use.
SP147 | 978-0-86017-483-7 | PB | 1998
£60 (£30 members)

Rising groundwater levels in Birmingham and the engineering implications
C V Knipe, J W Lloyd, D N Lerner, R Greswell
If a big city stops abstracting large amounts of water for its industries, the groundwater rises beneath it. This guide indicates the areas most likely to be affected by rising groundwater and explains the implications. It assesses wider environmental impacts and considers options for mitigation of groundwater levels, and recommends control methods, monitoring and further data collection.
SP92 | 978-0-86017-364-9 | PB | 1993
£80 (£40 members)

The performance of tunnel-boring machines in rock
D B Parkes
An analysis of performance data from 65 rock tunnels in which full-faced tunnel-boring machines were used.
SP62 | 978-0-86017-290-1 | PB | 1988
£60 (£30 members)
Laterite in road pavements
J H Charman

This publication provides a classification scheme for laterites, gives guidance on effective field prospecting and discusses specifications used in tropical countries.

SP47 | 978-0-86017-275-8 | PB | 1988
£60 (£30 members)

Photocopies of out of print titles
The following titles are now out of print but bound photocopies of these can still be purchased.

Full details can be found in the CIRIA bookshop via the website: www.ciria.org

Survey of problems associated with the installation of displacement piles
PG8 | 978-0-86017-145-4
£25 + VAT (£20 + VAT members)

Pile load testing procedures
PG7 | 978-0-86017-136-2
£25 + VAT (£20 + VAT members)

Piling in chalk
PG6 | 978-0-86017-119-5
£40 + VAT (£35 + VAT members)

Piling in ‘boulder clay’ and other glacial tills
PG5 | 978-0-86017-103-4
£30 + VAT (£25 + VAT members)

The use and influence of bentonite in bored pile construction
PG3 | 978-0-86017-031-0
£30 + VAT (£25 + VAT members)

A review of bearing pile types
PG1 | 978-0-86017-286-8
£35 + VAT (£30 + VAT members)

Glossary of terms and definitions used in grouting: proposed definitions and preferred usage
PR61 | 978-0-86017-861-3
£20 + VAT (£15 + VAT members)

Rapid characterisation of contaminated sites using electrical imaging
PR35 | 978-0-86017-835-4
£27 + VAT (£23 + VAT members)

Prediction and effects of ground movements caused by tunnelling in soft ground beneath urban areas
PR30 | 978-0-86017-830-9
£40 + VAT (£35 + VAT members)

The Observational Method in ground engineering: principles and applications
R185 | 978-0-86017-497-4
£100 (£50 members)

Design of laterally-loaded piles 1984
R103 | ISBN: 0-86017-216-3
£33 + VAT (£28 + VAT members)

Material durability in aggressive ground 1983
R98 | 978-0-86017-216-1
£26 + VAT (£21 + VAT members)

Hydraulic roughness of segmentally lined tunnels
R96 | 978-0-86017-861-3
£20 + VAT (£15 + VAT members)

Review of behaviour of piled raft foundations
R83 | 978-0-86017-130-0
£30 + VAT (£27 + VAT members)

Tunnelling – improved contract practices 1978
R79 | 978-0-86017-083-9
£29 + VAT (£24 + VAT members)

Design and construction of ground anchors, second edition
R65 | 978-0-86017-152-2
£30 + VAT (£25 + VAT members)
Coastal and marine

Old waterfront walls
S Cork, S Chamberlain

This guide is an update of CIRIA B13 published in 1992. It includes a significant amount of the material used in the original publication, particularly with respect to the history and types of old waterfront walls. It contains an overview of how they were constructed. Many proved troublesome to construct, but their longevity is a measure of persistence to succeed.

C746D [978-0-86017-751-7] PDF 2015
Available to download from: www.ciria.org/freepublications

Coastal and marine environmental pocket book (second edition)
S John, K Basford, H Craven, N Meakins, P Charles, S D’Albee

Any construction project, irrespective of the location, size or nature of the development, will have environmental consequences. This is particularly true when working on the coast or at sea given the often sensitive nature of the environment and the importance of this region for human activities. This pocket book focuses on the control of environmental impacts arising from construction practices in the coastal and marine environment.

C745 [978-0-86017-750-0] PB 2015
Pack of 10: £80 (£40 members)

Coastal and marine environmental site guide (second edition)
S John, N Meakins, K Basford, H Craven, P Charles (eds)

Any construction project, irrespective of the location, size or nature of the development, will have environmental consequences. This is particularly true when working on the coast or at sea given the often sensitive nature of the environment and the importance of this area for human activities. However, good management and construction processes can avoid or minimise impacts.

This guide focuses on the control of environmental impacts arising from construction practices in the coastal and marine environment (recognising that the coastal environment includes terrestrial elements). Those projects that need to deal with land and marine water interfaces should draw on this and the environmental site guide.

£70 (£35 members)

The International Levee Handbook
CIRIA, Ministry of Eclogy, USACE

Leves, otherwise known as flood embankments or dikes, are a vital part of modern flood risk management. Many towns and cities would be uninhabitable without them. The International Levee Handbook (ILH) will offer international good practice on levees based on current knowledge and experience from six countries. The collaboration involved in compiling the ILH will have other long-term benefits over and above current good practice.

The ILH aims to provide a client who has a technical background, but no particular specialist knowledge, with sufficient information to understand the main issues and general procedures likely to be followed by an experienced practitioner.

C731 [978-0-86017-734-0] HB 2013
£375 (£275 members)

Beach management manual (second edition)
P Brenton, B Hamer, A Brampton, M Giennerster, J Rogers, A Bradbury, S Challinor

Beach management in the UK has evolved significantly in design and execution over the last 10 years, motivated by increased expenditure on capital schemes aided by guidance from the first edition, CIRIA R153.

This second edition includes the latest information on state-of-art methods, guidance on beach monitoring and maintenance, evaluation of the state and performance of a beach, design, procurement, execution and the after-care of beach improvement schemes.

Book: £330 (£220 members)

CD: £150 + VAT (£100 + VAT members)

CIRIA, CUR, CETMEF


Since publication of these earlier reference texts significant research has been done to improve understanding of rock behaviour and to determine improved practices for hydraulic engineering. Consequently, this manual has been developed to bring the earlier publications up to date and has been given a broader scope that increases the focus on environmental and sustainability concerns. This edition supersedes SP83.

£265 (£190 members)

A guide to cost standards for dredging equipment 2009
N Bray

Dredging is a capital-intensive industry, often involving only a few high-cost items of marine construction equipment on each project. This guide describes the characteristics of the various common types of dredging equipment. It examines the philosophy behind the internationally-accepted costing conventions prevalent today. It also gives information allowing the non-direct costs relating to dredging equipment, the amortisation, maintenance and repair, to be estimated.

£80 (£40 members)

The use of concrete in maritime engineering – a good practice guide
B Woods Ballard, M Denechere, S Dupray, G Robertshaw, J Knights, D Wimpenny

Over £800m is spent on coastal defences in the UK every year. The OST-funded FORESiGHt project suggested that annual expenditure on flood and coastal defences will need to be doubled to take account of the effects of climate change. Despite this the Defra review of engineering materials in 2004 identified a gap in available guidance on the use of concrete in maritime structures. This guide builds on this information and combines the new findings for use within the maritime engineering industry.

C674 [978-0-86017-674-9] PB 2010
£160 (£85 members)

Multi-functional artificial reefs scoping study
S Challinor, H Hai

Multi-functional artificial reefs offer an opportunity for coastal defence structures to deliver ecological and/or amenity benefits, and in doing so, can support sustainable development. This scoping study focuses on artificial reef structures used for coastal defence and identifies the opportunities and constraints to adding marine habitat (eg biodiversity, fisheries) and/or amenity (eg sea angling, diving, surfing).

Available to download from: www.ciria.org/freepublications

Guidelines for the use of metocean data through the life cycle of a marine renewable energy development
W Cooper, A Sautter, P Hodgetts

A good understanding of metocean data is fundamental to the success of all marine renewable projects. This guide has been developed to identify and recommend on the uses of metocean data through the life cycle of a marine renewable energy development and provides a helpful reference to inform those who will benefit from a wider appreciation of metocean issues.

£85 (£45 members)

Buy online at: www.ciria.org

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Coastal and marine

Management of accelerated low water corrosion in steel maritime structures
J E Breakell, M Siegwart, K Foster, D Marshall, M Hodgson, R Cottis, S Lyon

Accelerated low water corrosion (ALWC) is a particularly aggressive and localised form of low water corrosion that can occur in tidal and brackish waters on steel maritime structures. This publication provides a comprehensive guide to the phenomenon of ALWC and its management, condition appraisal, repair, protection and monitoring. It is aimed at infrastructure owners, operators and their advisors, specialist engineers and asset and maintenance managers in ports, harbours and other marine locations.

C534 | 978-0-86017-634-3 | PB | £110 (£55 members)

Coastal and estuarine managed realignment – design issues
D Leggett, N Cooper, R Harvey

Managed realignment is a deliberate process of altering a flood defence to allow flooding of a previously defended area. This comprehensive guide on the design and construction of managed realignment schemes will be valuable to coastal and estuarine managers and engineers, consultants, environmental regulators, geomorphologists, modellers, consenting authorities and environmental advisers.

C628 | 978-0-86017-628-2 | PB | £120 (£60 members)

Scoping the assessment of sediment plumes from dredging
S John, S Challinor, M Simpson, T Burt, J Spearman

What is known about sediment plumes, and how are they managed? Pooling the knowledge and expertise of an authoritative consortium, this guide is a call to action for the dredging industry, developers, regulators and conservationists concerned with the environmental effects of marine aggregate and capital and maintenance dredging.

C547 | 978-0-86017-547-6 | PB | £120 (£60 members)

Maximising the use and exchange of coastal data. A guide to best practice
K Millard, P Sayers

This guide provides comprehensive guidance on coastal data that, up until today, was hard to find and inconsistent. It is divided into two parts, part 1 is for the coastal manager or data user, while part 2 is aimed at the data collector/manager. An invaluable list of data providers and useful websites is included.

C541 | 978-0-86017-541-4 | PB | £110 (£55 members)

Safety in ports – ship-to-shore linkspans and walkways. A guide to procurement, operation and maintenance
R J E Marks

Ship-to-shore linkspans and walkways are not easy to get right. Use of this guidance will greatly improve safety, operational efficiency, reliability, durability and whole-life economy. It is vital reading for all port owners, ship and ferry operators, consultants, maintenance engineers, manufacturers and operators, insurers and safety managers.

C518 | 978-0-86017-518-6 | PB | £120 (£60 members)

Regional seabed sediment studies and assessment of marine aggregate dredging
A H Brampton, C D Evans

What does seabed sediment removal do to the coastline, fisheries, marine biology and archaeology? This publication enables government, local authorities, environmental bodies and others to predict the answers. For anyone needing to understand the forces that shape the seabed and their effect on the coastline. See also CIRIA PR65.

C505 | 978-0-86017-505-6 | PB | £90 (£45 members)

Marine sand and gravel in north-west Europe – a fact-finding and scoping study
B Humphreys, D Harrison, R Arthurton, C Laban, J Leth, L Galitter

There is a continuing demand for marine sand and gravel resources on the north-west European continental shelf. This demand is increasing because of sharpening environmental pressures on land aggregate extraction and rising demand for marine materials for coastal defence and reclamations. This book reviews the state of information and practice concerning marine aggregate resources, identifies the principal holdings of information that are in the public domain and indicates their currency and completeness.

PR68 | 978-0-86017-868-2 | PB | £60 (£30 members)

Beach recharge materials – demand and resources
B Humphreys, T Coates, M Watkiss, D Harrison

This guide provides quantitative estimates of the national demand for beach recharge material and of the resources suitable to meet demand over the next 20 years. It considers the potential for the use of beach recharge of materials other than marine sand and gravel, such as navigational dredgings.

R154 | 978-0-86017-439-4 | PB | £80 (£40 members)

Coasts and seas of the United Kingdom (second edition)
JNCC

This CD contains the entire Joint Nature Conservation Committee coastal directories series. It is a primary information source for planners, coastal managers, researchers and developers, and all concerned with ensuring the sustainable development of the UK coastal zone.

X103CD | £115 + VAT | CD | 2001

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B12 | 978-0-86017-391-5
£90 + VAT (£85 + VAT members)

Sea outfalls – inspection and diver safety
R158 | 978-0-86017-444-8
£21 + VAT (£18 + VAT members)

Guide on the use of groyne in coastal engineering
R119 | 978-0-86017-313-7
£35 + VAT (£30 + VAT members)

Control and suppression of pressure surges in pipelines and tunnels
R84 | 978-0-86017-129-4
£40 + VAT (£35 + VAT members)

Oscillation of piles in marine structures
R141 | 978-0-86017-42-2
£17 + VAT (£12 + VAT members)

Groyne in coastal engineering: data on performance of existing groyne systems
TN135 | 978-0-86017-314-4
£40 + VAT (£35 + VAT members)

Sea walls: survey of performance and design practice
TN125 | 978-0-86017-266-6
£30 + VAT (£25 + VAT members)

Maintenance of coastal revetments
TN124 | 978-0-86017-265-9
£25 + VAT (£20 + VAT members)

Groynes in coastal engineering: a review
TN111 | 978-0-86017-201-7
£26 + VAT (£21 + VAT members)

A comparison of quay wall design methods
TN64 | 978-0-86017-113-3
£40 + VAT (£35 + VAT members)
### Top 10

#### Early-age thermal crack control in concrete

**P Bamforth**

- Early-age thermal cracking occurs when the tensile strain, arising from either restrained thermal contraction or a temperature differential, exceeds the tensile strain capacity of the concrete. In high strength concretes autogenous shrinkage may also contribute to early contraction. Numerous factors influence the risk of early-age cracking including the temperature rise, the coefficient of thermal expansion of the concrete, the restraint to movement offered either by adjacent elements or by differential strain within an element, and the ability of the concrete to resist tensile strain.

- This guide provides a method for estimating the magnitude of crack-inducing strain and the risk of cracking, and where cracking will occur guidance is provided on the design of reinforcement to control crack widths.

- **C660** 978-0-86017-660-2 | PB | 2007
  - £120 (£60 members)

#### Use of sewage sludge products in construction

**A Gunn, R Dewhurst, A Giorgetti, N Gillett, S Wishart, S Pedley**

- The potential applications of sewage sludge derivatives in structural construction materials is outlined in this book. The health and safety implications are examined alongside the positive and negative impacts on the environment. Readers will gain information about the recycling of sewage sludge including the sludge producers, structural material manufacturers, retailers and users and the economics, and barriers to the use, of sludge in structural materials.

- **C608** 978-0-86017-608-4 | PB | 2004
  - £120 (£60 members)

#### Strengthening metallic structures using externally bonded fibre-reinforced composites

**J M Cadei, T J Stratford, L C Hollaway, W H Duckett**

- Externally-bonded FRP strengthening for metallic structures is a rapidly developing technique. This book provides good practice guidance on its use, and advice on structural design, correctly adopting strengthening schemes, and on the future maintenance of strengthened structures.

- **C598** 978-0-86017-595-7 | PB | 2004
  - £120 (£60 members)

#### Potential use of alternatives to aggregates in coastal and river engineering

**A H Brampton, M J Wallis, E M Holliday**

- This guide seeks to identify the potential for using secondary and recycled aggregates, including inert construction and demolition waste, in coastal and river engineering schemes. It reviews the types of river and coastal engineering schemes that exist around the UK and the materials used in them. The various alternatives to primary aggregates available in the UK are included, along with environmental and practical engineering issues that arise in their use.

- **C590** 978-0-86017-590-2 | PB | 2004
  - £110 (£55 members)

#### Guide to the construction of reinforced concrete in the Arabian Peninsula

**M Walker (ed)**

- This guide provides information and guidance on the production of high-quality, durable concrete, able to withstand the region's extremely harsh environment. Much of the guidance is also applicable to concrete construction in other hot-wet and hot-dry environments around the world. The principles set out are applicable for the whole range of construction activity, from small-scale building works to large civil engineering projects.

- **C577** 978-0-94691-93-7 | PB | 2002
  - £150 (£75 members)

#### Concrete technology for cast in situ foundations

**N A Henderson, N J R Baldwin, L D McKibbins, D S Winsor, H B Shanghai**

- This publication focuses on the concrete technology issues relating to common buried foundation types including piles, diaphragm walls and pad, strip and raft foundations. It is based on a detailed review of published literature, consultation with experts and practitioners within the field, and case studies demonstrating good practice and highlighting critical issues.

- **C569** 978-0-86017-569-8 | PB | 2001
  - £110 (£55 members)

#### Fibre-reinforced polymer composites in construction

**A Cripps**

- In the construction industry FRP composites are widely used in applications such as cladding, pipes, for repair and in strengthening work. However there are many situations where they are not used, even though they can offer a good solution. This guide addresses its many potential applications and explains the differences between the techniques and the potential for each one to produce different products.

- **C564** 978-0-86017-564-3 | PB | 2002
  - £150 (£75 members)

#### Permanent formwork in construction

**R G Wrigley**

- This guide outlines some of the reasons why permanent formwork should be considered, when the decision to adopt should be made and how it should be implemented, and gives a summary checklist of benefits. This practical publication explores the design, specification and construction stages and is aimed at supervising engineers involved in building and civil engineering works.

- **C558** 978-0-86017-558-2 | PB | 2001
  - £120 (£60 members)

#### On-site curing of concrete – microstructure and durability

**N Buenfeld, R Yang**

- Curing is widely perceived as being an important factor in achieving durable concrete structures. However, direct evidence that the levels of curing achieved on-site increases durability is scarce. This publication describes the second phase of an investigation into the influence of practical on-site curing on the durability of concrete. The first phase was a literature review, see CIRIA PR49.

- **C530** 978-0-86017-530-8 | PB | 2001
  - £110 (£55 members)

#### Sealants – microbiological deterioration under wet conditions

**C Dow, D Aubrey, S Hurley**

- Sealants are widely used in the water industry to prevent water leakage through designed joints and repaired cracks. This guide enables sealant end-users to obtain a greater awareness of the influence of micro-organisms and be better informed about the essential test data from sealant manufacturers.

- **C520** 978-0-86017-520-9 | PB | 2001
  - £110 (£55 members)
Action in the case of non-conformity of concrete structures
P R Ainsworth, C J Hopkins
Increasingly sophisticated construction techniques and demanding contract programmes produce numerous non-conformities – and along with them, problems and disputes. This book will help those involved in the construction process to come to pragmatic, cost-effective solutions.
C519 | 978-0-86017-519-3 | PB | 2000
£110 (£55 members)

The reclaimed and recycled construction materials handbook
S Coventry, C Woolveridge, S Hillier
Things have moved on since crushed concrete was put into access roads. This definitive guide lists a wide range, explaining sourcing, specifying and applications, with case studies and guidance on legislation.
C513 | 978-0-86017-513-1 | PB | 1999
£120 (£60 members)

Controlled permeability formwork
W F Price
CPF systems can be particularly effective in certain situations. This practical survey of techniques, problems and opportunities will enhance the skills and options of designers, specifiers, formwork designers and contractors.
C511 | 978-0-86017-511-7 | PB | 2000
£110 (£55 members)

Transfer of adhesives technology. Feasibility study
A R Hutchinson, S A Hurley
This guide provides an assessment of the feasibility of transferring adhesives technology from other industries to the construction industry. It is intended to assist in the improvement of joining techniques, which will lead to reduced construction time and whole-life costs.
PR84 | 978-0-86017-884-2 | PB | 2001
£60 (£30 members)

The use of epoxy, polyester and similar reactive polymers in construction. Volume 2: Specification and use of the materials
S A Hurley
Volume 2 concentrates on areas closely associated with actual use.
PR79 | 978-0-86017-878-1 | PB | 2002
£50 (£25 members)

The use of epoxy, polyester and similar reactive polymers in construction. Volume 3: Materials technology
S A Hurley
Volume 3 is aimed at readers requiring detailed technical information.
PR78 | 978-0-86017-879-8 | PB | 2002
£50 (£25 members)

Screeds, flooring and finishes – selection, construction and maintenance
M J Gatfield
Flooring often fails, with huge costs as a result, such as remedial works, loss of use, loss production, and litigation. This publication provides co-ordinated guidance on the selection and construction of internal flooring systems and floorings, including their application to stairs and floors as such cold rooms or foundries.
R184D | 978-0-86017-496-7 | PDF | 1998
£110 + VAT (£55 + VAT members)

New paint systems for the protection of construction steelwork
G Gedge, N Whitehouse
This publication provides guidance on the selection, application and specification of coatings for use in the general steel fabrication industry.
R174 | 978-0-86017-472-1 | PB | 1997
£100 (£50 members)

The planning and design of concrete mixes for transporting, placing and finishing
G G Masterton, R A Wilson
This book advises designers, specifiers, planners, concrete suppliers and contractors on how to achieve the required properties in practical conditions through appropriate mix design. Case studies illustrate the principles involved.
R165 | 978-0-86017-470-7 | PB | 1997
£85 (£45 members)

Care and treatment of steel reinforcement and the protection of starter bars
M Bussell, R Cather
This publication provides guidance on the proper treatment of reinforcement on site, explaining the basis for such advice. It is directed at reinforcement in new work, rather than the assessment and repair of damaged or corroded steel in existing construction. The effects of rusting, chemicals and other contaminants found on site are reviewed and the guide offers recommendations for good practice.
R147 | 978-0-86017-430-1 | PB | 1995
£110 (£55 members)

Formwork striking times – criteria, prediction and methods of assessment
T A Harrison
Since the beginning of concrete construction, the decision to remove formwork and allow the structure to support itself has been a matter for judgement between the needs for speed of construction and to avoid collapse or damage. This publication describes the criteria governing the striking of formwork.
R136D | 978-0-86017-431-8 | PDF | 1995
£55 + VAT (£28 + VAT members)

Concreting deep lifts and large volume pours
P B Bamforth, W F Price
This guide aims to make the designer, the contractor and the concrete producer aware of the particular features of these construction methods, and to provide guidance on how to avoid problems.
R135 | 978-0-86017-420-2 | PB | 1995
£55 (£28 members)

Concrete pressure on formwork
C A Clear, R A Harrison
The book gives guidance on calculating concrete pressures on formwork extending and improving the method used in CIRIA R1 to cover concretes using admixtures and blends or blended cements. Use of the method is demonstrated in six examples, bridge abutment, partition wall, lift shaft, mass concrete retaining wall, bridge column, and V-column.
R108D | 978-0-86017-250-5 | PDF | 1985
£55 + VAT (£28 + VAT members)

Environmental impact of building and construction materials: Volume A – summary
CIRIA
Reviews market, regulatory and other factors that influence the production and specification of construction materials, in particular the practicality and implications of labelling and life cycle assessment.
SP116 | 978-0-86017-424-0 | PB | 1995
£65 (£35 members)

Performance of sealant-concrete joints in wet conditions: results of a laboratory testing programme, Volume 1: main results and discussion
D W Aubrey
This guide studies the various factors at the sealant/concrete interface that affect joint performance.
TN144 | 978-0-86017-357-1 | PB | 1992
£55 (£28 members)

Standard tests for repair materials and coatings for concrete Part 3: stability, substrate compatibility and shrinkage
E Kay, B Staynes, G Mays, B Tillyer
Part 3 deals with the properties that need to be quantified to ensure compatibility of substrate and repair material when exposed to thermal and moisture cycles of exposure.
TN141 | 978-0-86017-336-6 | PB | 1993
£55 (£28 members)

Standard tests for repair materials and coatings for concrete Part 2: permeability tests
M B Leeming
Part 2 covers methods of test suitable for the determination of permeability to gases, water and chloride.
TN140 | 978-0-86017-335-9 | PB | 1993
£55 (£28 members)
Web buckling of rolled steel beams

M Holmes, A Asstil, L Martin

A description of a range of tests to determine the web-buckling characteristics of rolled steel beams is given in this guide.

TN102 978-0-86017-153-9 PB 1980
£55 (£28 members)

Guide to good practice for the design and installation of refractory sprayed concrete linings

W D Handley

Good practice guidance dealing with anchored, reinforced or armoured hydraulic setting sprayed concrete employed in steel casings as refractory linings.

TN97 978-0-86017-135-5 PB 1980
£55 (£28 members)

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Specifying, detailing and achieving cover to reinforcement

C568 978-0-86017-568-1 £35 + VAT (£30 + VAT members)

Freeze-thaw resisting concrete – its achievement in the UK

C559 978-0-86017-559-9 £110 + VAT (£55 + VAT members)

The use of epoxy, polyester and similar reactive polymers in construction. Volume 1: the materials and their practical applications

C537 978-0-86017-537-7 £69 + VAT (£64 + VAT members)

Selection and use of fixings in concrete and masonry: interim update to CIRIA Guide 4

TN137 978-0-86017-319-9 £20 + VAT (£15 + VAT members)

Building sands: availability, usage and compliance with specification requirements

R59 978-0-86017-076-1 £20 + VAT (£15 + VAT members)

Managing materials and components on site

SP146 978-0-86017-481-3 £40 + VAT (£35 + VAT members)

Steel reinforcement: a handbook for young construction professionals

SP118 978-0-86017-418-9 £50 + VAT (£25 + VAT members)

Manual of good practice in sealant application

SP131 978-0-86017-324-3 £25 + VAT (£20 + VAT members)

Design of profiled steel sheeting as permanent formwork

TN116 978-0-86017-227-7 £20 + VAT (£15 + VAT members)

Precast concrete tunnel linings – review of current test procedures

TN104 978-0-86017-165-2 £27 + VAT (£22 + VAT members)

Design guidance notes for friction grip bolted connections

TN98 978-0-86017-140-9 £43 + VAT (£38 + VAT members)

Combined loading tests on model prestressed concrete box beams reinforced with steel mesh

TN52 22 + VAT (£17 + VAT members)

Shear in reinforced concrete – an analytical study

TN45 164 + VAT (£59 + VAT members)

Shear in reinforced concrete – an experimental study

TN45 165 + VAT (£60 + VAT members)

Rolled concrete for dams – a laboratory study of the properties of high flyash content concrete

M R H Dunstan

This is an investigation into the different types of concrete that have been considered suitable for dams, concluding that high flyash content concrete is the most suitable.

TN105 978-0-86017-159-1 PB 1981
£55 (£28 members)
Engaging with risk
H Lewis, N Allan, C Ellinas, P Godfrey
This guide provides advice and methods for identifying, assessing, monitoring and managing risks in an informed and structured manner. It also gives advice on how to implement effective risk management and control on construction projects and where to seek specialist advice. See also SP125.
C747 [978-0-86017-752-4] PB [2014 £50 (£25 members)]

Implementing Lean in construction
In 2010 CIRIA developed a project to help raise awareness of the potential lack of awareness of Lean. The new guidance was to provide an insight as to how the change to a Lean culture could be achieved. It was written as a narrative following a Lean champion on his journey in exploring and implementing Lean and published in 2011 as C696 Build Lean: transforming construction using Lean thinking.
Following the publication of Build Lean, a series of guides on Lean has been produced that cover specific areas highlighted in the series of guides on Lean has been produced. The first edition was up-to-date with current practice, particularly in the use of electronic instruments and aspects of quality control and safety. No site engineer should be without a copy.
C709 [978-0-86017-709-8] PB [2007 £70 (£35 members)]

Guidance on catastrophic events in construction
A Gilbertson, J Kappia, L Bosher, A Gibb
Health and safety has always been important in the construction industry. Harm to people is no longer considered an inevitable by-product of construction. In 2009 the HSE commissioned CIRIA, working in partnership with Loughborough University, to carry out a wide-ranging study of the subject of catastrophic events in construction, with particular focus on the issues that the industry needs to address. The research report (RR834) was published by the HSE in January 2011, and forms the core of this publication.


Building Lean. Transforming construction using Lean Thinking
A Terry, S Smith
We meet Steve, a senior leader in a construction business as he receives news of yet another failed tender bid. Licking his wounds, and pondering what he can do differently next time, he comes across a comparative review of two projects recently completed by his company. The two schemes were similar. However the second project, significantly outperformed the first. The review reported that the team had achieved this performance through adopting what they described as a Lean Thinking approach. It was worth a look.

C679 [978-0-86017-679-8] PB [2007 £110 (£55 members)]

Business case for knowledge management
J Palmer, S Platt
The role of knowledge management (KM) is to identify what information and knowledge is important to an organisation, finding out where it is held, and mobilising it so that staff can apply it in their work. Anyone in construction who understands the importance of improving their organisation’s management of knowledge needs this guide.

C642 [978-0-86017-642-8] PB [2005 £110 (£55 members)]

Benchmarking knowledge management practice in construction
R J Dent, K N Montague
This book is designed for those managing KM in construction, service providers of all types and those interested in promoting the concept of KM within their organisations. The main objective is to provide a deeper understanding of successful KM programmes, of approaches used to overcome the challenges successfully, and to identify effective ways to improve both the short-term and the long-term competitiveness of participating companies.

C620 [978-0-86017-620-6] PB [2004 £110 (£55 members)]

Benchmarking the performance of design activities in construction
R J Dent, D A Storey
This publication summarises the findings of a confidential funders report circulated to benchmarking club members in March 2003. It is aimed at those managing design teams in construction companies of all types who are interested in promoting the concept of performance management within their organisations. It concentrates on the conclusions made in the report and recommendations for good practice, along with further background information.

C618 [978-0-86017-618-3] PB [2004 £180 (£90 members)]
Construction process and management

PPPCom – the integrated risk and value management toolkit for public private partnerships

I Cruickshank et al

The toolkit offers a common platform and language for the communication of risk issues. It helps users to improve the quality of risk and value management on their projects by providing an on-the-job educational tool for risk management. PPCCom is an easily transferrable process, as 80 per cent of the information is generic and so may be exported to other industries, with 20 per cent aimed specifically at construction projects.

C61CD [978-0-86017-566-7] PB 2001 £25 +VAT (£100 +VAT members)

It’s a people thing – practical ideas for accelerating change

J Payne, K Montague

A focus on people and good human resources practices can help accelerate change within the construction industry. This guide is a result of a survey undertaken among senior executives to identify the most useful solutions. The questionnaire is included so that readers may benchmark their organisation’s responses against the industry average approach.


The collaborative working training pack – supply chain good practice

N Jarrett et al

This training pack adopts a collaborative approach to learning, refined using feedback from extensive piloting during the development process. The modules present the principles of best practice and are supplemented by syndicate sessions designed to help delegates adapt and apply the principles in their own environment.

It comprises six modules each containing facilitator’s notes, delegates’ notes and PowerPoint slide presentation. The trainers can use and reuse the six A4 booklets as often as necessary. The CD also contains the six separate PowerPoint presentations, to accompany the modules and notes.


More for less. A contractor’s guide to improving productivity in construction

M Horner, R Duff

Few contractors have decided to improve their productivity, despite evidence suggesting that construction is one of the least profitable sectors. This guide offers some practical advice expressed in simple terms from three major contractors who have shown that productivity can be significantly improved by following some simple techniques.


RiskCom. Software tool for managing and communicating risks

HR Wallingford et al

There is no standard method to determine how risks can be examined by all members of a supply chain to enable collective management. Developing risk management systems on an organisation-by-organisation basis or even a project-by-project basis results in inefficient repetition and provides no guarantee that good practice has been adopted. This is a spreadsheet-based tool to help manage the risks to businesses or on projects, and to communicate these to other organisations and individuals.

C561CD [978-0-86017-561-2] CD 2001 £195 +VAT (£95 +VAT members)

Faster construction on site by selection of methods and materials

A Delves, R Drayton, T Sheehan

Faster construction on site can contribute significantly to the speed of project delivery. This is achieved through a process of collective decision making by the project team on the selection of construction methods and materials throughout the project process. This book shows how the selection of appropriate methods and materials can be used to help reduce construction times on site.

C560 [978-0-86017-560-5] PB 2001 £100 (£50 members)

Managing project change. A best practice guide

D Lazarus and R Clifton

“This project is not only late, it’s way over budget.” One of the recurring problems for the construction industry is that of project change and, in particular, the disruptive affects of late and numerous changes to project information. This guide presents good practice recommendations for the effective management of change on projects, including establishment and operation of change management systems and the procedures that should be adopted to control and manage its effect.

C556 [978-0-86017-556-8] PB 2001 £100 (£50 members)

Construction contract incentive schemes – lessons from experience

D Richmond-Coggan

There is little published material available in the UK on the incentivisation of contracts. This publication summarises the findings from a survey of 20 construction projects that used incentivised contracts. The studies covered utilities, transportation, civils infrastructure, building, and heavy and light process manufacturing.

C554 [978-0-86017-554-4] PB 2001 £100 (£50 members)

Innovation at the cutting edge: the experience of three major infrastructure projects

G Thomas, R Bone

Sir John Egan’s 1998 report, Rethinking construction, set challenging targets for the construction industry. This publication examines three major infrastructure projects to demonstrate how innovation contributes to achieving those targets. The three areas of innovation considered are supply chain management and partnering, risk and value management, and technical innovation.


Civil engineering design and construct – a guide to integrating design into the construction process

G Lafford, C Penny, S O’Hana, N Scott, M Tulett, A Buttfield

This book discusses the issues to be addressed when managing design and explains the attitudes and practices that are recommended to enable projects to succeed. Considerable emphasis is placed on the importance of the designer-constructor interface. It describes contractual frameworks, and contains management toolboxes for reference.

C534 [978-0-86017-534-6] PB 2001 £110 (£55 members)

The management of technical excellence in design organisations

A Alwani-Starr

Technical excellence in design is both an important short-term competitive issue and a vital ingredient for the survival and growth of an organisation in an increasingly competitive worldwide environment. How do 12 of the UK’s leading design consultants and contractors – and leaders in other comparable industries – manage it? This book shows how.

C531 [978-0-86017-531-5] PB 2000 £60 (£30 members)

Benefit trading – a practical guide for construction

M Potter, J Connaughton

Recent initiatives have sought to improve the performance and reliability of construction, resulting in a radically improved method of business known as ‘benefit trading’. This is where main construction participants trade the benefits it can offer for fair reward. This guide offers clear good practice guidance. See also C527.

C526 [978-0-86017-526-1] PB 2000 £100 (£50 members)

Buy online at: www.ciria.org
Guide to developing effective learning networks in construction
R Holti, S Whittle
Learning networks are a powerful mechanism for spreading good practice and encouraging effective innovation. However, there is confusion over what constitutes a learning network and how it may best be used to benefit a company, individuals or the industry. This book aims to address these issues.
C508 | 978-0-86017-608-4 | PB | 1999 £100 (£50 members)

Performance measurement of design activities. A summary report and key performance indicators
R Dent, G Alwani-Starr
This guide is aimed at those managing design teams in construction companies of all types and who are interested in promoting the concept of performance management within their organisations. Background information is included to help the reader put the guidance into context.
PR85 | 978-0-86017-885-9 | PB | 2001 £200 (£100 members)

Construction management education and practical application – the gap
D Mootanah
This guide looks at the size and significance of the gap that many in the construction industry believe exists between management education and its practical application. It explores the aims and methodology used in the research and the views of the various stakeholders on this issue.
PR76 | 978-0-86017-876-7 | PB | 1999 £55 (£28 members)

Final report on action research with the Construction Productivity Network
The Tavistock Institute
This guide gives further background information on the effectiveness of learning networks. It is designed to improve learning by involving researchers and network managers in planning and adopting improvements to an existing network. See also CIRIA PR66.
PR71 | 978-0-86017-875-2 | PB | 1999 £60 (£30 members)

Benchmarking for construction – a strategic review
P Jones, G Thomas
Benchmarking is a powerful tool for continuous improvement in many industries, including construction. Company directors, industry bodies and senior construction managers need this guide if they are to be better informed about the applicability of benchmarking (and its limitations) in addressing both technical and business objectives and organisational goals.
PR69 | 978-0-86017-869-9 | PB | 1998 £60 (£30 members)

Networks, learning and innovation in the UK construction industry
A H Brampton, C D Evans, A F Velegakris
This guide offers conclusions on the kinds of learning being supported by existing networks in UK construction, the main challenges faced and much more. See also CIRIA PR71.
PR66 | 978-0-86017-866-8 | PB | 1999 £60 (£30 members)

Quality management in construction – survey of experiences with BS 5750. Case study information
D Hugill, A Grice, M Ward
This publication contains case studies, covering the experiences of installing QMS to BS 5750 of 35 firms across the industry and those of 30 of their clients. It contains information from seven firms operating an alternative QMS. See also SP152.
PR32 | 978-0-86017-832-3 | PB | 1996 £40 (£20 members)

Securing the contractor’s contribution to buildability in design
A Atkinson, J Cavilla, J Wells
This book identifies the benefits and beneficiaries of improved buildability and considers the advantages of including construction expertise at the design stage.
PR27 | 978-0-86017-827-9 | PB | 1997 £40 (£20 members)

IT in construction – quantifying the benefits
S T Johnson, R W Howard, D W Churcher, D M Wager
This guide considers how organisations within the construction industry quantify the benefits they expect to obtain from any particular investment in IT. The book identifies several approaches that others might consider or develop to improve the way in which decisions regarding IT are taken, and that may promote a more objective investment in IT.
R160 | 978-0-86017-847-9 | PB | 1996 £60 (£30 members)

Target and cost-reimbursable construction contracts
J Perry, P Thompson, M Wright
Provides guidance on management and financial procedures when considering the use of target or cost-reimbursable contracts.
R85 | 978-0-86017-245-1 | PB | 1985 £60 (£30 members)

Whole-life costing. An information pack
Hywel Davies Consultancy
This guide explains the benefits to businesses of adopting whole-life performance and costing as the basis for their construction procurement. It outlines a step-by-step approach to project appraisal from the decision on whether or not to build, through to the assessment of the end result. Suppliers of construction will find this guide valuable, as they need to understand the kinds of technical and economic data that clients will ask them to provide to predict full cost of ownership.
SP157 | 978-0-86017-903-0 | PB | 2002 £30 + VAT

A simple guide to controlling risk
CIRIA
All construction projects contain risks, which may be commercial, safety, environmental or procedural. The easiest way to make sure people are not caught by surprise is to manage the risks. This guide provides an introduction to how to do this and is aimed specifically at smaller construction companies. See also CIRIA SP153.
SP154 | 978-0-86017-804-0 | PDF | 2002 £20 + VAT

A simple guide to building
CIRIA
When planning to build an extension to an office, factory or a new facility, it is important to get the best out of advisers and builders. This guide is aimed specifically at the occasional client and those unfamiliar with the modern construction industry. It provides guidance through the role of client on how to select a designer and builder and gives practical advice. It also gives further sources of information and guidance. See also CIRIA SP113.
SP153 | 978-0-86017-803-3 | PB | 2002 £20

Selecting contractors by value
A Jackson-Robbins
Many construction clients should not hand over an end product if it is wrong or poorly built. This guide helps them get maximum value rather than the lowest price. Required reading for all in client organisations responsible for construction projects, plus the consultants and others who advise them.
SP150 | 978-0-86017-491-2 | PB | 1998 £110 (£55 members)

The control of quality on construction sites
D W Churcher, S T Johnson
This publication presents the results of a project that examined how contractors control site operations and identified common procedures that had beneficial effects on the control of end product quality.
SP140D | 978-0-86017-462-2 | PDF | 1996 £60 + VAT (£30 + VAT members)

Buy online at: www.ciria.org
Specialist trade contracting – a review
W Hughes, C Gray, J Murdoch
This book is designed to promote a positive approach to the good management in the relationships between clients, designers, contractors and specialist trade contractors. It includes the integration of specialist contractor design into the overall design, the influences of production processes on design, and management.

Quality management in construction – survey of experiences with BS 5750.
Report of key findings
D Hugill, A Grice, M Ward
This publication presents the findings from a survey of experiences of applying BS 5750 within construction and suggests that this can be an effective way of managing quality within the industry. See also PR32.

Control of risk: a guide to the systematic management of risk from construction
P S Godfrey
Take no risks without this simple, practical introduction to identifying, assessing, monitoring and managing risk from construction. Easy-to-use format with toolboxes to guide readers through basic techniques and advanced analytical methods.
SP125 [978-0-86017-441-7] PB [1996] £60 (£30 members)

Value by competition: a guide to the competitive procurement of consultancy services for construction
J N Connaughton
This guide is designed to assist all those who procure consultancy services, including clients, their advisers or contractors. It will help to identify when competition is appropriate, understand the implications of competition and manage the competitive process. First-time clients should also purchase CIRIA SP113.
SP117 [978-0-86017-414-1] PB [1996] £100 (£50 members)

Planning to build? A practical introduction to the construction process
M Potter
This book is vital reading for those who are about to commission some building work and it is their first experience of the construction industry. It introduces potential clients to the many different ways of obtaining a new building. It also gives information on asking the right questions and where to get expert advice.

The impact of European Communities’ policy on quality management in construction
R Grover, A Lavers
This publication was produced because, with the aim of completing the single internal market by the end of 1992, UK membership of the EC may affect UK quality management policies. The single market removes some legal and administrative barriers to trade, and several measures have implications for quality management.

Quality management in construction – implementation in design services organisations
G M B Oliver (ed)
Detailed guidance for those wishing to adopt a quality system that meets the requirements of BS 5750:1:1979.

Quality management in construction: interpretations of BS 5750:1987 – ‘quality systems’ for the construction industry
G M B Oliver
This title interprets the clauses of BS 5750 and covers design, construction/installation work and monitoring.
SP74 [978-0-86017-311-3] PB [1990] £30 (£15 members)

Design of shear wall buildings

Reinforcement connector and anchorage methods
R92 [978-0-86017-188-3] £25 + VAT (£20 + VAT members)

Lack of fit in steel structures
R87 [978-0-86017-244-7] £25 + VAT (£20 + VAT members)

Lateral movement of heavy loads
R68 [978-0-86017-091-4] £20 + VAT (£15 + VAT members)

Tables of minimum striking times for soffit and vertical formwork
R67 [978-0-86017-033-4] £20 + VAT (£15 + VAT members)

Design of riprap slope protection against wind waves
R61 [978-0-86017-042-6] £28 + VAT (£23 + VAT members)

Design and construction of circular biological filter walls
R58 [978-0-86017-058-7] £19 + VAT (£14 + VAT members)

Buy online at: www.ciria.org
Waste minimisation in construction – training pack
B Shorter
This comprehensive training pack has been developed to assist those involved in training construction staff. It includes users’ instructions, trainers’ notes, two quizzes, a video and copies of CIRIA C536 and SP133.
C555TP │978-0-86017-555-1│TP │2001
£295 +VAT (£195 +VAT members)

Demonstrating waste minimisation benefits in construction
S Coventry, B Shorter, R Kingsley
This guide aims to demonstrate the practical principles of waste reduction, reuse and recycling in the construction industry and how waste can cost the developer and contractor in many different, often indirect, ways. It is intended for use by all organisations involved in construction, primarily clients, developers, planners, designers and contractors.
C536D │978-0-86017-536-0│PDF │2001
£120 +VAT (£60 +VAT members)

Tools for measuring and forecasting waste generated on site. Scoping study
J Kwan, H Mallett, S Mason and D Spence
Reducing waste requires simple and effective means of measuring and forecasting the production of waste on construction sites. This study was based on consultation with industry members, a workshop and a review of published data from across Europe. It establishes a need for a waste minimisation tool to help construction practitioners to identify priority waste minimisation plans.
PR83 │978-0-86017-883-5│PB │2001
£60 (£30 members)

Guidance on the disposal of dredged material to land
J Brooke
This book guides the user on the safe, economic and effective disposal and management of dredged material in-line with the aims of the Environmental Protection Act 1990 and associated waste management regulations.
R157 │978-0-86017-450-9│PB │1996
£80 (£40 members)

Waste minimisation and recycling in construction – boardroom handbook
S Coventry, A Woolveridge, V Patel
Policy makers have a big responsibility in minimisation and recycling. The construction industry wastes more than almost any other industry, and yet it is both simple and cost-effective to reduce, reuse and recycle construction waste, especially with leadership from the top.
SP135 │978-0-86017-320-5│PB │1999
£70 (£35 members)

Waste minimisation and recycling in construction – design manual
S Coventry, P Guthrie
The construction industry can no longer afford to produce the huge quantities of waste it has in the past. What’s more, the economic and environmental benefits to be gained from waste minimisation and recycling are enormous. Here are guidelines on three key aspects – reducing the resources needed for construction, reducing the quantity of waste from sites, and improving the reclamation of waste materials.
SP134 │978-0-86017-500-1│PB │1998
£70 (£35 members)

Waste minimisation in construction – site guide
P M Guthrie, A C Woolveridge, V S Patel
Full of practical tips on how to reduce, reuse and recycle construction and demolition wastes, this handbook is for everyone on site. Site managers can use it as a basis for talks, and it is a useful guide for site workers. This site guide highlights why and how waste should be managed properly. It is an entertaining read with a vital message.
SP133 │978-0-86017-482-0│PB │1997
£70 (£35 members)

Photocopies of out of print titles
The following titles are now out of print but bound photocopies of these can still be purchased.
Full details can be found in the CIRIA bookshop via the website: www.ciria.org

Waste minimisation and recycling in construction – technical review
PR28 │978-0-86017-828-6
£45 +VAT (£40 +VAT members)

Supervision of sewers for adoption
R118 │978-0-86017-308-3
£30 +VAT (£25 +VAT members)

Waste minimisation and recycling in construction – a review
SP122 │978-0-86017-428-8
£60 +VAT (£30 +VAT members)

Prestressed concrete beams: controlled demolition and prestress loss assessment
TN129 │978-0-86017-277-2
£22 +VAT (£17 +VAT members)
Environmental management

**Fit-out environmental good practice on site guide**
Harris, S

The construction industry is under increasing pressure to ensure its activities have reduced impact on the environment. The fit-out sector faces unique challenges including the need for a quick turnaround, controlling cost and programme, and site constraints. This guide provides practical guidance to support the delivery of fit-out projects applicable across a range of sectors.

C757 [978-0-86017-763-0] PB 2015
£70 (£35 members)

**Top 10 Environmental good practice on site guide (fourth edition)**
P Charles, P Edwards

This guide was first published in 1999 and the latest edition reflects changes in legislation, developments in practice and emergence of new topics that the industry needs to consider. It is a user-friendly reference tool and training aid that provides practical advice about managing construction on site to minimise environmental impacts. It is relevant to all concerned within the construction process.

C741 [978-0-86017-746-3] PB 2015
£70 (£35 members)

**Top 10 Environmental good practice on site pocket book (fourth edition)**
C Law, S D'Aleo (eds)

Good environmental management on site requires a team effort between main contractors, subcontractors, designers, clients and suppliers. This pocket book provides clear, up-to-date advice on the management of a range of environmental issues that may be encountered on site and presents and encourages the adoption of good practice to reduce the environmental impacts due to construction, regardless of whether this means complying with or going beyond the legal requirements.

The book covers the following environmental issues: habitat and ecology, historic environment, land contamination, nuisance, resource management, traffic management, and water pollution prevention.

Pack of 10: £40 (£80 members)

**The benefits of large species trees in urban landscapes: a costing, design and management guide**
T Armour, M Job, R Canavan

The UK’s large trees play an important role in combating the effects of growing urbanisation. While all trees are beneficial to an urban environment, larger species are particularly significant as the most important single elements of urban green infrastructure. This guide aims to highlight the vital importance of large species trees, including the retention and improvement of existing trees and carrying out new planting in streets, squares and parks for new and existing developments.

£120 (£60 members)

**Delivering biodiversity benefits through green infrastructure**
K Dale, C Thomson, J Kelly, D Hay, K MacDougall

The term green infrastructure (GI) can be used to describe the integrated aspects of the design and construction of a project that deliver a strategically planned network of natural and man-made green (land) and blue (water) spaces that sustain biodiversity and natural processes. This guide aims to give clear messages about the goals and objectives of GI for the construction industry. It also serves as a tool to enable construction professionals to work together with other disciplines and maximise the opportunities presented by civil engineering and building projects, while minimising any negative effects on the environment.

C711 [978-0-86017-713-5] PB 2011
£110 (£55 members)

**Use of vegetation in civil engineering**
N J Coppin, I G Richards (eds)

This guide provides a background to bioengineering and practical information on the design and implementation of vegetative methods for slope stabilisation, water erosion control, watercourse and shoreline protection, wind erosion control, shelter, noise reduction and surface protection.

£80 (£40 members)

**Noise and vibration from road and rail**
T Lawrence, J Dakin, P Norris, M Forni

With increasing transport requirements, the promotion of urban regeneration and higher housing quality expectations, noise and vibration issues have to be carefully addressed when building new infrastructure or undertaking developments next to existing transportation infrastructure. This guide gathers information from a wide range of sources and aims to assist informed communication, discussion and decision making for those with no or little knowledge or experience of noise and vibration from road and rail.

C693 [978-0-86017-693-0] PB 2011
£90 (£40 member)

**Working with wildlife: guidance for the construction industry**
J Newton, B Nicholson, R Saunders

The UK has a long history of wildlife conservation. This guide is intended to be used to allow those working on construction projects to stay within the law, and to understand and adopt good practice in relation to wildlife. It gives background information on the fundamentals of ecology, considers the relationship between ecology and construction, and an overview of the legislation governing action that can be taken, and how to manage these. Toolboxes talks, and habitat and species briefings are provided on an accompanying CD.

C691 [978-0-86017-691-6] PB 2011
£140 (£70 members)

**Environmental good practice – training resource**
I Audus

The construction industry is coming under increasing pressure to ensure its activities have a minimal affect on the environment. This training resource has been produced to help all concerned with those activities to follow environmental good practice. The comprehensive programme of resources provided supports training sessions ranging from 90 minutes to a full day.

C678TP [978-0-86017-678-7] TP 2008
£250 +VAT (£125 +VAT members)

**Easy access environmental management Phases 1–6 (revised)**
G Hail, P Burr

This package has been developed to help construction companies understand and implement an effective environmental management system. It includes detailed guidance notes, template documents, and a set of top tips, outlining the easiest and most effective ways of achieving the requirements of each stage in the guidance notes.

It is an update to C640CD and covers Phases 1–6 of BS 8555:2003 including integration of the environmental management system with other systems, such as quality, and health and safety. The package is complemented by a series of CIRIA training workshops to help companies put the ‘easy access’ approach into practice.

£90 +VAT (£45 +VAT members)
Water key performance indicators and benchmarks for offices and hotels
R Waggett, C Arotsky

Increasingly, there is a requirement to safeguard water supplies in the UK and implement sustainable water use. This guide describes how suitable benchmarks have been found for water use in offices and hotels across England and Wales that will enable managers to understand whether their property is performing well or poorly in comparison with other similar buildings in the UK.

C657 | 978-0-86017-657-2 | PB | 2006
£80 (£40 members)

Control of water pollution from linear construction projects. Site guide
E Murnane, A Heap, A Swain

Efforts are being made at all levels within the construction industry to improve environmental performance. Good practice advice is given for identifying appropriate methods of protecting the water environment and for carrying out most activities encountered on site. See also CIRIA C648.

C649 | 978-0-86017-649-7 | PB | 2006
£70 (£35 members)

Control of water pollution from linear construction projects. Technical guidance
E Murnane, A Heap, A Swain

This guidance addresses the control of water pollution throughout the whole project cycle, from the design of a scheme, through to construction and commissioning. It also highlights issues encountered on upgrades and online replacement, and sets out generic good practice and procedures for controlling water pollution from construction sites in England, Wales, Scotland and Northern Ireland.

C648 | 978-0-86017-648-0 | PB | 2006
£120 (£60 members)

A guide to rabbit management
S Wray

This publication is a summary of existing knowledge about the European rabbit Oryctolagus cuniculus, and offers guidance on the management of rabbit populations. The results of consultations and literature reviews are set out and the principles of an integrated management system for all types of land managers are outlined. It includes detailed chapters on rabbit damage and control methods as well as information on the history of the rabbit in Europe, rabbit ecology and biology, myxomatosis and Rabbit Haemorrhagic Disease (RHD).

C645 | 978-0-86017-645-9 | PB | 2006
£110 (£55 members)

Building greener. Guidance on the use of green roofs, green walls and complementary features on buildings
P Early, D Gedge, J Newton, S Wilson

Green roofs and walls are widely used to provide a range of benefits for the built environment. Numerous studies have been carried out to monitor and assess the effectiveness of green roofs and green walls in the areas of biodiversity, stormwater management and climate change mitigation and adaptation. This guide results from a detailed assessment of published information and offers guidance on their design, construction and operation.

C644 | 978-0-86017-644-2 | PB | 2007
£120 (£60 members)

Sustainable construction – implementing targets and indicators. Experiences from CIRIA's Pioneers' Club
J Kersey

Despite intensive development of industry key performance indicators (KPIs), practical understanding of their implementation is in its infancy. This book describes the trialling of a set of KPIs for sustainable construction and distils the lessons learned to enable their dissemination to the wider industry.

C633 | 978-0-86017-633-6 | PB | 2004
£110 (£55 members)

Habitat translocation – a best practice guide
P Anderson, P Groutage

Habitat translocation is the process of moving soils with their vegetation and any animals that are associated with them. This guide sets out minimum standards for habitat translocations, and has been broadened to apply to any construction project. It does not promote translocations, but seeks to set high standards to help avoid some of the failures found in past translocation projects.

C600 | 978-0-86017-600-8 | PB | 2003
£120 (£60 members)

Guidance on the costing of environmental pollution from construction
M Postle, J Vernon

Construction companies are responsible for more pollution incidents than any other industry sector. This guide sets out simple methods for evaluating pollution potential and costs during pre-contract risk assessment.

C565 | 978-0-86017-565-0 | PB | 2001
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Integrating safety, quality and environmental management
CIRIA

Aimed at strategists and senior managers within construction organisations, this publication provides good practice guidance on integrated management of quality, environment, and health and safety to suit both their customers’ needs and their own site procedures.

C509 | 978-0-86017-509-4 | PB | 2000
£110 (£55 members)

Photocopies of out of print titles

The following titles are now out of print but bound photocopies of these can still be purchased.

Full details can be found in the CIRIA bookshop via the website: www.ciria.org

Wildlife fencing design guide
C646 | 978-0-86017-646-6 | £90 (£45 members)

Climate change risks in building – an introduction
C638 | 978-0-86017-638-1 | £110 (£55 members)

Grassmoor Lagoons – organic sludge bioremediation field trials
PR40 | 978-0-86017-840-8 | £42 + VAT (£37 + VAT members)

Building greener. Guidance on the use of green roofs, green walls and complementary features on buildings
P Early, D Gedge, J Newton, S Wilson

Green roofs and walls are widely used to provide a range of benefits for the built environment. Numerous studies have been carried out to monitor and assess the effectiveness of green roofs and green walls in the areas of biodiversity, stormwater management and climate change mitigation and adaptation. This guide results from a detailed assessment of published information and offers guidance on their design, construction and operation.

C644 | 978-0-86017-644-2 | PB | 2007
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Grassmoor Lagoons – organic sludge bioremediation field trials
PR40 | 978-0-86017-840-8 | £42 + VAT (£37 + VAT members)
Managing urban flooding from heavy rainfall – encouraging the uptake of designing for exceedance. Recommendations and summary
C Digman, P Haighreaves

Urban areas are susceptible to floods. Making our drainage systems big enough to cope with every possible rainfall event is unsustainable. In 2006 CIRIA published C635 and through this new guidance, we investigated the reasons why uptake of the approach has been slow and have developed resources to help encourage designing for exceedance. This research project includes C738b and C738c.

C738b [978-0-86017-742-5] [PDF] [2014]
C738b Lessons and success factors [PDF] [2014]
C738c Case studies [PDF] [2014]
Available to download from: www.ciria.org/freepublications

Land use management effects on flood flows and sediments – guidance on prediction
N McIntyre, C Thorne (eds)

This guide draws primarily on evidence obtained through the Flood Risk Management Research Consortium (FRMRC) project, but also includes some findings generated by other projects. It offers guidelines for evaluating and predicting land use management impacts on flood flows and catchment scale sediment dynamics, by reviewing the applicability and utility of analysis tools and approaches that are available in the UK.

C719D [978-0-86017-722-7] [PDF] [2013]
Available to download from: www.ciria.org/freepublications

Culvert design operation guide supplementary technical note on understanding blockage risks
N Wallerstein, S Arthur, J Blanc

While there is recognition that culverts present significant flood risks, there have been few systematic investigations in the UK of blockage risk associated with trash accumulation at culverts and other hydraulic structures. This technical note outlines the findings from the project, and accompanies CIRIA C689.

C720D [978-0-86017-723-4] [PDF] [2013]
Available to download from: www.ciria.org/freepublications

Site handbook for the construction of SuDS
B Woods-Ballard, R Kellagher, P Martin, C Jefferies, R Bray, P Shaffer

Sustainable drainage systems (SuDS) are designed to contribute to the achievement of sustainable development. This handbook provides guidance on the construction of SuDS to help their effective adoption within developments and is aimed at site engineers and SuDS practitioners.

C698 [978-0-86017-698-5] [PB] [2007]
£40 (£20 members)

Flood resilience and resistance for critical infrastructure
W McBain, D Wilkes, M Retter

This publication provides an overview of the regulatory framework and outlines the main issues now faced by the industry in this area. Flood risk management for critical infrastructure across the UK is considered with respect to flood risk assessment, adopting resilience and resistance measures and investment prioritisation. Owners need to develop long-term strategic investment approaches that allow for optimised investment decision making.

C688 [978-0-86017-688-6] [PB] [2010]
£30 (£15 to members)

Planning for SuDS – making it happen
S Dickie, L Ions, G McKay, P Shaffer

Sustainable drainage is becoming the preferred approach to managing rainfall and surface water in developments. Delivering sustainable drainage systems (SuDS) can provide several benefits for those that live or work in or around a development. This guidance has been put together to help realise the many benefits of delivering SuDS in developments and overcome any challenges. It is a step-by-step guide on planning, specifying and delivering SuDS, dispels myths and supports the implementation of sustainable drainage.

C687 [978-0-86017-687-9] [PB] [2010]
£100 (£50 members)

The potential for water pollution from railways
M Osborne, K Montague

The operation of a railway has the potential to lead to pollution as water drains from the railway into watercourses, which may arise from a wide variety of sources. The rail industry has obligations to minimise pollution and its risks. This guide summarises a study into the legislative framework, the overall structure of the railway industry in the UK, the potential sources of pollution, the responsibilities for pollution, the availability of guidance on good practice, and actions that may need to be taken. It is essential reading for anyone who has responsibilities for operational management or environmental management of railway activities.

C643 [978-0-86017-643-5] [PB] [2005]
£60 + VAT (£30 + VAT members)

Designing for exceedance in urban drainage – good practice
C Digman, D Balmforth, R Kellagher, D Butler

This guidance aims to provide good practice advice for the design and management of urban sewerage and drainage systems to reduce the impacts that arise when flows occur that exceed their capacity.

C635 [978-0-86017-635-0] [PB] [2006]
£120 (£60 members)

Communication and engagement in local flood risk management. Companion guide
D Daly, R Jodieri, S McCarthy, K Pygott, M Wright

This companion guide should be read together with CIRIA C751 and is not intended as a standalone guide. Users may include flood risk managers, drainage engineers, planners and communication and engagement professionals from LLFAs, district authorities and other local authority organisations.

C751 [978-0-86017-757-9] [PDF] [2015]
Available to download from: www.ciria.org/freepublications

Communication and engagement techniques in local flood risk management
D Daly, R Jodieri, S McCarthy, K Pygott, M Wright

This guide provides practical help to lead local flood authorities (LLFAs), risk management authorities (RMAs), and other authorities with responsibilities, for managing local flood risk. It is relevant to practitioners in England, Wales, Scotland, Northern Ireland, and Ireland.

C752 [978-0-86017-758-6] [PDF] [2015]
Available to download from: www.ciria.org/freepublications

The Top 10

The SuDS Manual
B Woods-Ballard, S Wilson, H Udale-Clarke, S Illman, T Scott, R Ashley, R Kellagher

This publication covers the planning, design, construction and maintenance of sustainable drainage systems (SuDS) to assist with their effective implementation within both new and existing developments. It looks at how to maximise amenity and biodiversity benefits, and deliver the key objectives of managing flood risk and water quality. There is also supporting information covering topics such as materials, landscape design, maintenance, community engagement and costs and benefits.

C753 [978-0-86017-769-3] [PB] [2015]
£395 (£295 members)
Sediment management in urban drainage catchments

D Butler, P Clark

Sediment can be found in urban drainage catchments on the surface, in gully pots, in drains and sewers, and at sewage treatment works. This publication reviews the problems, sources, characteristics and quantities of sediment in each part of the drainage system and includes information on sediment build-up rates on the surface and in gully pots. It should be of practical help to cleaning managers and drainage/sewerage engineers.


Design of reinforced grass waterways

H W Hewlett, L A Boorman, M E Bramley

This guide sets out the procedure and principles for the planning and design of reinforced grass waterways. Hydraulic, geotechnical and botanical aspects are included along with worked examples. Consideration relating to specification, construction and ongoing management is provided, as well as data from full-scale trials on prototype reinforced grass channels.


Control of groundwater for temporary works

S H Sommerville

This is a guide to the selection and design methods for the control of groundwater during construction works. It includes the various methods of dewatering control available, identification of the ground, methods of assessing permeability, design of well systems and approximate costs etc. It also draws attention to the various legal aspects and statutory regulations in force. Safety aspects and particular dangers are highlighted.

R113 [978-0-86017-261-0] PB [1986] £60 (£30 members)

Drainage of development sites – a guide

R Kellagher

This guide is intended to assist all those involved with foul and surface water drainage of development sites. It is aimed specifically at developments in the UK based on national requirements and international good practice. It is intended that general engineering practitioners, developers and architects will use this book as a first point of reference for guidance and information on all aspects related to the hydraulics of site drainage. Sites range from small suburban developments to large industrial estates, each having specific features that require particular attention.


Photocopies of out of print titles

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Full details can be found in the CIRIA bookshop via the website: www.ciria.org

Model agreements for sustainable water management systems. Model agreements for SuDS
CG25 [978-0-86017-625-1] £70 (£35 members)

Sustainable urban runoff management: scoping study and proposal for further work
PR20 [978-0-86017-620-0] £20 +VAT (£15 +VAT members)

Review of the design and management of constructed wetlands
R180 [978-0-86017-485-1] £65 +VAT (£60 +VAT members)

A study of the impact of urbanisation on the Thames Gravels Aquifer
R129 [978-0-86017-370-0] £59 +VAT (£54 +VAT members)

Design of low-lift pumping stations – with particular application to pumping wastewater
R121 [978-0-86017-312-0] £35 +VAT (£30 +VAT members)

The hydraulic design of stepped spillways (second edition)
R33 [978-0-86017-061-7] £23 +VAT (£18 +VAT members)

The engineering implications of rising groundwater levels in the deep aquifer beneath London
SP69 [978-0-86017-303-8] £25 +VAT (£15 +VAT members)
Addressing crime and disorder through planning and design
CIRIA-led consortium
This guide aims to provide advice about the issues that arise from the area of ‘crime and disorder’. It explores how planners and designers can respond to these issues arising from threats to social and physical well-being and infrastructure, taking account of operational issues including day-to-day management and maintenance. It focuses on public places such as major transport hubs and shopping centres, and the information provided may be useful in many different situations.

C710 | 978-0-86017-712-8 | PB | 2011
£80 (£40 members)

Not just an accident
CIRIA
Prevent accidents. Be aware of the dangers! Construction sites are extremely dangerous places, but it is estimated that up to 70 per cent of fatalities could be prevented with appropriate management action. This DVD alerts young professionals and new site workers to the most common hazards they face on construction sites. Designed to be used in conjunction with CIRIA SP151, but available separately.

C705DVD | 978-0-86017-705-0 | DVD | 1993
£60 + VAT (£30 + VAT members)

Crane stability on site (second edition)
D Lloyd (ed)
Cranes are some of the most widely operated items of plant on construction sites and if misused, they are lethal. This guide provides information on type and choice of crane, loading cases, ground conditions, and foundation details. It contains diagrams, symbols, tables and checklists, plus accident case studies with dramatic photographs, and information of the LLOER Regulations 1998.

C703 | 978-0-86017-703-6 | PB | 2003
£70 (£35 members)

J Idson, J Carpenter
The Construction (Design and Management) Regulations (CDM) 1995 provides the regulatory impetus for designers to give due attention to the whole-life aspects of facilities. This book provides good practice guidance aimed specifically at designing for safe access for maintenance and repair. It gives an overview of the commercial and regulatory backdrop, statutory obligations and alternative procurement processes. This is followed by targeted design guidance for a variety of building elements and work situations.

C686 | 978-0-86017-686-2 | PB | 2009
£120 (£60 members)

Safer stairs in public places – assessment of existing stairs
A Gilbertson (ed)
Design and construction of safe stairs has a significant effect upon daily life and there are specific requirements in the Building Regulations. This guide is intended to provide sufficient information for non-experts to make an initial assessment of stair safety leading, where necessary, to a more detailed investigation.

C722 | 978-0-86017-725-8 | PDF | 2013
£55 + VAT (£28 + VAT members)
Available to download from: www.ciria.org/freepublications

Safer escalators in public places
A Gilbertson
In 2013 CIRIA published guidance on stair safety. This publication accompanies this work and is specific to escalators. While escalators are machines that, once installed, provide few opportunities for change, there are maintenance and operational issues to be considered during in-use safety assessments. Similarly, the difficulty of making physical changes later (either to the escalator itself or in the surrounding walking routes) adds to the need for design at installation to carefully consider the subsequent operational issues.

C732 | 978-0-86017-736-4 | PDF | 2013
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C732 | 978-0-86017-736-4 | PDF | 2013
Available to download from: www.ciria.org/freepublications

CDM 2015 – construction work sector guidance for designers, fourth edition
Ove Arup & Partners, A Gilbertson
The Construction (Design and Management) Regulations 2015 (CDM 2015) apply to construction work undertaken in the UK and under these Regulations designers have duties on all projects. This guide helps any person or organisation acting as a designer to meet their obligations with respect to construction risks in an effective manner. Advice on considering ‘in-use’ risks is provided in CIRIA C755.

C755 | 978-0-86017-756-2 | PB | 2015
£80 (£40 members)

CDM 2015 – workplace ‘in-use’ guidance for designers, second edition
A Gilbertson
The Construction (Design and Management) Regulations 2015 (CDM 2015) apply to construction work undertaken in the UK. This guide helps any person or organisation acting as a designer to meet their obligations with respect to designing, taking account of workplace ‘in-use’ risks. Advice on considering construction risks is provided in the accompanying guide CIRIA C755, which also contains more general information about designers’ duties under CDM.

C756 | 978-0-86017-762-3 | PB | 2015
£60 (£30 members)

Top 10
Site safety handbook (fourth edition)
S C Bleiby, A L Gilbertson
Building and civil engineering construction sites contain many hazards. The risks to engineers, architects and surveyors – and especially to professionals going to work on them for the first time – are considerable. This fourth edition has been prepared to alert construction professionals to the hazards often present on site. It has been revised to reflect the recent changes in health and safety regulations, in particular within the context of the Health and Safety at Work etc Act 1974. It is not a legal document, nor a comprehensive manual on site safety, but it is designed as an easy-to-read, reference guide for use on site.

C669 | 978-0-86017-669-5 | PB | 2008
£70 (£35 members)

Tower crane stability
H Skinner, T Watson, B Dunkley, P Blackmore
The guide is intended to promote the safe design of foundations for, and use of, tower cranes through an improved understanding of temporary works design and health and safety issues. It highlights some key situations in which a specialist should be consulted and covers specific guidance for designers of temporary works involving tower cranes. See also CIRIA C703.

C654 | 978-0-86017-654-1 | PB | 2006
£110 (£55 members)

J Idson, J Carpenter
The Construction (Design and Management) Regulations (CDM) 1995 provides the regulatory impetus for designers to give due attention to the whole-life aspects of facilities. This book provides good practice guidance aimed specifically at designing for safe access for maintenance and repair. It gives an overview of the commercial and regulatory backdrop, statutory obligations and alternative procurement processes. This is followed by targeted design guidance for a variety of building elements and work situations.

C686 | 978-0-86017-686-2 | PB | 2009
£120 (£60 members)

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C722 | 978-0-86017-725-8 | PDF | 2013
£55 + VAT (£28 + VAT members)
Available to download from: www.ciria.org/freepublications
Health and safety

Safer surfaces to walk on – reducing the risk of slipping
D Lazarus, C Perkins, J Carpenter
Slipping accidents cause many thousands of occupational major injuries each year, yet the perception by the public, the workforce and those who design or manage floors in buildings, is that these accidents are inevitable. This guide has been produced as part of the Health and Safety Executive’s programme to reduce the number of slips and trips accidents in the UK. It is based upon research by the HCL and in particular the slip potential model, and is designed to provide designers, procurers and managers of floors with good practice guidance.

Guidance on glazing at height
A Keiller, A Walker, S Ledbetter, W Wolmuth
This book provides information on the glazing used within both new and existing buildings. Particular emphasis is given to the safety and attendant issues concerning glass façades, glass roofs and canopies, and glass barriers that protect a drop. It will be of value to the broadest spectrum of designers, ie clients, architects, engineers, specifiers, main contractors and specialist sub-contractors, involved in the use of glass in buildings. Others concerned with the design, construction, maintenance, demolition and operation of buildings over time will also find this book useful.

Chemical storage tank systems – good practice. Guidance on design, manufacture, installation, operation, inspection and maintenance
S Cassie, L Seale
This guidance is useful reading for all organisations represented on a site where chemicals are stored, whether as promoter, owner, user, designer, main contractor or sub-contractor. The advice given is based on both adopted common practice from chemical storage sites, and more recent practices. It is applicable to all levels of experience – not just those new to chemical storage systems. See also CIRIA W2 and W3.

How much noise do you make? A guide to assessing and managing noise on construction sites
A J Wills, D W Churcher
This pocket guide tackles an aspect of construction that can cause the greatest damage to good relations with the general public – excessive noise. As well as creating difficulties with the public, excessive noise is a significant hazard for site workers, and attracts increasingly stringent legislative action. This guide has the answers to noise measurement and management.

Site safety for the water industry
CIRIA
Don’t let anyone start work in the water industry without this guide. The first part covers on-site preparation and behaviour, the second deals with 23 common activities and related hazards. There are also sections on accident reporting and investigation.

Temporary access to the workforce: a handbook for young professionals
D Lloyd, T Kay
Another indispensable CIRIA site aid to young, and not so young, designers and client representatives. Providing safe access for workers and supervisors is vital.

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Sound control for homes
R127 [978-0-86017-362-5]
£40 + VAT (£35 + VAT members)

A guide to reducing the exposure of construction workers to noise
R120 [978-0-86017-310-6]
£15 + VAT (£10 + VAT members)

Rationalisation of safety and serviceability factors in structural codes
R63 [978-0-86017-017-4]
£50 + VAT (£45 + VAT members)

Medical code of practice for work in compressed air, third edition
R44 [978-0-86017-175-1]
£25 + VAT (£20 + VAT members)

Planning to reduce noise exposure in construction
TN138 [978-0-86017-317-5]
£28 + VAT (£23 + VAT members)

Exposure of construction workers to noise
TN115 [978-0-86017-225-3]
£20 + VAT (£15 + VAT members)
Infrastructure asset management

**Dam and reservoir conduits. Inspection, monitoring, maintenance and repair**

A Hughes, D Bruggemann, K Gardiner, T Blower, M Dearie, D Nash

Reservoir owners and safety engineers have long known or suspected that conduit problems have led directly to a significant number of dam failures and incidents. This guide covers a wide range of aspects to conduits such as forms and materials used in their construction, failure modes, methods for inspection and assessment (ie surveys, integrity testing, and leakage investigations), and the instrumentation that can be used for such testing.

C743 | 978-0-86017-748-7 | PB | 2015
£150 (£75 members)

**Manual on scour at bridges and other hydraulic structures, second edition**

A Kirby, M Roca, A Kitchen, M Escaramelia, O Chesterton

This updated version to CIRIA C551 published in 2002 provides specific guidance within the contexts, regulations and legislation of the UK (England, Wales, Scotland and Northern Ireland) and Republic of Ireland. It is for engineers and asset managers engaged in the design, construction, operation and maintenance of structures in the water environment that may be subject to scour of erodible beds or banks.

C742 | 978-0-86017-747-0 | PB | 2015
£180 (£90 members)

**Transport infrastructure drainage: condition appraisal and remedial treatment**

T Spink, J Duncan, A Lawrence, A Todd

After a long period of neglect, it is increasingly recognised that an effective drainage asset can significantly enhance the performance and life of other major assets such as the pavement, permanent-way and earthworks. This book provides good practice guidance for the condition appraisal, maintenance and remedial treatment of transportation infrastructure drainage.

C714 | 978-0-86017-717-3 | PB | 2014
£75 (£35 members)

**Quantitative assessment methods for the monitoring and inspection of flood defences: new techniques and recent developments**

G Long, M Smith, M Mawdesley, A Taha

Work carried out under the initial phase of the FRMRC devised a measured step towards performance-based visual inspection (WP4.3) and investigated state-of-the-art methods for acquiring quantitative data for use in flood risk management (WP5.1). This resulting guidance contains promising new methods of quantitative assessment that are relevant to flood defence asset management.

C710 | 978-0-86017-720-3 | PDF | 2013
Free to download from: www.ciria.org/frmc

**Culvert design and operation guide**

M Balkham, C Fosbery, A Kitchen, C Rickard

A culvert provides the means of allowing infrastructure to cross a watercourse. This guide, which replaces CIRIA R168, adopts a whole-life approach to the design and operation of culverts. It also addresses the management of culverts in the context of both the drainage basin in which they sit, and the infrastructure that they form part of.

C689 | 978-0-86017-689-3 | PB | 2010
£160 (£80 members)

**Whole-life infrastructure asset management across industries (Phase 2)**

R Hooper, R Armitage, A Gallagher, T Osorio

This guide provides a focus on the strategic and tactical aspects of asset management, including setting asset management policy and strategy, and developing and adopting asset management plans. It highlights the importance of information management for long life civil engineering infrastructure assets, and briefly describes systems to manage this information.

C677 | 978-0-86017-677-0 | PB | 2009
£110 (£55 members)

**Tunnels: Inspection, assessment and maintenance**

L McKiribs, R Elmers, K Roberts

This book provides guidance on the management, condition appraisal, maintenance and repair of the structural elements of existing infrastructure tunnels, focusing primarily on older infrastructure and certain tunnel types. It is based on a detailed review of published literature and infrastructure owners’ procedures, consultation with experts and practitioners within the field, and case studies demonstrating good practice.

C671 | 978-0-86017-671-8 | PB | 2010
£150 (£75 members)

**Iron and steel bridges: condition appraisal and remedial treatment**

G Tilly, S Matthews, D Deacon, J De Voy, P Jackson

This guide is aimed to meet the requirements of those with a general knowledge of bridge engineering and asset management and who need further information about the performances and specific requirements of iron and steel bridges. It provides and explains good practice, and offers information for general application and relevant to iron and steel bridges. Examples of successful schemes are included, and case studies are given as both successful and unsuccessful examples of repair and strengthening projects.

C664 | 978-0-86017-664-0 | PB | 2007
£140 (£70 members)

**Intelligent monitoring of concrete structures**

N Buenfeld, R Davies, A Karimi, A Gilbertson

Most of the developed world’s infrastructure is built in concrete. Management of concrete structures requires an understanding of the deterioration processes involved. Intelligent monitoring is automated monitoring that provides explicit information on current condition and deterioration rates to assist in predicting the remaining life of a component or structure.

C661 | 978-0-86017-661-9 | PB | 2008
£90 (£45 members)

**Masonry arch bridges: condition appraisal and remedial treatment**

L Mckiribs, M Melbourne, A Sawar, C Gallard

Masonry arch bridges have proved to be reliable, enduring structures and remain a vital part of the road, rail and waterway infrastructure in the UK and other countries, but they are facing several challenges. To ensure the continued efficient use of these assets in the future it is necessary to manage and maintain them carefully, with due regard to, and an adequate understanding of, their special characteristics and needs. This book provides information and guidance that will assist those responsible for this task in achieving their aims.

C656D | 978-0-86017-656-5 | PDF | 2006
£140 +VAT (£70 +VAT members)

**Infrastructure embankments – condition appraisal and remedial treatment (second edition)**

J Perry (updater), M Pedley, M Reid

Embankments perform an important function in the efficient operation of an infrastructure network, whether it is railway, highway or waterway, and it is essential that they are recognised accordingly within the asset management policy. This updated second edition presents vital information for infrastructure owners, designers, contractors and maintenance managers. Supersedes CIRIA C550.

C592 | 978-0-86017-592-6 | PB | 2003
£120 (£60 members)

**Infrastructure cuttings – condition appraisal and remedial treatment**

J Perry, M Pedley, K Brady

Cuttings perform an important function in the efficient operation of an infrastructure network, whether in railway, highway or waterway. This guide is based on a detailed review of published literature and infrastructure owner’s procedures, consultation with experts and practitioners within the field, and case studies demonstrating good practice.

C591 | 978-0-86017-591-9 | PB | 2003
£120 (£60 members)
Regeneration and contaminated land

Top 10
Assessment and management of unexploded ordnance (UXO) risk in the marine environment
N Cooper, S Cooke
This publication provides guidance to organisations involved with the planning, design, delivery, operation and maintenance, decommissioning or regulation of projects in the marine environment on the assessment and management of unexploded ordnance (UXO) risks. It focuses principally upon managing those risks that might be generated by UXO containing high explosives (HE), including abandoned explosive ordnance (AXO) such as sea-dumped munitions or abandoned ship or aircraft wrecks.

C754 | 978-0-86017-760-9 | PB | 2015
£110 (£55 members)

Guidance on the use of plastic membranes as VOC vapour barriers
S Wilson, A Abbot, H Mallett
Buildings are often constructed on sites where volatile organic compounds (VOCs) are present in the ground. This publication provides guidance on the use of plastic membranes to reduce vapour migration into buildings. Durability and resistance to damage when plastic membranes are exposed to VOCs is a concern and the guide considers the potential for degradation and which tests methods are suitable to assess performance.

C748 | 978-0-86017-753-1 | PB | 2014
£50 (£25 members)

Top 10
Good practice on the testing and verification of protection systems for buildings against hazardous ground gases
H Mallett, L Cox, S Wilson, M Corban
The first guidance on the installation of gas protection systems for buildings was published in the early 1990s. Since then the frequency of installation and variety of systems has increased considerably.

This publication provides good practice guidance on the verification and integrity testing of gas protection systems. It sets out a flexible, risk-based and practicable framework that can be adapted to provide site-specific advice on the need for and scope of verification activities (including any integrity testing).

C735 | 978-0-86017-739-5 | PB | 2014
£120 (£60 members)

Top 10
Asbestos in soil and made ground: a guide to understanding and managing risks
P Nathannya, A Jones, R Ogden, A Robertson
The term ‘asbestos’ relates to several fibrous minerals regulated under UK law that are known to cause serious health effects. Asbestos containing materials (ACMs) were widely used in construction, and this guide identifies several key areas of uncertainty in current understanding, with recommendations for future research and policy making in order to address them.

This guide recommends a ‘lines of evidence’ approach whereby more than one method is used to estimate the airborne fibre concentrations likely to be generated from soils at the site.

C733 | 978-0-86017-737-1 | PB | 2014
£130 (£65 members)

Guidance on the management of landfill sites and land contamination on eroding or low-lying coastlines
N Cooper, G Bower, R Tyson, J Flikweert, S Rayner, A Hallas
Over the years, processes of coastal erosion and sea flooding have resulted in waste from some sites being deposited on the foreshore or seeping into the coastal and marine environment, potentially resulting in a range of issues. This guide has been produced to help the increasing number of professionals who will come across such problems for the first time. It is aimed at the interface between the well-established industries of waste management, pollution prevention and control, and flood and coastal erosion risk management.

C718 | 978-0-86017-721-0 | PDF | 2013
Free to download from: www.ciria.org/landfills

Remediating and mitigating risks from volatile organic compound (VOC) vapours from land affected by contamination
P Welburn, K Baker, K Borthwick, C MacLeod
Volatile organic compounds (VOCs) are commonly found on land affected by contamination in the UK, at concentrations that result in the need for remediation and risk mitigation measures to be carried out to manage the potential risks to people. This publication is intended to provide clear and flexible guidance specific to management of VOC vapours, primarily relating to inhalation by people.

C716 | 978-0-86017-719-7 | PB | 2012
£120 (£60 members)

Open space opportunities for previously developed land
K Wray, R Jackson, J Healey Brown, P Jarvis
Creating open space on previously developed land can give genuine opportunities. Well-conceived projects can help to make the most out of sites that otherwise may be subject to blight and high management costs, and can generate significant social, environmental and economic benefits. This guide informs the reader of the opportunities associated with creating open space on previously developed land and advice on how to deliver projects. It has been developed to be relevant to stakeholders working across the UK, including information on policy and legislation, and on organisations active in dealing with previously developed land and open space projects.

C682 | 978-0-86017-685-5 | PB | 2009
£120 (£60 members)

The VOCs Handbook. Investigating, assessing and managing risks from inhalation of VOCs at land affected by contamination
K Baker, H Hayward, L Potter, D Bradley, C MacLeod
Considerable advances have been made in the assessment of risks associated with land contamination over the past decade, which are incorporated in recent regulatory guidance. This guide aims to provide clear and flexible guidance on the investigation, assessment and management of risks associated with VOCs at land affected by contamination in the UK. See also CIRIA C665.

C659 | 978-0-86017-694-7 | PB | 2011
£80 (£40 members)

Unexploded ordnance (UXO) – a construction industry guide
K Stone, A Murray, S Cooke, J Foran
The legacy of UXO has caused many problems for construction projects throughout the UK, which have led to delays and increased costs. This guide provides the UK construction industry with a defined process for managing the risks associated with UXO including WWI and WWII aerial bombardment and other UXO that might be encountered.

C681 | 978-0-86017-681-7 | PB | 2009
£110 (£55 members)

Buy online at: www.ciria.org
Archaeology and development – a good practice guide to managing risk and maximising benefit
B Barber, J Carver, P Hinton, T Nixon
Archaeology is a major factor in construction and development and an estimated £150m is spent by developers on archaeology in the UK each year. Archaeological remains are treated as a material consideration in the planning process. However, archaeology is often underestimated as a business risk. This guide provides a unified accessible source of independent and practical advice and information regarding archaeology, drawing on an array of existing guidance.
C672 [978-0-86017-672-5] PB 2008 £100 (£50 members)

Assessing risks posed by hazardous ground gases to buildings (revised)
S Wilson, S Oliver, H Mallett, H Hutchings, G Card
Following the high profile gas explosions at Loscoe and Abbeystead during the 1980s, several reports were published in the 1990s on the measurement of ground gases, the assessment of risk such gases may present along with the measures that can be employed to mitigate such risks. This book gives advice on all these aspects. It contains consolidates good practice in investigation, the collection of relevant data and monitoring programmes in a risk-based approach to gas contaminated land.
C665 [978-0-86017-665-7] PB 2007 £110 (£60 members)

Selection of remedial treatments for contaminated land. A guide to good practice
D J Rutland, S D Jackson
The guide presents good practice methodology for the selection of remedial treatments. It is aimed at a broad spectrum of practitioners.
C622 [978-0-86017-622-0] PB 2004 £70 (£35 members)

Implementation of remedial options for contaminated land – training pack
L Potter
This training pack is designed to help those involved in the management of contaminated sites to understand the procedures in the implementation of the remedial options. The pack will demonstrate the process of implementing a remedial strategy. Attendance can contribute towards credits for qualification in continuing professional development. The training is designed to be run as six sessions in a one-day course, with variation to suit the circumstances of the training course. The pack may also be used by individuals for self-study.
C612TP [978-0-86017-612-1] TP 2004 £295 +VAT (£195 +VAT members)

Non-biological methods for assessment and remediation of contaminated land – case studies
D Barr, R Bardos, C Nathanail
An increasing number of ‘innovative’ techniques for the assessment and remediation of contamination are available within the UK, many of which have an established track record overseas. This guide provides a review of such techniques and includes a series of case studies that illustrate their application to both radionuclide and non-radionuclide contamination issues in the UK.
C588 [978-0-86017-588-9] PB 2003 £120 (£60 members)

Brownfields – managing the development of previously developed land. A client’s guide
D W Laider, A J Bryce, P Wilbourn
The UK Government’s expressed policy of using previously developed land offers an exciting opportunity for developers. This guide provides a framework for managing these issues logically and methodically. It can help clients identify their own technical limitations, and equip them with the tools they need when appointing and managing a specialist team of advisers.
C578 [978-0-86017-578-0] PB 2002 £130 (£65 members)

Biological methods for assessment and remediation of contaminated land: Case studies
D Barr, J Finnamore, R Bardos, J Weeks, C Nathanail
Biological processes to treat contaminated land (bioremediation) have had widespread use in North America, several countries in mainland Europe, and in the UK. This guide includes case studies showing that bioremediation can treat a range of contaminants under different conditions.
C575 [978-0-86017-575-9] PB 2002 £120 (£60 members)

Remedial engineering for closed landfill sites
D Barry, I Summergill, R Gregory, E Hellowell
Closed landfill sites have physical conditions that are not immediately compatible with redevelopment options, even if they are not contaminated. This book provides guidance to designers and regulators on the principal statutory, technical and environmental factors that can influence the redevelopment of sites for particular uses.
C557 [978-0-86017-557-5] PB 2001 £120 (£60 members)

Land contamination – management of financial risk
J R Finnamore, B Denton, C P Nathanail
It is important that construction professionals involved in contaminated land projects understand their financial risk exposure and know how to manage the risk efficiently. This guide reviews how different parties involved in such projects currently manage financial risk and provides specific guidance to help professionals improve their practice.
C545 [978-0-86017-545-2] PB 2000 £200 (£100 members)

Remedial treatment for contaminated land – training pack
CIRIA
Excavation and disposal is currently the most commonly applied remedial option for land contamination. This training pack aims to increase the ability of all those involved in remediating contaminated land to better assess the whole range of options with the potential to remediate at the best balance of economic costs, engineering feasibility and environmental impact. It contains material to support six hours of training sessions, which can contribute towards CPD credits.

Regeneration and contaminated land

Buy online at: www.ciria.org
Demonstration of the Geodur solidification/stabilisation system

F M Jardine, S T Johnson

This book describes field trials and testing of the commercially available Geodur solidification/stabilisation system for processing contaminated soils and other industrial residues. It is one of a series of guides resulting from CIRIA’s programme of case study demonstrations of remediation of contaminated land.

PR41 | 978-0-86017-841-5 | PB | 2000 £55 (£28 members)

Chromium contamination – field and laboratory remediation trials

R Bewley, R Jeffries, K Bradley

This guide describes a series of field and laboratory-scale trials for the remediation of chromium contamination. These relate to several sites in south-east Glasgow. The guide outlines the objectives and methodologies for each of these trials, discusses the results obtained, and evaluates their overall effectiveness.

PR39D | 978-0-86017-839-2 | PDF | 2000 £55 +VAT (£28 +VAT members)

Low-temperature thermal desorption – hydrocarbon and PCB remediation case studies

J Birnstingl

The potential of treatment technologies for the cost-effective remediation of contaminated land is becoming more widely recognised. These case studies describe the state of development of a mobile low-temperature thermal desorption soil remediation unit (SRU) operated in the UK by British Aerospace Royal Ordnance. Part of CIRIA’s contaminated land programme.

PR38 | 978-0-86017-838-5 | PB | 2000 £55 (£28 members)

In situ stabilisation of chemical waste

M R Sansom

This book is a case study of the application of deep in situ soil mixing, using a cementitious slurry, to encapsulate and neutralise contaminated waste within a landfill from which contaminated groundwater is leaking into an adjacent estuary. Part of CIRIA’s contaminated land programme.

PR37 | 978-0-86017-837-8 | PB | 2000 £55 (£28 members)

Risk assessment for methane and other gases from the ground

N J O’Riordan, C J Milloy

Assessing risk is an important step in the feasibility appraisal of new developments and of remedial works for existing ones. This guide helps the user to make a rational comparison of risks for a wide range of construction situations and ground gases, particularly for methane and carbon dioxide.

R152 | 978-0-86017-434-9 | PB | 1995 £70 (£35 members)

Interpreting measurements of gas in the ground

C R Harries, P J Witherington, J M McEntee

Understanding how hazards like methane, landfill gas and carbon dioxide could present themselves means postulating a conceptual model of the gas regime. This book explains how to develop and refine a model of the relationship between the site and gases in the ground.

R151 | 978-0-86017-446-2 | PB | 1995 £80 (£40 members)

Methane investigation strategies

J G Raybould, S P Rowan, D L Barr

This publication provides thorough, methodical good practice guidance from practitioners. It addresses the requirements and duties of different stakeholders in the development process and provides a general framework for site-specific gas investigations.

R150 | 978-0-86017-435-6 | PB | 1995 £80 (£40 members)

Protecting development from methane

G B Card

Based on a review of UK practice, this authoritative volume explains where protection from methane is needed and how to provide it. It includes selection and construction of protective measures, from integral floor slabs and membranes to in-ground barriers, venting and active gas abstraction as well as long-term management of gas control systems.

R149 | 978-0-86017-410-3 | PB | 1996 £110 (£55 members)

A guide for safe working on contaminated sites

J Steeds, E Shepherd, D Barry

Construction can be a dangerous industry. Some dangers are hidden, like those from apparently clean, safe sites that were previously contaminated, leaving a legacy of pollution to affect the health of site workers, occupiers, neighbours, and nearby land and groundwater resources. Safe working practices are essential.

R132 | 978-0-86017-451-6 | PB | 1996 £110 (£55 members)

The measurement of methane and other gases from the ground

D Crowhurst, S Manchester

An essential reference for finding out what methods and techniques are available for the detection of methane and other gases from the ground. This book also describes how to sample these gases and take measurements relevant to mitigating the problems they pose. While centred on methane and landfill gas, the book also covers carbon dioxide and other hazardous gases.

R131 | 978-0-86017-372-4 | PB | 1993 £110 (£55 members)

Methane: Its occurrence and hazards in construction

P J Hooper, M P Bannon

It is vital that construction professionals take methane and other gases into account and assess the risks they pose. This book provides information to recognise potential methane problems and find solutions.

R130D | 978-0-86017-373-1 | PDF | 1993 £110 +VAT (£55 +VAT members)

Asbestos in soil and made ground: a guide to understanding and managing risks.

Ready reference

P Nathanael, A Jones, R Ogden, A Robertson

The term ‘asbestos’ relates to several fibrous minerals regulated under UK law that are known to cause serious health effects (including mesothelioma and lung cancer) when inhaled. This reference guide should be used to accompany CIRIA C755.

SP166 | 978-0-86017-745-6 | PDF | 2014 Available to download from: www.ciria.org/freepublications

Don’t expose yourself on contaminated sites

CIRIA

Safe working practices on projects are vital as even clean, safe sites may have been contaminated in the past. This set of posters accompanies CIRIA R132 and is intended for wide use as guidance to safe working practices for contaminated sites.

SP119 | Poster set | 1995 £40 (£20 members)

Building on derelict land

B A Leach, H K Goodger

A precursor to SP101 to SP112, but still an invaluable overview of the redevelopment of brownfield sites. This publication detailed guidance on the investigation, appraisal and remedial treatment needed before building on derelict sites.

SP78 | 978-0-86017-323-6 | PB | 1991 £110 (£55 members)

Remedial treatment for contaminated land, volumes I–XII (SP164)

£260 (£130 members) for the set

Volume I: Introduction and guide

CIRIA

This introductory volume serves as a guide to the other 11 books in this set. It provides a brief summary, a consolidated list of references and an index.

SP101 | 978-0-86017-396-0 | PB | 1998

Volume II: Decommissioning, decontamination and demolition

M R Harris, S M Herbert, M A Smith

Provides information about the design and adoption of post-closure operations for industrial facilities, including post-closure tasks such as site surveys before and after decommissioning.

SP102 | 978-0-86017-397-7 | PB | 1995

Buy online at: www.ciria.org
Volume III: Site investigation and assessment
M R Harris, S M Herbert, M A Smith
Describes the various phases of investigating and assessing a site, and the issues to be addressed throughout. It highlights the necessity for investigation and assessment to be set within a risk management framework.
SP103 [978-0-86017-398-4] PB 1995

Volume IV: Classification and selection of remedial methods
M R Harris, S M Herbert, M A Smith
Gives a step-by-step approach to the selection of appropriate techniques, including setting objectives, identifying constraints, evaluating site information and testing various treatment options.
SP104 [978-0-86017-399-1] PB 1995

Volume V: Excavation and disposal
M R Harris, S M Herbert, M A Smith
Deals with the excavation of contaminated material before disposal (on or off site) or as a precursor to other forms of treatment. Issues considered include the applicability, limitations, effectiveness and practical requirements of excavation, and the implications of on- and off-site disposal.
SP105 [978-0-86017-400-4] PB 1995

Volume VI: Containment and hydraulic measures
M R Harris, S M Herbert, M A Smith
Provides information and guidance on engineering-based remedial methods, specifically physical containment and hydraulic control measures, including cover layers, vertical and horizontal barriers and removal of contaminated groundwater from a site.
SP106 [978-0-86017-401-1] PB 1996

Volume VII: In situ methods of remediation for soils, sludges and sediments
M R Harris, S M Herbert, M A Smith
Deals with physical, chemical and biological methods of removing or rendering harmless the contaminants in solid materials after excavation from the ground. Gives guidance on the requirements for equipment, process controls and ongoing monitoring, and on material handling procedures.

Volume VIII: In situ methods for contaminated groundwater and other liquids
M R Harris, S M Herbert, M A Smith
Examines the design and operation of various treatment techniques for contaminated liquids, which are produced during remediation of a contaminated site. It discusses the advantages and disadvantages of the various methods from both the technical and legal angles.

Volume IX: In situ methods of remediation
M R Harris, S M Herbert, M A Smith
Describes the techniques available for removing, destroying or rendering harmless contaminants while they are in place in the ground. The volume considers the applications to which they are suited, their operational characteristics and requirements, and compares them with ex situ remedial treatments.

Volume X: Special situations
M R Harris, S M Herbert, M A Smith
Gives guidance on the specific technical and management requirements of contaminated sites that call for special attention. These include sites that may lead to unacceptable health risks or environmental effects, operational sites, and those for infrastructure projects or other sensitive uses. The book also discusses building on contaminated land, stressing the need to ensure that remedial works do not create problems.
SP110 [978-0-86017-405-9] PB 1995

Volume XI: Planning and management
M R Harris, S M Herbert, M A Smith
Describes planning and management procedures for the various stages of remedial treatment for contaminated land. The volume covers setting of objectives, drawing up specifications, organisation of resources, procedures for selection of specialists, forms of contract and procurement, and issues in the adoption of projects. Also discusses quality management systems.

Volume XII: Policy and legislation
M R Harris, S M Herbert, M A Smith, K Mylrea
This volume summarises the key elements and main developments in environmental legislation and policy as they affect the remedial treatment of contaminated land. It is not intended to be a comprehensive statement of the law or a substitute for legal advice on specific problems. As well as UK policy and legislation, this title also considers legislation in the USA, Canada, Denmark, Germany, the Netherlands, Australia and New Zealand.

Photocopies of out of print titles
The following titles are now out of print but bound photocopies of these can still be purchased. Full details can be found in the CIRIA bookshop via the website: www.ciria.org

Hydraulic measures for the control and treatment of groundwater pollution
R186 [978-0-86017-499-8]
£166 +VAT (£161 +VAT members)

Methane and associated hazards to construction: a bibliography
SP79 [978-0-86017-327-4]
£75 +VAT (£70 +VAT members)
Sustainable water management

Structural and geotechnical design of modular geocellular drainage systems
A S O’Brien, Y S Hsu, C R Lile, S W Pye

Stormwater attenuation and infiltration tanks constructed using modular plastic geocellular units are commonly used as part of sustainable drainage and rainwater harvesting systems.

This guide discusses the different types of geocellular unit available and provides guidance on testing, geotechnical and structural design and behaviour, practical issues affecting installation and construction works, and maintenance of the installations. Recommendations for the design methodology to be followed are included, together with worked examples, which is consistent with the requirements of the Eurocodes.

C737 | 978-0-86017-741-8 | PB | 2016
£110 (£55 members)

Containment systems for the prevention of pollution. Secondary, tertiary and other measures for industrial and commercial premises
I L Walton

This guidance has been developed to assist owners and operators of industrial and commercial facilities storing hazardous substances (inventories) that may be hazardous to the environment. It provides information on identifying the hazards, assessing the risks and mitigating the potential consequences of a failure of the primary storage facility and/or the combustion of its contents.

It is applicable to the containment of a wide range of inventories and to all sizes of site from small commercial premises with a single storage tank, through to large chemical or petroleum sites. It also applies to warehouses storing hazardous inventories.

C736 | 978-0-86017-740-1 | PDF | 2014
Available to download from: www.ciria.org/freepublications

Creating water sensitive place: scoping the potential for Water Sensitive Urban Design in the UK
J Abbott, P Davies, P Simkins, C Morgan, D Levin, P Robinson

Water Sensitive Urban Design (WSUD) is an approach to design that delivers greater harmony between water, the environment and communities. It prioritises water management considerations during the early conception of developments creating multiple benefits and opportunities to overcome challenges.

This scoping study, together with the accompanying ideas booklet CIRIA C723, provides details of the drivers, benefits and vision of WSUD in the UK. It is based on findings from a collaborative project that included extensive consultation and a literature review to understand the role of WSUD in the UK.

C724D | 978-0-86022-733-3 | PDF | 2013
Available to download from: www.ciria.org/freepublications

Wate Sensitive Urban Design in the UK
C Morgan, C Bevington, D Levin, P Robinson, P Davis, J Abbott, P Simkins

This short booklet accompanies the WSUD scoping study CIRIA C724, which provides details of the drivers, benefits and vision of WSUD in the UK. It is based on findings from a collaborative project that included extensive consultation and a literature review to understand the role of WSUD in the UK.

C723 | 978-0-86017-726-5 | PDF | 2013
Available to download from: www.ciria.org/freepublications

Retrofitting to manage surface water
C Digman, R Ashley, D Balmforth, D Balmforth, V Stovin, J Glierum

As urban areas develop, natural drainage processes are changed. Paved areas are constructed and piped drainage systems built. Yet they deprive communities of the many benefits of natural drainage processes. A different approach is needed to managing surface water run-off to sustain communities that are pleasant and vibrant places to live in. This guidance sets out a process to achieve this. It challenges many of the current conventions employed to manage surface water run-off.

C713 | 978-0-86017-715-9 | PB | 2012
£180 (£90 members)

WaND Guidance on water cycle management for new developments
D Butler, F A Memon, C Makropoulos, A Southall, L Clarke

This publication provides guidance on how to achieve improved sustainable water cycle management in new developments. It outlines the policy context and the processes involved focusing on why it is required and what approaches are needed for its successful planning and delivery. This guide offers practitioners an improved understanding of the tools and techniques necessary for achieving, delivering and adopting sustainable water cycle management in new developments.

C690 | 978-0-86017-690-9 | PB | 2010
£90 (£45 members)

Guide to sustainable procurement in construction
C Berry, S McCarthy

In the next 40 years, the world’s population is likely to double. In theory this is good news for the construction industry, but the world is of finite resources and within 40 years, many of the natural resources that are taken for granted will be in short supply.

This guide explains how to realise clients’ ambitions and mitigate reputation risks through more effective management of the supply chain. The principles and practice described apply equally to numerous professions involved in delivering an effective project.

C695 | 978-0-86017-695-4 | PB | 2011
£80 (£40 members)

Risk management for UK reservoirs
A Hughes, H Hewlett, P G Samuels, M Morris, P Sayers, I Moffat, A Harding, P Tedd

Britain has a large stock of embankment dams, many built more than 100 years ago. Prepared after extensive consultation within the UK reservoir community, this book is essential reading for owners, managers, engineers, regulators, insurers and safety personnel concerned with reservoirs in the UK.

C542 | 978-0-86017-542-1 | PB | 2000
£110 (£55 members)

Rainwater and greywater use in buildings. Best practice guidance
D Leggett, R Brown, D Brewer, G Stanfield, E Holiday

Practical guidance on the specification and adoption of rainwater and greywater use. The guidance is aimed at developers, building owners, equipment manufacturers and their consultants and contractors. It will also be of interest to water utilities, local authorities, environmental regulators and house builders.

C539 | 978-0-86017-539-1 | PB | 2001
£120 (£60 members)

Low-cost options for prevention of flooding from sewers
R May, P Martin, N Price

An essential reference for all engineers, planners and designers involved in constructing or maintaining drainage works. Some 32 000 properties in the UK alone could be at risk of flooding from sewers in the next 10 years – with important implications for sewerage undertakers and the water industry regulator.

C506 | 978-0-86017-506-3 | PB | 1998
£90 (£45 members)

Rainwater and greywater use in buildings. Decision-making for water conservation
D Leggett, R Brown, G Stanfield, D Brewer, E Holiday

There has been relatively little guidance on how separate or combined rainwater and greywater systems may provide safe water to buildings. Together with CIRIA C539, this book aims to address these problems and provide information and authoritative best practice for rainwater and greywater systems, either separate or combined.

This guide provides a background to the use of rainwater and greywater and identifies the barriers and benefits of this type of water use and recycling. It is aimed at private individuals and house builders with an interest in conserving water resources.

PR80 | 978-0-86017-880-4 | PB | 2001
£55 (£28 members)
Control of infiltration to sewers
M White, H Johnson, G Anderson, B Misstear
Cut your costs – both operational and capital – with the tools this guide provides. When is it possible, or cost-effective, to reduce or eliminate groundwater infiltration? Covers the scale and causes, the techniques available for locating the source of the problem, and renovation techniques and costs.
R175 | £100 (£50 members)

Valves, pipework and associated equipment in dams – guide to condition assessment
R Reader, M Kennard, J Hay
The guide sets out a logical step-by-step process for condition assessment, involving location, inspection, monitoring, evaluation of results and remedial measures. It describes how the hazard and risk posed by each element of a dam’s pipework system are influenced by its structural and service condition.
R170 | £100 (£50 members)

Water mains: guidance on assessment and inspection techniques
R Dorn, P Howsam, R Hyde, M Jarvis
This guide will assist users in evaluating the condition of a pipeline system. It demonstrates the merits and limitations of currently available assessment and inspection techniques for pipelines, valves and associated operating equipment in terms of their reliability, practicality, cost, level of disruption to the pipeline and ease of result interpretation.
R162 | £75 (£35 members)

Small embankment reservoirs
M Kennard, C Hoskins, M Fletcher
This guide is aimed at those with limited experience of design and construction of small reservoirs, ie those under 25 000 cubic metres. It explains the procedures and principles that form good practice through all the phases of the work from planning to design and construction and subsequently maintenance, monitoring and remedial works.
R161 | £110 (£55 members)

Sea outfalls – construction, inspection and repair. An engineering guide
P J D Neville-Jones, A D Chitty
This book gives practical guidance on the construction, modification, inspection and repair of sea outfalls. It explains the procedures and principles that form good practice through all the phases of the work from design to construction and subsequently maintenance, monitoring and remedial works.
R159 | £100 (£40 members)

Engineering guide to the safety of concrete and masonry dam structures in the UK
M R Kennard, L L Owens, R A Reader
This book provides comprehensive advice on matters related to the safety of concrete and masonry dams and associated dam structures, both old and new, in the UK. It describes how dams deteriorate, how they can be investigated, instrumented, monitored, subjected to planned surveillance, and rectified.
R148 | £80 (£40 members)

Design of sewers to control sediment problems
J Ackers, D Butler, R May
This guide sets out a standard methodology for the hydraulic design of sewers to control sediment problems, and provides appropriate guidance for design engineers.
R141 | £70 (£35 members)

Underground service reservoirs: waterproofing and repair manual
P Howsam, B Misstear, C Jones
The search is constantly on for ways to optimise water supply from groundwater sources. Key message here is adopt a co-ordinated approach by relating borehole performance to the condition of the abstraction system and to physical, chemical and microbial processes. Includes a substantial bibliography and detailed technical information.
R138 | £60 (£30 members)

Monitoring, maintenance and rehabilitation of water supply boreholes
P Howsam, B Misstear, C Jones
The search is constantly on for ways to optimise water supply from groundwater sources. Key message here is adopt a co-ordinated approach by relating borehole performance to the condition of the abstraction system and to physical, chemical and microbial processes. Includes a substantial bibliography and detailed technical information.
R137D | £100 + VAT (£30 + VAT members)

Reducing the Impacts of flooding – extemporary measures
C R Elliott, D J Legget
This guide identifies the measures that may be taken to provide some protection against flooding using readily available materials. It reviews how flood water can get into a building and the damage it can cause to it and its contents. It also provides information on how to reduce water entry, minimise damage and the actions to take after a flood.
SP1550 | £80 (£40 members)
Available to download from:
www.ciria.org/freepublications
Sustainable water management

Septic tank systems: A regulator’s guide
CIRIA
This booklet, which accompanies a series of lively, informative leaflets, aims to reduce pollution and nuisance by improving understanding and practice of the maintenance and use of septic tank systems, and is for those with responsibility for regulating the use of septic tank systems in England and Wales.
SP144BT│£10│PDF│1998

Leaflet for anyone considering options for the disposal of domestic sewage on site
CIRIA
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Septic tanks and small sewage treatment works: a guide to current practice and common problems
J Payne, D Butler
Septic tanks, cesspools and small sewage treatment works can cause odour, nuisance, health and pollution problems. This guide provides an overview of the septic tanks and small sewage treatment plants available, how they work and the problems they cause. It also describes the regulatory and administrative framework for control of their design, installation and use, and contains the results of a survey of practice and problems.
TN146│978-0-86017-374-8│PB│1993
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Screenings and grit in sewage – removal, treatment and disposal, phase 3: stormwater overflows and pumping stations
J M Sidwick
Deals with problems associated with screenings and grit in sewage arising upstream of treatment works, particularly those occurring at storm sewage overflows and in-sewer pumping stations.
TN132│978-0-86017-293-2│PB│1998
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J M Sidwick
This technical note highlights the findings from the second phase of a CIRIA research project that investigated problems posed by grit and screenings in sewage, and on the methods of removing, treating and disposing of them.
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Sustainable water management in schools
J Duggin, J Reed
This guidance provides advice to facilitate the sustainable management of water in schools, including information on the implementation of sustainable water use and sustainable drainage during both the design and operational phases of schools.
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J Whiteley, N Beton, P Metcalfe, K Owen, C Bentley, T Brassington, R Jones, B Watson
Part 2 covers the general design, construction and installation aspects and provides specific details on the storage facilities available. This part also provides guidance on the maintenance and repair of structures, and health and safety considerations. It is aimed at a more technical audience, eg designers, consultants and contractors.

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Invasive species management for infrastructure managers and the construction industry
O Booy, M Wade, V White
This guide describes the effect invasive species have, and the legislation and policy that regulates their management, and provides examples of invasive plant and animal species, and species that could become tomorrow’s invaders.

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M Gaterell
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Livestock manure and silage storage infrastructure for agriculture. Part 3: Demolition and site clearance
D Housego, J Chapman, A Peirson-Hills
The last in this set focuses on the main areas of concern in the demolition and site clearance process, notably legislation and policy, project planning and environmental management.

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PR74 | 978-0-86017-874-3 | PB | 1999
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Environmental issues in construction – a desk study
P Guthrie et al

Complementing the related publications C510, PR74 and PR75, this study discusses the progress made by the industry on environmental issues and of sustainability indicators for the civil engineering industry – including attitudes towards costs, risks, guidelines, and regulatory pressures.

PR73 | 978-0-86017-873-6 | PB | 1999
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SP120 | 978-0-86017-423-3 | PB | 1995
£70 (£35 members)

Environmental assessment
M Renger et al

This guide sets out a basis for the environmental assessment of different types of development schemes, describing the stages involved in identifying and evaluating the potential impacts of projects, together with appropriate mitigation measures or enhancement opportunities.

SP96 | 978-0-86017-379-3 | PB | 1994
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Considers the interaction of mankind and the environment from the perspective of the UK construction industry, by defining its activities in terms of their environmental consequences.

SP94 | 978-0-86017-366-3 | PB | 1993
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Environmental issues in construction – a review of issues and initiatives relevant to the building, construction and related industries. Volume 1 – Overview including executive and technical summaries
L Shorrock et al

SP93 and SP94 form a review of environmental issues and initiatives relevant to the building, construction and related industries. SP93 is an overview that outlines the roles and responsibilities within the industry, while SP94 deals with specific areas including energy use, waste and recycling, and pollution.

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Sustainability accounting in the construction industry
Casella Stanger, Forum for the Future, Carillion

Accounting for the financial aspects of an organisation’s performance is a statutory requirement, while accounting for sustainability is currently voluntary. Companies are increasingly reporting aspects of their social and environmental performance. This guide provides a useful tool to identify, evaluate and manage social and environmental risks, by identifying resource efficiency and cost savings.

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TN123 | 978-0-86017-262-8
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